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**Health professional educators' needs regarding strategies
in the implementation of a learning management system**

A thesis by

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Summary

The University of Pretoria (UP) implemented an upgraded version of the institutional learning management system (LMS) (called “new clickUP”) from June 2011 to December 2012. The purpose of the study is to determine the levels of use (LoU), stages of concern (SoC), and perceived expressed needs of health professional educators (HPEs) in the Faculty of Health Sciences as they adopt and implement the new LMS in their teaching.

The rapid development of educational technology for teaching and learning is a cause of constant change in higher education institutions. In particular, regular upgrades to an LMS put pressure on lecturers, forcing them to learn to implement upgraded versions. Although LMSs are viewed as an essential part of technology-enhanced learning, the literature seems to be silent about widespread *fidelity of use* and how this may be achieved, particularly in a medical education context.

The study follows an *eclectic* research design utilising the Concerns Based Adoption Model (CBAM) with its diagnostic tools (SoC and LoU) to evaluate both the concerns of HPEs and the extent of implementation of the LMS. The perceived expressed needs of HPEs in this context were explored further through interviews. The rationale for the study is that the levels of implementation of the LMS could be improved if professional staff development interventions address specific training and support needs of lecturers.

The results of the study show that HPEs at UP have not yet completed the journey across the *bridge of implementation*. Based on the results of the SoC and LoU instruments, HPEs consistently rated concerns at the *Unconcerned* stage as

the highest, and *Management* concerns as second highest. *Informational* and *Personal* stage concerns were rated not much lower than *Management* concerns.

Detailed information regarding the context-specific needs of HPEs was collected from the perceived expressed needs interview, to supplement the needs obtained through the SoC questionnaire. The results reveal some variation from the SoC, as well as additional needs HPEs have with regard to the implementation of an LMS.

Four core needs of the HPEs were identified: (i) to know the reason for the change to the new LMS; (ii) to have time available to learn, practice and implement the system; (iii) to have access to training and support resources; and (iv) to understand the functionalities available and associated possibilities for application in their teaching practice.

By integrating the results of research question 1 (SoC) and research question 2 (LoU), the *fidelity of implementation* was ascertained, utilising a *fidelity matrix* based on the highest SoC and LoU achieved by HPEs.

To accomplish the stated rationale (i.e. to facilitate the journey across the implementation bridge) the study recommends that attention should be paid to the *Unconcerned* and *Management* stages of concern. Specific training and support interventions should address these concerns, without neglecting *Informational* and *Personal* concerns that are still prevalent.

Keywords: Learning management system; Concerns based adoption model; Health professional educators; lecturers; stages of concern; levels of use; implementation; fidelity; needs; higher education.



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“Lean on, trust in, and be confident in the Lord with all your heart and mind and do not rely on your own insight or understanding. In all your ways know, recognise, and acknowledge Him and He will direct and make straight and plain your paths.” Proverbs 3:5-6

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Table of Content

| | |
|--|--------------|
| List of Tables | ix |
| List of Figures | xiii |
| List of Appendices | xv |
| List of Acronyms | xvi |
| List of Support documents available on DVD | xvii |
| List of Terminology | xviii |
| 1 Introduction and Background | 1 |
| <hr/> | |
| 1.1 Introduction | 2 |
| 1.2 Fidelity of implementation | 4 |
| 1.3 Context and background of the study | 6 |
| 1.3.1 <i>University of Pretoria: Health Professional Educators in the Faculty of Health Sciences</i> | 6 |
| 1.3.2 <i>A historical view of the use of an LMS at the University of Pretoria</i> | 8 |
| 1.3.3 <i>Auditing the use of the system</i> | 12 |
| 1.3.4 <i>clickUP lecturer survey</i> | 14 |
| 1.3.5 <i>Development of new training workshops for the new clickUP (Bb version 9.1)</i> | 16 |
| 1.3.6 <i>Changes implemented in the training workshops</i> | 17 |
| 1.4 Statement of the problem | 20 |
| 1.5 Purpose of the study | 21 |
| 1.6 Research questions | 21 |
| 1.7 Rationale for the study | 22 |
| 1.8 Significance of the study | 22 |
| 1.9 Assumptions of the study | 23 |
| 1.10 Limitations of the study | 24 |
| 1.11 Delimitations of the study | 24 |
| 1.12 Structure of the thesis | 24 |
| 2 Literature review | 27 |
| <hr/> | |
| 2.1 Introduction | 28 |
| 2.2 The use of educational technology in higher education | 30 |

| | | |
|------------|--|------------|
| 2.2.1 | <i>Learning management systems</i> | 31 |
| 2.2.2 | <i>The trends in the use of other educational technology in higher education</i> | 33 |
| 2.2.3 | <i>Implementation of educational technology</i> | 36 |
| 2.2.4 | <i>Educational technology in medical education and professional development</i> | 37 |
| 2.2.5 | <i>The changing role of lecturers</i> | 39 |
| 2.3 | Evaluation of LMS implementation and use | 43 |
| 2.3.1 | <i>Introduction</i> | 43 |
| 2.3.2 | <i>Description of studies reviewed</i> | 45 |
| 2.3.3 | <i>Synthesis of findings of studies reviewed</i> | 52 |
| 2.4 | Summary of literature review chapter | 72 |
| 3 | CBAM Theory and Conceptual Framework | 75 |
| <hr/> | | |
| 3.1 | The process of implementing a new technology | 76 |
| 3.2 | Concerns-Based Adoption Model (CBAM) | 77 |
| 3.2.1 | <i>Stages of Concern (SoC)</i> | 82 |
| 3.2.2 | <i>Levels of Use (LoU)</i> | 91 |
| 3.2.3 | <i>Limitations and critique of the CBAM</i> | 94 |
| 3.2.4 | <i>Conclusion</i> | 94 |
| 3.3 | Review of CBAM studies in higher education from 2000 to 2012 | 96 |
| 3.3.1 | <i>Discussion of review</i> | 100 |
| 3.3.2 | <i>CBAM studies in the medical education field</i> | 102 |
| 3.3.3 | <i>CBAM studies conducted in Southern Africa</i> | 103 |
| 3.4 | Doctoral studies using the CBAM from 2000 to 2012 | 104 |
| 3.4.1 | <i>Discussion of review</i> | 109 |
| 3.4.2 | <i>Interpretations (conclusions) based on the review</i> | 112 |
| 3.4.3 | <i>Summary</i> | 114 |
| 3.5 | Implementation bridge metaphor: theoretical and conceptual framework | 115 |
| 4 | Research design | 121 |
| <hr/> | | |
| 4.1 | Introduction | 122 |
| 4.2 | Research design | 123 |
| 4.2.1 | <i>Three level mixed methods design</i> | 123 |
| 4.2.2 | <i>Research paradigm or philosophical foundations</i> | 126 |
| 4.3 | Population, sampling and research participants | 127 |
| 4.4 | Data collection instruments | 132 |
| 4.4.1 | <i>Stages of concerns questionnaire (SoCQ)</i> | 132 |
| 4.4.2 | <i>Levels of use (LoU) interview protocol</i> | 136 |

| | | |
|------------|--|------------|
| 4.4.3 | <i>Semi-structured interview: Perceived needs</i> | 140 |
| 4.5 | Data collection strategy | 145 |
| 4.6 | Data analysis | 146 |
| 4.6.1 | <i>Analysis of the demographic information</i> | 146 |
| 4.6.2 | <i>Research question 1: Analysis of the SoCQi and SoCQii data</i> | 148 |
| 4.6.3 | <i>Research question 2: Analysis of LoU data</i> | 154 |
| 4.6.4 | <i>Research question 3: Collection and analysis of the semi-structured interview data</i> | 155 |
| 4.7 | Reflexivity and rigour | 156 |
| 4.8 | Ethical considerations | 157 |
| 4.8.1 | <i>Trustworthiness of the study</i> | 158 |
| 4.8.2 | <i>The role of the researcher in this study</i> | 159 |
| 4.8.3 | <i>Privacy of participants</i> | 160 |
| 4.9 | Limitations of the research design | 160 |
| 5 | Relationship between Data Collection, LMS Implementation & Workshops | 163 |
| <hr/> | | |
| 5.1 | Introduction | 164 |
| 5.2 | LMS implementation timeline | 164 |
| 5.3 | New clickUP workshops presented | 166 |
| 5.4 | Data collection process | 167 |
| 6 | Analysis of data and interpretation of results | 169 |
| <hr/> | | |
| 6.1 | Introduction | 170 |
| 6.2 | Participation in the study | 170 |
| 6.3 | Demographic information of the research participants | 172 |
| 6.3.1 | <i>General descriptive information about the participants</i> | 173 |
| 6.3.2 | <i>Participants' use of the LMS (clickUP)</i> | 180 |
| 6.3.3 | <i>Participants' preferences and proficiencies in using technology</i> | 193 |
| 6.3.4 | <i>Summary of the One-way Chi² or Binomial test on the demographic variables</i> | 197 |
| 6.4 | Research question 1: Analysis of data and interpretation of results . | 201 |
| 6.4.1 | <i>Participants who completed the Stages of Concern questionnaire (SoCQ)</i> | 201 |
| 6.4.2 | <i>Analysis of SoCQ data</i> | 202 |
| 6.4.3 | <i>Reliability of SoCQi and SoCQii</i> | 202 |
| 6.4.4 | <i>Part I: Stages of Concern profile analysis</i> | 204 |
| 6.4.5 | <i>Part II: Analysing the stages in the SoC</i> | 240 |
| 6.4.6 | <i>Part III: Analysing individual concern statements</i> | 251 |

| | | |
|------------|--|------------|
| 6.5 | Research question 2: Analysis of data and interpretation of results . 262 | |
| 6.5.1 | <i>The LoU interviews conducted</i> | 262 |
| 6.5.2 | <i>Analysis of the LoU interview data</i> | 263 |
| 6.5.3 | <i>LoU interview results</i> | 265 |
| 6.5.4 | <i>Summary for Research Question 2</i> | 279 |
| 6.6 | Research question 3: Analysis of data and interpretation of results . 81 | |
| 6.6.1 | <i>Perceived expressed needs interview</i> | 281 |
| 6.6.2 | <i>Analysis of interview data</i> | 284 |
| 6.6.3 | <i>Interview results and discussion</i> | 288 |
| 6.6.4 | <i>Summary for Research Question 3</i> | 308 |
| 7 | Discussion, conclusions and recommendations..... | 311 |
| 7.1 | Introduction..... | 312 |
| 7.2 | Discussion of the results and findings | 314 |
| 7.3 | Research Question 1: Stages of Concern (SoC) of HPEs at UP | 315 |
| 7.3.1 | <i>HPEs' group profile for SoCi and SoCii</i> | 316 |
| 7.3.2 | <i>HPEs' group profile: the change from SoCi to SoCii</i> | 327 |
| 7.3.3 | <i>SoC in relation to the demographic variables</i> | 335 |
| 7.3.4 | <i>HPEs' individual profiles</i> | 342 |
| 7.3.5 | <i>Summary of findings of Rq 1 - the SoC of HPEs at UP</i> | 348 |
| 7.4 | Research Question 2: Levels of Use (LoU) of HPEs at UP..... | 351 |
| 7.4.1 | <i>The LoU of HPEs at UP</i> | 351 |
| 7.4.2 | <i>The LoU in relation to the demographic data</i> | 355 |
| 7.4.3 | <i>Relationship between the LoU and SoC</i> | 357 |
| 7.4.4 | <i>Summary of findings for Rq 2 – the LoU of HPEs</i> | 359 |
| 7.5 | Research Question 3: Perceived expressed needs of HPEs | 362 |
| 7.5.1 | <i>The perceived needs expressed by HPEs at UP</i> | 362 |
| 7.5.2 | <i>Summary of findings of Rq 3 – the expressed perceived needs of HPEs</i> | 367 |
| 7.6 | Conclusions | 369 |
| 7.7 | Summary of contributions of the study | 376 |
| 7.8 | Suggestions for further research..... | 378 |
| 7.9 | Closing remarks | 379 |
| 8 | List of references | 381 |
| 9 | Appendices..... | 405 |

List of Tables

| | |
|---|-----|
| Table 1:1 Changes implemented in the new training workshops | 17 |
| Table 2:1 Topics identified in the studies reviewed | 51 |
| Table 2:2 Barriers, factors or challenges identified in the studies reviewed | 56 |
| Table 2:3 Strategies for training, support, managing and for a community of learning | 60 |
| Table 3:1 Stages of Concerns defined and grouped into four dimensions..... | 83 |
| Table 3:2 Levels of Use | 92 |
| Table 3:3 Systematic review of CBAM studies (2000-2012)..... | 97 |
| Table 3:4: CBAM studies in higher education from 2000 to 2012: Summary of key elements..... | 99 |
| Table 3:5 Systematic review of PhD studies using CBAM (2000-2012) | 105 |
| Table 3:6 PhD studies between 2000 and 2012 using CBAM: Summary of key elements | 106 |
| Table 3:7 Synthesis of CBAM studies reviewed | 113 |
| Table 4:1 Perceived needs interview guide | 143 |
| Table 4:2 Demographic data analysis methods..... | 147 |
| Table 4:3 Data analysis for Research Question 1 | 151 |
| Table 4:4 Summary of data analysis process for Research question 2 | 154 |
| Table 6:1 Summary of the Overview Workshop attendances and participation in the study..... | 170 |
| Table 6:2 Summary of the participation of the four schools in the faculty | 173 |
| Table 6:3 Distribution of gender groups..... | 174 |
| Table 6:4 Lecturing experience of participants | 174 |
| Table 6:5 Academic position of participants | 175 |
| Table 6:6 Type of appointment of participants..... | 176 |
| Table 6:7 Class sizes participants lecture..... | 177 |
| Table 6:8 Professional identity of participants | 178 |
| Table 6:9 Age of participants | 178 |
| Table 6:10 Highest academic qualification of participants | 179 |
| Table 6:11 Time available to learn and become familiar with clickUP | 181 |
| Table 6:12 Time available to develop a module in the LMS | 181 |
| Table 6:13 Time available to manage and maintain LMS modules | 182 |

| | |
|--|-----|
| Table 6:14 Confidence in using new LMS (clickUP) | 183 |
| Table 6:15 Used WebCT before 2006 | 184 |
| Table 6:16 Used old clickUP (2006-2012) | 184 |
| Table 6:17 Participants currently using new clickUP | 185 |
| Table 6:18 clickUP workshops attended..... | 186 |
| Table 6:19 Summary of the workshops attended | 188 |
| Table 6:20 Proficiency or level of expertise in using new clickUP | 188 |
| Table 6:21 Resources used by participants | 189 |
| Table 6:22 Summary of resources used by participants | 191 |
| Table 6:23 Barriers in the implementation of new clickUP | 192 |
| Table 6:24 Perceived greatest benefits of new clickUP | 193 |
| Table 6:25 Participants' preferences with regards to new technology | 194 |
| Table 6:26 Proficiency levels in using software programs | 195 |
| Table 6:27 Summary of the Chi and Binomial test conducted on the demographic variables | 197 |
| Table 6:28 Reliability coefficients for the Stages of Concern Questionnaire (Appendix 4a) | 203 |
| Table 6:29 Median, minimum, maximum and quartile scores for each of the stages in SoCi and SoCii | 208 |
| Table 6:30 Wilcoxon signed rank test: difference between SoCi and SoCii (Support document 6-1i) | 214 |
| Table 6:31 Significant results for the Kruskal-Wallis / Mann-Whitney tests performed on demographic variables and SoCi and SoCii | 219 |
| Table 6:32 Spearman's rank-order correlation & demographic variables for SoCi / Sample 1 | 225 |
| Table 6:33 Spearman's correlation and demographic variables for SoCii / Sample 1.1 | 227 |
| Table 6:34 Eight possible individual profiles | 233 |
| Table 6:35 Summary PART I: SoC profiles | 236 |
| Table 6:36 Significant results for Spearman's and Kruskal-Wallis on SoCi and demographic variables | 239 |
| Table 6:37 Significant results for Spearman's and Kruskal-Wallis on SoCii and demographic variables | 239 |
| Table 6:38 Frequency distribution for highest stage of concern in relation to second highest stage of concern for SoCi | 240 |
| Table 6:39 Frequency distributions for highest stage of concern in relation to second highest | 241 |
| Table 6:40 Stages of concern rated as highest in SoCi and SoCii..... | 242 |

| | |
|--|-----|
| Table 6:41 Stages of concern rated as second highest in SoCi and SoCii | 243 |
| Table 6:42 Stages of concern rated as lowest in SoCi and SoCii | 244 |
| Table 6:43 Summary: PART II - Stages of concern | 248 |
| Table 6:44 Results of the Chi square, Kruskal-Wallis and Spearman's correlation test on demographic variables and the highest, second highest and lowest stages..... | 250 |
| Table 6:45 Highest rated individual concerns | 252 |
| Table 6:46 Concern items rated highest in SoCi | 252 |
| Table 6:47 Concern items rated highest in SoCii..... | 253 |
| Table 6:48 Second highest rated individual concerns..... | 254 |
| Table 6:49 Concern items rated second highest in SoCi..... | 255 |
| Table 6:50 Concern items rated second highest in the SoCii | 256 |
| Table 6:51 Lowest rated individual concerns..... | 257 |
| Table 6:52 Concern items rated lowest in SoCi..... | 257 |
| Table 6:53 Lowest rated concern items for SoCii | 258 |
| Table 6:54 Wilcoxon signed rank results for individual concerns rated from SoCi to SoCii | 259 |
| Table 6:55 Summary PART III - Individual concerns | 260 |
| Table 6:56 LoU ratings for users and non-users..... | 266 |
| Table 6:57 Results of the one-way Chi-squared analysis for categories of LoU ratings | 267 |
| Table 6:58 Cronbach Alpha and agreement percentage results of first and second ratings..... | 269 |
| Table 6:59 Results of the Chi-squared test on LoU and Age..... | 270 |
| Table 6:60 Results of Spearman's correlation between the LoU and <i>Lecturing experience</i> and <i>Age</i> | 271 |
| Table 6:61 Results of the Kruskal-Wallis test for the LoU and <i>Age</i> | 272 |
| Table 6:62 LoU results summary | 279 |
| Table 6:63 Keys to the visual representation of expressed needs in Table 6.63 | 288 |
| Table 6:64 Expressed needs of participants: "PRE & POST" | 289 |
| Table 6:65 Unconcerned concerns of HPEs | 291 |
| Table 6:66 Informational concerns of HPEs | 293 |
| Table 6:67 Personal concerns of HPEs | 297 |
| Table 6:68 Management concerns of HPEs | 299 |
| Table 6:69 Consequence concerns of HPEs | 303 |
| Table 6:70 Collaboration concerns of HPEs | 305 |

| | |
|--|-----|
| Table 6:71 Refocusing concerns of HPEs | 307 |
| Table 7:1 Individual concern analysis for SoCi | 322 |
| Table 7:2 Individual concern analysis for SoCii | 323 |
| Table 7:3 Results of the change investigated from SoCi to SoCii | 330 |
| Table 7:4 Statistically significant results: demographic variables with SoCi and SoCii | 336 |
| Table 7:5 Statistically significant results: Demographic variables and the highest, second highest and lowest stages | 340 |
| Table 7:6 Individual profiles: Two groups | 344 |
| Table 7:7 Individual profiles: Four groups | 344 |
| Table 7:8 Individual profiles: Eight groups | 346 |
| Table 7:9 Summary of statistical significance: LoU categories and demographic variables | 355 |
| Table 7:10 LoU and SoC fidelity matrix | 358 |
| Table 7:11 Contextualised needs of HPEs at UP when implementing an LMS | 372 |

List of Figures

| | |
|---|-----|
| Figure 1:1 Historical view of the use of the LMS at UP | 9 |
| Figure 1:2 Cyclical development and implementation..... | 11 |
| Figure 1:3 Levels of web-support (J.W. Fresen, personal communication, December, 2013)..... | 13 |
| Figure 1:4 Factors that influenced the new clickUP workshop design | 17 |
| Figure 1:5 New clickUP training workshops..... | 19 |
| Figure 2:1 Roles and responsibilities of Health Professional Educators | 40 |
| Figure 2:2 Structure and focus of the literature review | 43 |
| Figure 2:3 Search results for studies in medical education..... | 45 |
| Figure 2:4 Gap in the literature | 46 |
| Figure 2:5 Number of studies published in last decade | 47 |
| Figure 2:6 Countries where the reviewed studies were published..... | 48 |
| Figure 2:7 LMSs employed in international, SA and medical education studies reviewed..... | 49 |
| Figure 2:8 The Five tier LMS ecosystem | 53 |
| Figure 3:1 The three dimensions of the CBAM..... | 80 |
| Figure 3:2 Hypothetical Stages of Concern profile..... | 89 |
| Figure 3:3: Concerns evaluation process | 113 |
| Figure 3:4 Conceptual framework (<i>Adapted from:</i> Hall & Hord, 2011a; Hall & Hord, 2011b)..... | 118 |
| Figure 4:1 Three level mixed methods design (QL is qualitative and QN for quantitative)..... | 123 |
| Figure 4:2 Sample selection process..... | 129 |
| Figure 4:3 Research question 3 and the journey across the bridge..... | 141 |
| Figure 4:4 Data collection and analysis for Research Question 3 | 156 |
| Figure 5:1 Timeline: Data collection, LMS implementation and workshops | 165 |
| Figure 5:2 Detailed data collection process | 168 |
| Figure 6:1 Data collection: phases, sampling and instruments used | 171 |
| Figure 6:2 Visual structure of demographic information (section 6.3) of participants..... | 172 |
| Figure 6:3 Visual structures for sections 6.4.4 -6.4.6..... | 204 |
| Figure 6:4 SoCi and SoCii profiles..... | 205 |
| Figure 6:5 Box plots of SoCi and SoCii scores | 209 |

| | |
|---|-----|
| Figure 6:6 Generic profile of all users | 218 |
| Figure 6:7 Personal stage (i) and the demographic variable greatest benefit..... | 220 |
| Figure 6:8 Personal(ii) stage and academic qualification..... | 221 |
| Figure 6:9 Management concerns (ii) and Confidence in using the system..... | 222 |
| Figure 6:10 Consequence concerns and Use of old clickUP (2006-2012)..... | 223 |
| Figure 6:11 Consequence concerns and proficiency in the new clickUP | 224 |
| Figure 6:12 Collaboration concerns and professional identity | 225 |
| Figure 6:13 SoCi and SoCii dimensions | 230 |
| Figure 6:14 Hypothetical negative split group..... | 234 |
| Figure 6:15 Hypothetical positive split group | 235 |
| Figure 6:16 Kruskal-Wallis results for Highest SoCii and <i>lecturing experience</i> | 247 |
| Figure 6:17 Kruskal-Wallis results in the Sharing category and Age demographic variable | 272 |
| Figure 6:18 Scatter plot of the Highest SoCii and Overall LoU | 274 |
| Figure 6:19 Scatter plot of the Second Highest SoCii and Overall LoU..... | 276 |
| Figure 6:20 Scatter plot of the Lowest SoCii and Overall LoU..... | 278 |
| Figure 6:21 Design, development and feedback cycles of interview guide and questions..... | 283 |
| Figure 6:22 Data analysis process for second interview..... | 285 |
| Figure 7:1 Structure for RQ 1 discussion..... | 315 |
| Figure 7:2 SoC and the journey across the implementation bridge | 334 |
| Figure 7:3 Value and use of the SoCQ | 350 |
| Figure 7:4 Research question 2: structure of the discussion | 351 |
| Figure 7:5 LoU journey across the bridge..... | 360 |
| Figure 7:6 Structure of findings for research question 3 | 362 |
| Figure 7:7 Integration of research questions | 370 |

List of Appendices

| | | |
|--------------|---|-----|
| Appendix 1a | Descriptions and topics covered in the new clickUP training workshops (Compiled by the DEI, 2011b – Internal document) | 406 |
| Appendix 2a | Studies reviewed in an international context | 408 |
| Appendix 2b | Studies reviewed that were conducted in a South African context | 415 |
| Appendix 2c | Medical education studies reviewed | 418 |
| Appendix 2d | Different LMS / technologies used in studies reviewed | 419 |
| Appendix 2e | Different frameworks employed in studies reviewed | 420 |
| Appendix 3a | Levels of use (LoU) and categories defined | 422 |
| Appendix 4a | Stages of Concern Questionnaire | 423 |
| Appendix 4b | Demographic Information (SoCQi & SoCQii) | 426 |
| Appendix 4c | Letter of invitation to participate and Informed consent for the SoCQ | 431 |
| Appendix 4d | SEDL permission for copyright purposes | 434 |
| Appendix 4e | Certification confirmation | 438 |
| Appendix 4f | Invitation to follow-up interview | 439 |
| Appendix 4g | Interview schedule for LoU | 441 |
| Appendix 4h | Letter of invitation and informed consent for the interviews (LoU and Perceived expressed needs) | 442 |
| Appendix 4i | Perceived expressed needs interview guide | 445 |
| Appendix 4j | LoU rating sheet (Hall et al., 2008, p. 57) | 447 |
| Appendix 4k | Ethical clearance certificate from Faculty of Education, UP | 448 |
| Appendix 4l | Approval of the Registrar at UP | 449 |
| Appendix 4m | Signed consent Dean: Faculty of Health Sciences | 450 |
| Appendix 4n | Signed consent Vice Dean and Head: School of Medicine | 452 |
| Appendix 4o | Signed consent Head: School of Health Care Sciences | 454 |
| Appendix 4p | Signed consent Head: School of Health Systems and Public Health | 456 |
| Appendix 4q | Signed consent Head: School of Dentistry | 458 |
| Appendix 6a | SoC statements per stage | 460 |
| Appendix 6b. | SoC statements per stage – codes used | 461 |
| Appendix 7a | List of needs of HPEs at the University of Pretoria when implementing a new LMS | 462 |

List of Acronyms

| Acronym | Meaning |
|----------------|---|
| CBAM | Concerns Based Adoption Model |
| clickUP | Institutional name for the Learning Management System at the University of Pretoria |
| DEI | Department for Education Innovation |
| HPEs | Health Professional Educators |
| LMS | Learning Management System |
| LoU | Levels of Use |
| QL | Qualitative research |
| QN | Quantitative research |
| SEDL | Southwest Educational Development Laboratory |
| SoC | Stages of Concern |
| SoCi / SoCii | Refers to the results of the SoC questionnaire in rounds (i) and (ii). |
| SoCQ | Stages of Concern Questionnaire |
| SoCQi / SoCQii | Refers to the SoCQ used during phase I and phase II of the study. |
| SPSS | Statistical Package for the Social Sciences. |
| UP | University of Pretoria |

List of Support documents available on DVD

| | |
|-------------------------|---|
| Support document 6-1i | Wilcoxon signed rank test: difference between SoCi and SoCii |
| Support document 6-1ii | SoC profiles demographic variable and intensity of SoC |
| Support document 6-1iii | The individual profiles |
| Support document 6-1iv | The individual concerns rated highest and the lowest |
| Support document 6-1v | Second highest rated individual concerns |
| Support document 6-2i | Example of LoU transcribed text in table |
| Support document 6-2ii | SPSS: One-way Chi on all the LoU categories |
| Support document 6-2iii | Cronbach alpha reliability of 2 LoU raters |
| Support document 6-2iv | Spearman correlation on the LoU and demographic variables / age and rating obtained for the LoU Sharing category /Sharing correlation with variable: lecturing experience |
| Support document 6-2v | Kruskal Wallis on the LoU and demographic variables / Sharing and the age of participants statistically significant |
| Support document 6-2vi | Chi square for Sharing and Age |
| Support document 6-2vii | Overall LoU, and variables relating to SoC |
| Support document 6-3i | Word documents with Pre and Post codes and text in tables |
| Support document 6-3ii | Excel code list generated from second interviews |
| Support document 6-3iv | Excel reports from Atlas.ti™ / Quotation count reports in Atlas.ti™ |
| Support document 6-3v | Reports from Atlas.ti™ containing codes from different stages (example) |
| Support document 6-3vi | Evidence provided from text for codes (Pre and Post codes) |

List of Terminology

| Term | Definitions or descriptions |
|--|--|
| 3-D printing | 3-D printers enable the manufacture of any 3-D object from a computer-driven model. Multiple layers of drawings are laid down one after the other to create different shapes and objects (Business dictionary). |
| Adoption and implementation | For the purpose of this study, the researcher assumes that new educational technology is adopted by the organisation and thereafter implemented by the DEI and lecturers at the University. |
| Basic, Intermediate and Advanced courses | Names of clickUP training courses presented between 2006 and 2011 to lecturers at the University of Pretoria. |
| Blended learning | Blended learning is defined as an approach to teaching that utilises both online (e-learning) activities and face-to-face contact sessions with students. Students can attend face-to-face sessions and be expected to complete assignments or other activities online (Malamed, 2014). |
| Click-here courses | A hands-on training strategy to guide participants in a clickUP training course by using step-by-step instructions on where to click. |
| clickUP | The household name (since 2006) for the learning management system employed by the University of Pretoria. |
| Courses | For the purpose of this report, <i>courses</i> refer to subjects (also known as <i>modules</i>) that form part of a specific qualification which a student registers for at the University. This term is chosen because of its particular use in the current LMS at the University of Pretoria. |
| Digital textbooks | Text books that are available in digital or e-book format. Students can download these books electronically. E-books may also be interactive (Kroski, 2013). |
| E-learning | E-learning is “an umbrella term that refers to all types of training, education and instruction that occurs on a digital medium, like a computer or mobile phone” (Malamed, 2014). “E-learning is defined as electronically mediated synchronous and asynchronous communication [with students] for the purpose of constructing and confirming knowledge” (Garrison, 2011, p. 2). |

List of Terminology (continued)

| Term | Definitions or descriptions |
|---|---|
| Flipped classroom | In the flipped classroom approach, students gain control over their learning when they are expected to study pre-recorded or posted learning material before they come to class. The in-class time is then used for inquiry, application and problem solving activities. In this way, a deeper approach to learning is achieved (Kroski, 2013). |
| Gamification (game-based learning) | Gamification can be described as the use of game theory when designing or planning instruction with the aim of engaging students. This proven, successful strategy relies on the competitive nature of humans to achieve success in solving problems (Kroski, 2013). |
| Health Professional Educators (HPEs) | Health Professional Educators (HPEs) are lecturers responsible for teaching in a Faculty of Health Sciences, in any of the disciplines medicine, dentistry, health care sciences, or public health. |
| Just-in-case | More content is provided than what some of the participants in a particular training course may need. The additional information is provided <i>just-in-case</i> it is needed. |
| Just-in-time | Content and information provided in a course is limited to what is really needed by lecturers only at that particular time. |
| Learning analytics | Learning analytics refers to software used to capture intelligent student data to assist in the customisation of learning opportunities for students (Kroski, 2013; Siemens, 2010). |
| Learning management system (LMS) | A learning management system (LMS) is online software available 24/7 for educators to support and enhance student learning. It enable educators to upload content, communicate with students, and create interactive activities for students to participate in. |
| Lecturers, academics and academic staff | The terms <i>lecturers</i> , <i>academics</i> and <i>academic staff</i> are used interchangeably in this report to refer to lecturers in a higher education institution. |
| Mobile learning | Traxler (2005, p. 262) defines mobile learning as “any educational provision where the sole or dominant technologies are handheld or palmtop devices”. |

List of Terminology (continued)

| Term | Definitions or descriptions |
|--|--|
| Massively open online courses (MOOCs) | Massively open online courses (MOOCs) are free and open-access online courses. Apart from online course material in different formats, students can also build and interact with a community for learning (Kroski, 2013). |
| New clickUP | The upgraded version of the LMS at the University of Pretoria, implemented in 2011/2012. |
| Professional staff development / faculty development | Professional staff development refers to programmes and activities, such as clickUP training workshops, that aim to facilitate learning opportunities to enhance and develop skills, knowledge and competencies in using the learning management system at the University of Pretoria (eHow, n.d.). |
| Social media as teaching and learning tools | “Social media and social networking are Web 2.0 tools and platforms that enable ‘user-generated content’ through writing and uploading to a webpage. Examples of social media technologies that can be used for learning and teaching include: discussion forums, blogs, wikis, and 3D virtual worlds. External social media sites include Facebook, YouTube, Wikipedia, Flickr, Twitter, LinkedIn and Second Life” (Victoria University, n.d.). |
| Web-supported learning | The term ‘web-supported learning’ implies the use of the Internet to enhance and support teaching and learning in a blended learning situation (Fresen, 2004). |

Chapter 1 - Introduction & Background

Chapter 1

1.1 Introduction

Globally the higher educational landscape is influenced by a combination of forces. Firstly, trends and development in educational technology result in fundamental transformation (Violette, 2013, p. 1) and provide “an opportunity that permeates all aspects of the educational ecosystem” (Weiner, 2013, p. 2).

Secondly, the development of the Internet precipitated a “digital educational revolution” (Violette, 2013, p. 2); and lastly, the current generation of undergraduate students has grown up with ubiquitous technology and they have certain expectations regarding the use of technology in learning and teaching.

The adoption of sophisticated educational technologies, for example learning management systems (LMSs), is driven by thrusts such as the increasing demand for higher education qualifications. The resultant higher student numbers lead to a growing shortage of physical space and an increased dependence on alternative learning methods and media. Other thrusts are the promises of these educational technologies (e.g. LMSs) to address teaching quality and greater learner interaction (Coates, James & Baldwin, 2005, p. 23-24). Continuing to pursue entrenched ways of teaching or turning back to traditional textbook teaching methods are no longer an option. New ways of teaching are required to address the challenges faced by the higher education sector in the 21st century.

In support of the many challenges that higher education is facing, institutions worldwide are making increasing use of various technologies to support teaching and learning (Petherbridge, 2007, p. 26). Many have acquired an LMS to enable communication, assessment and the management of courses. LMSs provide a web-based space where content can be accessed or viewed, and students can interact with fellow class members, lecturers and with content in the form of

learning materials. Most of these web-based spaces can be accessed from any computer or (many) mobile devices, and are available at any time of the day or night. Unfortunately, the availability of such systems on campuses causes many academics to feel obliged or pressurised to make use of them.

In South Africa, many large residential universities have acquired the use of an LMS since the late 1990s. The University of Pretoria (hereafter “UP” or “the University”) strives to stay internationally competitive, as expressed in its strategic vision to be a leading university in education and research. The University expects academics to consider the most “effective blended learning model when planning multiple learning opportunities in a resource rich learning environment” (University of Pretoria [UP], 2012a, p. 10) and in so doing, to make use of the enterprise-wide Blackboard™ LMS (branded in-house as “clickUP”).

The Department for Education Innovation (DEI) is responsible for leading the university in terms of excellence in teaching and learning, with the stated vision of “creating synergy towards innovative education environments for student engagement and success” (Department for Education Innovation [DEI], 2013). The DEI is therefore responsible for facilitating the implementation and support of the LMS in all nine faculties across the institution.

Since an LMS was first introduced at UP in 1998, academics have experienced regular upgrades which have necessitated re-training in the use of new and updated functionality. The latest upgrade (during 2011) was a major one in terms of layout and features that imposed a fresh learning curve and necessitated familiarisation with new terminology. This provided the challenging opportunity to encourage widespread fidelity use of the new platform.

An audit done in 2007 on the use of the previous LMS showed that in 80% of the courses, the system was used merely as a repository of information. This finding was confirmed by a lecturer survey at UP in 2009, when lecturers revealed that they use the system mainly to make content available to students. The question is what is needed to guide lecturers to achieve fidelity of implementation.

1.2 Fidelity of implementation of the UP LMS

When implementing expensive learning management systems in higher education, accountability for their use is to be expected. Although LMSs are used in various operational forms across the different disciplines in higher education, there is a need for a defined vision of preferable practices (Hall & Hord, 2011a, p. 64). This vision is often referred to as *optimal use*, *high quality* or *high fidelity use*. In this thesis these and other terms are used interchangeably to describe this vision: fidelity of implementation, high level use, high fidelity, high quality use, intensity of use, high fidelity of implementation, widespread fidelity of use, or high quality of use.

The critical question is whether it is appropriate to expect high fidelity of implementation in higher education, considering academic freedom and the scope of disciplines taught. Should all academics be required to do exactly the same thing? However, failing to define the vision for use is often regarded as the very reason for the lack of widespread use (Hall & Hord, 2011a, p. 65).

Various studies refer to fidelity of implementation and use in different ways. Studies done by Bridge (1995) and Koon (1995) cited in Hall & Hord (2011a, p. 63) associate fidelity of use with higher student achievement. Javeri and

Persichitte (2010, p. 607) measured technology integration practices in a higher education setting and classified the use as high, medium, or low fidelity. The same authors describe technology integration as a “transformative or re-invention process where instructional strategies and outcomes are redefined by technology and the innovative capabilities of technology are used to fundamentally change teaching and learning” (p. 612). They argue that the more integrated one’s technology use becomes, the more fundamental are the required changes in teaching approaches (p. 614). They further argue that this implementation process is more challenging for academics in higher education since they carry additional responsibilities of research and community service.

Holt, Borland, Farmer & Rice (2005, p. 261) reason that fidelity “is enhanced through the use of cases of good practice located within the institution” which will further support the widespread use of technology in a particular context.

Irrespective of the promises that educational technologies hold for higher education, Hall and Hord (2011a, p. 239) conclude that if these technologies (in particular, LMSs) are “not used well, the promised outcomes will not be attained”. They are therefore of the opinion that fidelity of implementation is becoming more important than ever.



For the purpose of this study, fidelity of implementation of the UP LMS is defined as the level of use that is reached when lecturers carefully consider the impact of how they use the LMS, and purposefully select from the available tools, with the intention of enhancing student learning.

Thus, using a greater number of functionalities (tools) in the LMS is not necessarily related to fidelity of implementation of the system. The

purpose for using certain functionalities to impact student learning is more important. This idea is further explored and discussed in section 3.5.

1.3 Context and background of the study

A description and understanding of the context of the study and those individuals who participated in it, are important in order to clarify the lens through which the researcher analysed and interpreted the data. Furthermore McMillan and Schumacher (2010, pp. 321-322) states that context also has a powerful influence on human behaviour.

1.3.1 University of Pretoria: Health Professional Educators in the Faculty of Health Sciences

This research study was conducted at UP, which is one of the largest residential universities in South Africa, with 62 500 registered students in 2012 (UP, 2012b). This student population reflects the cultural diversity of the South African population. The university strives to be recognised and to stay competitive locally and internationally for excellence in terms of teaching and learning, research and community engagement. There are nine faculties and a business school which are spread across six campuses in Pretoria and Johannesburg (UP, 2012c, p. 3).

The Prinshof Campus (also referred to as the “Medical Campus”) houses the Faculty of Health Sciences and is located next to the Steve Biko Academic Hospital. The faculty comprises four schools: the School of Medicine, the School of Dentistry, the School of Health Systems and Public Health, and the School for

Health Care Sciences. Each school consists of various academic departments. The faculty is one of the largest faculties of Health Sciences in the country, and is renowned nationally and internationally for the education of health professionals. The emphasis on community engagement in the curriculum ensures that graduates are prepared to deal with the demands of providing health services in all areas and locations once they are professionally qualified. Exceptional research and clinical services are also delivered (UP, 2012c, p. 18).

Clinical training of students takes place at various other sites including the Steve Biko Academic Hospital, Kalafong Hospital, Tshwane District Hospital, National Health Laboratory Services, and a number of primary health clinics in and around Pretoria. Health professional educators (HPEs) are professionally qualified and registered scientists, including medical doctors, dentists, specialists and health care practitioners. In August 2011, there were 572 academic staff (HPEs) in the faculty, of which 269 were full-time appointees. This number included academics with joint appointments (i.e. appointed by the University and the government simultaneously) (UP, 2011, p. 49).

The HPEs in the faculty were invited to participate in this study. They have the additional role of delivering clinical training in the aforementioned academic or government hospitals and clinics, besides their normal duties and responsibilities in terms of teaching, research, and community engagement. The faculty is also under pressure to increase the number of students in order for the country to meet the demands of delivering health services to the South African population (UP, 2011, p. 49).

Since the initial implementation of the LMS at the University, HPEs in the Health Sciences Faculty have taken up the challenge of implementing it in their teaching

and learning. With each upgrade HPEs learned how to utilise the new version of the system and implement it. Nevertheless, the task of supporting lecturers in using the system effectively and to its full capacity proved to be a challenge, as can be seen from the results of the audit and the lecturer survey previously mentioned.

1.3.2 A historical view of the use of an LMS at the University of Pretoria

The University promotes a blended learning approach and strives to foster a resource-rich teaching and learning environment. The Blackboard™ LMS is utilised to scaffold this approach and academic staff are expected to implement and use the LMS effectively in their teaching and learning.

The University originally implemented the WebCT LMS in 1998. Figure 1:1 presents a historical overview on the use of the WebCT and Blackboard platforms at UP over the last one and a half decades. UP experienced exceptional growth in the use of the LMS, which is evident from the following statistics (DEI, 2011a, p. 18):

- The number of undergraduate courses accessible from the LMS increased from 200 in 2002 to 1 767 in 2011;
- The number of post graduate courses increased from 420 in 2002 to 992 in 2011; and
- The number of students with access to the LMS increased from 1 600 by the end of 1999 to 17 377 in 2002, and 38 201 in 2011.

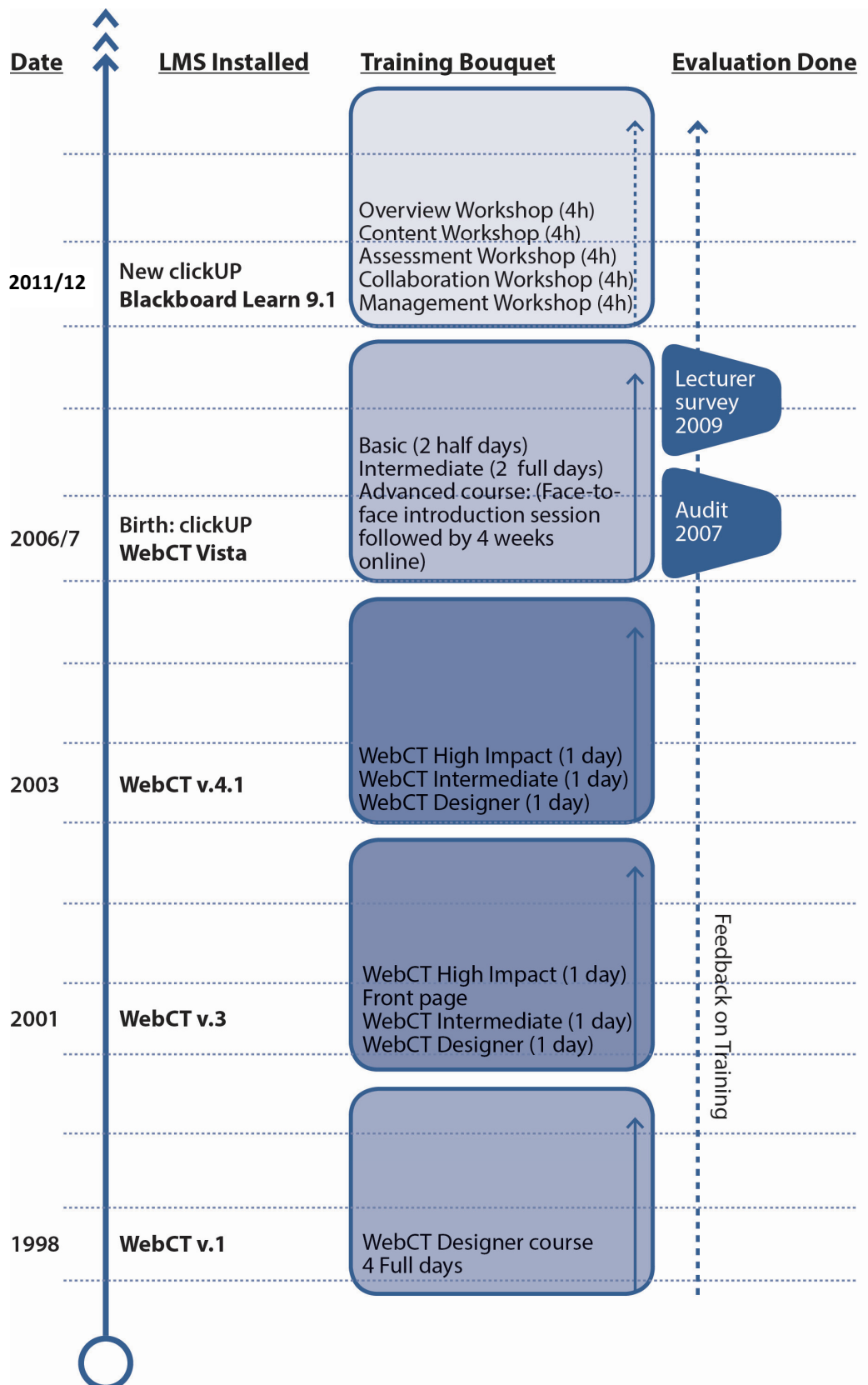


Figure 1:1 Historical view of the use of the LMS at UP

Major upgrades to the LMS software were accompanied by the need to re-think and re-design the training opportunities offered to academic staff who are expected to implement the system in their teaching. Le Roux (2002) reports that, contrary to expectations, academics did not fully adopt the WebCT system, even after intensive training in how to use it. It became clear that the increasing and changing demands in an e-learning environment for students and lecturers were more difficult to accept than had been expected. Lecturers felt that the system was not very user friendly and that they were unable to cope with the demand of using it; they were thus negative about implementing the LMS (Le Roux, 2002, p. 2).

In 2006/7, a major upgrade took place when *WebCT Vista* was implemented. The new version of the LMS was then branded with the in-house name: *clickUP*. During this cycle of upgrading the LMS, three courses (*Basic*, *Intermediate* and *Advanced*) were designed and presented to academic staff. The design of the courses was inspired by the *Ten levels of web integration in higher education*, compiled by Bonk, Cummings, Hara, Fischler and Lee (1999), which were condensed by Fresen (personal communication, December 2013) into three levels: web-supported, web-enhanced and web-dependent learning.

The *Basic* course (web-supported) helped lecturers to prepare study material for uploading to the web, to structure a course online, and to facilitate and use online collaboration tools. The *Intermediate* course (web-enhanced) focused on the use of assessment functionalities as well as the plagiarism software and grade book. The *Advanced* course (web-dependent) enabled lecturers to build and implement a fully online course for students who seldom attended face-to-face sessions. Attendance at the various courses allowed academic staff to gain progressively

more competencies in the use of a wider range of functionalities available in the system. Since a set curriculum was followed, the training sessions were experienced by participants as *just-in-case* type of training. The *Basic* and *Intermediate* courses were presented as “click-here” courses while the *Advanced* course was an online course that allowed participants to work independently developing their own courses utilising the more advanced functionalities.

A new beginning for academics and students at UP was signalled by implemented of the upgraded Blackboard™ LMS, known as “*new clickUP*”, in 2011/12. The *new clickUP* was systematically implemented in parallel with the “*old clickUP*” system (implemented in 2006/7) which remained fully operational. The intention was to grant lecturers time to attend training workshops, master the new system and migrate their courses from the old to the new system. This occurred over the 18-month period from the middle of 2011 to the end of 2012.

The continuous development and improvements in the learning management

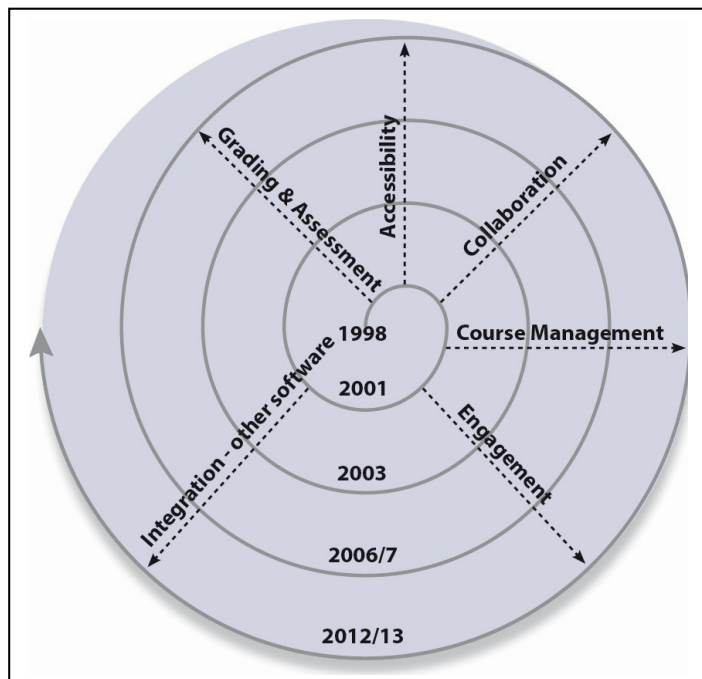


Figure 1:2 Cyclical development and implementation

software, prompt a recurring cyclical process of implementation of the upgraded learning management software (see Figure 1:2), in order to enhance student

learning through better grading and assessment tools, collaboration opportunities, course management and engagement.

Changes in software design philosophy, screen layout and new functionalities in the upgraded Blackboard™ LMS meant that this new version of the system constituted a major upgrade, which necessitated the learning and acquiring of more skills to ensure the implementation and effective use of the system. As a result, the training workshops presented to staff had to be re-designed and re-developed.

1.3.3 Auditing the use of the system

Soon after the upgrade to *WebCT Vista (clickUP)* and implementation in 2007, the need was identified to create a status report of how the system was used across the University. The aim was to inform management about how to improve the training and support provided by DEI.

An electronic database was designed and developed in order for the team of instructional designers to capture data on how the system was being used by lecturers and students in each course. The three levels of web-supported learning (web-supported, web-enhanced and web-dependent) used to structure the face-to-face training workshops were applied as a framework for performing the audit (J.W. Fresen, personal communication, December, 2013). All courses available on the system were audited and categorised according to these levels of web usage. The web-supported level was categorised as a virtual ‘post box’ due to its emphasis on the provision of content. Web-enhanced courses were identified as those that, among other aspects, also employed assessment tools.

Web-dependent courses were identified as those which were conducted fully online, with students having little (if any) face-to-face lecturing time.

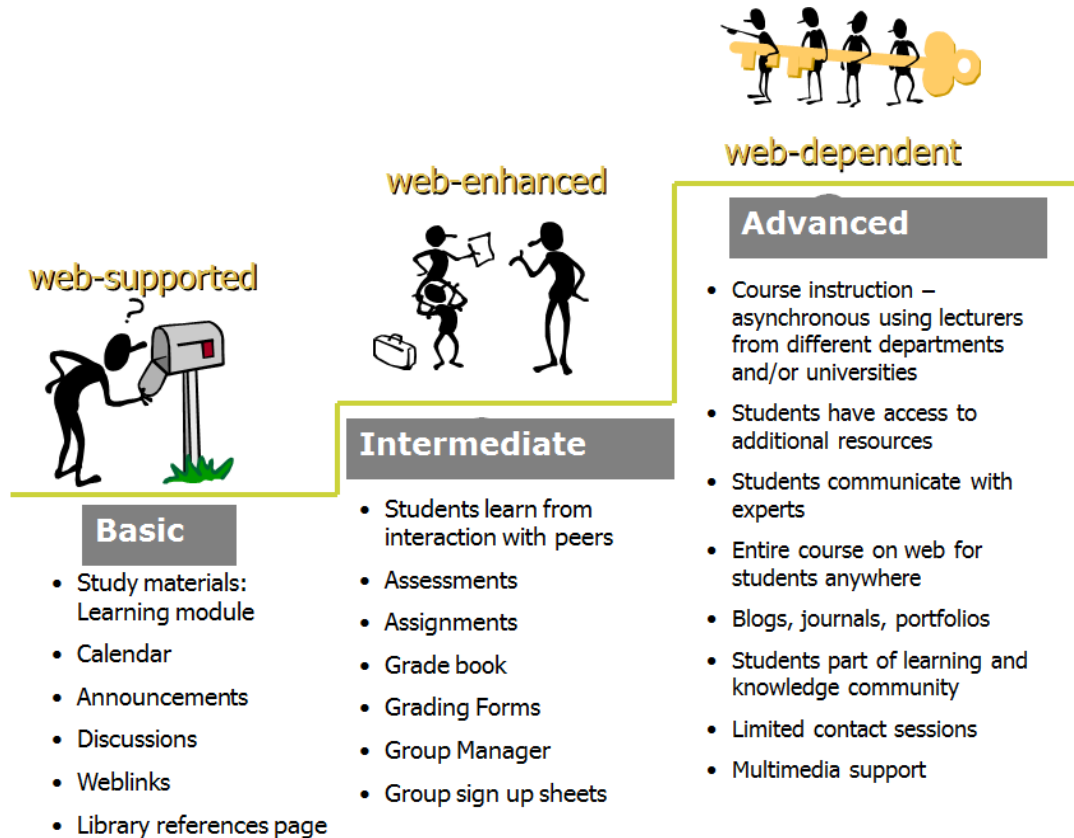


Figure 1:3 Levels of web-support (J.W. Fresen, personal communication, December, 2013)

The results of the audit revealed that 80% of the courses across the University (n = 1 592) were operating at the web-supported level – mainly providing information to students, with little interaction. About 14% were web-enhanced courses that embraced some of the interactive features like online assessments or assignments. In the Faculty of Health Sciences (n = 225), 86% of courses were operating at the web-supported level, and 14% at the web-enhanced level (DEI, 2008, p. 48).

Information technology problems experienced by the University in 2007/8, such as slow bandwidth to other campuses, might have contributed to the results of

this audit. The conclusion was that “*DEI has to actively research the reasons why some lecturers are not using clickUP in order to direct future teaching and learning strategies as well as clickUP governance decisions*” (DEI, 2008, p. 50).

The audit clearly showed that the *clickUP* system was not being used to its full potential, despite training and support efforts. An institutional survey conducted amongst lecturers in 2009 to determine the use or non-use of the *clickUP* system, found similar results, as discussed below.

1.3.4 clickUP lecturer survey

An exploratory study conducted by DEI in 2009 focused on factors influencing the use or non-use of *clickUP* at the University. From a total population of 1 656 lecturers, 432 (29%) responded to the study. The respondents comprised users as well as non-users of the system (DEI, 2010, p. 24).

A challenge listed by lectures for not attending training or making use of *clickUP* was **time** constraints (DEI, 2010, p. 25). Time constraints and the non-awareness of features were also cited as reasons why lecturers do not make use of the more advanced features. The majority of participants (66.05%) indicated that personal time constraints play a role either to some extent, to a large extent, or “yes, definitely” (Bothma, 2010, p. 17). The report on the study also indicated that lecturers in junior academic capacities, with less teaching experience, tended to be more regular users of the system (Bothma, 2010, p. 55).

Dissatisfaction and frustration with the system resulted from the following factors (Bothma, 2010, pp. 3-4):

- the system itself: e.g. system downtime, unforeseen session time-outs;
- challenges in terms of teaching responsibilities; and

- limitations of the infrastructure [limited bandwidth].

In terms of training opportunities available for academic staff to master clickUP, the survey results showed that (Bothma, 2009):

- the perception was that training was not well communicated or advertised (p. 23);
- lecturers were not aware of the Help website where a lot of additional training and self-help materials were available (p. 44);
- time constraints made it difficult for lecturers to attend training for the duration of two half days or two full days, especially if they only needed to learn about a specific aspect of the system (p. 47);
- there was a need for one-on-one training (p. 23); and
- dedicated technology staff members to support a particular department were preferred (p. 23).

Bothma (2010) concluded that:

The results from the survey indicated that a holistic approach addressing all areas relating to and impacting on clickUP should be followed by the University to ensure an increase in the quality of clickUP use (p. 4);

and

The information gained will be used to develop strategies to ensure the optimal use of this electronic learning platform and that, upon implementation, these strategies are monitored and evaluated (p. 61).

Another key finding in the study was:

Customised training sessions based on the needs and requirements of lecturers' particular academic department/unit and an electronic approach to teaching and support are the preferred means in terms of clickUP training and support (p. 3).

In particular, it was found that:

... respondents from the faculties of Veterinary Sciences and Health Sciences were fairly positive regarding clickUP. They've emphasised that training opportunities regarding clickUP should be adjusted to cater for individual needs and requirements of faculties and departments. They were adamant that this might lead to an increase in clickUP use and overall satisfaction with the system (Bothma, 2009, p. 51).

In summary, Bothma suggested that a holistic approach should be followed, addressing all areas that relate to or impact on clickUP, in order to ensure increased use of the system (2010, p. 4).

Both the findings of the audit (section 1.2.2.1) and the results of the lecturer survey (section 1.2.2.2) were taken into consideration in subsequent interventions to re-design the clickUP training offered to academic staff.

1.3.5 Development of new training workshops for the new clickUP (Bb version 9.1)

During the re-design process of the training workshops, the primary drivers to consider in terms of changing the philosophy and methodology of the training were (Figure 1:4):

- the results from the lecturer survey report – suggested changes were implemented in the structure and facilitation of the new training workshops;
- the fact that, according to the 2007 audit, clickUP had been used mostly as a repository of information;
- the philosophy of the new upgraded version of the LMS (with a focus on enhancing student engagement and instructor effectiveness and offering a large number of new functionalities) required a different approach to the training; and
- the Executive Management of the University as well as the DEI management required a higher quality of use of the new clickUP system.

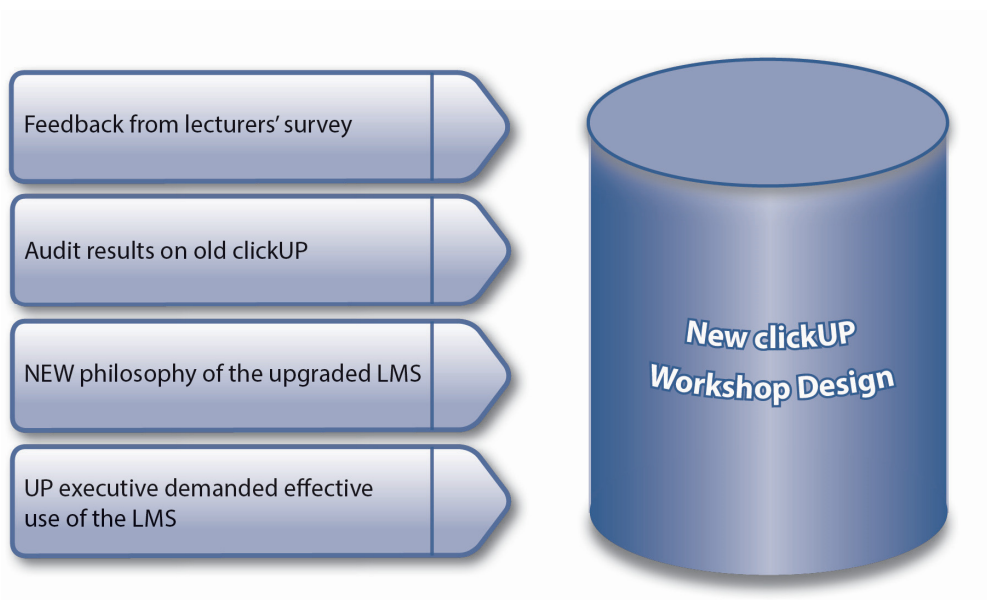


Figure 1:4 Factors that influenced the new clickUP workshop design

At the University of Pretoria these training workshops are presented to all lecturers as part of their in-house professional staff development opportunities.

1.3.6 Changes implemented in the training workshops

The re-design process highlighted three change strategies to address: the way the training was designed and delivered (course delivery), the content provided during the training workshops (course content), and the type of support provided (providing support) (see Table 1:1).

Table 1:1 Changes implemented in the new training workshops

| Changes made | Type of strategy | Reason for change |
|-----------------------------|-----------------------------|--|
| Workshops were made shorter | Course delivery and content | Results from lecturer survey report: “insufficient time to attend formal (often lengthy) training sessionswere stated as the most common reasons why the current clickUP training and support are not always adequate” (Bothma, 2010, p. 39). |

Table 1:1 Changes implemented in the new training workshops (continued)

| Changes made | Type of strategy | Reason for change |
|---|---------------------------------------|--|
| Sharing examples or case studies of clickUP use | Providing support | Results from lecturer survey report: “The factors that will encourage respondents the most to use more features within clickUP are Case studies presented by other academic staff members that demonstrate the successful application of certain features” (Bothma, 2010, p. 54). |
| Workshops presented regularly on four different campuses | Course delivery | Results from lecturer survey report: “ClickUP courses are often scheduled on main campus, during times that we have to lecture. Schedule these during non-lecturing times, on other campuses” (Bothma, 2010, p. 37). |
| Educational foundations for use of online features addressed | Course content | Executive management and DEI management want to achieve higher levels of use of the system, rather than just as a repository of information. This will require lecturers to re-think their teaching strategies. |
| Hands-on sessions restricted to tricky features or features commonly used | Course delivery and content | Results from lecturer survey report: Shorter training sessions by Education Innovation [DEI] that focus on specific features and their applications ” (Bothma, 2010, p. 38). |
| Dedicated session for planning and building the use of a particular set of features based on individual challenges and needs | Course delivery and providing support | New clickUP philosophy (possibilities) necessitated this approach and also the results from the lecturer survey report indicated a need for: “Personalised, focused training by Education Innovation [DEI] on the different needs and application opportunities of a specific department and faculty” (Bothma, 2010, p. 38). |

The changes listed in Table 1:1 resulted in the design of five new training workshops. The workshops were each based on a specific group of tools or functionalities in the system (See Appendix 1a for details about each workshop). Figure 1:5 displays the names of the new workshops and the structure applied to each of them.

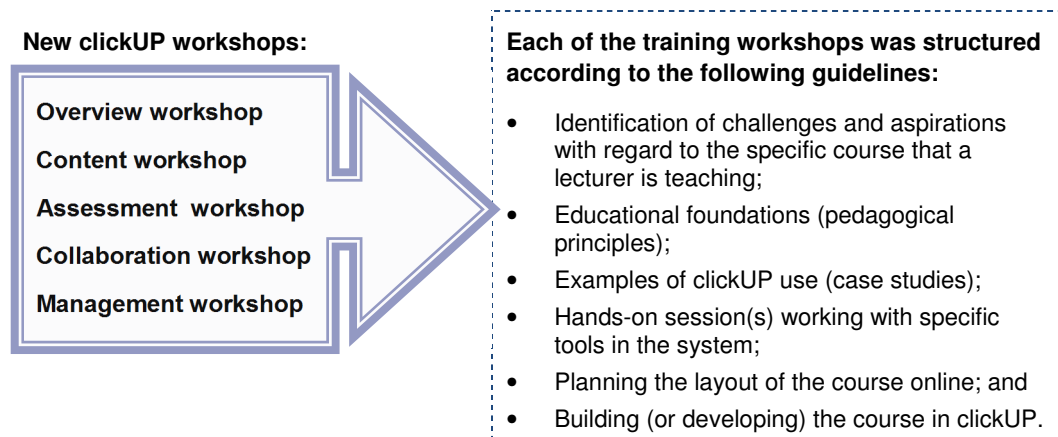


Figure 1:5 New clickUP training workshops

The training workshops were all piloted in 2011 to a pilot group of lecturers, before changes were made based on feedback from these pilot lecturers. These workshops were then presented to the broader communities of academics on the various campuses.

The DEI “serves and leads the University of Pretoria’s vision for teaching excellence and innovation” (DEI, 2013) and is also responsible for facilitating the effective use of *clickUP* in all nine faculties. The implementation and use of *clickUP* by lecturers therefore needs to be monitored in order to deliver customised support to academics on their journey to effectively implementing and using the system in their teaching.

❖ Although all the recommended changes were implemented, based on the audit and lecturer survey it is not known to what extent HPEs have started to implement and use the new *clickUP* system in their teaching.

1.4 Statement of the problem

Although many research studies have been conducted to investigate factors that impact on the implementation of an LMS (Atkins & Vasu, 2000; Brzycki & Dudt, 2005; Elgort, 2005; Lee & Kim, 2007; Mihhailova, 2006; Oncu, Delialioglu & Brown, 2008; Schifferdecker et al., 2012; Wang & Wang, 2009; Yang & Huang, 2008; Zayim et al., 2006; Zinn, 2009), research literature is silent about what is the best way to facilitate such an implementation in a medical education setting in South Africa. Furthermore, evidence provided in studies indicates that widespread fidelity (high level) use of educational technology is little (Birch & Burnett, 2009, p. 117; Hall, 2010, p. 231; Lee & Kim, 2007, p. 1854; Zinn, 2009, p. 159).

Since its first implementation in January 1999, monitoring and evaluation of the use of the LMS at the University (first WebCT and later Blackboard) consisted of various data collection activities (see Figure 1.3).

System statistics show that large numbers of users have access to the system (DEI, 2011a, p. 18). The audit (2007) and lecturer survey (2009) both confirmed that the system was used mainly to manage and deliver content. However, none of the data gathering activities used a validated or standardised instrument that focused on the specific needs of lecturers regarding strategies that would ease the implementation of the system in their teaching practice. The gap exists to systematically evaluate the implementation of the Blackboard™ LMS in order to investigate and explore how the system is used by lecturers and what their concerns (feelings and attitudes) are with regards to the implementation. In summary this study ventures on a quest to find an answer to what it is that

lecturers need with regard to training and support in order to implement the Blackboard™ LMS in their teaching practice.

1.5 Purpose of the study

To assist in the systematic evaluation of the implementation of the new LMS the study employs the Concerns Based Adoption Model (CBAM) that consists of two constructs: the stages of concern (SoC) and the levels of use (LoU).

The purpose of this study is to identify the LoU and SoC of Health Professional Educators (HPEs) at the Faculty of Health Sciences at UP in order to determine their perceived needs regarding strategies to facilitate the implementation of the LMS that was upgraded in 2011/2.

The purpose can be deconstructed into the following research questions.

1.6 Research questions

Based on the above purpose statement, three research questions were formulated.

Research question 1:

What are the stages of concern (SoC) of HPEs regarding the implementation of the LMS in their teaching practice after they have engaged in professional staff development interventions?

Research question 2:

What are the levels of use (LoU) of the LMS in the lecturers' teaching practice after they have engaged in professional staff development interventions and had the time to start using the system?

Research question 3:

What are the perceived expressed needs of lecturers with regard to training and support that would enable them to implement the LMS in their own teaching practice?

1.7 Rationale for the study

The results of this study will enable professional staff developers and instructional designers who support HPEs, to design, develop and implement customised training and support strategies based on the specific needs demonstrated by HPEs at UP. The aim of such strategies is to facilitate the implementation and use of educational technology in teaching. It is hypothesised that these customised interventions (strategies) will have a positive influence on the implementation and use of the learning management system.

1.8 Significance of the study

Through the results of the study the following contributions to the field of study will be realised:

- The perceived needs of HPEs regarding training and support needed to facilitate the implementation and use of the upgraded Blackboard™ LMS will be assessed;

- The concepts LoU and SoC will be applied in a medical education environment, with the aim of improving the implementation and use of the upgraded Blackboard™ LMS; and
- The application of the concepts LoU and SoC to assess the needs and monitor the extent of implementation of the upgraded Blackboard™ LMS at UP will be explored in terms of appropriateness and value.

Although the results of this study will not be generalisable, other researchers in similar contexts with similar challenges might benefit from the results of this study in their journey of facilitating the implementation of an LMS to higher levels of use.

1.9 Assumptions of the study

This study is based on the assumptions that:

- HPEs attending the training workshops have made the decision to use the UP LMS (clickUP);
- the LMS system is functioning properly and is stable in terms of technological requirements;
- that participants in the study truthfully and to the best of their ability disclosed their concerns regarding the implementation of the LMS;
- the concerns of HPEs who participated in the study are representative of the concerns of HPEs in the faculty regarding the use of the LMS; and
- the concerns identified through the use of the CBAM instrument (SoC) will allow the researcher to “identify the special needs of individuals [HPEs] involved in the change process” as stated by the authors of the SoC (George, Hall & Stiegelbauer, 2008, p. 1).

1.10 Limitations of the study

The researcher is employed as an instructional designer in the Faculty of Health Sciences at UP and is responsible for presenting the training workshops to HPEs on the use of the Blackboard™ LMS. Any potential bias on the part of the researcher as a result of working in this environment has been considered in the analysis and interpretation of results.

The study focuses only on the concerns and needs of HPEs who attended the training workshops and not of those who decided not to attend the workshops. The specific context of the study and the restricted number of participants may negatively impact on the generalisability of the results of the study.

1.11 Delimitations of the study

The study explores the concerns and needs of HPEs regarding training and support required in implementing and using the upgraded Blackboard™ LMS and not any other technologies. The study did not attempt to do an evaluation on the effectiveness of the training workshops that were designed and presented.

Furthermore the study is limited to HPEs and the Faculty of Health Sciences, and not any academic staff in any other faculties or subject areas.

1.12 Structure of the thesis

The thesis report is divided in to seven chapters. The remaining six chapter is briefly described below:

- Chapter 2 reports on the **literature reviewed** and a synthesis regarding the evaluation of the implementation of LMSs in higher education environments.
- Chapter 3 introduces the Concerns Based Adoption Model (CBAM) and **conceptual framework** for the study. It also reports on studies reviewed within higher education that employed the CBAM framework and instruments.
- Chapter 4 explains the **research design** used in the study.
- Chapter 5 introduces and describes the **relationship between the data collection, LMS implementation and training workshops** presented.
- Chapter 6 reports on the **data analysis** and **the findings**.
- Chapter 7 discusses and summarises the findings before the **conclusions, contributions and suggestions for further study** is provided.



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Chapter 2

Chapter 2 - Literature review

2.1 Introduction

“We are living in a time of change. Rather than viewing change as a painful course of action, let’s develop an understanding of how it works, how to facilitate the process, and how to learn from experiences” (Hall & Hord, 2011a, p. 18).

The biggest cause of continuous change in higher education over the past two decades is the growth and development of educational technology and the high rates of adoption of these technologies by institutions worldwide. Increasingly, technology is being used to enhance teaching and learning at universities, because of the many benefits and opportunities it offers for higher education institutions (Njenga & Fourie, 2010, p. 200; Turney, Robinson, Lee & Soutar, 2009, p. 71). Despite research that has been done concerning the possible strategies for adoption and implementation, as well as factors to consider for successful implementation, authors agree that high fidelity (quality) use of educational technology in higher education is lacking (Birch & Burnett, 2009, p. 117; Lee & Kim, 2007, p. 1854; Zinn, 2009, p. 159).

Multiple factors, such as the context and culture of institutions, have been proposed as reasons for the low quality of use (Brzycki & Dudt, 2005, p. 619; Straub, 2009, p. 641). Njenga and Fourie (2010) assert that people issues, and resistance to change are some of the most difficult issues to overcome when implementing new technology. The same authors emphasise that these “soft issues can have a much greater effect on implementation than the technology itself” (p. 207).

Because various technologies have unique characteristics and are ever evolving, trainers (staff developers) as well as trainees (academic staff members) are required to learn and adapt on a continual basis (Hall, 2010, p. 231). The picture is not complete if users (lecturers), with their associated reactions to and frustrations in the use of a new or updated LMS, are not taken into account. Laurillard (2002, p. 18) states that innovation is at the core of universities' competitive advantage in both research and technology, and therefore lecturers are regularly expected to change or adapt in order to accommodate new technologies in their teaching.

From the late 1990s learning management systems were adopted quite swiftly by higher education institutions across the world, and they are now considered as “normal and a necessary rather than an optional element” of teaching (Coates et al., 2005, p. 22). Despite the fact that this view is fairly dated it still holds truth for South Africa. The University first implemented an LMS in 1999. Since then several upgrades occurred, notably in 2003 and 2006/7. An audit in 2008 revealed that in 80% of the courses in the system, fidelity of use had not yet been achieved (DEI, 2008, pp. 45-51).

A third upgrade in 2011/12 prompted the question as to what could be done differently to address the needs identified by the 2007 audit. The new implementation resulted in comprehensive changes in the way training and support are offered to lecturers, in order to promote high fidelity (high quality) use of the upgraded LMS. This study aims to monitor and evaluate the implementation initiated in 2011/12 using the CBAM (Concerns Based Adoption Model) to determine the real concerns and needs of lecturers, and how they are using the new LMS system.

Professional staff development interventions need to facilitate the necessary knowledge, skills, beliefs and attitudes on the part of lecturers, so that improved teaching and learning practices will support or enhance the quality of student learning (Fishman, Marx, Best & Tal, 2003, p. 654; Hendricson et al., 2007, p. 1517). In medical education in particular, the ultimate vision is that better teaching and learning practices will further result in better quality of patient care (McClellan, Cilliers, & Van Wyk, 2008, p. 564).

Jesson, Matheson & Lacey (2011, pp. 10 -12) define two styles (approaches) of literature review - a *traditional* review and a *systematic* review which can be viewed as two ends of a continuum. The traditional review is differentiated by the fact that no prescribed methodology is followed (p. 10), while the systematic review has a clearly defined purpose, states the inclusion and exclusion criteria, and results in a qualitative appraisal of the literature (p. 12). In section 2.2 a traditional review is used to review the literature particularly relevant to the topic of this study, while in section 2.3 a systematic review is used to investigate how the implementation and use of learning management systems (LMSs) have been evaluated in higher education.

2.2 The use of educational technology in higher education

In this section the use of LMSs in higher education, emerging trends in educational technology, the implementation of educational technology, the use in medical education as well as the change in the roles and responsibilities of lecturers implementing technology in their teaching practice are discussed.

2.2.1 Learning management systems

A learning management system (LMS) is an educational web-based technology – a sophisticated software platform designed for large-scale institutional use that enables the management and delivery of learning content and resources to students. LMSs are also referred to as “learning platforms”, “course management systems”, “virtual learning environments” and “instructional management systems” in literature (Coates et al., 2005, p. 20).

Some benefits that any LMS offers to the teaching and learning environment are identified by Aunwasha (n.d. , pp. 1-3) and Katsifli (2010, p. 11) namely that:

- it is easy to customise the interface so that the learning experience can be designed to address the specific needs of any particular group;
- all the functionalities are integrated in one system and can be accessed through one point of entry;
- it supports and makes the administration of groups easy;
- it enables asynchronous class discussions, as well as group work or peer support;
- it allows tracking of student activities as well as administration, tracking and recording of assignments;
- it facilitates communication between students and lecturers;
- it serves to support students in their learning;
- it facilitates the management of content in the sense that it can be updated and new information can be made available immediately;
- it provides a way in which students can receive feedback on their progress; and
- it can be accessed from anywhere and at any time.

LMSs continue to drive and influence pedagogy (Coates et al., 2005, p. 27).

Although these authors admit that the dominant use in higher education today is still more towards the transmission of content, they highlight the concern that LMS design should “stay simple enough” to be used as “an everyday teaching tool” while also “support[ing] sophisticated pedagogical practices” (Coates et al., 2005, p. 28).

Coates et al. (2005, pp. 21-26) elaborate on the **possible drivers** behind the overwhelming LMS adoption by higher education institutions. They claim that amongst others the following **characteristics and promises held by the technology** are motivating its adoption:

- it provides a way of increasing efficiency in teaching;
- it offers institutions a way to deliver large-scale learning programmes that are resource based;
- it enables flexible course delivery;
- it enhances knowledge management;
- it promises enriched student learning;
- it provides what new students expect, which is the use of advanced technologies because they were born with the “information age mind set”;
- it provides a means to respond to the increasing demands made on higher education for broader access;
- it reduces limited access caused by a lack of physical infrastructure;
- it provides a means to qualitatively reform higher education; and
- it offers the “capacity to control and regulate teaching” (p. 26).

Ngugi et al. (2007) investigated the use of learning management systems in South African universities. Of the 22 institutions in South Africa, 13 (including UP) use a commercial learning management system (WebCT, also known as Blackboard since 2007); 5 institutions employ an open source system (Sakai or Moodle); 3 use self-developed systems; and one institution did not use an LMS at that stage (Ngugi et al., 2007, p. 111).

2.2.2 The trends in the use of other educational technology in higher education

Educational technology has had a significant impact on higher education internationally, and indications are that this trend will continue (Glenn, 2008, p.4). This notion of Glenn (2008) is confirmed by the annual Horizon Report that lists key trends, challenges and technologies that will significantly impact higher education. The report is compiled by a panel of experts – an “international community of experts in educational technology” (p. 3) working with new technologies on various campuses across the world. The group includes visionaries that are “shaping the future of learning at think tanks, laboratories and research centres” as well as researchers helping the consortium to conduct cutting edge research (Johnson, Adams, & Cummins, 2012, p. 3). The main aim of these annual reports is to help institutions to stay at the leading edge of emerging technologies and the applications thereof, in order to make learning more engaging and relevant (Johnson et al., 2012, p. 3).

Another report by *The Economist Intelligence Unit* states that technology is still seen as disruptive and expensive, **and educators remain reluctant to change**

the way they have taught for many years, in order to accommodate innovations (Glenn, 2008, p. 4). The 21st century is seen as an “era of **pervasive** technology” and most respondents in the survey believed that “technology will become ever more interwoven into the fabric of academic life” (Glenn, 2008, p. 5). The survey report (Glenn, 2008, p. 16) states that technology is seen as “an **agent** of immense change”; it has “heralded our present knowledge economy and given rise to a generation of students who have never known life without a computer”. It is further highlighted that educational technologies will potentially have ripple effects and make education more accessible to more people around the world. Universities need to equip graduates to compete and survive in a 21st century economy and workplace. Therefore, universities are embracing transformational technologies (i.e. technologies that transform the way we teach), such as learning management systems (Glenn, 2008, p. 4).

In the 1980s, the overhead projector and use of transparencies in teaching were considered to be cutting edge technology, and overhead projectors were provided in most lecture rooms. The possibility of providing photocopied notes for students and playing a video on a video machine in class led educators to believe that they were being innovative and more productive. Since then, methods for presenting information or content have continuously improved. The development of the Internet and improved broadband now allow unrestricted access to information. Active learning has become much more prevalent and students and educators can create, share, collaborate and communicate information, thoughts and ideas in new ways not previously conceivable (EduTecher, 2009, video).

Most recently, it is reported that educational paradigms are shifting to accommodate a blended learning approach. More online learning is expected to become prevalent in 2014 in higher education according to the latest preview of the NMC Horizon Report (New Media Consortium [NMC], 2013, p. 1).

Current trends in technologies that are used or predicted to accelerate in use in higher education are: learning analytics, digital textbooks, gamification or game-based learning, the flipped classroom approach, mobile learning, 3-D printing, MOOCs, and social media as teaching and learning tool (Kroski, 2013; NMC, 2013, Raths, 2014; Sheehy, 2013). Many of the current trends in technologies have been fused into the design of the LMS and are accessible for use by lecturers at higher education institutions.

The Horizon Report also **highlights significant challenges** that higher education institutions are facing in the adoption of new technologies (Johnson et al., 2012, pp. 5-6; Johnson, Adams Becker, Cummins, Estrada, Freeman, & Ludgate, 2013, pp. 9-10; NMC, 2013, p. 2), namely:

- new models of education increase competition with traditional forms of higher education;
- digital media literacy rise in importance but are still not an expected skill for university lecturers, nor evident in faculty training;
- educational processes and practices are a cause of resistance that hinder the full implementation of educational technology; and
- **due to lack of time**, many lecturers have not been trained to implement and use new technologies in teaching and learning, as expected of them.

Two key characteristics of educational technology are that it is **inherently evolving and changing**, and that the emergence of new technologies is an

inevitable part of living in the 21st century. Thus lecturers are continuously facing upgrades of innovations and tend to be bombarded by the development of new technologies. It can be mentally exhausting for educators to keep pace with the changes, not to mention the demands on their time and attention (Brzycki & Dudt, 2005, p. 637). Yet educators continue to be expected to adopt high levels of educational technology use in their teaching (Hall, 2010, p. 231).

Although educational technology has **enormous potential to engage** students in their learning and can assist in differentiating instruction when the appropriate technology is integrated, realising this potential is a caveat that is yet to be achieved.

2.2.3 Implementation of educational technology

According to Hall (2010, p. 231) “technology’s Achilles heel is achieving high quality implementation”. The challenge is to move beyond initial or early adoption by enthusiasts to widespread high quality of use (Hall, 2010, p. 231). The same author asserts that there is a gap in our understanding about what is needed to help people to fully integrate technology into their practice.

Straub (2009, p. 641-642) conducted a review on three adoption theories (Rogers’s innovation diffusion theory, the Concerns-Based Adoption Model, the Technology Acceptance Model,) and highlights the difficulties associated with the implementation process. According to Straub (2009) it is evident from these adoption theories that “technology adoption is a complex, inherently social, developmental process“ (p. 641). Personal and contextual factors may influence the decision to adopt and to persevere or not with a particular technology. He

asserts that “technology adoption is innately social, influenced by peers, change agents, organisational pressure and social norms” (p. 641). The decisions to use or continue use are sometimes altered by these social interactions. He further states that “individuals construct unique (but malleable) perceptions of technology that influence the adoption process” (p. 641). Individuals’ personal beliefs about a new innovation are the results of “prior experience, certain abilities, personality traits, and mandated or voluntary use of the innovation” (p. 641). These beliefs may be changed by strategies to moderate attitudes towards the innovation such as structured training, experimentation, social pressure or change agents.

McPherson and Nunest (2008) agree and suggest that:

The successful adoption of information and communication technology to enhance learning can be very challenging, requiring a complex blend of technological, pedagogical and organizational components, which may at times require the resolution of contradictory demands and conflicting needs. (p. 433)

2.2.4 Educational technology in medical education and professional development

Health professional educators (HPEs) have the task of preparing health professionals of the future in the face of “a rapid[ly] changing health care environment and shifting societal and international issues” (Lief, 2010, p. 429).

The pressures of accountable practice, social responsibility and the growing need for better patient care may have driven the field of medical education to evolve into a discipline in its own right.

Both Dent and Harden (2009, p. 6) and Hallock (2009, p. v cited in Dent and Harden), studying medical education trends and guidelines, state that the

continuing developments of new learning technologies are seen as a trend in medical education and as a challenge. This view is driven by rapid expansion in the use of the Internet, and the development and availability of simulations and multimedia tutorials through which a wide range of clinical skills can be acquired and practised'.

McClellan et al. (2008, p. 557) identify some of the trends and driving forces that shape the future of professional staff development in medical education: professionalism, technology advances, authentic learning and assessment, information technology and the internet, ethical practice, increasing cultural diversity, accountability, and accreditation. In response to these trends, they suggest that professional staff development should focus on the individual and be tailored for a specific department and/or institution.

As previously mentioned, the implementation and use of new educational technology by lecturers can be problematic and this is no different for medical educators. Huwendiek et al. (2010) report on a web-based survey that was sent to 2 200 medical educators across the globe in 2005. The aim was to shed some light on “how medical educators perceive their own expertise, needs and challenges in relation to medical education” (p. 912). Medical educators reported a “need for training with respect to development in medical education research methodology and computer-based training” (Huwendiek et al., 2010, p. 912). Participants regarded their own expertise with regard to new technologies to be low and indicated a need for further training (p. 917). Another need for training they indicated relates to the integration of technology in medical education (p. 917).

Steinert (2010, p. 426-427), who is regarded as an expert in professional development of medical educators (HPEs), proposes the following strategies regarding professional development interventions:

- Learning from peers: the advantage of peer coaching is that it models aspects of clinical practice in the practice setting and thereby fosters collaboration, feedback and support. This is, however, not a method that many lecturers makes use of (p. 426);
- Learn from communities of practice which are defined as: “sustaining, social network[s] of individuals who share and develop an overlapping knowledge base, set of beliefs, values and experiences focussed on a common practice” (p. 427); and
- Mentorship: this is an underutilised strategy which can promote socialisation and the support and development of health professional educators. Mentors can “provide guidance, direction and support or expertise to lecturers” (p. 427).

2.2.5 The changing role of lecturers

Figure 2:1 integrates the roles and responsibilities of lecturers as well as the proposed new tasks, according to the sources listed.

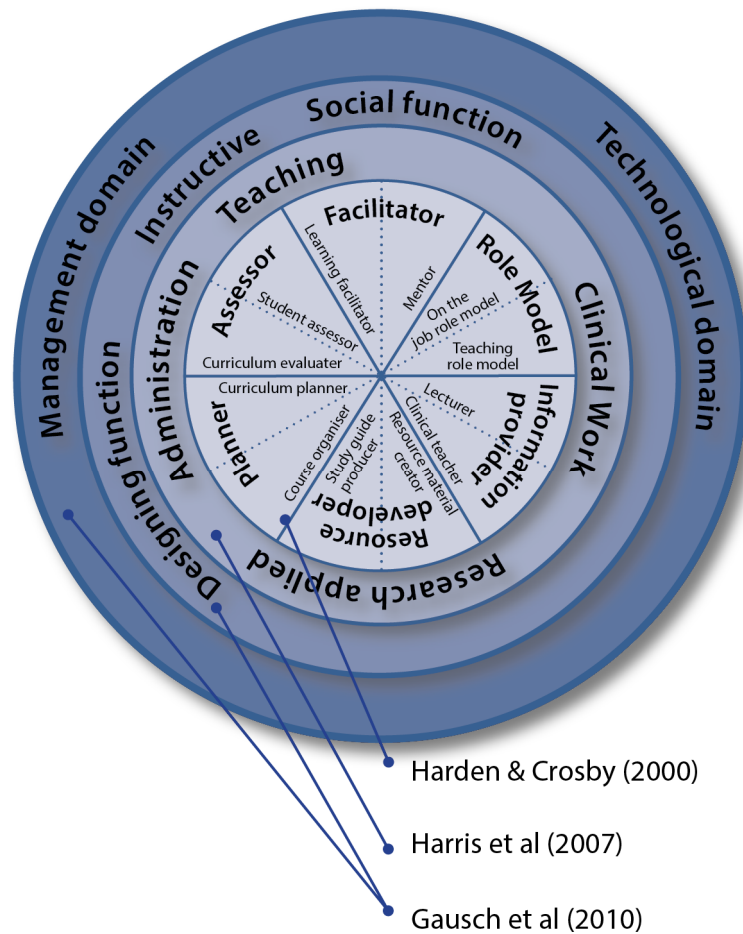


Figure 2:1 Roles and responsibilities of Health Professional Educators

Adapted from: (Harden & Crosby, 2000)

Harden and Crosby (2000, pp. 6-7) investigated the roles and responsibilities of HPEs while Harris, Krause, Parish & Smith (2007, pp. 346-347) conclude that there are four main areas of responsibilities for lecturers (see Figure 2:1).

Guasch, Alvarez & Espasa (2010, p. 201) sought guidance on the changing role of lecturers who employ online learning. They propose new tasks that lecturers need to perform when integrating technology into teaching.

To deliver quality professional development interventions in medical education, Harden and Crosby (2000, p. 3-17) investigated the roles and responsibilities of

the medical educator. They identified twelve roles and responsibilities (see Figure 2:1) that range from being a medical teacher and a clinical expert, to being a mentor and role model for students.

Harris et al. (2007) identified teaching, research, education (clinical work) and administration as four areas of responsibility for medical educators in Family Medicine (McClean et al., 2008, p. 558). Besides these responsibilities, institutions expect lecturers to implement and make use of the learning management system to employ e-learning or create a blended learning environment.

Guasch et al. (2010) considered the changes in the roles lecturers fulfil in their teaching, which have been brought about by the introduction of online environments or other educational technologies. They call for guidance and some agreement about the new functions (roles) and accompanying competencies that lecturers need when using online environments. A common understanding would allow accommodating the needs of lecturers, and the planning of suitable training interventions to enable them to cope effectively with these changes (Guasch et al., 2010, p. 199).

Guasch et al. (2010, p. 201) reviewed previous research and specified a list of functions that are required by lecturers (see Figure 2:1):

- **Designing function:** This involves the ongoing effort of building a course online. It includes organising and managing tasks between colleagues and students to allow students to achieve the learning outcomes. It also involves the monitoring and feedback process.
- **Social function:** This refers to relationship building between lecturers and students so that easy communication is possible to enable knowledge building.

- Instructive function: This function includes the academic's cognitive expertise in the subject matter, and also knowledge on how to facilitate learning using online technologies.
- Technological domain: This includes basic computer literacy to be able to use new technologies, knowledge about how to use specific educational technologies, and knowing where to find support.
- Management domain: This function includes the management of plans and actions required, as well as managing the communication, motivation and learning needs of students.

The *Practical Guide for Medical Educators* (2009) refers to Ellaway and Masters' (2008, p. 228) definition of an '*e-teacher*' as someone who employs online and other technology-based methods to support their teaching practice. An e-teacher needs to acquire new skills and competencies, and adopt new approaches to teaching and learning because of the new forms of interaction and new kinds of relationships that become possible with students and colleagues. Ellaway and Masters (2008, p. 228) further describe tasks that are associated with e-teaching similar to what Guasch et al. (2010), Harden and Crosby (2000) and Harris et al. (2007) found. These tasks, a lecturer performs are design (which includes design for learning and the creation of a structure, content and presentation of educational materials), preparation, execution, assessment, evaluation and personal development.

Ellaway and Masters (2008, p. 240) emphasise the importance of skills training that can only be effective when it is aligned with, or embedded in regular activities, thus allowing participants to build on their prior knowledge and skills.

2.3 Evaluation of LMS implementation and use

2.3.1 Introduction

A systematic literature review was conducted to investigate how the implementation and use of learning management systems (LMSs) have been evaluated at higher education institutions internationally, in South Africa, and specifically in the context of medical education (shown in Figure 2:2). The investigation focuses specifically on how lecturers' use of an LMS has been evaluated or examined.

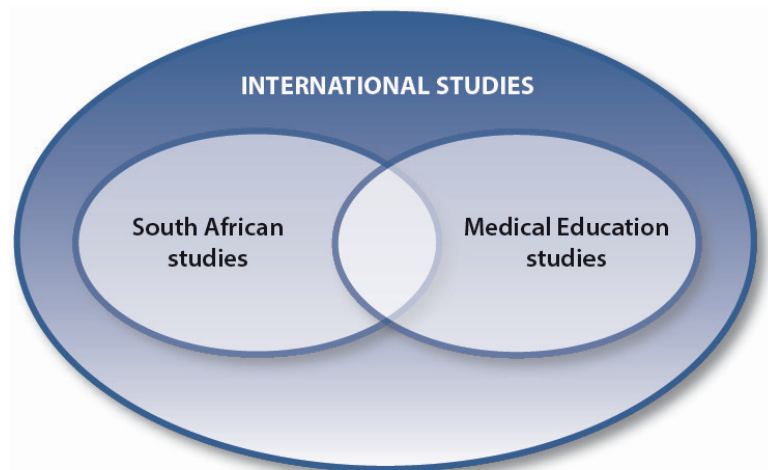


Figure 2:2 Structure and focus of the literature review

Searches were conducted through educational databases including *ERIC (ProQuest)*, *ERIC (EBSCOHOST)*, *ScienceDirect*, *Scopus*, *Current and Completed Research (SA Research, including SA theses)* and *SA ePublications (SA journal articles: full text)*. The ERIC databases consist of 67 databases that include *MEDLINE* and *CINAHL* which are sources of research on medicine, nursing, dentistry and health care systems.

The search criteria consistently used to search the databases were: “learning management system” and “higher education”. Only peer reviewed work published between 2000 and 2013 was included. Studies which focused on the impact of the LMS on students and specific tools within the LMS were not included in this review. A number of general discussion papers regarding ICTs or e-learning and studies on how to make a decision about selecting an LMS were found, but are not included in this review.

The results of the searches were then further narrowed down based on the following **exclusion criteria**:

- studies conducted using students/learners or librarians as participants;
- research focusing on the use of specific tools within an LMS, such as wikis or blogs;
- research about curriculum management or development; and
- research conducted in a business environment.

The remaining studies were further analysed to ensure that they met the following **criteria for inclusion** in the review, namely:

- the study investigated the use of an LMS in higher education; and
- the participants (research sample) were lecturers (also referred to as ‘academics’, ‘instructors’ or ‘faculty members’).

The review is summarised and reported here using the framework shown in Figure 2:2, starting with studies conducted internationally, followed by studies conducted in South Africa, and thirdly those in a medical education context.

2.3.2 Description of studies reviewed

Based on the inclusion criteria listed above, Appendix 2a provides details about studies conducted internationally, Appendix 2b about those conducted in South Africa, and Appendix 2c provides details of studies that focused on medical education. In this section, different aspects of the studies reviewed are compared and discussed. This analysis focuses on particulars of the investigation, such as date and place of publication, which LMS was being implemented, the research themes / focus of the study, the purpose, methods or instruments used, the number of participants and the implementation context.

Although the same search strategy and search terms “learning management system” and “higher education” were used for sourcing South African studies, the search term “South Africa” was included for this domain. Furthermore SA *ePublications* and Sabinet’s *Current and Completed Research* database were also consulted, in addition to *ERIC*, *Science Direct* and *Scopus*.

Medical educational journals were also searched in order to source medical education studies. Only two studies could be located that met the inclusion criteria. Figure 2:3 shows the results of searches for studies in medical education.

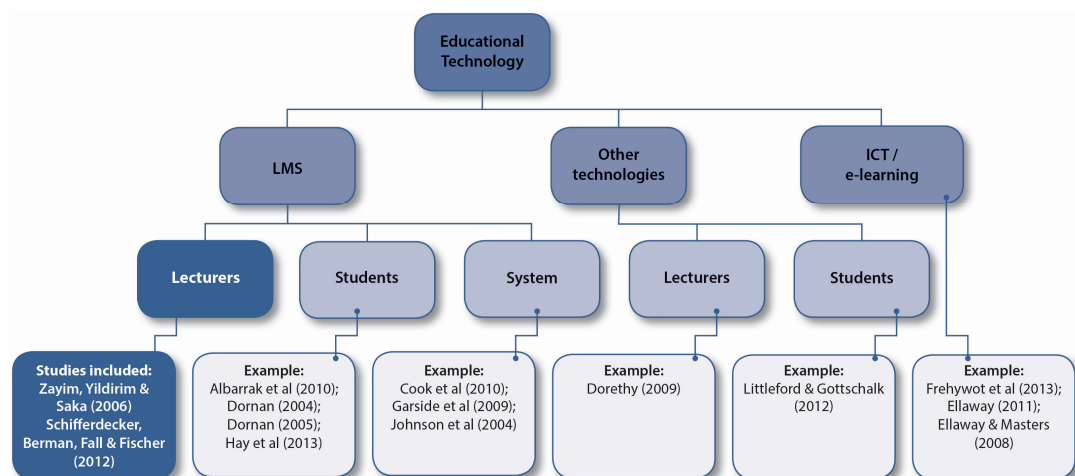


Figure 2:3 Search results for studies in medical education

No study could be found that evaluated the extent of LMS use by lecturers in medical education or attempted to identify the needs of this unique group of lecturers when implementing an LMS. This study aims to address this gap identified in medical education in South Africa as illustrated in Figure 2:4.

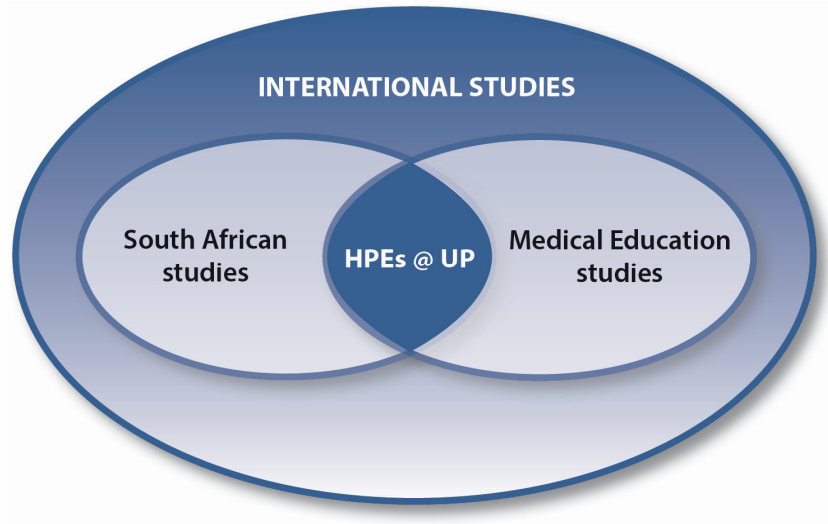


Figure 2:4 Gap in the literature

2.3.2.1 Dates of publication

The 26 international studies reviewed (Appendix 2a) were published between 2004 and 2013 as shown in Figure 2:5. Fifty percent of these studies were published between 2010 and 2013, coinciding with the period of this study.

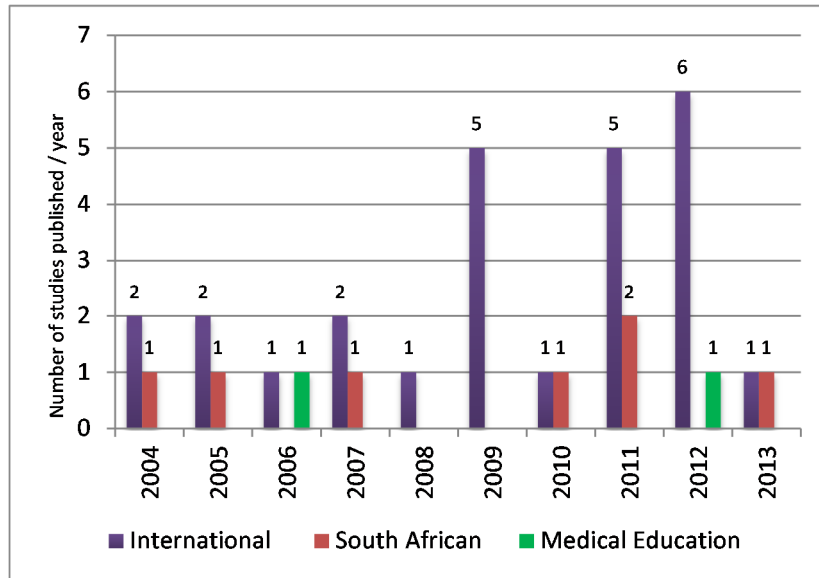


Figure 2:5 Number of studies published in last decade

Seven South African studies (Appendix 2b) and two medical education studies (Appendix 2c) complied with the criteria for inclusion. Figure 2:5 shows the dates of publication of all the studies reviewed.

2.3.2.2 Countries or universities where the studies were conducted

Figure 2:6 shows the number of studies conducted in particular countries. The largest number of international studies was conducted in Australia ($n = 8$), followed by the USA ($n=4$). The South African studies reviewed took place at the universities of Stellenbosch, Rhodes, Kwazulu-Natal, North-West, Unisa and Tshwane University of Technology.

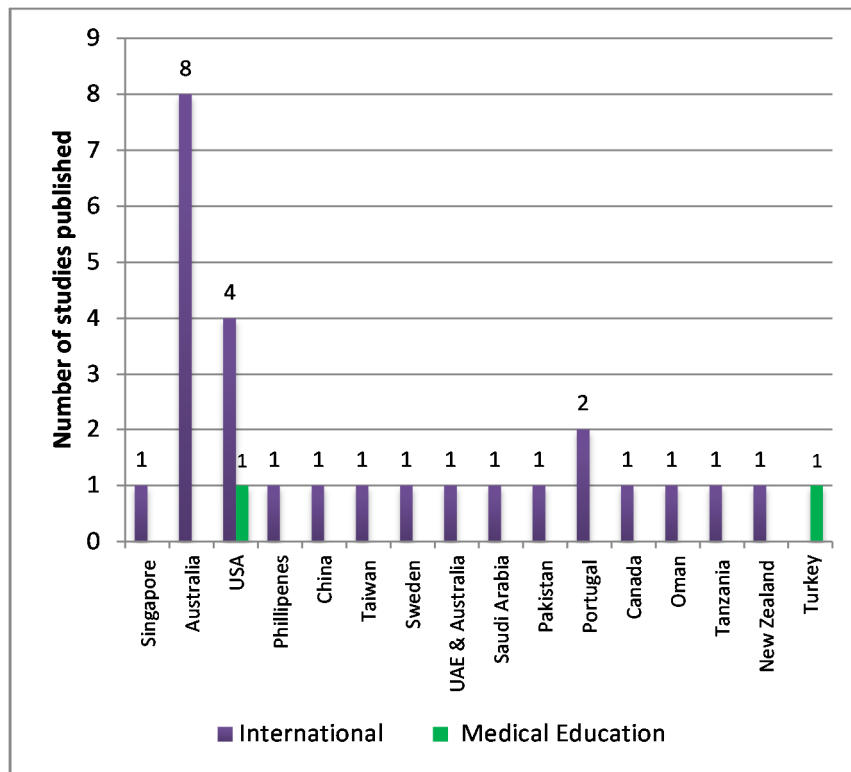


Figure 2:6 Countries were the reviewed studies were published

2.3.2.3 Learning management systems evaluated

The most popular commercial learning management systems in the international studies reviewed (Figure 2:7 and Appendix 2a) are *Blackboard* (n = 9), *WebCT* (n = 3) and the open-source system *Moodle* (n = 5) (see Appendix 2d). In some studies the investigation was done using a ‘bundle’ of technologies (including an LMS) employed by lecturers in teaching and learning (Bhati, Mercer, Rankin & Thomas, 2009; Georgina & Hosford, 2009). Some authors refrained from stating which LMS was employed during the particular investigation (Abdous, 2011; Coates et al., 2005; Iqbal & Qureshi, 2011; Lwoga, 2012; Shea, Pickett & Li, 2005; Wang & Wang, 2009).

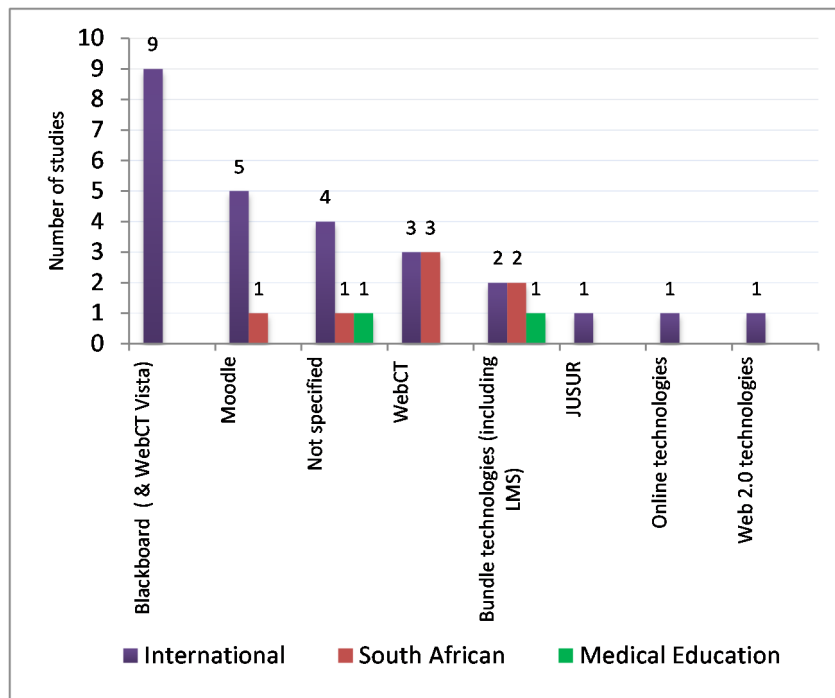


Figure 2:7 LMSs employed in international, SA and medical education studies reviewed

Both commercial (WebCT) and open-source (Moodle) systems are employed in the South African studies (Appendix 2d). Figure 2:7 shows which LMSs were used in the SA studies compared to the international and medical education studies.

However, none of the SA studies clearly stated the use of Blackboard (earlier known as WebCT *Vista*) during their investigation. Three studies report on the use of WebCT (Simelane, Blignaut, & Van Reyneveld, 2007; Van der Merwe, 2004; Van der Merwe & Mouton, 2005) and one used *Moodle* (Snowball & Mostert, 2011). Two SA studies report on the use by lecturers of more than one particular technology (Esterhuizen, Blignaut, & Ellis, 2013; Khoza, 2001), and one study did not specify which LMS is used.

Medical education studies reported on the use of Blackboard (Zayim, Yildirim & Saka, 2006) as part of a bundle of technologies and an online learning environment called CASUS¹ (Schifferdecker, Berman, Fall, & Fischer, 2012).

2.3.2.4 Considering the purpose of the studies reviewed

The studies selected can be grouped according to their stated purposes:

- adoption and or implementation (Bothma & Cant, 2011; Georgina & Hosford, 2009; Lee, Tan & Goh, 2004; Schifferdecker et al., 2012; Simelane et. al, 2007; Wang & Wang, 2009; Zayim et al., 2006);
- barriers or success factors – i.e. enabling / disabling factors (Al-Busaidi & Al-Shihi, 2012; Bhati et al., 2009; Christie & Juradob, 2009; Iqbal & Qureshi, 2011; Khoza, 2011; McNeill, Arthur, Breyer, Huber, & Parker, 2012; Samarawickrema & Stacey, 2007; Shannon & Doube, 2004; Shea et al., 2005; Van der Merwe, 2004; Van der Merwe & Mouton, 2005);
- the beliefs of lecturers regarding teaching strategies and technology (Lawrence & Lentle-Keenan, 2013; Steel, 2009);
- experiences of lecturers implementing an LMS (Bongalos, Bulaon, Celedonio, de Guzman, & Ogarte, 2006; Fox, 2007; Gonçalves & Pedro, 2012; Ryan, Toyé, Charron, & Park, 2012; Snowball & Mostert, 2010; Weaver, Robbie, & Borland, 2008);
- motivation, perceptions and satisfaction (Heirdsfield, Walker, Tambyah, & Beutel, 2011); and
- extent of use (Cabral, Pedro, & Gonçalves, 2012).

¹ The study did not indicate specifically which LMS technology was used.

Table 2:1 shows the topics studied (based on the stated purpose of a study) in the last decade. It specifically highlights topics studied and published in the last four years, which coincide with the timeframe of this study.

Table 2:1 Topics identified in the studies reviewed

| | Studies published: 2004-2009 | Studies published: 2010 -2013 |
|--------------------------|---|---|
| International | <ul style="list-style-type: none"> ▪ Barriers / success factors ▪ Adoption and implementation ▪ Experiences captured ▪ Beliefs of lecturers | <ul style="list-style-type: none"> ▪ Barriers / success factors ▪ Extent of use / implementation ▪ Attitudes, motivation, perceptions and satisfaction ▪ Beliefs of lecturers |
| South Africa | <ul style="list-style-type: none"> ▪ Barriers / success factors ▪ Strategies for implementation | <ul style="list-style-type: none"> ▪ Barriers / success factors ▪ Experiences / impact ▪ Adoption and implementation ▪ Perceptions |
| Medical education | <ul style="list-style-type: none"> ▪ Adoption and implementation | <ul style="list-style-type: none"> ▪ Adoption and implementation |

Table 2:1 shows that a common topic of research study seems to be identifying the barriers (challenges) or success factors (enablers) in implementing an LMS. One would expect to see more studies on the extent of use of an LMS in higher education systems.

The research topics shown in Table 2:1 that were deduced from the purpose of each of the South African studies (Appendix 2b) seem to overlap with research topics in international studies (Appendix 2a). However, none of the South African or medical education studies attempted to evaluate the use of an LMS by lecturers.

2.3.2.5 Methods and instruments used

Qualitative and quantitative studies, as well as mixed method designs were followed in the studies that were reviewed (Appendix 2a to 2c). Instruments employed were mostly self-designed surveys and/or semi-structured interviews.

Usage data extracted from the LMS system itself was also analysed. None of the studies employed existing validated or standardised instruments for interviews or questionnaires to evaluate the use or extent of implementation of the LMS. Five of the South African studies employed a case study approach. One university-wide (case) study had a sample size of 237 lecturers.

2.3.2.6 Theoretical frameworks employed

Appendix 2e lists the ten international studies reviewed that used a theoretical framework during the investigation. The *diffusion of innovation theory* serves as the most frequently used theoretical framework (n = 4) employed in these studies (Rogers, 1995, cited in Gautreau, 2011; Gonçalves & Pedro, 2012; Samarawickrema & Stacey, 2007; Shea et al., 2005). The technology acceptance model of DeLone and McLean (2003) cited in Klobas & McGill (2010) and Wang & Wang (2009) is used in two of the studies, while Fullan (2001) cited in Gautreau (2011) reports on change theory as it relates to technology integration.

2.3.3 Synthesis of findings of studies reviewed

The findings of the studies reviewed (conducted in international, South African and medical education contexts) were analysed in terms of barriers, factors or challenges when implementing a technology innovation and strategies suggested to enhance and support the implementation. Three studies that specifically attempted to evaluate the extent of an LMS implementation are discussed. Other themes that surfaced during the analysis of these studies include the pedagogical

implications when using an LMS and the rate of change of educational technology.

2.3.3.1 Barriers, factors and challenges identified

When analysing the barriers, key factors or challenges recorded by the authors of the studies reviewed (see list of studies reviewed in Appendices 2a to 2c), it became clear that these factors can be organised (grouped together) by adapting the SLOAN-C Consortium’s five pillars of quality in online education (Moore, 2005). These five pillars and associated goals can be used as “prompts for considering, implementing and measuring quality” (Sloan-C, 2002). The five pillars of quality are: student and lecturer satisfaction, access, learning effectiveness, cost, and institutional commitment. Adapting the pillars concept,

five layers can be put together to form an *ecosystem*, where one layer or level is dependent on previous ones. In this *Five tier LMS ecosystem* (Figure 2:8) at a higher education institution, student success is dependent on excellent functioning of all the previous layers (which themselves

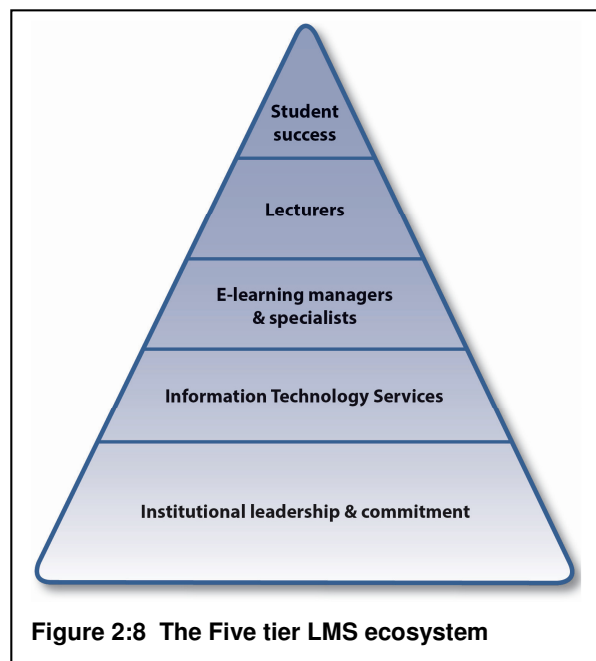


Figure 2:8 The Five tier LMS ecosystem

are dependent on the layers below).

A *five tier LMS ecosystem* at a higher education institution (such as UP) consists of the following, listed from the bottom upwards:

- Organisational or institutional leadership and commitment to enable the implementation and use of an LMS;
- Informational technology services responsible for providing, installing and servicing the necessary infrastructure for an LMS to function under stable conditions;
- A group of e-learning managers and specialists to drive the implementation and enable academic staff to use the LMS effectively;
- Lecturers who apply appropriate blended learning strategies and use the LMS effectively in their teaching and learning practices; and
- Students who succeed in their learning and benefit from having access to course material via the LMS 24/7 and from anywhere; their learning is accelerated due to effective use of blended learning at a traditional university in the 21st century.

Table 2:2 **shows the barriers, factors and challenges** listed in the studies reviewed as having an influence on the effective implementation of an LMS internationally, in South Africa and in the field of medical education.

The **lack of time or time concerns** are mentioned as a barrier or challenge by a large number of the studies (Bothma & Cant, 2011, p. 382; Iqbal & Qureshi, 2011, p. 212; Lawrence & Lentle-Keenan, 2013, p. 189; Samarawickrema & Stacey, 2007, p. 330; Van der Merwe & Mouton, 2005, p.35).

With regard to Information Technology related barriers, it seems that the authors agree on the importance of **system reliability** (Al-Busaidi & Al-Shihi, 2012, p.35; Wang & Wang, 2009, p. 771) and the fact that technology is changing at a fast

pace. This creates a barrier for lecturers in trying to keep pace with changing technologies (Bhati et al., 2009, p. 14; Schifferdecker et al. (2012, p. 1071).

Several of the authors agree that **inadequacy of institutional policies** (Lee, Tan, & Goh, 2004, p. 15; Lwoga, 2012, p. 103) and rewards regarding the use of technology (Iqbal & Qureshi, 2011, p. 212; Van der Merwe & Mouton, 2005, p. 35) impact negatively on the implementation of an LMS.

Table 2:2 Barriers, factors or challenges identified in the studies reviewed

| Five tier LMS ecosystem | Barriers / factors / challenges in implementing an LMS | International studies | SA studies | Medical education studies |
|--|---|------------------------------------|--------------------------------------|---------------------------|
| Student related [Student success] | Medium overload (too many technologies) – affects the effectiveness of the technologies. An LMS incorporates many, if not most, into one space. | | Bothma & Cant (2011, p. 382) | |
| | Extent of student access to computers on campus | | Van der Merwe & Mouton (2005, p. 35) | |
| | Students who view the online environment as a substitute for attending classes | | Snowball & Mostert (2010, p. 829) | |
| Lecturer related [Lecturers] | Older lecturers need more time to adapt to the use of the LMS | Christie & Juradob (2009, p. 277) | | |
| | Time to make pedagogically worthwhile slides | Christie & Juradob (2009, p. 277) | | |
| | Enormous learning curve | Christie & Juradob (2009, p. 277) | | |
| | Resistance to change | Christie & Juradob (2009, p. 277) | | |
| | Computer anxiety | Al-Busaidi & Al-Shihi (2012, p.35) | | |
| | Amount of technology experience | Al-Busaidi & Al-Shihi (2012, p.35) | | |
| | Extent of personal innovation | Al-Busaidi & Al-Shihi (2012, p.35) | | |
| | Instructor satisfaction determines use | Al-Busaidi & Al-Shihi (2012, p.35) | | |
| | Participation in training promotes solid and effective ICT-related competencies | Zayim et al. (2006, p. 617) | | |
| | Lecturers attendance eases adoption and embracement of LMS for teaching purposes | Zayim et al. (2006, p. 617) | | |
| | Motivation of lecturers | Gautreau (2011, p. 13) | | |
| | Responsibility, achievement, advancement | Gautreau (2011, p. 13) | | |
| | Implementation places increased pressure on lecturers' time | Fox (2007, p. 202) | | |
| | Roles blurred for academic and general staff | Fox (2007, p. 202) | | |
| | Concerns about quality of e-learning | Iqbal & Qureshi (2011, p. 212) | Esterhuizen et al. (2013, p. 74) | |
| Discipline specific factors influence satisfaction | Shea et al. (2005, p. 14) | | | |
| Self-efficacy influences perceived ease of use | Wang & Wang (2009) | | | |
| Instructor involvement important for LMS success | Klobas & McGill (2010, p. 131) | | | |

Table 2:2 Barriers, factors or challenges identified in the studies reviewed (continued)

| Five tier LMS ecosystem | Barriers / factors / challenges in implementing an LMS | International studies | SA studies | Medical education studies |
|---|--|---|---|--|
| | Time concerns / lack of time | Iqbal & Qureshi (2011, p. 212); Lawrence & Lentle-Keenan (2013, p. 189); Samarawickrema & Stacey (2007, p. 330) | Bothma & Cant (2011, p. 382); Van der Merwe & Mouton (2005, p.35) | |
| | Managing workload | Lawrence & Lentle-Keenan (2013, p. 189); Samarawickrema & Stacey (2007, p. 330) | | |
| | Lack of exposure | | Bothma & Cant (2011, p. 382) | |
| | Lack of training or opportunities for learning | Shea et al. (2005, p. 14) | Bothma & Cant (2011, p. 382) | |
| | Continuous development needs | | Esterhuizen et al. (2013, p. 74) | |
| | Benefits the use will have for students (intrinsic factors) | | | Albarrak, Aboalsamh, & Abouzahrah (2010, p. 675) |
| | Huge amounts of information in medical education | | | Albarrak et al. (2010, p. 675) |
| | Specific needs that need to be addressed | | | Schifferdecker et al. (2012, p. 1071) |
| | Needs of lecturers (early adopters vs. late adopters) in terms of staff training | | | Zayim et al. (2006, p. 219) |
| | Perceived and real benefits of the change for the lecturer | | | Schifferdecker et al. (2012, p. 1071) |
| | Provision of adequate training for teaching staff | | | Schifferdecker et al. (2012, p. 1071) |
| | Computer use; self-efficacy belief of individuals | | | Zayim et al. (2006, p. 219) |
| DEI related [E-learning managers / specialists] | Time it takes to introduce and help lecturers to see the advantages | Christie & Juradob (2009, p. 277) | | |
| | Information quality (perceived output produced by the system) | Al-Busaidi & Al-Shihi (2012, p.35) | | |
| | Technical support | Lwoga (2012, p. 103); Shea et al. (2005, p. 14) | | |
| | Concerns and reservations of lecturer | Shea et al. (2005, p. 14) | Esterhuizen et al. (2013, p. 74) | |
| | Service quality (i.e. reliability, responsiveness and empathy of support services) | Al-Busaidi & Al-Shihi (2012, p.25); Wang & Wang (2009) | | |
| | Human factors relating to the adoption of technology | | Esterhuizen et al. (2013, p. 74) | |

Table 2:2 Barriers, factors or challenges identified in the studies reviewed (continued)

| Five tier LMS ecosystem | Barriers / factors / challenges in implementing an LMS | International studies | SA studies | Medical education studies |
|---|---|--|--------------------------------------|---------------------------------------|
| | Expectations, needs and motivation of lecturers | | Esterhuizen et al. (2013, p. 74) | |
| IT Related [Information technology services] | System quality | Al-Busaidi & Al-Shihi (2012, p.35); Wang & Wang (2009, p. 771) | | |
| | Hardware inadequate | Iqbal & Qureshi (2011, p. 212); Lwoga (2012, p. 103) | | |
| | Software inadequate | Iqbal & Qureshi (2011, p. 212) | | |
| | Internet access | Lwoga (2012, p. 103) | | |
| | Pace of technological developments and the drive to implement in the curricula threatens to exceed the understanding of how it can be used most effectively | Bhati et al. (2009, p. 14) | | Schifferdecker et al. (2012, p. 1071) |
| Organisation level [Institutional leadership & commitment] | Money / increased cost to implement | Christie & Juradob (2009, p. 277) | | |
| | Inadequate institutional policies affects use | Lee et al. (2004, p. 15); Lwoga (2012, p. 103) | | |
| | Inadequate rewards or incentives to use technology in teaching | Iqbal & Qureshi (2011, p. 212) | Van der Merwe & Mouton (2005, p. 35) | |
| | No demonstrated support for teaching and learning with appropriate ICT use | | Van der Merwe & Mouton (2005, p. 35) | |
| | Environment in which lecturers adopt or implement new technology | | Esterhuizen et al. (2013, p. 74) | |

2.3.3.2 Strategies employed to enhance implementation

Four main groups of strategies to enhance the implementation process emerged in the studies reviewed, each of which is discussed in the sub-sections which follow. The first group of strategies relates to training (also referred to as ‘staff development’ or ‘professional development’), as listed in Table 2:3. A second group of strategies are those employed to enhance the support given to lecturers. The third group of strategies has a particular management or leadership focus. The final group of strategies relates to establishing a community of learning.

A. Training strategies

In all three categories of studies (international, SA and medical education studies) there is consensus that training (i.e. professional development opportunities) is required to enhance the implementation process (Al-Busaidi & Al-Shihi, 2012, p. 35; Bothma & Cant, 2011, p. 382; Cabral et al., 2012, p. 265; Heirdsfield et al., 2011, p. 10; Lee et al., 2004, p. 15; Lwoga, 2012, p. 104; Ryan et al., 2012, p. 104; Schifferdecker et al., 2012, p. 1071; Shannon & Doube, 2004, p. 12; Van der Merwe & Mouton, 2005, p. 35).

In these studies it seems that training should be based on the specific needs of lecturers (Cabral et al., 2012, p. 618; Christie & Juradob, 2009, p. 277; Gautreau, 2011, p. 13; Schifferdecker et al., 2012, p. 1068-107; Shannon & Doube, 2004, p. 14).

However, no study was found which identified the needs of lecturers who are expected to implement an LMS to enhance their teaching practice.

Table 2:3 Strategies for training, support, managing and for a community of learning

| A. Strategies for training | References | | |
|--|--|--|--|
| | International studies | SA studies | Medical education studies |
| Training should be presented: | Cabral et al. (2012, p. 265); Heirdsfield et al. (2011, p. 10); Lee et al. (2004, p. 15); Lwoga (2012, p. 104); Ryan et al. (2012, p. 104) | Bothma & Cant (2011, p. 382); Van der Merwe & Mouton (2005, p. 35) | Schifferdecker et al. (2012, p. 1071) |
| → in a variety of formats (i.e. workshop, seminar or online manuals) | Al-Busaidi & Al-Shihi (2012, p. 35) | | |
| → institution wide | Shannon & Doube (2004, p. 14) | | |
| → on a regular basis | Gautreau (2011, p.16) | | |
| → on a continuous basis | Christie & Juradob (2009, p. 277); Fox (2007, p. 201); Iqbal & Qureshi (2011, p. 212); Lwoga (2012, p. 104) | | |
| → with limited numbers of participants in workshops | Georgina & Hosford (2009, p. 695) | | |
| Provide training programmes that also focus on the integration of technology for teaching and learning | | | Zayim et al. (2006, p. 219) |
| In the beginning / start there is a need for comprehensive practice-based training | | Esterhuizen et al. (2013, p. 74) | |
| Opportunities for follow up after workshops should be offered | Georgina & Hosford (2009, p. 695) | | |
| Staff development strategies should be research based approaches that lecturers value, and should demonstrate the benefits of use for students | Shannon & Doube (2004, p. 14) | Bothma & Cant (2011, p. 382) | Schifferdecker et al. (2012, p. 1070) |
| Identify and discuss pedagogical affordances and limitations of the technology | Steel (2009, p. 417) | | |
| Provide opportunities to explore, create and apply their learning to traditional methods – may lead to higher levels of adoption | Shea et al. (2005, p. 17) | | |
| Lecturers or departmental training should be based on preferences and particular needs of lecturers to promote effective adoption | Cabral et al. (2012, p.618); Christie & Juradob (2009, p. 277); Gautreau (2011, p.13); Shannon & Doube (2004, p. 14) | | Schifferdecker et al. (2012, p. 1068-1071) |

Table 2:3 Strategies for training, support, managing and for a community of learning (continued)

| A. Strategies for training | References | | |
|---|---|--------------------------------------|---------------------------------------|
| | International studies | SA studies | Medical education studies |
| Align departmental training with the strategic direction of a department | Shannon & Doube (2004, p. 14) | | |
| Early adopters and mainstream lecturers have different characteristics and needs in the adoption process – understanding the differences (differentiating needs) will help to develop appropriate programmes and encourage lecturers to pursue the adoption of instructional technology | | | Zayim et al. (2006, p. 219) |
| Training should be based on the changing needs of lecturers | Gautreau (2011, p.14) | | |
| Offer individualised training sessions | Georgina & Hosford (2009, p. 695) | | |
| Training should improve technology proficiency and competence among lecturers | Christie & Juradob (2009, p. 277); Gautreau (2011, p.16); Samarawickrema & Stacey (2007, p. 331) | Esterhuizen et al. (2013, p. 76) | Zayim et al. (2006, p. 219) |
| Computer knowledge and skills need to be sufficient to support the adoption of new technology | | | Schifferdecker et al. (2012, p. 1070) |
| Building capabilities of lecturers requires a range of information and training sessions to cater for the different levels of experience and confidence | Cabral et al. (2012, p. 618); McNeill et al. (2012, p. 63); Shannon & Doube (2004, p. 14); Weaver et al. (2008, p. 772) | | |
| Professional development should focus on holistic coping strategies to build technical confidence rather than overload of detail | | Esterhuizen et al. (2013, p. 75) | |
| Staff development should provide incremental development of capacity (in stages) and extend it to more sophisticated modes | Shannon & Doube (2004, p. 14); Weaver et al. (2008, p. 770) | | |
| Create an immediate application to go and implement the new skill or what was learned during the training | Georgina & Hosford (2009, p. 695) | | |
| Lecturers development plan must stimulate reflection on training practice in general and strategic objectives | | Van der Merwe & Mouton (2005, p. 36) | |

Table 2:3 Strategies for training, support, managing and for a community of learning (continued)

| A. Strategies for training | References | | |
|--|---|---|---------------------------|
| | International studies | SA studies | Medical education studies |
| Way / manner of technology training is important | Georgina & Hosford (2009, p. 695) | | |
| Role of lecturer as designers – should be understood | Steel (2009, p. 414) | | |
| Training should acknowledge the discipline knowledge of the lecturers | Weaver et al. (2008, p. 770) | | |
| Acknowledgement and understanding of the stress of the academic working environment | Weaver et al. (2008, p. 770) | | |
| Be mindful of the potential impact on lecturers in at least three large interrelated areas: faculty development, technical support and course design | Shea et al. (2005, p.16) | | |
| Common yet flexible course designs coupled with faculty development that supports implementation – likely to increase interaction and lecturers satisfaction | Shea et al. (2005, p.18) | | |
| Establish educational faculty development unit | | Van der Merwe & Mouton (2005, p. 36) | |
| Motivate by identifying best practices for e-learning applications | | Van der Merwe & Mouton (2005, p. 36) | |
| Offer training to students | Hussein (2011, p. 51); Ryan et al. (2012, p. 232) | | |
| B. Strategies for support | | | |
| Offer support | Gautreau (2011, p. 16); Heirdsfield et al.(2011, p. 10); Lee et al. (2004, p. 15); Ryan et al. (2012, p. 232); Shannon & Doube (2004, p. 12); Shea et al. (2005, p.17; Weaver et al. (2008, p. 772) | Esterhuizen et al. (2013, p. 76); Khoza (2011, p. 167); | |
| Offer user support by experts of the LMS to stimulate full capacity use | Christie & Juradob (2009, p. 277); Fox (2007, p. 200); Weaver et al. (2008, p. 772) | | |

| B. Strategies for support | | | |
|---|--|--|--|
| Provide technical support | Fox (2007, p. 201) | | |
| Provide administrative support at university and faculty level (i.e. release time, reduce workloads while implementing) | Fox (2007, p. 199); Gautreau (2011, p.14); Georgina & Hosford (2009, p. 695) | | |
| Provide ongoing support from instructional designer or technology specialist | Fox (2007, p. 201); Shea et al. (2005, p. 18) | | |
| Work in teams to provide support to ensure sustainability | Fox (2007, p. 201) | | |
| Support units which foster ICT related competencies | | Esterhuizen et al. (2013, p. 76) | |
| Adopt a careful, planned approach which supports changes | Fox (2007, p. 199) | | |
| Gradually increase staff interest | Fox (2007, p. 200) | | |
| Tutorial sessions face-to-face | Ryan et al. (2012, p. 232) | | |
| Resources needed: → support materials → administrators encouraging lecturers → group consultant | Gautreau (2011, p.16) | | |
| → individual consultant | Gautreau (2011, p.16); Georgina & Hosford (2009, p. 695) | | |
| Collaborative opportunities for faculty to work with colleagues | Gautreau (2011, p.16); | Khoza (2011, p. 167) | |
| Increase efforts to integrate technology substantially to involve and engage lecturers that play a key role | | Esterhuizen et al. (2013, p. 75) | |
| Arrange mentors / ongoing mentoring | | Bothma & Cant (2011, p. 382); Khoza (2011, p. 167) | |
| Offer technical support to students | Hussein (2011, p. 51) | | |
| Provide assistance with: → Structuring the course | | Simelane et al. (2007, p. 946) | |

| B. Strategies for support | | | |
|--|--|--------------------------------|-----------------------------|
| → Examples of well-structured courses | | | |
| Not prescriptive – but creative and flexible | | Simelane et al. (2007, p. 946) | |
| Lecturers need: guidelines and advice (Bonk 2001, p. 4-10) | | Khoza (2011, p. 167) | |
| Computer use self-efficacy belief of individuals is a significant factor in their utilisation of technology Training and support should focus on computer self-efficacy of mainstream lecturers | | | Zayim et al. (2006, p. 219) |

| C. Strategies for managing | References | | |
|---|---|--------------------------------------|------------------------|
| | International studies | SA studies | Medical studies |
| Management support | Al-Busaidi & Al-Shihi (2012, p. 35); Christie & Juradob (2009, p. 277) | | |
| Incentives policy / Monetary reward based on value and reward of teaching and learning in general | Al-Busaidi & Al-Shihi (2012, p. 35); Hussein (2011, p. 51) | Van der Merwe & Mouton (2005, p. 36) | |
| Flexibility with regard to working time and to be learners as well as teachers | Bhati et al. (2009, p. 14) | | |
| Access to decision-making | Bongalos et al. (2006, p.703) | | |
| On-going evaluation and organisational effect of adoption | Coates et al. (2005, p. 33) | | |
| Ask instructors what is needed | Gautreau (2011, p. 14); Georgina & Hosford (2009, p. 695); Ryan et al. (2012, p. 232) | | |
| Alleviate concerns – time and workload / Attention to concerns – facilitate acceptance | Shannon & Doube (2004, p. 12); Shea et al. (2005, p.18) | | |
| Flexibility in arrangements | Shannon & Doube (2004, p. 12); Weaver et al. (2008, p. 772) | | |
| Encourage evaluation of changes made recognising achievements | Weaver et al. (2008, p. 770) | | |

Table 2:3 Strategies for training, support, managing and for a community of learning (continued)

| C. Strategies for managing | References | | |
|--|------------------------------|----------------------------------|-----------------|
| | International studies | SA studies | Medical studies |
| Promotion of lecturers innovations | Weaver et al. (2008, p. 770) | | |
| Compel lecturers to use with target set in performance management | | Bothma & Cant (2011, p. 382) | |
| Manage responsibility | | Bothma & Cant (2011, p. 382) | |
| Role change; managing content; connecting learners to other learners in new ways | | Esterhuizen et al. (2013, p. 75) | |

| D. Strategies for a community of learning | References | | |
|--|--|------------|-----------------|
| | International studies | SA studies | Medical studies |
| Share discoveries | Bhati et al. (2009, p. 14) | | |
| Ongoing engagement with lecturers affected by LMS to learn or know their needs | Coates et al. (2005, p. 33); McNeill et al. (2012, p. 63) | | |
| Lecturers need encouragement if they are to move towards interactive and innovation pedagogies | Heirdsfield et al. (2011, p. 10); Weaver et al. (2008, p. 770) | | |
| Showcase good practice in examples | McNeill et al. (2012, p. 63) | | |

There is agreement that training should be provided on a continuous basis (Christie & Juradob, 2009, p. 277; Fox, 2007, p. 201; Iqbal & Qureshi, 2011, p. 212; Lwoga, 2012, p. 104) based on the changing needs of lecturers (Gautreau, 2011, p.14). Benefits of using the LMS should be demonstrated clearly for lecturers to see the value in implementing it (Bothma & Cant, 2011, p. 382; Schifferdecker et al., 2012, p. 1070; Shannon & Doube, 2004, p. 14).

Although Schifferdecker et al. (2012, p. 1070) are of the opinion that lecturers' computer knowledge and skills need to be sufficient, other authors feel that training should also improve technology proficiency and competence among lecturers and build their confidence (Christie & Juradob, 2009, p. 277; Esterhuizen et al., 2013, p. 76; Gautreau, 2011, p.16; Samarawickrema & Stacey, 2007, p. 331; Zayim et al., 2006, p. 219).

B. Support strategies

Several of the studies reviewed agree that support should be available to lecturers who need to implement an LMS (Esterhuizen et al., 2013, p. 76; Gautreau, 2011, p. 16; Heirdsfield et al., 2011, p. 10; Khoza, 2011, p. 167; Lee et al., 2004, p. 15; Ryan et al., 2012, p. 232; Shannon & Doube, 2004, p. 12; Shea et al., 2005, p.17; Weaver et al., 2008, p. 772). Christie and Juradob (2009, p. 277), Fox (2007, p. 200) and Weaver et al. (2008, p. 772) further qualify such support by stating that it should be provided by experts in the use of the LMS.

Other types of support suggested to enable full capacity use of the LMS are the availability of administrative support (Fox, 2007, p. 199; Gautreau, 2011, p. 14; Georgina & Hosford, 2009, p. 695), as well as having an instructional designer

available. Individual consultation (Gautreau, 2011, p. 16; Georgina & Hosford, 2009, p. 695) and having mentors (Bothma & Cant, 2011, p. 382; Khoza, 2011, p. 167) are also regarded as favourable strategies for supporting lecturers.

C. Managing strategies

Authors agree that management support is needed for the implementation process (Al-Busaidi & Al-Shihi, 2012, p. 35; Christie & Juradob, 2009, p. 277). An incentive policy or performance agreement with lecturers are also recommended (Al-Busaidi & Al-Shihi, 2012, p. 35; Hussein, 2011, p. 51), although Van der Merwe and Mouton (2005, p. 36) indicate that there is no clear consensus among lecturers regarding financial incentives offered for using technology in teaching. They indicate that intrinsic factors (such as the benefits it holds for students), rather than extrinsic factors (financial reward) increases the use of the LMS system.

Shannon and Doube (2004, p. 12) and Shea et al. (2005, p.18) highlight the importance of alleviating lecturers concerns regarding the implementation of the LMS.

D. Community of learning

Some of the studies reviewed alluded to the sharing of discoveries (Bhati et al., 2009, p. 14), ongoing engagement (Coates et al., 2005, p. 33; McNeill et al., 2012, p. 63) and encouragement (Heirdsfield et al., 2011, p. 10; Weaver et al., p. 770). These activities can be realised through the use of a learning community.

2.3.3.3 Extent of use investigated

Only three of the international studies reviewed attempted to evaluate the extent of use of the LMS, each of which is analysed in further detail below:

- Lwoga (2012) investigated the extent to which Web 2.0 technologies (LMS included) are used in Tanzanian universities;
- Christie and Juradob (2009) investigated the extent to which different features in the LMS are used; and
- Goncalves and Pedro (2012) illustrate how technology adoption took place based on the diffusion of technology model of Rogers.

Lwoga (2012) conducted an empirical investigation through interviews and content analysis in six of the eight universities in Tanzania, with regard to the extent of use of Web 2.0 and other learning technologies. Lwoga specifically investigated ICT infrastructure, deployment of these technologies, and challenges that universities experience. Although all universities reported having installed e-learning systems, these were utilised in only four of the six universities. The most common e-learning system installed was *Moodle*. Although Lwoga (2012) reports on the extent of use of these technologies in different universities, a limitation is that the study does not reveal the extent to which lecturers are using the e-learning systems in their teaching and learning.

In both studies conducted by Christie and Juradob (2009) in Sweden and Goncalves and Pedro (2012) in Portugal, lecturers were divided into groups based on levels (extent) of use. The levels or extent of use were determined by the number of tools activated in a course (Christie & Juradob, 2009), and the activity in a course (Goncalves & Pedro, 2012).

In the study of Christie and Juradob (2009), lecturers were divided into three categories based on the number of tools that were actively used in the course, namely:

- the most *experienced group* had at least 5 to 6 tools active in the course;
- the *intermediate group* had 3 to 4 tools active; and
- the least *experienced group* had 1 to 2 tools active in the course.

Christie and Juradob (2009) captured data during interviews which was confirmed during systematic observations in the courses. The biggest limitation of this study lies in the fact that counting the number of active tools in a course falls short of discovering how and for what purpose the tools are used. A wider variety of tools does not necessarily imply better student learning. The outcomes that students need to achieve should drive the selection of the tools required.

Christie and Juradob (2009) confirm that lecturers feel they do not have the time to learn more about an LMS and how to use it (p. 276). Their data analysis further revealed that:

- 60% of the lecturers use the fundamental tools in the LMS (content tools);
- 6% use image-related tools;
- 12 to 23% use communication tools; and
- 13 to 30% plan to use evaluation tools in the LMS.

Goncalves and Pedro (2012) report on a three-year longitudinal study to describe the stages involved in the process of implementation of an LMS, based on the Rogers' model of diffusion of innovation. The study evaluates the intensity (level) of use and categorises different levels as follows:

- 'No activity' – the course is empty and there is no activity;

- ‘Moderate activity’ – the course provides only resources or information; and
- ‘Considerable activity’ – the course provides resources or information as well as some interactive activities.

Goncalves and Pedro (2012) arrived at a number of conclusions: (p. 264)

- extrapolation regarding the adoption rate should not be done based on the number of early adopters;
- as the number of users grew, so the level (intensity) of use declined;
- the type of adopter (early, late etc.) determines the level of use;
- different disciplines demonstrated different levels of interaction or implementation; and
- one should make use of the characteristics of the early adopter groups to promote the dissemination of the LMS.

Despite the above conclusions, the Goncalves and Pedro (2012) study does not indicate how further implementation of the LMS will be conducted or how lecturers will be further guided and supported.

2.3.3.4 Pedagogy

Academic staff need to use the LMS creatively as part of their pedagogical practice, and not simply as a repository of information or learning resources (Heirdsfield et al., 2011, p. 10). To achieve this, training, support and engagement are necessary to move towards interactive and innovative use of the system (Georgina & Hosford, 2009, p. 695; Heirdsfield et al., 2011, p. 10). Steel (2009, p. 415) warns that the implementation or use of technology in learning should be driven by **an educational need and not by the technology itself**. Pedagogical drivers or needs for using the LMS include communicating with

students and supporting the achievement of specific learning outcomes

(Lawrence & Lentle-Keenan, 2013, p. 19).

In the South African study done by Snowball and Mostert (2010) in a large class setting, the authors mention several pedagogical and management advantages of using the LMS, such as:

- increased level of efficiency in running the course;
- quick and inexpensive means of communicating with students;
- additional resources could be added easily;
- the discussion tool exceeded its expected usefulness; and
- the questions posted in the discussion enabled lecturers to identify areas of difficulty.

2.3.3.5 Rate of change of educational technology

Schifferdecker et al. (2012, p. 14) and Steel (2009, p. 417) conclude that the rate at which technology advances in education means that educators (lecturers) will continue to face the need to change their teaching practices in order to accommodate innovations. Schifferdecker et al. (2012, p. 14) caution, however, that the pace of change is such that it exceeds the understanding of how to use innovations effectively, or the ability to start using them at all. Ultimately Fox (2007, p. 199) advises that institutions should adopt a “careful, considered, planned approach” to support changes on an institutional as well as on a faculty level.

2.4 Summary of literature review chapter

The development of educational technology for teaching and learning is seen as the cause of constant change in higher education institutions – a trend which is forecast to continue. LMSs are now viewed as a normal and necessary part of teaching and no longer as optional. However, despite more than a decade of LMS implementation and use, no study reviewed reported high fidelity of use of an LMS in a higher education institution.

The literature review reported in section 2.3 was conducted to investigate how the implementation and use of LMSs were evaluated at higher education institutions internationally, in South Africa and specifically in the context of medical education. The investigation specifically sought studies on how the use of an LMS by lecturers was evaluated or examined. Based on the criteria for inclusion of studies in the review, 26 international studies, seven South African studies and two medical education studies were identified and reviewed.

A common topic for research studies published in the last decade internationally, in South Africa and in medical education is the **barriers, factors and challenges** influencing the implementation of LMSs. Four **main types of strategies** employed to enhance the implementation emerged from the studies reviewed, namely training, support, management, and establishing communities of learning.

Only three of the studies reviewed (from the international studies list) attempted to evaluate the extent of LMS use (Christie & Juradob, 2009; Goncalves & Pedro, 2012; Lwoga, 2012). However none of these studies indicates how lecturers will be guided to further enhance the use of the LMS in their teaching.

The studies reviewed did not yield any guidelines as to what is the best way to facilitate the implementation of an LMS to achieve widespread, high quality of implementation, especially in the field of medical education. Nor do any of the studies reviewed suggest a standardised way to assess the extent of use of the LMS.



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Chapter 3 - CBAM theory and conceptual framework

Chapter 3

3.1 The process of implementing a new technology

“As we all know achieving change success is always a challenge and even more so with technology.” (Hall, 2010, p. 247)

Hall (2010, p. 233) argues that the implementation of a new technology involves a **process**. This claim is confirmed by earlier studies conducted by Kaputska and Damore (2009, p. 119) and LaRocco and Murdica (2009, p. 20). The implementation process is seen as complex, inherently social, and developmental (Hall, 2010, p. 247).

Technology innovations bring a further unique challenge to the already complex change process in that technology is **constantly evolving** (Hall, 2010, p. 231; Slough & Chamblee, 2007, p. 222). With each upgrade, small or large, the delicate balance of a planned lecture can be upset as the educator tries to accommodate the new version of the software (Hall, 2010, p. 247). Change theorists agree that the successful implementation of new technology and new practices depends on the **individuals** in a particular situation (Foulger & Williams, 2007, p. 108; Hall & Hord, 2011a, pp. 9-10).

Educational leaders are urged to understand that the implementation of an innovation or technology change requires **learning** to take place; this takes time and may elicit feelings of anxiety, dread and / or exhilaration (LaRocco and Murdica, 2009, p. 20). These anxieties can contribute to negative attitudes and result in academic staff resisting the whole implementation process (Hollingshead, 2009, p. 167).

The two most widely used change theories are the Concerns-Based Adoption Model (CBAM) theory of Hall and Hord (2011a), and the Diffusion of Innovations Theory of Rogers (1995) cited in Gautreau (2011). This study chose to use the CBAM and therefore it will be discussed in more detail. The CBAM of Hall and Hord (2011a) takes into consideration that the implementation of an innovation is a process, not an event. The key to such a process is the individual who needs to implement the innovation and therefore the CBAM acknowledges that in order for individuals to accommodate innovations and change current practices, the acquisition of new skills and knowledge is required. This model also affords the researcher standardised instruments to systematically monitor or evaluate the progress of a new implementation.

3.2 Concerns-Based Adoption Model (CBAM)

The CBAM derived from the work of Fuller (1969) that was based on the notion that when people had to adopt an innovation (i.e. a new product, programme or curriculum, or set of strategies), the desired outcome/s would theoretically be achieved. In reality, this outcome seldom occurs; alternatively it does not occur at the level that was envisioned. Studies to resolve this problem led to the study of the multiple dimensions involved in the implementation or change process (George et al., 2008, p. 1).

The CBAM has its origins in the 1970s when it was developed at the *Research and Development Centre* at the University of Texas. The researchers involved in the development of the CBAM were Drs Hall, George and Hord. Extensive studies have been conducted over the years at all levels of education in the

United States (Southwest Educational Development Laboratory [SEDL], n.d. a), including in medical education (G.E. Hall, personal communication, October 21, 2010).

Through long-term research and repeated observations, the CBAM research team formulated principles that are predictable aspects when a new approach, programme or innovation is launched or implemented in an educational environment. These principles form the foundation of the CBAM and also provide order during the process of implementation. Hall and Hord (2011a) propose that:

- the process of implementation requires that individuals learn new skills and acquire new knowledge (p. 6);
- the implementation should be seen as a process and not a once-off event that takes place. They assert that the process, if well planned and supported, will take three to five years to be implemented at a high level. The CBAM does not propose shortcuts, but rather offers a method to ensure that high level implementation is achieved. If any implementation is dealt with as an “event” that takes place, high level implementation might never be reached. An important consequence of this principle is that an implementation of any sort should be accompanied by strategic planning and policy formulation in order to budget for the resources and support needed to facilitate the implementation over three to five years (p. 8);
- change (implementation) starts with and ends with the individual. The organisation can’t change unless individuals change. The rate at which a change process takes place is determined by how quickly people take on the challenge, learn new skills and acquire the new knowledge necessary to implement the innovation. Some will avoid taking the step to implement a new programme, practice or innovation for a long time. Leaders need to devise ways to address these differences in order to facilitate the implementation. The CBAM research has established that people react in typical ways when they have to implement something new, which implies that lecturers do not

need to be guided individually to achieve higher levels of implementation (pp. 9-10);

- actions and events (also referred to as “interventions”), taken by the facilitators of an implementation are key to the success of any implementation. Although training workshops are the most common form of interventions, research shows that more regular, smaller events have the biggest impact (p. 12);
- facilitators will always have to deal with resistance. This resistance can have several reasons or origins. People may experience a sense of loss because they became comfortable with a particular way of doing things or with a particular system. Resistance can also be due to serious doubts whether the new programme or innovation will work for them. And some see any form of change as a painful process and will resist it. If these individual concerns are addressed appropriately, the CBAM authors are confident that the implementation can be productive and does not have to be painful (pp. 12-13);
- leadership plays an important role in any implementation, not only for short-term success, but also for the long-term sustainability of a new practice and / or innovation (p. 13); and
- physical features in any context, such as resources, policies and schedules, and also people factors, will influence the success of an implementation. The authors of the CBAM state that by having lecturers identify what they need to learn in order to help students become more successful learners, can contribute greatly to how the implementation succeeds in an educational organisation (pp. 15-16).

Hall (2010, p. 234) points out that there is often a lack of understanding of the complexities involved in implementing an innovation (change) in an institution. High levels of implementation right from the start of the process are rare, and therefore better student learning, as a consequence, is not realised. The authors

of the CBAM suggest therefore that academics should be informed about the change process and that this understanding would assist in higher levels of implementation and ultimately better student learning.

CBAM consists of the following three dimensions that can provide the necessary evidence of the extent of – or quality of – the implementation (see Figure 3:1):

- The Stages of Concern (SoC) record the reactions and feelings of individuals (affective domain) when they are implementing an innovation;
- The Levels of Use (LoU) monitor how individuals are using an innovation. The LoU focus on the actions or behaviours (behavioural domain) of individuals who are implementing it;
- Innovation Configurations (IC) is a mapping tool that uses a rubric (map) format to capture the variations of how the innovation is applied in teaching practice.

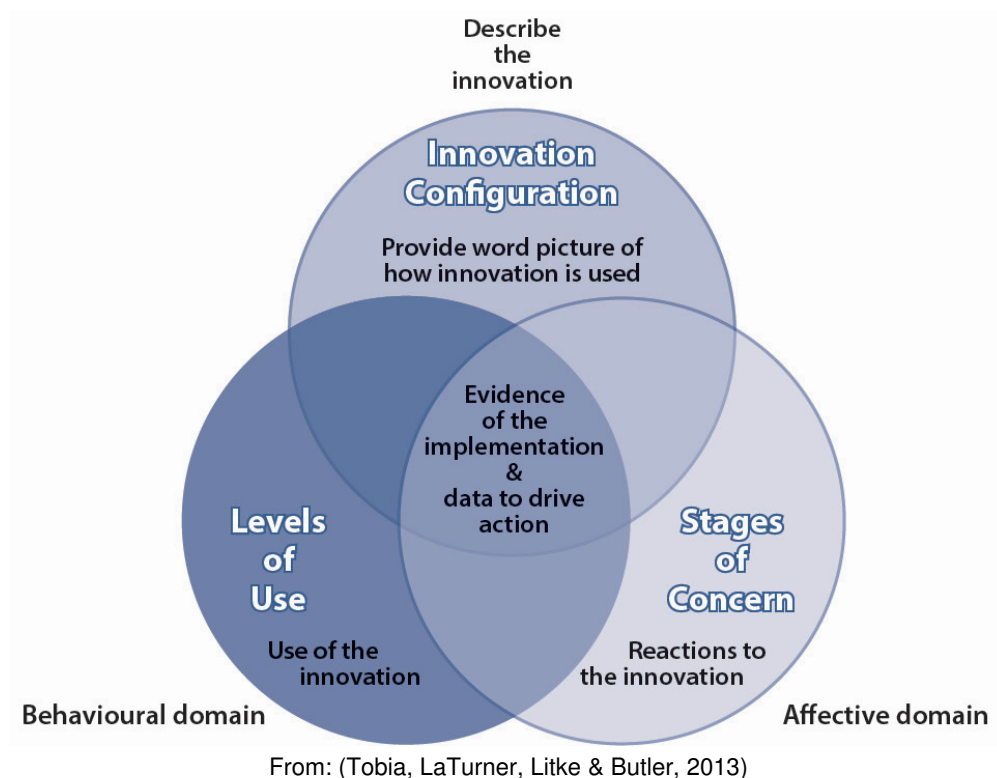


Figure 3:1 The three dimensions of the CBAM

Based on the CBAM research, Hall (2010) suggests that the dimensions: Stages of Concern , Levels of Use and Innovation Configuration , should be used not only to evaluate the process, but also to serve as diagnostic tools to guide the facilitation of the change process during the implementation of new technology (Hall, 2010, p. 232). Using the lenses that these constructs provide on the implementation process, individualised planning can be done for the next interaction or engagement with academics, in order to support higher levels of adoption and to lead eventually to sustained use of the technology.

George et al. (2008, p. 2) acknowledge that organisations do support academic staff to facilitate better student outcomes, through continuous learning and improvement; but the authors are of the opinion that the language of change has become rather abstract with the introduction of terms such as accountability, values, leadership and learning communities. The authors therefore conclude that the question of the best way to facilitate the implementation of the new innovation or change process has still not been fully addressed. They further note that despite the type of innovation or change process imposed, there are still individuals who resist change and therefore the CBAM tools are even more relevant today than they might have been 30 years ago.

The CBAM research team believes that change starts with the individual who is expected to implement a new technology / innovation. The team focused on investigating and understanding what happens to individuals in educational settings when presented with this challenge. The CBAM helps to identify the special needs of the individuals who are obliged to change or to implement a new technology / innovation (George et al. 2008, p. 1). Both the SoC and LoU

instruments were employed by the researcher during this study and therefore these two instruments are now discussed in more detail.

3.2.1 Stages of Concern (SoC)

The CBAM is embedded in the idea that the concerns of users need to be addressed in order to achieve successful implementation of an innovation. The name of the model originated from the idea that the concerns of users is a key construct in bringing about change (George et al., 2008, p. 1). It can help the facilitators understand the *personal side* of the change process (George et al., 2008, p. 2).

Academic staff who want to adopt an innovation are most likely to have some concerns about it during the implementation process. These concerns might be personal, management, or even impact-related concerns. User concerns are captured by means of a questionnaire where each stage of concern is scored and a profile of the user's concerns is compiled (SEDL, n.d. c).

The Stages of Concern operate within the affective domain. Through this lens, information about the attitudes, reactions and feelings of educators with regard to the implementation of the innovation become visible (SEDL, n.d. c). Seven kinds of user concerns have been identified through research. The stages are distinctive, but not mutually exclusive. Research has shown that an individual can have concerns of different intensities at any of the stages at a given time. These variations form the developmental character of the individual's concerns (George et al., 2008, p. 7-9). Table 3:1 (reading from the bottom up) presents the names

of the seven SoC and the four dimensions according to which these seven stages are classified, namely: Unrelated, Self, Task and Impact concerns.

Table 3:1 Stages of Concerns defined and grouped into four dimensions

| Dimension | Stage number and name | | Stage description |
|------------------|-----------------------|----------------------|--|
| IMPACT | 6 | Refocusing | The individual focuses on exploring ways to reap more universal benefits from the innovation, including the possibility of major changes to it or replacing it with a more powerful alternative |
| | 5 | Collaboration | The individual focuses on coordinating and cooperating with others regarding use of the innovation. |
| | 4 | Consequence | The individual focuses on the innovation's impact on students in his or her immediate sphere of influence. Considerations include the relevance of the innovation for students; the evaluation of outcomes, including performance and competencies; and the changes needed to improve student outcomes. |
| TASK | 3 | Management | The individual focuses on the processes and tasks of using the innovation and the best use of information and resources. Issues related to efficiency, organizing, managing, and scheduling dominate. |
| SELF | 2 | Personal | The individual is uncertain about the demands of the innovation, his or her adequacy to meet those demands, and/or his or her role in using the innovation. The individual analyses his or her relationship to the reward structure of the organization, determining his or her part in decision making, and considering potential conflicts with structures or personal commitment. Concerns might also involve the financial or status implications of the program for the individual and his or her colleagues. |
| | 1 | Informational | The individual indicates a general awareness of the innovation and interest in learning more details about it. The individual does not seem to be worried about him- or herself in relation to the innovation. Any interest is in impersonal, substantive aspects the innovation, such as its general characteristics, effects, requirements for 'use. |
| UNRELATED | 0 | Unconcerned | The individual indicates little concern about or involvement with the innovation. |

From: George et al. (2008, p. 8)

3.2.1.1 What are concerns?

George et al. (2008, p. 7) assert that in our complex world we allocate different priorities and levels of attention to things we notice. Some things attract our attention because of internal or external forces – or a combination thereof – that focuses our attention on it. The way we perceive things depends on many different factors and combinations thereof, such as who we are and how we act or react, what motivates us, what needs, feelings or education we have. “These things shape how we perceive, feel and cope with our environments” (George et al. 2008, p.7).

Hall and Hord (2011a, p. 68) classify these feelings and perceptions into ‘concerns’. They note that a concern is registered “whenever something heightens our feelings and thoughts” (George et al., 2008, p. 7). Hall, George and Rutherford (1979), cited in Hall and Hord (2011a, p. 68), developed a comprehensive definition of the term concern:

The composite representation of the feelings, preoccupation, thought, and consideration given to a particular issue or task is called a concern. Depending on our personal make-up, knowledge and experiences, each person perceives and mentally contends with a given issue differently; thus there are different kinds of concerns. ...In response to the demand, our minds explore ways, means, potential barriers, possible actions risk and reward in relation to the demand. All in all, the mental activity composed of questioning, analysing, and re-analysing, considering alternative actions and reactions, and anticipating consequences is concern....To be concerned means to be in a mentally aroused state about something. The intensity of the arousal will depend on the person's past experiences and associations with the subject of arousal, as well as [on] how close to the person and how immediate the issue is perceived as being. ...Through all of this, it is the person's perceptions that stimulate concerns, not necessarily the reality of the situation.

It was the idea of Francis Fuller, a lecturer and counselling psychologist at the University of Texas (in Austin), to label feelings and perceptions as *concerns*. She conducted studies on the concerns of students and proposed that their concerns go through four stages: *unrelated, self, task and impact concerns*. She noted that students may at any given time have concerns in more than one stage but that they “*tend to concentrate in one particular area*” (Hall & Hord, 2011a, pp. 69-70). The different types of concerns experienced are registered at varying levels of intensity and the things that have the highest level of personal involvement tend to provide the more intense concerns.

George et al. (2008) highlight the fact that “our perceptions create and shape our concerns” (p. 7). Therefore concerns are regarded as an important aspect when working with individuals who are involved in an implementation process. The innovation that is implemented is then the point of reference from which the concerns are viewed and described.

Although many different concerns can be experienced simultaneously, certain aspects are perceived as being more important than others at any given moment. A person’s concerns are influenced by the knowledge and experience they have with an innovation: an individual with no experience, someone who has just started with an innovation, or someone who has worked with an innovation to some extent, will have substantially different concerns (George et al., 2008, p. 7).

The reactions of academic staff might be influenced by the perceived attributes of the innovation, which in turn influence their attitude regarding the technology itself. Rogers (1995, in Kim & Baylor, 2008, p. 313) proposes five relevant attributes of technology that may frame the adoption process: relative advantage,

compatibility, complexity, trial ability, and observability. Kim and Baylor (2008, p.311) stress that any relative advantage should be measured against the time and effort it would take academics to integrate the technology into their practice. Relative advantage also leads academic staff to ask whether the technology is compatible with their values, experiences and needs; how complex it will be to understand and use it; if it will be possible to experiment with it; and how visible the integrated efforts will be to the users (Kim & Baylor, 2008, p. 311).

The same authors also note that concerns are influenced by attitudes and confidence. For academic staff to take the risk of integrating new technology, they “must sense that the technology proposed complements their teaching style and pedagogy, and they must feel that they have the required skills” to be able to use it successfully (Foulger & Williams, 2007, p. 107). Levels of implementation will also be determined by their interest and the content area they teach (Foulger & Williams, 2007, p. 108).

3.2.1.2 Identifying and resolving concerns

The CBAM researchers (George et al., 2008) assert that the *stages* indicate a developmental movement through various types of concerns about an innovation. Individuals theoretically progress from a point of having little or no concerns about an innovation (stage 0), to having concerns about the impact that the innovation has on students (stages 5 – 7). Individuals are not able to see any further possibilities of using an innovation until earlier concerns (stages) are resolved or lowered in intensity (George et al., 2008, p. 8).

The CBAM researchers are confident that these *developmental stages* are relevant in all implementation processes, for all types of products. Concerns may be aroused as a result of affective experiences, while the resolution of concerns is dependent on cognitive experiences such as acquisition, practice, evaluation and synthesis (George et al., 2008, p. 9). Straub (2009) evaluated different adoption theories and states that the strength of the CBAM lies in “the application of cognitive concerns through the context of an educational setting” (p. 632).

Other priorities or demands in an individual’s life may not allow for an innovation to become a high priority. The CBAM authors admit that some concerns might be nearly impossible to resolve (George et al., 2008, p. 9). In general they conclude that users’ concerns about an innovation “progress towards the later, higher-level stages (i.e. towards impact concerns) with time, successful experience, and the acquisition of new knowledge and skills” (p. 9). The process of holding onto or changing concerns is an individual dynamic and cannot be manipulated by others.

Although timely interventions with affective experiences and cognitive resources can assist in the appearance and resolution of concerns, there is no guarantee that higher-stage concerns will follow the lessening of lower stage concerns. The CBAM authors assert that the speed at which higher level concerns follow the lower level concerns will depend on the individuals, their context and their perceptions of the new innovation (George et al., pp. 7-9). They also state that although personalised interventions can facilitate the implementation or encourage higher quality of use, it is the individual that determines whether or not higher levels of implementation will occur (George et al., 2008, p. 9).

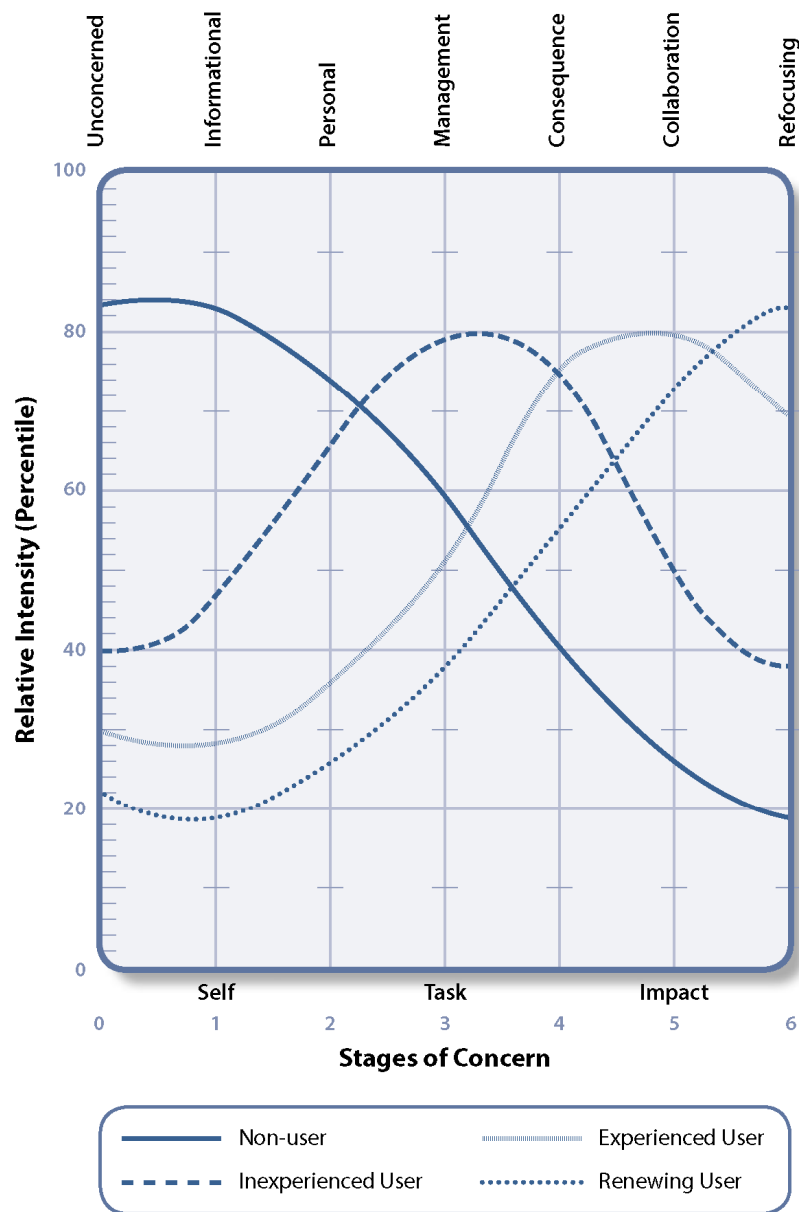
The CBAM team asserts that

“attending to academic staff concerns is not an attempt at manipulation. Rather, studies have shown how effective it can be to recognise the inevitable presence of concerns within individuals and to extend a helping hand to assist in coping with and resolving those concerns” (George et al., 2008, p. 9).

The Stages of Concern questionnaire (SoCQ) that is used to identify concerns has been widely used to guide professional development and facilitate actions to support the implementation of innovations (Hall & Hord, 2011a, p. 80). George, Hall and Uchiyama (2000, p. 64) found that higher fidelity of use of the innovation ultimately resulted in higher test scores for students.

3.2.1.3 Typical concerns profiles

One way of measuring concerns is to capture a snapshot in time showing how far across the *bridge of implementation* (Hall & Hord, 2011a, p. 11) users have progressed. Although Hall and Hord (2011a, pp. 76-77) hypothesise a pattern of movement as the development of concerns takes place or unfolds, change is dynamic and complex and does not always follow these patterns. Figure 3:2 shows the hypothetical movement through the stages of concern, in what is called a *concerns profile*. Typically the non-user has high *Unconcerned* and *Information* concerns, while the inexperienced user has high *Management* concerns (George et al., 2008, p. 37). The experienced user has moved to high *Consequence* or *Collaboration* concerns and is concerned about the impact the innovation has on student learning, while the *Refocusing* user questions what other innovation(s) could assist in making learning more effective and efficient for students (George et al., 2008, p. 37).



From: Hall and Hord (2011a, p. 77)

Figure 3:2 Hypothetical Stages of Concern profile

The overall shape of the profile, as well as the peaks and valleys of the individual profiles should be analysed in more detail (Hall & Hord, 2011a, p. 86):

- One of the typical profiles is described as a “the big W”. This is where the stage 3 (*Management* concerns) is very high, stages 1, 2, 4 and 5 relatively

low but stage 6 tails up. This profile is typical of people who are strongly opinionated about the innovation and what should be changed (Hall & Hord, 2011a, p. 81).

- A profile with high *Consequence* and *Collaboration* concerns (stages 4 and 5) represents the ideal CBAM profile (see the ‘Experienced User’ profile in Figure 3:2). This means that the change has been implemented as a process and sufficient time has been given for lecturers to implement the innovation. Although it is rarely found, this profile calls for celebration. Such users should be congratulated, supported and cherished (Hall & Hord, 2011a, p. 83).
- Individuals with feelings of resistance might have high self-concerns. When *Personal* concerns (stage 2) are very high, there might be self-doubt and uncertainty about one’s ability to succeed with the innovation. The failure to address *Informational* concerns (stage 1) early might have this result (Hall & Hord, 2011a, p. 84). People with high *Informational* concerns should receive small amounts of information, repeated across time. These individuals also want to see enthusiasm and the promise of continuing support (Hall & Hord, 2011a, p. 84).

Training and support aimed at facilitating the implementation of an innovation should reflect or address the concerns of the users of the innovation, in order to “move the people towards more advanced use of the innovation” (Hall & Hord, 2011, p. 76). “Understanding the SoC and using the assessment techniques can result in significantly more effective one-on-one coaching sessions, more relevant workshops, and strategic plans that take into account the personal side of a change process” (p. 68).

For the purpose of this study the link between the concerns and the needs of participants is viewed as either a direct need that can also be regarded as a concern or an implied need – when the concern can be translated into a

contextualised need based on the specific context and the specific innovation under consideration.

3.2.2 Levels of Use (LoU)

The second dimension of the CBAM is the Levels of Use (LoU). During implementation of an innovation, individuals use it in varying ways and on different levels. While some *think about* using it, others might *use it in a mechanical way* or may even be *refining* their use for maximum impact. The LoU instrument aims to monitor the process of implementation and to provide guidance or assistance for further implementation and use (Hall, Dirksen, & George, 2008, pp. 1-4).

3.2.2.1 Identifying the LoU

The LoU are defined by Hall, Dirksen and George (2008, p. 6) as follows:

Levels of use are distinct states that represent distinct different types of behaviour and patterns of innovation use as exhibited by individuals and groups. These levels characterise a user's development in acquiring skills and varying use of the innovation. Each level encompasses a range of behaviours.

To assess the effectiveness or levels of use of an innovation, an interview protocol has been developed by the CBAM research team. The LoU interview measures the behaviour of users by assessing the extent to which they use the innovation. Generally research using this model has shown that higher levels of use are associated with better student outcomes (SEDL, n.d. b). When a new programme is launched, the assumption is often made that people will either use

it or not. Research has shown, however, that it is not merely a question of using it or not, but rather “How is he or she using it?” (Hall & Hord, 2011a, p. 93).

Hall et al. (2008, pp. 8-9) identified and verified eight classifications or *behavioural profiles*, ranging from level 0 – non-use, to level VI – renewal (see Table 3:2, reading from the top down). Sub-points or behavioural indicators that would reflect a LoU are described; these behavioural indicators are further classified into seven categories of behaviour. All of these categories are observable behaviours except the *Knowledge* category which deals with a user’s understanding of an innovation (Hall et al., 2008, pp. 8-9). Operational definitions or descriptions for each of the **levels and categories** of use have been formulated by Hall and Hord (2011a, p. 94) (see Appendix 3a).

The eight possible levels of use are divided into three types of non-use and five types of use, as shown in Table 3:2.

Table 3:2 Levels of Use

| User / Non-use | No. | Level name and description |
|----------------|------------|--|
| NON USE | 0 | Non-use: State in which the user has little or no knowledge of the innovation, has no involvement with the innovation, and is doing nothing toward becoming involved. |
| | I | Orientation: State in which the user has acquired or is acquiring information about the innovation and/or has explored or is exploring its value orientation and its demands upon the user and the user system. |
| | II | Preparation: State in which the user is preparing for first use of the innovation. |
| USE | III | Mechanical use: State in which the user focuses most effort on the short-term, day-t-day use of the innovation with little time for reflection. Changes in use are made more to meet user needs than client needs. The user is primarily engaged in a stepwise attempt to master the tasks required to use the innovation, often resulting in disjointed and superficial use. |

Table 3:2 Levels of Use (continued)

| User / Non-use | No. | Level name and description |
|----------------|-----|--|
| | IVA | Routine: Use of the innovation is stabilized. Few, if any, changes are being made in ongoing use. Little preparation or thought is being given to improving innovation use or its consequences. |
| | IVB | Refinement: State in which the user varies the use of the innovation to increase the impact on clients within immediate sphere of influence. Variations are based on of both short- and long-term consequences for clients. |
| | V | Integration: State in which the user is combining own efforts to use the innovation with the related activities of colleagues to achieve a collective effect on clients within their common sphere of influence. |
| | VI | Renewal: State in which the user re-evaluates the quality of use of the innovation, seeks major modifications or alternatives to the present innovation to achieve increased impact on clients, examines new developments in the field, and explores new goals for self and the system. |

From: Hall et al. (2008, p. 5)

Hall and Hord (2011a) strongly believe that an individual's success with a new implementation is largely affected by the facilitation and / or support they receive. The authors emphasise that where there is no support and facilitation "many will never fully implement the innovation and others will just remain nonusers" (Hall & Hord, 2011a, p. 105).

3.2.2.2 Measuring an overall LoU

The level of use in each of the seven categories (i.e. Knowledge, Sharing etc. shown in Appendix 3a) is rated based on an interview conducted using the LoU interview protocol. An overall LoU (refer to Table 3.2) is then allocated for an individual.

Individuals at level III (Mechanical use) will need support and facilitation on how to adapt and better manage the innovation in order for them to move to higher levels of use – or else they may decide to stop using it. The authors stress that if individuals receive “appropriate facilitative assistance and time they will typically move to LoU IVA – Routine” (Hall & Hord, 2011a, p. 106).

3.2.3 Limitations and critique of the CBAM

Straub (2009) highlights some limitations of the CBAM in facilitating the implementation of an innovation:

- It disregards the positive perceptions of individuals regarding the innovation. Individuals may hold positive perceptions regarding the innovation simultaneously with their concerns about it. The CBAM underestimates the resilience of academics by focusing on their resistance to change or innovation (Straub, 2009, p. 636);
- It deals primarily with “top-down” change in studies conducted using the CBAM instruments (Straub, 2009, p. 636); and
- The preferences of individuals regarding an innovation and how that inter-relates with their concerns are not studied (Straub, 2009, p. 636).

Although the CBAM is well suited for large groups it needs to be confirmed if it is as suitable for the small group setting in this study. The time for learning to use the LoU instrument may hinder other researchers to implement this instrument.

3.2.4 Conclusion

The CBAM is proposed as a model for managers and facilitators of change to use in order to assess where the individuals in an organisation are with regard to the

implementation of an innovation (George et al., 2008, p. 5). The SoC and LoU instruments provide an **authoritative way to assess and describe the dynamics an individual** is involved in during the implementation process. They “provide powerful descriptions of the dynamics of individuals” (Hall et al., 2008, p. 3) involved in an implementation or change process, particularly with regard to their feelings and behaviour relating to the innovation. The data can also be used to facilitate further implementation efforts (George et al., 2008, p. 5) and to make the necessary modifications to support facilitation of the implementation and the sustainability of an instructional reform (Hall et al., 2008, p. 3).

The first concerns that arise when a new technology is implemented, are *Self* concerns (i.e. Informational and Personal concerns). The CBAM authors affirm that individuals are, to a large extent, protecting themselves and it is only when they perceive that both the change and the change facilitators can be considered “safe” that they will start to implement the innovation. The authors suggest that change facilitators should respect these *Self concerns*, and that any resistance to implementation and use should be faced and managed (Hall & Hord, 2011a, p. 279). To ensure successful implementation of an innovation, change facilitators must ensure that “Self and Task concerns are resolved and Impact concerns arise” (Hall & Hord, 2011a, p. 279).

The ideal LoU for users to be on would be level IVB – *Refinement*, which demonstrates efforts to increase the impact of the innovation on the student learning.





The CBAM has been used in many research studies in the USA and around the world, in many cultures and in a variety of educational contexts. The researcher

conducted a review of published CBAM studies to investigate how the model has been used in a higher education context. In the sections that follow, the following questions are investigated, based on CBAM studies published between 2000 and 2012:

- How did researchers use the SoC and LoU instruments in a higher educational context?
- How did the results of these studies resonate with what the model proposes when it is employed in a higher education context?
- Are there any studies that employed the CBAM in a medical education context? Do their purpose or findings relate to this study?
- Has the CBAM been employed to monitor the implementation of a learning management system in higher education?
- Have any studies been conducted in South Africa using the CBAM or any of the dimensions of the model, and what was their purpose?

3.3 Review of CBAM studies in higher education from 2000 to 2012

A systematic review of CBAM research studies since 2000 was conducted, based on the process prescribed by Jesson, Matheson and Lacey (2011, p. 108). Table 3:3 shows the systematic review process followed in this study.

| | |
|---|--|
| Phase 1: Scoping the review  | Research studies that were conducted since 2000 in the higher education context, which utilised the CBAM instrument(s). |
| Phase 2: Comprehensive search  | Make use of available electronic databases Search criteria used: <ul style="list-style-type: none"> ▪ “Concerns based adoption model” ▪ 2000 ▪ Peer reviewed articles ▪ Full paper |
| Phase 3: Quality assessment  | Inclusion criteria to select papers for analysis: <ul style="list-style-type: none"> ▪ Studies that employ instrument(s) CBAM ▪ CBAM instruments used without any adaptation(s) ▪ Higher education environment ▪ A research paper and not a conceptual work or discussion paper |
| Phase 4: Data extraction  | Data extracted from the studies focused on: <ul style="list-style-type: none"> ▪ Author(s) ▪ Date published ▪ What was measured with the CBAM instrument? ▪ Number of participants ▪ CBAM instruments used ▪ How was data from the CBAM instruments analysed? ▪ What was the innovation studied? ▪ What were the results from the CBAM instrument(s)? ▪ What were the findings and/or recommendations of the study? |
| Phase 5: Synthesis | Discussion of literature reviewed: what we know now and what we still need to know. |
| Phase 6: Write up | See ‘Discussion of review’, section 3.3.1 |

After determining the scope of the literature review, the comprehensive search resulted in 61 research articles that adhered to the four required search criteria

(process followed in this study). During the quality assessment phase, the 61 CBAM studies were analysed and any discussion papers and / or conceptual articles were excluded, which left 40 articles. A further analysis of the papers revealed that the CBAM instruments, also referred to as diagnostic tools, had sometimes been adapted. Since the researcher intended to use the instruments in their original format, and is interested in rigorous use of the instruments and the results subsequently derived, studies using adapted instruments were excluded. Only 18 articles applied the instruments in their original format. After applying the further inclusion criterion of studies that were conducted in a higher education environment, only seven studies remained.

Table 3:4 provides a summary of key elements reviewed in the 7 studies.

Table 3:4: CBAM studies in higher education from 2000 to 2012: Summary of key elements

| | Signer, Hall and Upton | Ward, West and Isaak | Dobbs | Gallaher and Wentling | Foulger and Williams | Donovan and Green | Tan et al. |
|--|---|--|--|---|--|--|---|
| Date published | 2000 | 2002 | 2004 | 2004 | 2007 | 2010 | 2011 |
| CBAM instrument(s) used | SoCQ (pre and post) | SoCQ (pre and post) | SoCQ (pre and post) | SoCQ | SoCQ (pre and post) LoU (pre and post) IC map | SoCQ *Open-ended question and One-legged interview | SoCQ * LoU |
| Innovation | Web-based tool | Internet in teaching | Interactive TV | e-Learning | Technology in teaching | Laptops | QMS |
| What was measured? | Lecturers concerns and use of web-based tools in teaching. | Use of peer-mentoring to integrate technology into teaching. | The concerns of groups that receive different forms of training. | Concerns regarding e-learning in different professional groups and how the rate of adoption is influenced. | Social factors that influence new practices when instructors work together. | Initial concerns of lecturers during the implementation of a teacher laptop programme. | Extent of concerns and use of the QMS in the early stages of implementation. |
| Number of participants | N = 149 (pre) N = 65 (post) | N = 45 mentors N = 65 protégés | N = 27 (3 groups of 9) | N = 547 | N = 4 | N = 11 | N = 23 |
| Selection method | Voluntary | Voluntary | Voluntary | Simple random sample | Voluntary | All lecturers involved in programme | All staff from division |
| Participants | Faculty members | Student mentors (3 rd year students) and protégés (1 st year students) | Faculty members and administrators | Faculty members | Faculty members | Faculty members | Faculty members and administrators |
| SoC – Analysis: Highest concerns | Unconcerned | Personal | Unconcerned | Personal | Unconcerned Information | Unconcerned | Consequence |
| Highest dimension | Unrelated concerns | Self concerns | Unrelated concerns | Self concerns | Unrelated concerns | Unrelated concerns | Impact concerns |
| Did movement take place to other development phases? (from pre- to post-test) | Stayed a typical non-user profile although the intensity of the concerns dropped. | Yes, for adapted stages of awareness, consequence collaboration. | Yes, from self to task concerns. | NA | No, remained in initial stages of concern. | NA | NA |
| Statistical analysis | Guidelines from CBAM. | Multivariate repeated measures to compare within subject changes; Factor analysis; Exploratory analysis; correlation analysis. | Analysis of covariance (ANCOVA) to determine if differences occurred between groups; Analysis of variance (ANOVA); Linearity analysis (between pre- and post); Correlations between pre- and post-test). | Significant differences: ANOVA (for each of the professional groups in each of the stages); Correlations: Pearson correlation and multiple regressions for significant relationships. | Descriptive statistics and also calculations as described by CBAM. | Used guidelines as prescribed by CBAM. | Descriptive statistics; Cronbach alpha; and multiple regressions. |
| Findings | Indicate a need for staff development and incentives. Focus on addressing personal concerns. Support for early adopters is recommended. Sharing of experiences to encourage laggards. | A need was identified to adjust SoCQ to suit the concerns of student teachers. | Training (in classroom and laboratories) was effective for addressing concerns; This should be followed up with ongoing assistance and peer mentoring. | Professional groups adopt an innovation at different rates; People who develop and implement an e-learning programme should work together with faculty members of professional groups; Early adopters had more years of formal education; The benefits and impact from personal impact should be included. People are unsure about the demands of the innovation and their ability to meet those demands. | Where the collaboration was strong in a group technology integration was high. All participants expressed time concerns and stayed in the early stages of concern. They wanted to know what personal benefit could be acquired after implementation. | When people have to implement such a project, their readiness, preparation and differences should be taken into account before the project starts. | SoC (in this case consequence concerns) have a significant impact on the LoU. |

* LoU instrument was adapted to a questionnaire; IC map – Innovation Configuration map (CBAM construct); QMS – Quality management system; NA = Not applicable.

3.3.1 Discussion of review

All seven studies identified utilised the Stages of Concern Questionnaire (SoCQ) as a diagnostic instrument to evaluate the concerns of participants. Four of the seven (Dobbs, 2004; Foulger & Williams, 2007; Signer, Hall & Upton, 2000; Ward, West & Isaak, 2002) applied the SoCQ twice – during a pre- and post-test – to measure changes in the concerns of individuals.

Both Foulger and Williams (2007) and Signer et al. (2000) report that individuals stayed in the initial stages of concerns (Unconcerned and Self concerned dimensions) when they were evaluated the second time (post-test). While Signer et al. (2000) report that the intensity of concerns of typical non-users dropped during the second evaluation (post-test), Dobbs (2004) reports a movement to other development phases: from Self concerns to Task concerns, in her experimental design study that took place between the pre- and post-test.

In both the studies of Signer et al. (2000) and Dobbs (2004), lecturers had the opportunity to attend training interventions between the pre- and post-test evaluation. The reasons why one group of individuals moved to a different dimension of concerns and the other group did not may be due to the aim and design of the studies.

In the study by Signer et al. (2000), academic staff were not part of a controlled programme that mandated them to attend training and use the innovation. Participants had opportunities to attend the training sessions and to use the innovation. They received an invitation to respond to a questionnaire – but responses were not compulsory. In contrast, in the Dobbs (2004) study, participants volunteered to participate in a dedicated and controlled programme where they were exposed to different forms of interventions to implement and use

the innovation. It is not surprising that Signer et al. (2000) identified the need for staff training to address the specific concerns of lecturers. The need for staff development training was also confirmed and recommended by Signer et al. (2000), Dobbs (2004), and Gallaher and Wentling (2004).

In six of the studies (Dobbs, 2004; Donovan & Green, 2010; Foulger & Williams, 2007; Gallaher & Wentling, 2004; Signer et al., 2000; Ward, West & Isaak, 2002) the innovations that were implemented by users were used in a teaching and learning situation. These SoCQ results show that users have Self-concerns such as Unconcerned, Informational, and Personal concerns when they have to implement an innovation.

In the study by Tan et al. (2011), the initial concerns of staff about the mandatory implementation and use of a Quality Management System (QMS) were captured. The QMS used by this higher education institution is not a teaching and learning tool (to be used by students or by lecturers to present materials to students); rather it is a tool to capture the processes and documentation in the organisation. This study showed that participants' highest concerns were Consequence concerns, in the Impact dimension.

Most of the results of these studies confirm the CBAM theory: academic staff members have high Self-concerns when they are required to implement and use an innovation in their teaching and learning practice. It is also not surprising that the study by Ward, West and Isaak (2002) demonstrates that student teachers' concerns are inconsistent with the stages of the model, and that the SoCQ needs modification for such an application context.

The LoU instrument was mentioned in only two of the studies. Foulger and Williams (2007) used the LoU interviews as a pre- as well as a post evaluation

and they mention the required training and the suggested procedure to have a second rater for the interviews. Tan, Haron, Yahya, Dahlan, Goh and Ashaari (2011) also mention the use of the LoU interview, but they converted it to a questionnaire with 14 items. Although the reliability coefficient for the LoU was reported to be high (Tan et al., 2011, p. 204), thorough rating of eight categories and interpreting the possible configurations of use of an innovation by each individual, does not seem possible in a questionnaire of 14 statements.

❖ From this group of seven studies, only one (Foulger and Williams, 2007) made use of the innovation configuration construct of CBAM. None of these studies – including Foulger and Williams (2007) – did a diagnostic evaluation of the implementation and use of a learning management system in a higher education environment. Nor were any of the studies conducted in health sciences lecturers.

3.3.2 CBAM studies in the medical education field

Bresnitz, Ross, Hall and Stiegelbauer (1997) report on the concerns of medical faculty members (pulmonary lecturers) on the use of a computer-based learning programme. Four different groups of participants received different levels of facilitating interventions. Respondents completed the SoCQ and participated in a personal interview. Results show that the users of the programme were more involved in clinical activities than the non-users. Faculty members reported informational and personal concerns during the whole three years the study.

Bresnitz et al. (1997, p. 18) conclude that specific interventions are needed to address user concerns to ensure and encourage full integration of the programme.

❖ Although this study was conducted in a medical education context and reports on the implementation of educational technology, it does not identify or report on the specific needs of academic staff with regard to interventions or strategies they needed to fully integrate the programme into their teaching practice. This study only deals with one aspect of medicine and not the complex context of a health sciences faculty with its multi-disciplinary academic staff.

3.3.3 CBAM studies conducted in Southern Africa

Khoboli and O'Toole (2012) conducted an action research study in Maseru, Lesotho, on the professional development process of science teachers who had to implement a mandated new practice in their teaching. Different cycles of growth and development of the implementation processes were observed. Data were gathered through a variety of methods. Textual data were transcribed and matched to the CBAM stages of concern.

The authors (Khoboli & O'Toole, 2012) did not make use of one of the official CBAM diagnostic data gathering tools, but supposedly used descriptions of each of the stages of concern to match participants' responses. Their method of analysis is therefore questionable. Because their study took place over a two-year period, it would have been possible to have participants complete the SoCQ at least twice – once at the beginning of the project and once when the project

concluded. This approach would have provided comparable data, which could then have been triangulated with the data from other sources and would have allowed for the action research cycles of investigation and development.

In 1997, Gwele conducted a case study in a nursing department at the University of Kwazulu Natal. She reports on the implementation process and development of concerns of lecturers who had to implement problem-based learning (PBL) in their teaching. The CBAM model provided the tools (SoCQ) as well as interviews to monitor the development of the lecturers' concerns over an 18-month period. Gwele (1997, p. 275) reports that lecturers were committed to the programme and saw it as being relevant for the changing health policy in South Africa, despite their prevailing personal concerns. However, there is no mention of a plan to design specific interventions to address their concerns.







These two studies, one at the school level and the other in higher education, were conducted in the Southern African region. The innovations studied do not include the implementation of a learning management system as this study has done. The studies differ further in the CBAM diagnostic instruments that they employed: Gwele (1997) made use of the SoCQ, but Khoboli and O'Toole (2012) did not make use of any of the diagnostic instruments provided by the CBAM.

3.4 Doctoral studies using the CBAM from 2000 to 2012

A systematic review of doctoral studies since 2000 that used the CBAM was conducted based on the process prescribed by Jesson et al. (2011, p. 108).

Table 3:5 shows the systematic review process followed.

Table 3:5 Systematic review of PhD studies using CBAM (2000-2012)

| | |
|---|--|
| Phase 1: Scoping the review  | PhD research studies that were conducted since 2000 in the higher education context that utilised the CBAM instrument. |
| Phase 2: Comprehensive search  | Make use of available electronic databases Search criteria used: <ul style="list-style-type: none"> ▪ “Concerns based adoption model” ▪ 2000 ▪ Theses ▪ Full paper |
| Phase 3: Quality assessment  | Inclusion criteria to select papers for analysis: <ul style="list-style-type: none"> ▪ Studies that employ instrument(s) of the Concerns Based Adoption Model (CBAM) ▪ CBAM instruments are used without any adaptation(s) of the instrument ▪ Higher educational environment |
| Phase 4: Data extraction  | Data extracted from the studies focused on: <ul style="list-style-type: none"> ▪ Author(s) ▪ Date published ▪ What was measured with the CBAM instrument? ▪ Number of participants ▪ CBAM instruments used ▪ How was the data from the CBAM instruments statistically analysed? ▪ What was the innovation? ▪ What were the results from the CBAM instrument(s)? ▪ What were the findings and/or recommendations of the study? |
| Phase 5: Synthesis | Discussion of literature reviewed: what we know now and what we still need to know. |
| Phase 6: Write up | See ‘Discussion of review’, section 3.4.1 |

From a list of 53 doctoral studies, only 15 were done in higher education and also used a non-adapted CBAM instrument. These 15 studies are included in the review. The focus of this synthesis is on the information from these 15 studies that relates to the current research study. Table 3:6 presents key information about each of the 15 studies reviewed.

Table 3:6 PhD studies between 2000 and 2012 using CBAM: Summary of key elements

| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 |
|---------------------------------|---|---|---|--|---|---|--|--|---|--|---|--|--|--|---|
| | Sells-Lewallen | Negrete | Schoepp | Ridgway | Henrickson | Julius | Petherbridge | Pan | Reid | Romero-Fuerte | Goliath | Hoskyns-Long | Mills | Al-Sarrani | Lee |
| | 2000 | 2004 | 2004 | 2005 | 2007 | 2007 | 2007 | 2008 | 2008 | 2009 | 2009 | 2009 | 2009 | 2010 | 2010 |
| CBAM instrument (s) used | SoCQ Open-ended question | SoCQ | SoCQ | SoCQ | SoCQ | SoCQ | SoCQ | SoCQ | SoCQ | SoCQ | SoCQ | SoCQ | SoCQ | SoCQ | SoCQ |
| Innovation | Instructional technology | Educational model (mandated) | Educational technology | Standards based teaching (SBT) and Educational digital libraries (EDL) | Educational technology | Educational technology | Learning management system (LMS) | Communicative language teaching (CLT) | Asynchronous courses | Web-based instructional technology | E-portfolios | Podcasting as learning tool | Active learning | Blended learning | Student learning outcomes and assessment (mandated) |
| What was measured? | Concerns and attitudes towards the use of instructional technology. | Concerns and perceptions about implementation of a mandated innovation. | Relationship between barriers, behaviour and affective. | Feeling of preparedness to use SBT; SoC related to EDL and the adoption of both. | Concerns about technology use of part- and full-time faculty members. | How concerns changed over course of fellowship involvement; Change in the use of technology and different concerns of different participant groupings (demographic info). | What effect certain variables had on concerns; What professional development and support interventions will help to utilise the LMS? | Attitudes, concerns and relationship between perceptions and practice. | How various factors impact on adoption: * Societal factors; * Institutional factors; * Individual factors. | Levels of implementation and computer self-efficacy beliefs; as factors influencing perceptions of support mechanisms to implement and use the web-based technology. | The factors that influence adoption and why; the efficacy of e-portfolios as an educational strategy. | Concerns of faculty members regarding podcasting. | The driving or restraining forces in implementing active learning as revealed through perceptions. | Concerns and professional development needs. | SOC and how it changed over time; What the SoC of the mandated innovation look like? |
| Number of participants | N = 71 | N = 310 | N = 69 | N = 8 | N = 100 | N = 15 | N = 353 | N = 68 | N = 32 | N = 334 | N = 9 | N = 57 | N = 9 | N = 148 | N = 216 |
| Selection method | Voluntary | Voluntary | Voluntary | Purposive convenience sample | Voluntary | Voluntary | Random sampling | Stratified purposeful sampling | Purposeful selection (sample) received invitation | Proportional random sample invited and some agreed | Purposive and convenient sampling | Random sampling (by inviting all lecturers to participate in inline survey) | Self-nominating and voluntary | All lecturers included | Representative (sample error formula); probability sampling; Stratified random sampling |
| Research design | Quantitative descriptive study | Quantitative exploratory study | Descriptive, correlational and explanatory case study | Case study and cross case analysis. | Quantitative triangulated with qualitative data | Qualitative and quantitative data collection methods | Non-experimental; cross-sectional; exploratory | Mixed method, sequential explanatory and descriptive | Qualitative cases study | Exploratory cross-sectional survey design | Explorative case study | Quantitative methodological approach using descriptive statistics to discover and identify relationships between | Descriptive, exploratory phenomenological study | Mixed methods | Descriptive ex post facto research methods designed to collect and study survey responses |

Table 3:6 PhD studies between 2000 and 2012 using CBAM: Summary of key elements (continued)

| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 |
|---|--|--|---------------------------------|---------------------------------------|---|---|--|--|--------------------------------|---|---|--|--|---|--|
| | Sells-Lewallen | Negrete | Schoepp | Ridgway | Henrickson | Julius | Petherbridge | Pan | Reid | Romero-Fuerte | Goliath | Hoskyns-Long | Mills | Al-Sarrani | Lee |
| | 2000 | 2004 | 2004 | 2005 | 2007 | 2007 | 2007 | 2008 | 2008 | 2009 | 2009 | 2009 | 2009 | 2010 | 2010 |
| | | | | | | | | | | | | concerns and disciplines | | | |
| Participants | Full time Arts faculty members at university | Full- and part-time faculty members | Faculty members at universities | Undergraduate science faculty members | Part-time and full-time faculty members in math science, liberal arts, technology and nursing | Faculty members – part of a fellowship programme | Faculty members | Faculty members at 4 universities | Faculty members | Faculty members at 6 universities | Internal medicine physicians | Full-time faculty members at a college | University faculty members | Faculty of Science | Full-time faculty in colleges |
| SoC: Highest concerns | Informational concerns | <i>(Did not mention individual stages)</i> | Unconcerned | Unconcerned and Informational | Unconcerned and informational | Informational | Unconcerned | Reported participants as non-implementers | Used for triangulation of data | <i>(Did not mention individual stages)</i> | 9 Individuals each on different stage during pre- and post-test | Informational | <i>(Did not mention individual stages)</i> | Personal | Unconcerned |
| Highest dimension | SELF | Part time: SELF Full time: TASK | UNRELATED | UNRELATED SELF | UNRELATED SELF | SELF | UNRELATED | NA | NA | IMPACT | 9 cases differ | SELF | NA | SELF | UNRELATED |
| Did change take place to other development phases? (from pre-to post-test) | NA | NA | NA | NA | NA | Unconcerned concerns stayed consistent; informational concerns diminished; there was a small increase in impact concerns later. | NA | NA | NA | NA | Yes. Diverse change. Self to Unconcerned; Unconcerned to self-concerns. Others stayed in the same dimensions. | NA | NA | NA | NA |
| Statistical analysis | Chi-square | Multivariate analysis of variance; Multinomial logistic regression | ANOVA | Descriptive statistics | ANOVA ; Cluster analysis; Pearson correlation | Kruskal-Wallis (nonparametric); One way analysis of variance by rank; post hoc analytic procedures; Wilcoxon signed rank test | Stepwise regression analysis to identify potential variables predictive of concerns regarding use of LMS | Cronbach Alpha; Factor analysis; Multiple regression; Descriptive statistics | None | Descriptive statistics; Factor analysis; Correlational analysis; Multinomial logistic MANNOVA | None | Quantitative: Descriptive statistics ; Analysis of variance (ANOVA), Linear regression ; Pearson correlation | Mixed method Descriptive statistics; Exploratory | Mixed method cross sectional; Open and closed questions; Descriptive statistics; Multivariate analysis MANNOVA; ANOVA | Descriptive statistics; Ex post facto ANOVA; Scheffe confidence interval; Games-Howell post hoc test; Chi-square |
| Some findings | Significant relationships between: | Faculty members have different | SoC stayed at initial stages | Develop common understanding | Concerns of part-time and full-time | Descriptive change patterns identified were: | Variables such as age, years teaching, | Strong unfavourable attitudes to | Various findings: Formal | Develop lecturers profiles to include | There was no consistent individual | Majority of educators are slow to adopt | Driving forces identified: Supportive faculty | Significance between gender and | Time is related with lower intensity in two |

Table 3:6 PhD studies between 2000 and 2012 using CBAM: Summary of key elements (continued)

| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 |
|--|--|---|--|---|---|--|--|---|---|---|--|--|---|--|
| Sells-Lewallen | Negrete | Schoepp | Ridgway | Henrickson | Julius | Petherbridge | Pan | Reid | Romero-Fuerte | Goliath | Hoskyns-Long | Mills | Al-Sarrani | Lee |
| 2000 | 2004 | 2004 | 2005 | 2007 | 2007 | 2007 | 2008 | 2008 | 2009 | 2009 | 2009 | 2009 | 2010 | 2010 |
| academic rank, age and peak score; frequency of use and participation in training; peak score. | perceptions of facilitators and barriers based on status, professional development and educational level. Most significant leadership intervention is perceived to be: ongoing support or coaching; providing resources; and a supportive change culture. | despite the technology rich environment. Greatest barrier: faculty members are uncertain how to integrate technology; Other barriers: lack of time and difficulty to schedule enough time for students to work on computers; People at task concern dimension notice and perceive more barriers to implementing technology than those at self or impact stages. | of terminology related to innovations; Consider individuals' pre-existing knowledge of the technology. | academics are similar. Most participants were at early SoC. No relationship found between age and concerns or use; Use technology to enhance personal productivity; fewer use it to deliver content and a small number use it to engage students; Found flawed beliefs about use of technology in teaching. Tail-up at the refocusing stage; Collaboration concerns higher than the consequence concerns in users with experience; Time is a barrier to implement and use technology. | (i) positive change; (ii) idiosyncratic change; (iii) little change and (iv) negative change. | attitudes towards teaching, prior use of LMS, training, perceived administrative support, and collegial attitudes do predict concerns. Needs identified: technical and, administrative support; support by peers; time for training; evidence found that technology supports student learning. | CLT; All demographic variables impacted on behavioural concerns. | institutional support; general institutional environment; and societal factors impact on adoption. Change in the role of the professors. | psychological and behavioural variables to predict lecturers levels of implementation; during first phases (non-use or preparation phases) access to resources and preparation are more important than in later phases when leadership encouragement, role modelling and visible support are important. Online learning experience and computer self-efficacy significantly predicted LoU. Experience in using the innovation and level of professional development and LoU predicted the SoC. | profile that predicted optimal adoption; therefore adoption of technology is seen as multi-factorial. | podcasting as a learning tool; Instructors have a general awareness and are interested in learning more; No relationship between SoC and academic position; Individuals with higher levels of adoption have higher levels of concerns; Business and Medical & Health faculty members have highest adoption scores and are considered to be early adopters. | development; student enthusiasm; student engagement; policy; benefits of active learning. Limiting forces: Students and peers that are unsupportive and negative; "Lack of alignment between stated values and enacted values in terms of rewards and time." Coaching and showcasing of active learning in class are recommended | concerns; No relationship between age, rank, nationality, country, teaching experience and concerns; Significant differences between use of technology and attitude; Significant difference between use and department as well as professional development needs; Professional development needs included things like workshops, technology support | of the stages but not with development of higher levels in SoC; All subgroups have non-user profiles; and a negative 1-2 split that is an indication of resistance; Stage 6 shows considerable tailing up that is another indicator of resistance. No concerns about the impact on students in the groups. The overall profile seen as persistent and resistant to change. |

3.4.1 Discussion of review

The majority of innovations under measurement or investigation in the studies reviewed were related to educational technology (e.g. podcasting, learning management systems etc.). A few of the studies investigated concerns about other educational-related innovations (e.g. student learning outcomes and assessment).

All the studies reviewed made use of the SoCQ. Only two studies (Julius, 2007 and Romero-Fuerte, 2009) used the LoU construct and only one used the instrument as intended and prescribed by the authors of the CBAM. Julius (2007) made use of the LoU as a pre- as well as a post- measurement. He employed a group of raters trained in using the model to rate the interviews which were conducted using the structured branched interview protocol. Romero-Fuerte (2009) used a questionnaire to ask behavioural questions instead of the LoU structured branched interview schedule. The CBAM authors (Hall et al., 2008, p. 17) carefully considered the reliable and valid assessment of a behavioural phenomenon such as levels of use. They concluded that observation or an interview are the only reliable methods of capturing the variations and configurations of possible use of an innovation (p. 17).

The third construct of the CBAM, the Innovation Configuration map is included in only two of the studies (Schoepp, 2004; Julius, 2007).

The research done by Petherbridge (2007) relates closely to the current study, because the innovation that was implemented was an LMS in a higher education environment. She investigated how certain variables might influence the adoption of an LMS in a higher education environment and also explored whether professional development support would help academic staff to use the LMS.

This current study is not primarily interested in the factors that influence adoption or implementation, but rather what the professional development needs are of HPEs (Health Professional Educators) when they have to implement and use a learning management system.

The exploratory study done by Petherbridge (2007) identified the following professional development and support needs of instructors in terms of using an LMS:

- Technical support;
- Administrative support;
- Time needs associated with use;
- Training required to enable use;
- Peer support;
- Evidence of how technology supports student learning;
- Financial support; and
- Improvement in the system.

Al-Sarrani (2010, p. 122) also identified the professional development needs of academics who have to implement blended learning in a science curriculum. Not only did the results indicate a substantial need for professional development, but academics also identified the following needs in order to be able to integrate blended learning in their science curriculum:

- more resources;
- more training regarding teaching strategies demonstrating the integration of technology;

- some wanted to contribute to the technology professional development programme;
- more regular instructional technology workshops; and
- collaboration with colleagues on instructional technology issues.

Several of the studies refer to critiques of the SoCQ (Julius, 2007; Petherbridge, 2007; Romero-Fuerte, 2009 and Sells-Lewallen, 2000). Romero-Fuerte (2009, p. 204) investigated the construct validity of the questionnaire and, after conducting an exploratory factor analysis, suggested that it should be revised. Caution is advised when interpreting findings (Romero-Fuerte (2009, p. 204). However, the fact that the SoC questionnaire were administered as part of a larger 65-item questionnaire serving five different focus areas might have negatively influenced the internal validity of the SoC questions.

Both Julius (2007) and Petherbridge (2007) discuss studies that report issues about the question validity of the SoCQ. Jibaja et al. (1991, in Julius 2007, p. 44) report on the low internal consistency reliability of the SoCQ.

This low reliability might be due to the fact that they applied the questionnaire to a small group of participants. Julius (2007, p.44) and Petherbridge (2007, p. 93) also discuss the study of Bailey and Palsha (1992) that measured the construct validity of the questions when the SoCQ was completed by a group of early intervention professionals. Julius (2007) comments that the “participant demographics were substantially different than those for which the SoCQ was originally validated” (p. 44). A study by Shotsberger and Crawford (1996; 1999, in Petherbridge, 2007, p. 94) followed up the recommendations of Bailey and Palsha (1992) to revise the SoCQ questionnaire, but failed to establish the validity of the *revised* questionnaire.

Sells-Lewallen (2000, p. 90) reports problems participants experienced in understanding some of the questions. This is related to the fact that the instrument is designed for generic application and use (p. 91). Despite all the concerns raised, Julius (2007, p. 29) highlights the value of the CBAM due to its validated instruments and the fact that it focuses on the individual within the change process.

3.4.2 Interpretations (conclusions) based on the review

After reviewing the identified studies, a process emerged taking the aims and purpose of this study into account. Figure 3:3 illustrates a cyclical evaluation and design process using the CBAM and SoC. The process starts with a SoC evaluation using the SoCQ to identify the concerns (step 1). The next step (step 2) involves the identification of the needs of academic staff based on their concerns. These needs inform and guide appropriate interventions (step 3), knowing which needs should be addressed. The last step (step 4) is to evaluate or assess changes that occurred in terms of the concerns and use, and whether student outcomes have been positively affected.

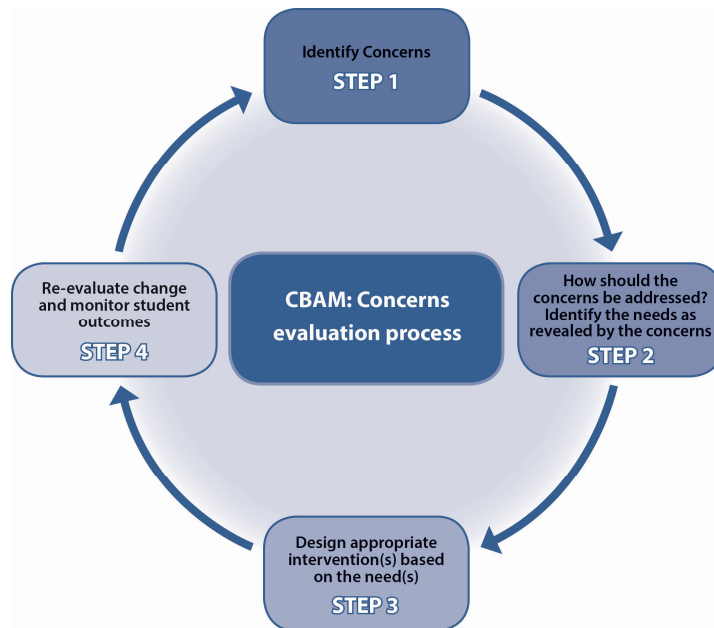


Figure 3:3: Concerns evaluation process

The studies reviewed can be categorised according to the four steps of the above CBAM concerns evaluation process, as shown in Table 3:7.

Table 3:7 Synthesis of CBAM studies reviewed

| Phases | Studies related to each phase |
|---|--|
| <p>Step 1: Identify concerns</p> <p>During the implementation of an innovation people are expected to change certain behaviour to implement and use it. Most of the studies reviewed assessed the concerns of individuals, whether they were expected to implement an innovation or had been using the innovation for some time.</p> | <p>Studies which identified concerns:</p> <ul style="list-style-type: none"> ▪ Ridgway (2005) ▪ Sells-Lewallen (2000) ▪ Al-Sarrani (2010) ▪ Henrickson (2007) ▪ Hoskyns-Long (2009) <p>Studies which investigated the relationship of different variables to concerns, or impact of variables on concerns:</p> <ul style="list-style-type: none"> ▪ Petherbridge (2007) ▪ Reid (2008) ▪ Schoepp (2004) ▪ Goliath (2009) ▪ Mills (2009) ▪ Negrete (2004) ▪ Pan (2008) |
| <p>Step 2: Identify needs (How should the concerns be addressed?)</p> <p>Without knowledge of the needs revealed through the concerns, the appropriate training or support interventions cannot be designed.</p> | <p>Studies that identified the professional support needs of instructors:</p> <ul style="list-style-type: none"> ▪ Petherbridge (2007) ▪ Al-Sarrani (2010) <p>Julius (2007) identified a “change profile” for instructors.</p> |

| Phases | Studies related to each phase |
|---|---|
| <p>Step 3: Design interventions/strategies based on needs</p> <p>This phase would involve starting with the needs and selecting and presenting appropriate interventions.</p> | <p>Was not reported in any of the studies reviewed (needs → intervention).</p> |
| <p>Step 4: Re-evaluate change and monitor student outcomes</p> <p>This closing phase would provide answers to questions such as:</p> <ul style="list-style-type: none"> • What is the change in the concerns of academics? • What is the change in behaviour of the individual(s)? • What was the impact on student outcomes? | <p>Changes in concerns were reported by Julius (2007) and Lee (2010).</p> <p>In none of these studies was it clear how the needs of instructors were addressed between the first and second evaluations.</p> <p>Julius (2007) also reports on the changes in use / behaviour.</p> |

This research study is not an attempt to follow the full cycle (Step 1 and 2 is completed in this study) of the CBAM evaluation process as shown in Figure 3:3, since this falls outside the scope of the study, and time limitations did not allow for such a project. However, the results of this study may indicate avenues for further research on the evaluation process.

3.4.3 Summary



Although Petherbridge (2007) and Al-Sarrani (2010) included the identification of professional development or support needs, it is not clear how these needs relate to any of the concerns identified.

The study by Goliath (2009) used internal medicine physicians as participants implementing an e-portfolio. Other than that, none of the studies reviewed were conducted in any health science faculties where medical educators were the participants.

3.5 Implementation bridge metaphor: theoretical and conceptual framework

The biggest challenge in implementing new technology in higher education is to achieve sustained and widespread use in an institution. To address this challenge, Hall (2010, p. 231) introduces the “*implementation bridge*” metaphor to reflect the three constructs (SoC, LoU and IC maps) of the CBAM (see Figure 3:4).

The implementation and use of an innovation can be metaphorically compared to a journey across a bridge (Hall & Hord, 2011a, pp. 10-11; Hall & Hord, 2011b, pp. 56-57). The start of the journey is characterised by an institutional drive to implement an innovation or new educational technology. Initial training and support are provided to the implementers of the innovation. The *implementation bridge* in Figure 3:4 illustrates the process of implementation (Hall & Hord, 2011a, pp. 10-11). The further the implementer advances across the bridge, the higher the level of use (LoU) and stages of concern (SoC) become with regard to the innovation. These indicators can be viewed as measures of the extent of the implementation (Hall & Hord, 2011a, pp. 10-11).

The key elements of the conceptual framework for this study (Figure 3:4) are the academics (A) who implement the innovation; the innovation, which is the LMS (B); and the CBAM, which provides the metaphor for the implementation process (bridge) as well as the diagnostic tools and constructs (LoU and SoC) (C) to evaluate and monitor the implementation process.

The desire for higher education institutions to be internationally recognised (UP, 2011) drives their implementation of new educational technologies such as learning management systems. Academics feel pressured to implement and use

these innovative educational technologies (King, 2002, p. 284), and old ways of teaching and learning are adapted and changed to make space for new and more innovative approaches (King, 2002, p. 283).

At the University, academic staff are faced with regular upgrades of the learning management system. These upgrades are necessitated by the continuous development of the learning management software in order to maximise the potential to make learning more effective, engaging and relevant for students (Learning Without Frontiers, 2010). Each upgrade requires academic staff to learn the new functionalities or tools in the system, along with the necessary skills and knowledge to apply them effectively in a teaching and learning environment.

An effective and engaging learning experience that incorporates a blend of methods, tools and educational technologies (e.g. use of the learning management system) and enables the realisation of learning outcomes relies on the knowledge, skills, attitudes and beliefs of the academic who designs it.

Professional staff development interventions are needed to assist academics in acquiring the necessary knowledge and skills to improve or develop new teaching and learning practices (Fishman et al., 2003, p. 654; Hendricson et al., 2007, p. 1517). Diverse intervention strategies need to be considered, including training sessions, one-on-one support sessions, online resources, and departmental training sessions.

To monitor the implementation process of a learning management system, two CBAM diagnostic tools were employed in this study:

- The stages of concern (SoC) construct was used to assess an individual or group's concerns. Concerns refer to the feelings, perceptions, attitudes and reactions the academic staff member may have towards an innovation

(George et al., 2008, pp. 7-9). During this study participants will complete this SoCQ twice. Once at the start of the journey (their first contact with the LMS and once at a later stage when they had time to start with the implementation in their own teaching practice); and

- The levels of use (LoU) construct was used to assess the current extent of implementation and to determine what support and facilitation interventions are required to further enhance the process. The LoU give an indication of the implementer's behaviour in their use of the innovation (Hall et al., 2008, pp. 1-3).

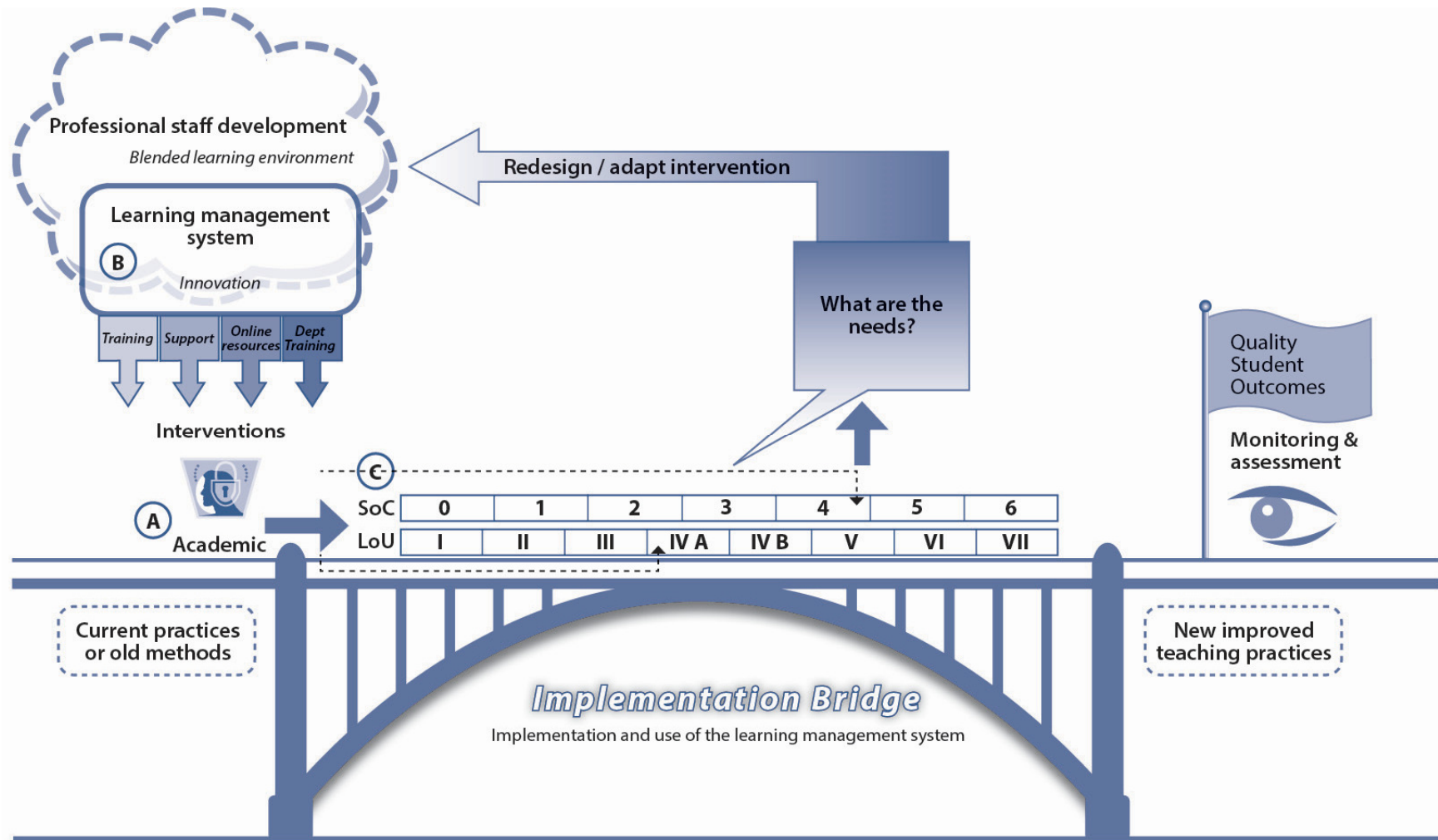


Figure 3:4 Conceptual framework (Adapted from: Hall & Hord, 2011a; Hall & Hord, 2011b)

From Figure 3:4 it is shown that data from the SoCQ in this study (also see Step 1 in Figure 3:3 assessing the SoC of the participants) provide insight into the **specific needs of lecturers** (also Step 2 in Figure 3:3 – identification of the needs) regarding the implementation and use of the LMS (George et al., 2008, pp. 1-3).

Furthermore, the SoC and LoU results assist in assessing whether fidelity of implementation of the LMS at UP has been reached (by HPEs). The results indicate the level of use (LoU) and whether or not there was careful consideration (i.e. the purposeful selection of functionalities or tools) of the impact (as measured by the SoC and LoU) of LMS use with the purpose of enhancing student learning.

The results of this study will enable staff that is responsible for implementing the LMS to address participants' (HPEs) concerns through customised interventions (i.e. Step 3 design interventions based on the needs).

The CBAM hypothesise that higher levels of use and implementation will result if lecturers' concerns are addressed (particularly their emotional, affective needs). This hypothesis therefore warrants a follow-up study to do another SoCQ evaluation (i.e. Step 4 – re-evaluate the change) to measure the extent of the journey across the bridge.



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Chapter 4

Chapter 4 - Research design

4.1 Introduction

According to McMillan and Schumacher (2010), the “ultimate aim of research is to reduce complex realities into simple explanations” (p. 324); this requires an appropriate research design and methods that are followed systematically.

This chapter introduces and describes the multi-level research design followed in this study. It examines the process of sampling participants; the instruments used (from the CBAM); the research process and data collection timeline; and lastly how the data were analysed in seeking answers to the research questions.

The primary purpose of this *eclectic* research design is to explore the perceived needs of Health Professional Educators (HPEs) with regard to required training and support when they are expected to implement and use an upgraded learning management system in a higher education context, in particular in a South African medical education faculty.

This research aims to harvest a combined set (two crops) of needs regarding support and training to facilitate the implementation and use of an LMS. The first set of needs of HPEs are those at the start of their journey, and the second crop are their needs at a later stage after training has been done, to enable the continuation of the journey across the *implementation bridge*.

4.2 Research design

By making use of a combination of both qualitative and quantitative methods, the study aims to enable a thorough investigation (McMillan & Schumacher, 2010, p. 25) and gain more insight (Creswell, 2009, p. 203) into the needs of HPEs when implementing a technology innovation. The framework for the collection and analysis of data can be described in terms of three operational levels: macro, meso and micro levels.

4.2.1 Three level mixed methods design

Figure 4:1 shows the three levels, mixed-methods research design that was followed in this study. Each of the levels is discussed in detail in the following sub-sections.

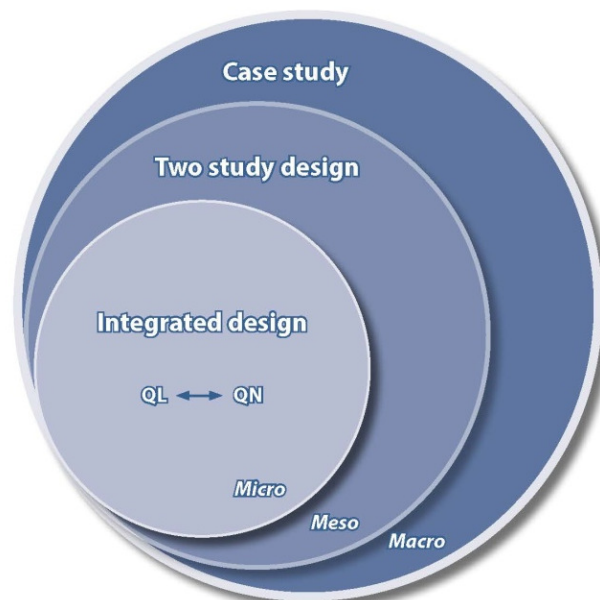


Figure 4:1 Three level mixed methods design (QL is qualitative and QN for quantitative)

4.2.1.1 On the macro level – case study

A *case study* strategy was used to explore the needs of HPEs regarding training and support required to facilitate the implementation of the LMS. The single case is characterised as follows:

- The participants in the study were HPEs in the Faculty of Health Sciences at the University of Pretoria (UP) who attended the *new* LMS (*clickUP*) training workshops. These workshops are aimed at facilitating the implementation of the upgraded LMS at the University.
- Two CBAM constructs (SoC and LoU) and their validated evaluation instruments (questionnaire and interview schedule respectively) were employed as methods to explore the needs of HPEs as well as the extent of implementation of the LMS.

Yin (2009, p. 47) provides specific reasons for making use of a single case design. Parts of his rationale that apply to this case study are that a single case design is:

- *representative* or *typical*. Lessons learned from this group are assumed to be informative about experiences of the other HPEs in this institution. (Yin, 2009, p. 48); and
- *revelatory* in the sense that the researcher had the unique opportunity to explore the needs of HPEs during the implementation process of the upgraded LMS. This type of implementation (or upgrade) process might be repeated in five-year cycles (or more) (Yin, 2009, p. 48). To repeat a study like this might be possible only during a following cycle of implementation of an LMS.

A limitation of a case study design is that it leads to problems of generalisability (Flick, 2009, p. 134). It is therefore expected to be similar in the current study.

4.2.1.2 On the meso level – two-study design

Both qualitative and quantitative data were collected in this case study. Srnka and Koeszegi (2007, p.32) classify research designs that collect and analyse qualitative and quantitative data as “two-study designs”. The researcher utilised standardised instruments in the form of a questionnaire and a structured branched interview schedule to explore the needs of the target population. The perceived needs of HPEs regarding training and support during the implementation of the LMS were explored using semi-structured interview questions.

4.2.1.3 On the micro level – integrated design

Srnka and Koeszegi (2007, p.32) refer to an “integrated study design” when qualitative data is collected and transformed into quantitative data during analysis, or when qualitative data are analysed using quantitative data analysis techniques. Qualitative data are transformed into quantitative codes, and quantitative data are transformed into qualitative themes (Srnka & Koeszegi, 2007, p. 33) – i.e. the same data are treated both hermeneutically and statistically. In this case study, the qualitative data collected during the LoU interview were transformed into quantitative data by allocating a rating and the ratings were tabulated and then analysed further.

4.2.2 Research paradigm or philosophical foundations

Creswell (2009, p. 8) embraces the term “world views” to refer to what other authors call *paradigms*, *epistemologies* and *ontologies*. *World views* are assumptions or the general point of reference that a researcher has about the *nature of research*. Although a researcher’s *world view* is mostly hidden, it does play a role and influence how the researcher plans and executes a study (Cresswell, 2009, p. 5).

The ontological foundation of the researcher’s assumptions in this study rests on the interpretivist paradigm. In this study, the researcher’s intention was to explore in order to provide insights into, and understanding of the needs of HPEs when implementing an LMS. The researcher believes that there are “different viewpoints” (Henning, Van Rensburg & Smit, 2011, p. 19) in constructing a view of reality that can and should be taken into account during the study.

In the interpretivist paradigm, knowledge frameworks and social discourse play an important role in the construction of knowledge. It is necessary to gather data from different sources to gain different views (Henning et.al, 2011, p. 19). The social context and values of participants play an important part in the analysis of the data and therefore the researcher should be sensitive and take these into careful consideration (McMillan & Schumacher, 2010, p.10).

Mertens (1998, cited in Creswell, 2009, p. 8) **combines social constructivism with interpretivism** and states that such researchers intend to “seek understanding of the world in which they live and work”. He further points out that in constructivist studies, researchers rely on the views of research participants, which help to construct the meaning of their situation through interaction; thus

more open-ended questioning is advised. McMillan and Schumacher (2010) agree that qualitative research leans towards “**constructionism**, which assumes that multiple realities are socially constructed through individual or collective perceptions or views of the same situation”; and they maintain that “systematic research procedures” should be followed (p. 12).

On the opposite side of *constructionism*, positivists assume that “theories are used to generate hypotheses that can be tested” and research can represent objective reality that is not dependent on the observer which is in contrast to interpretivist paradigm which does depend on the observer (Flick, 2009, p. 69).

To translate this worldview assumptions into the practice of inquiry the methods used in this study needs to be identified. Framed by the interpretive constructivist theoretical framework these methods are both qualitative as well as quantitative.

4.3 Population, sampling and research participants

As guided by the purpose and rationale of this study, HPEs in the Faculty of Health Sciences were identified as the target population (as shown in Figure 4:2) to participate in the study.

According to McMillan and Schumacher (2010), a “non-probability, purposeful sampling approach is the most common type in educational research” (p. 136). In purposeful sampling, participants are **selected based on certain characteristics** (McMillan & Schumacher, 2010, p. 138) they possess that would assist in the research investigation.

Participants in the sample met the following criteria:

- they were all HPEs from one of the four schools in the Faculty of Health Sciences at the University of Pretoria;
- they registered and attended the *Overview Workshop* that was presented as part of an introduction to the implementation process for the new LMS; and
- they demonstrated an interest in using the new LMS in their teaching (whether by own choice or via an instruction from a head of department or head of school).

The researcher judged that these participants who attended the implementation workshops (B in Figure 4:2) would provide rich sources of information in the quest to answer the research questions and therefore they were regarded as a purposeful sample.

The following people were excluded from the study:

- HPEs who did not attend any of the workshops about the new LMS, are not regarded as rich and relevant sources of information regarding the research questions. They might be highly technologically literate and able to use the new LMS without any support or training. There might also be other groups, such as those who are not interested in using the technology at all, or those who might be able to use the system by learning from other lecturers who did attend the workshop. Those who are able to learn from their peers are clearly not actively seeking professional development or support.
- Administrators, secretaries or teaching assistants employed by the departments or schools within the faculty to assist HPEs in teaching and administrative tasks, including the use of the LMS. This group did not comply with the criterion of being HPEs in the faculty.

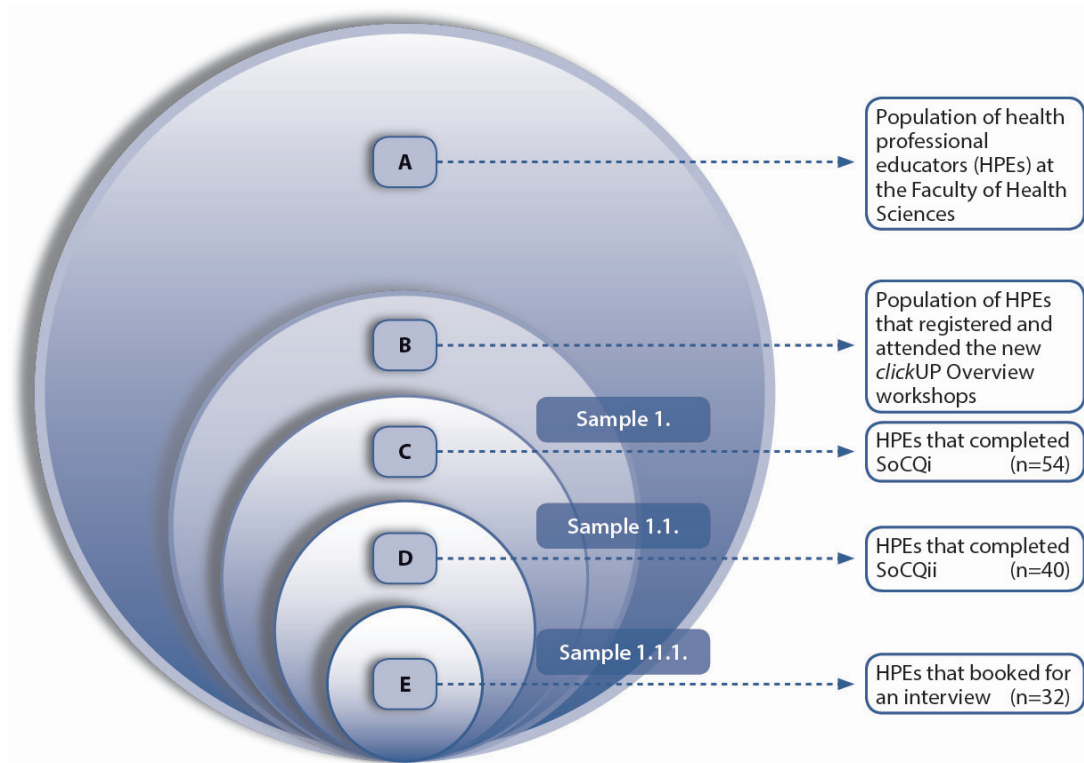


Figure 4:2 Sample selection process

Figure 4:2 illustrates the relationship between the population of all HPEs in the faculty (A) and the samples that were identified for the study. The sampling process shown in Figure 4:2 involved the following:

- A. All HPEs in the faculty were invited to attend the *Overview Workshop* and other training workshops. The invitation was sent to all educators in the Faculty of Health Sciences and was followed up with a reminder encouraging them to attend.
- B. The *Overview Workshop* was an introduction to the new LMS and was compulsory for everybody to attend, before attending any of the other workshops. HPEs who were interested in attending the *Overview Workshop* had to register through a central office at the University that administers all staff development opportunities. The central office was responsible for

handling registration for workshops that were presented on four different campuses, including the Medical Campus (the Faculty of Health Sciences).

The study made provision for HPEs who wanted to attend workshops on other campuses due to their personal or class schedules and the corresponding dates of the workshops. Therefore the researcher studied the participant lists of all the workshops presented on different campuses to make sure those HPEs who attended at other campuses were contacted and given the opportunity to participate in the study.

Participants who attended the *Overview workshops* were briefly informed about the research study during the workshop and then referred to an information sheet. They were invited to ask any questions they might have about the study. The information sheet, consent form and questionnaire were handed to them in an envelope. At the end of the *Overview workshop*, they were asked to provide general feedback on the workshop to the training team. They then had the opportunity to complete the questionnaire and consent form, if they wished to participate in the study.

- C. Sample 1 was the participants who attended the *Overview workshop* and completed the first Stages of Concern Questionnaire (SoCQi). Some returned the completed questionnaire on the following day, since they had more time to complete it in their offices after the workshop.

Invitations to complete a follow-up SoCQ and make an appointment to discuss their specific needs with regard to training and support were extended to all the participants in Sample 1.

The criteria for Sample 1.1² (D) and Sample 1.1.1³ (E) participants were:

- they had completed the SoCQi at (or after) the Overview Workshop;
and
- then had the opportunity during a period of at least two months after the Overview Workshop to implement and start using the LMS in their

² Sub-set of Sample 1 – see Figure 4.2.

³ Sub-set of Sample 1.1 – see Figure 4.2.

teaching, although it was NOT a requirement to have already started using the system.

- D. Some of the participants responded and completed the SoCQii follow-up questionnaire, but did not make an appointment for an interview. They are grouped as Sample 1.1.
- E. The subset of participants who completed the SoCQii follow-up questionnaire and also attended the interview session were grouped as Sample 1.1.1.

Purposeful sampling has certain strengths and weaknesses. According to McMillan and Schumacher (2010, p. 139-140), the strengths of purposeful sampling are:

- it is not too time-consuming or expensive to conduct;
- a high response rate is often guaranteed;
- it is possible to generalise to “similar subjects”; and
- it promises the delivery of required information.

However, McMillan & Schumacher (2010, p.140) also highlights the weaknesses of this particular sampling technique. This method of sampling will limit the ability of the researcher to generalise the results because of the unique characteristics of the participants in the sample.

4.4 Data collection instruments

For each of the three research questions a different research instrument was used.

| Research question | Instrument |
|--|-------------------------------|
| What are the stages of concern (SoC) of HPEs regarding the implementation of the LMS in their teaching practice after they have engaged in professional staff development interventions? | → SOCQ (questionnaire) |
| What are the levels of use (LoU) of the LMS in the lecturers' teaching practice after they have engaged in professional staff development intervention(s)? | → LoU (interview) |
| What are the perceived expressed needs of lecturers with regard to training and support that would enable them to implement the LMS in their own teaching practice? | → Perceived needs (interview) |

Two of the CBAM instruments, the Stages of Concern Questionnaire (SoCQ) and the Levels of Use (LoU) interview protocol were used to gather data to address research questions 1 and 2 respectively. For research question 3 a semi-structured interview was used to gather data about the perceived needs of HPEs regarding training and support required to implement and use the upgraded LMS. These instruments are discussed in further detail in the following sub-sections.

4.4.1 Stages of concerns questionnaire (SoCQ)

The SoCQ is seen as the most rigorous technique to measure concerns of research participants who are implementing an innovation in any educational context (Hall & Hord, 2011a, p. 80).

4.4.1.1 Design of the instrument

This instrument was designed to measure the seven stages of concern regarding an innovation (George et al., 2008, p. 11). These stages resemble a natural progression of concerns as users become more confident in using the innovation (George, et al., 2008, p. 4).

George et al. (2008, pp. 11-20) present a historical view of the design and development of the SoCQ. A first attempt to assess concerns about an innovation was in 1973 (p. 11). The initial instrument consisted of open-ended statements. Different variations of the instrument were investigated. The research team compiled lists of possible concern statements. Through a series of editing exercises and rewording of sentences, the number of statements was reduced to 195 (p. 12). The statements were then formed into a questionnaire and piloted. Factor and item analyses were conducted. Rating scales were confirmed through follow-up interviews with some of the initial participants. Following the pilot study results, the questionnaire was reduced to 35 items (p. 14). “Each statement was carefully selected according to the concerns theory to represent the seven fundamental Stages of Concern” (George, et al., 2008, p. 26). There are five statements per stage.

The SoCQ in this study consists of four parts (see Appendix 4a):

- i. A letter of invitation to HPEs explaining the purpose of and procedures for participation in the study. This is followed by a separate page requiring informed consent.
- ii. An introductory page explaining how to complete the instrument and also indicates which innovation the participants should consider when they respond.

- iii. Two pages of statements (five statements for each of the seven stages of concern) that respondents need to rate on a scale of 0 and 7. Respondents choose the appropriate scale point based on how true the statement is for them at the time. The zero is marked for items that are completely irrelevant while 1 is regarded as “not true of me now” while 7 is “very true of me now”. The only wording in the statements that was changed for this study was the allowed change of the name of the innovation: “clickUP”. The order of the statements was retained.
- iv. A demographic section was added with the purpose to assist in describing the samples and explore possible relationships between demographic-SoC and LoU variables. Both SoCQi and SoCQii have a demographic section with different questions. Questions in the demographic section of SoCQii focus on information that can only be answered after attending training and starting to use the innovation (see Appendices 4a and 4b).

4.4.1.2 Validity and reliability

The standardised Stage of Concerns Instrument (SoCQ) consists of 35 items and has proven reliability (test/retest reliability ranging from .65 to .86) and internal consistency (alpha coefficients ranging from .66 to .83) according to Hall and Hord (2011a, p. 80).

Since the first use, the instrument has been regularly re-evaluated. In 2006 it was revised based on statistics found in various studies. The sample group (n = 185) that completed the revised SoCQ had an estimated reliability of .66 for Stage 0 where the changes had been made (George et al., 2008, p. 22). This figure is higher than that found in earlier studies using the previous Stage 0 items. They also found that alpha coefficients for different groups within the sample ranged between .75 and .57 for Stage 0 (George et al., 2008, p. 22).

4.4.1.3 Permission to use instrument

Permission was obtained from the Southwest Educational Development Laboratory (SEDL) located in Austin, Texas to administer and use the SoCQ (see Appendix 4d).

Participants completed the SoCQi on paper. They could then decide to complete the follow-up SoCQii either online (through the SEDL online questionnaire facility) or on paper. The goal was to facilitate the process of data collection in a way convenient to participants.

4.4.1.4 Strengths and weaknesses of the SoCQ

The SoCQ is designed for diagnostic purposes (George, et al., 2008, p. 55) and should not be used to screen or evaluate people. It is also seen as inappropriate to analyse concerns in terms of good or bad, or that one stage is worse than any other – the stages indicate only that people require different kinds of assistance. “Concerns are natural, healthy phenomena and should not be equated to personality characteristics” (George, et al., 2008, p. 55). Furthermore, the authors state that the results of the SoCQ should be treated as hypotheses and should be confirmed with respondents.

The authors are confident, however, that notwithstanding the limitations of the SoCQ, valuable data can be obtained from it, when there is a need to research and facilitate change (George et al., 2008, p. 56).

4.4.2 Levels of use (LoU) interview protocol

Hall and Hord (2011a, p. 99) affirm that the only way to assess levels of use is through long-term observations, or the use of a specifically designed, validated and focused interview protocol (Hall et al., 2008, p. 53). They emphasise that it is not possible to use a questionnaire to make judgements about the use of an innovation, because measuring behaviour through self-reporting is “like trying to decipher semaphore signals by listening to the radio” (Hall & Hord, 2011a, p. 99).

The LoU construct provides a way to examine the use or non-use of an innovation. Traditionally the use of an innovation was viewed as dichotomous: individuals were seen as either users or non-users.

4.4.2.1 Design of the instrument

The LoU divides both non-users as well as users into several levels: three pre-defined levels of non-use and five levels of use (see Table 3:2 in Chapter 3).

Although the levels appear to be logically sequenced, each level should be seen as independent and discrete. The CBAM authors define “decision points” to differentiate between the levels by identifying a key behaviour at each level. The decision points help to guide the interview and also enable the interviewer to clearly distinguish between the different levels or behavioural profiles (Hall et al., 2008, p. 6).

Because educators or users are involved in many tasks and behaviours when using or implementing an innovation (not only planning and preparation), the LoU also makes use of seven different categories of behaviours of users (see

Appendix 3a for the description of these categories). Each of the categories is rated separately during the interview process and at the end of the interview, an overall LoU is determined. These categories and level definitions are indicated on a LoU chart that needs to be studied by interviewers before being used during the interview. All but one of the categories is observable: the Knowledge category indicates a user's understanding about the innovation.

4.4.2.2 Training required before using the LoU instrument

The authors of the CBAM require users of the LoU instrument to attend a three-day *face to face* training session. This certified training (Hall et al., 2008, p. 22) allows the researcher to acquire the expertise to:

- internalise and understand the construct of Levels of Use (LoU);
- conduct LoU interviews using the branching format and required questions with appropriate probing; and
- rate the interviews reliably.

The LoU training teaches the interviewer to ask questions related to each category. LoU interviewers require the skills to relate answers to decision points, rate each of the categories, and provide an overall rating for an individual participant (Hall & Hord, 2011a, p. 105). The researcher completed the face-to-face LoU training and complied with the requirements by submitting three interviews and ratings after the training to Prof Gene Hall for evaluation (see Appendix 4e).

4.4.2.3 Conducting and rating the interview

The LoU interview schedule is available in Appendix 4g. The interview is structured around the decision points in a branching format (Hall et al. 2008, p. 17). There is a set of questions that must be asked. Interviewers are not allowed to change or discard any of the questions. The interviewer asks an open question to establish use or non-use of the innovation. Depending on what the interviewee answers, a branching technique is followed (Hall et al., 2008, p. 17). All questions in a particular branch must be posed to the interviewee. Rules such as “no creative paraphrasing” of the questions apply when using this instrument.

The LoU chart provides a framework but cannot provide all the information and variations possible during the use of an innovation. During the interview, the interviewer ask for specific examples of behaviour and must ensure through further probing that the behaviour is described sufficiently to be able to rate it (Hall et al., 2008, p. 17).

The rating of the interview is done on a rating sheet indicating the different categories and levels. The person rating the interview uses the rating sheet to independently rate each of the categories as well as the overall level of use. The overall rating provides a holistic view of the categories along with full consideration of rating of behaviours that are indicative of a certain decision point (Hall et al., 2008, p. 23).

The procedures to make use of this instrument require that (Hall et al., 2008, p. 23):

- the interviews are audio taped, to provide a record of the interview and allow a *second rater* (qualified LoU rater) the opportunity to rate the same interview in order to establish reliability;
- the interviewer rates all the categories and provides an overall rating for each interview; and
- there is a list of pre-determined criteria (three to five components) for making a use or non-use decision.

4.4.2.4 Reliability and validity of the LoU interview protocol

To check interviewer reliability, a sample of the interviews is rated by a second qualified rater. Because LoU is a categorical variable, a rating can be either right or wrong. If the rating differs between the two raters, a third rating needs to be done.

To measure the reliability of the LoU ratings, two procedures were followed:

- the calculation of the Agreement coefficients for each rater; and
- the calculation of the Cronbach alpha coefficient.

A study by Hall and Loucks (1977, pp. 267-268) tested and verified this interview protocol as a valid and reliable method to measure the levels of use of an innovation.

4.4.2.5 Limitations of the LoU instrument

The training for interviewers is not available online, but must be attended face-to-face in the USA. This may be a reason for the low uptake of this particular instrument in educational research studies that employ the CBAM.

To use this instrument, the researcher need to study the definitions of each of the categories on the different levels of non-use and use thoroughly (see Appendix 3a). This knowledge is what the interviewer use to make decisions on how to probe an interviewee for (further) examples of use to clarify the level of use he/she is at. Finding another qualified LoU rater to act as a second rater is necessary, but may be challenging for researchers.

4.4.3 Semi-structured interview: Perceived needs

This section presents the purpose of the perceived needs interview and explain how the interview is structured and used.

4.4.3.1 Purpose and design of the instrument

Research question 3 explores the needs expressed by HPEs with regard to training and support that would enable them to implement the new *clickUP*. The exploration was done by means of an interview. Figure 4:3 illustrates the place and purpose of this question in the study.

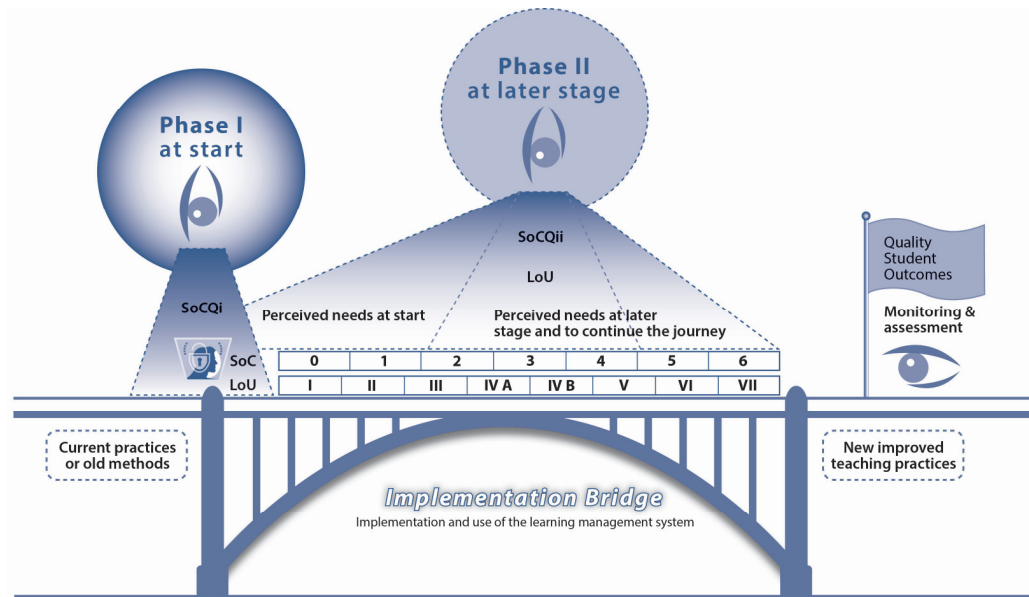


Figure 4:3 Research question 3 and the journey across the bridge

This research question explores what HPEs say they needed when they started off on their journey of implementing the new *clickUP* in their teaching, and also what they feel they need to continue this journey (Figure 4:3). Therefore, the interview schedule is divided into two parts. It starts with a set of questions that are answered *retrospectively* and continues by asking the same questions but with the focus on their current needs to continue the journey and move to a higher level of use.

The semi-structured interview questions allowed the researcher to explore:

- the needs of HPEs when they started the journey of implementing a new LMS in their teaching;
- the needs of HPEs after they attended a workshop(s) and time to implement the new LMS; and
- how the needs that HPEs express compare with the findings of the SoCi and SoCii with regard to training and support needs.

4.4.3.2 Semi-structured interview instrument

Bryman (2012, p. 471) states that there is a “growing tendency” to collectively call semi-structured and unstructured interviews, “qualitative interviews”. However, qualitative interviews may take different forms. McMillan and Schumacher (2010, p. 355) and Bryman (2012, p. 471) describe the *interview guide* approach in which topics are outlined in advance and the researcher then decides the sequence and wording of the questions during the interview. A researcher can also make use of interview probes to increase the comprehensiveness of the data gathered. In general this interview aims to “bring out the specific elements which determine the impact or meaning of an event for the interviewees” (Flick, 2009, p. 151);

The perceived needs interview used in this study can be described as a *semi-structured* focused interview using an *interview guide*, for the following reasons:

- The interview follows a “stimulus”, namely the implementation of the new clickUP system.
- The impact of this stimulus on the interviewee is taken into consideration when the interviewer explores their needs – in this study, when implementing a new LMS in their teaching practice.
- In designing and conducting the interview for this study (see Appendix 4i), the researcher considered the following criteria for a semi-structured focused interview provided by Flick (2009, p. 150):
 - follow a *non-directive* questioning or conversational style;
 - aim to increase the *specificity* in the interview by asking retrospective questions;
 - allow the interviewees to introduce any topic related to the research during the interview; and

→ address the *depth and personal context* criteria by focusing on feelings when they are expressed, but also continuously diagnose the level of depth that is needed.

Table 4:1 lists the questions and the rationale for each question asked.

Table 4:1 Perceived needs interview guide

| Perceived needs interview questions | | |
|---|--|---|
| Question set 1: Retrospective questions | Question set 2: repeat same questions plus additional ones | Rationale |
| <i>Introduction before asking first question set: Think back in time to when you started the journey of implementing the new clickUP system; the first time you were exposed to the new system. The next few questions will be about your plans and experiences at that time.</i> | <i>Introduction before asking second question set: NOW, if I may bring you back to today. Think about where you are now in this journey of implementing the new clickUP system. The next few questions will be about your current plans and experiences.</i> | |
| 1.1 What was it that you wanted to achieve (or be able to do) with the new clickUP system? | 2.1 What is it that you want to do or to achieve with the new clickUP system? | <i>Will the aim / goal of using the system indicate / reflect the way it is used or some of the concerns in using the system?</i> |
| 1.2 Why did you attend the training? | 2.2 What would encourage you to attend more / further workshops or training? | <i>Motivation for use and attendance (why did they not do self-study?) Deeper and wider exploration of the rationale for using and making the effort to learn new clickUP. Does that reveal concerns?</i> |
| 1.3 What was your biggest concern about the implementation and use of clickUP then? | 2.3 What is your biggest concern about the implementation and use of clickUP currently? | <i>Link to the SoC / concerns that the participant may / may not have.</i> |
| 1.4 In your opinion what was it that you (or others) needed with regard to training and support to be able to use clickUP effectively in teaching? | 2.4 In your opinion what is it that you (or others) need with regard to training and support to be able to use clickUP effectively in teaching? | <i>Training and support needs to interpret in terms of the SoC (categories or specific concerns) that the participant may / may not have.</i> |
| 1.5 Is there anything else that you would like to add with regard to the beginning of this journey? | 2.5 Is there anything else that you would like to add with regard to where you currently are in this journey and where you would like to be in future? | <i>Open-ended for any other comments or concerns.</i> |
| | 2.6 What is it that you need from me, or other instructional designers to achieve your goals? | <i>Support needs to interpret in terms of the SoC (categories or specific concerns) that</i> |

Table 4:1 Perceived needs interview guide (continued)

| Perceived needs interview questions | | |
|--|--|---|
| Question set 1: Retrospective questions | Question set 2: repeat same questions plus additional ones | Rationale |
| | | <i>the participant may / may not have.</i> |
| | 2.7 What is it that will keep you interested in using clickUP? Probe: and motivated to learn more about clickUP? | <i>Deeper and wider exploration of the rationale for using and making the effort to learn new clickUP. Does that reveal concerns?</i> |
| | 2.8 What is your biggest role in your current post? Probe: biggest role with regard to teaching and learning? | <i>Roles of HPEs– explore whether that affects their use or non-use of new clickUP.</i> |
| | 2.9 There are many ways in which one could introduce a new LMS to academics in a faculty. I know that there are diverse opinions on how it should be done and that lecturers who have to implement and use the system have very specific needs. Please describe (share) which of the things that were used to introduce the new updated LMS you thought worked well / were good? Which interventions would you say (do you know) are not positively received by staff members? What else or different approaches / strategies would you rather see should be introduced / added? | <i>Deeper and wider exploration of what worked and what did not work with the new clickUP implementation. Does that reveal concerns about the innovation?</i> |
| | 2.10 Do you think that clickUP addresses / can address the learning needs of your students? | <i>Do participants see the benefit of using the innovation for the students?</i> |
| | 2.11 Did you change anything in your teaching practice since you started using the new clickUP? | <i>Do participants see the benefit of using the innovation in terms of improving teaching strategies?</i> |
| | 2.12 Is there anything else that you would like to add with regard to where you are currently in this journey and where you would like to be in future? | <i>Providing the opportunity for participants to add whatever they feel is relevant and important for them but was not addressed during the interview.</i> |

The full interview guide used in this study is available in Appendix 4i.

4.4.3.3 The use of retrospective questions

The first set of questions (1.1 to 1.5 in Table 4:1) in the interview required participants to think *retrospectively* about a certain event at a specific time. Participants were therefore asked to think back about their first encounter with the new LMS. The aim of the retrospective questions were to stimulate their long-term memories back to a given time.

Although the current situation may influence assessment of their earlier or past perspective (Flick, 2009, p.136), the *retrospective* interview questions assist participants in the sense that they have an opportunity to reflect on important and not-so-important aspects of the innovation after experience and time. Flick (2009, p.136) states that *retrospective* questions provide a method for retrieving past events and their possible significance, where this information might otherwise have been lost. The retrospective questions employed in this perceived needs interview was used for the same reasons described by Flick (2009).

4.5 Data collection strategy

The data collection strategy used in this study can be described as both *sequential transformative* as well as a *concurrent triangulation* strategy (Creswell, 2009, p. 212 - 213).

Creswell, (2009, p. 212) defines a *sequential transformative* strategy when the data is collected in two phases using a theoretical lens. For this study the research design and process is guided by the theoretical lens of the CBAM. The limitation of this strategy, as also pointed out by Creswell (2009, p. 213), was the

time (i.e. 18 months) that was required to complete the two data collection phases for this study.

Another approach that emerged from this research design is what Creswell (2009, p. 213) describes as a *concurrent triangulation* strategy. During the second phase of the study, both quantitative and qualitative data are collected concurrently. Participants completed the SoCQ and took part in the perceived needs as well as the LoU interviews. Data from the SoCQ and the perceived needs interview were then compared to see if there is a convergence, divergence or some combination of findings. The particular weakness of this strategy is that it can be difficult to compare the results of two analyses using data of different forms (Creswell, 2009, p. 214).

4.6 Data analysis

In this section the data analysis procedures followed are described for the demographic information as well as each of the three research questions.

4.6.1 Analysis of the demographic information

The demographic data captured via both the SoCQi and SoCQii were analysed using the one-way chi square (or binomial) non-parametric test to describe the distributions and observed frequencies. Because of the small number of participants ($n = 54$) in this study, non-parametric analysis methods were used to determine significance in the differences in numbers between the categories of

the demographic variables. Table 4:2 presents a summary of the demographic data analysis methods utilised in this study.

Table 4:2 Demographic data analysis methods

| Demographic data | Analysis method | QN / QL Integrated | SoCQi | SoCQii |
|-----------------------|---|----------------------|-------|--------|
| Demographic variables | Descriptive: Present frequencies | Integrated: QL→QN | ✓ | ✓ |
| | Inferential statistics: One-way Chi ² / Binomial test | Integrated: QL→QN | ✓ | ✓ |

The SoCQi and SoCQii each contain a section for collecting demographic information. The need to gather the demographic information over two questionnaires was necessitated by the following factors:

- restricted amount of time available to participants to complete the questionnaire between workshop sessions. The researcher therefore attempted to reduce the number of questions to enable participants to complete the SoCQi questionnaire in the shortest possible time;
- some questions were therefore added for the second questionnaire - SoCQii (e.g. age and academic achievement); and
- some questions could only be answered after participants had the opportunity to use and became more familiar with the new LMS system (e.g. ‘Confidence in using the new clickUP’).

4.6.2 Research question 1: Analysis of the SoCQi and SoCQii data

What are the stages of concern (SoC) of HPEs regarding the implementation of the LMS in their teaching practice after they have engaged in professional staff development intervention(s)?

To analyse the data relating to the seven stages of concern collected via this questionnaire, the following steps were performed:

- i. **raw** scores (each statement was rated between 0 and 7) need to be added up for each particular stage of concern (each stage consists of 5 statements) in order to get a **total** per stage;
- ii. the **percentile** score of the total raw scores are located on a *percentile table* (see table in George et al., 2008, p. 29); and
- iii. the percentile scores are plotted on the **Cartesian plane**.

This entire process was done using Excel™ to automate the calculations and conversions from the raw score to the percentile score. This also reduces the possibility of errors.

The analysis of the SoC data focus on the profiles, the stages in the SoC and the individual concern statements.

4.6.2.1 Profiles of concerns

Following the suggestions in the SoC manual by George et al. (2008, p. 34), a graph was drawn to show the profile of concerns by using the percentile scores for each of the stages of concern. This was done for:

- an entire group;
- individuals; and
- smaller groups that can be based on the demography of the participants.

Further **inferential statistical calculations** in the SAS (Statistical Analysis Software) and SPSS™ v21 (Statistical Package for the Social Sciences) programs included:

- the change in concerns from the SoCQi (pre) to the SoCQii (post); and
- relationships / associations between the demographic data and the SoC.

If percentile scores were equal in any two stages, the first stage in the order the stages are displayed, was taken as the highest stage. This action can be justified due to the *developmental* nature of the concerns in the SoC. This method is similar to the one followed by the administrator of the online SoCQ when analysing the highest scores.

4.6.2.2 Analysis of the stages: peak, second highest and lowest stage scores

Peak stage scores were determined by using the highest percentile score that a participant received for one of the seven stages. The same method was followed to determine the second highest stage and the lowest stage (the lowest score

received). If a participant scores the same on two or more stages, the following process was followed to determine highest (peak) or second highest stages:

- the first stage (in the order the seven stages exist) in which the scores were equal, was taken as the highest score; and
- the second stage in which the scores are equal was then determined to be the second highest score.

This method is based on output from the online questionnaire facility of the SoCQ administered by SEDL (Austin, Texas). Again, the developmental nature of concerns on which the stages of concerns are based makes this an acceptable method to use.

4.6.2.3 Individual concerns: highest, second highest and lowest concerns

An analysis was also performed on the 35 concern statements or individual concerns (see the SoCQ in Appendix 4a). Each of the concern statements in the SoCQ represents a relevant concern an individual may have regarding an innovation. Each of these concerns (35 items) is rated by an individual between 0 and 7 according to how true the concern is for that person. A “0” rating is an indication of an irrelevant concern.

To determine which individual concern was rated the highest the following procedure was performed: All 35 items (per respondent) were scanned to locate the highest number (rating) used by a respondent to rate any of the concerns. A participant may have one or many concerns with the same high score. All the concerns (items) that received this highest score/rating were then taken as “highest rated concerns”. From the entire group of participants who completed

the SoCQ, concern(s) that received highest ratings were then listed and ranked, from most to least amount of times that a concern received a highest rating. The same process was followed to list and rank concerns that received the second highest rating, and the lowest rating from participants.

Tie scores regarding individual concerns were handled in the following way:

- Each individual's ratings were analysed to find the highest rating that he or she allocated to any concerns. All concerns that received this rating were then taken as "highest rated concerns". This method allowed the researcher to determine which individual concerns can be regarded as significant;
- After the highest scores were identified, they were removed from the data to be able to identify the second highest scores. Individual concern(s) rated the second highest were identified in the same way as the highest rated concern(s); and
- In order to identify the lowest rated individual concern(s) the "0" ratings (indicating not applicable) were removed from the data. The lowest rating allocated by an individual was then identified, after which all the concern(s) that received this lowest rating were listed.

The study made use of both qualitative and quantitative analysis methods. The methods used to analyse the data from the two SoCQ instruments are presented in Table 4:3.

Table 4:3 Data analysis for Research Question 1

| Data analysis | Analysis method | QN / QL / Integrated | SoCQi & SoCQii |
|--|--|----------------------|----------------|
| I – SoC profile analysis | | | |
| Sum raw scores to get total raw score for each stage. Convert to percentiles and draw profiles for: individuals and also for the | CBAM guidelines guideline (George et al., 2008). | QN | ✓ |

Table 4:3 Data analysis for Research Question 1 (continued)

| Data analysis | Analysis method | QN / QL / Integrated | SoCQi & SoCQii |
|---|---|----------------------|----------------|
| entire group | | | |
| Create a profile for groups of participants based on demographic variables. | Descriptive: Compare profiles Inferential statistics: Spearman correlation Kruskal-Wallis test | QN | ✓ |
| Change in SoC of the entire group from SoCQi to SoCQii. | Descriptive statistics: Profile Inferential statistics: Friedman test Wilcoxon signed rank test | QN | |
| Calculate the SoC dimensions | Descriptive statistics: Profile | QN | ✓ |
| Change in dimensions from SoCQi to SoCQii | Inferential statistics: Friedman test | QN | |
| Individual SoC profiles | Descriptive: Analysis of profiles for trends and differences | QN | ✓ |
| II – Analysis of the STAGES | | | |
| Calculate highest (peak), second highest, and lowest stage scores | Descriptive: Frequencies | QN | ✓ |
| Frequency distribution of the highest stage in relation to the second highest stage | CBAM guideline (George et al., 2008). | QN | ✓ |
| Relationship of peak, second highest, and lowest stages with demographic variables | Inferential statistics: Chi2 test Kruskal-Wallis test Spearman's correlation | QN | ✓ |
| Change of peak , second highest, and lowest stages from SoCQi to SoCQii | Inferential statistics: Wilcoxon signed rank test | QN | ✓ |

Table 4:3 Data analysis for Research Question 1 (continued)

| Data analysis | Analysis method | QN / QL / Integrated | SoCQi & SoCQii |
|--|--|----------------------|----------------|
| III – Analysis of individual concerns | | | |
| Calculation of highest (peak), second highest, and lowest rated individual concerns. | Descriptive statistics: Rank and list the top 5 in each group | QN | ✓ |
| Change in scores for individual concerns from SoCQi to SoCQii. | Inferential statistics: Wilcoxon signed rank test | QN | |

Table 4:3 presents a summary of the data analyses proposed for research question 1 in sections 4.6.2.1 - 4.6.2.3.

4.6.3 Research question 2: Analysis of LoU data

What are the levels of use (LoU) of the LMS in the lecturers' teaching practice after they have engaged in professional staff development intervention(s) and had the time to start using the system?

Specific steps and analysis methods that were followed to answer research question 2 are shown in Table 4:4.

Table 4:4 Summary of data analysis process for Research question 2

| Data analysis process | Analysis method / guidelines followed | QL / QN / Integrated |
|--|---|------------------------------|
| Analyse the transcribed text-based interviews by: <ul style="list-style-type: none"> adding ratings (indicating the category and level) as well as comments to the applicable text in the text-based document to show rationale/evidence for ratings provided; using the rating sheet (Appendix 4j) to capture the ratings for each category as well as the overall LoU; adding the final ratings for all categories and each of the participants to an Excel™ spreadsheet. | CBAM guidelines and process to ensure valid ratings (George et al., 2008) | QL |
| A second <i>trained</i> person rates a sample of the interviews. | CBAM guidelines | QL |
| Calculate agreement coefficients (in % or Cronbach's alpha coefficient) between first and second rater's ratings. | CBAM guidelines | QL → QN Integrated design |
| Calculate the significance of the LoU ratings | Inferential statistics: <ul style="list-style-type: none"> One-way Chi² | QL → QN Integrated design |
| Calculate the relationship between the LoU and different demographic variables. | Inferential statistics: <ul style="list-style-type: none"> One way Chi² Spearman correlation Kruskal-Wallis test | QL → QN Integrated design |

4.6.4 Research question 3: Collection and analysis of the semi-structured interview data

What are the perceived expressed needs of lecturers with regard to training and support that would enable them to implement the LMS in their own teaching practice?

All the interviews were recorded and transcribed. The SoC framework served as a lens through which the interview data was coded using Atlas.ti™. This required a set of codes to be created based on the 35 statements in the SoCQ. The results of this analysis were mapped onto a table reflecting the seven stages of concern. The interview data exhibited a broader range of concerns than the 35 statements in the SoCQ. Figure 4:4 shows what the data collection and analysis process entailed for research question 3.

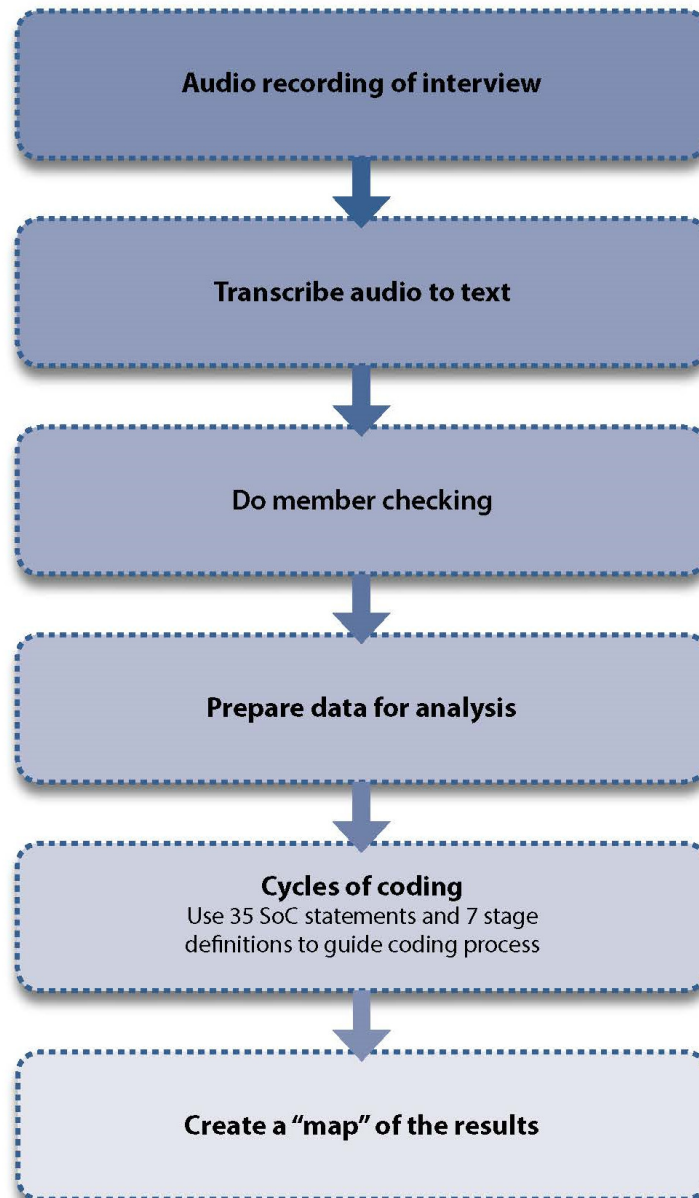


Figure 4:4 Data collection and analysis for Research Question 3

4.7 Reflexivity and rigour

The researcher used the following methods to develop reflexivity and rigour in the research process:

- writing reflections about different aspects of the study in a reflective diary;

- using a group of critical readers or critical friends. when appropriate;
- discussions with study leader;
- meeting with a known international expert in research methodology to discuss the study and specifically research question 3;
- communication and feedback from one of the authors of the CBAM; and
- communication and/or meetings with other researchers in the same field, but also different fields, where applicable; and
- the researcher attended the certified LoU training by the CBAM authors (Professor Hall and colleagues) to be able to conduct LoU interviews using the branching format and appropriate probes, and to ensure reliable rating of the interview data. The researcher also completed the certified training requirements by submitting practice interviews with her ratings to the CBAM authors for evaluation (see Appendix 4e).

4.8 Ethical considerations

The study was approved by the Ethics Committee of the Faculty of Education at the University of Pretoria and also by the Registrar. The latter approval was required to allow the participation of academic staff in the research study (see letters of approval in Appendices 4k and 4l).

In addition, the study received consent from the Dean of the Faculty of Health Sciences at the University, as well as the Deputy Dean and heads of the four schools in the faculty (see letters of consent in Appendices 4m to 4q).

4.8.1 Trustworthiness of the study

Shenton (2004, p. 64) summarises the strategies (credibility, confirmability, dependability and transferability) that Guba (1981) in Shenton (2004, p. 64) proposes in order to achieve trustworthiness in a study:

- Credibility can be achieved in different ways – for example, making provision for scrutiny opportunities by peers, colleagues and other academics, and also engaging in *member checks* which is getting the participants to verify the accuracy of the data captured (p. 64).
- Confirmability refers to the steps taken to ensure that the results are the experiences and ideas of the participants and not those of the researcher. Confirmability in this study was ensured by inviting the participants to confirm (i.e. member check) that the transcript of the audio recording during the LoU and semi-structured interview was accurate (p. 64).
- Dependability can be addressed through detailed reporting of the processes followed in the study, thus enabling other researchers to be able to repeat the work. This was done during the writing of this thesis (p. 64).
- Transferability can be handled by providing as much detail as possible about the processes followed to obtain results, so as to allow other researchers to make comparisons. This was done during the writing of this thesis (p. 64).

Several measures were taken to ensure the trustworthiness of this research study:

- Trustworthiness of the SoC was enhanced through:
 - The use of a tested and validated questionnaire instrument: the *SoCQ 075* (George et al., 2008, pp. 79-85);
 - The use of a scoring card in analysing the data; and
 - Checking the data entered for correctness by a second person.
- Trustworthiness of the LoU was further enhanced through:

- The use of a validated interview protocol and standardised rating sheet (Hall et al., 2008, pp. 53-66);
 - Transcription of interview data was checked by participants for correctness (member checking);
 - The rating of a sample of interviews by a second, trained rater;
 - The statistical calculation of data reliability and validity measures.
- Interview data on the perceived needs of participants was transcribed and analysed using *Atlas Ti* software. Participants were invited to confirm (member checking) that transcribed data were the correct version/interpretation of their perceived needs.

4.8.2 The role of the researcher in this study

McMillan and Schumacher (2010, p. 12) indicate that using qualitative methods to understand a phenomenon being studied often results in a researcher's intense involvement in the lives of participants. They also note that researchers have to exercise disciplined subjectivity and reflexivity throughout the research project.

The researcher in this study has been employed as an instructional designer in the Faculty of Health Sciences at the University of Pretoria since January 2005. A major focus of her work involves facilitating professional staff development interventions to support and guide the implementation and use of the learning management system (clickUP) by academics in the Faculty of Health Sciences, and occasionally also those from other faculties. A particular task of the researcher is to facilitate workshops with the aim of enabling HPEs to implement the new updated learning management system (new clickUP).

The focus of this study was chosen specifically to inform and enrich the quality of training interventions and to enhance support strategies by the knowledge gained from the findings. Thus the research problem reflects a real-life need, and the findings will

be of value not only to the researcher in her professional work, but also to the HPEs in the faculty and the management of the University.

4.8.3 Privacy of participants

The privacy of research participants was protected by means of the following confidentiality undertakings:

- any information given by participants regarding the implementation and use of the learning management system was treated confidentially as far as possible;
- participants were informed about who had access to the data before any information is released or published (researcher, DEI line manager and study leader); and
- a paper-based system was used to identify participants using a number on the questionnaire. This list indicating the names and numbers was kept separately, as securely as possible; and
- identifier numbers were assigned to ensure anonymity, since the researcher needed to be able to identify individuals' responses to permit the correlation of data gathered from the different instruments. The identifier numbers added to the SoCQi were also transferred to the responses or data collected via the other instruments.

4.9 Limitations of the research design

The following are identified as possible limitations in the study design:

- the small number ($n = 54$) of HPEs that participated in the study;
- the time required for each participant to complete the SoCQ twice and take part in two interviews, considering the busy schedules of HPEs;

- the facilitator of the workshops is also the researcher and interviewer in this study which may introduce bias (see mitigation strategies implemented in chapter 7); and
- generalisability are limited to similar contexts in higher education due to the specific context of this study and number of participants.



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Chapter 5 - Relationship between data collection, LMS implementation and workshops

5.1 Introduction

The data collection process was dependent on the implementation timelines of the new LMS system (called “new clickUP”) and the newly designed clickUP workshops at the University of Pretoria. The time dependencies are shown graphically in Figures 5:1 and 5.2 and are discussed in subsequent paragraphs.

5.2 LMS implementation timeline

Phasing out the old version of clickUP at the University of Pretoria and implementing the major upgrade to “new clickUP” (Blackboard Learn™ 9.1) were conducted in parallel over a period of 18 months from June 2011 to December 2012.

From June 2011, the new LMS was made available to lecturers only (not students), while the old clickUP system remained in full operation. With effect from January 2012, new clickUP was available to both lecturers and students. The migration of courses from old clickUP to new clickUP was done in a systematic manner during the course of 2012. During the first semester (January to June 2012) lecturers were required to move all first semester and year courses (suggested specifically for first year students) to the new clickUP, and in the second semester (July to December 2012) they migrated second semester courses. The remaining courses continued to run on old clickUP.

By the end of December 2012 old clickUP was discontinued and from January 2013 new clickUP was fully operational across all courses.

Chapter 5 – Relationship between data collection, LMS implementation & workshops

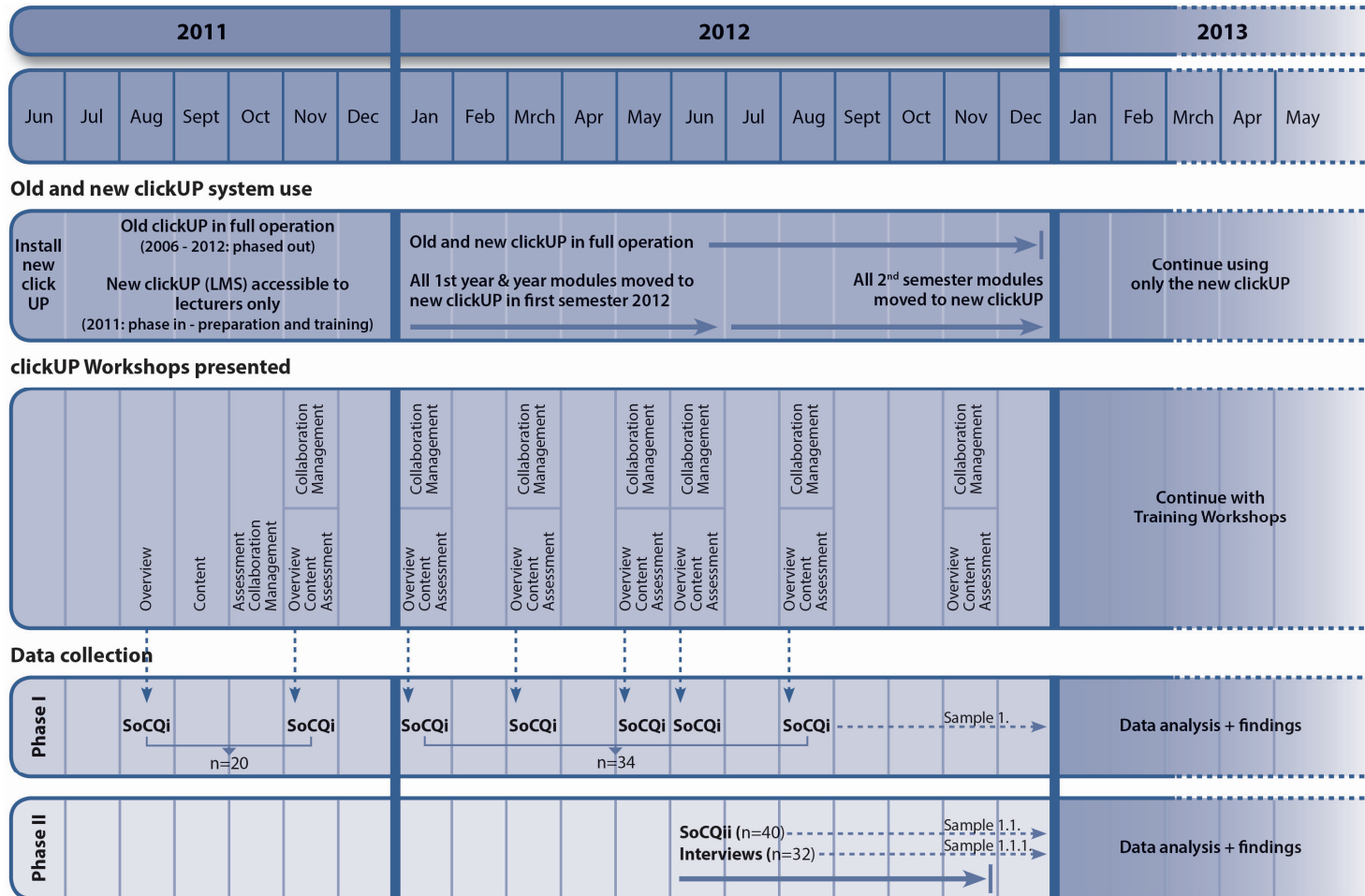


Figure 5:1 Timeline: Data collection, LMS implementation and workshops

5.3 New clickUP workshops presented

The implementation of the new clickUP version necessitated a complete redesign of training courses for lecturers. The revision of the training strategy is discussed in Chapter 1. The curriculum consists of five workshops: Overview, Content, Assessment, Collaboration and Management. The Overview Workshop is a pre-requisite for attendance at the remaining workshops, and was the basis for the sample of HPEs who participated in this study. Further details about the curriculum of each of the five workshops and the sequence of presentation are available in Appendix 1a.

During the 18-month implementation period (June 2011 – December 2012), an increased number of workshops were scheduled to provide opportunities for lecturers to learn the new clickUP system. These workshops were presented on four of the UP campuses. During the period August to October 2011, each of the workshops was presented repeatedly, starting with the Overview Workshop, followed by the next workshop in the sequence. From November 2011 the scheduling of the workshops changed. All five workshops were then presented consecutively during one week. The presentation sequence of the workshops remained the same. Figure 5:1 shows when the workshops were presented on all four UP campuses, including the Medical campus.

5.4 Data collection process

The HPEs who attended the Overview Workshops were invited to participate in the study. The data collection took place in two phases (as shown in Figure 5:2) during the 18-month implementation period for new clickUP:

- Phase I involved completion of the SoCQi immediately after the participants had attended the Overview Workshop; and
- Phase II involved completion of the follow-up SoCQii and participation in the LoU and perceived needs interviews. A minimum timespan of two months after completion of SoCQi was allowed to enable the HPEs to learn and use the system.

The HPE group that proactively attended the workshops in 2011 could only start using the new clickUP system with students in the first semester of 2012.

Therefore time had to be allowed from that point on, for them to use the system, before SoCQii and the interviews could be conducted (Phase II). The invitations for the interviews were sent out in May and the interviews with the ‘first group’ commenced in June 2012, at the end of the first semester. The interviews with HPEs who attended the 2012 workshops (the ‘second group’) commenced during August 2012. Figure 5:2 shows more detail about the two phases in the data collection process.

Chapter 5 – Relationship between data collection, LMS implementation & workshops

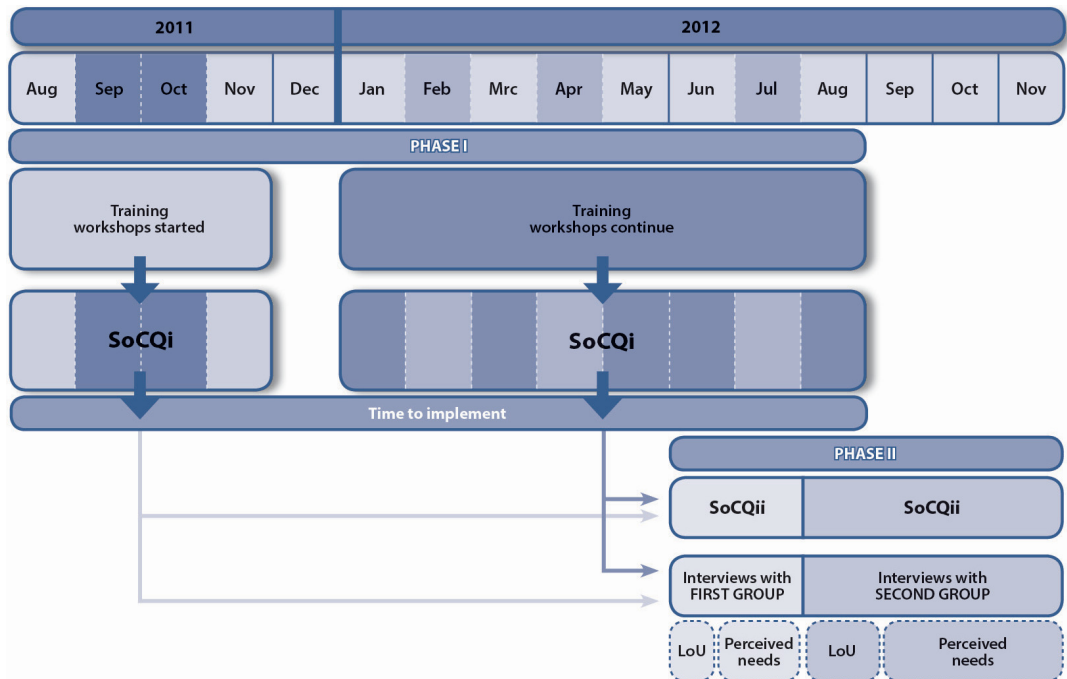


Figure 5:2 Detailed data collection process



Chapter 6 - Analysis of data and interpretation of results

6.1 Introduction

The results of the data analysis conducted and findings drawn from these results are presented in this chapter. Before reporting on the results and findings pertaining to the three research questions (sections 6.4 to 6.6), details about the participation of the HPEs in the study are presented (section 6.2), followed by demographic information about them (section 6.3).

6.2 Participation in the study

Table 6:1 shows the number of HPEs in the Health Sciences Faculty at the University of Pretoria who attended the *Overview Workshops* presented in 2011 and 2012. It also indicates the number who participated in the study by completing the first SoCQ (SoCQi) after the *Overview Workshop*.

Table 6:1 Summary of the Overview Workshop attendances and participation in the study

| Overview Workshop | Number of HPEs attending Overview Workshop | Number of HPEs participating in the study |
|-------------------|--|---|
| 2011 | 30 | 20 |
| 2012 | 54 | 34 |
| Total: | 84 | 54 |

Table 6:1 shows that 64% (n = 54) of the workshop attendees participated in the study as part of Phase I. A reduced number of these participants continued with the further data gathering activities during Phase II in 2012. Their journey in phases I and II of the study is illustrated in Figure 6.1.

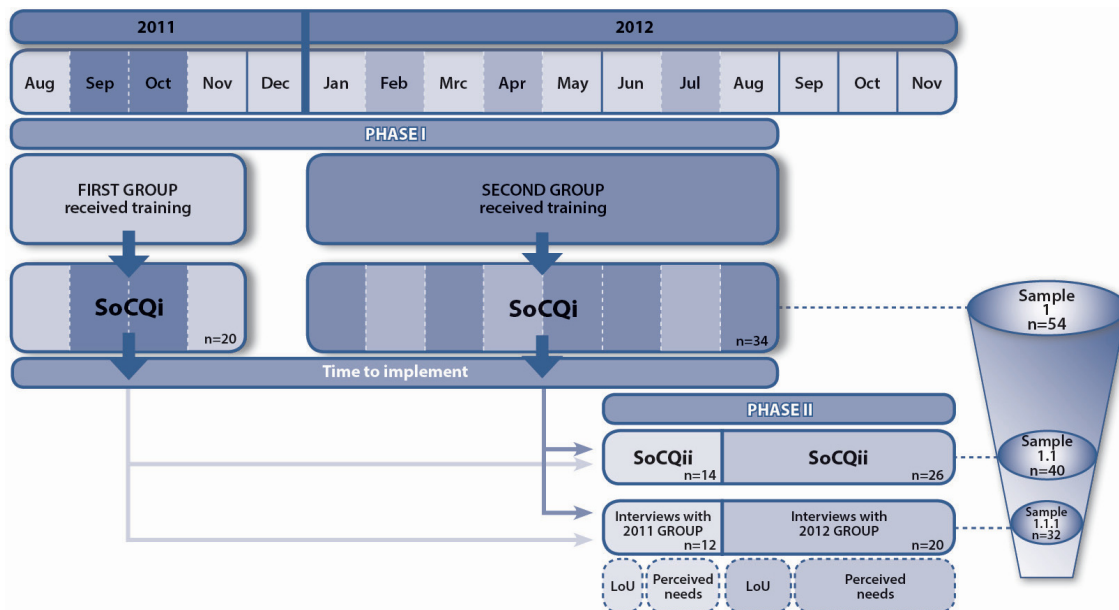


Figure 6:1 Data collection: phases, sampling and instruments used

Figure 6:1 shows that from the initial 54 participants who completed the SoCQi (Sample 1), 40 completed the follow-up SoCQii (Sample 1.1) while 32 participants completed the entire research process by also being interviewed (Sample 1.1.1).

During Phase II both the LoU and the Perceived needs interviews were done simultaneously with each participant (as shown in Figure 6:1). In the subsequent sections “Phase II – Interviews” refers to both the LoU and the Perceived needs interviews.

6.3 Demographic information of the research participants

The frequency tables provided in this section describes the demographic characteristics of the participants (in Sample 1, 1.1 and 1.1.1). The aim of this section is to verify that the participants in each of the categories in a single demographic variable are equally distributed. This was done by utilising a non-parametric test – the one-way χ^2 (chi square goodness-of-fit test). The binomial test are used when a demographic variable has only two categories. These significances offer value to the inferential statistical analysis that is conducted in research questions one and two.

The information describing the demographic profile of the research participants in this study is divided into different types, namely:

- General demographic information;
- Information about the participants' use of the LMS (*clickUP*); and
- Information about the participants' preferences and proficiencies with regard to the use of technology.

Figure 6:2 visually illustrates the structure of this section and will serve to guide the reader.



Figure 6:2 Visual structure of demographic information (section 6.3) of participants

Note that when it is stated in subsequent sections that results ‘differ significantly’, it means that the difference is ‘statistically significant’.

6.3.1 General descriptive information about the participants



General descriptive information with regards to the school participants are appointed in, their gender, lecturing experience, academic position, type of appointment, the largest class size they are teaching, their professional identity, age and highest academic qualification are provided in this section.

6.3.1.1 Schools in the Faculty of Health Sciences

HPEs from all four schools in the Faculty of Health Sciences participated in the study. Table 6:2 shows the number of participants during the different phases of the study. Though School 2 had the highest number of participants in Phase I, there is only a marginal difference in the number of participants from School 2 and 3 during Phase II.

Table 6:2 Summary of the participation of the four schools in the faculty

| School | Phase I (SoCQi) | | | Phase II (SoCQii) | | | Phase II (Interviews) | | |
|--------|-------------------|------|---|---------------------|------|---|-----------------------|------|---|
| | Sample 1 (N = 54) | | | Sample 1.1 (N = 40) | | | Sample 1.1.1 (N = 32) | | |
| | n | % | One-way Chi ² | n | % | One-way Chi ² | n | % | One-way Chi ² |
| 1 | 3 | 5.6 | $\chi^2 = 36.370$ df = 3 p = .000 | 3 | 7.5 | $\chi^2 = 22.600$ df = 3 p = .000 | 3 | 9.4 | $\chi^2 = 18.500$ df = 3 p = .000 |
| 2 | 29 | 53.7 | | 18 | 45.0 | | 15 | 46.9 | |
| 3 | 19 | 35.2 | | 17 | 42.5 | | 13 | 40.6 | |
| 4 | 3 | 5.6 | | 2 | 5.0 | | 1 | 3.1 | |

The results of a one-way Chi-Square analysis relating to each of the three samples (1, 1.1 and 1.1.1) revealed that the number of participants from the four schools differ significantly (Sample 1, $\chi^2 (3) = 36.519$, $p < .01$, Sample 1.1, $\chi^2 (3)$

= 22.600, $p < .01$ and Sample 1.1.1, $\chi^2 (3) = 18.500$, $p < .01$) for each sample at a 99% level of confidence.

6.3.1.2 Gender of participants

The number of males and females who participated in the different phases of the study is shown in Table 6:3.

Table 6:3 Distribution of gender groups

| Gender | Phase I (SoCQi) | | | Phase II (SoCQii) | | | Phase II (Interview) | | |
|--------|-------------------|------|---------------|---------------------|------|---------------|-----------------------|------|---------------|
| | Sample 1 (N = 54) | | | Sample 1.1 (N = 40) | | | Sample 1.1.1 (N = 32) | | |
| | n | % | Binomial test | n | % | Binomial test | n | % | Binomial test |
| Male | 8 | 14.8 | p = .000 | 7 | 17.5 | p = .000 | 6 | 18.8 | p = .001 |
| Female | 46 | 85.2 | | 33 | 82.5 | | 26 | 81.3 | |

The results of a binomial sign test ($\alpha = .01$) indicated that the number of male and female participants relating to each sample (1, 1.1 and 1.1.1) differ statistically significantly at a 99% level of confidence.

6.3.1.3 Lecturing experience of participants

The results in Table 6:4 show that 40.7%, 37.5% and 31.3% from the three samples (1, 1.1 and 1.1.1) respectively have lecturing experience of less than five years.

Table 6:4 Lecturing experience of participants

| Lecturing experience | Phase I (SoCQi) | | | Phase II (SoCQii) | | | Phase II (Interviews) | | |
|----------------------|-------------------|------|---|---------------------|------|--|-----------------------|------|--|
| | Sample 1 (N = 54) | | | Sample 1.1 (N = 40) | | | Sample 1.1.1 (N = 32) | | |
| | n | % | One-way Chi ² | n | % | One-way Chi ² | n | % | One-way Chi ² |
| ≤ 5 years | 22 | 40.7 | $\chi^2 = 16.926$ df = 4 p = .002 | 15 | 37.5 | $\chi^2 = 8.500$ df = 4 p = .075 | 10 | 31.3 | $\chi^2 = 3.313$ df = 4 p = .507 |
| 6-10 years | 9 | 16.7 | | 7 | 17.5 | | 6 | 18.8 | |
| 11-15 years | 8 | 14.8 | | 7 | 17.5 | | 5 | 15.6 | |
| 16-20 years | 4 | 7.4 | | 4 | 10 | | 4 | 12.5 | |
| ≥21 years | 11 | 20.4 | | 7 | 17.5 | | 7 | 21.9 | |

The results of a one-way Chi-Square analysis relating to Sample 1 ($\chi^2 (4) = 16.926, p < .01$) revealed that the number of participants at the five levels of lecturing experience differ statistical significantly at the 99% level of confidence.

However, the results of a one-way Chi-Square analysis relating to Sample 1.1 ($\chi^2 (4) = 8.500, p = .075$) and Sample 1.1.1 ($\chi^2 (4) = 3.313, p = .507$) revealed that for both these samples there are no statistically significant differences in the number of lecturing staff at the five levels of lecturing experience.

6.3.1.4 Academic position of participants

Table 6:5 shows that approximately 60% of the participants were appointed as lecturers during both phases of the study.

Table 6:5 Academic position of participants

| Academic position | Phase I (SoCQi) Sample 1 (N = 54) | | | Phase II (SoCQii) Sample 1.1 (N = 40) | | | Phase II (Interviews) Sample 1.1.1 (N = 32) | | |
|-------------------|--------------------------------------|------|---|--|-----|---|--|------|---|
| | n | % | One-way Chi ² | n | % | One-way Chi ² | n | % | One-way Chi ² |
| Junior lecturer | 11 | 20.4 | $\chi^2 = 79.333$ df = 5 p = .000 | 8 | 20 | $\chi^2 = 44.750$ df = 4 p = .000 | 7 | 21.9 | $\chi^2 = 34.875$ df = 4 p = .000 |
| Lecturer | 32 | 59.3 | | 24 | 60 | | 19 | 59.4 | |
| Senior lecturer | 7 | 13. | | 6 | 15 | | 4 | 12.5 | |
| Associate Prof. | 2 | 3.7 | | 1 | 2.5 | | 1 | 3.1 | |
| HoD | 1 | 1.9 | | 0 | 0 | | 0 | 0 | |
| Other | 1 | 1.9 | | 1 | 2.5 | | 1 | 3.1 | |

The results of a one-way Chi-Square analysis concerning each sample (1, 1.1 and 1.1.1) revealed that the number of participants relating to the six academic positions are significantly different (Sample 1: $\chi^2 (5) = 79.333, p < .01$), Sample 1.1: $\chi^2 (4) = 44.750, p < .01$, Sample 1.1.1: $\chi^2 (4) = 34.875, p < .01$) at a 99% level of confidence for all three samples.

6.3.1.5 Type of appointment of participants

The results in Table 6:6 show that approximately 56% of participants in Sample 1, 57% in Sample 1.1 and 56% in Sample 1.1.1 are permanently employed by the University, while approximately 26% participants in Sample 1, 27% in Sample 1.1 and 28% in Sample 1.1.1 are temporarily employed.

Table 6:6 Type of appointment of participants

| Appointment types | Phase I (SoCQi) | | | Phase II (SoCQii) | | | Phase II (Interview) | | |
|-------------------|------------------|------|---|-------------------|------|---|-----------------------|------|---|
| | Sample 1 (N= 54) | | | Sample 1.1 (N=40) | | | Sample 1.1.1 (N = 32) | | |
| | n | % | One-way Chi ² | n | % | One-way Chi ² | n | % | One-way Chi ² |
| Permanent UP | 30 | 55.6 | $\chi^2 = 32.222$ df = 3 p = .000 | 23 | 57.5 | $\chi^2 = 26.600$ df = 3 p = .000 | 18 | 56.3 | $\chi^2 = 20.750$ df = 3 p = .000 |
| Extraordinary | 2 | 3.7 | | 1 | 2.5 | | 1 | 3.1 | |
| Temporary UP | 14 | 25.9 | | 11 | 27.5 | | 9 | 28.1 | |
| Dual (Gov. & UP) | 8 | 14.8 | | 5 | 12.5 | | 4 | 12.5 | |

The results of a one-way Chi-Square analysis concerning each sample (1, 1.1 and 1.1.1) revealed that the number of participants relating to the four types of appointments are significantly different (Sample 1: $\chi^2 (3) = 32.222$, $p < .01$), Sample 1.1: $\chi^2 (3) = 26.600$, $p < .01$, Sample 1.1.1: $\chi^2 (3) = 20.750$, $p < .01$) at a 99% level of confidence for all three samples.

6.3.1.6 Largest class size that participants lecture

Between 35% and 37.5% of participants (in Sample 1, 1.1 and 1.1.1) indicated that the largest class that they lecture are between 26 and 50 students (Table 6:7).

Table 6:7 Class sizes participants lecture

| Class sizes | Phase I (SoCQi) | | | Phase II (SoCQii) | | | Phase II (Interviews) | | |
|-------------|-------------------|-------|---|---------------------|------|--|-----------------------|------|--|
| | Sample 1 (N = 54) | | | Sample 1.1 (N = 40) | | | Sample 1.1.1 (N = 32) | | |
| | n | % | One-way Chi ² | n | % | One-way Chi ² | n | % | One-way Chi ² |
| 1-25 | 6 | 11.11 | $\chi^2 = 10.444$ df = 4 p = .034 | 5 | 12.5 | $\chi^2 = 7.000$ df = 4 p = .136 | 4 | 12.5 | $\chi^2 = 7.688$ df = 4 p = .104 |
| 26-50 | 19 | 35.19 | | 14 | 35.0 | | 12 | 37.5 | |
| 51-100 | 13 | 24.07 | | 7 | 17.5 | | 6 | 18.8 | |
| 101-200 | 7 | 12.96 | | 5 | 12.5 | | 3 | 9.4 | |
| ≥ 200 | 9 | 16.67 | | 9 | 22.5 | | 7 | 21.9 | |

The results of a one-way Chi-Square analysis relating to Sample 1 ($\chi^2 (4) = 10.444$, $p < .05$) revealed that the number of participants teaching the five categories of class sizes differ statistical significantly at the 95% level of confidence.

However, the results of a one-way Chi-Square analysis relating to Sample 1.1 ($\chi^2 (4) = 7.000$, $p = .136$) and Sample 1.1.1 ($\chi^2 (4) = 7.688$, $p = .104$) revealed that for both these samples, there are no significant differences in the number of participants teaching the five categories of class sizes.

6.3.1.7 Professional identity of participants

This information was only collected during the second phase (SoCQii). Approximately 60% of the participants in Sample 1.1 and 65.6% of participants in Sample 1.1.1 were Health Care practitioners (see Table 6:8).

Table 6:8 Professional identity of participants

| Professional Identity | Phase I (SoCQi) | | | Phase II (SoCQii) | | | Phase II (Interviews) | | |
|---------------------------|---|---|--------------------------|---------------------|------|---|-----------------------|------|---|
| | Sample 1 (N = 54) | | | Sample 1.1 (N = 40) | | | Sample 1.1.1 (N = 32) | | |
| | n | % | One-way Chi ² | n | % | One-way Chi ² | n | % | One-way Chi ² |
| Scientists | <i>Personal identity was not part of SoCQi.</i> | | | 9 | 22.5 | $\chi^2 = 12.950$ df = 2 p = .002 | 5 | 15.6 | $\chi^2 = 15.063$ df = 2 p = .001 |
| Health Care practitioners | | | | 24 | 60.0 | | 21 | 65.6 | |
| Medical Doctors | | | | 7 | 17.5 | | 6 | 18.8 | |

The results of a one-way Chi-Square analysis concerning Sample 1.1 and Sample 1.1.1 respectively revealed that the number of participants relating to the three types of professional identities are significantly different (Sample 1.1: $\chi^2 (2) = 12.950$, $p < .01$, Sample 1.1.1: $\chi^2 (2) = 15.063$, $p < .01$) at a 99% level of confidence.

6.3.1.8 Age of participants

This information was only collected during the second phase (SoCQii). The largest number (35% - 40%) of the HPEs who participated in Phase II (Sample 1.1 and Sample 1.1.1) were in the age category 40 to 49 (Table 6:9).

Table 6:9 Age of participants

| Age | Phase I (SoCQi) | | | Phase II (SoCQii) | | | Phase II (Interview) | | |
|-------|----------------------------------|---|--------------------------|---------------------|-------|--|-----------------------|-------|---|
| | Sample 1 (N = 54) | | | Sample 1.1 (N = 40) | | | Sample 1.1.1 (N = 32) | | |
| | n | % | One-way Chi ² | n | % | One-way Chi ² | n | % | One-way Chi ² |
| 20-29 | <i>Age was not part of SoCQi</i> | | | 5 | 12.50 | $\chi^2 = 9.000$ df = 4 p = .061 | 3 | 9.40 | $\chi^2 = 13.000$ df = 4 p = .011 |
| 30-39 | | | | 5 | 12.50 | | 2 | 6.30 | |
| 40-49 | | | | 14 | 35.00 | | 13 | 40.60 | |
| 50-59 | | | | 11 | 27.50 | | 9 | 28.10 | |
| 60 + | | | | 5 | 12.50 | | 5 | 15.60 | |

The results of a one-way Chi-Square analysis concerning Sample 1.1 and Sample 1.1.1 revealed that the number of participants relating to the five age

categories are significantly different only for Sample 1.1.1 ($\chi^2(4) = 13.000$, $p < .05$) at a 95% level of confidence.

6.3.1.9 Highest academic qualification of participants

This information was only collected during the second phase (SoCQii).

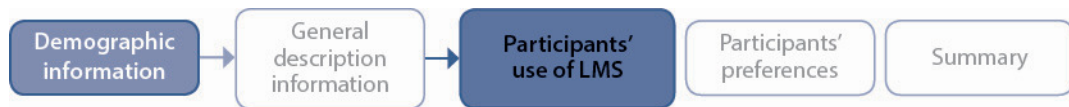
Approximately 54% of the participants in Sample 1.1 and 50% in Sample 1.1.1 obtained a Master's degree as their highest academic qualification (see Table 6:10).

Table 6:10 Highest academic qualification of participants

| Academic qualification | Phase I (SoCQi) | | | Phase II (SoCQii) | | | Phase II (Interviews) | | |
|------------------------|--|---|--------------------------|---------------------|-------|---|-----------------------|-------|---|
| | Sample 1 (N = 54) | | | Sample 1.1 (N = 40) | | | Sample 1.1.1 (N = 32) | | |
| | n | % | One-way Chi ² | n | % | One-way Chi ² | n | % | One-way Chi ² |
| Diploma | Academic qualification was not part of SoCQi | | | 3 | 7.69 | $\chi^2 = 50.923$ df = 6 p = .000 | 3 | 9.40 | $\chi^2 = 36.968$ df = 6 p = .000 |
| Bachelor | | | | 4 | 10.26 | | 4 | 12.50 | |
| Honours | | | | 4 | 10.26 | | 3 | 9.40 | |
| Masters | | | | 21 | 53.85 | | 16 | 50.0 | |
| PhD/Doctoral | | | | 3 | 7.69 | | 3 | 9.40 | |
| Post-doc | | | | 2 | 7.69 | | 1 | 3.10 | |
| Professor | | | | 1 | 2.56 | | 1 | 3.10 | |

The results of a one-way Chi-Square analysis relating to Sample 1.1 ($\chi^2(6) = 50.923$, $p < .01$) and Sample 1.1.1 ($\chi^2(6) = 36.968$, $p < .01$) revealed that the number of participants in the seven categories of academic qualification differ significantly at a 99% level of confidence.

6.3.2 Participants' use of the LMS (clickUP)



This section presents information regarding the participants' use of the LMS (clickUP). The time HPEs perceive to have available in order to familiarize themselves with the system, to develop a module in the system as well as to manage and maintain that module. Furthermore their confidence in the use of the LMS, their historical and current use of the new LMS, their self-rated proficiency in the use of the system, workshops they attended, the resources they used, as well as the perceived barriers and benefits with regards to the use of the new LMS are presented.

6.3.2.1 Time available to learn to use and become familiar with the system

HPEs were asked to rate the amount of time they perceive they have available for learning how to use the new system. They had to rate the time they have available on a scale of 1 (no time) to 10 (enough time). Twenty of the 43 participants (46.5%) in Sample 1, 16 (50%) in Sample 1.1, and 11 (≈46%) in Sample 1.1.1 (see Table 6:11), rated the time they have available as limited (i.e. between 4 and 6).

Table 6:11 Time available to learn and become familiar with clickUP

| Time available | Phase I (SoCQi) | | | Phase II (SoCQii) | | | Phase II (Interviews) | | |
|--------------------|-------------------|------|--|---------------------|------|--|-----------------------|------|--|
| | Sample 1 (N = 54) | | | Sample 1.1 (N = 40) | | | Sample 1.1.1 (N = 32) | | |
| | n | % | One-way Chi ² | n | % | One-way Chi ² | n | % | One-way Chi ² |
| No time (1-3) | 13 | 30.2 | $\chi^2 = 3.674$ df = 2 p = .159 (n = 43) | 7 | 21.9 | $\chi^2 = 4.188$ df = 2 p = .123 (n = 32) | 5 | 20.8 | $\chi^2 = 2.250$ df = 2 p = .325 (n = 24) |
| Limited time (4-6) | 20 | 46.5 | | 16 | 50.0 | | 11 | 45.8 | |
| Enough time (7-9) | 10 | 23.2 | | 9 | 28.1 | | 8 | 33.3 | |

The results of a one-way Chi-Square analysis concerning each sample (1, 1.1 and 1.1.1) revealed that the number of participants relating to the three categories of available time are not significantly different (Sample 1: $\chi^2(2) = 3.674$, $p = .159$, Sample 1.1: $\chi^2(2) = 4.188$, $p = .123$, Sample 1.1.1: $\chi^2(2) = 2.250$, $p = .325$).

6.3.2.2 Time available to develop a module in the LMS

Almost 54% of the participants in Sample 1, 59.4% from Sample 1.1 and 58.3% from Sample 1.1.1 (see Table 6:12), rated the time they have available to develop an LMS module as limited (i.e. between 4 and 6).

Table 6:12 Time available to develop a module in the LMS

| Time available | Phase I (SoCQi) | | | Phase II (SoCQii) | | | Phase II (Interviews) | | |
|--------------------|-------------------|------|--|---------------------|------|--|-----------------------|------|--|
| | Sample 1 (N = 54) | | | Sample 1.1 (N = 40) | | | Sample 1.1.1 (N = 32) | | |
| | n | % | One-way Chi ² | n | % | One-way Chi ² | n | % | One-way Chi ² |
| No time (1-3) | 13 | 30.2 | $\chi^2 = 9.116$ df = 2 p = .010 (n = 43) | 7 | 21.9 | $\chi^2 = 9.813$ df = 2 p = .007 (n = 32) | 5 | 20.8 | $\chi^2 = 6.750$ df = 2 p = .034 (n = 24) |
| Limited time (4-6) | 23 | 53.5 | | 1 | 59.4 | | 1 | 58.3 | |
| Enough time (7-9) | 7 | 16.3 | | 9 | 44.3 | | 4 | 33.3 | |

The results of a one-way Chi-Square analysis concerning each sample (1, 1.1 and 1.1.1) revealed that the number of participants relating to the three categories of time available to develop a module in the LMS, are significantly different (Sample 1: $\chi^2 (2) = 9.116$, $p < .05$), Sample 1.1: $\chi^2 (2) = 9.813$, $p < .05$, Sample 1.1.1: $\chi^2 (2) = 2.250$, $p < .05$) at a 95% level of confidence for all three samples.

6.3.2.3 Time available to manage and maintain LMS modules

Almost 51% of the participants in Sample 1, 50% from Sample 1.1 and Sample 1.1.1 (see Table 6:13), rated the time that they perceive they have available to manage and maintain LMS modules as limited (i.e. between 4 and 6).

Table 6:13 Time available to manage and maintain LMS modules

| Time available | Phase I (SoCQi) | | | Phase II (SoCQii) | | | Phase II (Interview) | | |
|--------------------|-------------------|------|--|---------------------|------|--|-----------------------|------|--|
| | Sample 1 (N = 54) | | | Sample 1.1 (N = 40) | | | Sample 1.1.1 (N = 32) | | |
| ... | n | % | One-way Chi ² | n | % | One-way Chi ² | n | % | One-way Chi ² |
| No time (1-3) | 11 | 25.6 | $\chi^2=6.186$ df=2 p=.045 (n = 43) | 7 | 21.9 | $\chi^2 = 4.188$ df = 2 p = .123 (n = 32) | 4 | 16.7 | $\chi^2 = 4.000$ df = 2 p = .135 (n = 24) |
| Limited time (4-6) | 22 | 51.2 | | 16 | 50.0 | | 12 | 50.0 | |
| Enough time (7-9) | 10 | 23.3 | | 9 | 28.1 | | 8 | 33.3 | |

The results of a one-way Chi-Square analysis relating to Sample 1 ($\chi^2 (2) = 6.186$, $p < .05$) revealed that the number of participants concerning the three categories of time available to manage and maintain LMS modules, are significantly different at a 95% level of confidence.

However, the results of a one-way Chi-Square analysis relating to and Sample 1.1 ($\chi^2 (2) = 4.188$, $p = .123$) and Sample 1.1.1 ($\chi^2 (2) = 4.000$, $p = .135$)

revealed that the number of participants concerning the three categories of time available to manage and maintain LMS modules, are not significantly different.

6.3.2.4 Confidence in using new LMS (clickUP)

When HPEs were asked about their confidence in using the new clickUP system during the follow-up SoCQii, 10% of those in Sample 1.1 and ≈6% of those in Sample 1.1.1 indicated that they have the confidence to *do everything in the new clickUP on their own*. Approximately 90% of the participants in Sample 1.1 and ≈94% in Sample 1.1.1, indicated that they need support or assistance, albeit at different frequencies and intensity in the three support categories (see Table 6:14).

Table 6:14 Confidence in using new LMS (clickUP)

| Confidence at using new LMS (clickUP) | Phase I (SoCQi) | | | Phase II (SoCQii) | | | Phase II (Interviews) | | |
|---|---|---|--------------------------|---------------------|------|---|-----------------------|------|---|
| | Sample 1 (N = 54) | | | Sample 1.1 (N = 40) | | | Sample 1.1.1 (N = 32) | | |
| | n | % | One-way Chi ² | n | % | One-way Chi ² | n | % | One-way Chi ² |
| Could do everything on my own | | | | 4 | 10 | χ ² = 24.200 df = 3 p = .000 | 2 | 6.3 | χ ² = 19.000 df = 3 p = .000 |
| Sometimes need assistance / help | Confidence in using clickUP was not part of SoCQi | | | 23 | 57.5 | | 18 | 56.3 | |
| Often need support / assistance | | | | 9 | 22.5 | | 8 | 25.0 | |
| Need support or assistance most of the time | | | | 4 | 10 | | 4 | 12.5 | |

The results of a one-way Chi-Square analysis relating to Sample 1.1 ($\chi^2(3) = 24.200, p < .01$) and Sample 1.1.1 ($\chi^2(3) = 19.000, p < .01$) indicated that the number of participants concerning the four categories of confidence in using the new clickUP, are significantly different for both samples at a 99% level of confidence.

6.3.2.5 Participants who used WebCT (before 2006)

The number of participants in Samples 1.1 and 1.1.1 who indicated they used the previous version of the LMS is shown in Table 6:15.

Table 6:15 Used WebCT before 2006

| <i>Used WebCT before 2006</i> | Phase I (SoCQi) | | | Phase II (SoCQii) | | | Phase II (Interviews) | | |
|-------------------------------|---|---|---------------|---------------------|----|----------------------|-----------------------|------|----------------------|
| | Sample 1 (N = 54) | | | Sample 1.1 (N = 40) | | | Sample 1.1.1 (N = 32) | | |
| | n | % | Binomial test | n | % | Binomial test | n | % | Binomial test |
| Yes | This question was not included in SoCQi | | | 10 | 27 | p = .008 (n = 37) | 8 | 25.8 | p = .011 (n = 31) |
| No | | | | 27 | 73 | | 23 | 74.2 | |

The results of a binomial sign test ($\alpha = .05$) indicated that the number of participants who used or did not use WebCT relating to Sample 1.1 ($p < .05$) and Sample 1.1.1 ($p < .05$) differ statistically significant at a 95% level of confidence.

6.3.2.6 Participants who used old clickUP (2006-2012)

Table 6:16 shows the number of participants who indicated they used old clickUP (previous version of the LMS at the University).

Table 6:16 Used old clickUP (2006-2012)

| <i>Used Old clickUP (2006-2012)</i> | Phase I (SoCQi) | | | Phase II (SoCQii) | | | Phase II (Interviews) | | |
|-------------------------------------|---|---|---------------|---------------------|------|----------------------|-----------------------|------|----------------------|
| | Sample 1 (N = 54) | | | Sample 1.1 (N = 40) | | | Sample 1.1.1 (N = 32) | | |
| | n | % | Binomial test | n | % | Binomial test | n | % | Binomial test |
| Yes | This question was not included in SoCQi | | | 29 | 78.4 | p = .001 (n = 37) | 24 | 77.4 | p = .003 (n = 31) |
| No | | | | 8 | 21.6 | | 7 | 22.6 | |

The results of a binomial sign test ($\alpha = .05$) indicated that the number of participants who used the old version of clickUP and the number of participants

who did not use the old version of clickUP relating to Sample 1.1 ($p < .05$) and Sample 1.1.1 ($p < .05$) differ significantly at a 95% level of confidence.

6.3.2.7 Participants currently using new clickUP

The number of participants who indicated they are using the new version of the LMS is shown in Table 6:17.

Table 6:17 Participants currently using new clickUP

| Current use of new clickUP | Phase I (SoCQi) | | | Phase II (SoCQii) | | | Phase II (Interviews) | | |
|----------------------------|---|---|---------------|---------------------|------|----------------------------|-----------------------|------|----------------------------|
| | Sample 1 (N = 54) | | | Sample 1.1 (N = 40) | | | Sample 1.1.1 (N = 32) | | |
| | n | % | Binomial test | n | % | Binomial test | n | % | Binomial test |
| Yes | This question was not included in SoCQi | | | 26 | 70.3 | $p = .020$ ($n = 37$) | 21 | 67.7 | $p = .071$ ($n = 31$) |
| No | | | | 11 | 29.7 | | 10 | 32.3 | |

The results of a binomial sign test ($\alpha = .05$) indicated that the number of participants in Sample 1.1 who use the new LMS (clickUP) and the number of participants in Sample 1.1 ($p < .05$) who do not use the new LMS (clickUP), differ significantly at a 95% level of confidence.

However, the number of participants in Sample 1.1.1 ($p = .071$) who use the new clickUP and the number of participants in Sample 1.1.1 who do not use the new clickUP, do not differ significantly.

6.3.2.8 clickUP workshops attended

The number of participants who specified which of the training workshops they attended is shown in Table 6:18.

Table 6:18 clickUP workshops attended

| Workshops | Phase I (SoCQi) | | | Phase II (SoCQii) | | | Phase II (Interviews) | | |
|-------------------------------|--|---|---------------|---------------------|-----|---------------|-----------------------|-----|---------------|
| | Sample 1 (N = 54) | | | Sample 1.1 (N = 40) | | | Sample 1.1.1 (N = 32) | | |
| | n | % | Binomial test | n | % | Binomial test | n | % | Binomial test |
| <i>Overview Workshop</i> | | | | | | | | | |
| Yes | This data was not collected with the SoCQi | | | 40 | 100 | p = .000 | 32 | 100 | p = .000 |
| No | | | | 0 | 0 | | 0 | 0 | |
| <i>Content Workshop</i> | | | | | | | | | |
| Yes | This data was not collected with the SoCQi | | | 33 | 83 | p = .000 | 25 | 78 | p = .002 |
| No | | | | 7 | 18 | | 7 | 22 | |
| <i>Assessment Workshop</i> | | | | | | | | | |
| Yes | This data was not collected with the SoCQi | | | 23 | 58 | p = .430 | 16 | 50 | p = 1.000 |
| No | | | | 17 | 43 | | 16 | 50 | |
| <i>Collaboration Workshop</i> | | | | | | | | | |
| Yes | This data was not collected with the SoCQi | | | 20 | 50 | p = 1.000 | 15 | 47 | p = .860 |
| No | | | | 20 | 50 | | 17 | 53 | |
| <i>Management Workshop</i> | | | | | | | | | |
| Yes | This data was not collected with the SoCQi | | | 19 | 48 | p = .875 | 14 | 44 | p = .597 |
| No | | | | 21 | 53 | | 18 | 56 | |
| <i>Turnitin Workshop</i> | | | | | | | | | |
| Yes | This data was not collected with the SoCQi | | | 7 | 18 | p = .000 | 6 | 19 | p = .001 |
| No | | | | 33 | 83 | | 26 | 81 | |
| <i>Grades Workshop</i> | | | | | | | | | |
| Yes | This data was not collected with the SoCQi | | | 6 | 15 | p = .000 | 5 | 16 | p = .000 |
| No | | | | 34 | 85 | | 27 | 84 | |

Data collection started during the *Overview Workshop*, therefore it is to be expected that a 100% of the participants indicated they attended this Workshop. Consequently the results of a binomial sign test ($\alpha = .01$) will be significantly different ($p < .01$).

The list of workshops presented in Table 6:18 resembles the order in which the Workshops were presented with the first five presented in one week (one per day). A reduction in the number of attendances per workshop is visible. The results of the binomial sign test ($\alpha = .01$) for Sample 1.1 ($n = 40$) show that the number of participants who attended:

- the *Content workshop* (n = 33) differ significantly at a 99% level of confidence ($p < .01$) from the number that did not attend (n = 7);
- the *Assessment workshop* (n = 23) do not differ significantly ($p = .430$) from the number that did not attend (n = 17);
- the *Collaboration workshop* (n = 20) were equal to the number that did not attend (n = 20) and therefore do not differ significantly ($p = 1.000$);
- the *Management workshop* (n = 19) do not differ significantly ($p = .875$) from the number that did not attend (n = 21);
- the *Turnitin workshop* (n = 7) differ significantly at a 99% level of confidence ($p < .01$) from the number that did not attend (n = 33); *and*
- the *Grades workshop* (n = 6) differ significantly at a 99% level of confidence ($p < .01$) from the number that did not attend (n = 34).

The results of the binomial sign test ($\alpha = .01$) for Sample 1.1.1 (n = 32) show that the number of participants who attended:

- the *Content workshop* (n = 25) differ significantly at a 99% level of confidence ($p < .01$) from the number that did not attend (n = 7);
- the *Assessment workshop* (n = 16) were equal to the number that did not attend (n = 16) and therefore do not differ significantly ($p = 1.000$);
- the *Collaboration workshop* (n = 15) do not differ significantly ($p = .860$) from the number that did not attend (n = 17);
- the *Management workshop* (n = 14) do not differ significantly ($p = .597$) from the number that did not attend (n = 18);
- the *Turnitin workshop* (n = 6) differ significantly at a 99% level of confidence ($p < .01$) from the number that did not attend (n = 26); *and*
- the *Grades workshop* (n = 5) differ significantly at a 99% level of confidence ($p < .01$) from the number that did not attend (n = 27).

These results are summarized in Table 6:19.

Table 6:19 Summary of the workshops attended

| Workshop | Sample 1.1 | Sample 1.1.1 |
|---------------|---|---|
| Overview | $N_{\text{attended}} > N_{\text{not attended}}$ | $N_{\text{attended}} > N_{\text{not attended}}$ |
| Content | $N_{\text{attended}} > N_{\text{not attended}}$ | $N_{\text{attended}} > N_{\text{not attended}}$ |
| Assessment | $N_{\text{attended}} > N_{\text{not attended}}$ | $N_{\text{attended}} = N_{\text{not attended}}$ |
| Collaboration | $N_{\text{attended}} = N_{\text{not attended}}$ | $N_{\text{attended}} < N_{\text{not attended}}$ |
| Management | $N_{\text{attended}} < N_{\text{not attended}}$ | $N_{\text{attended}} < N_{\text{not attended}}$ |
| Turnitin | $N_{\text{attended}} < N_{\text{not attended}}$ | $N_{\text{attended}} < N_{\text{not attended}}$ |
| Grades | $N_{\text{attended}} < N_{\text{not attended}}$ | $N_{\text{attended}} < N_{\text{not attended}}$ |

N_{attended} : Number of participants who attended the workshop

$N_{\text{not attended}}$: Number of participants who did not attend the workshop

6.3.2.9 Proficiency level of participants in using new clickUP

Table 6.20 displays the level of expertise participants perceive they have in using new clickUP. In Sample 1.1, 42.5% of the participants rated their level of expertise as 3 out of 5, while in Sample 1.1.1 almost 37.5% rated their level of expertise as 3 out of 5.

Table 6:20 Proficiency or level of expertise in using new clickUP

| Proficiency/ expertise in using new clickUP | Phase I (SoCQi) | | | Phase II (SoCQii) | | | Phase II (Interviews) | | |
|--|--|---|--------------------------|---------------------|------|--|-----------------------|------|---|
| | Sample 1 (N = 54) | | | Sample 1.1 (N = 40) | | | Sample 1.1.1 (N = 32) | | |
| | n | % | One-way Chi ² | n | % | One-way Chi ² | n | % | One-way Chi ² |
| 0 (No Skill) | | | | 4 | 10.0 | $\chi^2 = 15.250$ df = 4 p = 0.004 | 3 | 9.4 | $\chi^2 = 10.188$ df = 4 p = .037 |
| 1 | | | 3 | 7.5 | 2 | | 6.3 | | |
| 2 | This data was not collected with the SoCQi | | | 8 | 20.0 | | 8 | 25.0 | |
| 3 | | | | 17 | 42.5 | | 12 | 37.5 | |
| 4 | | | | 8 | 20.0 | | 7 | 21.9 | |
| 5 (Expert) | | | | 0 | 0 | | 0 | 0 | |

The results of a one-way Chi-Square analysis relating to Sample 1.1 ($\chi^2(4) = 15.250(4)$, $p < .01$ and for Sample 1.1.1 $\chi^2(4) = 10.188$, $p < .05$) indicated that the number of participants concerning the six categories of proficiency in using new clickUP are significantly different in both samples (at a 99% level of confidence for Sample 1.1 and at a 95% level of confidence for Sample 1.1.1).

6.3.2.10 Resources used by participants

Table 6.21 shows the number of participants who specified which resources they use in working with clickUP.

Table 6:21 Resources used by participants

| Resources used | Phase I (SoCQi) Sample 1 (N = 54) | | | Phase II (SoCQii) Sample 1.1 (N = 40) | | | Phase II (Interviews) Sample 1.1.1 (N = 32) | | |
|---|--|------|---------------|--|------|-----------------------------|--|------|----------------------------|
| | n | % | Binomial test | n | % | Binomial test | n | % | Binomial test |
| <i>Departmental administrative person</i> | | | | | | | | | |
| Yes | This data was not collected with SoCQi | | | 10 | 26.3 | $p = .005$ ($n = 38$) | 9 | 30 | $p = .043$ ($n = 30$) |
| No | 28 | 73.7 | 21 | 70 | | | | | |
| <i>Instructional designer(s)@ Department for Education Innovation</i> | | | | | | | | | |
| Yes | This data was not collected with SoCQi | | | 28 | 73.7 | $p = .005$ ($n = 38$) | 23 | 76.7 | $p = .005$ ($n = 30$) |
| No | 10 | 26.3 | 7 | 23.3 | | | | | |
| <i>E-Support (e-support@up.ac.za)</i> | | | | | | | | | |
| Yes | This data was not collected with SoCQi | | | 16 | 42.1 | $p = .418$ ($n = 38$) | 13 | 43.3 | $p = .585$ ($n = 30$) |
| No | 22 | 57.9 | 17 | 56.7 | | | | | |
| <i>Colleagues</i> | | | | | | | | | |
| Yes | This data was not collected with SoCQi | | | 19 | 50 | $p = 1.000$ ($n = 38$) | 18 | 60 | $p = .362$ ($n = 30$) |
| No | 19 | 50 | 12 | 40 | | | | | |
| <i>Experienced students</i> | | | | | | | | | |
| Yes | This data was not collected with SoCQi | | | 4 | 10.5 | $p = .000$ ($n = 38$) | 4 | 13.3 | $p = .000$ ($n = 30$) |
| No | 34 | 89.5 | 26 | 86.7 | | | | | |
| <i>Online resources (clickUP Help site)</i> | | | | | | | | | |
| Yes | This data was not collected with SoCQi | | | 29 | 76.3 | $p = .002$ ($n = 38$) | 23 | 76.7 | $p = .005$ ($n = 30$) |
| No | 9 | 23.7 | 7 | 23.3 | | | | | |
| <i>Workshop hand-outs</i> | | | | | | | | | |
| Yes | This data was not collected with SoCQi | | | 29 | 76.3 | $p = .002$ ($n = 38$) | 22 | 73.3 | $p = .016$ ($n = 30$) |
| No | 9 | 23.7 | 8 | 26.7 | | | | | |

The results of a binomial sign test ($\alpha = .01$) for Sample 1.1 ($n = 40$) showed that the number of participants who are making use of:

- *departmental administrators* ($n = 10$) and the number of participants that are not ($n = 28$), differ significantly ($p < .01$) at a 99% level of confidence;
- *instructional designers* ($n = 28$) and the number of participants that are not ($n = 10$) differ significantly ($p < .01$) at a 99% level of confidence;
- *E-Support* ($n = 16$) and the number of participants that are not ($n = 22$) do not differ significantly ($p = .418$);
- *colleagues* ($n = 19$) and the number of participants that are not ($n = 19$) are equal and therefore no significant difference is expected ($p = 1.000$);
- *experienced students* ($n = 4$) and the number of participants that are not ($n = 34$) differ significantly ($p < .01$) at a 99% level of confidence;
- *online resources* ($n = 29$) and the number of participants that are not ($n = 9$) differ significantly ($p < .01$) at a 99% level of confidence; and
- *workshop hand-outs* ($n = 29$) and the number of participants that are not ($n = 9$) differ significantly ($p < .01$) at a 99% level of confidence.

The results of a binomial sign test ($\alpha = .01$) for Sample 1.1.1 ($n = 32$) showed that the number of participants that are making use of:

- *departmental administrators* ($n = 9$) and the number of participants that are not ($n = 21$) differ significantly ($p < .05$) at a 95% level of confidence;
- *instructional designers* ($n = 23$) and the number of participants that are not ($n = 7$) differ significantly ($p < .01$) at a 99% level of confidence;
- *E-Support* ($n = 13$) and the number of participants that are not ($n = 17$) do not differ significantly ($p = .585$);
- *colleagues* ($n = 18$) and the number of participants that are not ($n = 12$) do not differ significantly ($p = .362$);

- *experienced students* ($n = 4$) and the number of participants that are not ($n = 26$) differ significantly ($p < .01$) at a 99% level of confidence;
- *online resources* ($n = 23$) and the number of participants that are not ($n = 7$) differ significantly at a 99% level of confidence ($p < .01$) ; and
- *workshop hand-outs* ($n = 22$) and the number of participants that are not ($n = 8$) differ significantly at a 99% level of confidence ($p < .05$).

These results are summarized in Table 6:22.

Table 6:22 Summary of resources used by participants

| Resource used | Sample 1.1 | Sample 1.1.1 |
|----------------------------|----------------------------|----------------------------|
| Departmental Administrator | $N_{used} < N_{not\ used}$ | $N_{used} < N_{not\ used}$ |
| Instructional designer | $N_{used} > N_{not\ used}$ | $N_{used} > N_{not\ used}$ |
| E-Support | $N_{used} < N_{not\ used}$ | $N_{used} < N_{not\ used}$ |
| Colleagues | $N_{used} = N_{not\ used}$ | $N_{used} > N_{not\ used}$ |
| Experienced students | $N_{used} < N_{not\ used}$ | $N_{used} < N_{not\ used}$ |
| Online resources | $N_{used} > N_{not\ used}$ | $N_{used} > N_{not\ used}$ |
| Workshop hand-outs | $N_{used} > N_{not\ used}$ | $N_{used} > N_{not\ used}$ |

N_{used} : Number of participants who made use of resource

$N_{not\ used}$: Number of participants who did not make use of resource

6.3.2.11 Significant barriers participants experienced to using clickUP

Participants were asked to write down any significant barriers that they have experienced when implementing new clickUP in their teaching. The answers were transcribed using Excel™ and coded. Six categories of barriers were distinguished. During Phase II approximately 60% of participants made comments concerning time and the “lack” or “constraint” thereof.

Table 6:23 Barriers in the implementation of new clickUP

| Barriers to implementation | Phase I (SoCQi) | | | Phase II (SoCQii) | | | Phase II (Interviews) | | |
|----------------------------|---|---|--------------------------|---------------------|------|---|-----------------------|------|---|
| | Sample 1 (N = 54) | | | Sample 1.1 (N = 40) | | | Sample 1.1.1 (N = 32) | | |
| | N | % | One-way Chi ² | N | % | One-way Chi ² | N | % | One-way Chi ² |
| Time | | | | 22 | 59.5 | $\chi^2 = 54.297$ $df = 5$ $p = .000$ $(n = 37)$ | 18 | 60.0 | $\chi^2 = 35.667$ $df = 4$ $p = .000$ $(n = 30)$ |
| Personal | | | 8 | 21.6 | 8 | | 26.7 | | |
| None | This data was not collected with SoCQi. | | | 3 | 8.1 | | 2 | 6.7 | |
| System | | | 2 | 5.4 | 1 | | 3.3 | | |
| UP | | | 1 | 2.7 | 0 | | 0 | | |
| Students | | | 1 | 2.7 | 1 | | 3.3 | | |

The results of a one-way Chi-Square analysis relating to Sample 1.1 ($\chi^2(5) = 54.297, p < .01$) and for Sample 1.1.1 ($\chi^2(5) = 35.667, p < .01$) indicated that the number of participants concerning the six categories of barriers experienced in using new clickUP, are significant different in both samples at a 99% level of confidence.

6.3.2.12 Perceived greatest benefits of new clickUP

Participants were asked to describe the greatest benefits that they have experienced in using new clickUP in their teaching. These responses were transcribed using Excel™ and coded. Four categories of perceived benefits were distinguished. Approximately 34% of the participants in Sample 1.1 and 38.7% of the participants in Sample 1.1.1 made comments about benefits in managing their modules.

Table 6:24 Perceived greatest benefits of new clickUP

| Perceived greatest benefits | Phase I (SoCQi) | | | Phase II (SoCQii) | | | Phase II (Interviews) | | |
|-----------------------------|--|---|--------------------------|---------------------|------|--|-----------------------|-------|--|
| | Sample 1 (N = 54) | | | Sample 1.1 (N = 40) | | | Sample 1.1.1 (N = 32) | | |
| | n | % | One-way Chi ² | n | % | One-way Chi ² | n | % | One-way Chi ² |
| Teaching and learning | This data was not collected with SoCQi | | | 9 | 23.7 | $\chi^2 = 2.000$ df = 3 p = .572 n = 38 | 6 | 19.4 | $\chi^2 = 3.194$ df = 3 p = .363 n = 31 |
| System related | | | | 7 | 18.4 | | 6 | 19.4 | |
| Management of the course | | | | 13 | 34.2 | | 12 | 38..4 | |
| Communication | | | | 9 | 23.7 | | 7 | 22.6 | |

The results of a one-way Chi-Square analysis relating to Sample 1.1 ($\chi^2(3) = 2.000, p = .572$) and for Sample 1.1.1 ($\chi^2(3) = 3.194, p = .363$) showed that the number of participants concerning the four categories of benefits experienced in using the new clickUP, are not significantly different in either sample.

6.3.3 Participants' preferences and proficiencies in using technology



In this section information regarding participants' preferences when using new technology as well as their level of proficiency in using different software, are presented.

6.3.3.1 Participants' preferences with regards to new technology

Participants rated their preferences in using new technology (Table 6:25). In all three samples a similar proportion of participants indicated that they *like new*

technologies and use them before most people I know do (44.4%, 45% and 43.8% in Samples 1, 1.1 and 1.1.1 respectively).

Table 6:25 Participants' preferences with regards to new technology

| Preferences with regards to technology | Phase I (SoCQi) | | | Phase II (SoCQii) | | | Phase II (Interviews) | | |
|--|-------------------|------|--|---------------------|------|--|-----------------------|------|--|
| | Sample 1 (N = 54) | | | Sample 1.1 (N = 40) | | | Sample 1.1.1 (N = 32) | | |
| | n | % | One-way Chi ² | n | % | One-way Chi ² | n | % | One-way Chi ² |
| Love new technologies and am among the first to experiment with and use them | 10 | 18.5 | $\chi^2 = 27.66$ df = 4 p = .000 | 7 | 17.5 | $\chi^2 = 11.00$ df = 3 p = .012 | 4 | 12.5 | $\chi^2 = 10.75$ df = 3 p = .013 |
| Like new technologies and use them before most people I know do | 24 | 44.4 | | 18 | 45 | | 14 | 43.8 | |
| Usually use new technologies when most people I know do | 13 | 24.1 | | 11 | 27.5 | | 11 | 34.4 | |
| Am usually one of the last people I know to use new technologies | 6 | 11.1 | | 4 | 10 | | 3 | 9.4 | |
| Am sceptical of new technologies and use them only when I have to | 1 | 1.9 | | 0 | 0 | | 0 | 0 | |

The results of a one-way Chi-Square analysis relating to Sample 1 ($\chi^2(4) = 27.66$, $p < .01$), indicated that the number of participants concerning the four categories of preferences with regards to technology, are significantly different at a 99% level of confidence. The results relating to Sample 1.1 ($\chi^2(3) = 11.00$, $p < .05$) and Sample 1.1.1 ($\chi^2(3) = 10.75$, $p < .05$) indicated that the number of participants concerning the four categories of preferences with regards to technology, are significantly different in both samples at a 95% level of confidence.

6.3.3.2 Participants' level of proficiency in using software programs

Participants rated their level of expertise (see Table 6:26) in using different software programs on a scale of 0 (no skill) to five (an expert).

Table 6:26 Proficiency levels in using software programs

| Proficiency level in ... | Phase I (SoCQi) Sample 1 (N = 54) | | | Phase II (SoCQii) Sample 1.1 (N = 40) | | | Phase II (Interviews) Sample 1.1.1 (N = 32) | | | |
|--------------------------|--------------------------------------|------|---|--|------|--|--|------|--|---|
| | n | % | One-way Chi2 | n | % | One-way Chi2 | n | % | One-way Chi2 | |
| MS Word | | | | | | | | | | |
| (No skill) 0 | 0 | 0 | $\chi^2 = 21.44$ df = 2 p = .000 | 0 | 0 | $\chi^2 = 21.05$ df = 2 p = .000 | 0 | 0 | $\chi^2 = 15.06$ df = 2 p = .001 | |
| 1 | 0 | 0 | | 0 | 0 | | 0 | 0 | | 0 |
| 2 | 0 | 0 | | 0 | 0 | | 0 | 0 | | 0 |
| 3 | 9 | 16.7 | | 6 | 15 | | 6 | 18.8 | | |
| 4 | 34 | 63.0 | | 27 | 67.5 | | 21 | 65.6 | | |
| (Expert) 5 | 11 | 20.4 | 7 | 17.5 | 5 | 15.6 | | | | |
| MS Excel | | | | | | | | | | |
| (No skill) 0 | 3 | 5.6 | $\chi^2 = 39.33$ df = 4 p = .000 | 1 | 2.5 | $\chi^2 = 29.50$ df = 4 p = .000 | 1 | 3.1 | $\chi^2 = 28.31$ df = 4 p = .000 | |
| 1 | 0 | 0 | | 0 | 0 | | 0 | 0 | | 0 |
| 2 | 6 | 11.1 | | 5 | 12.5 | | 4 | 12.5 | | |
| 3 | 27 | 50.0 | | 20 | 50 | | 18 | 56.3 | | |
| 4 | 15 | 27.8 | | 11 | 27.5 | | 6 | 18.8 | | |
| (Expert) 5 | 3 | 5.6 | 3 | 7.5 | 3 | 9.4 | | | | |
| Internet | | | | | | | | | | |
| (No skill) 0 | 0 | 0 | $\chi^2 = 25.70$ df = 3 p = .000 | 0 | 0 | $\chi^2 = 17.00$ df = 3 p = .001 | 0 | 0 | $\chi^2 = 12.50$ df = 3 p = .006 | |
| 1 | 0 | 0 | | 0 | 0 | | 0 | 0 | | |
| 2 | 1 | 1.9 | | 1 | 2.5 | | 1 | 3.1 | | |
| 3 | 11 | 20.4 | | 8 | 20 | | 7 | 21.9 | | |
| 4 | 27 | 50.0 | | 19 | 47.5 | | 15 | 46.9 | | |
| (Expert) 5 | 15 | 27.8 | 12 | 30 | 9 | 28.1 | | | | |
| MS PowerPoint | | | | | | | | | | |
| (No skill) 0 | 0 | 0 | $\chi^2 = 14.111$ df = 2 p = .001 | 0 | 0 | $\chi^2 = 8.60$ df = 2 p = .014 | 0 | 0 | $\chi^2 = 10.93$ df = 2 p = .004 | |
| 1 | 0 | 0 | | 0 | 0 | | 0 | 0 | | |
| 2 | 0 | 0 | | 0 | 0 | | 0 | 0 | | |
| 3 | 11 | 20.4 | | 10 | 25 | | 9 | 28.1 | | |
| 4 | 31 | 57.4 | | 22 | 55 | | 19 | 59.4 | | |
| (Expert) 5 | 12 | 22.2 | 8 | 20 | 4 | 12.5 | | | | |
| Images | | | | | | | | | | |
| (No skill) 0 | 3 | 5.6 | $\chi^2 = 23.111$ df = 5 p = .000 | 1 | 2.5 | $\chi^2 = 20.00$ df = 5 p = .001 | 1 | 3.1 | $\chi^2 = 20.12$ df = 5 p = .001 | |
| 1 | 5 | 9.3 | | 4 | 10 | | 3 | 9.4 | | |
| 2 | 4 | 7.4 | | 3 | 7.5 | | 3 | 9.4 | | |
| 3 | 16 | 29.6 | | 13 | 32.5 | | 13 | 40.6 | | |
| 4 | 18 | 33.3 | | 13 | 32.5 | | 9 | 28.1 | | |
| (Expert) 5 | 8 | 14.8 | 6 | 15.0 | 3 | 9.4 | | | | |
| new clickUP | | | | | | | | | | |
| (No skill) 0 | 8 | 14.8 | $\chi^2 = 19.55$ df = 5 p = .002 | 5 | 12.5 | $\chi^2 = 18.80$ df = 5 p = .002 | 3 | 9.4 | $\chi^2 = 11.50$ df = 5 p = .042 | |
| 1 | 10 | 18.5 | | 5 | 12.5 | | 4 | 12.5 | | |
| 2 | 6 | 11.1 | | 6 | 15.0 | | 6 | 18.8 | | |
| 3 | 19 | 35.2 | | 16 | 40.0 | | 11 | 34.4 | | |
| 4 | 10 | 18.5 | | 7 | 17.5 | | 7 | 21.9 | | |
| (Expert) 5 | 1 | 1.9 | 1 | 2.5 | 1 | 3.1 | | | | |

The results of a one-way Chi-Square analysis relating to the level of software proficiency, indicated that the number of participants concerning the categories of proficiency in:

- using *MS Word*, are significantly different in all three samples (Sample 1: $\chi^2(2) = 21.44$, $p < .01$, Sample 1.1: $\chi^2(2) = 22.05$, $p < .01$ and Sample 1.1.1: $\chi^2(2) = 15.06$, $p < .01$) at a 99% level of confidence;
- using *MS Excel*, are significantly different in all three samples (Sample 1: $\chi^2(4) = 39.33$, $p < .01$, Sample 1.1: $\chi^2(4) = 29.50$, $p < .01$ and Sample 1.1.1: $\chi^2(4) = 28.31$, $p < .01$) at a 99% level of confidence;
- using the *Internet*, are significantly different in all three samples (Sample 1: $\chi^2(3) = 25.70$, $p < .01$, Sample 1.1: $\chi^2(3) = 17.00$, $p < .01$ and Sample 1.1.1: $\chi^2(3) = 12.50$, $p < .01$) at a 99% level of confidence;
- using *MS PowerPoint*, are significantly different in Sample 1 ($\chi^2(2) = 14.111$, $p < .01$) and Sample 1.1.1 ($\chi^2(2) = 10.93$, $p < .01$) at a 99% level of confidence. The results relating to Sample 1.1 ($\chi^2(2) = 8.60$, $p < .05$) indicated that the number of participants concerning the categories of expertise in using *MS PowerPoint*, are significantly different at a 95% level of confidence.
- *manipulating images*, are significantly different in all three samples (Sample 1: $\chi^2(5) = 23.111$, $p < .01$, Sample 1.1: $\chi^2(5) = 20.00$, $p < .01$ and Sample 1.1.1: $\chi^2(5) = 20.12$, $p < .01$) at a 99% level of confidence; and
- using *new clickUP*, are significantly different in Sample 1 ($\chi^2(5) = 19.55$, $p < .01$) and Sample 1.1 ($\chi^2(5) = 18.80$, $p < .01$) at a 99% level of confidence. The results relating to Sample 1.1.1 ($\chi^2(5) = 11.50$, $p < .05$) indicated that the number of participants concerning the categories of proficiency in using *new clickUP*, are significantly different at a 95% level of confidence.

6.3.4 Summary of the One-way Chi² or Binomial test on the demographic variables



In Table 6:27 the results of one-way Chi² or binomial tests conducted on the demographic variables are shown. Significant values are indicated with an asterisk (*).

Table 6:27 Summary of the Chi and Binomial test conducted on the demographic variables

| Section | Variable | Sample 1 N = 54 | Sample 1.1 N = 40 | Sample 1.1.1 N = 32 |
|--|------------------------|-------------------------------------|-------------------------------------|-------------------------------------|
| General descriptive information | | | | |
| 6.3.1.1 | School | $\chi^2(3) = 36.370, p = .000$ * | $\chi^2(3) = 22.600, p = .000$ * | $\chi^2(3) = 18.500, p = .000$ * |
| 6.3.1.2 | Gender | Binomial test: $p = .000$ * | Binomial test: $p = .000$ * | Binomial test: $p = .001$ * |
| 6.3.1.3 | Lecturing experience | $\chi^2(4) = 16.926, p = .002$ * | $\chi^2(4) = 8.500, p = .075$ | $\chi^2(4) = 3.313, p = .507$ |
| 6.3.1.4 | Academic position | $\chi^2(5) = 79.333, p = .000$ * | $\chi^2(5) = 44.750, p = .000$ * | $\chi^2(5) = 34.875, p = .000$ * |
| 6.3.1.5 | Type of appointment | $\chi^2(3) = 32.222, p = .000$ * | $\chi^2(3) = 26.600, p = .000$ * | $\chi^2(3) = 20.750, p = .000$ * |
| 6.3.1.6 | Class size | $\chi^2(4) = 10.444, p = .034$ * | $\chi^2(4) = 7.000, p = .136$ | $\chi^2(4) = 7.688, p = .104$ |
| 6.3.1.7 | Professional identity | | $\chi^2(2) = 12.950, p = .002$ * | $\chi^2(2) = 15.063, p = .001$ * |
| 6.3.1.8 | Age of participants | | $\chi^2(4) = 9.000, p = .061$ | $\chi^2(4) = 13.000, p = .011$ * |
| 6.3.1.9 | Academic qualification | | $\chi^2(6) = 50.923, p = .000$ * | $\chi^2(2) = 36.968, p = .000$ * |

Table 6:27 Summary of the Chi and Binomial test conducted on the demographic variables (continued)

| Section | Variable | Sample 1 N = 54 | Sample 1.1 N = 40 | Sample 1.1.1 N = 32 |
|---|--|------------------------------------|-------------------------------------|-------------------------------------|
| Information about participants' use of the new LMS (clickUP) | | | | |
| 6.3.2.1 | Time available to familiarise / learn how to use the new clickUP | $\chi^2(2) = 3.674, p = .159$ | $\chi^2(2) = 4.188, p = .123$ | $\chi^2(2) = 2.250, p = .325$ |
| 6.3.2.2 | Time available to develop a module | $\chi^2(2) = 9.116, p = .010$ * | $\chi^2(2) = 9.813, p = .007$ * | $\chi^2(2) = 6.750, p = .034$ * |
| 6.3.2.3 | Time available to maintain a module | $\chi^2(2) = 6.186, p = .045$ * | $\chi^2(2) = 4.188, p = .007$ * | $\chi^2(2) = 4.000, p = .135$ |
| 6.3.2.4 | Confidence in using new clickUP | | $\chi^2(3) = 24.200, p = .000$ * | $\chi^2(3) = 19.000, p = .000$ * |
| 6.3.2.5 | Participants' use of WebCT before 2006 | | Binomial test: $p = .008$ * | Binomial test: $p = .011$ * |
| 6.3.2.6 | Participants' use of old clickUP | | Binomial test: $p = .001$ * | Binomial test: $p = .003$ * |
| 6.3.2.7 | Participants' are current use of the new clickUP | | Binomial test: $p = .020$ * | Binomial test: $p = .071$ |
| 6.3.2.8 | Workshops attended: | | Binomial test: $p = .000$ * | Binomial test: $p = .000$ * |
| | Overview | | | |
| | Content | | Binomial test: $p = .000$ * | Binomial test: $p = .002$ * |
| | Assessment | | Binomial test: $p = .430$ | Binomial test: $p = 1.000$ |
| | Collaboration | | Binomial test: $p = 1.000$ | Binomial test: $p = .860$ |
| | Management | | Binomial test: $p = .875$ | Binomial test: $p = .597$ |
| | Turnitin | | Binomial test: $p = .000$ * | Binomial test: $p = .001$ * |
| | Grades | | Binomial test: $p = .000$ * | Binomial test: $p = .000$ * |
| 6.3.2.9 | Proficiency levels using new clickUP | | $\chi^2(4) = 15.250, p = .004$ * | $\chi^2(4) = 10.188, p = .037$ * |
| 6.3.2.10 | Resources used: | | Binomial test: $p = .005$ * | Binomial test: $p = .043$ * |
| | Administrative person | | | |
| | Instructional designer | | Binomial test: $p = .005$ * | Binomial test: $p = .005$ * |
| | E-Support | | Binomial test: $p = .418$ | Binomial test: $p = .585$ |

Table 6:27 Summary of the Chi and Binomial test conducted on the demographic variables (continued)

| Section | Variable | Sample 1 N = 54 | Sample 1.1 N = 40 | Sample 1.1.1 N = 32 |
|--|--|-------------------------------------|-------------------------------------|-------------------------------------|
| | Colleagues | | Binomial test: p = 1.000 | Binomial test: p = .362 |
| | Experienced students | | Binomial test: p = .000 * | Binomial test: p = .000 * |
| | Online resources | | Binomial test: p = .002 * | Binomial test: p = .005 * |
| | Workshop hand-outs | | Binomial test: p = .002 * | Binomial test: p = .016 * |
| 6.3.2.11 | Significant barriers | | $\chi^2(5) = 54.297, p = .000$ * | $\chi^2(5) = 35.667, p = .000$ * |
| 6.3.2.12 | Benefits | | $\chi^2(3) = 2.000, p = .572$ | $\chi^2(3) = 3.194, p = .363$ |
| Information about participants' preferences and proficiencies regarding the use of technology | | | | |
| 6.3.3.1 | Preferences with regards to new technology | $\chi^2(4) = 27.66, p = .000$ * | $\chi^2(4) = 11.00, p = .012$ * | $\chi^2(4) = 10.75, p = .013$ * |
| 6.3.3.2 | Proficiency levels in different software programs: | $\chi^2(2) = 21.44, p = .000$ * | $\chi^2(2) = 21.05, p = .000$ * | $\chi^2(2) = 15.06, p = .001$ * |
| | Word | | | |
| | Excel | $\chi^2(4) = 39.33, p = .000$ * | $\chi^2(4) = 29.50, p = .000$ * | $\chi^2(4) = 28.31, p = .001$ * |
| | Internet use | $\chi^2(3) = 25.70, p = .000$ * | $\chi^2(3) = 17.00, p = .000$ * | $\chi^2(3) = 12.50, p = .000$ * |
| | PowerPoint | $\chi^2(2) = 14.111, p = .001$ * | $\chi^2(2) = 8.60, p = .014$ * | $\chi^2(2) = 10.93, p = .004$ * |
| | Image manipulation | $\chi^2(5) = 23.111, p = .000$ * | $\chi^2(5) = 20.00, p = .001$ * | $\chi^2(5) = 20.12, p = .001$ * |
| | Use of new clickUP | $\chi^2(5) = 19.55, p = .002$ * | $\chi^2(5) = 18.80, p = .002$ * | $\chi^2(5) = 11.50, p = .042$ * |

In Table 6:27 it is shown that the distribution of participants in the associated categories of each demographic variables are mostly significantly different (not equally distributed in the categories).

This section explored the three types of information provided by the demographic variables and the significant differences in the frequencies of the different categories in each of the variables. These variables are further used to investigate possible relationships that could assist in understanding the SoC and LoU of participants. The description of the sample forms the background to understand the SoC and LoU and interpret the findings in the three research questions. In the next section the findings of research question 1 is reported.

6.4 Research question 1: Analysis of data and interpretation of results

What are the stages of concern (SoC) of HPEs regarding the implementation of the LMS in their teaching practice after they have engaged in professional staff development intervention(s)?

6.4.1 Participants who completed the Stages of Concern questionnaire (SoCQ)

In order to answer research question 1, the SoCQ was administered twice: in Phase 1 (SoCQi) and in Phase 2 (SoCQii) (See Table 6:1). Participants completed the first SoCQ (SoCQi) after attending the Overview Workshop as an introduction to the new clickUP LMS. A total of 54 HPEs completed SoCQi, 20 from the 2011 group and 34 from the 2012 group. This group of HPEs is referred to as Sample 1 (n=54).

A time span of at least two months allowed participants to implement what they had learnt during the workshop. Participants from Sample 1 were then invited to further participate in the study by completing the follow-up SoCQii and participate in the interviews. From the first sample of 54, a total of 40 participants completed the second SoCQ (SoCQii): 14 from the 2011 group and 26 from the 2012 group). The sample that completed both SoCQi and SoCQii is referred to as Sample 1.1.

From Sample 1.1 (n = 40) a total of 32 participants (12 from the 2011 group and 20 from the 2012 group) participated in the interviews. This sample is referred to as Sample 1.1.1.

6.4.2 Analysis of SoCQ data

As detailed in Chapter 4, the SoCQ data can be analysed and presented descriptively as well as through inferential statistics. The following sections (6.4.3 – 6.4.7) focus on the results from these analyses.

The acronyms SoCQi / SoCQii are used when referring to the instruments used to collect the data, while SoCi / SoCii are used when referring to the data collected by means of the SoCQi / SoCQii instruments.

The goal of research question 1 (Rq 1) is to develop a holistic description of the relative intensity of stages of concerns that HPEs have about the new clickUP system. Therefore the analysis considers the profile(s) of the entire group, individuals, and various groups of individuals based on the demographic information (Part I); the highest (peak) and lowest stages of concern (Part II); and individual concerns (Part III). In the next section (6.4.3) findings regarding the reliability coefficient of the SoCQ is presented when completed by the HPEs at the University of Pretoria.

6.4.3 Reliability of SoCQi and SoCQii

Cronbach's alpha was used to assess the reliability of SoCQi and SoCQii. The raw data gathered through SoCQi and SoCQii were used to calculate Cronbach's

alpha coefficients of internal reliability for the five statements that measure each of the stages of concern. Table 6:28 displays the Cronbach's alpha values.

Table 6:28 Reliability coefficients for the Stages of Concern Questionnaire (Appendix 4a)

| | Stages of Concern | | | | | | |
|--------|-------------------|--------------------|---------------|-----------------|------------------|--------------------|-----------------|
| | 0 Unconcerned | 1 Informational | 2 Personal | 3 Management | 4 Consequence | 5 Collaboration | 6 Refocusing |
| SoCQi | .22 | .70 | .76 | .79 | .66 | .75 | .46 |
| SoCQii | .45 | .62 | .75 | .80 | .75 | .79 | .60 |

The Cronbach alpha values provide an overall reliability coefficient for the set of concern items (from the SoCQ) which belong to a particular stage of concern. Five concern items relate to each of the seven stages of concern (7 stages multiplied by 5 concern items per stage equals the 35 item SoCQ). Eleven of fourteen scales (SoCi and SoCii) measured have a 'good to acceptable' level of reliability, as determined by the Cronbach's alpha values between .60 and .80.

Stage 0 (Unconcerned) reported a reliability coefficient of 0.22 and 0.45 respectively on the two administrations of the instrument. This result is similar to what Julius (2007, p. 93) reports with regard to Cronbach alpha values in his study on a small sample ($n = 15$) of respondents. A reliability coefficient of 0.27 was reported by Julius (1993) in one of three evaluations of the Unconcerned stage.

The reliability coefficient levels increased in five of the seven stages of concern (see Table 6:28) during the second administration of the instrument. Because the

SoCQ is a standardised instrument, the researcher is not allowed to remove any of the items.

This analysis and interpretation of the results for Rq 1 are divided into three parts:

- Part I: Stages of Concern (SoC) profile analysis
- Part II: Analysing the stages of concern
- Part III: Analysing the individual concerns

A visual structure that guides the reader is used throughout the text. Shaded enlarged blocks signposts the section under discussion.

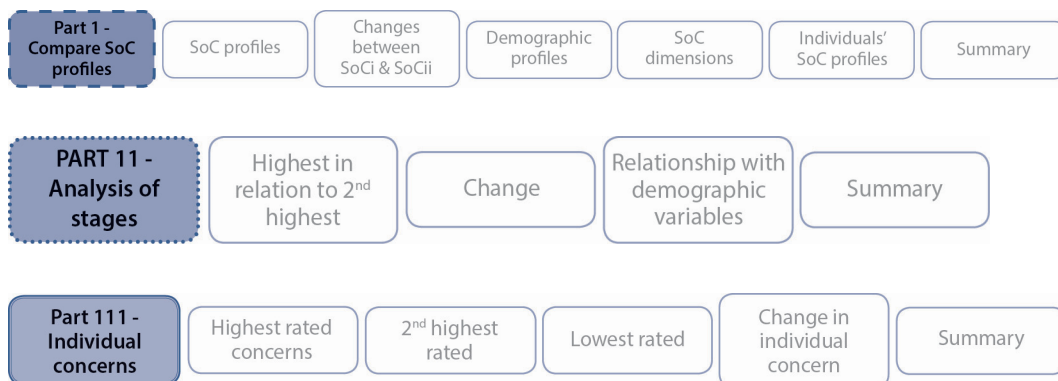
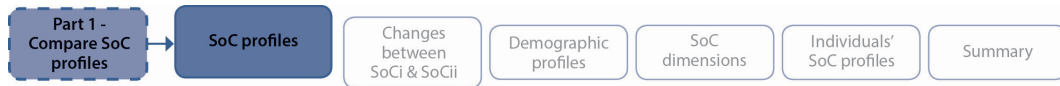


Figure 6:3 Visual structures for sections 6.4.4 -6.4.6

6.4.4 Part I: Stages of Concern profile analysis

This section analyses the SoC profiles of the entire group for SoCi and SoCii as well as the change that took place from the first to the second SoCQ. Profiles of different demographic groups (e.g. different age groups) as well as the individual profiles of participants are explored. Lastly the SoC dimensions and the changes in these dimensions from SoCi to SoCii are calculated.

6.4.4.1 Comparison of SoCi and SoCii profiles



The SoCi and SoCii profiles are shown in Figure 6:4. The columns (bar graph) indicate that SoC are discrete data and not continuous data. The blue and red lines were created with the use of a “scatter plot graph with smooth lines” option in Excel™ to show the profile of concerns more clearly.

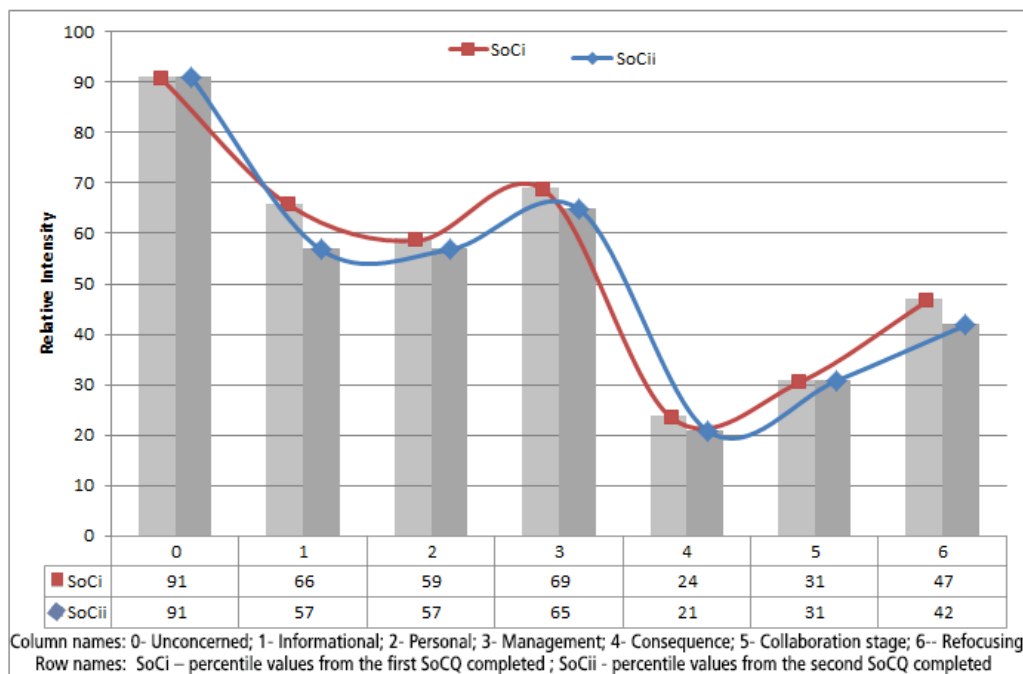


Figure 6:4 SoCi and SoCii profiles

According to George et al. (2008, p. 37) the plotting of the percentile scores on a graph “provides the most complete clinical interpretation and assessment of both individual and group data”. The clinical interpretation gives insight into the types of concerns, where these concerns are most intense or least intense; it also provides insight into the affective stance a participant or group is taking towards

the innovation (George et al., 2008, p. 37). These authors indicate that such insights would help to design appropriate interventions to move participants to the next developmental stages.

The graph in Figure 6:4 (SoC profile) indicates for both SoCi and SoCii, that:

- Unconcerned concerns are the highest, signifying that HPEs have other priorities besides clickUP that require their attention.
- Management concerns are the second highest stage, showing that HPEs are focusing on how to get clickUP tasks done efficiently.
- Refocusing concerns “tail up” and according to George et al. (2008, p. 42), this indicates that HPEs see another innovation as a possible alternative.

Information concerns are higher than Personal concerns during SoCi, which are identified as a “positive two-split” (George et.al., 2008, p. 40), signifying an open and positive attitude towards the innovation by having fewer concerns about themselves and showing more interest in learning more about the innovation.

Furthermore, it is evident that:

- The intensity of the Informational, Personal, Management, Consequence and Refocusing stages of concerns decreased after the participants had the opportunity to start implementing the system.
- The intensity of concerns is exactly the same for SoCi and SoCii in both the Unconcerned and Collaboration stages.

In calculating the SoC profiles (Figure 6:4) the averages (or means) of participants raw score totals were used and converted to percentile scores (indicating the relative intensity of concerns), as prescribed by the CBAM authors (George et.al., 2008, p. 34). Although Figure 6:4 allows for an analysis of the group’s stance towards the innovation, the mean scores makes it difficult to judge

the change that took place from SoCQi to SoCQii therefore additional analysis was done.

Figure 6:5 is a box plot with smooth lines added (from the “scatter plot graph” in Excel™) to investigate the changes in intensity of concerns from SoCi to SoCii. The box plot provides a visual distribution of the percentile scores (for each individual in the group) for each of the stages. This graph allows a closer inspection of the differences between the SoCi and SoCii scores in each of the stages.

Table 6:29 shows the median scores for each of the stages in SoCi and SoCii as well as the quartile scores and minimum and maximum values. These values were used to construct the box plot graph in Figure 6:5.

Chapter 6 – Analysis of findings and interpretation of results

Table 6:29 Median, minimum, maximum and quartile scores for each of the stages in SoCi and SoCii

| SoCi (Sample 1) | | | | | | | | |
|--------------------|---------|----------------|--------------------|---------------|-----------------|------------------|--------------------|-----------------|
| | | Awareness (i) | Informational (i) | Personal (i) | Management (i) | Consequence (i) | Collaboration (i) | Refocusing (i) |
| N | Valid | 54 | 54 | 54 | 54 | 54 | 54 | 54 |
| | Missing | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Median | | 92.50 | 64.50 | 58.00 | 75.00 | 24.00 | 36.00 | 52.00 |
| Range | | 68 | 72 | 71 | 84 | 83 | 89 | 86 |
| Minimum | | 31 | 27 | 21 | 15 | 3 | 2 | 11 |
| Maximum | | 99 | 99 | 92 | 99 | 86 | 91 | 97 |
| Percentiles | 25 | 81.00 | 53.25 | 44.00 | 43.00 | 11.00 | 18.25 | 33.00 |
| | 50 | 92.50 | 64.50 | 58.00 | 75.00 | 24.00 | 36.00 | 52.00 |
| | 75 | 96.00 | 88.00 | 80.00 | 88.50 | 44.25 | 49.00 | 70.00 |
| SoCii (Sample 1.1) | | | | | | | | |
| | | Awareness (ii) | Informational (ii) | Personal (ii) | Management (ii) | Consequence (ii) | Collaboration (ii) | Refocusing (ii) |
| N | Valid | 40 | 40 | 40 | 40 | 40 | 40 | 40 |
| | Missing | 14 | 14 | 14 | 14 | 14 | 14 | 14 |
| Median | | 92.50 | 61.50 | 55.00 | 58.00 | 28.50 | 29.50 | 47.00 |
| Range | | 85 | 74 | 89 | 84 | 95 | 95 | 94 |
| Minimum | | 14 | 23 | 5 | 15 | 1 | 3 | 5 |
| Maximum | | 99 | 97 | 94 | 99 | 96 | 98 | 99 |
| Percentiles | 25 | 70.50 | 40.00 | 42.00 | 47.00 | 12.25 | 14.50 | 26.00 |
| | 50 | 92.50 | 61.50 | 55.00 | 58.00 | 28.50 | 29.50 | 47.00 |
| | 75 | 99.00 | 80.00 | 76.00 | 83.00 | 43.00 | 61.75 | 65.00 |

The box plot graph Figure 6:5 for each of the stages in SoCi and SoCii will be used to interpret the differences between the two sets of data.

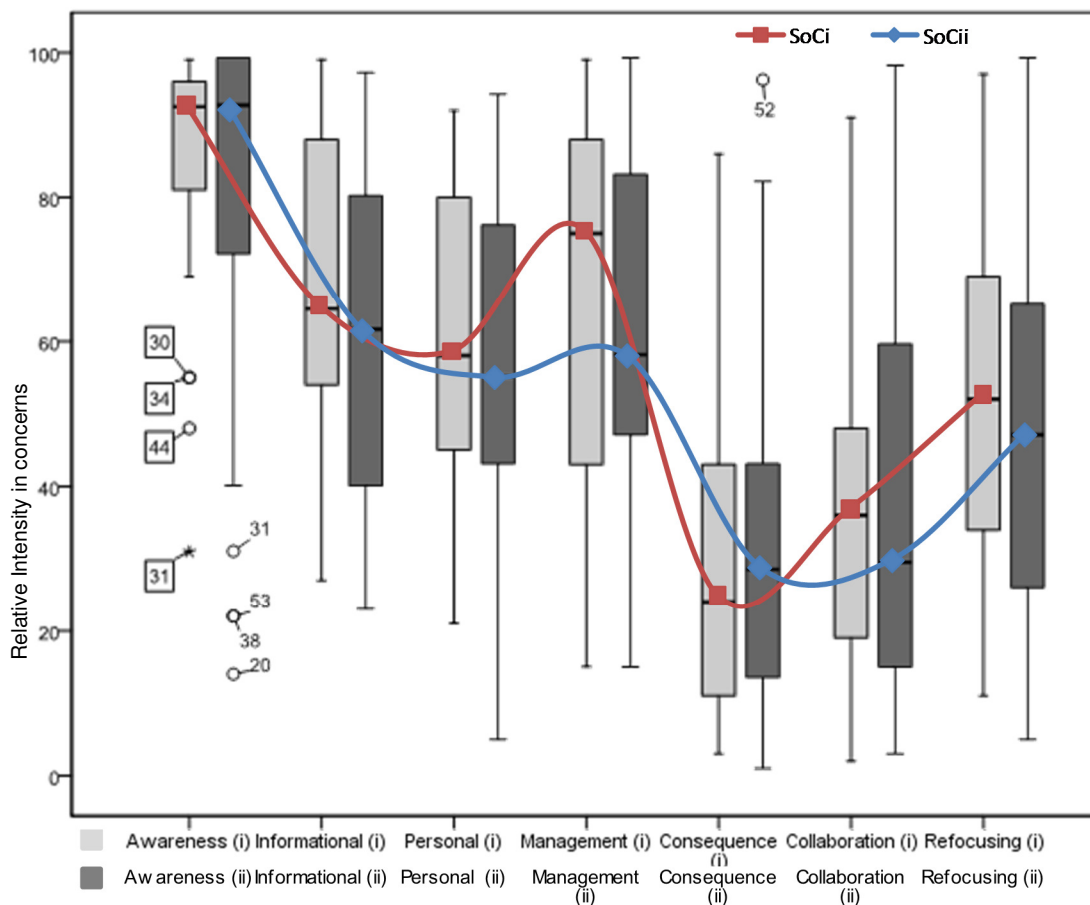


Figure 6:5 Box plots of SoCi and SoCii scores

The possible change from SoCi to SoCii is obscured within a small homogeneous participant group. The box plots for each of the stages in SoCi and SoCii (Figure 6:5) help to interpret the differences between the two sets of data. These box plots reveals that:

- In the Unconcerned stage there are more participants with lower percentile points for Unconcerned(ii) than for Unconcerned(i). This is seen in the following:
 - the median of the percentile points for Unconcerned(i) and Unconcerned(ii) are exactly the same, but the box-plot shows that the

spread of percentiles is very different in the two evaluations and therefore suggests a wider range of relative intensity concerning Unconcerned(ii).

- The bottom 25% of participants in Unconcerned (ii) have lower percentile points than in Unconcerned(i);
 - the lowest outlier and minimum relative intensity is lower in Unconcerned (ii) than in Unconcerned(i);
 - percentile points for this stage are high for both Sample 1 and Sample 1.1. For Unconcerned(i) 50% of participants scored between 92.5 and 99, and 75% of participants had more than 81 percentile points in this stage. For Unconcerned(ii) the 75th percentile points ranging from 70.5 to 99.
- Lower levels of relative intensity for Informational concerns in SoCii are evident in the Informational stage in SoCii (Sample 1.1). The following can be seen from Figure 6.3:
 - in Informational(i) stage concerns, 50% (between the 25th and 75th percentile) of the relative intensity of these concerns are between 53 and 88 percentile points, while in Informational(ii) 50% (between the 25 and 75 percentile) of the participants indicated relative intensity of Informational concerns between 40 and 80 percentile points. This shows a general lower intensity in concerns concerning the Informational stage for Sample 1.1;
 - the lower observed median; as well as
 - a lower maximum, minimum, 25th, 50th and 75th percentile scores in Informational(ii) observed than for Informational stage(i).
 - In the Personal stage a wider range of relative intensity of concerns in the top 50% (quartile 1 and 2) of the participants shows that some participants have a lower intensity of concerns regarding the Personal stage in SoCii. The following can be seen:

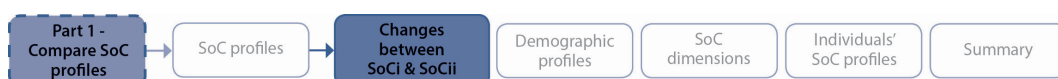
- in the Personal(i) stage, the bottom 50% of the participants had relative intensity scores ranging between 21 and 58 percentile points (in the 1st and 2nd quartile). However 25% (at the bottom) of the participants indicated relative intensity scores ranging between 21 (minimum) and 44 percentile points; and
- the bottom 50% (1st and 2nd quartile) of participants' percentile points for the relative intensity in the Personal stage(ii) ranges between 5 and 55. Participants also indicated relative intensity scores in the 1st quartile ranging between 5 (minimum) and 42 percentile points. This shows that the relative intensity of Personal(ii) is lower than for Personal(i).
- In the Management stage the median for Management(ii) is also visibly less than in Management(i), and therefore it is clear that the relative intensity of concerns dropped in SoCii. The following can be said:
 - although the minimum (15) and maximum (99) percentile points that shows the relative intensity of Management concerns for both SoC(i) and SoC(ii) are exactly the same, there is a noticeable difference in the top 50% of the participants of these two data sets; and
 - in Management(i), the upper 50% of the participants' relative intensity of concerns are between 75 and 99, while in Management(ii), the upper 50% have a relative intensity of these concerns between 58 and 99 percentile points. This means that more participants rated Management concerns with less intensity in SoCii than in SoCi.
- In the Consequence concerns stage a slightly higher intensity in concerns are recorded in SoCii. This is seen in:
 - The median of the relative intensity regarding the Consequence concerns in SoCii is higher than in SoCi; and
 - The higher maximum percentile score recorded in Consequence(ii).
- In the Collaborative concerns stage the lower 50% of the percentile scores showed lesser levels of intensity in Collaboration(ii) concerns. This is evident from:

- the median value for Collaboration(ii) stage that is lower than for Collaboration(i) stage of concerns; and
- the narrower range of percentile points that is between 3 and 29 in Collaboration(ii) compared to a range that is between 2 and 36 percentile points in Collaboration(i).
- In the Collaborative concerns stage the upper 50% of the percentile scores showed higher levels of intensity in Collaboration(ii) concerns. This is evident from:
 - a wider range of percentile points for Collaboration concerns are visible in Collaboration(ii); and
 - the maximum level of intensity in the Collaboration concerns increased from 89 to 95 in Collaboration(ii). This suggests that there was participants that scored higher levels of intensity in SoCii.
- In the Refocusing stage lower intensity of concerns in SoCii are visible based on:
 - the lower median as well as the lower minimum score; and
 - the bottom 50% of participants in SoCii (Refocusing(ii)) recorded generally lower Percentile scores than was done by the bottom 50% of participants in SoCi (Refocusing(i)).

- ❖ From the SoCi (Sample1) and SoCii (Sample1.1) profiles shown in Figure 6:4 and Figure 6:5, the following is evident in each of the stages:
 - no change occurred from Unconcerned(i) to Unconcerned(ii) as shown in Figure 6:4. However Figure 6:5 show more participants had lower levels of intensity regarding Unconcerned(ii) concerns than for Unconcerned(i) evident from the wider range of percentile scores especially for the bottom 25% of participants in Unconcerned(ii);

- a lower level of relative intensity in Informational(ii) concerns are shown in both Figure 6:4 and Figure 6:5;
- a lower level of relative intensity in Personal(ii) concerns are shown in both Figure 6:4 and Figure 6:5;
- a lower level of relative intensity in Management(ii) concerns are shown in both Figure 6:4 and Figure 6:5;
- a lower level of relative intensity in Consequence(ii) concerns are shown in Figure 6:4. However Figure 6:5 suggests a tendency towards a higher level of relative intensity for some participants evident from the higher median and higher maximum percentile scores in Consequence(ii);
- no change occurred from Collaboration(i) to Collaboration(ii) as shown in Figure 6:4. However Figure 6:5 show that the lower 50% of percentile scores in Collaboration(ii) have lesser intensity of concerns which is evident from the lower median and narrower range of scores, while the upper 50% of percentile scores for Collaboration(ii) have higher levels of intensity of concerns which is evident from the wider range and higher level of maximum percentile scores; and
- a lower level of relative intensity in Refocusing(ii) concerns are shown in both Figure 6:4 and Figure 6:5.

6.4.4.2 Inferential statistics to determine the changes between SoCi and SoCii



A Wilcoxon signed rank (matched pairs) test was performed using the percentile scores of participants in each of the seven stages of concern in SoCi and SoCii (e.g. Unconcerned(i) and Unconcerned(ii)). The Wilcoxon signed rank test determines the significance in the median differences between the two sets of percentile scores in SoCi and SoCii (Table 6:30). The hypotheses are as follows:

- H_0 : The median of the differences between the respective SoCi and SoCii scores in each of the seven different stages is equal to zero.
- H_a : The median of the differences between the respective SoCi and SoCii scores in each of the seven different stages is not equal to zero, i.e.:
 - $H_{a1} : \mu_{SoCi} > \mu_{SoCii}$
[Relative intensity of scores for concerns in SoCi is higher than in SoCii]
 - $H_{a2} : \mu_{SoCi} < \mu_{SoCii}$
[Relative intensity of scores for concerns in SoCi is lower than in SoCii]

Table 6:30 Wilcoxon signed rank test: difference between SoCi and SoCii (Support document 6-1i)

| SoCQi and SoCQii | | Wilcoxon Signed Rank results | | | | | | Effect size | |
|------------------|-------------------------|------------------------------|----------------------|----------------------|------------|--------------------------------------|--------------------------------------|---------------------|-----------------|
| | | Z value | Exact Sig (2-tailed) | Exact Sig (1-tailed) | Hypothesis | Sum of negative differences (i > ii) | Sum of positive differences (ii > i) | Direction of change | Effect size (r) |
| 0 | Unconcerned (i to ii) | -.539 | .597 | .299 | H_0 | -329.0 | 266.0 | i > ii | -.060 |
| 1 | Informational (i to ii) | -1.726 | .085 | .043 | H_{a1} | -489.5 | 251.5 | i > ii | -.193 |
| 2 | Personal (i to ii) | -1.008 | .319 | .159 | * H_{a1} | -440.0 | 301.0 | i > ii | -.113 |
| 3 | Management (i to ii) | -.638 | .530 | .265 | H_0 | -414.5 | 326.5 | i > ii | -.071 |

Table 6:30 Wilcoxon signed rank test: difference between SoCi and SoCii (Support document 6-1i) (continued)

| SoCQi and SoCQii | | Wilcoxon Signed Rank results | | | | | | | Effect size |
|------------------|-------------------------|------------------------------|------|------|------------------|--------|-------|--------|-------------|
| 4 | Consequence (i to ii) | -.041 | .971 | .485 | H ₀ | -317.5 | 312.5 | i > ii | .003 |
| 5 | Collaboration (i to ii) | -.269 | .793 | .396 | H ₀ | -390.0 | 430.0 | ii > i | -.030 |
| 6 | Refocusing (i to ii) | -1.253 | .214 | .107 | *H _{a1} | -434.5 | 268.5 | i > ii | -.140 |

* With a confidence level between 80% and 90%

With an alpha level of .05 a significant difference was found in the **Informational stage** between SoCi and SoCii (one-tailed) with $z = -1.726$, $p < .05$ at the 95% confidence level (Table 6:30). The null hypothesis that the median of the difference between the two pairs is equal to 0, can be rejected. This result indicates that the relative intensity of Informational concerns in SoCi (with 27 negative rankings and the sum of the negative differences = 489.50) is significantly higher than in SoCii (with 11 positive rankings and the sum of the positive differences = 251.5). Therefore, for the Informational stage, the alternative hypothesis H_{a2} can be accepted.

The following was found when choosing more lenient alpha levels:

- In the **Personal stage**, a difference was found between SoCi and SoCii (one-tailed) with $z = -1.008$, $p < .16$ at the 84% confidence level. This result indicates that the relative intensity of Personal concerns in SoCi (with 22 negative rankings and the sum of the negative differences = 440) is higher than in SoCii (with 16 positive rankings and the sum of the positive differences = 301). Therefore the alternative hypothesis H_{a1} can be accepted.
- In the **Refocusing stage**, a difference was found between SoCi and SoCii (one-tailed) with $z = -1.253$, $p < .11$ at the 89% confidence level. This result indicates that the relative intensity of Refocusing concerns in SoCi (with 23

negative rankings and the sum of the negative differences = 434.50) is higher than in SoCii (with 14 positive rankings and the sum of the positive differences = 268.5). Therefore the alternative hypothesis H_{a1} can be accepted.

Table 6:30 shows the *sum of the positive* and the *sum of the negative rankings*. These rankings are based on the absolute value of the differences between the two measurements (SoCi and SoCii). The sum of the negative ranks is the result of the SoCi score being larger than the SoCii score. In six of the seven stages, the sum of the negative ranks is larger than the sum of the positive ranks, indicating that $SoCi > SoCii$. Only in the Collaboration stage is it the other way around, indicating that $SoCii > SoCi$.

❖ As mentioned above, only one stage (the Informational stage) shows significant difference between SoCi and SoCii at a 95% confidence level. When choosing a more lenient alpha level significant differences were also found for Personal and Refocusing stages. In all seven stages the effect size (indicating the magnitude of the difference) is small (less than 0.2) according to Cohen's rule of thumb (1992, p. 157).

6.4.4.3 The effect of the demographic information on the stages of concern



The SoC profiles were presented in a graphical format based on the categories⁴ associated with each demographic variable and the intensity of the stages of concerns (Support documents 6-1ii). These graphical profiles were analysed before inferential statistical analysis were conducted using non-parametric statistical tests. These tests included the Kruskal-Wallis and the Spearman's rank-order correlation test.

Graphical inspection of the SoCi and SoCii profiles for the different demographic variables shows that the profiles typically exhibit the following characteristics (see Figure 6:6):

- peak concerns in the Unconcerned stage;
- either a positive one-two split (indicated by the dotted line) or a negative one-two split (indicated by the solid line) for Informational and Personal concerns; and
- second highest concern in the Management stage;
- the tailing up (indicated by the blue line) or down (indicated by the red line) at the end of the profile; and
- Impact concerns (Consequence, Collaboration and Refocusing concerns) are much lower relative to Self (Informational and Personal concerns) and Task (Management concerns) concerns.

Figure 6:6 represents the generic profile of HPEs based on different categories associated with each of the demographic variables.

⁴ Refer to the categories associated with each of the demographic variables (e.g. Demographic variable "Gender" has two categories: male and female).

Chapter 6 – Analysis of findings and interpretation of results

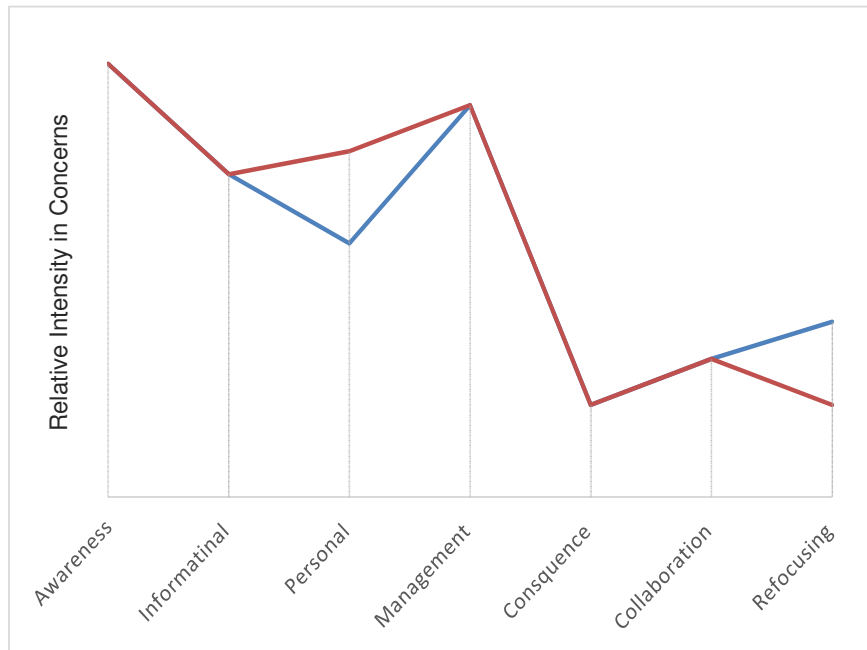


Figure 6:6 Generic profile of all users

Table 6:31 shows the results of the Kruskal-Wallis non-parametric tests that were used to determine whether there are any statistically significant differences between the distributions relating to the stages of concern and demographic variables. The coloured cells in Table 6:31 show the results that were statistically significant.

Table 6:31 Significant results for the Kruskal-Wallis / Mann-Whitney tests performed on demographic variables and SoCi and SoCii

| | SoCi or SoCii | General descriptive information | | Participants' use of the LMS | | | Participants' proficiency in technology |
|-----------------|---------------------|---------------------------------------|------------------------------------|------------------------------------|--|------------------------------------|---|
| | | Professional identity / qualification | Academic qualification | Confidence level | Used old clickUP (2006-2012) | Greatest benefit | Proficiency in new clickUP |
| 0 Unconcerned | SoCi | $\chi^2(2) = 2.459, p = .292$ | $\chi^2(6) = 4.691, p = .584$ | x | U = 130.000, z = .520, p = .625 * | $\chi^2(3) = 2.968, p = .397$ | x |
| | SoCii | $\chi^2(2) = 1.905, p = .386$ | $\chi^2(6) = 4.587, p = .598$ | $\chi^2(3) = 2.271, p = .518$ | U = 87.000, z = -1.086, p = .299 | $\chi^2(3) = .038, p = .998$ | $\chi^2(4) = 4.643, p = .326$ |
| 1 Informational | SoCi | $\chi^2(2) = 0.015, p = .831$ | $\chi^2(6) = 11.687, p = .069$ | x | U = 147.5, z = 1.164, p = .251 * | $\chi^2(3) = 4.365, p = .225$ | x |
| | SoCii | $\chi^2(2) = 0.371, p = .831$ | $\chi^2(6) = 8.649, p = .194$ | $\chi^2(3) = 7.048, p = .070$ | U = 162.000, z = 1.701, p = .094 | $\chi^2(3) = 4.051, p = .256$ | $\chi^2(4) = .399, p = .983$ |
| 2 Personal | SoCi | $\chi^2(2) = .645, p = .724$ | $\chi^2(6) = 7.339, p = .291$ | x | U = 109.5, z = -.240, p = .814 * | $\chi^2(3) = 10.240, p = .017 (a)$ | x |
| | SoCii | $\chi^2(20) = 1.413, p = .493$ | $\chi^2(6) = 13.198, p = .040 (b)$ | $\chi^2(3) = 2.394, p = .495$ | U = 126.500, z = .388, p = .704 | $\chi^2(3) = 140, p = .606$ | $\chi^2(4) = 2.455, p = .653$ |
| 3 Management | SoCi | $\chi^2(2) = 2.732, p = .255$ | $\chi^2(6) = 4.179, p = .653$ | x | U = 73.000, z = -1.589, p = .118 * | $\chi^2(3) = 4.631, p = .201$ | x |
| | SoCii | $\chi^2(2) = 3.427, p = .180$ | $\chi^2(6) = 10.510, p = .105$ | $\chi^2(3) = 14.343, p = .002 (c)$ | U = 98.500, z = -.647, p = .526 | $\chi^2(3) = 1.713, p = .634$ | $\chi^2(4) = 1.453, p = .835$ |
| 4 Consequence | SoCi | $\chi^2(2) = .427, p = .808$ | $\chi^2(6) = 5.177, p = .521$ | x | U = 170.000, z = 1.999, p = .047 (d)* | $\chi^2(3) = 7.097, p = .069$ | x |
| | SoCii | $\chi^2(2) = 1.716, p = .424$ | $\chi^2(6) = 9.074, p = .169$ | $\chi^2(3) = 1.269, p = .737$ | U = 154.500, z = 1.424, p = .158 | $\chi^2(3) = .775, p = .856$ | $\chi^2(4) = 15.683, p = .003 (e)$ |
| 5 Collaboration | SoCi | $\chi^2(2) = 1.075, p = .584$ | $\chi^2(6) = 1.671, p = .947$ | x | U = 148.000, z = 1.184, p = .251 * | $\chi^2(3) = 3.958, p = .266$ | x |
| | SoCii | $\chi^2(2) = 6.942, p = .031 (f)$ | $\chi^2(6) = 4.907, p = .556$ | $\chi^2(3) = 1.493, p = .684$ | U = 107.500, z = -.315, p = .758 | $\chi^2(3) = 3.716, p = .294$ | $\chi^2(4) = .938, p = .919$ |
| 6 Refocusing | SoCi | $\chi^2(2) = 1.716, p = .424$ | $\chi^2(6) = 8.069, p = .233$ | x | U = 155.000, z = 1.441, p = .158 * | $\chi^2(3) = .617, p = .893$ | x |
| | SoCii | $\chi^2(20) = 1.013, p = .630$ | $\chi^2(6) = 9.011, p = .173$ | $\chi^2(3) = 6.137, p = .105$ | U = 140.000, z = .887, p = .393 | $\chi^2(3) = 2.023, p = .568$ | $\chi^2(4) = 3.003, p = .557$ |

x Not included in SoCQi

* Mann-Whitney U Test with Exact Sig. used when only two categories are present.

A Kruskal-Wallis test was run (as shown in Table 6:31) to determine if there were differences in the distributions of each of the stages of concerns' scores (for both SoCi and SoCii) of relative intensity and each of the categories associated with the demographic variables. The results of the Kruskal-Wallis test shows that:

- a. There is a significant difference between the Personal stage of concerns and the different categories of *greatest benefits* the system holds for participants, $\chi^2 (3) = 10.240$, $p = .017$. Participants who regarded *Teaching and Learning* as the *greatest benefits* of the new clickUP are more likely to have higher scores in the Personal stage than participants who view *Communication* as one of the *greatest benefits* (Figure 6:7). The latter group is more likely to have lower Personal stage scores. This is shown in Figure 6:7 that is based on the distribution of percentile score for the Personal stage and median values.

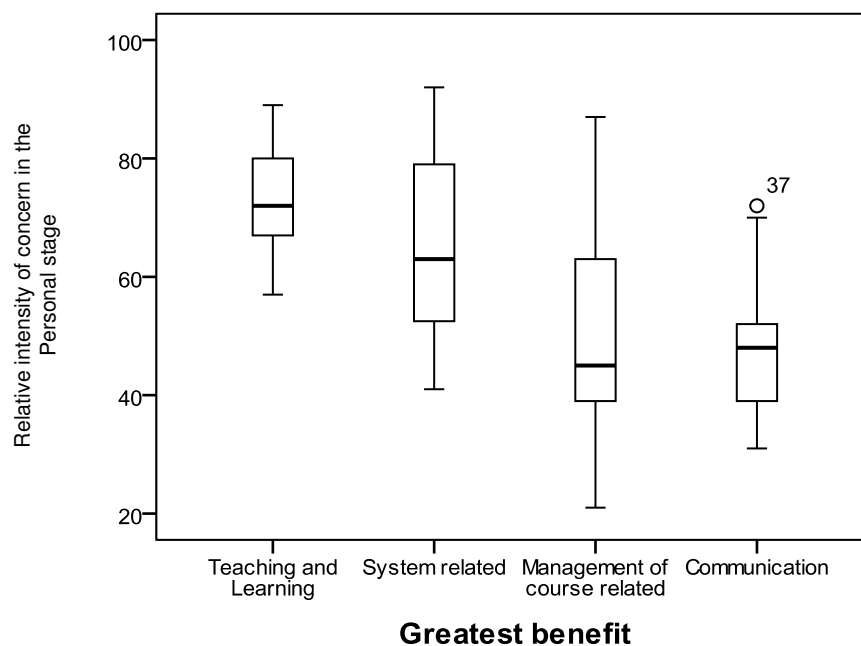


Figure 6:7 Personal stage (i) and the demographic variable greatest benefit

- b. There is a significant difference between the Personal concerns' percentile scores and the categories of *academic qualification*, $\chi^2 (6) = 13.198$, $p =$

.040. Participants with diploma and PhD qualifications recorded higher Personal concerns than those with masters, honours and bachelor degrees. Participants with Post-doctoral qualifications showed the lowest Personal concerns.

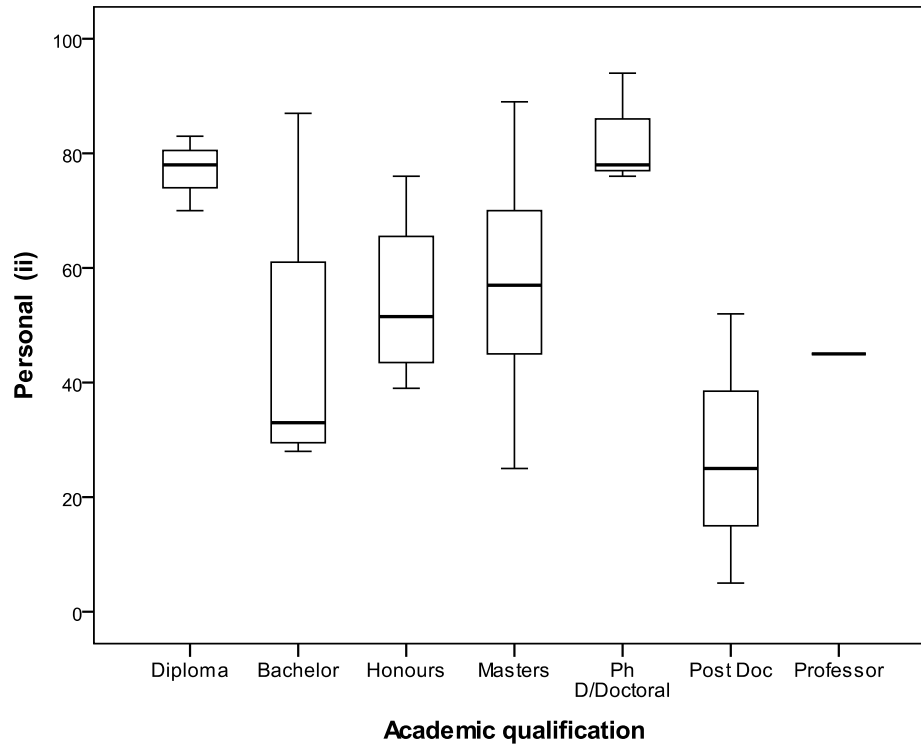


Figure 6:8 Personal(ii) stage and academic qualification

- c. There is a significant difference between the Management stage and the *level of confidence* to work in the LMS system: $\chi^2(3) = 14.343, p = .002$. It can be inferred that the group who can “do everything on their own” are more likely to have low intensity regarding management concerns, while the groups who indicate that they “need support often” or “most of the time” are more likely to have high levels of intensity regarding management concerns (See Figure 6:9).

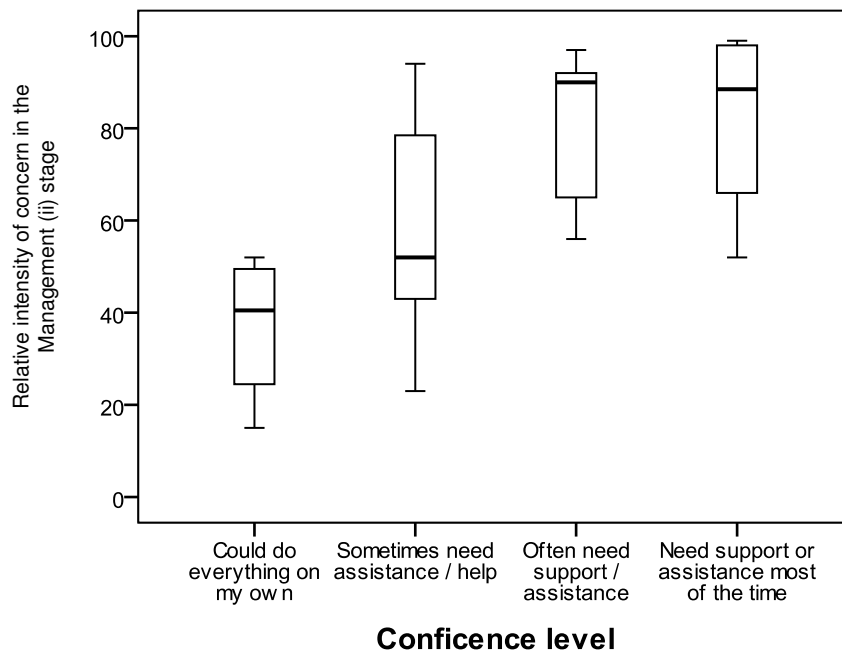


Figure 6:9 Management concerns (ii) and Confidence in using the system

- d. Because the independent variable (*use of old clickUP between 2006 and 2012*) is dichotomous, a Mann-Whitney test was run to determine if there are differences between the Consequence concerns' percentile scores and the *users or non-users of the old-clickUP system*. A statistically significant difference is present between Consequence concerns and the *users* (Mdn = 27) and *non-users* (Mdn = 11), of the old-clickUP system ($U = 170$, $z = 1.999$, $p = .047$). Figure 6:10 shows that the group that *used the old clickUP system between 2006 and 2012* are more likely to have higher Consequence concerns. The group that are *non-users* of an LMS are likely to have very low Consequence concerns when they started off in the journey to implement an LMS.

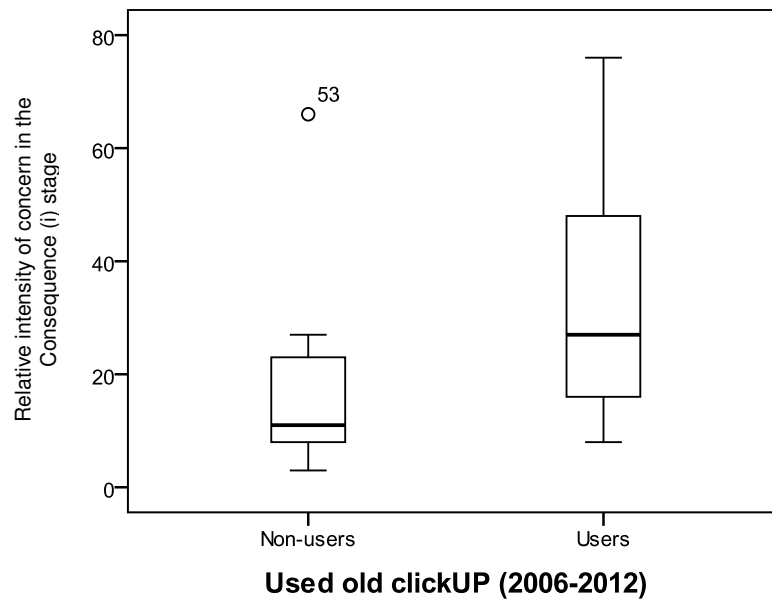


Figure 6:10 Consequence concerns and Use of old clickUP (2006-2012)

- e. There is a significant difference between the Consequence concerns and the *level of proficiency* in the new clickUP system: $\chi^2(4) = 15.683, p = .003$. From Figure 6:11 it is clear that the group that indicated they have “no skill” (0 out of 5) in using the new clickUP, have lower level of intensity for Consequence concerns. The group, however that rated their skills for working in the new clickUP with a 4 out of 5, are likely to have higher levels of Consequence concerns. Furthermore, 75% of the participants that rated their proficiency 3 out of 5, will have lower Consequence concerns than the group that rated a 4 out of 5 for their proficiency.

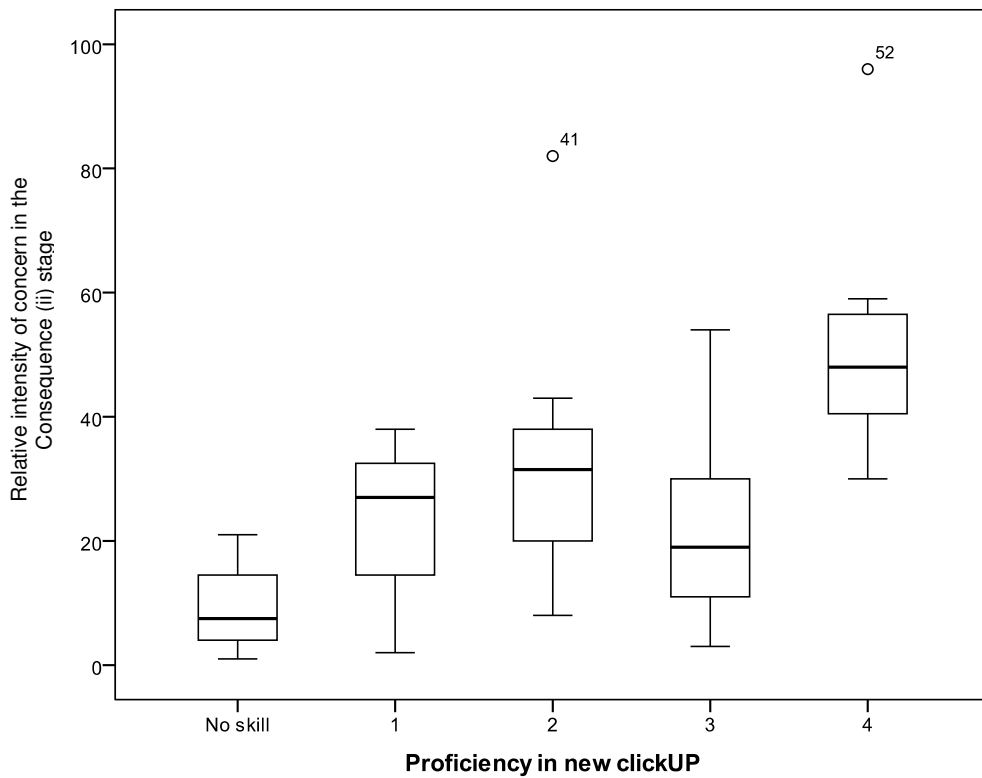


Figure 6:11 Consequence concerns and proficiency in the new clickUP

- f. There is a significance difference between the Collaboration concerns' percentile scores and groups with different *professional identities*: $\chi^2 (2) = 6.942$, $p = .031$. Figure 6:12 shows that it is more likely that *Medical doctors* have high Collaboration concerns than *Scientists* do.

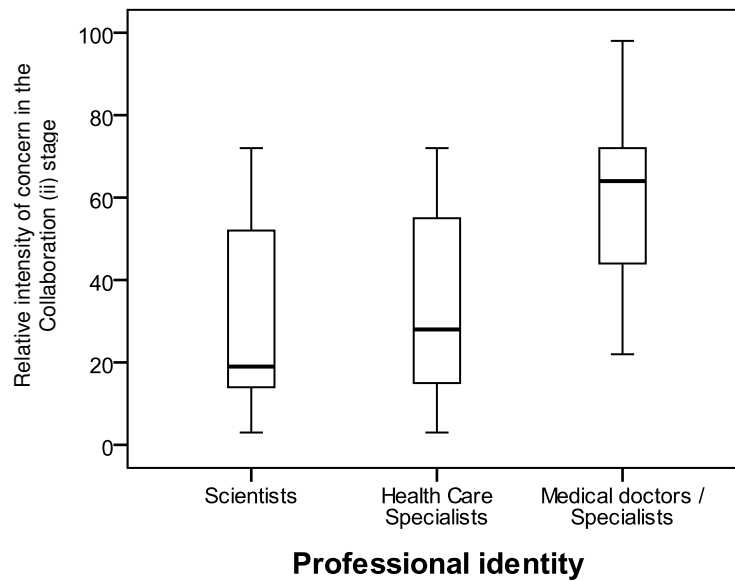


Figure 6:12 Collaboration concerns and professional identity

Spearman's rank-order (ρ) correlation test was used to measure the strength and direction of the association between the SoCi and SoCiii stages of concern and the demographic variables (Table 6:32 and Table 6:33). Only the demographic variables that showed association in any of the SoC are included in Table 6:32 for Sample 1 and in Table 6:33 for Sample 1.1. The shaded cells identify significant associations.

Table 6:32 Spearman's rank-order correlation & demographic variables for SoCi / Sample 1

| Spearman's rank-order correlation for SoCi | | School (a) | Academic position (b) | Academic qualification (c) | Used old clickUP (2006-2012) (d) | Greatest benefit (e) |
|--|-------------------------|------------|-----------------------|----------------------------|----------------------------------|----------------------|
| Unconcerned (i) | Correlation Coefficient | -.043 | .363** | .075 | .087 | -.196 |
| | Sig. (2-tailed) | .759 | .007 | .650 | .610 | .237 |
| | N | 54 | 54 | 39 | 37 | 38 |
| Informational (i) | Correlation Coefficient | -.156 | .119 | .289 | .194 | -.161 |
| | Sig. (2-tailed) | .261 | .393 | .075 | .250 | .333 |

Table 6:32 Spearman's rank-order correlation & demographic variables for SoCi / Sample 1 (continued)

| Spearman's rank-order correlation for SoCi | | School (a) | Academic position (b) | Academic qualification (c) | Used old clickUP (2006-2012) (d) | Greatest benefit (e) |
|--|-------------------------|------------|-----------------------|----------------------------|----------------------------------|----------------------|
| | N | 54 | 54 | 39 | 37 | 38 |
| Personal (i) | Correlation Coefficient | -.174 | -.116 | -.024 | -.040 | -.504** |
| | Sig. (2-tailed) | .207 | .405 | .883 | .814 | .001 |
| | N | 54 | 54 | 39 | 37 | 38 |
| Management (i) | Correlation Coefficient | -.295* | .054 | -.034 | -.265 | -.318 |
| | Sig. (2-tailed) | .030 | .698 | .835 | .113 | .052 |
| | N | 54 | 54 | 39 | 37 | 38 |
| Consequence (i) | Correlation Coefficient | -.175 | .021 | -.020 | .333* | -.227 |
| | Sig. (2-tailed) | .205 | .878 | .904 | .044 | .170 |
| | N | 54 | 54 | 39 | 37 | 38 |
| Collaboration (i) | Correlation Coefficient | .015 | -.061 | -.042 | .197 | -.286 |
| | Sig. (2-tailed) | .915 | .663 | .797 | .242 | .082 |
| | N | 54 | 54 | 39 | 37 | 38 |
| Refocusing (i) | Correlation Coefficient | -.150 | -.163 | -.370* | .240 | -.066 |
| | Sig. (2-tailed) | .279 | .240 | .021 | .152 | .695 |
| | N | 54 | 54 | 39 | 37 | 38 |

** Exact test values / *

The following can be inferred from the significances (Table 6:32) that were found in SoCi (when they started the journey of implementing new clickUP):

- Participants with the highest Management concerns belong to School 1, while the lowest Management concerns are in School 4. (there is a moderate negative correlation between Management concerns and School, $r_s(52) = -.295$, $p < .05$).
- The higher a participant's academic position, the more intense the Unconcerned concerns were (there is a moderate positive correlation between Unconcerned concerns and academic position, $r_s(52) = .363$, $p < .05$).

- c. Participants with higher levels of academic qualifications had lower levels of Refocusing concerns (there is a moderate negative correlation between Refocusing concerns and academic qualification level, $r_s(37) = -.370$, $p < .05$).
- d. Users of the old clickUP system (2006 - 2012) had higher levels of Consequence concerns, than those that are non-users to the LMS (there is a moderate positive correlation between Consequence concerns and whether participants have used the old clickUP or not, $r_s(35) = .333$, $p < .05$).
- e. Participants that see the greatest benefit of using the LMS in communication with students, had lower Personal concerns than those that see teaching and learning as benefits in using the system (there is a moderate to strong negative correlation between Personal concerns and the greatest benefits participants see in having the new clickUP available, $r_s(36) = -.504$, $p < .005$).

Table 6:33 Spearman's correlation and demographic variables for SoCii / Sample 1.1

| Spearman's rank-order correlation for SoCii | | Professional identity (a) | Age (b) | Confidence level (c), (d) | Proficiency in new clickUP (e) |
|---|-------------------------|------------------------------|---------|------------------------------|-----------------------------------|
| Unconcerned(ii) | Correlation Coefficient | .216 | .157 | .169 | -.310 |
| | Sig. (2-tailed) | .181 | .334 | .298 | .052 |
| | N | 40 | 40 | 40 | 40 |
| Informational(ii) | Correlation Coefficient | .071 | .266 | .350* | .069 |
| | Sig. (2-tailed) | .665 | .097 | .027 | .673 |
| | N | 40 | 40 | 40 | 40 |
| Personal(ii) | Correlation Coefficient | .068 | .151 | .215 | -.055 |
| | Sig. (2-tailed) | .677 | .353 | .182 | .737 |
| | N | 40 | 40 | 40 | 40 |
| Management(ii) | Correlation Coefficient | .247 | .330 | .602 | -.158 |
| | Sig. (2-tailed) | .125 | .038 | .000 | .331 |
| | N | 40 | 40 | 40 | 40 |
| Consequence(ii) | Correlation Coefficient | .198 | -.107 | -.090 | .443* |
| | Sig. (2-tailed) | .221 | .509 | .581 | .004 |
| | N | 40 | 40 | 40 | 40 |

Table 6:33 Spearman's correlation and demographic variables for SoCii / Sample 1.1 (continued)

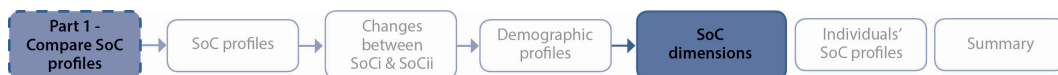
| Spearman's rank-order correlation for SoCii | | Professional identity (a) | Age (b) | Confidence level (c),(d) | Proficiency in new clickUP (e) |
|---|-------------------------|------------------------------|---------|-----------------------------|-----------------------------------|
| Collaboration(ii) | Correlation Coefficient | .371* | .113 | .066 | .101 |
| | Sig. (2-tailed) | .019 | .488 | .686 | .536 |
| | N | 40 | 40 | 40 | 40 |
| Refocusing(ii) | Correlation Coefficient | .032 | -.121 | -.064 | .245 |
| | Sig. (2-tailed) | .843 | .456 | .693 | .127 |
| | N | 40 | 40 | 40 | 40 |

The following can be inferred from the significances (in Table 6:33) that were found in SoCii (at a later stage of the journey to implement the new clickUP):

- Medical doctors (one of the categories of professional identity) had lower levels of Collaboration concerns than scientists (one of the categories of professional identity) did (there is a moderate positive correlation between Consequence concerns and proficiency level, $r_s(38) = .371$, $p < .05$).
- Participants in higher age groups also had higher levels of Management concerns (there is a moderate positive correlation between Management concerns and age, $r_s(39) = .330$, $p < .05$).
- Participants with higher levels of confidence in the use of the system have higher levels of Informational concerns (there is a moderate positive correlation between Informational concerns and level of confidence, $r_s(38) = .350$, $p < .05$).
- Participants who indicated that they “could do everything on their own” (rating their level of confidence) had the lowest Management concerns. Consequently participants who indicated that they “need support most of the time” (rating their level of confidence) had higher levels of Management concerns (a strong positive correlation between Management concerns and confidence level, $r_s(38) = .602$, $p < .005$).

- e. Participants with higher levels of proficiency in using new clickUP also had higher levels of Consequence concerns (a moderate to strong positive correlation between Consequence concerns and proficiency level, $r_s(38) = .443, p < .05$).

6.4.4.4 SoC dimensions



In Figure 6:13 the results are shown for the SoCi and SoCii dimensions (refer to section chapter 3 and 4). Percentile scores for each of the dimensions were calculated by using the average of the total scores for the stages in the Self-concern dimension (i.e. Informational and personal stages) and in the Impact concerns (i.e. the Consequence, Collaboration and Refocusing stages) and converting that to a percentile score using a percentile table. The average total scores for the Unconcerned stages and the Management stage were used to calculate the percentile scores for the Unrelated and Task dimensions respectively.

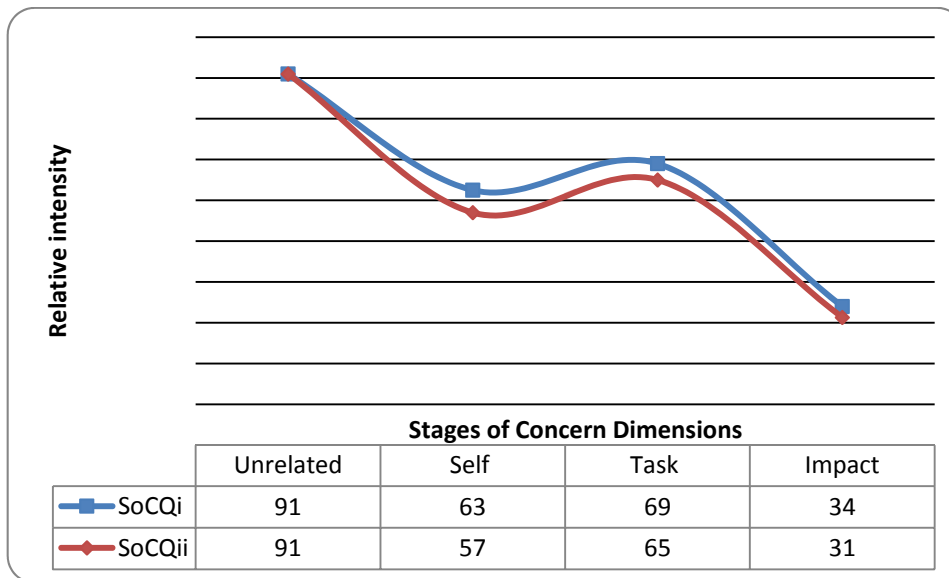


Figure 6:13 SoCi and SoCii dimensions

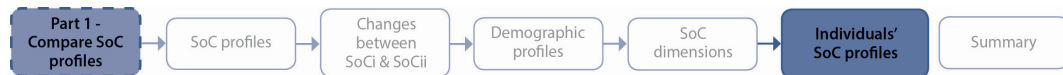
Both applications of the SoCQ rated Unrelated concerns as equally high, Task concerns and Self concerns as second and third highest respectively, and Impact concerns as the lowest dimension.

A Friedman test was run to determine if there were differences in the Self, Task and Impact dimensions between the two evaluations (SoCi and SoCii). The null hypothesis that the two evaluations have the same results could not be rejected:

- The Self concerns dimension (Informational and Personal stages) decreased from SoCi (Median = 59.25) to SoCii (Median = 58.00), but the difference is not statistically significant: $\chi^2 (1) = 0.900$, $p = .343$.
- The Task concerns dimension (Management stage) decreased from SoCi (Median = 69.00) to SoCii (Median = 58.00), but the difference is not statistically significant: $\chi^2 (1) = 0.026$, $p = .873$.
- The Impact concerns dimension (Consequence, Collaboration and Refocusing stages) increased from SoCi (Median = 33.83) to SoCii (Median =

38.00), but the difference is not statistically significant: $\chi^2 (1) = 0.900, p = .343$.

6.4.4.5 Individual SoC profiles



One of the most common ways to display SoCQ data is to use profiles – both group (used in 6.4.1) and individual profiles (George et al., 2008, p. 28), which is also seen as the richest method of analysis (p. 37). This study followed the prescribed method for drawing profiles provided by George et al. (2008, p. 28) in the SoC manual.

In this section an investigation of the individual profiles (see CD for Support documents 6-1iii) of participants (for SoCQii) revealed that all of them had either a positive or a negative one-two split⁵ as described by George et al. (2008, p. 42). The respondent profiles were divided into two groups: positive and negative one-two split (see Table 6:34). These two groups were each divided into two further groups based on the criterion of Refocusing concerns (stage number 6) tail up or tail down. As shown in Table 6:34, four groups were then formed: positive split with the Refocusing stage tail up; positive split with the Refocusing stage tail down; negative split with the Refocusing stage tail up; and negative split with the Refocusing stage tail down.

⁵ Refers to relationship of percentiles scores between the Informational stage (stage one) and Personal stage (stage two).

The analysis of the individual profiles further showed that there are either high Management concerns or Personal concerns. Therefore each of the four groups was then further divided into two, based on the intensity of Management and Personal concerns in relation to each other. Groups have either Management concerns that are higher than Personal concerns, or Personal concerns that are higher than Management concerns. By further dividing the groups in this way, eight different “profiles” could be identified. The eight possible profiles typical of the HPE participants are described in Table 6:34.

Table 6:34 Eight possible individual profiles

| | | Stage 6 (Refocusing) Tail up | Stage 6 (Refocusing) Tail down |
|--|-----------------------|---|--|
| Stage 1 (Informational) > Stage 2 (Personal) Positive one-two split | Personal > Management | <ul style="list-style-type: none"> Positive /Interested / open to learn Feel uneasy / in doubt /resistance Have strong ideas about how to do things differently with innovation / another innovation | <ul style="list-style-type: none"> Positive / Interested / open to learn Feel uneasy / in doubt / resistance Do not have ideas that would compete with innovation |
| | Management > Personal | <ul style="list-style-type: none"> Positive /Interested / open to learn Time / management concerns Have strong ideas about how to do things differently with innovation / another innovation | <ul style="list-style-type: none"> Positive / Interested / open to learn Time / management concerns Do not have ideas that would compete with innovation |
| Stage 2 (Personal) > Stage 1 (Informational) Negative one-two split | Personal > Management | <ul style="list-style-type: none"> Negative /in doubt / not so open to learn Feel uneasy / in doubt / resistance Have strong ideas about how to do things differently with innovation / another innovation | <ul style="list-style-type: none"> Negative /in doubt / not so open to learn Feel uneasy / in doubt / resistance Do not have ideas that would compete with innovation |
| | Management > Personal | <ul style="list-style-type: none"> Negative /in doubt / not so open to learn Time / management concerns Have strong ideas about how to do things differently with innovation / another innovation | <ul style="list-style-type: none"> Negative /in doubt / not so open to learn Time / management concerns Do not have ideas that would compete with innovation |

The profiles in Table 6:34 can be graphically illustrated. Figure 6:14 shows a generic profile of the group with a negative split (Personal concerns higher than Informational concerns). The variations and in Management and Refocusing concerns are indicated by the dotted lines – each representing different profiles.

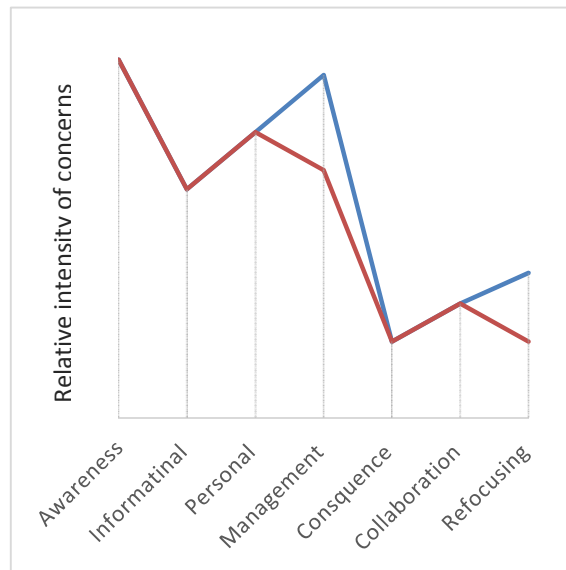


Figure 6:14 Hypothetical negative split group

Figure 6:15 shows the generic profile of the group with a positive split (Personal concerns lower than Informational concerns). The variations in Management and Refocusing concerns are indicated by the dotted lines – each representing different profiles.

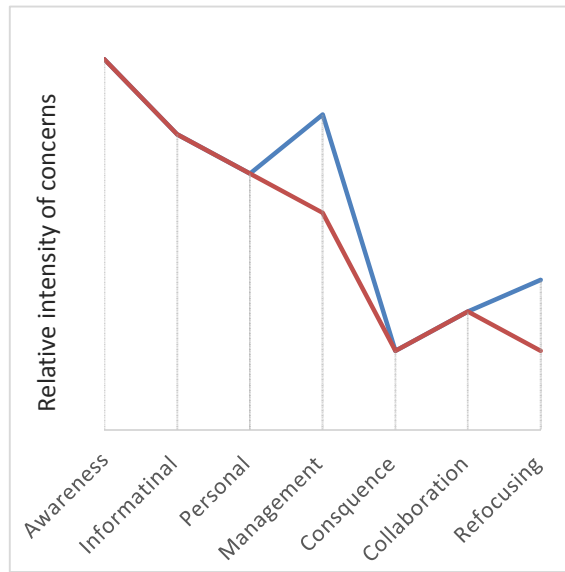
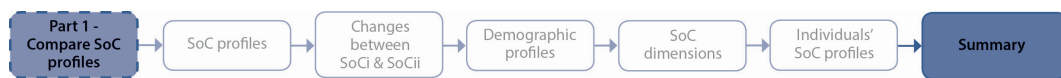


Figure 6:15 Hypothetical positive split group

6.4.4.6 Summary Part I: the SoC profiles



The findings for Part I of research question 1 (the SoC Profile) are summarised in Table 6:35 prior to the analysis of the highest and second highest stages in Part II.

Table 6:35 Summary PART I: SoC profiles

| Summary Part I: SoC PROFILE | | | |
|--|--|---|--|
| | SoCi findings | SoQii findings | Change: SoCi –SoCii findings |
| | What are the concerns of HPEs at the start of a journey to implement a new LMS? | What are the concerns of HPEs after they had time to implement and start using the LMS? | How did the concerns change after HPEs had time to implement new clickUP? |
| SoCi and SoCii profiles of the entire group | <p><u>The column-graph shows:</u></p> <ul style="list-style-type: none"> - Highest stage of concern is Unconcerned - Second highest stage is Management - Consequence stage of concerns is the lowest. | <p><u>The column-graph shows:</u></p> <ul style="list-style-type: none"> - A lower relative intensity of concerns in majority of stages, but still : - Highest stage of concern is Unconcerned - Second highest stage is Management - Consequence stage of concerns is the lowest. | <ul style="list-style-type: none"> - The column graph shows that Unconcerned and Collaboration stages stayed the same in SoCi and SoCii but that the Informational, Personal, Management, Consequence and Refocusing concerns are less intense in SoCii than in SoCi. - Box plot profile (shows the median and distribution of scores) shows that Unconcerned stage (ii) reported lower scores, although mean and medians are the same in SoCi and SoCii. - Lower level of relative intensity in SoCii is evident in Informational, Personal, Management and Refocusing stages. - Consequence stage has a higher median in SoCii than in SoCi, indicating that there was a slight increase in intensity of the scores (difference in mean scores displayed in column graph). |

| Table 6:35 Summary PART I: SoC profiles (continued) | | | |
|--|---|---|---|
| Summary Part I: SoC PROFILE | | | |
| | SoCi findings | SoQii findings | Change: SoCi –SoCii findings |
| | What are the concerns of HPEs at the start of a journey to implement a new LMS? | What are the concerns of HPEs after they had time to implement and start using the LMS? | How did the concerns change after HPEs had time to implement new clickUP? |
| | | | <ul style="list-style-type: none"> - Collaboration stage a lesser intensity in the lower 50% of percentile scores is recorded for SoCii while a higher level of intensity is recorded for SoCii in the upper 50% of the percentile scores. |
| Inferential statistics to determine the changes between SoCi and SoCii | | | <ul style="list-style-type: none"> - The Wilcoxon signed rank paired test showed that the most significant change from SoCi to SoCii occurs in the Informational stage. - With more lenient alpha levels, Personal and Refocusing stages also shows significant change from SoCi to SoCii. |
| Effect of demographic variables on profiles: → Descriptive analysis | The SoC profiles based on the categories associated with demographic variables were analysed. A list of characteristics that were identified from these profiles were used to plot a generic profile. | The SoC profiles based on the categories associated with demographic variables were analysed. A list of characteristics that were identified from these profiles were used to plot a generic profile. | |

| Table 6:35 Summary PART I: SoC profiles (continued) | | | |
|--|---|--|---|
| Summary Part I: SoC PROFILE | | | |
| | SoCi findings | SoQii findings | Change: SoCi –SoCii findings |
| | What are the concerns of HPEs at the start of a journey to implement a new LMS? | What are the concerns of HPEs after they had time to implement and start using the LMS? | How did the concerns change after HPEs had time to implement new clickUP? |
| → Inferential statistics | See Table 6:36 for a summary of these results. | See Table 6:37 for a summary of these results. | |
| SoC dimensions | Unrelated concerns are the highest; Task concerns are the second highest; and Impact concerns are the lowest. | Intensity of these dimensions is slightly less. The order remains the same as in the first evaluation. | No statistically significant changes in these dimensions. |
| Individual SoC profile | | Individual profiles graphically analysed. Groups formed with similar concerns. This resulted in eight group profiles that were identified. | |

In Table 6:36 and Table 6:37 the significant results (using an x) found in the non-parametric tests conducted on demographic variables and the SoC are shown.

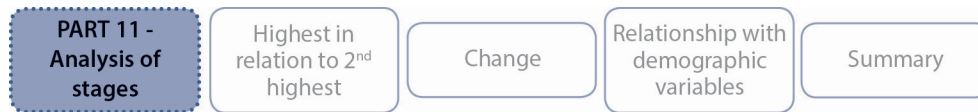
Table 6:36 Significant results for Spearman's and Kruskal-Wallis on SoCi and demographic variables

| | SoCi | Demographic variable | Spearman's rank-order correlation | Kruskal-Wallis |
|---|---------------|-------------------------|-----------------------------------|----------------|
| 0 | Unconcerned | Academic position | x | |
| 1 | Informational | | | |
| 2 | Personal | Greatest benefit | x | x |
| 3 | Management | School | x | |
| 4 | Consequence | Used Old clickUP < 2012 | x | x |
| 5 | Collaboration | | | |
| 6 | Refocusing | Academic qualification | x | |

Table 6:37 Significant results for Spearman's and Kruskal-Wallis on SoCii and demographic variables

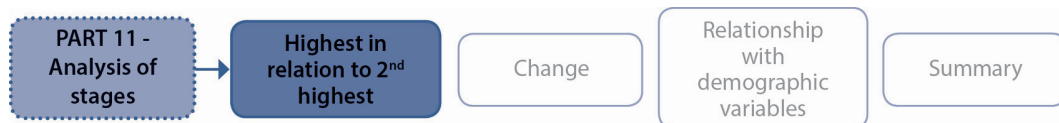
| | SoCii | Demographic variable | Spearman's rank-order correlation | Kruskal-Wallis |
|---|---------------|----------------------------------|-----------------------------------|----------------|
| 0 | Unconcerned | | | |
| 1 | Informational | Confidence level | x | |
| 2 | Personal | Academic qualification | | x |
| 3 | Management | Age | x | |
| | | Confidence level | x | x |
| 4 | Consequence | Proficiency in using new clickUP | x | x |
| 5 | Collaboration | Professional identity | x | x |
| 6 | Refocusing | | | |

6.4.5 Part II: Analysing the stages in the SoC



In this section the highest stage in relation to the second highest stage is reported. Furthermore the changes in the highest, second highest en lowest stages are investigated as they occur from SoCi to SoCii. Lastly possible relationships with regards to the demographic variables are explored.

6.4.5.1 Highest stages of concern in relation to second highest stages of concern



George et al. (2008, p. 35) suggest that is useful to cross-tabulate the highest and the second highest stages of concern. Table 6:38 and Table 6:39 show for SoCi and SoCii respectively, the frequencies of the highest stage scores in relation to the second highest scores for each participant.

Table 6:38 Frequency distribution for highest stage of concern in relation to second highest stage of concern for SoCi

| SoCi (Sample 1) | Second highest stage | | | | | | | |
|-------------------|----------------------|----|---|----|---|---|---|-----------|
| Highest stage | 0 | 1 | 2 | 3 | 4 | 5 | 6 | Row Total |
| 0 – Unconcerned | | 12 | 3 | 16 | 1 | 2 | 4 | 38 |
| 1 – Informational | 3 | | 1 | 1 | | | | 5 |
| 2 – Personal | | | | 1 | | | | 1 |
| 3 – Management | 4 | 3 | | | | | | 7 |
| 4 – Consequence | | | | | | | | 0 |
| 5 – Collaboration | | | | | | | | 0 |

Table 6:38 Frequency distribution for highest stage of concern in relation to second highest stage of concern for SoCi (continued)

| SoCi (Sample 1) | Second highest stage | | | | | | | |
|-----------------|----------------------|----|---|----|---|---|---|----|
| 6 - Refocusing | | 1 | | | | 2 | | 3 |
| Column Total | 7 | 16 | 4 | 18 | 1 | 4 | 4 | 54 |

The results of a one-way Chi-Square analysis for Sample 1 reveal that the number of participants relating to the different categories of highest vs. second highest stage of concern is not significantly different ($\chi^2 (5) = 4.857, p = .434$) at the 95% level of confidence.

From Table 6:38 it can be inferred that respondents with high Unconcerned concerns (Stage 0) appear to fall into two sub-groups:

- those who want to learn more about the innovation (high Informational concerns, stage 1) and
- those who are very concerned about how to manage this innovation (high management concerns, stage 3).

Table 6:39 Frequency distributions for highest stage of concern in relation to second highest

| SoCQii (Sample 1.1) | Second highest stage | | | | | | | |
|---------------------|----------------------|---|---|----|---|---|---|-----------|
| Highest stage | 0 | 1 | 2 | 3 | 4 | 5 | 6 | Row Total |
| 0 – Unconcerned | | 5 | 4 | 13 | 1 | 2 | 3 | 28 |
| 1 – Informational | 1 | | 2 | | | | | 3 |
| 2 – Personal | 1 | | | 1 | | | | 2 |
| 3 – Management | 2 | | | | | 1 | | 3 |
| 4 – Consequence | | | | | | | | 0 |
| 5 – Collaboration | 1 | | | | 1 | | | 2 |
| 6 - Refocusing | | | | 1 | 1 | | | 2 |
| Column Total | 5 | 5 | 6 | 15 | 3 | 3 | 3 | 40 |

The results of a one-way Chi-Square analysis for Sample 1.1 reveal that the number of participants relating to the different categories of highest vs. second highest stage of concern is significantly different ($\chi^2(5) = 19.250, p < .01$) at the 99% level of confidence.

From Table 6:39 it can be inferred that after respondents had had time to implement and use the system, a large proportion of the group with the highest Unconcerned concerns in SoCii, also had concerns about time and how to manage the innovation.

6.4.5.2 Change in highest, second highest and lowest Stages of Concern from SoCi to SoCii



The number of participants who rated each SoC as highest (peak) stage in SoCi and SoCii is shown in Table 6:40.

Table 6:40 Stages of concern rated as highest in SoCi and SoCii

| Highest rated stage | | SoCi | | SoCii | |
|---------------------|---------------|---------------|-------|---------------|-------|
| | | Frequency | % | Frequency | % |
| 0 | Unconcerned | 38 | 70.37 | 28 | 70.00 |
| 1 | Informational | 5 | 9.26 | 3 | 7.50 |
| 2 | Personal | 1 | 1.85 | 2 | 5.00 |
| 3 | Management | 7 | 12.96 | 3 | 7.50 |
| 4 | Consequence | 0 | 0.00 | 0 | 0.00 |
| 5 | Collaboration | 0 | 0.00 | 2 | 5.00 |
| 6 | Refocusing | 3 | 5.56 | 2 | 5.00 |
| | | <i>n</i> = 54 | 100 | <i>n</i> = 40 | 100 |

Fewer respondents rated Informational and Management concerns highest in SoCii than in SoCi. The results of a Wilcoxon signed rank test show that the highest ratings of the seven stages of concerns in SoCi and SoCii **are not** significantly different ($Z = -.032$, $p = .975$). The null hypothesis that the median differences between the highest rated stage for SoCi and the highest rated stage for SoCii equals zero, can therefore be retained.

The frequencies of stages rated second highest in SoCi and SoCii is shown in Table 6:41.

Table 6:41 Stages of concern rated as second highest in SoCi and SoCii

| Second highest stage | | SoCi | | SoCii | |
|----------------------|---------------|---------------|-------|---------------|------|
| | | Frequency | % | Frequency | % |
| 0 | Unconcerned | 7 | 12.96 | 5 | 12.5 |
| 1 | Informational | 16 | 29.63 | 5 | 12.5 |
| 2 | Personal | 4 | 7.41 | 6 | 15 |
| 3 | Management | 18 | 33.33 | 15 | 37.5 |
| 4 | Consequence | 1 | 1.85 | 3 | 7.5 |
| 5 | Collaboration | 4 | 7.41 | 3 | 7.5 |
| 6 | Refocusing | 4 | 7.41 | 3 | 7.5 |
| | | <i>n</i> = 54 | 100 | <i>n</i> = 40 | 100 |

Fewer respondents rated Informational concerns as second highest in SoCii than in SoCi when they started with the implementation. Management concerns still seem to be at the forefront after respondents had had the opportunity and time to implement new clickUP. The results of a Wilcoxon signed rank test show that the second highest ratings of the seven stages of concern in SoCi and SoCii **are not** significantly different ($Z = -.863$, $p = .388$). The null hypothesis that the median differences between the second highest rated stage for SoCi and the second highest rated stage for SoCii equals zero, can therefore be retained.

The stages of concern rated lowest by participants in SoCi and SoCii is shown in Table 6:42.

Table 6:42 Stages of concern rated as lowest in SoCi and SoCii

| Lowest stage | | SoCi | | SoCii | |
|--------------|---------------|---------------|-------|---------------|------|
| | | Frequency | % | Frequency | % |
| 0 | Unconcerned | 0 | 0 | 4 | 10 |
| 1 | Informational | 0 | 0 | 2 | 5 |
| 2 | Personal | 0 | 0 | 1 | 2.5 |
| 3 | Management | 4 | 7.41 | 0 | 0 |
| 4 | Consequence | 30 | 55.56 | 21 | 52.5 |
| 5 | Collaboration | 16 | 29.62 | 11 | 27.5 |
| 6 | Refocusing | 4 | 7.41 | 1 | 2.5 |
| | | <i>n</i> = 54 | 100 | <i>n</i> = 40 | 100 |

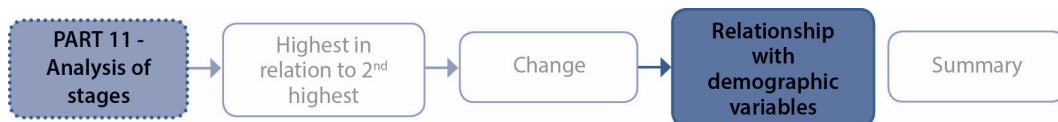
In both evaluations, Impact concerns (Consequence and Collaboration) were rated the lowest by participants. They indicated that they are not concerned about the effects of the innovation on the students, or in cooperating with others to improve the impact on students when using new clickUP.

The results of a Wilcoxon signed rank test show that the lowest ratings of the seven stages of concern in SoCi and SoCii **are** significantly different ($Z = -1.968$, $p < .05$). The null hypothesis that the median differences between lowest rated stage for SoCi and the lowest rated stage for SoCii equals zero, can therefore be rejected.

This finding correlates with the developmental nature of concerns when implementing an innovation, according to the CBAM. The change pattern visible in Table 6:42 shows more respondents in SoCii with lowest stages of concern in the Unrelated (Unconcerned concerns), Self (Informational and Personal concerns) concern dimensions. On the other hand, fewer respondents rated Task

(Management concerns) dimensions and Impact (Consequence and Collaboration) concerns as the lowest concerns during SoCii. There seems to be some movement away from Unrelated, Self concerns towards task and Impact concerns.

6.4.5.3 Relationships of highest, second highest and lowest stages with demographic variables



Three statistical tests: Two-way χ^2 , Kruskal-Wallis, and Spearman's rank-order correlation tests, were performed in seeking possible relationships between the highest, second highest and lowest stages and the demographic variables.

Firstly, in order to investigate possible associations between the highest, second highest and lowest stages of concern and the demographic variables, cross tabulations with Pearson's χ^2 test were performed. Fisher's exact test was used when the Pearson's χ^2 was significant, and where one or more of the expected cell frequencies was less than five. The following findings emerged:

- The Fisher's Exact test (90% of the cells had expected cell frequencies less than five) showed a statistically significant association between *school* and *highest stage* for SoCi, $\chi^2(12) = 21.003$, $p < .05$). Pertaining to SoCi, 84.2% of participants in School 3 and 65.5% of participants in School 2 rated Unconcerned as their highest stage of concern.
- There is a statistically significant association between *academic qualification* and *second highest stage* for SoCii. Fisher's exact test shows that $\chi^2(36) =$

42.075, $p < .05$. Pertaining to SoCii, 52.4% of the participants who hold a *Masters degree* as their highest *academic qualification* rated Management concerns as their second highest stage of concern.

- There is a statistically significant association between *academic position* and *lowest stage* for SoCii. Fisher's exact test shows that $\chi^2(20) = 38.191$, $p < .05$. Pertaining to SoCii, 42.5% of participants in the *Lecturer* category rated Consequence concerns as their lowest highest stage of concern.
- There is a statistically significant association between *academic qualification* and *lowest stage* for SoCii. Fisher's exact test shows that $\chi^2(30) = 45.114$, $p < .05$. Pertaining to SoCii, 66.7% and 28.6% of participants who hold a *Masters degree* as their highest *academic qualification* rated Consequence or Collaboration concerns respectively as their lowest stage of concern.

Secondly, the Kruskal-Wallis test was used “to determine whether there are any statistically significant differences between the distributions of three or more independent (unrelated) groups” (Lund & Lund, 2013, Kruskal-Wallis, para 1).

The only statistically significant difference found is between different categories of *lecturing experience* and the *highest stage* in SoCii, $\chi^2(4) = 13.027$, $p < .05$. The relationship between the highest stage of concern in SoCii and the categories of *lecturing experience* is shown in Figure 6:16.

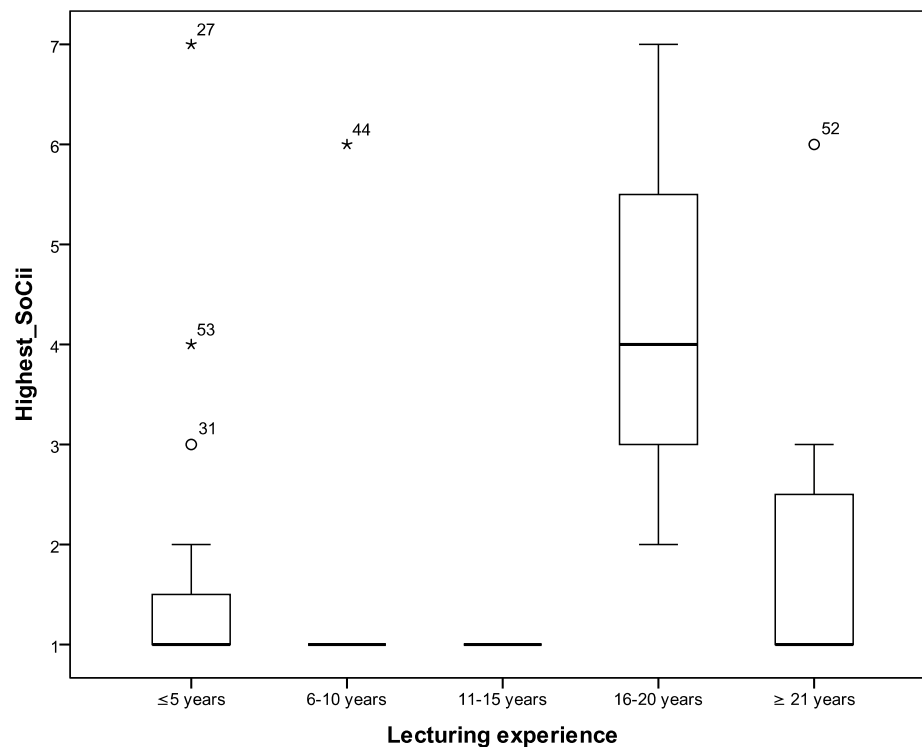


Figure 6:16 Kruskal-Wallis results for Highest SoCii and *lecturing experience*

Figure 6:16 shows that participants with more *lecturing experience* also have peak scores in the higher⁶ stages of concern.

Lastly, the Spearman’s rank-order correlation test was performed to measure significance in relationships between the highest (peak), second highest and lowest stages of concern and the demographic variables. The following findings emerged:

- There is a low, negative significant correlation between *academic position* and *highest stage* in SoCi, $r_s(52) = -.269, p < .05$. This means that

⁶ Higher stages of concerns of concern refers to stages 4 to 6 (i.e the Consequence, Collaboration and Refocusing stages).

participants with lower academic positions are likely to have highest (peak) scores in higher stages of concern.

- There is a low, negative significant correlation between *appointment type* and *highest stage* in SoCii, $r_s(38) = -.319, p < .05$. This means that participants employed as permanent staff are likely to have highest (peak) scores in higher stages of concern.

6.4.5.4 Summary PART II – Stages of Concerns

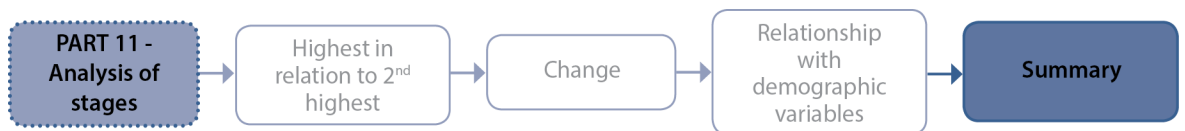


Table 6:43 provides a summary of the results presented in Part II (section 6.4.5) regarding the descriptive and inferential statistical analyses performed on the highest, second highest and lowest stages of concern reported by HPEs in SoCi and SoCii.

Table 6:43 Summary: PART II - Stages of concern

| Summary Part II: STAGES OF CONCERN | | | |
|---|---|---|---|
| | SoCi findings | SoQii findings | Change: SoCi –SoCii findings |
| | What are the concerns of HPEs at the start of a journey to implement a new LMS? | What are the concerns of HPEs after they had time to implement and start using the LMS? | How did the concerns change after HPEs had time to implement new clickUP? |
| Highest stage in relation to second highest stage | HPEs with high Unconcerned concerns appear to fall into two sub-groups: those who want to learn more about the innovation (high Informational concerns, stage 1); and | A large proportion of the HPEs with the highest Unconcerned concerns in SoCii, also had concerns about time and how to manage the innovation. | |

Table 6:43 Summary: PART II - Stages of concern (continued)

| Summary Part II: STAGES OF CONCERN | | | |
|---|--|--|--|
| | SoCi findings | SoQii findings | Change: SoCi –SoCii findings |
| | What are the concerns of HPEs at the start of a journey to implement a new LMS? | What are the concerns of HPEs after they had time to implement and start using the LMS? | How did the concerns change after HPEs had time to implement new clickUP? |
| | those who are very concerned about how to manage the innovation (high Management concerns). | | |
| Highest stage | Unconcerned stage was rated as the highest stage of concern by 70.4% of the participants. | Unconcerned stage was rated as the highest stage of concern by 70% of the participants. | Unconcerned was consistently rated the peak stage in SoCi and SoCii. A reduced number of participants rated Management and Informational stage as peak stage in SoCii. |
| Second highest stage | Management stage was rated as the second highest stage of concern by 33.3% of the participants, followed by the Informational stage at 29.63%. | Management stage was rated as the second highest stage of concern by 37.5% of the participants. The Informational stage was rated as second highest by only 12.5% of participants. | Although a lesser number of participants rated Informational concerns as the second highest in SoCii Personal, Management and Consequence stages received more second highest ratings in SoCii than in SoCi. |
| Lowest stage | Consequence stage was rated as the lowest stage of concern by 55.5% of the participants, followed by Collaboration at 29.62%. | Consequence stage was rated as the lowest stage of concern by 52.5% of the participants, followed by Collaboration at 27.5%. | For SoCii more participants rated Informational and Personal concerns as lowest stages while Consequence and Collaboration continue to be the stages that are mostly lowest rated. |
| Inferential statistical analysis | See Table 6:44 for summary of results. | | |

In Table 6:44 the demographic variables that showed significant results with regard to the highest, second highest and lowest stages utilizing non-parametric tests, are shown (grey cells indicate no significance).

Table 6:44 Results of the Chi square, Kruskal-Wallis and Spearman's correlation test on demographic variables and the highest, second highest and lowest stages

| | Non-parametric tests | Highest stage | Second highest stage | Lowest stage |
|-------|------------------------|---------------------------------------|-------------------------|---|
| SoCi | Chi ² | School | | |
| | Kruskal-Wallis | | | |
| | Spearman's correlation | | | |
| SoCii | Chi ² | | Academic qualifications | Academic qualification Academic position |
| | Kruskal-Wallis | Lecturing experience | | |
| | Spearman's correlation | Academic position Appointment type | | |

6.4.6 Part III: Analysing individual concern statements



In this section an analysis of the individual concerns are done in order to identify the highest -, second highest and lowest rated individual concerns. Individual concerns refer to each of the 35 concern statements to be rated by individuals in the SoCQ (Addendum 6-3b).

6.4.6.1 Highest rated individual concerns



The results of the analysis of individual concerns that were rated highest by most of the participants are presented in support document 6-1iv (see CD). The ratings allocated by each participant in the 35 items, were examined to determine the highest rating (score) awarded. All items (concerns) with this particular rating were then counted (listed) as a concern that received a highest rating. The frequency (see Table 6:45) represents the number of times a particular concern appeared in a highest rated list (e.g. concern statement 24 was rated a highest concern by 17 of the participants in Sample 1). Table 6:45 shows the top five concerns from the ranked list of highest rated concerns and the stage of concern (SoC) to which the particular item belongs. The question number indicates the number of the concern statement in the SoCQ (see Appendix 6a for the statements and numbers). This list of concerns was ranked from the most to the

least number of times a concern was rated the highest. The concerns that was rated under the top five highest rated concerns in both SoCi and SoCii are highlighted (i.e. concern items 24 and 30).

Table 6:45 Highest rated individual concerns

| SoCi | | | | SoCii | | | |
|------------------------|------|------|---------------|-----------------|------|------|-------------|
| Question number | Freq | % | Stage | Question number | Freq | % | Stage |
| 24 | 17 | 7.05 | Consequence | 21 | 14 | 6.6 | Unconcerned |
| 16 | 14 | 5.81 | Management | 24 | 14 | 6.6 | Consequence |
| 30 | 14 | 5.81 | Unconcerned | 4 | 12 | 5.66 | Management |
| 15 | 12 | 4.98 | Informational | 22 | 11 | 5.19 | Refocusing |
| 27 | 12 | 4.98 | Collaboration | 30 | 11 | 5.19 | Unconcerned |
| (n = 241) ⁷ | | | | (n = 212) | | | |

Table 6:46 displays the five concern statements (also referred to as individual concerns) most frequently rated as a participant's highest concern in SoCi.

Table 6:46 Concern items rated highest in SoCi

| # | Individual concern statement | Stage |
|-----|--|---------------|
| 24. | I would like to excite my students about their part in this approach. | Consequence |
| 16. | I am concerned about my inability to manage all that the new clickUP requires. | Management |
| 30. | Currently other priorities prevent me from focusing my attention on the new clickUP. | Unconcerned |
| 15. | I would like to know what resources are available if we decide to adopt the new clickUP. | Informational |
| 27. | I would like to coordinate my efforts with others to maximize the new clickUP's effects. | Collaboration |

Concerns listed in Table 6:46 as highly rated by HPEs belong to (all) four concern dimensions and to five stages of concern. One of the individual

⁷ The total number of highest ratings that were allocated to the 35 statements by the entire group of HPEs

concerns, concern statement 30, belongs to the Unconcerned stage which is also the highest rated (peak) stage in SoCi.

Table 6:47 displays the five concern statements (individual concerns) most frequently rated as a participant's highest concern in SoCii.

Table 6:47 Concern items rated highest in SoCii

| # | Individual concern statement | Stage |
|-----|---|-------------|
| 21. | I am preoccupied with other things rather than new clickUP. | Unconcerned |
| 24. | I would like to excite my students about their part in this approach. | Consequence |
| 4 | I am concerned about not having enough time to organise myself each day. | Management |
| 22. | I would like to modify our use of the new clickUP based on the experiences of our students. | Refocusing |
| 30. | Currently other priorities prevent me from focusing my attention on the new clickUP. | Unconcerned |

Concerns listed Table 6:47 as highly rated by HPEs belong to four of the SoC. Two of these individual concern statements (21 and 30), belong to the Unconcerned stage which is also the highest rated (peak) stage in SoCi. These two concern statements indicate that other priorities still require a lot of attention, which prevents HPEs from spending more time on clickUP. As for SoCi, HPEs again indicated their interest to “excite students...”.

6.4.6.2 Second highest rated individual concerns



The results of the analysis of individual concerns that were rated second highest by most of the participants are presented in support document 6-1v. The ratings of each individual were examined to find the second highest rating (score) applied to the 35 items (concerns). All items (concerns) with this particular rating were then taken as a second highest rated concern. The frequency represents the number of times a particular concern appeared in a second highest rated list for the entire group. Table 6:48 shows the top five concerns from the ranked list of second highest rated concerns, as well as the stage of concern to which the particular item belongs. The question number indicates the number of the concern statement in the SoCQ (see Appendix 6a). This list of concerns was ranked from the most to the least number of times a concern was rated the second highest. The first five concerns that received the second highest rating from HPEs in both SoCi and SoCii are highlighted (items 4 and 24).

Table 6:48 Second highest rated individual concerns

| SoCi | | | | SoCii | | | |
|-----------------|------|------|---------------|-----------------|------|------|-------------|
| Question number | Freq | % | SoC | Question number | Freq | % | SoC |
| 4 | 15 | 4.9 | Management | 24 | 12 | 6.56 | Consequence |
| 24 | 15 | 4.9 | Consequence | 32 | 12 | 6.56 | Consequence |
| 10 | 14 | 4.58 | Collaboration | 4 | 8 | 4.37 | Management |
| 25 | 14 | 4.58 | Management | 16 | 8 | 4.37 | Management |
| 26 | 13 | 4.25 | Informational | 23 | 8 | 4.37 | Unconcerned |
| (n = 306) | | | | (n = 183) | | | |

In both evaluations concern items 4 and 24 receives a large proportion of the second highest ratings (see Table 6:48).

Table 6:49 displays the five concern statements most frequently rated as participants' second highest concern in both SoCi and SoCii.

Table 6:49 Concern items rated second highest in SoCi

| # | Individual concern statement | Stage |
|-----|---|---------------|
| 4 | I am concerned about not having enough time to organise myself each day. | Management |
| 24. | I would like to excite my students about their part in this approach. | Consequence |
| 10. | I would like to develop working relationships with both our faculty and outside faculty using this new clickUP. | Collaboration |
| 25. | I am concerned about time spent working with non-academic problems related to the new clickUP. | Management |
| 26. | I would like to know what the use of the new clickUP will require in the immediate future. | Informational |

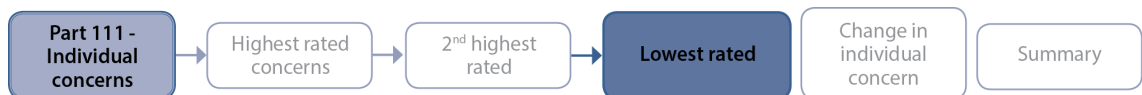
Two of the five concern items that received a second highest rating, belong to the Management stage (Task dimension). Respondents indicated their concern about how to manage new clickUP, and also about not having enough time to do what the use of clickUP requires. This does not change during the second evaluation (SoCii).

Table 6:50 displays the five concern statements most frequently rated as a participant's second highest concern in SoCii.

Table 6:50 Concern items rated second highest in the SoCii (continued)

| # | Individual concern statement | Stage |
|-----|--|-------------|
| 24. | I would like to excite my students about their part in this approach. | Consequence |
| 32. | I would like to know how my role will change when I am using the new clickUP. | Consequence |
| 4 | I am concerned about not having enough time to organise myself each day. | Management |
| 16. | I am concerned about my inability to manage all that the new clickUP requires. | Management |
| 23. | I spend little time thinking about the new clickUP. | Unconcerned |

6.4.6.3 Lowest rated individual concerns



The results of the analysis of individual concerns that were rated lowest by most of the participants are presented in support document 6-1iv. The ratings of each individual were examined to find the lowest rating (score) applied to all 35 concern statements. All items (concerns) with this particular rating were then taken as a lowest rated concern. A list of the lowest rated concerns per participant was compiled. The frequency represents the number of times a particular concern appeared in the lowest rated list. This list of concerns was ranked from the most to the least number of times a concern was rated the lowest. Table 6:51 shows the top five concerns from the ranked list of lowest rated concerns, as well as the SoC to which the particular concern belongs. Concerns that received the lowest rating from HPEs in both SoCi and SoCii are highlighted (items 1, 2, 3 and 11).

Table 6:51 Lowest rated individual concerns

| SoCi | | | | SoCii | | | |
|-----------------|------|------|---------------|-----------------|------|------|-------------|
| Question number | Freq | % | Stage | Question number | Freq | % | Stage |
| 3 | 27 | 7.99 | Unconcerned | 3 | 24 | 7.95 | Unconcerned |
| 1 | 20 | 5.92 | Consequence | 2 | 18 | 5.96 | Refocusing |
| 5 | 17 | 5.03 | Collaboration | 11 | 15 | 4.97 | Consequence |
| 2 | 16 | 4.73 | Refocusing | 1 | 14 | 4.64 | Consequence |
| 11 | 16 | 4.73 | Consequence | 13 | 13 | 4.3 | Personal |
| (n = 338) | | | | (n = 302) | | | |

Interestingly, four of the top five lowest rated concerns are the same in both SoCi and SoCii.

Table 6:52 displays the five concern statements most frequently rated as a participant's lowest concern in SoCi.

Table 6:52 Concern items rated lowest in SoCi

| # | Individual concern statement | Stage |
|----|--|---------------|
| 3 | I am more concerned about another innovation | Unconcerned |
| 1 | I am concerned about students' attitudes towards the new clickUP | Consequence |
| 2 | I know of some other approaches that might work better | Refocusing |
| 11 | I am concerned about how the innovation affect students | Consequence |
| 5 | I would like to help other faculty in their use of the new clickUP | Collaboration |

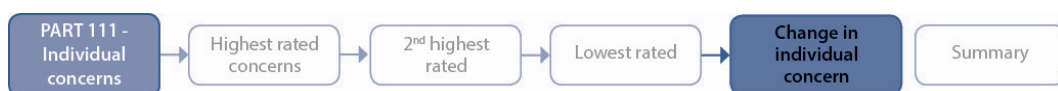
Table 6:53 displays the five concern statements most frequently rated as a participant's lowest concern in SoCii.

Table 6:53 Lowest rated concern items for SoCii

| # | Individual concern statement | Stage |
|----|--|-------------|
| 3 | I am more concerned about another innovation | Unconcerned |
| 1 | I am concerned about students' attitudes towards the new clickUP | Consequence |
| 2 | I know of some other approaches that might work better | Refocusing |
| 11 | I am concerned about how the innovation affect students | Consequence |
| 13 | I would like to know who will make the decisions in the new system | Personal |

Four of the five lowest rated concerns are repeated in SoCi (Table 6:52) and SoCii (Table 6:53). HPEs indicated that no other innovation is taking up their attention at the moment, and that they do not know of other innovative approaches that might work better. They are also not concerned about student attitudes or how new clickUP will affect students.

6.4.6.4 Change in individual concern ratings from SoCi to SoCii



A Wilcoxon signed rank test was conducted to determine if there was a significant change in the rating of each individual concern from SoCi to SoCii. Table 6:54 displays the results of the Wilcoxon signed rank test (z-values and p-values). The median (Mdn) of the two ratings is a further indication of how a concern's rating changed from SoCi to SoCii. The last line in each row shows the hypothesis statement that is true for each particular concern statement.

Note the following in Table 6:54:

- Darker shaded cells indicate concerns that show a significant difference from SoCi to SoCii; and
- The lighter shaded blocks indicate concerns with a lower median during SoCii than in SoCi. This means that these concerns were rated a lower intensity in SoCii; and
- A ‘i’ in indicates SoCi while ‘ii’ indicates SoCii.

Table 6:54 Wilcoxon signed rank results for individual concerns rated from SoCi to SoCii

| 0 - Unconcerned | 1- Informational | 2 Personal | 3 - Management | 4 - Consequence | 5 - Collaboration | 6 - Refocusing |
|---|---|---|---|---|---|--|
| 3 Mdn: i > ii Z = -1.636 p = .102 H ₀ : i = ii | 6 Mdn: i > ii Z = -3.466 p = 0.001 H ₀ : i ≠ ii | 7 Mdn: i > ii Z = -.813 p = .416 H ₀ : i = ii | 4 Mdn: i = ii Z = -.575 p = .564 H ₀ : i = ii | 1 Mdn: i = ii Z = -1.004 p = .315 H ₀ : i = ii | 5 Mdn: i > ii Z = -.342 p = .732 H ₀ : i = ii | 2 Mdn: i > ii Z = -.945 p = .344 H ₀ : i = ii |
| 12 Mdn: i > ii Z = -1.098 p = .272 H ₀ : i = ii | 14 Mdn: i < ii Z = -1.211 p = .226 H ₀ : i = ii | 13 Mdn: i > ii Z = -.638 p = .523 H ₀ : i = ii | 8 Mdn: i > ii Z = -.904 p = .366 H ₀ : i = ii | 11 Mdn: i < ii Z = -.628 p = .530 H ₀ : i = ii | 10 Mdn: i > ii Z = -.281 p = .779 H ₀ : i = ii | 9 Mdn: i < ii Z = -.088 p = .930 H ₀ : i = ii |
| 21 Mdn: i = ii Z = -.927 p = .354 H ₀ : i = ii | 15 Mdn: i > ii Z = -.582 p = .561 H ₀ : i = ii | 17 Mdn: i = ii Z = -.505 p = .614 H ₀ : i = ii | 16 Mdn: i > ii Z = -.889 p = .374 H ₀ : i = ii | 19 Mdn: i > ii Z = -1.187 p = .235 H ₀ : i = ii | 18 Mdn: i > ii Z = -.448 p = .654 H ₀ : i = ii | 20 Mdn: i > ii Z = -1.971 p = 0.049 H ₀ : i ≠ ii |
| 23 Mdn: i < ii Z = -.407 p = .684 H ₀ : i = ii | 26 Mdn: i > ii Z = -1.001 p = .317 H ₀ : i = ii | 28 Mdn: i = ii Z = -.188 p = .851 H ₀ : i = ii | 25 Mdn: i > ii Z = -1.069 p = .285 H ₀ : i = ii | 24 Mdn: i = ii Z = -.086 p = .932 H ₀ : i = ii | 27 Mdn: i > ii Z = -1.507 p = .132 H ₀ : i = ii | 22 Mdn: i = ii Z = -1.139 p = .255 H ₀ : i = ii |
| 30 Mdn: i = ii Z = -.173 p = .863 H ₀ : i = ii | 35 Mdn: i > ii Z = -.555 p = .579 H ₀ : i = ii | 33 Mdn: i > ii Z = -1.863 p = .062 H ₀ : i = ii | 34 Mdn: i < ii Z = -.077 p = .939 H ₀ : i = ii | 32 Mdn: i > ii Z = -.853 p = .394 H ₀ : i = ii | 29 Mdn: i = ii Z = -1.488 p = .137 H ₀ : i = ii | 31 Mdn: i > ii Z = -.775 p = .438 H ₀ : i = ii |

H₀: i = ii (means the null hypothesis that i = ii is true). Blue text indicates where median of SoCi > median of SoCii.

Concern statements 6 and 20 show a statistically significant change from SoCi to SoCii:

- The rating of **concern statement 6** decreased from SoCi (Mdn = 4.00) to SoCii (Mdn = 3.00) with $Z = -3.466$ and $p \text{ value} = .001$
- The rating of **concern statement 20** decreased from SoCi (Mdn = 4.00) to SoCii (Mdn = 2.00) with $Z = -1.971$ and $p \text{ value} = .049$.

The CBAM theory postulates that individuals' concerns will change the more they use an innovation, and the more comfortable they become with it. Initially high Unrelated (Unconcerned) and Self (Informational and Personal) concerns can be experienced. Once individuals are more comfortable with the innovation, these concerns might become less intense, while Task (Management), and Impact (Consequence and Collaboration) concerns may become more intense.

6.4.6.5 Summary PART III – Individual concerns

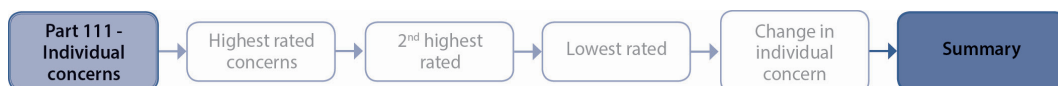


Table 6:55 provides a summary of the findings on the analysis of the individual concerns.

Table 6:55 Summary PART III - Individual concerns

| Summary PART III: Individual Concerns | | | |
|---------------------------------------|---|---|---|
| | SoCi findings | SoCii findings | Change: SoCi –SoCii findings |
| | What are the concerns of HPEs at the start of a journey to implement a new LMS? | What are the concerns of HPEs after they had time to implement and start using the LMS? | How did the concerns change after HPEs had time to implement new clickUP? |

Table 6:55 Summary PART III - Individual concerns (continued)

| Summary PART III: Individual Concerns | | | |
|---------------------------------------|---|---|---|
| | SoCi findings | SoQii findings | Change: SoCi –SoCii findings |
| Highest rated concern | Individual concerns rated the most with high intensity : <u>24</u> , 16 , <u>30</u> , 15, 27. | Individual concerns rated the most with high intensity: 21, <u>24</u> , 4, 22, <u>30</u> . | Individual concerns that were repeatedly rated highest and or second highest by HPEs in SoCi and SoCii are: 24, 4, 30 and 16. |
| Second highest rated concern | Individual concerns rated the most with second highest intensity : <u>4</u> , <u>24</u> , 10, 25, 26. | Individual concerns rated the most with second highest intensity: <u>24</u> , 32, <u>4</u> , 16 , 23. | |
| Lowest rated concern | Individual concerns rated the most with low intensity: <u>3</u> , <u>1</u> , 5, <u>2</u> , <u>11</u> . | Individual concerns rated the most with low intensity: <u>3</u> , <u>2</u> , <u>11</u> , <u>1</u> , 13. | HPEs rated the following four concerns consistently the lowest in SoCi and SoCii: 3, 2, 1 and 11. |
| Inferential Statistics | | | Only two of the individual concerns show a significant change from SoCi to SoCii: 6 (Informational) “I have a very limited knowledge of the new clickUP.” 20 (Refocusing) “I would like to revise the new clickUP’s approach.” The majority of individual concerns have a lower median for SoCii than for SoCi. In other words, these concerns were rated with less intensity in SoCii than in SoCi. |

Numbers underlined are concerns that repeat in SoCii as highest, second highest or lowest rated concerns.

6.5 Research question 2: Analysis of data and interpretation of results

What are the levels of use (LoU) of the LMS in the lecturers' teaching practice after they have engaged in professional staff development intervention(s) and had the time to start using the system?

The LoU interviews were conducted during the second phase of the research study (refer to Figure 6:1). After they had attended the Overview Workshop, participants were given a minimum period of two months to start using the new clickUP system before they were invited via email to participate further in the study by means of the LoU interviews (Appendix 4g). Appointments were set up for the interviews with those participants who showed interest by responding to the email. From the initial 54 participants who completed the SoCQi (Sample 1), 32 participated in the interviews (Sample 1.1.1)⁸.

6.5.1 The LoU interviews conducted



The interview with each participant was conducted in a quiet space, with minimal interruption as far as possible. Before the interview started, appreciation was expressed to participants for their time spent in further participation in the study.

⁸ As shown in Figure 6.1.

The purpose and structure of the interview were explained. Each participant was asked to sign the consent form for the interview to continue and to be audio taped.

The LoU structured branched protocol was followed during the interview (Appendix 4g). The first open-ended question: “*Please describe for me how you use new clickUP*” was supplemented to establish minimum criteria for use of the system, by means of the following prompts:

- Do you see yourself as an independent user?
- How many modules are you currently managing in clickUP?

Each of the 32 interviews was transcribed and participants were given the opportunity to verify the transcriptions for accuracy. Some of the participants replied and made small changes to the text.

6.5.2 Analysis of the LoU interview data



The researcher rated the 32 interviews using the rating methods prescribed by the CBAM, after having attended the required CBAM training (certification), delivered by the CBAM authors in Austin, Texas. A further requirement of the certification process was that practice interviews and ratings had to be submitted to the CBAM authors for review and feedback after the training. This process was completed successfully.

The definitions of each of the levels of use, as well as the categories in each of the levels as provided in the CBAM LoU chart (refer to Appendix 3a) were used during the rating process. The text documents of the 32 interview transcriptions were each formatted into a table with three columns (refer to support document 6-2i). The interview text was added to the first column (separating questions and answers by rows). The second column indicates the level and category of use, and the last column indicates the rationale or reason for the rating of each specific level and category of use. A summary of the LoU for each participant was added at the end of the textual analysis.

Although the CBAM training enabled the researcher to rate the interviews by listening to the audio recordings and immediately applying the rating to the rating sheet, this process was tailored by providing the evidence for each of the ratings applied. The text document (transcript of the interview), with a clear indication of the rationale for each rating, had the additional advantage of providing context to the statements made by the participants. This assisted the second rater (LoU certified Interviewer), from another country, to apply a second rating to the interview data.

After the text had been analysed, the researcher completed the LoU rating sheet (Appendix 4i) and added the overall rating. The audio file, text analysis and rating sheet for each of the 32 interviews were made available electronically to the second rater, who then completed the second rating process.

6.5.3 LoU interview results



In this section the LoU interview results and reliability of the ratings are reported, followed by the analysis of the relationships between the LoU categories and the demographic variables. Finally the relationship between the LoU and the SoCii are reported.

6.5.3.1 LoU ratings for HPEs

Table 6:56 shows the results of the ratings of the LoU interviews with the 32 participants. The ratings indicate that some participants are using the clickUP system (i.e. the users) after they had attended training, and some have not yet started using the system (i.e. the non-users).

Legend for Table 6.56

| | | |
|-----|---|---|
| 0 | → | Level of use 0 – None use |
| I | → | Level of use I – Orientation |
| II | → | Level of use II – Preparation |
| III | → | Level of use III – Mechanical use |
| IVA | → | Level of use IVA – Routine use |
| IVB | → | Level of use IVB – Refinement |
| V | → | Level of use V - Integration |
| VI | → | Level of use VI – Renewal |
| ND | → | Participant are not taking any action with regard to a category |

Chapter 6 – Analysis of data and interpretation of results

Table 6:56 LoU ratings for users and non-users

| Participants | Categories | | | | | | | | Overall LoU | Levels of use | NON-USERS or USERS |
|--------------|------------|-----------------------|---------|-----------|----------|------------------|------------|-----|----------------------|---------------|--------------------|
| | Knowledge | Acquiring Information | Sharing | Assessing | Planning | Status Reporting | Performing | | | | |
| 1 | I | 0 | I | I | I | 0 | I | 0 | 0 - Non-use | NON-USERS | |
| 2 | I | 0 | I | I | I | I | I | I | I - Orientation | | |
| 3 | I | I | I | I | II | II | I | I | II - Preparation | | |
| 4 | II | 0 | I | 0 | II | II | II | II | | | |
| 5 | II | II | III | I | II | I | I | II | | | |
| 6 | II | II | I | II | IVB | II | II | II | | | |
| 7 | I | I | II | II | II | II | II | II | | | |
| 8 | II | II | I | II | II | II | II | II | | | |
| 9 | II | II | ND | II | II | II | II | II | | | |
| 10 | II | II | ND | II | II | II | II | II | | | |
| 11 | II | II | I | II | II | II | II | II | | | |
| 12 | III | IVA | ND | III | III | III | III | III | III - Mechanical use | USERS | |
| 13 | III | III | III | III | III | III | III | III | | | |
| 14 | III | III | III | III | III | III | III | III | | | |
| 15 | IVB | III | III | III | IVB | III | III | III | | | |
| 16 | III | IVA | III | III | III | III | III | III | | | |
| 17 | III | III | ND | III | IVB | III | III | III | | | |
| 18 | III | III | III | III | III | III | III | III | | | |
| 19 | III | III | III | III | III | IVA | IVA | III | | | |
| 20 | IVB | IVA | IVA | IVA | IVB | IVA | IVA | IVA | | | IVA - Routine use |
| 21 | IVA | IVA | ND | ND | IVA | IVA | IVA | IVA | | | |
| 22 | IVB | IVA | III | III | IVB | IVA | IVA | IVA | | | |
| 23 | IVA | III | III | IVB | IVB | IVA | III | IVA | | | |
| 24 | IVA | III | III | III | IVA | IVA | III | IVA | | | |
| 25 | IVA | IVA | III | III | IVA | IVA | IVA | IVA | | | |
| 26 | IVA | IVA | III | III | IVB | IVA | IVA | IVA | | | |
| 27 | IVA | IVA | III | III | IVA | IVA | IVA | IVA | | | |
| 28 | IVA | III | III | III | IVB | IVA | III | IVB | IVB - Refinement | | |
| 29 | IVA | IVB | III | III | IVB | IVB | IVB | IVB | V- Integration | | |
| 30 | III | III | V | III | III | III | III | V | | | |
| 31 | IVB | IVA | III | III | V | IVA | IVA | V | | | |
| 32 | V | IVA | V | V | V | III | V | V | | | |

Of the 11 participants who are rated as *non-users* (Table 6:56), eight are rated on level II - Preparation. An individual can only become a level II (Preparation) user when a date and time to start using new clickUP have been established. These respondents (n = 11) indicated that they are actively planning to start using the system at a certain date.

Two respondents did not indicate when they will start to use new clickUP and are thus rated at level I – Orientation. One respondent felt that more training is needed before she/he could start using the system independently, and is therefore rated at level 0 – Non-use.

The majority of the respondents (n = 21) are **users** and have fully embraced the challenge of implementing the new clickUP system (Table 6:56). There are an equal number of level III Mechanical users (n = 8) and level IVA Routine users (n = 8). In a short time (about 2 months) after training and implementation, some participants moved directly to level IVB Refinement (n = 2) or level V Integration (n = 3).

In Table 6:57 the results of a one-way Chi square analysis are shown for the ratings in each of the categories of use as well as the overall LoU, (see support document 6-2ii) that participants received for their use of clickUP.

Table 6:57 Results of the one-way Chi-squared analysis for categories of LoU ratings

| Categories of use | One-way Chi squared values | Difference between observed and expected frequencies | Accept or reject the H ₀ |
|-------------------|-------------------------------|--|-------------------------------------|
| Knowledge | $\chi^2(5) = 7.375, p = .194$ | Not statistically significant | Reject H ₀ |

Table 6:57 Results of the one-way Chi-squared analysis for categories of LoU ratings (continued)

| Categories of use | One-way Chi squared values | Difference between observed and expected frequencies | Accept or reject the H ₀ |
|-----------------------|--------------------------------|--|-------------------------------------|
| Acquiring Information | $\chi^2(5) = 14.875, p < .05$ | Statistically significant ⁹ | Accept H ₀ |
| Sharing | $\chi^2(4) = 30.593, p < .001$ | Statistically significant ¹⁰ | Accept H ₀ |
| Assessing | $\chi^2(5) = 36.161, p < .001$ | Statistically significant | Accept H ₀ |
| Planning | $\chi^2(5) = 8.875, p = .114$ | Not statistically significant | Reject H ₀ |
| Status reporting | $\chi^2(5) = 19.000, p < .05$ | Statistically significant | Accept H ₀ |
| Performing | $\chi^2(5) = 15.250, p < .05$ | Statistically significant | Accept H ₀ |
| Overall LoU | $\chi^2(6) = 13.938, p < .05$ | Statistically significant | Accept H ₀ |

With the exception of the Knowledge and Planning categories, all the remaining categories of use as well as the Overall LoU reveal that the number of HPEs relating to each of the associated sub categories (i.e. level 0 – VI) are significantly different at a confidence level of at least 95%.

6.5.3.2 Reliability of ratings

A second expert rater (LoU Certified Interviewer) rated an arbitrary selection of interviews made available to him electronically. Table 6:58 shows the Cronbach alpha agreement coefficients between the first and second ratings.

⁹ Statistically significant at a 95% confidence level.

¹⁰ Statistically significant at a 99% confidence level.

Table 6:58 Cronbach Alpha and agreement percentage results of first and second ratings

| 1 st rater 2 nd rater | Participant | Knowledge | Acquiring Information | Sharing | Assessing | Planning | Status Reporting | Performing | Overall LoU | % Agreement | Cronbach Alpha |
|--|-------------|-----------|-----------------------|---------|-----------|----------|------------------|------------|-------------|-------------|----------------|
| 1st | 20 | IVB | IVA | IVA | IVA | IVB | IVA | IVA | IVA | 87.5 | .854 |
| 2nd | 20 | IVB | IVA | IVA | IVB | IVB | IVA | IVA | IVA | | |
| 1st | 13 | III | III | III | III | III | III | III | III | 100 | *(1.00) |
| 2 nd | 13 | III | III | III | III | III | III | III | III | | |
| 1st | 32 | V | IVA | V | V | V | III | V | V | 87.5 | .982 |
| 2nd | 32 | VI | IVA | V | V | V | III | V | V | | |
| % Agreement | | 66.6 | 100 | 100 | 66.6 | 100 | 100 | 100 | 100 | 91.7 | |

*Cannot be calculated for variables with zero variance

The average level of agreement is 91.7% for the sample of three arbitrary interviews that were rated by the second rater. A high alpha coefficient is an indication of the accuracy of the ratings done. The two raters showed a high level of internal consistency, as determined by Cronbach's alpha values of .854 and .982 (see support document 6-2iii).

6.5.3.3 Analysis of LoU ratings and demographic variables

Possible significant differences in the distribution, strength and direction of association were investigated for all participants, for associations that might exist between various demographic variables and the LoU categories and *Overall* rating. Therefore three non-parametric statistical tests is used namely Chi square, Spearman's rank-order correlation and the Kruskal-Wallis test. Statistically

significant associations and correlations were found between two demographic variables (*age* and *lecturing experience*) and some LoU categories.

The results of a Chi-squared test for association show a statistically significant association between the *age of participants* and the rating obtained for the LoU *Sharing* category (refer to support document 6-2vi):

Table 6:59 Results of the Chi-squared test on LoU and Age

| Categories of Use | Demographic variable: <i>Age of participants</i> | |
|-----------------------|--|-------------------------|
| | Chi ² test statistics | Significant association |
| Knowledge | $\chi^2(20) = 26.734, p = .143$ | No |
| Acquiring Information | $\chi^2(20) = 28.018, p = .109$ | No |
| Sharing | $\chi^2(16) = 28.158, p < .01$ | Yes |
| Assessing | $\chi^2(20) = 26.182, p = .160$ | No |
| Planning | $\chi^2(20) = 16.969, p = .655$ | No |
| Status reporting | $\chi^2(20) = 22.197, p = .330$ | No |
| Performing | $\chi^2(20) = 27.042, p = .134$ | No |
| OVERALL LoU | $\chi^2(24) = 28.537, p = .238$ | No |

In Sample 1.1.1, 90.9% of the participants in the *age* category *40-49* years were rated with a level of use III relating to the *Sharing* category.

The results of a Spearman's rank-order correlation test show a significant correlation of five of the seven categories of use, with the demographic variables *age*. Only one of the categories (*Sharing*) shows a significant correlation with the variable: *lecturing experience* (see support document 6-2iv). Table 6:60 shows the detailed results of the Spearman's correlation test.

Table 6:60 Results of Spearman's correlation between the LoU and *Lecturing experience* and *Age*

| Categories of Use | Demographic variable: <i>Lecturing experience</i> | | Demographic variable: <i>Age group</i> | |
|-----------------------|---|-------------|--|-------------|
| | Spearman's correlation | Significant | Spearman's correlation | Significant |
| Knowledge | $r_s(30) = -.187, p = .305$ | No | $r_s(30) = -.371, p < .05$ | Yes |
| Acquiring Information | $r_s(30) = -.198, p = .277$ | No | $r_s(30) = -.426, p < .05$ | Yes |
| Sharing | $r_s(25) = -.490, p < .05$ | Yes | $r_s(25) = -.567, p < .05$ | Yes |
| Assessing | $r_s(29) = -.266, p = .149$ | No | $r_s(29) = -.376, p < .05$ | Yes |
| Planning | $r_s(30) = -.078, p = .670$ | No | $r_s(30) = -.218, p = .230$ | No |
| Status reporting | $r_s(30) = -.220, p = .226$ | No | $r_s(30) = -.408, p < .05$ | Yes |
| Performing | $r_s(30) = -.194, p = .287$ | No | $r_s(30) = -.306, p = .088$ | No |
| OVERALL LoU | $r_s(30) = -.252, p = .164$ | No | $r_s(30) = .043, p = .816$ | No |

The Spearman's rank-order correlation reveals a moderate to low negative correlation between *age* and the categories: *Knowledge*, *Acquiring Information*, *Sharing*, *Assessing*, and *Status Reporting* (Table 6:60). This means that the older the participant is, the lower the levels of use are in each of the categories mentioned.

Table 6:60 shows a significant correlation concerning *Sharing* and the *lecturing experience* of participants, $r_s(25) = -.490, p < .05$. A moderate negative correlation exists between *Sharing* and *lecturing experience*. This means that the more lecturing experience HPEs have, the lower the levels of *Sharing* are.

A Kruskal-Wallis non-parametric test relating to the levels of use category *Sharing* and the *age* of participants reveals statistically significant results: $\chi^2(4) =$

10.336, $p < .05$ (see support document 6-2v). These results (Table 6:61) indicate that the null hypothesis that the distribution of the levels of use regarding *Sharing* is the same across all the categories of *age*, may be rejected.

Table 6:61 Results of the Kruskal-Wallis test for the LoU and Age

| Categories of use | Demographic variable: Age group | |
|-----------------------|---------------------------------|--------------|
| | Kruskal-Wallis test statistics | Significance |
| Knowledge | $\chi^2 (4) = 6.7263, p = .180$ | No |
| Acquiring Information | $\chi^2 (4) = 7.246, p = .123$ | No |
| Sharing | $\chi^2 (4) = 10.336, p < .05$ | Yes |
| Assessing | $\chi^2 (4) = 6.202, p = .185$ | No |
| Planning | $\chi^2 (4) = 4.140, p = .387$ | No |
| Status reporting | $\chi^2 (4) = 7.777, p = .100$ | No |
| Performing | $\chi^2 (4) = 4.740, p = .315$ | No |
| Overall LoU | $\chi^2 (4) = 7.287, p = .121$ | No |

From these results, as well as the bar graph (Figure 6:17), it can be concluded that it is more likely that older HPEs would have lower levels of *Sharing*.

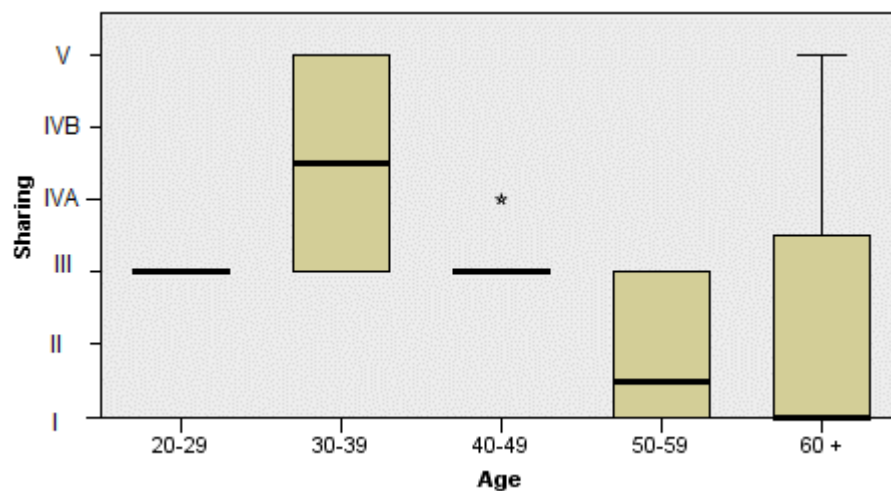


Figure 6:17 Kruskal-Wallis results in the Sharing category and Age demographic variable

From Figure 6:17 it is clear that participants in the age category:

- 30-39 have levels of Sharing between III and VI;
- 50-59 have levels of Sharing between I and III; and that participants
- 60+ have levels of Sharing between I and VI.

6.5.3.4 Relationship between SoCii and LoU

The possible relationship(s) between the *Stage of Concern* a participant has regarding new clickUP and the Levels of Use at which the clickUP system is used, were explored by making use of the Kruskal-Wallis, Spearman's correlation and Chi-squared tests for association. However, none of the tests show any statistically significant results regarding the categories of LoU (*Knowledge, Acquiring information, Sharing, Assessing, Planning, Status reporting and Performing*), the *Overall LoU*, and the variables relating to the Stages of Concerns for SoCii (refer to support documents 6-2vii).

A scatter plot was then used to graphically represent the relationship between highest, second highest and lowest scores for SoCii, and the LoU of HPEs.

In Figure 6:18 the scatter plot visually displays the highest SoCii and the Overall LoU rating of HPEs. Dividing the Overall LoU axis vertically into *non-users* and *users*, and the SoC axis horizontally into the four SoC dimensions (Unrelated, Self, Task and Impact dimensions), produces a matrix of eight areas (blocks) as follows:

- A** is the **non-users** of new clickUP with a highest score in the **Unrelated** dimension;
- B** is the **users** of new clickUP with a highest score in the **Unrelated** dimension;
- C** is the **non-users** of new clickUP with a highest score in the **Self** dimension;
- D** is the **users** of new clickUP with a highest score in the **Self** dimension;
- E** is the **non-users** of new clickUP with a highest score in the **Task** dimension;
- F** is the **users** of new clickUP with a highest score in the **Task** dimension;
- G** is the **non-users** of new clickUP with a highest score in the **Impact** dimension;
- H** is the **users** of new clickUP with a highest score in the **Impact** dimension.

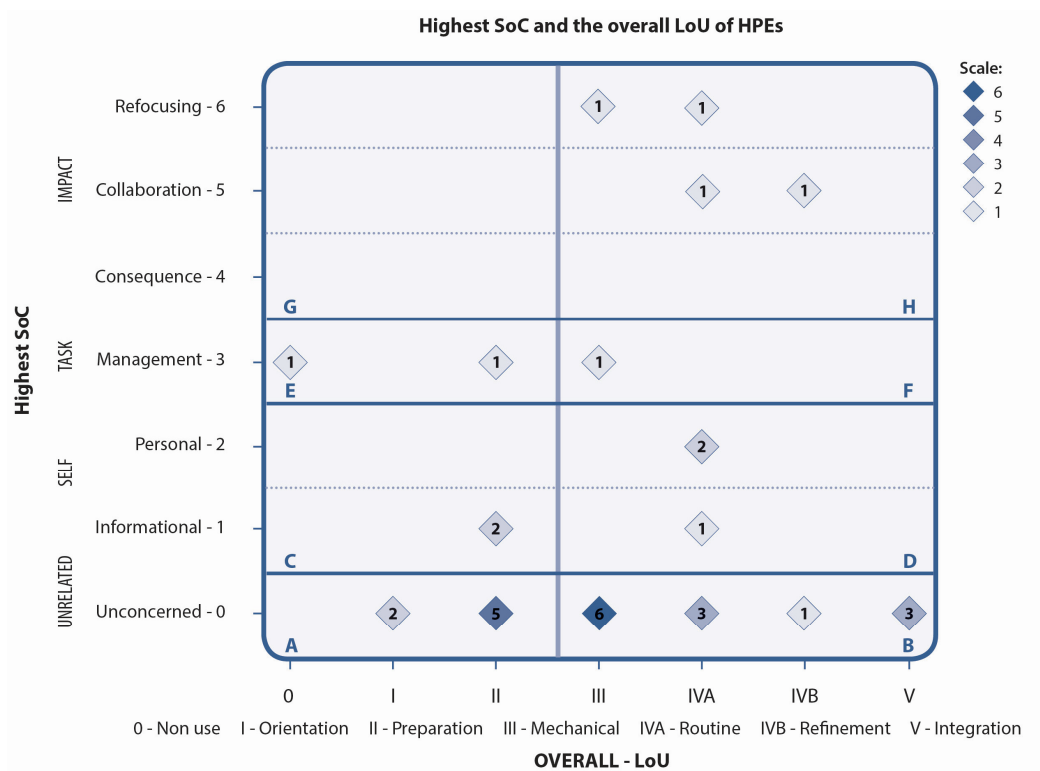


Figure 6:18 Scatter plot of the Highest SoCii and Overall LoU

In Figure 6:18 the largest number of HPEs ($n = 13$) is located in area **B: users** with highest **Unrelated** concerns. The second largest number of HPEs ($n = 7$) are **non-users** in the **Unrelated** dimension located in area **A**.

In area **D** three of the HPEs are **users** with highest concerns in the **Self** dimension. Both of the HPEs in area **C** have **Self** concerns and are at a Preparation level which means it is simply a matter of time before they start using the system.

In area **E** two of the **non-users** are intensely concerned about how to manage all that the system requires. One is at level 0 and may (as a result of the management concerns) therefore have taken no further action in learning more about the system. The second is rated at a preparation level which shows that this non-user have decided to start using the system in the near future.

In area **F** the only HPE is at a level III (Mechanical use) and rated **Task** concerns as the highest.

In area **H** there are four HPEs who are rated as **users** in the **Impact** dimension, which means that they have indicated high Collaboration or Refocusing concerns about the **Impact** of the system on the students; and they are using the system at the Mechanical ($n = 1$), Routine ($n = 2$) or Refinement ($n = 1$) levels respectively.

Figure 6:19 shows a scatter plot of the second highest SoCii and the Overall LoU rating of HPEs.

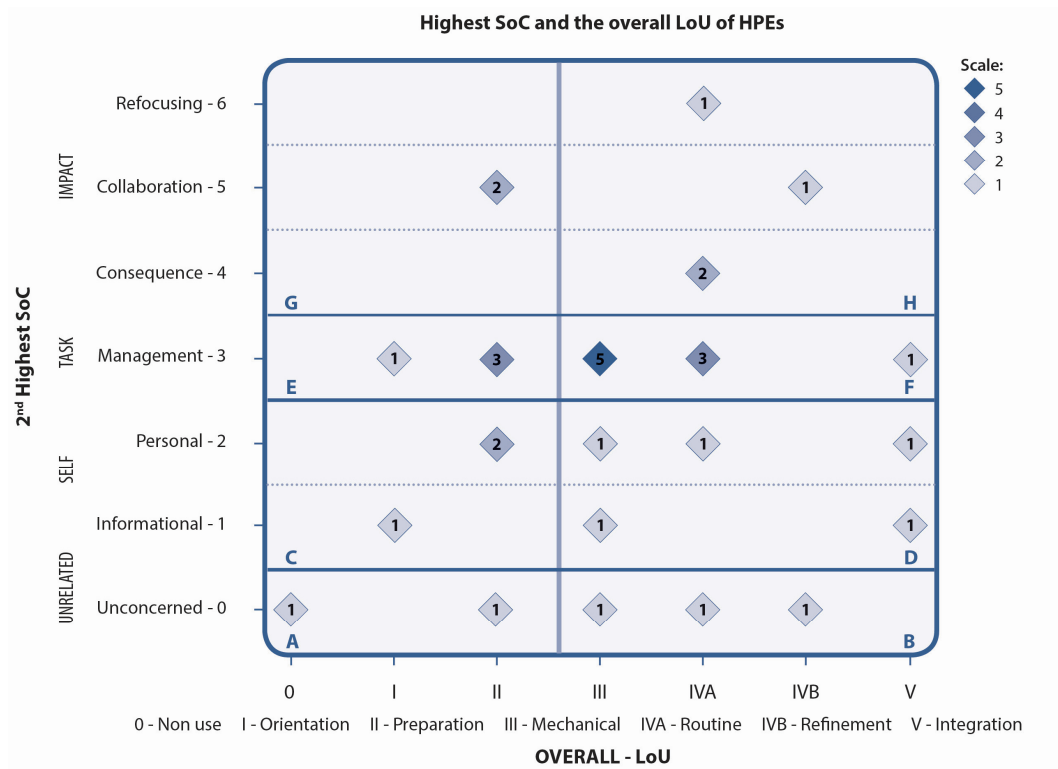


Figure 6:19 Scatter plot of the Second Highest SoCii and Overall LoU

In Figure 6:19 the largest number of HPEs is located in area **F** (n = 9) which means that their second highest concerns are **Task** concerns and they are using the clickUP system at the Mechanical – III (n = 5); Routine – IVA (n = 3) or Integrating – V (n = 1) levels.

In area **D** five of the HPEs have their second highest concerns as **Self** concerns (D) and they are **users** of the clickUP system at the Mechanical – III (n = 2); Routine – IVA (n = 1) or Integrating – V (n = 2) levels.

Four of the HPEs have their second highest concerns as **Impact** concerns (area **H**) and they are **users** of the clickUP system at the Routine – IVA (n = 3) or Refinement – IVB (n = 1) levels.

Three of the HPEs have their second highest concerns as **Unrelated** concerns (area **B**) and they are **users** of the clickUP system at the Mechanical – III (n = 1); Routine – IVA (n = 1) or Refinement – IVB (n = 1) levels.

Two of the HPEs have their second highest concerns as **Unrelated** concerns (area **A**). They are **non-users** of the clickUP system at the Non-use – 0 (n = 1) or Preparation – II (n = 1) levels.

Three of the HPEs have their second highest concerns as **Self** concerns (area **C**). They are **non-users** of the clickUP system at the Orientation – I (n = 1) or Preparation – II (n = 2) levels.

Four of the HPEs have their second highest concerns as **Task** concerns (area **E**). They are **non-users** of the clickUP system at the Orientation – I (n = 1) or Preparation – II (n = 3) levels.

There are also two HPEs with their second highest concerns as **Impact** concerns (area **G**). They are **non-users** of the clickUP system at the Preparation – II (n = 2) level.

Figure 6:20 shows a scatter plot of the lowest SoCii and the Overall LoU rating of HPEs.

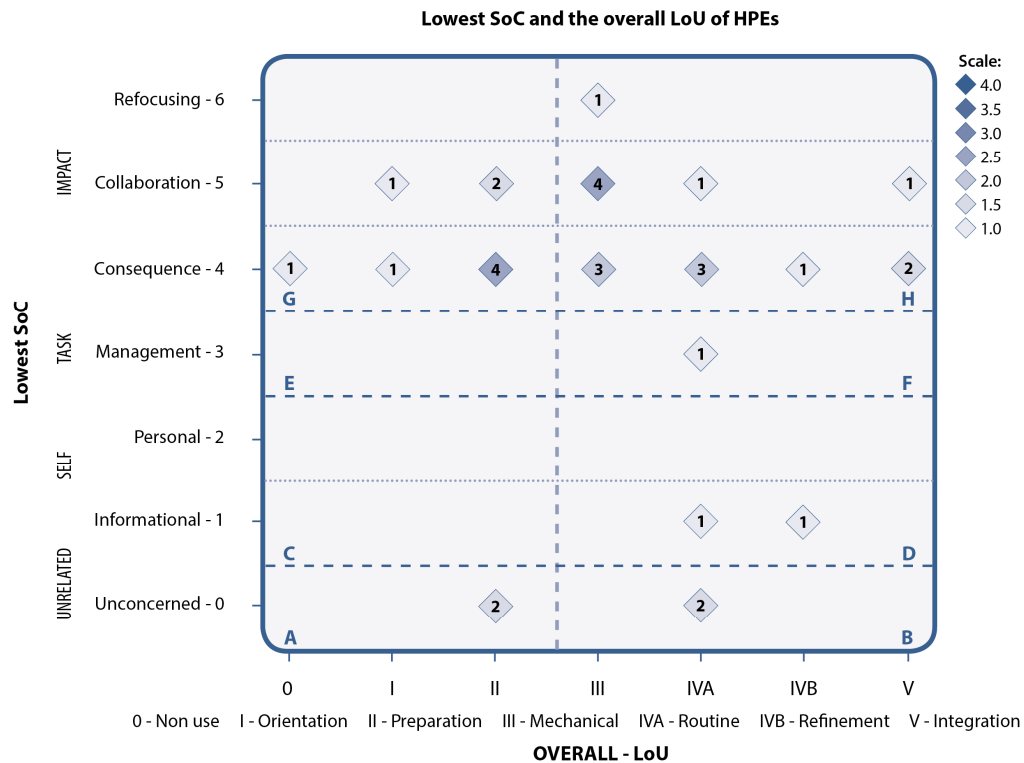


Figure 6:20 Scatter plot of the Lowest SoCii and Overall LoU

In Figure 6:20 the largest number ($n = 16$) of HPEs is located in area **H** which means that their lowest concerns are **Impact** concerns and they are **users** of the clickUP system at the Mechanical – III ($n = 8$); Routine – IVA ($n = 4$); Refinement – IVB ($n = 1$) or Integrating – V ($n = 3$) levels.

Nine of the HPEs have their lowest highest concerns as **Impact** concerns (area **G**). They are **non-users** of the clickUP system at the Non-use – 0 ($n = 1$); Orientation – I ($n = 2$); or Preparation – II ($n = 6$) levels.

6.5.4 Summary for Research Question 2



This section has reported on the LoU of participants in the clickUP system as well as the reliability of the LoU ratings done by the researcher. Possible associations, differences with regards to distribution of HPEs in different categories were explored and lastly the relationship between SoCii and LoU have been investigated.

The results of the LoU interviews are summarised in Table 6:62.

Table 6:62 LoU results summary

| Levels | | Number of HPEs at each LoU | % |
|-------------------------------------|----------------------|----------------------------|-----|
| Levels of Non- use n = 11 | 0 – Non-use | 1 | 3.1 |
| | I – Orientation | 2 | 6.3 |
| | II- Preparation | 8 | 25 |
| Levels of Use n = 21 | III – Mechanical use | 8 | 25 |
| | IVA – Routine use | 8 | 25 |
| | IVB – Refinement | 2 | 6.3 |
| | V – Integration | 3 | 9.3 |
| | VI- Renewal | 0 | 0 |
| Total: | | n = 32 | 100 |

Table 6:62 shows that the majority of HPEs (n = 21) are using the new clickUP system. A large number of the non-users (n = 8) are preparing to use the system and have decided on a date that they will do so.

It is encouraging to have HPEs at levels IVA, IVB and V only a short time after they attended the training. HPEs who are still at levels 0 and I might need more personalised support in order to take their first steps in using the system.

Statistically significant correlations were found between a number of the LoU categories (*Knowledge, Acquiring information, Sharing, Assessing, Status reporting* and the *Overall LoU*) and the demographic variable *age*. All the correlations are moderate to strongly negative, thus indicating that younger HPEs have higher levels of use in the *Sharing* category, than their older colleagues.

Participants with more *lecturing experience*, as well as older participants have lower levels of use in the *Sharing* category. No statistical significance was found between SoCii scores and LoU values.

The scatterplots (Figure 6:18 - Figure 6:20) provided a visual representation of the SoC and LoU of the participants in this study. In the last section of this chapter the analysis and findings of the results for research question 3 are presented.

6.6 Research question 3: Analysis of data and interpretation of results

What are the perceived expressed needs of lecturers with regard to training and support that would enable them to implement the LMS in their own teaching practice?

In the quest to discover the needs of HPEs, the SoCQ and LoU interviews provided information regarding their concerns as well as the level of use for each individual. To further explore their concerns and accompanying specific needs with regard to training and support, a semi-structured interview was employed. The purpose of this interview was to explore the perceived needs expressed by HPEs that had not been captured by the standardised SoCQ or by the focused structured LoU interview protocol.

6.6.1 Perceived expressed needs interview



As outlined in Chapter 4 (Figure 4:4), 32 participants in Sample 1.1.1 agreed to be interviewed about their perceived needs after the LoU interviews. A semi-structured qualitative interview instrument was used (Appendix 4i).

The interview consisted of a set of retrospective questions to explore the perceived needs of participants at two different points on the journey across the

implementation bridge (see Figure 3:4). The same questions were asked about when they embarked on the journey of implementing new clickUP, and later in their journey, after about two month's possible use of the new system.

The second set of questions was supplemented to explore concerns they might have in more depth, by considering:

- what worked and what did not work during the implementation of new clickUP; and
- what they perceive as the benefits of the innovation for student learning.

Figure 6:21 illustrates the design and development process for the interview guide. The questions went through various cycles of feedback from peers and experts as well as a pilot phase. The purpose of these evaluation and feedback cycles was to re-formulate, add or delete questions to enable the researcher to collect the most appropriate data in order to answer this research question.

Peers who gave feedback included colleagues who are regarded as local experts in the field of e-learning, professional development and research. The expert who gave feedback is a well-known international researcher and writer on the topic of research methods. The pilot phase consisted of the re-evaluation of the interview questions based on the first three interviewees' responses. The full interview guide is available in Appendix 4i.

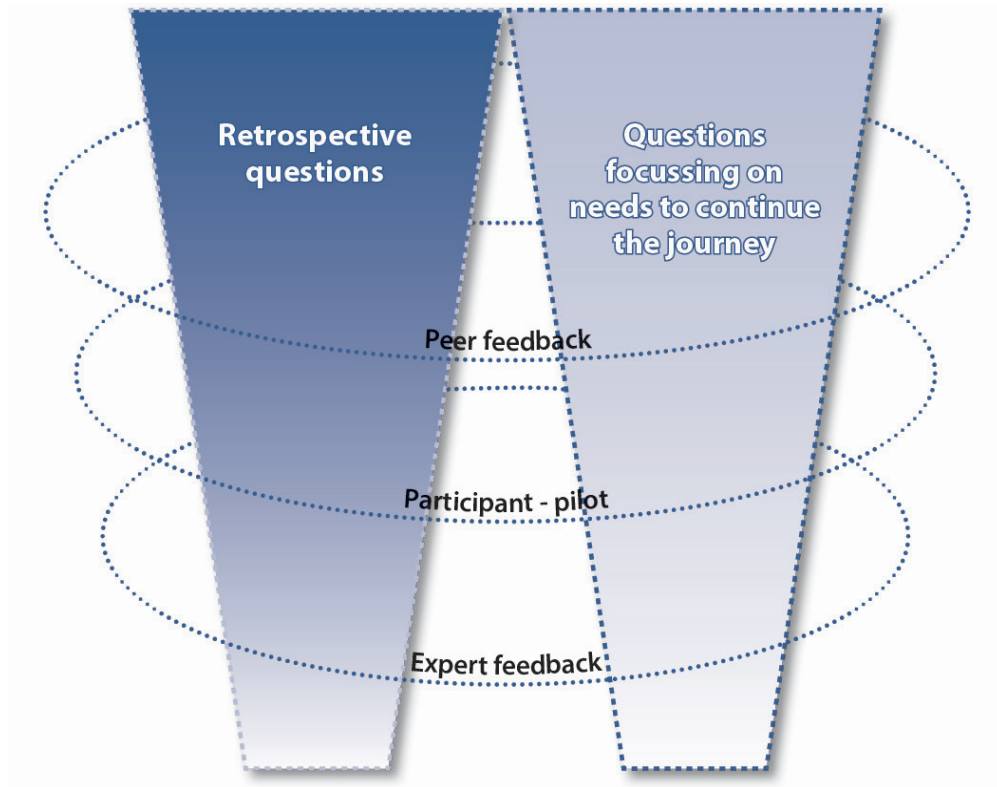


Figure 6:21 Design, development and feedback cycles of interview guide and questions

As indicated in the interview guide (Appendix 4i), the purpose of the interview was explained to participants. When they agreed to participate, they signed a consent form which also gave the researcher permission to make an audio recording of the interview.

The next section outlines the data analysis procedure followed.

6.6.2 Analysis of interview data

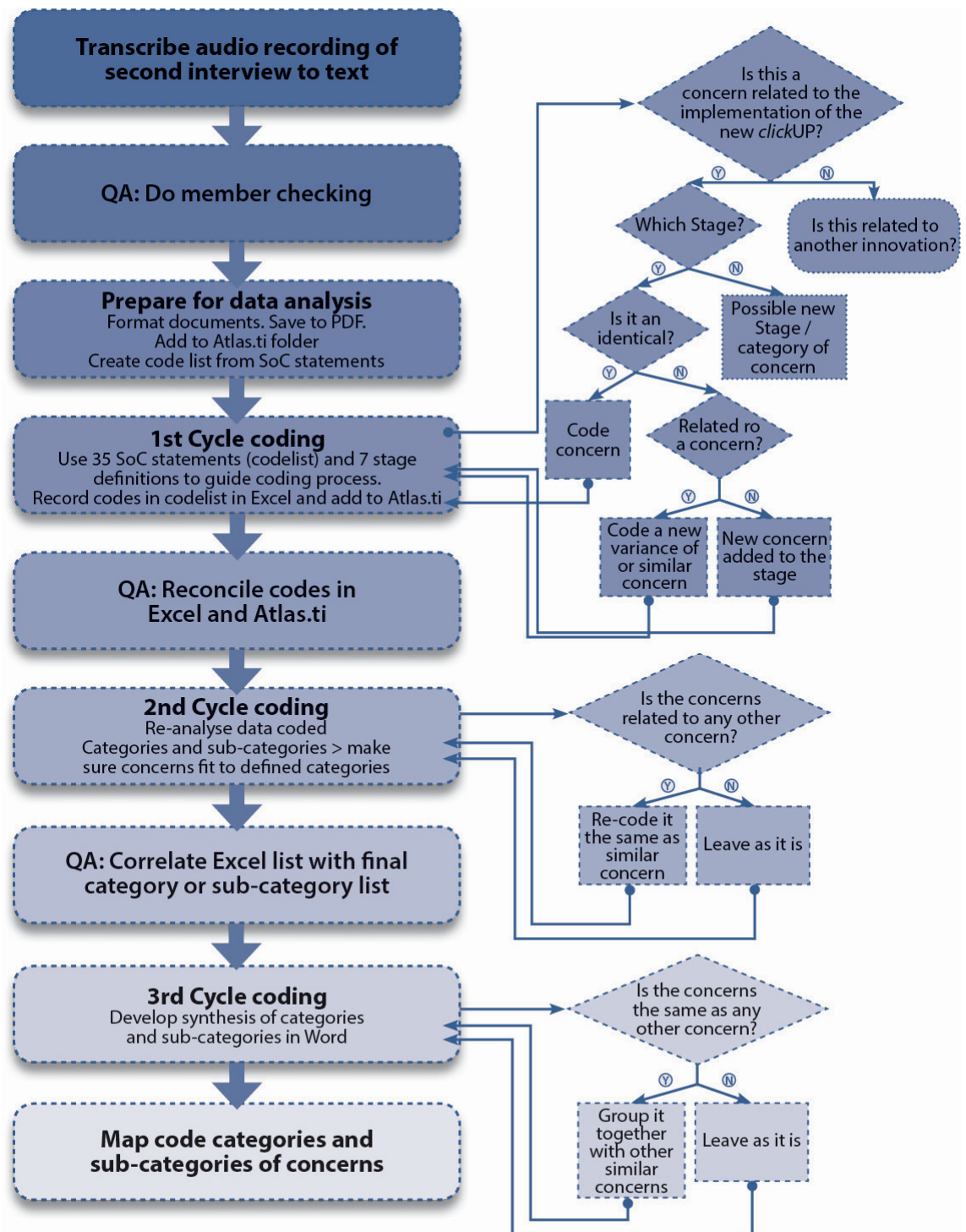


Figure 6:22 illustrates the data analysis process, from transcribing the interviews to the mapping of the results. The audio recordings were transcribed and emailed to each participant for member checking purposes. Some participants responded and requested minor changes.

The Stages of Concern (SoC) framework (Appendix 6a) was used to further explore the perceived needs expressed by participants. It was necessary to create a master code list from the 35 concern statements before coding of the second interviews started.

During the first cycle of coding the decision flowchart shown in Figure 6:22 was followed to analyse text using Atlas.ti™. Codes allocated to the data were either one of the 35 codes in the master list, or new codes that were generated. New codes were created when:

- a statement was seen as being related to one of the 35 concern statements, but not exactly the same; or
- a new concern was related to a particular stage, but not to one of the five concerns in that stage.



* QA (Quality Assurance procedure)

Figure 6:22 Data analysis process for second interview

The format of the codes was designed to distinguish between the seven stages and the 35 concern statements in the SoC framework (Appendix 6b) as follows:

- the stage (e.g. **#Inf** for Informational stage);
- row number¹¹ (e.g. **#Inf_01**)
- the concern number (e.g. **#Inf_01_06** for concern statement 06);
- other possible variations of that concern (e.g. **#Inf_01_06_02** for a second variation of concern statement 06);
- time of concern (e.g. **#Inf_01_06_02_pre**); and
- possible concerns that adhered to the definition of a particular stage, but not to any one of the five concern categories in that stage, received a number larger than 35 (e.g. **#Inf_06_40_01_pre**¹²).

A textual description for each of the codes (the 35 concern statements) was also necessary (see support document 6-3ii with the list of codes recorded).

Saldana (2009, p. 130) refers to this type of data analysis process as *protocol coding*, which is one of the first cycle coding methods developed. It is described as “the collection and, in particular, the coding of qualitative data according to a pre-established, recommended, standardized, or prescribed system.” He further states that substantive contributions may be possible if a study builds on previous research to confirm or disconfirm previous findings (Saldana, 2009, p. 132).

An extended code list held a list of the descriptions of the 35 SoC codes as well as new codes added (refer to support document 6-3ii). To ensure trustworthiness

¹¹ The SoC framework was tabularised using seven columns and five rows. These rows were numbered for coding identification.

¹² When a concern did not meet the criteria for one of the five concerns in a stage, it was coded as a new concern, starting in row 6 of the table.

and rigor in coding these interviews a quality assurance process was used to reconcile the codes added in Excel and in Atlas.ti™. This was done with the help of a peer. Quotation count reports in Atlas.ti™ and the full code list in Excel (refer to support document 6-3iv) were used to correct discrepancies so that the codes and code counts in both programs were exactly the same. A second cycle of coding was necessary to search for the most significant codes in order to develop “salient categories” in the data. According to Saldana (2009, p. 155) this is called *focused coding*.

Reports from Atlas.ti™ containing codes and quotations of the seven different stages were drawn and saved as text files. Data in these files were re-analysed using Atlas.ti™ and re-coded to ensure similar concerns were coded the same.

Axial coding, according to Saldana (2009, p. 159), “is to strategically reassemble data that were “split” or “framed”” during a first cycle coding process. It not only relates categories to sub-categories, but also specifies the characteristics of such categories. Concerns were grouped together to develop a better synthesis of the categories and sub-categories of concerns in each of the stages (refer to support document 6-3i).

These categories of expressed concerns or needs were then mapped in the form of a table to create a visual representation of pre and post concerns expressed by HPEs. This is discussed in the following section.

6.6.3 Interview results and discussion



The variety of concerns HPEs expressed during the second interview about the implementation of the new clickUP system, can be visually represented. These concerns were mapped to the 35 statements (numbers are shown in Table 6:64) of the SoC and the seven stages into which these statements are divided.

Additional categories of concern (different to the five concerns in each stage) expressed by HPEs were added to a ‘fitting’ stage. The extent of symbols in one block (which represents one concern statement) reflects the extent of variations mentioned by HPEs on a particular concern. Each of the symbols in itself represents the number of participants who agreed or had the same concern.

Table 6:63 presents the keys used for the visual representation of the expressed needs in Table 6:64.

Table 6:63 Keys to the visual representation of expressed needs in Table 6.63

| | |
|--|--|
| PRE: at the start of the journey | ⊙ - SoC identical concern was mentioned by 1 participant |
| | ● - SoC identical concern was mentioned by 2-5 participants |
| | ⊙ - SoC identical concern was mentioned by ≥ 6 participants |
| | ★ ≥ 6 participants mentioned a variation category of concern |
| | ◇ - 2-5 participants mentioned a variation category of concern |
| | • - 1 participant mentioned a variation category of concern |
| POST: after time available to start using | ⊙ - SoC identical concern was mentioned by 1 participant |
| | ● - SoC identical concern was mentioned by 2-5 participants |
| | ⊙ - SoC identical concern was mentioned by ≥ 6 participants |
| | ★ ≥ 6 participants mentioned a variation category of concern |
| | ◇ - 2-5 participants mentioned a variation category of concern |
| | • - 1 participant mentioned a variation category of concern |

Table 6:64 provides a summary of the concerns and variations of concerns identified. The next section discusses details of these variations in concerns.

Table 6:64 Expressed needs of participants: “PRE¹³ & POST¹⁴”

| 0 | | 1 | | 2 | | 3 | | 4 | | 5 | | 6 | |
|-------------|------|---------------|------|----------|------|------------|------|-------------|------|---------------|------|------------|------|
| Unconcerned | | Informational | | Personal | | Management | | Consequence | | Collaboration | | Refocusing | |
| PRE | POST | PRE | POST | PRE | POST | PRE | POST | PRE | POST | PRE | POST | PRE | POST |
| 3 | 3 | 6 | 6 | 7 | 7 | 4 | 4 | 1 | 1 | 5 | 5 | 2 | 2 |
| | | ★ | Ⓢ | | | Ⓢ | Ⓢ | ● | | | Ⓢ | | |
| | | ★ | ◆ | | | ● | ◆ | | | | | | |
| | | ◆ | ● | | | | ● | | | | | | |
| | | ● | ● | | | | ● | | | | | | |
| | | ● | ● | | | | ● | | | | | | |
| | | | ● | | | | ● | | | | | | |
| 12 | 12 | 14 | 14 | 13 | 13 | 8 | 8 | 11 | 11 | 10 | 10 | 9 | 9 |
| | | Ⓢ | Ⓢ | | | | ● | ◆ | Ⓢ | | | | |
| | | ★ | ◆ | | | | | ● | ◆ | | | | |
| | | | ● | | | | | ● | ◆ | | | | |
| | | | ● | | | | | ● | ● | | | | |
| | | | ● | | | | | | ● | | | | |
| | | | ● | | | | | | ● | | | | |
| 21 | 21 | 15 | 15 | 17 | 17 | 16 | 16 | 19 | 19 | 18 | 18 | 20 | 20 |
| | | Ⓢ | Ⓢ | ● | ● | ● | ● | | | | | | |
| | | ★ | ★ | ● | ● | ● | ● | | | | | | |
| | | ◆ | ● | | | | | | | | | | |
| | | ● | ● | | | | | | | | | | |
| | | ● | ● | | | | | | | | | | |
| | | ● | ● | | | | | | | | | | |
| 23 | 23 | 26 | 26 | 28 | 28 | 25 | 25 | 24 | 24 | 27 | 27 | 22 | 22 |
| | | | | ◆ | | ● | ◆ | ● | ◆ | | ● | | |
| | | | | ● | | | ● | ● | ◆ | | ● | | |
| | | | | ● | | | | ● | ◆ | | | | |
| | | | | ● | | | | ● | ◆ | | | | |
| | | | | ● | | | | ● | ● | | | | |
| | | | | ● | | | | ● | ● | | | | |
| 30 | 30 | 35 | 35 | 33 | 33 | 34 | 34 | 32 | 32 | 29 | 29 | 31 | 31 |
| | Ⓢ | ★ | ● | | | | ● | | | | Ⓢ | | |

¹³ Refers to Phase I or the start of the journey to implement new clickUP.

¹⁴ Refers to Phase II or the later stage of the journey to implement clickUP.

Table 6.64 Expressed needs of participants: “PRE & POST (continued)”

| <i>Additional concerns in each of the Stages of concerns</i> | | | | | | | | | | | | | |
|--|------|---------------|------|----------|------|------------|------|-------------|------|---------------|------|------------|------|
| 0 | | 1 | | 2 | | 3 | | 4 | | 5 | | 6 | |
| Unconcerned | | Informational | | Personal | | Management | | Consequence | | Collaboration | | Refocusing | |
| PRE | POST | PRE | POST | PRE | POST | PRE | POST | PRE | POST | PRE | POST | PRE | POST |
| ★ | | ◇ | ◇ | ★ | ◇ | ★ | ◇ | ● | ● | ◇ | ● | | ● |
| ◇ | | ◇ | ● | ◇ | ● | ◇ | ◇ | ● | ● | ◇ | ● | | |
| ● | | ◇ | ● | ◇ | ● | ◇ | ◇ | ● | ● | ● | ● | | |
| ● | | ● | ● | ◇ | ● | ● | ● | ● | ● | ● | ● | | |
| ● | | ● | ● | ◇ | ● | ● | ● | | ● | ● | ● | | |
| | | ● | ● | ● | ● | ● | ● | | ● | ● | ● | | |
| | | ● | | ● | | ● | ● | | ● | | ● | | |
| | | ● | | ● | | | ● | | ● | | | | |
| | | | | | | | ● | | | | | | |
| | | | | | | | ● | | | | | | |
| | | | | | | | ● | | | | | | |
| | | | | | | | ● | | | | | | |

The detail of the results in Table 6:64 is unpacked per stage in the sections to follow. For each of the seven stages a table is provided prior to a synopsis of the participants’ needs. Finally a summary is provides of the needs expressed that are similar to the stages of concerns and the variations or additional needs expressed.

6.6.3.1 Unconcerned stage

The Unconcerned stage (Unrelated dimension) is formally defined as “the individual indicates little concern about or involvement with the innovation” (George et.al., 2008, p. 8). It also provides insight into the “degree of priority” and

“degree of interest in and engagement with the innovation” (George et al., 2008, p. 33).

Unconcerned concerns are also referred to as participant’s *awareness* about a specific innovation (George et al., 2008, pp. 36 – 49). The word “awareness” is defined in the following ways in various dictionaries:

- “knowledge or perception of a situation or fact” (Oxford Dictionaries, 2013);
- “concern about and well-informed interest in a particular situation or development” (Oxford Dictionaries, 2013);
- “knowledge that something exists, or understanding of a situation or subject at the present time based on information or experience” (Cambridge dictionaries online, 2013); and
- “having or showing realization, perception, or knowledge” (Merriam-Webster’s online dictionary, 2013).

During the second interview, the focus was on the implementation of clickUP and not on the full spectrum of roles and responsibilities of HPEs. Therefore this stage was analysed, not only according to the priority participants allocated to it, but also in terms of their “*realisation, perception or knowledge*” of the implementation of new clickUP. Table 6:65 provides details of the variations of Unconcerned concerns identified during the second interview.

Table 6:65 Unconcerned concerns of HPEs

| Unconcerned concerns | |
|--|--|
| PRE | POST |
| No concerns matched | 30 © Currently other priorities prevent me from focusing my attention on the new clickUP. |
| Additional Unconcerned concerns | |

Table 6:65 Unconcerned concerns of HPEs (continued)

| Unconcerned concerns | |
|----------------------|--|
| ★ | It was expected of me to attend the workshop. |
| ◇ | Not sure what was going on with new system. |
| ● | Courses should be mandatory for all staff. |
| ● | Was not clear why the change to the new clickUP system is necessary. |
| ● | Did not know what [training and support] we needed at the start. |

Summary of Stage 0: Unconcerned

Although none of the five Unconcerned concern statements were coded (at the start of the journey) a few additional concerns expressed by HPEs were added.

[Concern statement 30]: One of the participants specifically mentioned that “other priorities” prevented him/her from focusing on the new clickUP at the time he/she came for the interview (post).

6.6.3.2 Informational stage

Four of the five concerns in the Informational stage were referred to (in various ways) by HPEs. Each of these concerns and variations thereof are listed in Table 6:66.

Table 6:66 Informational concerns of HPEs

| Informational concerns | |
|---|---|
| PRE | POST |
| 6 I have a very limited knowledge of the new clickUP. | 6 I have a very limited knowledge of the new clickUP. |
| ★ Lack of knowledge of different functionalities: <ul style="list-style-type: none"> - e.g. Wikis and blogs - Communication tools - Assessment functionalities | ★ Lack of knowledge of different functionalities: <ul style="list-style-type: none"> - Assessment functionalities - Marks and grading - Mobile functionalities |
| ★ Wanted to learn the basics: <ul style="list-style-type: none"> - How to navigate - How to get access to courses / clickUP - What it is all about - Wanted to familiarise myself | ● Administrative concerns |
| ◆ How to upload content and manage files | ● Modifying / editing uploaded files |
| ● Create a learning space and structure appropriately | ● Plan the structure of the course |
| ● There were things that I could not figure out myself. | ● How to make it look pretty |
| | ● What are the maximum file sizes for visual material. |
| 14 I would like to discuss the possibility of using the new clickUP. | 14 I would like to discuss the possibility of using the new clickUP. |
| ★ Wanted to see the possibilities / capabilities in the system; Or <i>have</i> overview of possibilities. | ● Wanted to see other possibilities |
| | ● Time to revise handouts to see other possibilities. |
| | ● Have to adapt [my] ideas to fit possibilities in system. |
| | ◆ Want to see examples of [possibilities] how to use. |

Table 6:66 Informational concerns of HPEs (continued)

| Informational concerns | |
|---|---|
| PRE | POST |
| 15 I would like to know what resources are available if we decide to adopt the new clickUP. | 15 I would like to know what resources are available if we decide to adopt the new clickUP. |
| ★ What physical support resources are available? | ★ Want to have personal support (in the form of just-in-time guidance, over the phone / by email). |
| ● Revise the handout resources. | ● Need to go back and revise notes. |
| ◇ What online resources are available? | ● To have online support available |
| ● Want a process chart/map to follow | ● Electronic booklet or guide |
| ● Want a basic recipe to follow | ● Layman's manual that indicates step 1, 2 and 3 |
| | ● Need help to migrate modules to the new clickUP |
| 35 I would like to know how the new clickUP is better than what we have now | 35 I would like to know how the new clickUP is better than what we have now. |
| ★ How the new ClickUP is different from old system | ● Concern that the new clickUP does not work as well as the old one |
| Additional Informational concerns | |
| ◇ Course participants have different needs and concerns | |
| ◇ Hands-on demonstration and practice needed in training / workshop | ● Will help to bring own content to training workshops |
| ◇ Training was necessary | ● Other training courses will be attended if they interest me / is something that we want to do / or to recap |
| ● I am sceptical about feasibility of using the new clickUP for our needs | ◇ Feasibility of my ideas in the system |
| ● Want to stay current and up to date – I have to learn these things | ● Want to keep up with the times in terms of the use of technology in teaching |

Table 6:66 Informational concerns of HPEs (continued)

| Informational concerns | |
|---|---|
| PRE | POST |
| <ul style="list-style-type: none"> ● Courses about approaches in e-learning would interest me | <ul style="list-style-type: none"> ● Should have short courses repeated as encouragement |
| <ul style="list-style-type: none"> ● Would like to have a feedback session on my use of the system | |
| <ul style="list-style-type: none"> ● Where are we going with new clickUP? | <ul style="list-style-type: none"> ● Will the bandwidth be stable and enough? |

Summary of Stage 1: Informational

[Concern statement 6]: A popular concern at the start of the journey was the need for basic knowledge: to know the basics of the new system during the training. Later on, concerns like “how can I make it look pretty” and “is it possible to upload large file sizes”, came to the fore.

[Concern statement 14]: HPEs referred to the concern “to discuss possibilities of using” new clickUP in various ways.

Once some possibilities are known and used, it is clear that the next step is to see some examples or to revise some of the notes in search of other possibilities. The realisation that you may have to adapt your own ideas and plans to fit in with the possibilities in the system shows an understanding of the system after training / use started.

[Concern statement 15]: In both instances, at the start as well as later on when they had an opportunity to start using the system (post), the need for physical

support is strongly indicated. This need ranges from being able to call or email, to making an appointment or having just-in-time guidance available. Other suggestions for support were also indicated, such as a layman's manual and electronic booklet or guide. The handouts, which are provided to trainees during the workshops, are also seen as a helpful resource to revise their knowledge.

[Concern statement 35]: A few of the HPEs indicated that they were interested in what the differences were between the old and the new systems when they started on the journey. One of the participants mentioned (post) that he/she was concerned that “[ID014] everything is not going to work as one would like it to work [going from the old to the new]” after he/she started to implement the new system.

[Additional Informational concerns]: The additional Informational concerns expressed focus on specific needs with regard to training (such as type of courses, needs of participants in training, and format of training). Others focus on the system and its use (such as, will it be feasible; the fact that one has to adapt and stay up to date with new developments in educational technology; and concerns about bandwidth that might hamper the use of the system).

6.6.3.3 Personal stage

Table 6:67 shows the variations of personal concerns as well as additional concerns that HPEs expressed.

Table 6:67 Personal concerns of HPEs

| Personal concerns | |
|---|---|
| PRE | POST |
| <p>17 I would like to know how my teaching or administration is supposed to change</p> <ul style="list-style-type: none"> ● Would like to know how my thinking should change ● Not knowing what was expected of me after integrating clickUP into teaching | <p>17 I would like to know how my teaching or administration is supposed to change</p> <ul style="list-style-type: none"> ● Would like to know how my thinking should change |
| <p>28 I would like to have more information on time and energy commitments required by the new clickUP.</p> <ul style="list-style-type: none"> ◇ Will I cope to develop everything from scratch? ● Time requirements to learn the system ● Amount of learning required ● Felt insecure not knowing what was expected of me | |
| Additional Personal concerns | |
| <ul style="list-style-type: none"> ★ Will I be able to master the system? <ul style="list-style-type: none"> - Will it be user-friendly enough for me to use it myself? - I feel bad that I cannot use the system myself and have to ask for help - Wanted a sense of security that it is not that difficult [to master] | <ul style="list-style-type: none"> ● Fear that I will not be able to master the system |
| <ul style="list-style-type: none"> ◇ Concerned with my own skills with the innovation <ul style="list-style-type: none"> - My own computer literacy/ability to use the computer | <ul style="list-style-type: none"> ◇ My IT skills are not sufficient |
| <ul style="list-style-type: none"> ◇ I want to get comfortable /confident in using the system | <ul style="list-style-type: none"> ● The amount of information to assimilate each day [at the 5 workshops] is too much |
| <ul style="list-style-type: none"> ◇ Need practice after training session | <ul style="list-style-type: none"> ● Fear that when trying to work in the system it is going to be frustrating |

Table 6:67 Personal concerns of HPEs (continued)

| Personal concerns | |
|---|---|
| PRE | POST |
| <ul style="list-style-type: none"> ◇ I felt uncomfortable and stupid during the overview course <ul style="list-style-type: none"> - <i>completely out of my comfort zone</i> since new clickUP is totally different - <i>confused and lost</i> at training session - technology makes me feel anxious | <ul style="list-style-type: none"> ● Is the change really necessary? |
| <ul style="list-style-type: none"> ● I felt overwhelmed by too much information in training/workshop <ul style="list-style-type: none"> - How will I remember all the information? | <ul style="list-style-type: none"> ● Not coping with the pace of the training workshop |
| <ul style="list-style-type: none"> ● Fear that I will not keep up with the rest of the class | |
| <ul style="list-style-type: none"> ● Wanted to allay my fears: is it going to be another People Soft disaster? <ul style="list-style-type: none"> - Is this new innovation going to be worth the effort? | |

Summary of Stage 2: Personal concerns

[Concern statement 17]: For both pre- and post instances, the participants indicated that they need to know how to change their thinking to be able to use new clickUP in their teaching. The need for clarity on what is expected with regard to teaching, is also mentioned.

[Concern statement 28]: The concern “whether I will be able to cope developing everything from scratch”, is an indication that time and energy commitments are a concern. The fact that participants indicated they felt

insecure not knowing what will be expected of them in using the new system, again confirms the need for information about time and energy commitments.

[Additional Personal concerns]: When the journey started, participants experienced feelings of fear and uncertainty “that I will not be able” to master the use of the new system. Fewer such feelings or concerns emerged in the later stage of the journey.

6.6.3.4 Management stage

Table 6:68 shows the variations of management concerns as well as additional concerns that were coded as management concerns that HPEs expressed.

Table 6:68 Management concerns of HPEs

| Management concerns | |
|---|---|
| PRE | POST |
| 4 I am concerned about not having enough time to organize myself each day | 4 I am concerned about not having enough time to organize myself each day |
| <ul style="list-style-type: none"> ● Not enough time to build the courses | <ul style="list-style-type: none"> ● Time to plan changes |
| <ul style="list-style-type: none"> ● Not enough time to attend courses | <ul style="list-style-type: none"> ● Time for marking online |
| <ul style="list-style-type: none"> ● Not enough time to practice what I was taught | <ul style="list-style-type: none"> ● Use it in order to save me time |
| | <ul style="list-style-type: none"> ● Can the system help to manage time / improve teaching |
| | <ul style="list-style-type: none"> ● That I will not have everything ready / in place |
| | <ul style="list-style-type: none"> ◇ Time to practice |
| | <ul style="list-style-type: none"> ◇ Time to attend training workshops |

Table 6:68 Management concerns of HPEs(continued)

| Management concerns | |
|---|--|
| | <p>8 I am concerned about conflict between my interests and my responsibilities</p> <ul style="list-style-type: none"> ● Whose responsibility is the development of the module? |
| <p>16 I am concerned about my inability to manage all that the new clickUP requires</p> <ul style="list-style-type: none"> ● My inability to implement all the information ● My inability to manage blogs, wikis, etc. ● Unsure about having to take responsibility for everything [in a block course] | <p>16 I am concerned about my inability to manage all that the new clickUP requires.</p> <ul style="list-style-type: none"> ● Frustration to download assignments using a home connection ● To manage the uploading process |
| <p>25 I am concerned about time spent working with non-academic problems related to the new clickUP</p> <ul style="list-style-type: none"> ● The system that fell over | <p>25 I am concerned about time spent working with non-academic problems related to the new clickUP</p> <ul style="list-style-type: none"> ◇ When system is down / off ● Amount of time to test new system and get things ready for students |
| | <p>34 Coordination of tasks and people is taking too much of my time</p> <ul style="list-style-type: none"> ● Coordination of tasks in a block |
| Additional Management concerns | |
| <ul style="list-style-type: none"> ★ How to use clickUP more effectively | <ul style="list-style-type: none"> ◇ ClickUP is not used optimally in the faculty Want to be able to use the system efficiently Knowledge and skills are needed to use clickUP effectively |
| <ul style="list-style-type: none"> ◇ Want to be able to use assessment functionalities: <ul style="list-style-type: none"> - Submit assignments on clickUP - Access what students know/don't know – what their progress is over period of time | <ul style="list-style-type: none"> ● Want to make use of assessment tools to grade learning |

Table 6:68 Management concerns of HPEs(continued)

| Management concerns | |
|---|--|
| <ul style="list-style-type: none"> ◆ How will I manage communication with students? I need to communicate with my students | <ul style="list-style-type: none"> ◆ To have a communication channel online for students <ul style="list-style-type: none"> - manage questions they have - provide necessary information - make more use of the communication functionalities |
| <ul style="list-style-type: none"> ● I want the system to make my life easier | <ul style="list-style-type: none"> ● Will my use make a difference in time management and teaching? |
| <ul style="list-style-type: none"> ● To have a noticeboard for students | <ul style="list-style-type: none"> ● Will the system be able to do what I need it to do? |
| <ul style="list-style-type: none"> ● Students to have access to information | <ul style="list-style-type: none"> ◆ Want students to have access to learning material when needed |
| <ul style="list-style-type: none"> ● Our teaching system not clickUP friendly | <ul style="list-style-type: none"> ● Rubric manager is not user-friendly enough |
| | <ul style="list-style-type: none"> ● There are limitations in question types |
| | <ul style="list-style-type: none"> ● Risk of making copyright images available in clickUP |
| | <ul style="list-style-type: none"> ● To monitor student activity in the module / provide evidence |
| | <ul style="list-style-type: none"> ● Help to manage administrative tasks |
| | <ul style="list-style-type: none"> ● Help to organise whole module this way |
| | <ul style="list-style-type: none"> ● Student access to computers |

Summary of Stage 3: Management stage

[Concern statement 4]: The concerns about not having enough time are mentioned more frequently by participants in the later stage of the journey. Participants who have a need to practise what was taught, still find it a

challenge to do so in the later stage of the journey. Time to attend courses is a concern that is repeated at both times.

[Concern statement 8]: Previous ways of managing clickUP in the faculty had to change with the implementation of new clickUP, and there is concern about taking responsibility for the module / block's presence on clickUP.

[Concern statement 16]: HPEs are concerned about their ability to implement all that they had learned, finding the time to manage blogs and wikis, managing the downloading and marking of assignments from home, and managing the uploading process.

[Concern statement 25]: A non-academic problem that takes up unnecessary time, such as the system that “goes off” unexpectedly, is a great concern to HPEs at this stage of the journey. The amount of time it takes to get a clickUP module ready for students is also seen as a big concern.

[Additional Management concerns]: HPEs are concerned about the effective use of the LMS at both instances on the implementation journey. There seems to be a wider range of management concerns during the later stage of the journey.

6.6.3.5 Consequence stage

Table 6:69 shows the variations of consequence concerns as well as additional concerns that were coded as consequence concerns that HPEs expressed.

Table 6:69 Consequence concerns of HPEs

| Consequence concerns | |
|--|--|
| PRE | POST |
| 1 I am concerned about students' attitudes towards the new clickUP | 1 I am concerned about students' attitudes towards the new clickUP © |
| <ul style="list-style-type: none"> ● Colleagues' attitudes towards ClickUP | |
| 11 I am concerned about how the innovation will affect students | 11 I am concerned about how the innovation will affect students |
| <ul style="list-style-type: none"> ◆ The user-friendliness will affect the students and colleagues' use That students can't get into the system | <ul style="list-style-type: none"> ◆ Student success and learning: My and the students' success with the system How to enhance student learning? That it is useful and interesting for students To make life easier for students |
| <ul style="list-style-type: none"> ● Want best out of learning time | <ul style="list-style-type: none"> ◆ User-friendliness of system concerns me Usability of the system for my students and colleagues who are not IT literate Easy access for students when needed in user-friendly way Learning environment with easy access and user-friendly to students |
| <ul style="list-style-type: none"> ● To do this for the benefit of my students | <ul style="list-style-type: none"> ● Tracking to support students to pass |
| <ul style="list-style-type: none"> ● The cost of using clickUP for the student | <ul style="list-style-type: none"> ● How to accommodate the learning needs of students |
| 24 I would like to excite my students about their part in this approach | 24 I would like to excite my students about their part in this approach |
| <ul style="list-style-type: none"> ● Want to make use of interactive functions | <ul style="list-style-type: none"> ◆ Make it interesting for students with visual elements Want to deliver content in variety of ways to students Make it fun for the students |
| <ul style="list-style-type: none"> ● Want to make notices, marks, examples available | <ul style="list-style-type: none"> ◆ Engage students Course about interactive methods / methods to get interaction |
| <ul style="list-style-type: none"> ● Want students to come prepared to class | <ul style="list-style-type: none"> ◆ Making use of exercises and assessments / discussions |

Table 6:69 Consequence concerns of HPEs (continued)

| Consequence concerns | |
|--|---|
| PRE | POST |
| <ul style="list-style-type: none"> Want to make it more accessible for my students | <ul style="list-style-type: none"> Making use of mobile functionalities in teaching |
| <ul style="list-style-type: none"> Want to design it for different groups of students differently [appropriately] | |
| Additional Consequence concerns | |
| <ul style="list-style-type: none"> To have clickUP as extension of my classroom | <ul style="list-style-type: none"> Students feel comfortable accessing the information |
| <ul style="list-style-type: none"> Students to get best teaching | <ul style="list-style-type: none"> Getting students engaged in discussing content |
| <ul style="list-style-type: none"> Want students to learn continuously | <ul style="list-style-type: none"> To get students to become independent learners |
| <ul style="list-style-type: none"> I am interested in technology for how it can promote student learning and teaching | <ul style="list-style-type: none"> Students to learn how to write, cite properly |
| | <ul style="list-style-type: none"> Integrate assessment into teaching more frequently |
| | <ul style="list-style-type: none"> Want students to use it more |
| | <ul style="list-style-type: none"> Students demand the use of clickUP |
| | <ul style="list-style-type: none"> Uneducated students [not enough knowledge to use clickUP] |

Summary of Stage 4: Consequence concerns

[Concern statement 1]: HPEs are not only concerned about students' attitudes towards the new clickUP, but also colleagues' attitudes.

[Concern statement 11]: The user friendliness, ease of access and usability of the system are a concern for both students and colleagues, especially when their IT skills may be inadequate.

[Concern statement 24]: There seems to be a growing interest in creating interactive, engaging learning opportunities for students, at a later stage of the journey.

[Additional Consequence concerns]: A wide range of consequence concerns is mentioned relating to the use of the system for student learning.

6.6.3.6 Collaboration stage

Table 6:70 shows the variations of collaboration concerns as well as additional concerns that were coded as collaboration concerns that HPEs expressed.

Table 6:70 Collaboration concerns of HPEs

| Collaboration concerns | |
|------------------------|---|
| PRE | POST |
| | 5 I would like to help other faculty in their use of the new clickUP |
| | 27 I would like to coordinate my efforts with others to maximize the effects of new clickUP. |
| | <ul style="list-style-type: none"> • Would like to integrate my efforts /collaborate when developing a new course • Want to work with librarian to update my course |

Table 6:70 Collaboration concerns of HPEs (continued)

| Collaboration concerns | |
|--|---|
| | 29 I would like to know what other faculty are doing in this area |
| Additional Collaboration concerns | |
| <ul style="list-style-type: none"> ◆ Useful if colleagues teaching in same block are trained Useful if colleagues teaching in a department have an idea of possibilities All staff to complete at least first three courses | <ul style="list-style-type: none"> ● To have all lecturers comfortable in the use of clickUP |
| <ul style="list-style-type: none"> ◆ Impact on self when colleagues are not using the system Increase in workload when colleagues are not using the system | <ul style="list-style-type: none"> ● All should attend the Overview Workshop |
| <ul style="list-style-type: none"> ● That colleagues will be negative about the implementation | <ul style="list-style-type: none"> ● Will everybody buy into this? |
| <ul style="list-style-type: none"> ● Everyone must use it then it will work perfectly | <ul style="list-style-type: none"> ● Low uptake of colleagues |
| <ul style="list-style-type: none"> ● All staff should be using the system. else confusing for students | <ul style="list-style-type: none"> ● Lack of interest from colleagues and students |
| <ul style="list-style-type: none"> ● Time required to help colleagues with the system | <ul style="list-style-type: none"> ● Colleagues are first line of support |
| | <ul style="list-style-type: none"> ● Negative influence(negativity) of colleagues regarding the system |

Summary of Stage 5: Collaboration concerns

Three of the collaboration concerns were recorded at the later stage of the journey.

[Concern statement 5]: One participant indicated that he/she would be prepared to assist colleagues in his/her department with clickUP.

[Concern statement 27]: Two participants indicated the need to integrate efforts within departments and also with the librarian, to maximize the effects of clickUP.

[Concern statement 29]: A number of HPEs indicated the need to know what other colleagues are doing in the system and how it is working for them.

[Additional Concern statement]: The impact of colleagues' attitudes and non-use of new clickUP system concerns HPEs, which is evident from the wide range of concerns raised.

6.6.3.7 Refocusing stage

Table 6:71 shows the variations of refocusing concerns that HPEs expressed.

Table 6:71 Refocusing concerns of HPEs

| Refocusing concerns | |
|-----------------------|--|
| | 31 I would like to determine how to supplement, enhance, or replace the new clickUP. |
| No concerns mentioned | <ul style="list-style-type: none"> New developments in system will keep me interested |

Summary of Stage 6: Refocusing concerns

Only one refocusing concerns were captured during the interviews.

[Concern statement 31]: One participant mentioned that new developments of the system will help to keep him/her interested in continuing to use the system.

6.6.4 Summary for Research Question 3



The purpose of research question 3 is to explore the needs of HPEs regarding their training and support needs to implement the new clickUP system.

Questions asked during the interview took participants back in time to when they started the journey of implementing the new LMS. They talked about what they wanted to achieve, their goal with the new system, and what they felt was needed to be able to accomplish that goal. The same questions were repeated when the interview focus was forwarded to where they are currently in their implementation journey. This approach allowed the researcher to explore HPE perspectives not only of what is needed to support the start of such a journey, but also what is needed to continue the journey.

The analysis made use of the SoC framework. Results of this qualitative analysis summarised in Table 6:64 show that HPEs have similar concerns to those listed in the 35 concern statements of the SoC framework. It also emerged that *variations* of these concerns are present. Some of their concerns can be matched to the seven stages of concern, but not necessarily to any of the 35 concern statements. Furthermore, there are some concerns regarding the implementation of the new clickUP that could not be grouped either as one of the existing

concerns, or as a variation of existing concerns in any of the stages, which was then coded as additional concerns in a particular stage.



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Chapter 7 - Discussion, conclusions and recommendations

7.1 Introduction

According to literature, achieving widespread high fidelity use of educational technology in higher education has proved to be a challenge (Birch & Burnett, 2009, p. 117, Hall, 2010, p. 231, Lee & Kim, 2007, p. 1854; Zinn, 2009, p. 159). This notion was confirmed by the results of an audit and clickUP survey that were conducted to investigate the use of the LMS (called 'clickUP') at the University of Pretoria (UP). The study sought to address the gap in understanding what is needed to help people to fully integrate technology into their teaching practice.

The CBAM model (Hall & Hord, 2011) is based on the assumption that individuals who are expected to implement an innovation will experience feelings not only of excitement, but also of frustration. The authors of the CBAM assume that successful implementation of an innovation requires guidance, training and support interventions that will lead to higher levels of implementation and use of the innovation. Two standardised CBAM instruments – Levels of Use (LoU) and Stages of Concern (SoC) – were employed in this study to investigate the research questions about the effectiveness of the implementation of and training in the use of clickUP at UP.

The purpose of this study was to determine the SoC and LoU in order to determine the perceived needs of Health Professional Educators (HPEs) at the Faculty of Health Sciences at UP, regarding strategies that may be needed to facilitate the implementation and use of the LMS that was upgraded in 2011/12.

A number of caveats should be noted regarding the current study. The relatively small number of participants do not allow the researcher to make generalisations

from the findings. Instead, this explorative study sought to provide a rich contextualised understanding of the needs of HPEs with regard to training and support using the standardised instruments of the CBAM, rather than providing generalised rules about what academics might need when they implement a new LMS.

Possible bias may be introduced in the study since the researcher is employed as a faculty development officer, support and educational technology advisor in the Faculty of Health Sciences at UP. Quality assurance strategies were implemented during the analysis of results to curb this possible bias. These strategies included the use of second parties to perform quality checks on the data entered for the purpose of analysis (SoCQ). During the perceived needs interviews, questions were read from the interview guide to minimise any possible paraphrasing of questions. The researcher had undergone training in how to use a structured branched interview protocol of the LoU interview. Independent transcribers were employed to do the transcriptions. Participants were also given the opportunity to check the transcribed text of the interviews for accuracy. A second expert rater (i.e. LoU Certified Interviewer) rated a sample of the interviews and an agreement coefficient was then determined. A second expert rater (i.e. LoU certified interviewer) rated a sample of the interviews and an agreement coefficient was then determined. The second rater has no relation to UP or to any of the participants in the study. The researcher made use of the prescribed structured process for rating the LoU interviews and for the analysis of the perceived needs interview data (discussed in section 6.6.2 and Figure 6.22).

It is also important to note that the results and inferences from the SoCQ cannot be used to judge the way participants use (or do not use) the LMS, nor to conduct a personality analysis. Instead, the results were used to determine what their needs are with regard to training and support strategies in order to continue their journey across the implementation bridge.

7.2 Discussion of the results and findings

The discussion of the results and findings is organised according to the three research questions that the study set out to answer:

- **Research question 1:** [section 7.3] What are the stages of concern (SoC) of HPEs regarding the implementation of the LMS in their teaching practice after they have engaged in professional staff development interventions?
- **Research question 2:** [section 7.4] What are the levels of use (LoU) of the LMS in the lecturers' teaching practice after they have engaged in professional staff development interventions and had the time to start using the system?
- **Research question 3:** [section 7.5] What are the perceived expressed needs of lecturers with regard to training and support that would enable them to implement the LMS in their own teaching practice?

The findings of this research study are related to what the authors of the CBAM (George et al., 2008; Hall & Hord, 2011) describe and hypothesise about the use of the CBAM and its diagnostic tools in a context where change is expected of individuals.

7.3 Research Question 1: Stages of Concern (SoC) of HPEs at UP

The discussion of findings for research question 1 is divided into five parts as shown in Figure 7:1.

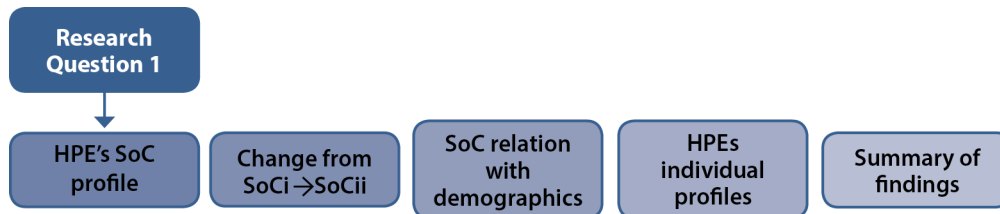


Figure 7:1 Structure for RQ 1 discussion

Firstly the characteristics of the SoC profile of the HPEs are discussed and compared to the hypothetical SoC profiles put forward by the CBAM theory, and then the change visible between SoCi and SoCii is considered. This is followed by a discussion of the relationship between the SoC and the demographic variables, and lastly the individual profiles of HPEs are presented. This section concludes with a summary of findings on research question 1 regarding the SoC of HPEs at the University of Pretoria.

HPEs completed the SoCQ twice – right at the beginning of their journey in implementing the LMS (at their first contact with the new LMS / clickUP) – and a second time, after they had had some time to start using clickUP. The results of the SoCQ provide guidance on what the HPEs needed with regard to training and support interventions when they started the journey of using clickUP, but also what they need to continue the journey to achieve fidelity of the LMS implementation in their teaching and learning.

7.3.1 HPEs' group profile for SoCi and SoCii



According to the CBAM authors (George et al., 2008, p. 37), the percentile scores, in either graph or tabular format, enable researchers to interpret group and individual data to understand the types of concerns that are most or least intense. This method helps understand the affective stance (feelings and attitudes) of participants toward an innovation.

7.3.1.1 HPE group profile compared with the hypothetical SoC profile

Hypothetically (refer to Figure 3:2 for the hypothetical profiles) individuals move through the defined stages of concern from very little awareness of an innovation (i.e. highly unconcerned), to starting to use it, and later to more sophisticated use of the innovation (George et al., 2008, p. 37).

The profile of the HPEs (Figure 6:4) shows the most intense concerns in the *Unconcerned* stage, in both SoCi and SoCii. This is consistent with what George et al. (2008, p. 37) and Hall and Hord (2011, p. 77) describe as the hypothetical *typical non-user* profile.

The second highest stage of concern, however, is dissimilar to the *typical non-user profile*, because it is not the adjacent stages 1 or 2 (*Informational* and *Personal* stages) that follows directly after the *Unconcerned* stage, but the

Management concerns stage (stage 3). Intense *Management* concerns are more consistent with the hypothetical *inexperienced user*.

7.3.1.2 What the HPEs' group profile indicates

Firstly the group of HPEs who participated in the study scored very highly in the *Unconcerned* stage for both SoCi and SoCii. Fuller (1969, p. 219) referred to the concerns in the *Unconcerned* stage as 'unrelated' concerns, due to the fact that the students she used in her study showed they had concerns that were not related or centred around the issue of teaching, but focused on something else (Hall & Hord, 2011, p. 69).

According to George et al. (2008, p. 33), *Unconcerned* scores indicate the degree of priority the new innovation receives in the daily life of respondents. The higher the percentile score, the lower the level of priority (i.e. little concern) the innovation receives, and the more the participant indicates that other priorities, tasks, initiatives or activities consume their attention.

The *Unconcerned* stage of concern has been subjected to different cycles of review by the CBAM team, based on criticism and difficulty from users in interpreting the percentile scores (George et al., 2008, p. 22). The reliability in different respondent groups varied between .57 and .75 and the team of researchers concluded that this illustrates the extent to which the reliability estimates depend on the sample respondents as well as on the item scales (George et al., 2008, p. 22). The reliability coefficients for the current study were .22 for the SoCi *Unconcerned* stage items and .45 for the SoCii *Unconcerned*

items. This low level of reliability is similar to the .27 that Julius (2007, p. 93) reported in using the SoCQ. In the current study, the reliability increased from SoCi to SoCii in five out of the seven stages. Since the SoCQ is a standardised instrument, it was not an option to remove or adjust any of the items in the *Unconcerned* stage or in the questionnaire as a whole.

The high *Unconcerned* stage concerns of HPEs at UP are consistent with previous research done by Petherbridge (2007, p. 151) and Ridgeway (2005, p. 215) who also found the *Unconcerned* stage concerns to be the highest during the implementation of an innovation in a higher education context.

Secondly, by indicating *Management* concerns as the second highest stage of concern, HPEs at UP signify that they are concerned about the management, time and logistical aspects of using clickUP in their teaching. The combination of Stage 0 (*Unconcerned*) and Stage 3 (*Management*) concerns may indicate that HPEs do not have time to focus on the innovation and are therefore concerned about how they will be able to manage the use of the new clickUP.

The divergence in the hypothesised *developmental 'wave'* (see Figure 3:2 and Figure 6:4) caused by the *Management* stage concerns being higher than the *Informational* and *Personal* stage concerns, are attributed to:

- the number of roles performed by HPEs (Harden & Crosby, 2000) may contribute to the fact that *Management* concerns overshadow their *Informational* and *Personal* concerns about the innovation;
- the increase in workload of HPEs due to budget cuts, pressure to publish research, and increased student numbers lead to many priorities and tasks that need to be balanced; and

- some of the HPEs used previous versions of the LMS at UP and may therefore not be so concerned about learning more about the innovation or how it will affect them personally, but rather how they can organise the tasks to use the LMS effectively to ease their workload.

Thirdly, the HPEs' profiles indicate that *Informational* concerns are higher than *Personal* concerns in both the SoCi and SoCii, thus showing a “positive-two-split”. George et al. (2008, p. 40) describe the “positive-two-split” as individuals with a **positive attitude** towards the innovation, with fewer concerns about how it may affect them, and an **interest in learning more** about the innovation.

Fourthly, the *Consequence* concern stage was rated as the lowest stage of concern by the HPEs in both SoCi and SoCii. This low intensity indicates that HPEs are not concerned about the impact of the innovation on the students or what can be done to improve the current impact of the innovation on the students.

Lastly, the HPEs' group profile for SoCi and SoCii *tails up* in the *Refocusing* concern stage. Both George et al. (2008) and Hall and Hord (2011, p. 84) refer to the Stage 6 percentile (*Refocusing* concerns) scores that show an upswing in the *non-user* profile as a possible indication of resistance. High *Refocusing* concerns are indicative of users who explore other innovations to use instead of the current one. It is regarded as a sign of possible resistance when *non-users* or *inexperienced users* indicate that they are exploring another innovation.

Researchers Petherbridge (2007, p. 151), Sells-Lewallen (2000, p. 58) and Lee (2010, p.) also found evidence that the *Refocusing* concerns tailed up slightly. In the study conducted by Lee (2010), similar results were reported when

individuals were expected to implement a mandated innovation: “SoC group profiles consistently exhibited a non-user negative one-two split with considerable tailing up in Stage 6 – a strong pattern of resistance” (p. iv).

7.3.1.3 HPEs’ dimensions of concerns

Figure 6:13 shows the four CBAM dimensions calculated for SoCi and SoCii. In both SoCi and SoCii the:

- *Unrelated concerns (Unconcerned stage)* is the highest dimension;
- *Task concerns (Management stage)* is the second highest dimension. The difference between the highest and second highest is more than 20 percentile points;
- *Self concerns (Information and Personal stages)* is the third highest dimension. *Self-concerns* are between 6 and 8 percentile points lower than *Task concerns*; and
- *Impact concerns (Consequence, Collaboration and Refocusing stages)* is the lowest dimension and is more than 20 percentile points lower than *Self concerns*.

Although the order from highest to lowest dimensions did not change from SoCi to SoCii, a lower relative intensity is visible in *Task*, *Self* and *Impact concerns*.

Contrary to the current study where the *Unrelated* dimension remained the highest, the study conducted by Bresnitz et al. (1997, p. 19) in a medical education environment reports that participants retained high *Self concerns* over the period of three years that the study was conducted.

7.3.1.4 Stages: highest to lowest rated

Most of the HPEs who rated the *Unconcerned* stage (70.4%) the highest in SoCi also had high *Informational* concerns (29.63%) indicating that they wanted to learn more); or high *Management* concerns (33.3%) indicating that they wanted to know how to manage the innovation. During SoCii, the group with the highest *Unconcerned* scores (70%) predominantly also had high *Management* concerns (37.5%).

This method of tabulating the highest stage in relation to the second highest, as suggested by George et al. (2008), provides additional “insight into the dynamics of concerns” (p. 35). This highlights that the highest and second highest stages of concern are non-adjacent stages, which contradicts the developmental nature of concerns (George et al., 2008, p. 34).

In this study, the lowest rated stages were *Consequence* (rated lowest by 55.5% and 52.5% of the participants in SoCi and SoCii respectively) and *Collaboration* (rated lowest by 29.62% and 27.5% of the participants in SoCi and SoCii respectively).

The investigation into the highest, second highest and lowest stages confirms what was found in the profile of the entire group, in that the characteristics of both the *typical non-user* (highest *Unconcerned* stage) as well as the *inexperienced user* (high *Management* concerns) are present. The fact that the highest and second highest stages are non-adjacent highlights the fact that characteristics of two hypothetical profiles are present.

7.3.1.5 What the individual concerns indicate

Individual concern analysis is suggested by George et al. (2008, p. 50) as a method of analysis to provide additional insight into the overall pattern of participant responses. This study however, identified the concerns that were rated the highest by most HPEs. A list of concerns most often rated as the highest was compiled with the help of a statistician at UP. The same method was applied when the second highest rated and lowest rated concerns were identified.

Table 7:1 shows the list of top five highest, second highest and lowest rated individual concerns that HPEs had at the start of their journey of implementing the new clickUP (SoCi).

Table 7:2 lists the top five highest, second highest and lowest rated concerns of HPEs after they had had time to implement the new clickUP (SoCii). The colours indicate the particular stage of each numbered concern.

Table 7:1 Individual concern analysis for SoCi

| SoCi | Highest rated | Second highest rated | Lowest rated |
|------|-------------------|----------------------|--------------------|
| 1 | #24 (Consequence) | #4 (Management) | #3 (Unconcerned) |
| 2 | #16 (Management) | #24 (Consequence) | #1 (Consequence) |
| 3 | #30 (Unconcerned) | #10 (Collaboration) | #5 (Collaboration) |
| 4 | #15 (Information) | #25 (Management) | #2 (Refocusing) |
| 5 | #27 (Refocusing) | #26 (Information) | #11 (Consequence) |

Numbers indicate the number of each of the individual concern statements as listed in the SoCQ

Table 7:2 Individual concern analysis for SoCii

| SoCii | Highest rated | Second highest rated | Lowest rated |
|-------|-------------------|----------------------|-------------------|
| 1 | #21 (Unconcerned) | #24 (Consequence) | #3 (Unconcerned) |
| 2 | #24 (Consequence) | #32 (Consequence) | #2 (Refocusing) |
| 3 | #4 (Management) | #4 (Management) | #11 (Consequence) |
| 4 | #22 (Refocusing) | #16 (Management) | #1 (Consequence) |
| 5 | #30 (Unconcerned) | #23 (Unconcerned) | #13 (Personal) |

Numbers indicate the number of each of the individual concern statements as they are listed in the SoCQ

Concerns **#24** and **#4** are repeatedly rated as the highest concern or as the second highest concern by most HPEs at the beginning of the journey, as well as at a later stage on the journey across the bridge.

Concerns **#24**, **#4**, **#30** and **#16** are the four concerns mostly rated as either highest or second highest by HPEs in both SoCi and SoCii.

In particular, individual concern **#24** from the *Consequence* stage is rated most often as one of the highest concerns in both SoCi and SoCii. HPEs indicated that they want to “*excite their students about their part in the approach*”. However, the *Consequence* stage is the lowest rated stage for the entire HPE group. This contradiction highlights the fact that HPEs do take students into consideration when thinking about the use of the LMS. This might serve as the rationale for embarking on the journey to implement the LMS in their teaching.

It is also important to note that two of the top five lowest rated concerns in both SoCi and SoCii (concerns **#1** and **#11**) are from the *Consequence* stage. These two concerns indicate that the HPEs are not concerned about the “*students*

attitudes towards the innovation” (#1) or about “how the innovation affects students” (#11).

The *Management* concern #4 was rated among the top five highest rated concerns in SoCi and also among the top five second highest rated concerns in both SoCi and SoCii. This concern indicates that “*I am concerned about not having enough **time** to organise myself each day*”.

The shortage of time to learn, build and maintain new clickUP modules is also indicated by HPEs in the demographic information about the use of the clickUP system. Participants indicated that they have limited time available (rated between 4 and 6 out of 10) to learn, build, manage and maintain clickUP modules.

The *Management* concern #16 is rated among the top five highest rated concerns in SoCii and among the top five second highest rated concerns in SoCii. This concern indicates that “*I am concerned about my inability to manage all that the new clickUP requires*”. This item also highlights the fact that high workload, many priorities and a shortage of time are of concern to HPEs.

The *Unconcerned* item #30 is rated among the top five highest rated concerns in both SoCi and SoCii. This concern indicates that “*other priorities prevent me from focusing attention on the new clickUP*”. During SoCii HPEs also indicated that “*I am pre-occupied with other things rather than clickUP*” (concern #21). The second highest rated concern #23 in SoCii indicates that “*I spend little time thinking about the new clickUP*”.

It is interesting to note that four of the top five lowest rated concerns are repeatedly rated lowest during both SoCi and SoCii. These are items that HPEs affirm they are NOT concerned about, namely:

- Individual concern #1: “I am concerned about students’ attitudes towards the new clickUP”
- Individual concern #2: “I know of other approaches that might work better”
- Individual concern #3: “I am concerned about another innovation”
- Individual concern #11: “I am concerned about how the innovation affects students”.

7.3.1.6 Summary of findings on the HPEs’ group profile for SoCi and SoCii

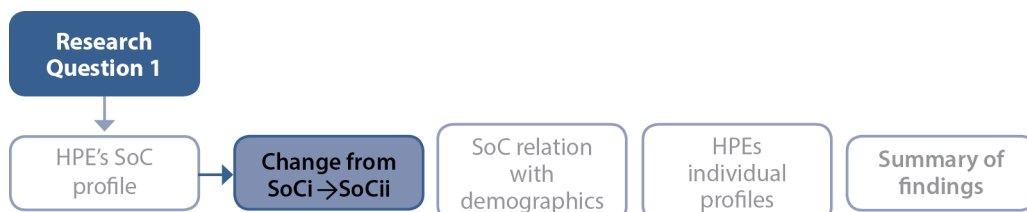
- ❖ The HPEs’ group profile resembles a combination of the features of a *typical non-user* and an *inexperienced user* profile as hypothesised by the CBAM, because:
 - the high intensity of the *Unconcerned* stage scores that HPEs have in SoCi is a *typical non-user* trait; and
 - the second highest stage (*Management*) is non-adjacent to the highest stage (*Unconcerned*) and leans more towards the properties of an *inexperienced user*.
- ❖ The HPEs’ group profile indicates that these participants:

- have intense *Unconcerned stage* concerns, signalling that they have other priorities that keep them occupied and prevent them from focusing their attention on new clickUP;
 - have high *Management stage* concerns, indicating in the first place that they are concerned that they do not have enough time to organise themselves each day (#4), and secondly (#16) they are concerned about their inability to manage what new clickUP requires;
 - have relative high *Informational* concerns in relation to the *Unconcerned* stage (highest stage), which indicates an openness to learn more about the innovation;
 - have *Personal* and *Informational* concerns that do not differ very much and therefore cognisance should be taken that HPEs may doubt their ability to cope with the demands the new LMS places on them;
 - have *Personal* and *Informational* concerns that are less than 10 percentile points lower than the second highest stage in the *Self* concerns dimension; and they
 - have lowest concerns in the *Consequence* and *Collaboration* stages (in the *Impact* dimension).
- ❖ The results of ranking the four dimensions of concerns are consistent with the earlier discussion (7.3.1.4) about the highest, second highest and lowest stages of concern of HPEs.
- ❖ The combination of the *Unconcerned* stage concerns and the second highest *Management* stage concerns could be the result of a ‘spill-over effect’ from the *Unconcerned* stage towards the *Management* stage. The fact that their workload has increased (as a result of continued budget cuts in the global economic recession etc.) without any tasks being removed or reduced, compounded by the implementation of a new LMS, might result in

too many priorities that restrict individuals in trying to focus on the implementation of the new LMS and how to use it fully. This spills over into feelings of inability to manage their time, tasks and what the new system requires.

- ❖ Concern statements that are repeatedly rated either highest or second highest show that HPEs are concerned about:
 - how to excite their students with the use of the new LMS (#24);
 - not having enough time (#4);
 - other things that they are occupied with (#30); and
 - their inability to manage all that clickUP requires (#16).
- ❖ Although the SoC of HPEs at the start of their journey across the implementation bridge are more or less similar (mimic the group profile) to the SoC at the later stage after they had had time to use the system, the difference lies in the intensity of concerns that are lower during SoCii.

7.3.2 HPEs' group profile: the change from SoCi to SoCii



The CBAM is based on the principle that when individuals are expected to implement an innovation they are involved in a change process. This change process should not be treated as a once-off event, but as a process that

individuals are involved in (Hall & Hord, 2011, pp. 6-12). This change process involves learning new skills and acquiring new knowledge.

In this study, the second SoCQ was employed after HPEs had had the opportunity of attending more training workshops, and then they had a minimum period of two months to start using the new clickUP. A key part of research question 1 is whether any change in their feelings and attitudes, or concerns towards the new LMS occurred.

7.3.2.1 Change in the HPEs' group profile

To investigate the change that took place from SoCi to SoCii, the percentile scores for each of the seven stages in SoCi and SoCii were compared.

Figure 6:4 shows that for two of the stages (*Unconcerned* and *Collaboration*) the percentile scores are exactly the same in SoCi and SoCii. In five of the stages (*Informational*, *Personal*, *Management*, *Consequence* and *Refocusing*) the percentile scores dropped between two and nine percentile points from SoCi to SoCii. This means that the relative intensity of the concerns dropped from SoCi to SoCii for these five stages.

Although less intense concerns are visible in SoCii, the overall profile ('wave') is still the same as in SoCi. The highest stage, second highest stage and lowest stage did not change. Signer et al. (2000, p. 5) revealed similar results, showing that participants remained *typical non-users*, although the intensity of concerns dropped in all seven stages from the first to the second SoCQ. Likewise Foulger and Williams (2007) report that "all remained at the initial stages" (p. 111) after

the second SoCQ, despite the fact that all participants had unique concerns profiles.

7.3.2.2 Investigating the change from SoCi to SoCii

To further investigate the possible changes from SoCi to SoCii three different methods were employed – calculating percentile scores, Wilcoxon paired signed ranked test and drawing box plots. Table 7:3 summarises the results of these methods. The consistency (indicated with similar coloured blocks) or inconsistency between these three methods regarding the change from SoCi to SoCii can be summarised as follows:

- In the *Unconcerned* stage the results of the box plot as well the sum of the negative rankings show that $SoCi > SoCii$, which indicates that the relative intensity of the concerns in the *Unconcerned* stage is less in SoCii. The percentile scores of the group are exactly the same in SoCi and SoCii;
- In the *Informational, Personal and Management* stages, all three methods used indicate that SoCi is greater than SoCii (i.e. the relative intensity of concerns in each of these stages is less in SoCii);
- In the *Consequence and Refocusing* stages there is consistency between the percentile scores and the sum of the negative ranks, showing that the SoCii scores are less intense than the SoCi scores; and
- In the *Collaboration* stage none of the methods shows any consistency. The box plot provides a possible hint of this result in that the upper (50% of participants) and lower (50% of participants) quartiles of relative intensity scores both show an increase and a decrease in relative intensity from SoCi to SoCii respectively. This may explain the result of the percentile score for the entire group showing that $SoCi = SoCii$.

Table 7:3 Results of the change investigated from SoCi to SoCii

| Stage | Percentile score | Box plot results | Wilcoxon paired signed rank test results |
|----------------------|------------------|---|---|
| Unconcerned | i = ii | Lower intensity in awareness scores during SoCii which is evident in the wider range of scores in the lower 50% of the scores seen on the box-plot. | No significant median differences between the SoCi and SoCii scores. The sum of negative ranks shows that SoCi > SoCii. |
| Informational | i > ii | Lower intensity of concerns evident in: <ul style="list-style-type: none"> The percentile scores in SoCii between 25th and 75th percentile is lower than in SoCi Lower maximum and minimum, 25th, 50th and 75th percentile scores. | Significant median differences between the SoCi and SoCii scores at 95% confidence level. Sum of negative ranks shows that SoCi > SoCii. |
| Personal | i > ii | Lower relative intensity of concerns evident in the SoCii scores that are lower in the 1st and 2nd quartile than in SoCi. | Significant median differences between the SoCi and SoCii scores at 84% confidence level. Sum of negative ranks shows that SoCi > SoCii. |
| Management | i > ii | The upper 50% of HPEs in SoCii recorded lower relative intensity of concerns than in SoCi. Median is also less for SoCii than for SoCi. | No significant median differences between the SoCi and SoCii scores. Sum of negative ranks shows that SoCi > SoCii. |
| Consequence | i > ii | Median of SoCii is higher than median of SoCi. | No significant median differences between the SoCi and SoCii scores. Sum of negative ranks shows that SoCi > SoCii. |
| Collaboration | i = ii | Median of SoCii is lower than median of SoCi. This boxplot shows that: <ul style="list-style-type: none"> Upper 50% of HPEs had higher levels of intensity of concerns in SoCii. Lower 50% of the HPEs had a lower level of intensity in SoCii. | No significant median differences between the SoCi and SoCii scores. Sum of negative ranks shows that SoCi < SoCii. |
| Refocusing | i > ii | Median of SoCii is lower than median of SoCi. | Significant median differences between the SoCi and SoCii scores at 89% confidence level. Sum of negative ranks shows that SoCi > SoCii. |

The box plot (see Figure 6:5) provides details (median value and the intensity of concerns in the upper two and lower two quartiles) about the distribution of concern intensities in SoCi and SoCii. The Wilcoxon signed rank paired test also calculated the median differences as well as the sum of positive and negative rankings (SoCii minus SoCi). A statistically significant change in SoC occurs in the *Informational*, *Personal* and *Refocusing* stages, at confidence levels that vary between 84% and 95%.

7.3.2.3 Change in the highest, second highest and lowest stages

In both SoCi and SoCii, approximately 70% of the participants scored the *Unconcerned* stage as the highest stage of concern. The *Management* stage was rated as the second highest stage by 33.33% of participants in SoCi and 37.5% of participants in SoCii. *Management* was followed by the *Informational* stage which was rated by 29.63% of participants in SoCii as the second highest. More HPEs rated *Personal*, *Management* and *Consequence* stages as the second highest in SoCii than in SoCi.

In both SoCi and SoCii, the *Consequence* and *Collaboration* stages of concern were rated lowest. The *Consequence* concern stage was rated the lowest by 55% of participants in SoCi and by 52% in SoCii. The *Collaboration* stage was rated the lowest by 29% of participants in SoCi and by 27% in SoCii. In each of these stages, the percentage of participants who rated it the lowest reduced from SoCi to SoCii.

7.3.2.4 *Change in individual concerns rated the highest, second highest and lowest*

Only two of the individual concerns showed significance in the way they were rated in SoCi and in SoCii:

- Individual concern number 6: “I have a very limited knowledge of the innovation”; and
- Individual concern number 20: “I would like to revise the innovation’s instruction approach”.

Sixty percent of the individual concerns (21 of the 35) showed less intensity (i.e. the median was lower) in SoCii. This pattern is visible not only in the *Unrelated* dimension, but also in the *Self (Informational and Personal)*, *Task (Management)* and *Impact (Consequence and Collaboration)* dimensions. The lower intensity in the *Impact* concerns contradicts what is expected in the development of concerns as hypothesised by the CBAM, namely that the level of concerns in the *Impact* dimension is expected to increase when participants are using an innovation.

7.3.2.5 Summary of finding on changes from SoCi to SoCii

- ❖ The HPEs’ group profiles show that two of the stages had the same percentile scores in SoCi and SoCii and the other five stages had lower percentile scores in SoCii than in SoCi. This means that the relative intensity of the concerns dropped from SoCi to SoCii in these five stages.
- ❖ The prescribed method of comparing the percentile scores for two SoCs was followed up by further exploratory analysis using box plots and the Wilcoxon Paired signed rank test. The percentile score results show

agreement with at least one of the alternative methods used in five of the seven stages.

In the *Unconcerned* stage of concern the percentile scores for SoCi and SoCii were exactly the same; however the box plot and the Wilcoxon paired signed rank test indicate that the intensity of concerns decreased from SoCi to SoCii.

In the *Collaboration* stage of concern, the percentile scores for SoCi and SoCii were exactly the same; however none of the alternative methods show agreement in the direction of change. This is due to the distribution of concern intensities in SoCii.

- ❖ The order of the stages of concern rated as the highest, second highest and lowest remained unchanged from SoCi to SoCii. The analysis of the changes in the highest, second highest and lowest rated stages from SoCi to SoCii shows some evidence of movement across the bridge (Intensity of concerns in SoCii showed lower than in SoCi.).
- ❖ Although only two of the individual concern statements (#6 and #20) were rated as significantly different in SoCii compared to SoCi, 60% of the concern statements were rated with a lower relative intensity in SoCii than in SoCi.

The progress of the HPEs across the implementation bridge is visually displayed in Figure 7:2.

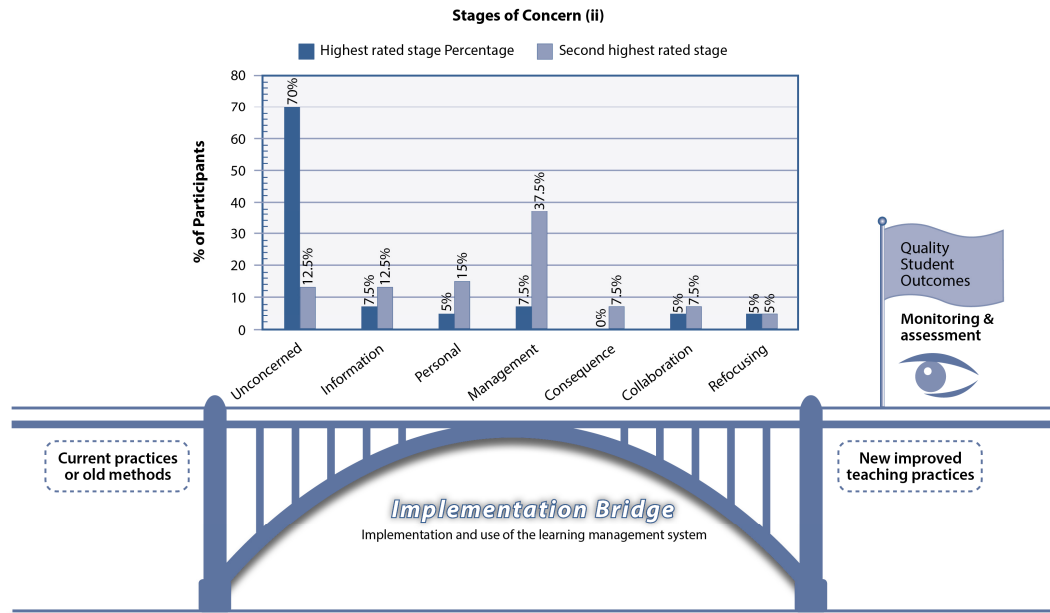
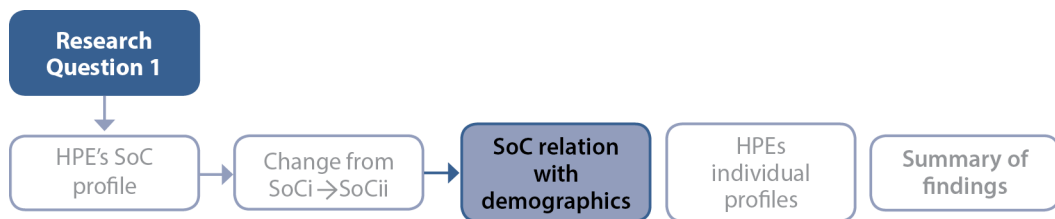


Figure 7:2 SoC and the journey across the implementation bridge

Figure 7:2 would suggest that no progress across the bridge took place (i.e. the majority of HPEs remained in the *Unconcerned* stage). The persistent high *Unconcerned* stage may be explained by the context of the HPEs having many roles and responsibilities associated with their jobs as HPEs, which are not due to change anytime soon. Almost 38% of the participants rated *Management* concerns as the second highest stage, which suggests some movement in the journey across the bridge.

7.3.3 SoC in relation to the demographic variables



George et al. (2008,) affirm that “the state of the user appears to be significantly more important than standard demographic variables in determining how the user will respond to an innovation” (p. 52). However, these authors acknowledge that correlations with demographic data may “lead to improved explanations and interpretations of the concerns data” (p. 52), which is evident in this study as discussed in this section.

7.3.3.1 HPEs’ profiles based on demographic variables

Profiles based on the categories of each demographic variable were analysed graphically and merged to form a generic profile with the following characteristics (see Figure 6:6):

- concerns in *the Unconcerned* stage have the highest intensity;
- the profile slopes down to *Informational* concerns, which are either lower or higher than *Personal* concerns. These two stages are of a slightly lower relative intensity than *Management* concerns;
- *Management* concerns have the second highest intensity; and
- from the *Management* concerns there is a relatively steep slope towards *Consequence* concerns; and

- there is a slight lift towards *Collaboration* concerns before the graph either slopes down or tails up towards *Refocusing* concerns.

These generic characteristics resemble what was discovered in the previous section for the entire HPE group profile. Although interesting to note, it was not the purpose of this research study to describe the clinical differences in each of the demographic variable groups in depth. Instead, the purpose was to focus on demographic variable relationships or correlations that can provide a better understanding about the stages of concerns of these HPEs.

Statistically significant relationships between the demographic variables and the different stages of concern are discussed in the following section.

7.3.3.2 *Investigating the SoC correlation with demographic variables and differences between various groups*

Table 7:4 shows the demographic variables that play a significant role in the stages of concerns in SoCi and SoCii.

Table 7:4 Statistically significant results: demographic variables with SoCi and SoCii

| | Stages of Concern | | | | | | |
|--------------------|-------------------|--------------------|-------------------|-----------------|--|--------------------|-----------------|
| | 0 Unconcerned | 1 Informational | 2 Personal | 3 Management | 4 Consequence | 5 Collaboration | 6 Refocusing |
| Kruskal Wallis: | | | [SoCi] Benefit | | [SoCi] Used old clickUP (2006- 2012) * | | |

Table 7:4 Statistically significant results: demographic variables with SoCi and SoCii (continued)

| | | Stages of Concern | | | | | |
|-----------------------|--------------------------|--------------------------|--------------------------------|---|-------------------------------------|-------------------------------|-------------------------------|
| | | | [SoCii] Academic qualification | [SoCii] Confidence level | [SoCii] Proficiency in new clickUP | [SoCii] Professional identity | |
| Spearman' correlation | [SoCi] Academic position | | [SoCi] Benefit | [SoCi] School | [SoCi] Used old clickUP (2006-2012) | | [SoCi] Academic qualification |
| | | [SoCii] Confidence level | | [SoCii] Confidence level [SoCii] Age | [SoCii] Proficiency in new clickUP | [SoCii] Professional identity | |

*Mann-Whitney test was done instead of the Kruskal-Wallis

The following findings emerge from Table 7:4:

- The **confidence level** of an HPE shows a significant medium to strong positive correlation with concerns in both the *Informational* and *Management* stages in SoCii. HPEs with higher **confidence levels** (to do everything by themselves) show lower relative intensity of *Information* and *Management* concerns. This is confirmed by the results of the Kruskal-Wallis test that exhibit a significant difference between the various groups with regard to their confidence level in using new clickUP. These results also show that the group with the most confidence (to do everything on their own) has the lowest intensity in *Management* concerns, while the group with the lowest confidence level (need support and assistance most of the time) has the highest relative intensity in *Management* concerns.
- There is a significant medium to strong positive correlation in the *Consequence* stage with the dependent variables: **Use of old clickUP (2006-2012)** and **proficiency in new clickUP** in both SoCi and SoCii. The results of the Kruskal-Wallis test confirm that HPEs who have **used the old clickUP** system and feel that they are more **proficient in the use** of new clickUP show higher intensity in *Consequence* concerns.

- There is a significant medium to strong positive correlation between the **Professional identity groups** with regard to their relative intensity in *Collaboration* concerns. Medical doctors show higher levels of *Collaboration* concerns than the group of *Scientists* and *Health Care specialists*. This is confirmed by the Kruskal-Wallis test.
- There is a significant medium to strong negative correlation between the **greatest benefits** in using new clickUP and the relative intensity of *Personal* concerns. This negative relationship shows that HPEs with higher *Personal* concerns mentioned *teaching and learning* as the *greatest benefits* for using the system. These results are confirmed by the Kruskal-Wallis test in that the group of HPEs that mentioned *teaching and learning* as the *greatest benefits* for using the system also had higher relative intensity of *Personal* concerns.
- Significant correlations were also found between the following:
 - **Academic position** and the *Unconcerned* stage – indicating that HPEs in higher academic positions experience higher relative intensity in concerns in the *Unconcerned* stage (there are more priorities associated with higher positions and thus less time to think about the new LMS);
 - **School** and *Management* concerns – indicating that School 1 has higher levels of relative intensity in *Management* concerns than School 4;
 - **Academic qualifications** and *Refocusing* concerns – indicating that HPEs with higher academic qualifications have lower intensity of *Refocusing* concerns; and
 - HPEs in higher **age** groups show higher levels of *Management* concerns.

The results of the Kruskal-Wallis test show significant differences with regard to the relative intensity of their *Personal* concerns in the various **academic**

qualification groups. HPEs with diplomas and PhDs have higher *Personal* concerns than those with post-doctoral, Bachelors, Honours or Masters degrees.

Various studies have investigated the relationship of demographic variables with the concerns of participants (Al-Sarrani, 2010; Hendricson, 2007; Hoskyns-Long, 2009; Julius, 2007; Lee, 2010; Petherbridge, 2007; Sells-Lewallen, 2000).

Petherbridge (2007, p. 152) found that the older the individual, the lower the *Unrelated* and *Task (Management)* concerns are. However, Hendricson (2007, p. 141) and Al-Sarrani (2010, p. 126) found no significant differences among the age groups with respect to their highest or lowest stages.

Petherbridge (2007) also found that “the longer a respondent has used an LMS, the higher their **impact-consequence** concerns” are (p. 155). Similarly the current study shows that HPEs who used the previous version of the LMS, as well as those with higher levels of proficiency in using clickUP, have higher *Consequence* concerns.

A study done by Gallaher and Wentling (2004, p. 66) investigated the concerns regarding e-learning in different professional groups and found that different professional groups adopt innovations at different rates (moved across the bridge of implementation at different rates). The current study shows that different professional identities (i.e. doctors, scientists and health care professionals) have different levels of *Collaboration* concerns. Medical doctors, who are used to working with various professional health care workers and specialists, indicated higher levels of *Collaboration* concerns than the other two professional identity groups.

7.3.3.3 Highest, second highest and lowest stages' association, correlation and differences between various groups with regard to the demographic variables

Table 7:5 displays a summary of the demographic variables in terms of their significant association, correlation and differences between the various groups with the highest, second highest and lowest stages.

Table 7:5 Statistically significant results: Demographic variables and the highest, second highest and lowest stages

| | Highest stage | Second highest stage | Lowest stage |
|---|--|---|---------------------------------------|
| 2-way Chi ² Association | [SoCi] School | [SoCii] Academic position [SoCii] Academic qualification | [SoCii] Academic qualification |
| Kruskal-Wallis Differences between groups | [SoCii] Lecturing experience | | |
| Spearman's Correlation | [SoCi] Academic position [SoCii] Appointment type | | |

Statistically significant **associations** (Chi² test) were found between:

- the highest stage of concern and the demographic variable **School** – approximately 65% of the HPEs in School 2 and 84% from School 3 rated the *Unconcerned* stage as their highest stage;
- the second highest stage and **academic position** – 45.8% of the HPEs who are appointed as *lecturers* rated *Management* concerns as their second highest stage;

- the second highest stage and **academic qualification** – 54% of HPEs with *Masters degrees* rated *Management* concerns as their second highest stage;
- the lowest stage and **academic qualification** – 66.7% of HPEs with *Masters degrees* rated *Consequence* concerns as their lowest stage;

The results of the Kruskal-Wallis test show that HPEs in groups with more **years of lecturing experience** have their highest or peak scores in higher stages of concern.

The following significant correlations were found using Spearman's rank order correlation:

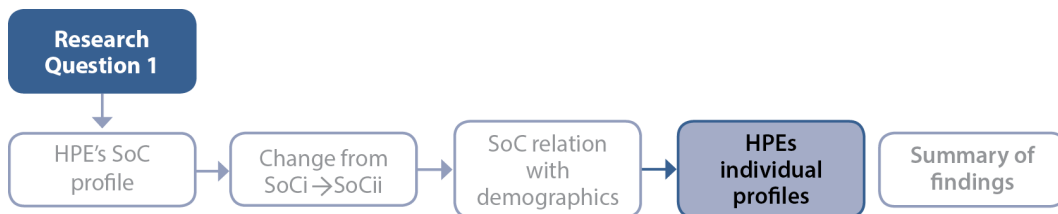
- HPEs with lower academic positions (e.g. *lecturers*) are likely to have their peak or highest concern in the higher stages of concern; and
- HPEs appointed as *permanent UP* staff are more likely to have their peak or highest concern in the higher stages of concern.

7.3.3.4 Summary of findings for SoC in relation to demographic variables

- ❖ The generic profile based on the various demographic groups has similar characteristics to the entire HPE group profile and also corresponds with the highest, second highest and lowest stages described in section 7.3.1. However, due to the smaller numbers of HPEs in the demographic groups (based on the categories of the various demographic variables) variations in the profile become visible in terms of the *Informational–Personal* as well as the *Collaboration-Refocusing* stage relationships.

❖ A number of the demographic variables show statistical significance in relation to stages of concern which lead to improved understanding and/or interpreting the concerns of HPEs. The practical implication of these results is that they can serve as guidelines when training and support interventions are planned.

7.3.4 HPEs' individual profiles



The individual profiles that emerged from SoCii were grouped according to their most prominent characteristics. With the highest stage being the *Unconcerned* stage, the following smaller groups were identified:

- Two large groups were formed based on the scores for the *Informational* and *Personal* stages. This is referred to as the positive or negative “two-split” by George et al. (2008, p.42);
- These two large groups were further divided based on the *Refocusing* stage percentile scores that were higher or lower (tailed up or down) than the *Collaboration* concerns. This “tail-up” is often seen as a warning sign of resistance (George et al., 2008, p.42); and
- Two other characteristics that were used to distinguish between the groups were the scores for the *Personal* and *Management* stages.

Julius (2007, pp. 98-110) also grouped together individual profiles showing common characteristics. He identified four different profiles based on the change over time visible in participant concerns from the first to the third applications of the SoCQ.

The profile groups in the current study differ from what Julius did, in that they do not attempt to interpret the change in concerns, but rather to group together individuals with the same feelings, attitudes or concerns regarding the LMS. The identification of groups with similar concerns may help to identify and formulate the appropriate focussed strategies to facilitate the implementation of the LMS.



7.3.4.1 Alternative configuration of groups

The identification of small groups with similar concerns, attitudes, feelings or needs with regard to the implementation of a new LMS is helpful for the facilitation of workshops (training courses) and support sessions. In Table 7:6 to Table 7:8 the criteria for dividing participants into various groups are used to illustrate and describe the characteristics of each group. These descriptions are based on what George et al. (2008, pp. 53-54) provides as descriptions for individuals with concerns in particular stages. Groups of attendees divided according to their individual profiles will allow facilitators to address specific needs and concerns.

Eight distinct groups were identified which can be used in different combinations, depending on the number of participants and facilitators for a training or support session. The groups can be used flexibly as follows:

- **Two groups** can be formed (see Table 7:6) by using only the *Informational* and *Personal* stage scores. The criteria would be:
 - Is the *Informational* stage score higher than the *Personal* stage score?
 - Is the *Personal* stage score higher than the *Informational* stage score?

Table 7:6 Individual profiles: Two groups

| Informational stage score > Personal stage score? | Personal stage score > Informational stage score? |
|---|---|
|  Positive, interested and open to learning. |  In doubt, not so open or eager to learn. Feelings towards learning might be more negative. |

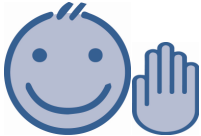
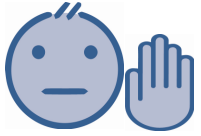


Descriptions based on what George et al. (2008, pp. 53-54) provide.

- **Four groups** can be formed (see Table 7:7) by using the *Informational* and *Personal* concern stage scores together with the *Refocusing* and *Collaboration* stage scores. The criteria would be:
 - Is the *Informational* stage score higher than the *Personal* stage score?
 - Is the *Personal* stage score higher than the *Informational* stage score?
 - Is the *Refocusing* stage score higher than the *Collaboration* stage score?
 - Is the *Collaboration* stage score higher than the *Refocusing* stage score?

Table 7:7 Individual profiles: Four groups

| Criteria for groups with relative high Informational concerns | Criteria for groups with relative high Personal concerns |
|---|---|
| Informational stage score > Personal stage score? Refocusing concerns > Collaboration concerns | Personal stage score > Informational stage score? Refocusing concerns > Collaboration concerns |

Table 7:7 Individual profiles: Four groups (continued)

| Criteria for groups with relative high Informational concerns | Criteria for groups with relative high Personal concerns |
|---|--|
|  <p>Positive, interested and open to learning. Have strong ideas about how to do things differently with another innovation.</p> |  <p>In doubt, not so open to learning. Feelings towards learning might be more negative. Have strong ideas about how to do things differently with another innovation.</p> |
| <p>Informational stage score > Personal stage score? Refocusing concerns < Collaboration concerns</p> | <p>Personal stage score > Informational stage score? Refocusing concerns < Collaboration concerns</p> |
|  <p>Positive, interested and open to learning. Do not have ideas that compete with the current innovation.</p> |  <p>In doubt, not so open to learning. Feelings towards learning might be more negative. Do not have ideas that compete with the current innovation.</p> |

Descriptions based on what George et al. (2008, pp. 53-54) provide.

- **Eight groups** can be formed (see Table 7:8) that take into account the previous two criteria as well as the third criterion, namely the scores of the *Personal* and *Management* stages. The criteria would be:
 - Is the *Informational* stage score higher than the *Personal* stage score?
 - Is the *Personal* stage score higher than the *Informational* stage score?
 - Is the *Refocusing* stage score higher than the *Collaboration* stage score?
 - Is the *Collaboration* stage score higher than the *Refocusing* stage score?
 - Is the *Personal* stage score higher than the *Management* stage score?

→ Is the *Management* stage score higher than the *Personal* stage score?

Table 7:8 Individual profiles: Eight groups

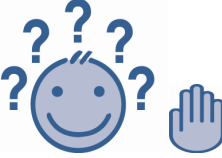
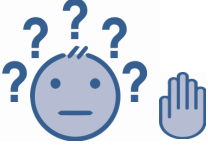





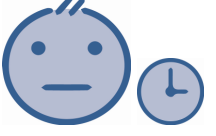
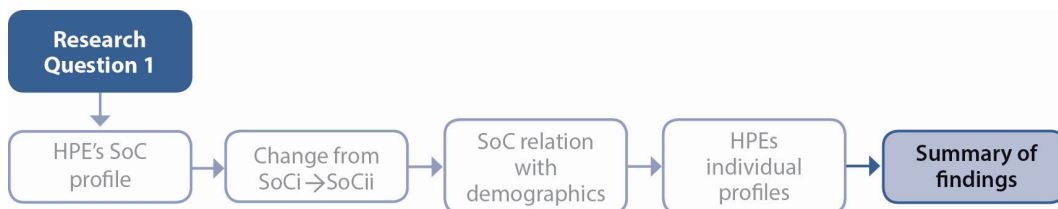
| Criteria for groups with relative high Informational concerns | Criteria for groups with relative high Personal concerns |
|---|---|
| Informational stage score > Personal stage score? Refocusing concerns > Collaboration concerns Personal concern scores > Management concerns scores | Personal stage score > Informational stage score? Refocusing concerns > Collaboration concerns Personal concern scores > Management concerns scores |
|  <p>Positive interested and open to learning. Have strong ideas about how to do things differently with another innovation. Feel uneasy or in doubt about own ability.</p> |  <p>In doubt, not so open to learning. Feelings towards learning might be more negative. Have strong ideas about how to do things differently with another innovation. Feel uneasy or in doubt about own ability.</p> |
| Informational stage score > Personal stage score? Refocusing concerns < Collaboration concerns Personal concern scores > Management concerns scores | Personal stage score > Informational stage score? Refocusing concerns < Collaboration concerns Personal concern scores > Management concerns scores |
|  <p>Positive interested and open to learning. Do not have ideas that compete with the current innovation. Feel uneasy or in doubt about own ability.</p> |  <p>In doubt, not so open to learning. Feelings towards learning might be more negative. Do not have ideas that compete with the current innovation. Feel uneasy or in doubt about own ability.</p> |
| Informational stage score > Personal stage score? Refocusing concerns > Collaboration concerns Management concerns scores > Personal concern scores | Personal stage score > Informational stage score? Refocusing concerns > Collaboration concerns Management concerns scores > Personal concern scores |

Table 7:8 Individual profiles: Eight groups (continued)

| Criteria for groups with relative high Informational concerns | Criteria for groups with relative high Personal concerns |
|---|---|
|  <p>Positive interested and open to learning. Have strong ideas about how to do things differently with another innovation. Have time and management concerns.</p> |  <p>In doubt, not so open to learning. Feelings towards learning might be more negative. Have strong ideas about how to do things differently with another innovation. Have time and management concerns.</p> |
| <p>Informational stage score > Personal stage score? Refocusing concerns < Collaboration concerns Management concerns scores > Personal concern scores</p> | <p>Personal stage score > Informational stage score? Refocusing concerns < Collaboration concerns Management concerns scores > Personal concern scores</p> |
|  <p>Positive interested and open to learning. Do not have ideas that compete with the current innovation. Have time and management concerns.</p> |  <p>In doubt, not so open to learning. Feelings towards learning might be more negative. Do not have ideas that compete with the current innovation. Have time and management concerns.</p> |

Descriptions based on what George et al. (2008, pp. 53-54) provide.

7.3.4.2 Summary of findings for SoC individual profiles



- ❖ The SoC individual profiles of HPEs assisted in identifying different groups of HPEs with similar concerns, attitudes and feelings towards the new clickUP system. These groups can be re-configured (into smaller number of groups) according to the concerns of a group of HPEs. This strategy will allow for the design of appropriate intervention strategies for larger groups of HPEs with similar concerns.

7.3.5 Summary of findings of Rq 1 - the SoC of HPEs at UP

Applying the CBAM conceptual framework and SoC instrument in the Health Sciences context has resulted in the assessment of concerns of HPEs at UP in a structured manner. The SoCQ standardised questionnaire assisted in systematically evaluating the implementation of the LMS (new clickUP) at the University. The analysis of the concerns of HPEs provides change facilitators with details of specific training and support needs to be addressed in order for HPEs to implement the LMS at a higher level of use in their teaching.

At the start of the journey across the implementation bridge, the stages of concern of HPEs at UP were as follows:

- concerns in the *Unconcerned* stage [*Unrelated* dimension] were rated the highest;
- concerns in the *Management* stage [*Task* dimension] were rated second highest;
- concerns in the *Informational* and *Personal* stages [*Self* dimension] were rated at a level close to the *Management* stage (less than 10 percentile points lower than the second highest stage); and

- concerns in the *Consequence* and *Collaboration* stages [*Impact dimension*] were rated the lowest.

After HPEs at UP had had time to use the LMS, the stages of concern remained the same as at the start of the journey, although the intensity of concerns dropped in most of the stages.

When comparing the SoCi and SoCii group profiles using percentile scores, it seems that the stages were rated at similar levels, which suggests that no change took place. Two alternative methods were employed to explore whether any change took place from SoCi to SoCii. The results show that the relative intensity of the concerns dropped from SoCi to SoCii. There is thus some agreement between the CBAM method and the alternative methods of analysis.

The generic profile based on the demographic variables shows similar characteristics to the HPE group profile. It also resonates with the results of the highest, second highest and lowest stage analysis. The statistically significant results found between the demographic variables and the stages of concern have some practical value in understanding the specific needs of HPEs.

The analysis of the individual profiles and the flexible re-construction of groups based on their similar concerns can be of practical value for application in larger groups.

The value and use of the application of the SoCQ in this study are illustrated in Figure 7:3:

- The SoCQ assisted primarily in the identification of the SoC profile of participants in order to isolate their specific needs with regard to training strategies or support interventions needed in their specific context.

- Secondly, further analysis and exploration of the SoC data led to the discovery of additional value in using this instrument:
 - The SoCQ was administered twice during this study and thus allowed for the investigation of possible changes in concerns between the two applications. The results of this investigation reveal the progress made in the journey of the HPEs across the implementation bridge.
 - Gathering the HPEs' demographic information allowed for the analysis of possible relationships between the SoC and various demographic variables. The significant results of this analyses can be used as guidelines (to keep in mind) when designing training or support interventions for specific groups of HPEs.
- The graphical analysis of the individual SoC profiles allowed for the clustering of HPEs with similar concerns. The value of this analysis is that these groups (either 2, 4 or 8) can be configured in various ways based on certain unique characteristics (concerns) which reflect their training and support needs.

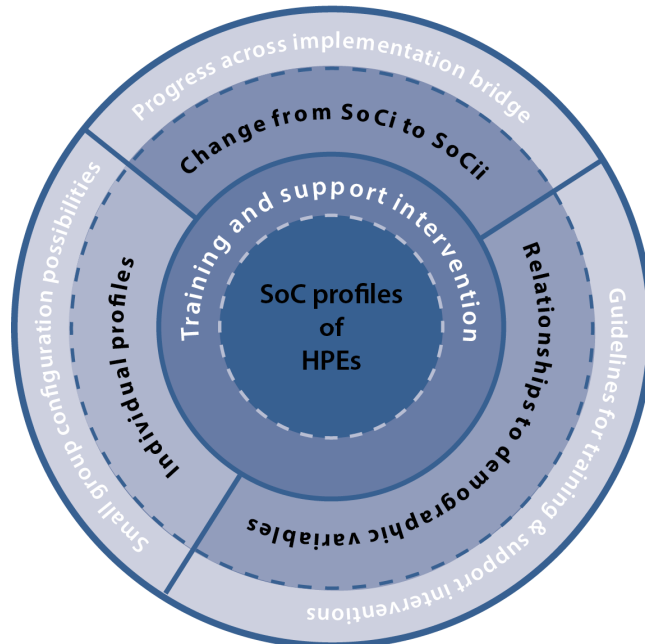


Figure 7:3 Value and use of the SoCQ

7.4 Research Question 2: Levels of Use (LoU) of HPEs at UP

The structure of the discussion of findings for research question 2 is visually illustrated in Figure 7:4.

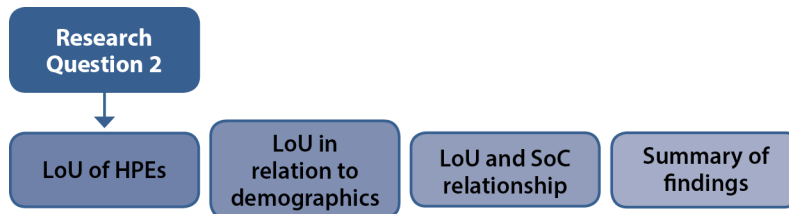


Figure 7:4 Research question 2: structure of the discussion

The levels of use (LoU) of HPEs at UP as determined by means of the LoU standardised interview instrument are discussed, followed by the relationship between the LoU and demographic variables. Finally the relationship between the LoU and the SoC of HPEs is investigated.

7.4.1 The LoU of HPEs at UP



From the LoU interview results shown in Table 6:56, it is evident that 21 of the HPEs are *users* and 11 are *non-users* of the new clickUP system. Of the 11 *non-users*, eight were rated at an overall level II – the *preparation* level. This means that these eight HPEs have decided on a date when they will start using the new system.

Two of the non-users were rated at level I, the *orientation* phase. This means that they have not yet decided when they will start to use the system, but they have taken some action to learn and explore what the system is all about. One of the *non-users* was rated at level 0 – a complete *non-user*. This user has acquired some knowledge, but was passive in terms of considering the use of the system.

Of the 21 *users*, eight were rated at level III - *mechanical* use. These HPEs are actively using the system. Their decisions for change in how they use the system are driven by their needs for convenience, comfort, or management and logistics of the module they teach. Often a very structured (step-by-step) methods of use are followed, in order to survive on a day-to-day basis.

Another eight of the *users* were rated at level IVA - *routine use*. These HPEs have established a routine pattern of how they use the LMS in their teaching and the important thing for them is not to change anything at the moment. HPEs rated at this level have reached this pattern of use within a period of one semester (two to six months). These users may want to wait a while to see the effects of their current use, before they make any changes.

Two of the *users* were rated at level IVB - *refinement* use. These users were rated at this level because they have recently made changes, or are planning to make changes that would benefit student learning outcomes. Their *motivation* as to why they made changes in their use of the system (i.e. to improve student learning) is important.

The remaining three *users* were rated at level V - *integration*. The decisive factor in order to be rated as a level V user is to initiate changes in the use of the system based on work done with colleagues. The motivation behind the decision

to integrate the use of the system is to increase the benefits of the LMS for students. These three HPEs are using the system in this manner.

There were no users at level VI - *renewal*. These would be users who explore other innovations to use in addition to the current one, in order to increase the benefits for student learning.

It is important to note that individuals were rated according to seven different categories of use before an overall LoU rating was applied (Table 6.56). HPEs at level III (*mechanical* use) were sometimes rated at the higher levels of use in categories such as *acquiring information* and *planning*. This illustrates the fact that each of the categories is individually rated based on the information provided by the user.

In Table 6.56 it is also interesting to note that at the higher levels of use (levels IVA, IVB and V), users are often rated at lower levels of use in some categories. Conversely, at the lower level (level III), users are sometimes rated at higher levels of use in some categories. This finding may be due to the fact that HPEs are in the process of implementing a new LMS, and a relatively short time has passed since they started to use the system.

A small number of the studies reviewed (Bresnitz et al., 1997; Foulger & Williams, 2007; Romero-Fuerte, 2009) assessed the LoU of lecturers. The current study's use of the LoU was limited to one evaluation mainly due to resource and time constraints. Two of the studies (Bresnitz et al., 1997; Foulger & Williams, 2007) had more than one researcher and used the CBAM LoU interview as an interview protocol. The only study in higher education (Romero-Fuerte, 2009) that was

conducted by a single researcher and used the LoU, converted the basic interview protocol into a web-based questionnaire.

HPEs were interviewed after they had time to implement the new LMS in their teaching practice. The study by Foulger and Williams (2007) reports a pre- and post-assessment of LoU of lecturers in a faculty of education who implemented a project to work collaboratively in the identification of gaps in the curriculum.

Progress across the bridge of implementation was evident when users progressed from levels I and II in the pre-assessment to levels IVA, IVB and VI in the post-assessment.

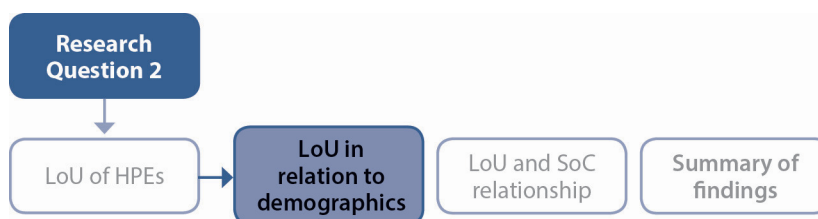
One participant in the study of Foulger and Williams (2007) progressed from level 0 (*non-user*) to level II (*preparation*) in the post LoU interview. Although Foulger and Williams (2007) made use of two LoU interviews, the post LoU results correlate with the current study's results in the sense that participants were interviewed after they had been exposed to the innovation and had had time to start implementing the innovation. Similar to Foulger and Williams (2007) also found that some of the participants remained at the *non-use* level, even after they had had time to implement the innovation. **Doing a pre- as well as a post-interview would be the ideal, but due to time and resource constraints, that was not possible in the current study.**

In the study by Bresnitz et al. (1997), the LoU interview was conducted in three different stages. Their study showed progress in the LoU for a computer-based learning program implemented by lecturers in the field of medicine. They report higher LoU for medical lecturers who received more interventions to support them in implementing the program in their teaching. Similar to the study by Foulger and

Williams (2007) **and the current study**, Bresnitz et al. (1997) also report users who were rated at level II (*non-user: preparation*). Furthermore Bresnitz et al. (1997) reports diverse levels of use in study groups that received various degrees of interventions at the end of their three year study. Bresnitz et al. (1997) highlight the fact that the adoption and implementation process is difficult and that facilitation interventions should be focused around the **concerns of staff**.

The study by Romero-Fuerte (2009) made use of a questionnaire to determine the LoU. This method of determining levels of use is not standardised or validated; however it does provide a feasible and quick way of determining the LoU of many users who are distributed across institutions.

7.4.2 The LoU in relation to the demographic data



Statistically significant results (see Table 7:9) were found between the demographic variables (*age* and *lecturing experiences*) and the levels of use in some of the categories of use (e.g. Sharing).

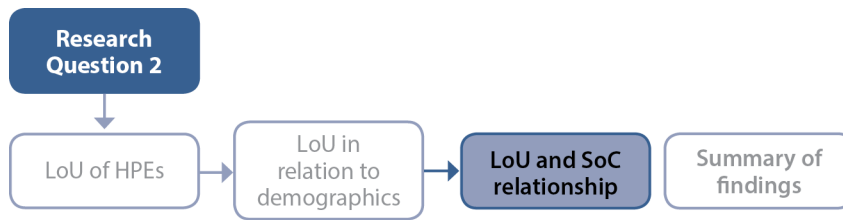
Table 7:9 Summary of statistical significance: LoU categories and demographic variables

| Demographic Variable | Non parametric test | | |
|----------------------|---------------------|---|----------------|
| | Chi 2 | Spearman's correlation | Kruskal Wallis |
| Age | Sharing | Knowledge Acquiring information Sharing ; Assessing Status reporting | Sharing |
| Lecturing experience | | Sharing | |

Spearman's correlation test indicates that *older* HPEs have lower levels of use in each of the categories *Knowledge, Acquiring information, Sharing, Assessing and Status reporting* (see Appendix 3a for categories). The Kruskal-Wallis test confirms that older HPEs tend to have lower levels of *Sharing* while the Chi² test shows that 90.9% of HPEs in the age category 40-49 years were rated at level III in the *Sharing* category. These results could be attributed to the fact that older HPEs hold higher academic positions associated with greater workloads than their younger colleagues and therefore do not have time to talk to colleagues about the use of the system, or share information or ideas on how to use it. The more senior HPEs are also mostly specialists in their fields of expertise and do not have a need to discuss teaching practices with colleagues. It is then also not surprising to find a correlation between *lecturing experience* and the *Sharing* category. In line with the findings above, HPEs with more *lecturing experience* exhibit lower levels of *Sharing*.

These findings of the current study support what Romero-Fuerte (2009) reports on the demographic variable *previous experience in online teaching*, which was found to be a predictor of the LoU of lecturers (p. 200). Furthermore, Romero-Fuerte (2007, p. 200) found that the variables *participation in professional activities* and *experience with the innovation* accurately predicted the LoU. This finding is in agreement with Bresnitz et al.'s (1997) finding that study groups who received more interventions and support also achieved higher LoU ratings during the final interview.

7.4.3 Relationship between the LoU and SoC



The ideal is to have all participants reaching higher levels of use and higher stages of concern. According to Hall and Hord (2011, p. 279) “change success is achieved when Self and Task concerns are resolved and ideally when Impact concerns are aroused”. Hall and Hord (2011, p. 107) contemplate the motivational aspects of moving to higher LoU by assuming a one-to-one correspondence with the SoC. Using their large databases they were able to predict that *non-users* are likely to have *Self* concerns. **People at a higher LoU are likely to have Impact concerns aroused.** They further hypothesise that at the lower LoU, actions of use cause the arousal of concerns, while at higher LoU concerns would seem to drive the level of use even higher (p. 107).

Because higher SoC and higher LoU (both resulting from validated and standardised instruments) are considered to be an indicator of successful implementation (or change success), a scatter graph (Figure 6:18) showing the relation between HPEs’ SoC and LoU was used in this study to assess fidelity of implementation of the new clickUP system. The relationship of the SoC and LoU data displayed on the scatter plot are represented as a 4 x 2 fidelity matrix using the four dimensions of the SoC and the LoU user and nonuser categories. Table 7:10 provides the combined descriptions of the LoU and SoC as defined in both Hall et al. (2008) and George et al. (2008), in order to define and assess fidelity

of implementation in the form of a matrix of concerns and use, based on the results of the SoC and LoU.

Fidelity of implementation is achieved when users of the system reach *Impact* concerns (concerned about the impact of the innovation on student learning outcomes), while being *users* (level III – VI) of the system. This occurs in area H in Table 7:10, the area which reflects the highest stage of concern and the highest overall LoU. Table 7:10 elaborates and defines all the areas in the LoU-SoC fidelity matrix based on the definitions provided by the CBAM.

Table 7:10 LoU and SoC fidelity matrix

| | | |
|--------------------|---|---|
| Impact concerns | <p>G – Concerned about the impact of the innovation on students but still in the process of orientation and preparation before starting to use the innovation.</p> <p>(Unlikely – but possible)</p> | <p>H – Concerned about the Impact of the innovation on student outcomes and about making changes in how to use the innovation to increase the impact on students. These users can range from using the system in a step by step manner to making things easier for themselves by working with others or seeking alternatives to achieve improved student outcomes (Fidelity of implementation)</p> |
| Task concerns | <p>E - Concerned about time efficiency and how to manage the use of the innovation while I am busy preparing and orientating myself for first use.</p> | <p>F – Concerned about time efficiency and how to manage the use of the innovation. These users can range from using the system in a step by step manner to making things easier for themselves by working with others or seeking alternatives to achieve improved student outcomes.</p> |
| Self concerns | <p>C - Concerned about the demands of the innovation and learning more about it – while I am planning to use it.</p> | <p>D – Concerned about the demands of the innovation and learning more about it. These users can range from using the system in a step by step manner to making things easier for themselves by working with others or seeking alternatives to achieve improved student outcomes.</p> |
| Unrelated concerns | <p>A - Other priorities keep me busy; no time to focus on this innovation while I prepare or orientate myself to use the innovation (New to the innovation)</p> | <p>B - Other priorities keep me busy; no time to focus on this innovation. These users can range from using the system in a step by step manner, to making things easier for themselves by working with others or seeking alternatives to achieve improved student outcomes.</p> |
| | Non-use (level 0 – II) | Use (level III – VI) |

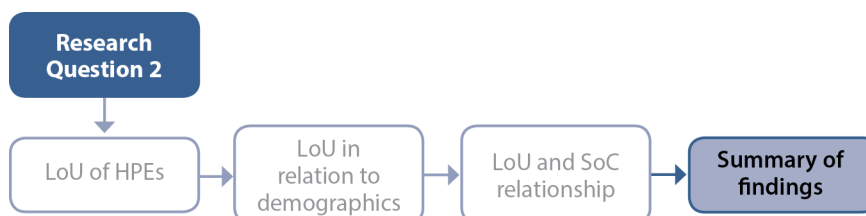
Based on LoU and SoC definitions in both Hall et al. (2008) and George at al. (2008).

From Figure 6:18 it is evident that the majority of HPEs (13 of the 32 participants) with highest concerns in the *Unrelated* dimension are users of the system (area B). **This finding might indicate that HPEs continue to perform tasks expected of them, despite having many other tasks and priorities to attend to.**

Only four of the participants (12.5%) achieved fidelity of use of the LMS as defined in Table 7:10. Ideally a user rated on level IVB or higher, with *Impact* concerns would be regarded as a high fidelity user. Based on this criterion, only one of the participants in this study can be classified as such a user.

From Figure 6:19 a large proportion of the HPEs (9 of the 32 participants) who are using new clickUP rated their second highest concern in the *Task* dimension (F). Figure 6:20 shows that half of the HPEs (16 of 32 participants) are currently **not** concerned about the impact of the system on students (area H). Only after *Self* and *Task* concerns are alleviated through focused interventions and support would HPEs possibly develop concerns about the impact of the system on students, which would lead to fidelity of implementation.

7.4.4 Summary of findings for Rq 2 – the LoU of HPEs



Applying the CBAM conceptual framework and associated LoU standardised interview instrument in the Health Sciences context resulted in an assessment of the extent of use of the new clickUP system by HPEs at the University of Pretoria.

The extent of HPEs' use of clickUP is visually illustrated in Figure 7:5, showing how far in the journey across the implementation bridge they have progressed. About one third of the participants interviewed in this study had not yet started using new clickUP, although a quarter of the entire group had already decided when they will do so. The remaining two thirds of the participants had started using the system, of which a small number have managed to leap to levels IVB and V of use in a very short space of time after the implementation. The majority of users are *mechanical* (level III) and *routine* (level IVA) users (Figure 7:5).

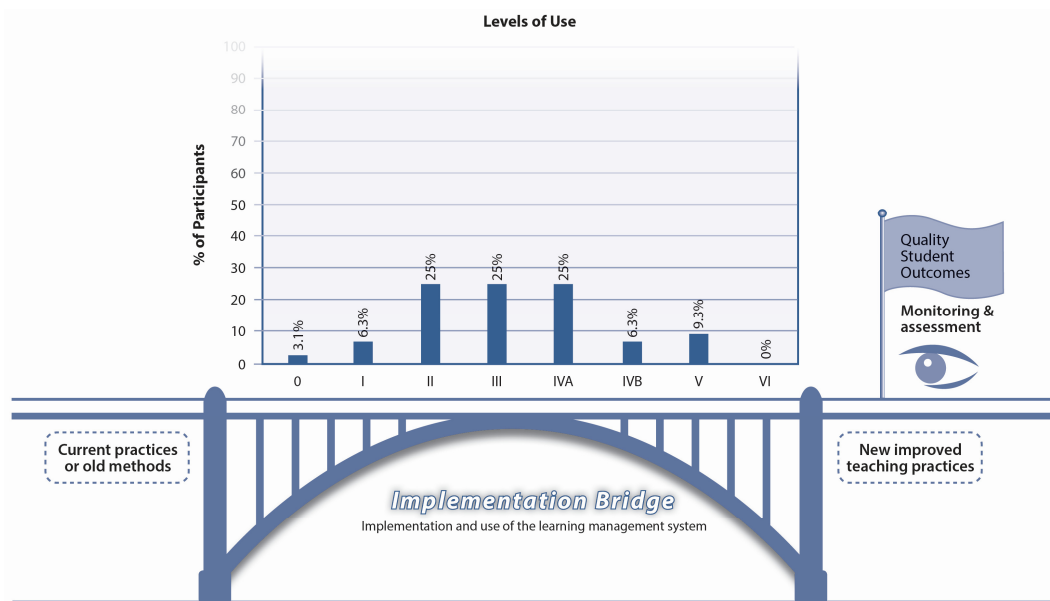


Figure 7:5 LoU journey across the bridge

This study found statistical evidence that the demographic variables *age* and *lecturing experience* play a role in the *Sharing* category. *Age* also shows some correlation with the categories of *Knowledge*, *Acquiring information*, *Assessing* and *Status reporting*. These results illustrate how HPEs belonging to specific categories in terms of *age* and years of *lecturing experience* are using the LMS (clickUP).

The dynamics in the implementation of an innovation such as an LMS are complex (Bresnitz et al., 1997; Hall & Hord, 2011). To ultimately achieve success in the implementation process, the CBAM proposes that users would be expected to achieve higher SoC and higher LoU. Such users would then ideally have highest concerns in the *Impact* dimension, indicating their concern about the effect of the system on students; as well as high LoU, indicating they are making changes in the way the system is used in order to positively affect student learning outcomes (levels IVB – VI). This way of using the system would demonstrate how it was intended or designed to be used in order to ultimately promote student success.

In order to **assess the fidelity of implementation** of the clickUP system, a matrix of the concerns (based on SoC data) and use (based on LoU data) was explored. This method of analysis combines the affective dimension (attitudes and feelings about the use of the system) and the behaviour dimension (actual use of the system). Each of these dimensions was determined separately by means of standardised instruments which are accessible and easy to use for anyone who is implementing an LMS, or indeed any other innovation.

Although this seems an obvious approach when employing both the SoC and LoU instruments, none of the studies reviewed (based on the criteria for the literature review in this study) employed this method of analysis.

7.5 Research Question 3: Perceived expressed needs of HPEs

Figure 7:6 shows the structure of the discussion and summary of findings for research question 3. The perceived expressed needs are discussed before the summary is provided.

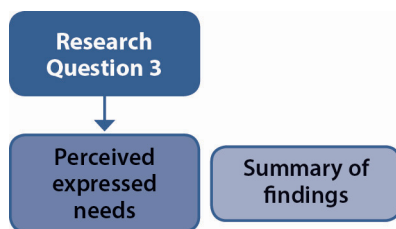


Figure 7:6 Structure of findings for research question 3

7.5.1 The perceived needs expressed by HPEs at UP

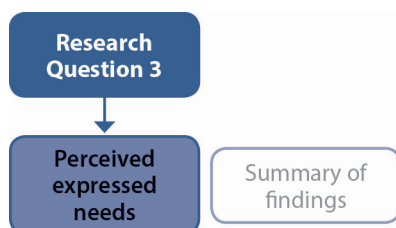


Table 6:64 provides a summary of the range of perceived concerns expressed by HPEs about the implementation of the new clickUP system. From that table it is evident that:

- HPEs expressed more *Self* and *Task* concerns, than *Impact* concerns. This finding is consistent with what was found in research question 1;
- Very few concerns in the *Unrelated* dimension were recorded. This may be due to the following issues:
 - The interview questions did not specifically enquire about their other responsibilities and tasks, but rather about their need for support and training in implementing the new clickUP system;
 - Among the additional concerns categorised in the *Unconcerned* stage, HPEs indicated that they “are expected to attend” and that “courses should be mandatory for all staff”. Together with comments to the effect that it “was not clear why the change ... was necessary” and that “other priorities” prevent them from focusing attention on new clickUP, these concerns might point towards the need for UP leadership intervention or support.

It is interesting to note that individual concern #24 was repeatedly rated as one of the top five highest and second highest rated concerns in the first research question. This concern was also mentioned by HPEs in the interview in various ways. Although this concern is part of the *Consequence* stage, which was rated lowest stage overall in both SoCi and SoCii, HPEs again indicated that they *would like to engage and excite students* by delivering content to them in a variety of ways; and make use of assessment and exercise possibilities as well as the mobile functionalities that are possible (see Table 6.69).

Another individual concern that was repeatedly rated highest and/or second highest in Rq1 was concern #4, which was also expressed by HPEs in various

ways in the interview. HPEs expressed concerns regarding “*not having enough time*” which they elaborated on by indicating that they are concerned about time for planning the necessary change; marking online; practising what they have learned; attending further workshops; and whether the system would be able to assist them in managing time (see Table 6:68). This finding corroborates what was stated in a number of the international studies reviewed (Christie & Juradob, 2009, p. 277; Iqbal & Qureshi, 2011, p. 212; Lawrence & Lentle-Keenan, 2013, p. 189; Samarawickrema & Stacey, 2007, p. 330;), as well as South African studies (Bothma & Cant, 2011, p. 382; Van der Merwe & Mouton, 2005, p.35) that recorded the availability of time as a barrier or challenge to the implementation of an LMS in higher education. Harden and Crosby (2000, p. 6) investigate and list the various roles HPEs have, while Harris et al. (2007, p. 346) studied the changing roles when HPEs use online teaching (see Figure 2:1). This combined list of roles provided by these authors may contribute and or explain the time issues HPEs experience when they have to implement an LMS.

Concern #16 was rated highest and second highest by participants in Rq1 and was also expressed by HPEs in the interview. Their concerns at the start of the journey regarding the “*ability to manage all that clickUP requires*” included the fact that they were concerned about “my ability to implement all the information” and to “manage blogs, wikis...”. They also expressed concerns related to specific tasks that they found challenging, such as uploading documents and downloading assignments from a home connection. This finding confirms what Zayim et al. (2006, p. 219) found regarding self-efficacy belief around computer use, that is a significant factor in the utilisation of technology in teaching.

Another one of the highest rated individual concerns in SoCi that was also mentioned by HPEs in both parts of the perceived needs interview was concern #15. Concerns at the start of the journey regarding the availability of resources included a need (concern) for **personal support**, to revise the hand-outs, to know what online resources are available, to have a process map, and to have a basic recipe to follow. This concern of HPEs at UP is in accordance with some of the suggested support strategies mentioned in the studies reviewed. Many (international and South African) studies agree that support should be offered (Esterhuizen et al., 2013, p. 76; Gautreau, 2011, p. 16; Heirdsfield et al., 2011, p. 10; Khoza, 2011, p. 167; Lee et al., 2004, p. 15; Ryan et al., 2012, p. 232; Shannon & Doube, 2004, p. 12; Shea et.al, 2005, p.17; Weaver et al., 2008, p. 772). Some, however, qualify this claim by suggesting that support should be provided by LMS experts, so as to enable use of the system to full capacity (Christie & Juradob, 2009, p. 277; Fox, 2007, p. 200; Weaver et.al, 2008, p. 772). There is agreement among these studies that ongoing personal support from instructional designers and technology specialists should be provided (Fox, 2007, p. 201; Shea et al., 2005, p. 18).

The lowest rated individual concerns #1, #2 and #3 in Rq 1 were not mentioned by HPEs during the perceived expressed needs interview. Concern #11 was rated in both SoCi and SoCii as one of the lowest rated concerns. It was coded several times with reference to the concern: “I am concerned about how the innovation affects students” and was associated with statements such as:

- “...that it is useful and interesting for students...”;
- “...to make life easier for my students...”;

- “...and the students’ success with the system...”;
- “User friendliness will affect the students’ and colleagues’ use...”

From these findings it can be inferred that HPEs have, in fact, started to consider the impact of the system on the students, albeit intuitively or unconsciously. It should be noted that the CBAM assesses whether lecturers are consciously considering the impact of an innovation.

In each of the stages of concern, additional concerns were coded that belong to the particular stage, but not to a particular individual concern. In Table 6.66 the additional *Informational* concerns seem to indicate very specific training needs, such as the need to bring their own content to training sessions, or the need for short courses that could be repeated as further encouragement. These additional concerns are consistent with what previous studies have recorded. The study by Georgina and Hosford (2009, p. 695) suggests that opportunities for follow-up workshops should be offered. Several authors propose that departmental training should be based on the particular needs of individuals to promote effective adoption (Cabral et al., 2012, p.618; Christie & Juradob, 2009, p. 277; Gautreau, 2011, p.13; Shannon & Doube, 2004, p. 14). The same suggestion is made by Schifferdecker et al. (2012, p. 1068-1071) who conducted a study in medical education. Furthermore, Weaver et al. (2008, p. 770) propose that this type of training should also acknowledge the particular discipline knowledge of academics.

In Table 6:67 the additional concerns in the *Personal* stage highlight HPEs’ concerns regarding confidence and skills required to master or learn the new system. These additional concerns relate to “computer anxiety” that Al-Busaidi

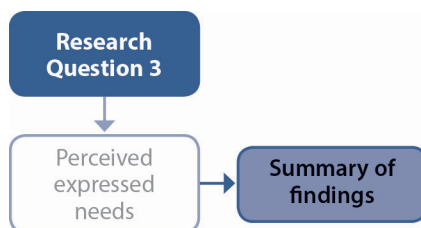
and Al-Shihi (2012, p.35) recorded as being a barrier or challenge to implementing an LMS in teaching.

In Table 6:68 the additional concerns in the *Management* stage revolve around the management and effective use of the system, communication with students, and interaction between lecturer and students. In Table 6:69 the additional concerns in the *Consequence* stage revolve around how to encourage students to become more engaged in the system.

In Table 6:70 the additional concerns in the *Collaboration* stage all indicate the need for colleagues to use the system and their concerns and associated impact when that does not happen. Petherbridge (2007, p. 268) reported similar findings about the effect of colleague's attitudes towards the LMS when she reports: "colleagues' attitudes towards the LMS are predictive of faculty [lecturers] concerns".

7.5.2 Summary of findings of Rq 3 – the expressed perceived needs of

HPEs



From the perceived needs expressed by HPEs, more *Self* and *Task* concerns are mentioned than *Impact* concerns, which is consistent to what was found in research question 1 from the analysis of the SoC using the SoCQ. Concerns at

the *Unconcerned* stage were not recorded in the interview, which may be due to the fact that the interview questions did not specifically focus on other tasks or priorities required of HPEs.

In this research question, variations to the concerns in the SoCQ were identified. These variations provide a better understanding of what each of the concern statements implies in the context of the Faculty of Health Sciences at the University of Pretoria. The value of these results lies in the ability it provides to instructional support staff to plan and design tailor-made interventions for this specific group of users of the LMS.

The additional concerns expressed by HPEs in each stage are that:

- a leadership intervention strategy might be required from UP management to address the concerns mentioned, in order to improve the use of the clickUP system in teaching in the faculty;
- HPEs have specific needs in terms of training workshops and the way they are presented;
- HPEs indicate that having to learn this new LMS made them feel vulnerable about their own skills and in doubt as to whether they would be able to master it;
- HPEs want to use the system to manage communication and information to the students effectively;
- HPEs want to engage students in learning through the use of clickUP; and
- HPEs are concerned about the non-use of the clickUP system by their colleagues and the impact this non-use has on their own workload.

7.6 Conclusions

Hall and Hord (2011, p. 77) state that:

“Attempting to change humans in an organisational context is a very complex, dynamic, subtle enterprise process. However by looking at the patterns, being knowledgeable about what has been learned about change, and being grounded in the uniqueness and intricacies of the situation, it is indeed possible to plan and facilitate a change process that will unfold in the manner shown in hypothetical patterns...change facilitators must continuously engage in monitoring and adjusting. “

The current study evaluated the implementation of an LMS in a Health Sciences faculty in a South African context. This addresses the shortcoming identified in chapter 2 that noted that no study reported on the extent of an LMS implementation in a medical education environment in South Africa. None of the studies reviewed in chapter 3, conducted in a higher education context – using the CBAM instruments – evaluated the use of an LMS. The two studies previously conducted in a South African context employing CBAM (Gwele, 1997; Khoboli & O’Toole, 2012) did not evaluate the use of educational technology. Furthermore, none of the doctoral studies reviewed that utilise the CBAM theory as a method of investigation in a higher education context were conducted in the field of Health Sciences. This study contributes to alleviate both these gaps in the literature.

Within the limitations of this study, its purpose was achieved by identifying the SoC (Rq 1), LoU (Rq 2) and the perceived expressed needs (Rq 3) of HPEs who are in the process of implementing an LMS. The systematic evaluation using the CBAM framework with its SoC and LoU standardised instruments shows that

HPEs at the University of Pretoria have not yet completed the journey across the *implementation bridge*.

Figure 7:7 visually illustrates the scope of the study and the relationship between the three research questions which the study investigated. The SoC (Rq1) and perceived expressed needs (Rq3) illustrate what HPEs need with regard to training and support interventions in order to facilitate the continuation of this journey across the implementation bridge. The LoU (Rq2) shows the extent to which the LMS is used by the HPEs. This result is visually illustrated (Figure 7:5) on the implementation bridge.

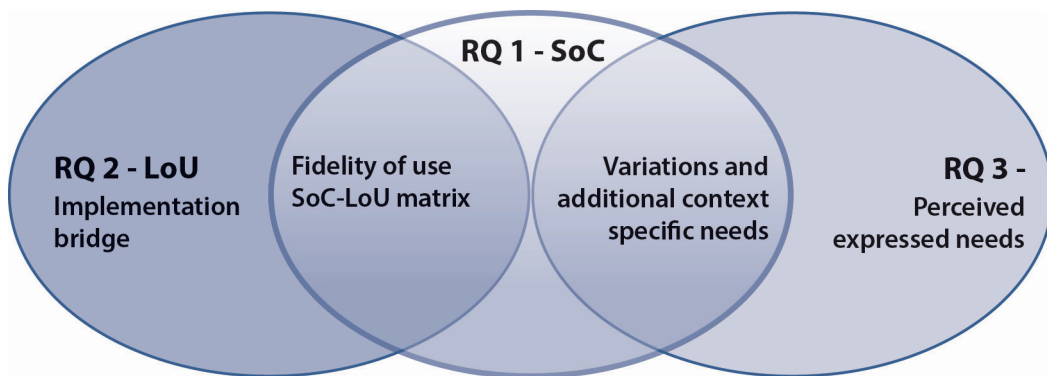


Figure 7:7 Integration of research questions

The findings for Rq1 show that HPEs repeatedly rated the *Unconcerned* stage of concerns as the highest, and *Management* concerns as the second highest in both SoCi and SoCii. This profile shows traits of both the hypothetical *non-user* as well as the *inexperienced* user profile. The intensity of *Informational* and *Personal* concerns does not differ very much from that of *Management* concerns. A positive attitude towards the implementation of the upgraded LMS is evident

from the Informational stage concerns that are consistently rated higher than the Personal stage concerns for the entire group of HPEs.

Using the perceived needs interview (Rq 3), more detailed information regarding context-specific needs was collected from the participants to supplement the CBAM framework. The results reveal variations and additional needs and/or concerns over and above the 35 concerns listed in the SoCQ.

This study has thus established the needs of HPEs in the following form, at both the start of the implementation journey (SoCi) and at a later stage of the journey (SoCii):

- The highest and second highest SoC were identified, as well as the top rated individual concerns of HPEs (Rq1); and
- The perceived needs interviews and the resulting tables list the variations and additional concerns expressed by HPEs (Rq 3).

Table 7:11 provides a synthesis of the contextualised needs of HPEs at UP based on their needs listed in Appendix 7a.

Table 7:11 Contextualised needs of HPEs at UP when implementing an LMS

| SoC | Phase 1 | Phase 2 |
|--------------------|---|--|
| Unconcerned | <p>HPEs need:</p> <ul style="list-style-type: none"> - to have a manageable workload to allow for time to learn and implement a new LMS; - to understand how the new LMS will benefit them to be more efficient in managing their available time and the value it can add to their teaching and student learning; - to understand the strategic objective of the University with regard to the change to the new LMS; and - to know what resources in terms of training and support options will be provided. | <p>HPEs need:</p> <ul style="list-style-type: none"> - to have a manageable workload to allow for time to learn and implement a new LMS; - to understand how the new LMS will benefit them to be more efficient in managing their available time and the value it can add to their teaching and student learning; and - to understand the strategic objective of the University with regard to the change to the new LMS. |
| Management | <p>HPEs need:</p> <ul style="list-style-type: none"> - to have time available to attend training and practice what they were taught, to then develop their own course(s); - to be able to implement the functionalities they identified and to see how their teaching methods can be accommodated by the functionalities of the LMS; - to know how the responsibilities for LMS tasks are divided between the Department for EI and the academic departments; - to be assured of the reliability and on-demand availability of the LMS; and - to know how to use the LMS more effectively, thereby making things easier. | <p>HPEs need:</p> <ul style="list-style-type: none"> - to have time available to attend training and practice what they were taught, to plan and develop their own course(s) and test the system; - to know how the LMS can help them to manage time more efficiently through employing online marking of assignments, uploading documents for students, managing the downloading of many assignments from home, performing administrative tasks, <i>monitoring students' activity in a course, and using assessment and communication functionalities</i>; - the necessary knowledge and skills to use the LMS more effectively in all courses throughout the faculty; - enhancement of the specific functionalities the LMS provides (e.g. a user-friendly rubric to mark assignments and access to a wider variety of question types); - ubiquitous access to learning material for students when needed; - to know how the responsibilities for LMS tasks are divided between the Department for EI and the academic departments; and - to be assured of the reliability and on-demand availability of the LMS. |

Table 7:11 Contextualised needs of HPEs at UP when implementing an LMS (continued)

| SoC | Phase 1 | Phase 2 |
|----------------------|--|--|
| Informational | <p>HPEs need:</p> <ul style="list-style-type: none"> - knowledge regarding specific functionalities of the LMS such as communication, collaboration, assessment functions; - to learn the basics on how to navigate, get access, upload content to the LMS; - to know how to create a learning space and structure a course; - an overview of the possibilities and to discuss the feasibility of using the LMS for their specific needs; - to know what resources are available when using the LMS, specifically with regard to personal support as well as online resources; - training in order to stay abreast with educational technology, but also to have their specific individual needs addressed during training workshops; - hands-on demonstration and practice during workshops; - a feedback session on their use of the system; - to know what the strategic objective of UP is with regard to the implementation of the new LMS; and - to know how the new LMS is different from the previous version. | <p>HPEs need:</p> <ul style="list-style-type: none"> - knowledge regarding assessment, mobile functionalities and managing files; - to know how to structure a course and make it look attractive; - to see further possibilities on how to use the LMS; - to know how to adapt their ideas to match the available possibilities and see examples of how the LMS is used in similar contexts; <i>discuss the feasibility of using the LMS for their specific needs</i> - personal support in the form of just-in-time guidance, telephonic, email and online support; - training in order to stay abreast with educational technology; - training to be provided regularly in the form of short courses but also to review what they have previously learned; - to work on own content during the training sessions; - to know if the bandwidth is stable enough (reliable) to use the LMS; and - to know that the new LMS will work just as well as the old/previous version. |
| Personal | <p>HPEs need:</p> <ul style="list-style-type: none"> - to know how their teaching approach should change when planning to use the LMS; - to understand the expectations of UP with regard to the use of the LMS in teaching; - to know that the change to the new LMS is worth their efforts and will not be a disastrous implementation; - to know if they will be able to cope with developing everything 'from scratch'; | <p>HPEs need:</p> <ul style="list-style-type: none"> - to know how their teaching approach should change when planning to use the LMS; - to understand the need for the new LMS and the strategic objective of UP; - to be confident that they will be able to master the LMS; - to improve their computer skills required to implement the LMS; - a digestible amount of information on each day of the training days; |

Table 7:11 Contextualised needs of HPEs at UP when implementing an LMS (continued)

| SoC | Phase 1 | Phase 2 |
|-----|--|---|
| | <ul style="list-style-type: none"> - to know how much time and learning (training) are required to implement the LMS; - to feel confident that they will be able to master the use of the LMS with practice after the training and use it independently; - to feel confident about their personal computer skills that would enable them to use the LMS; - to feel comfortable that they will be able to learn the LMS and keep up with the rest during the training workshop; and - a digestible amount of information during workshops. | <ul style="list-style-type: none"> - training to be presented at an adjustable pace; and - to know that when they work in the system they will not be frustrated. |

❖ Further synthesis of the needs presented in Table 7:11 resulted in four **core needs** of HPEs at UP when implementing a new LMS:

- the need to understand **the reason for change** to the new LMS (in the *Unconcerned, Informational* and *Personal* stages);
- the need to **allow time** to learn, practice, develop and implement the system in their teaching (in the *Unconcerned, Management* and *Personal* stages);
- the need for **training and support resources** to be available (in the *Unconcerned, Informational* and *Personal* stages); and
- the need to understand the **functionalities** available and the associated possibilities of using the new LMS in their teaching (in the *Management, Informational* and *Personal* stages).

The *needs with regards to training and support resources* indicated by the HPEs is mirrored in the strategies (i.e. to provide training and support) to enhance implementation found in the literature review conducted in chapter 2.

To facilitate the journey of HPEs across the implementation bridge, the first priority should be to pay further attention to concerns in the *Unconcerned* stage. Addressing these concerns should also positively impact on the *Management* concerns. Specific training and support interventions based on the needs identified in Phase II of Table 7:11 need to be formulated, designed and implemented by staff responsible for change and implementation. The needs listed in Phase I (Table 7:11) need to be taken into consideration when an upgrade or a new LMS is implemented in the future.

The results of Rq 2 show that half of the HPEs have progressed to become level III (*mechanical*) and level IVA (*routine*) users on the bridge of implementation. A small number of HPEs have leaped across the bridge in a short time after the implementation, to level IVB (6.3%) and level V (9.3%). Nobody, however, has managed to travel across the bridge completely. Twenty five percent of the HPEs had not yet started the use of the LMS, but have decided when they will do so. Only 3.1% of the HPEs are regarded as level 0 (*non-users*) and thus remain at the start of the implementation journey.

This study integrated the results of the SoC (Rq1) and the LoU (Rq2) by means of scatter plot graphs (Figures 6:18 -6:20) showing the relation between the SoC and LoU for HPEs at UP. The scatter plot graphs were adapted to form a 4 x 2 *fidelity matrix* (Table 7:10) based on the four SoC dimensions and two LoU non-user and user categories, showing fidelity of implementation as defined in this

study. This matrix shows that, based on their highest SoC and LoU, the majority of HPEs at UP did not achieve fidelity of implementation of the LMS. Four of them (12.5%) did, however, achieve fidelity of implementation.

Having a standardised means (i.e. standardised instruments) for determining the fidelity of implementation (as defined in this study) of expensive, sophisticated systems such as LMSs will benefit higher education institutions. The fidelity matrix could be expanded by refining different levels of fidelity of implementation by dividing the LoU *users* vertically: Level III and IVA (the mechanical-routine users) and Level IVB – VI (the impact users). This study combined the user categories due to the limited number of participants. Ideally a 4 x 3 fidelity matrix will allow a more refined fidelity analysis.

Addressing the current needs of HPEs, as identified through this study, would enable them to move to higher stages of concern and ultimately to fidelity of implementation. Hall and Hord (2011, p.107) claim that at lower levels of use, actions drive concerns, but at higher levels of use, concerns drive actions. This notion is based on huge databases of CBAM results, and warrants further follow-up evaluation to confirm if true for the specific context in the Faculty of Health Sciences at the University of Pretoria.

7.7 Summary of contributions of the study

Several contributions to the field of knowledge can be derived from the findings of this study.

Firstly, a systematic literature review on the application and use of the CBAM framework in higher education revealed that this model has been used in various studies to evaluate concerns or the extent of implementation of an innovation. Only two of the studies reviewed used the CBAM in the context of medical education. One of these studies (Gwele, 1997) used a CBAM diagnostic tool in a South African context. However, Gwele's (1997) study did not attempt to evaluate the extent of use of an LMS. **It may be argued that the current study is the first to use the CBAM diagnostic tools to evaluate the extent of use of an LMS in medical education in South Africa.**

Secondly, the individual profiles that were compiled in this study afford the opportunity to define distinct groups of HPEs with the same concerns. Only one of the studies reviewed (Julius, 2007) also identified groups based on the change profiles of individuals. The aim of the current study in identifying groups with similar profiles was to improve facilitation of the implementation process; in particular, these groups can be configured to suit the number of participants and/or facilitators.

Thirdly, a synthesis of the SoC results and the results from the perceived needs interview allowed for the **formulation of two sets of needs of HPEs at UP** – at the start of the implementation of an LMS, as well as at a later stage of the implementation process.

Fourthly, this study utilised various methods to investigate the change that took place from the first SoC evaluation to the second one. The CBAM authors propose the use of the profile graph with percentile scores of the group of participants. This is particularly useful for larger groups. Using box plots,

however, allowed for a more detailed evaluation about the change that took place from the first to the second evaluation in a smaller group. **This method provides a visual representation of the distribution of the percentile scores in each of the evaluations.**

Fifthly, this study explored ways to define and assess the **fidelity of use of an LMS** in a higher education teaching context. The scatter plots (Figure 6:18 to Figure 6:20) showing the relationship between the SoC and LoU of HPEs indicate that the concerns about and use of the clickUP system are not yet in an area that would constitute fidelity of implementation. The standardised SoC and LoU instruments were used to combine the concerns and levels of use, thus providing **a standardised method (a concerns-and use-matrix) to assess and define the fidelity of implementation of an innovation.**

Lastly, the perceived needs interview augments the SoCQ instrument by providing change facilitators with a **rich understanding of the concerns and needs of HPEs at UP.**

7.8 Suggestions for further research

Based on the findings of this study the following suggestions can be made for further studies:

- Conduct a follow-up study by employing a third SoCQ and a second LoU evaluation after training and support interventions have been implemented, to determine further progress made across the implementation bridge;

- Investigate further applications of the fidelity matrix as a method to determine fidelity of implementation of an innovation;
- Investigate how the results from the fidelity matrix correlate with user analytics in the LMS;
- Invite the entire Faculty of Health Sciences at UP to complete a SoCQ (those who attended and those who did not attend the clickUP workshops);
- Compare the results with the current study to further the understanding of HPEs' needs regarding the implementation of new clickUP; and
- Gather feedback from the HPEs on the training and support interventions in order to investigate the effectiveness of the intervention strategies employed.

7.9 Closing remarks

This research study allowed the researcher (change facilitator) to investigate the real life context of HPEs at UP. The focused conversations with HPEs changed the current consultation and support practices by allowing immediate response and follow-up interventions, based on their specific needs with regard to the implementation process. Furthermore, the nature of the relationship with HPEs was improved by having a clearer understanding of their teaching and learning goals and challenges.

In his book “Theory-U – Leading from the future as it emerges”, Sharmer (2009, p. 7) writes that

“the success of the intervention depends on the interior condition of the intervener”.

This research study has documented a process through which change took place ‘from the inside’ – introspection and change that enhanced the daily work of facilitating the implementation of an LMS. This is a process recommended for other instructional designers or staff involved in the facilitation of recurring implementation of new educational technologies in the higher education landscape.



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Appendices



Appendix 1a Descriptions and topics covered in the new clickUP training workshops (Compiled by the DEI, 2011b – Internal document) (continued)

| Name of the Workshop | Outcome, description and topics covered in each workshop |
|----------------------------|--|
| Overview workshop | <p>Identify possible new ways in which to apply the new clickUP environment; become familiar with the new environment and terminology and personalize and customize your module in the new clickUP environment.</p> <p>The clickUP Overview workshop helps to discover the functionalities of the new system. This workshop focuses on the similarities, differences and new functionalities of the new clickUP, as well as on how to personalize the system and customize your module. It also informs lecturers on how to prepare for the move to the new environment.</p> <p>Topics</p> <ul style="list-style-type: none"> • Application of a blended learning model in your module • Functionalities available in the new clickUP system • Changed and new concepts in the new clickUP system • New clickUP portal • New and different terminology and functions • Navigation & • Personalise the clickUP environment • Customize your module: loading a banner, changing menus, load lecturer information • The use of the content menu, content areas and module pages. • Identify your specific future training needs for your use of clickUP. |
| Content workshop | <p>Create a resource-led clickUP module that can serve as a prototype for your other modules.</p> <p>The clickUP Content workshop helps lectures discover the functionalities available to distribute resources through the new system. In this 4-hour workshop they create a resource-led clickUP module that may serve as an example for your other modules.</p> <p>Topics</p> <ul style="list-style-type: none"> • Use the UP teaching and learning principles to organise and plan the distribution of content within a module • Examples of how resources may be used in clickUP to promote active learning • Identify challenges with regard to the use of resources • Identify functionalities in clickUP that may solve your challenges • Changed and new concepts in the new clickUP system • New and changed terminology and functions & • Use of the Content Collection • Plan the use of content tools in clickUP (Visual editor, items, files, mash-ups, adaptive release, external links, syllabus, library pages, content folders, learning modules, lesson plans, etc.) • Build your own solution in your own module. |
| Assessment workshop | <p>Extend the module (built in the previous session) with clickUP collaboration tools that will enable your students to interact with and learn from each other. The Content workshop further extends the module (built in the previous session/s) with clickUP assessment tools that will enable you to assess your students; and for the students to self-assess or peer assess each other.</p> <p>Topics</p> <ul style="list-style-type: none"> • Apply the UP education and assessment principles that underpin assessment • Value of formative feedback and ways to provide feedback to students via clickUP |

Appendix 1a Descriptions and topics covered in the new clickUP training workshops (Compiled by the DEI, 2011b – Internal document) (continued)

| Name of the Workshop | Outcome, description and topics covered in each workshop |
|-------------------------------|---|
| | <ul style="list-style-type: none"> • Examples of how clickUP may be used to assess students • Principles of objective assessment • Identify challenges with regard to assessment. • Identify functionalities in clickUP that may solve your challenges • New and changed terminology and functions • Plan the use of assessment tools in clickUP (“tests, self- and peer assessment, assignments, Turnitin assignments, Grade Centre, rubrics, portfolio, graded discussion boards, journals, blogs and Wikis”, etc.) • Marking assignments using the Grade Centre • Build your own solution in your own module |
| Collaboration workshop | <p>Further extend the module (built in the previous session/s) with clickUP assessment tools that will enable you to assess your students; and for the students to self-assess or peer assess each other.</p> <p>The clickUP Collaborate workshop helps to discover the functionalities of the new system. In this 4-hour workshop you will extend your module (built in the previous session) with clickUP collaboration tools that will enable your students to interact with and learn from each other.</p> <p>Topics</p> <ul style="list-style-type: none"> • Apply the UP education principles that underpin collaboration • Examples of how clickUP may be used to promote collaboration/group work • Identify challenges with regard to the collaboration/group work • Identify functionalities in clickUP that may solve your challenges • New and changed terminology and functions • Detect emotions in written text and formulate appropriate responses in an online environment • Plan the use of collaboration tools in clickUP (discussion board, blogs, wikis, journals, groups, messages, collaboration, etc.) • Build your own solution in your own module |
| Management workshop | <p>Apply clickUP management tools to enable you to administrate, manage and track the performance of small, medium and large groups of students.</p> <p>The clickUP Management workshop helps to discover the functionalities of the new system. In this 4-hour workshop you will apply clickUP management tools to enable you to administrate, manage and track the performance of students.</p> <p>Topics</p> <ul style="list-style-type: none"> • Apply the UP education principle that underpin student support • Examples of how clickUP may be used to support students • Identify challenges with regard to the management of students and a module • Identify functionalities in clickUP that may solve your challenges • New and changed terminology and functions • Use of the Grade Center • Plan the use of management tools in clickUP (module pages, notifications, adaptive release, Grade Centre, Early Warning System, course reports, My Grades, etc.) • Build your own solution in your own module. |

Appendix 2a Studies reviewed in an international context

| | Author | Year | Journal | Type of article | Country | LMS used | Theme / topic | Purpose of study | Method and or instruments used to gather data | Participants: Sample size Institution(s), faculty(ies) and or department(s) |
|---|-------------------------|------|--|--|-----------|------------------------|-------------------------|---|--|---|
| 1 | Lee, Tan & Goh | 2004 | International Journal of Distance Education Technologies | Describe process followed during implementation and student satisfaction | Singapore | Blackboard | Adoption rate & process | Outline of the process followed to implement e-learning and other adjacent software on campus. And do a student satisfaction survey. | Used a staff and student satisfaction survey | n = 141 (staff) and n = 2771 (students) |
| 2 | Shannon & Doube | 2004 | Australasian Journal of Educational Technology | Research | Australia | Blackboard version 5.0 | Barriers / factors | Investigate the barriers to the adoption or extended use of the online learning management and content creation system. | Qualitative & Quantitative Questionnaire; Focus groups | n = 156: (Lecturers: full time and part time) |
| 3 | Shea, Pickett & Li | 2005 | International review of Research in Open and Distance learning | Research | USA | Not specified | Barriers / Factors | Reports on research to determine potential barriers to the continued growth in adoption of online teaching in higher education. | Quantitative Survey | n = 913 Math/Sciences, Art, Humanities, Social Sciences, Business |
| 4 | Coates, James & Baldwin | 2005 | Tertiary Education and Management | Conceptual | Australia | Not specified | Influence of LMS | Critical examination of the potential impact of online systems on teaching and learning in universities. It discusses the possible effects of LMS on teaching practices, student engagement, and the nature of academic work and on the | NA | NA |

NA: Not applicable

Appendix 2a Studies reviewed in an international context (continued)

| Author | Year | Journal | Type of article | Country | LMS used | Theme / topic | Purpose of study | Method and or instruments used to gather data | Participants: Sample size Institution(s), faculty(ies) and or department(s) |
|--|------|---|-------------------------------------|-------------|--------------------------|--|---|--|---|
| | | | | | | | control over academic knowledge. | | |
| 5 Bongalos, Bulaon, Celedonio, de Guzman, Ogarite | 2006 | British Journal of Educational Technology | Research | Philippines | Blackboard | Experience | To describe the experiences of college teachers as they develop, implement and evaluate their courseware materials. | Qualitative study using an interview and observation. | N = 10 Colleague professors |
| 6 Samarawickrema & Stacey | 2007 | Distance Education | Research | Australia | WebCT Vista | Barriers / Factors | Examine the factors that enable or impede the adoption of technology and their related pedagogical strategies. | Case study Interviews; Examination of artefacts and field notes | N = 22 University wide: Medicine, Nursing and Health Sciences; Arts; Business and law, Information technology; Education and Engineering |
| 7 Fox | 2007 | International Journal on E-Learning | Research | Hong Kong | WebCT & Blackboard | Experience and staff perceptions of the benefits | To focus on staff perceptions of how ICTs provide benefits to learning and teaching also look at issues and common concerns that needs to be addressed. | Ethnographic qualitative study using interviews and document analysis. | n = 14 Departments: Nursing, Education, Journalism, engineering, Social sciences and Business |
| 8 Weaver, Robbie & Borland | 2008 | International Journal on E-Learning | Experiences discussed & suggestions | Australia | Blackboard / WebCT Vista | Experience of PD staff | This article describes the experiences of staff responsible for developing and delivering professional | Case studies Questionnaire; Interview | n = 51 Professional staff developer |

Appendix 2a Studies reviewed in an international context (continued)

| Author | Year | Journal | Type of article | Country | LMS used | Theme / topic | Purpose of study | Method and or instruments used to gather data | Participants: Sample size Institution(s), faculty(ies) and or department(s) |
|--------------------------------------|------|--|-----------------|----------------|--|----------------------------------|--|--|---|
| | | | | | | | development (PD) in online teaching. A model for an "ideal" implementation is presented. | | |
| 9 Wang & Wang | 2009 | Computers & Education | Research | Taiwan | Not specified | Adoption / factors | This study develops an integrated model of instructor adoption of web-based learning systems by incorporating existing literature and multiple empirically theories. | Verify proposed theoretical model of instructor adoption Survey online | N = 268 3 Universities |
| 10 Georgina & Hosford | 2009 | Teaching and Teacher Education | Research | USA | Bundle of technologies including LMS (Bb / WebCT) | Adoption and technology literacy | Examine how faculty technology literacy and technology training impact on the integration of technology into pedagogy. | A non-experimental quantitative study using an online questionnaire. | n = 237 Faculty members from 15 Colleges of Education |
| 11 Christie & Juradob | 2009 | European Journal of Engineering Education | Research | Sweden | WebCT (Used since 1999) * investigated in 2006 | Barriers | Investigate to what extent lecturers made use of the different features available on the learning management system. | Descriptive analysis of a case study. Interview and Observation | n = 22 School of Engineering |
| 12 Bhati, Mercer, Rankin & Thomas | 2009 | International Journal of Pedagogies and Learning | Review | UAE, Australia | Mobile tools, Learning Management Systems, and the | Barriers and facilitators | Examined the key factors that influence the instructors' satisfaction of LMS in blended learning, and how this satisfaction is related to | NA | |

Appendix 2a Studies reviewed in an international context (continued)

| Author | Year | Journal | Type of article | Country | LMS used | Theme / topic | Purpose of study | Method and or instruments used to gather data | Participants: Sample size Institution(s), faculty(ies) and or department(s) | |
|--------|-----------------|---------|--|----------|------------------------------------|------------------------------|--|--|--|---|
| | | | | | virtual world program, Second Life | | their intention to continuously use LMS in blended learning and purely for distance education. | | | |
| 13 | Steel | 2009 | Australasian Journal of Educational Technology | Research | Australia | Blackboard environment | Beliefs and practice | The study uncovers faculty beliefs about the roles, affordances and limitations of educational technologies and how academics adapt these to their learning designs within an LMS environment. The aim of the study is to reveal the relationship between teacher beliefs and learning designs for web technologies such as LMS. | Qualitative, cases Concept mapping and stimulated recall tasks were used in conjunction with interviews to elicit their beliefs and learning designs in an LMS (Blackboard) environment. | n = 3 Not stated |
| 14 | Klobas & McGill | 2010 | Journal of Computing in Higher Education | Research | Australia | WebCT (CE) | Role of Involvement in LMS success | Investigate the role of involvement by student and instructor in LMS success. | Hypotheses testing Online questionnaire | N > 20 Wide variety of courses and programmes |
| 15 | Hussein | 2011 | The Turkish Online Journal of Educational Technology | Research | Saudi Arabia | JUSUR (self designed system) | Attitude | Identify the attitudes of academics towards using E-learning Management System JUSUR. More specifically what are their attitudes and what are the obstacles they encounter. | Descriptive analysis using an online survey (5-point Likert scale questions, which consists of 34 items) | n = 90 Medicine, Humanities and Sciences lecturers |

Appendix 2a Studies reviewed in an international context (continued)

| Author | Year | Journal | Type of article | Country | LMS used | Theme / topic | Purpose of study | Method and or instruments used to gather data | Participants: Sample size Institution(s), faculty(ies) and or department(s) |
|---|------|--|-----------------|-----------|----------------------------|-------------------------------|--|---|--|
| 16 Iqbal & Qureshi | 2011 | Information Management and Business Review | Research | Pakistan | Not specified | Barriers | Investigate what the major barriers in adoption of e-learning are and determine what kind of functionalities and teaching methodologies should be supported by LMSs. | Quantitative Survey | n = 98 Art & Humanities Engineering Management sciences Medical Social sciences |
| 17 Abdous | 2011 | Journal for Computing in Higher Education | Theoretical | USA | Focus on online technology | Effective faculty development | Put forward a process framework for faculty development based on existing models and experience. | NA | |
| 18 Gautreau | 2011 | The Journal of Educators Online | Research | USA | Blackboard | Motivation | The study analyses the demographic information and identify motivations factors to understand what determines the adoption of the LMS. | Quantitative study using a survey instrument based on Betts research (1998) | n = 42 Lecturers that taught in the College of Communications |
| 19 Heirdsfield, Walker, Tambyah & Beutel | 2011 | Australian Journal of Teacher Education | Research | Australia | Blackboard | Perceptions | To investigate the perceptions of student and staff perceptions of using the online learning management system in teaching and learning. | Questionnaire and focus groups were used. | Staff: n = 43 (questionnaire) and n = 9 (focus group); Students: n = 459 (questionnaire) and n = 6 (focus group). Staff and students from Faculty of Education |

Appendix 2a Studies reviewed in an international context (continued)

| Author | Year | Journal | Type of article | Country | LMS used | Theme / topic | Purpose of study | Method and or instruments used to gather data | Participants: Sample size Institution(s), faculty(ies) and or department(s) |
|----------------------------------|------|--|-----------------|----------|---|---|---|---|---|
| 20 Cabral, Pedro & Gonçalves | 2012 | World Academy of Science, Engineering and Technology | Research | Portugal | Moodle | Effect of training / extent of use levels | The study investigates the impact of ICT-related training in the adoption of a learning management systems (LMS). | Quantitative method Course attendance and course analysis | 1320 LMS courses and 265 faculties University wide |
| 21 Ryan, Toye, Charron & Park | 2012 | International Review of research in Open and Distance learning | Research | Canada | WebCT / Blackboard CE to Blackboard Learn version | Impact and change | Explore the dynamics of the changes, the transition process, problems encountered, and lessons learned when moving from one LMSs to a new upgraded one. | Mixed method Online instrument & interview | n = 265 Arts & Science, Education, Applied and Professional Schools, Distance (In-service /AQ,ABQ), Distance, (CCE) |
| 22 Gonçalves & Pedro | 2012 | World Academy of Science, Engineering and Technology | Research | Portugal | Moodle | Stages of implementation | Based on descriptive statistical data in a three years longitudinal study, the study investigates the different stages of a LMS adoption process. | This study aims to analyse, through a descriptive perspective, the process of LMS adoption in a European university, Making use of the data from the system | All courses and users on the system (2008 & 2011. Arts \7 Humanities, Health Sciences; Science & Technology; Legal, Economic & Social Sciences, Institute of Social Sciences, Faculty of Psychology, Inst. of Education and Institute of Geography & Territorial Planning. |

Appendix 2a Studies reviewed in an international context (continued)

| Author | Year | Journal | Type of article | Country | LMS used | Theme / topic | Purpose of study | Method and or instruments used to gather data | Participants: Sample size Institution(s), faculty(ies) and or department(s) |
|---|------|---|---|-------------|--------------------------------|--|--|--|---|
| 23 Al-Busaidi & Al-Shihi | 2012 | Journal for Computing in Higher Education | Research | Oman | Moodle (after WebCT) | Satisfaction | What the key factors are that influence the lecturers' satisfaction of an LMS in and how their satisfaction relates to their intention to use the LMS. | Quantitative Questionnaire | n = 82 lecturers |
| 24 McNeill, Arthur, Breyer, Huber & Parker | 2012 | Asian Social Science | Describe process followed during implementation | Australia | Move from Blackboard to Moodle | Success factors for implementation and staff development | The processes used in developing the professional learning program are described, along with indicators of success that are emerging from the initiative. | NA | Professional staff developer |
| 25 Lwoga | 2012 | Campus-Wide Information Systems | Research | Tanzania | Web 2.0 technologies | | Assesses the extent to which learning and Web 2.0 technologies are utilised to support learning and teaching in Africa's higher learning institutions, with a specific focus on Tanzania's public universities | Content analysis and semi-structured interviews | Staff at 6 Tanzanian Universities ICT staff |
| 26 Lawrence & Lentle-Keenan | 2013 | Distance Education | Research | New-Zealand | Moodle | Beliefs | Examines the relationship between teaching beliefs and practice, institutional constraints, and the uptake of Web-based technology for teaching in higher education. | Case studies are recorded using a semi-structured interview. | n = 6; Lecturers from business, information technology, social sciences, and engineering. |

NA: Not applicable

Appendix 2b Studies reviewed that were conducted in a South African context

| | Author(s) | Year | Database searched | Journal | Type of study / article | SA University | LMS used | Theme | Purpose of study | Method and or Instruments used | Sample |
|---|------------------------------------|------|--------------------|---------------------------|-------------------------|---------------|----------|--------------------------------------|--|--|---|
| 1 | Van der Merwe | 2004 | Completed research | NA | PhD thesis | Stellenbosch | WebCT | Barriers challenges | Structured evaluation of the integration of ICTs in a University. | Case study using an online questionnaire | n = 232 Lecturers from different Faculties |
| 2 | Van der Merwe & Mouton | 2005 | SA e-Pub | Perspectives in Education | Research | Stellenbosch | WebCT | Barriers / perception of lecturers | Investigates what lecturers perceive as the major barriers and challenges related to the integration of ICTs as well as what type of incentives they prefer. | Online questionnaire | n = 232 Lecturers from different Faculties |
| 3 | Simelane, Blignaut & Van Reyneveld | 2007 | SA e-Pub | SAJHE | Research | TUT | WebCT | Strategies to use and implementation | Report on the strategies and approaches employed to prepare lecturers to use technology in order to enhance their teaching. | Qualitative case study. Document analyses, focus group interviews and bloggers (individual reflections). | n = 15 Lecturers |

Appendix 2b Studies reviewed that were conducted in a South African context

| Author(s) | Year | Database searched | Journal | Type of study / article | SA University | LMS used | Theme | Purpose of study | Method and or Instruments used | Sample |
|--------------------|------|-------------------|---------------------|-------------------------|---------------|----------------------------------|-----------------------|---|--|---|
| Snowball & Mostert | 2010 | SA e-Pub | SAJHE | Case study | Rhodes | Moodle | Experience / impact | Experiences of the course coordinator, lecturers and an educational technologist are discussed as well as student perceptions. | Case study using feedback questionnaire from students and perspectives of lecturers. | n = 500 (students); n = 1 (technologist), n = 3 (lecturers) |
| Bothma & Cant | 2011 | SA e-Pub | Educational Studies | Research | Unisa | "MyUnisa" (Household name) | Adoption and use | The limited use of the LMS created a need to identify ways in which the use of increasing the use of MyUnisa amongst lecturers. | Interviews | n = 13 Lecturers in School of Management Sciences |
| Khoza | 2011 | SA e-Pub | Progressio | Research | KwaZulu-Natal | Different web-based technologies | Barriers / challenges | Reports about a case study of eight South African Educational Technology (ET) lecturers who use web-based teaching | Qualitative case study using interview, observations and a questionnaire. | n = 8 ET lecturers at four SA Universities |

Appendix 2b Studies reviewed that were conducted in a South African context

| Author(s) | Year | Database searched | Journal | Type of study / article | SA University | LMS used | Theme | Purpose of study | Method and or Instruments used | Sample |
|-----------------------------------|------|-------------------|--|-------------------------|---------------|--|-------------|--|---|--|
| | | | | | | | | and learning (WBTL) in teaching their modules and the challenges they face. | | |
| 7 Esterhuizen, Bignaut & Ellis | 2013 | ERIC | International Review of Research in Open and Distance learning | Research | North-West | Bundle: Moodle / e-Fundi (Plus Electronic whiteboards, etc.) | Perceptions | Investigate the perceptions of academic staff involved with staff development in order to implementing new to technology in teaching and learning. | Explorative case study using interview; questionnaire and observations. | n = 21 (academics); n = 1 (learning technologist) |

Appendix 2c Medical education studies reviewed

| | Author(s) | Year | Journal | Type of article | Country | LMS used | Theme | Purpose of study | Method and or instruments used | Participants: Sample size and context |
|---|--|------|------------------------------------|-----------------|---------|---|------------------|--|--|---|
| 1 | Zayim, Yildirim & Saka | 2006 | Educational Technology and society | Research | Turkey | Bundle (Blackboard and 11 other educational technologies) | Adoption factors | Explore differences between faculty that do adopt technology and those that are reluctant to do so. Characteristics, adoption patterns, perceptions of computer-use. | Quantitative study using a questionnaire | n = 155; Lecturers from Basic and Clinical Sciences |
| 2 | Schiffedercker, Berman, Fall & Fischer | 2012 | Medical Education | Research | USA | CASUS online learning environment | Adoption factors | This study examines the key elements and processes that led to the widespread adoption of a CAL program in undergraduate medical education. | Mixed-methods used in an explanatory study employing questionnaire and a semi- structured interview. | n = 90; Paediatric clerkship directors |

Appendix 2d Different LMS / technologies used in studies reviewed

| AUTHORS | YEAR | LMS / TECHNOLOGIES USED |
|------------------------------------|------|---|
| International studies | | |
| Lee, Tan & Goh | 2004 | Blackboard |
| Bongalos et al. | 2006 | Blackboard |
| Gautreau | 2011 | Blackboard |
| Heirdsfield et al. | 2011 | Blackboard |
| Weaver, Robbie & Borland | 2008 | Blackboard / WebCT Vista |
| Steel | 2009 | Blackboard environment |
| Shannon & Doube | 2004 | Blackboard version 5.0 |
| Ryan, Toye, Charron & Park | 2012 | WebCT / Blackboard CE to Blackboard Learn |
| Samarawickrema & Stacey | 2007 | WebCT Vista |
| Cabral, Pedro & Gonçalves | 2012 | Moodle |
| Gonçalves & Pedro | 2012 | Moodle |
| Lawrence & Lentle-Keenan | 2013 | Moodle |
| Al-Busaidi & Al-Shihi | 2012 | Moodle (after WebCT) |
| McNeill et al. | 2012 | Move from Blackboard to Moodle |
| Fox | 2007 | WebCT (both Univ) |
| Klobas & McGill | 2010 | WebCT (CE) |
| Christie & Juradob | 2009 | WebCT (since 1999) * investigated in 2006 |
| Shea, Pickett & Li | 2005 | Not specified |
| Coates, James & Baldwin | 2005 | Not specified |
| Wang & Wang | 2009 | Not specified |
| Iqbal & Qureshi | 2011 | Not specified |
| Georgina & Hosford | 2009 | Bundle including LMS (Blackboard / WebCT) |
| Bhati, Mercer, Rankin & Thomas | 2009 | Mobile tools, LMSs, Second Life |
| Hussein | 2011 | JUSUR (self-designed system) |
| Abdous | 2011 | Focus on online technology |
| Lwoga | 2012 | Web 2.0 technologies |
| AUTHORS | YEAR | LMS / TECHNOLOGIES USED |
| South African Studies | | |
| Van der Merwe | 2004 | WebCT |
| Van der Merwe & Mouton | 2005 | WebCT |
| Simelane, Blignaut & Van Reyneveld | 2007 | WebCT |
| Snowball & Mostert | 2010 | Moodle |
| Bothma & Cant | 2011 | LMS not specified ("MyUnisa") |
| Khoza | 2011 | Different web-based technologies |
| Esterhuizen, Blignaut & Ellis | 2013 | Bundle: Moodle / e-Fundi (Plus others) |
| AUTHORS | YEAR | LMS / TECHNOLOGIES USED |
| Medical Education | | |
| Zayim, Yildirim & Saka | 2006 | Bundle (Blackboard and 11 other educational technologies) |

Schifferdecker, Berman, Fall & Fischer 2012 CASUS online learning environment

**Appendix 2e Different frameworks employed in studies reviewed
(continued)**

| Author | Year | Theme | Purpose of study | Theoretical framework |
|-------------------------|------|-----------------------------------|---|--|
| Shea, Pickett & Li | 2005 | Barriers / Factors | Reports on research to determine potential barriers to the continued growth in adoption of online teaching in higher education. | Rogers' (2003) Diffusion of Innovation Model |
| Samarawickrema & Stacey | 2007 | Barriers / Factors | Examine the factors that enable or impede the adoption of technology and their related pedagogical strategies. | Rogers' theory of diffusion of innovations; The theory of perceived attributes; Actor-network theory |
| Wang & Wang | 2009 | Adoption / factors | This study develops an integrated model of instructor adoption of web-based learning systems by incorporating existing literature and multiple empirically verified theories. | Technology acceptance model and DeLone and McLean's information system success model. |
| Georgina & Hosford | 2009 | Adoption and technology literacy | Examine how faculty technology literacy and technology training impact on the integration of technology into pedagogy. | Rogers' (1980) central hypothesis for person-centred learning. |
| Klobas & McGill | 2010 | Role of Involvement - LMS success | Investigate the role of involvement by student and instructor in LMS success. | DeLone and McLean (2003) |
| Hussein | 2011 | Attitude | Identify the attitudes of academics towards using E-learning Management System JUSUR. -More specifically what are their attitudes and what are the obstacles they encounter. | The personal view towards E-learning and JUSUR; the need to use JUSUR; and the need for training on using JUSUR |
| Gautreau | 2011 | Motivation | The study analyses the demographic information and identify motivations factors to understand what determines the adoption of the LMS. | Three theories: (a) motivation hygiene theory (Herzberg et al., 1959); (b) diffusion of innovations theory (Rogers, 1995); |

**Appendix 2e Different frameworks employed in studies reviewed
(continued)**

| Author | Year | Theme | Purpose of study | Theoretical framework |
|---|------|--|--|---|
| | | | | (c) change theory as it relates to technology integration (Fullan, 2001). |
| Gonçalves & Pedro | 2012 | Implementation stages | Based on descriptive statistical data in a three year longitudinal study this study investigates the different stages of a LMS adoption process. | Rogers theory of innovation diffusion |
| McNeill, Arthur, Breyer, Huber & Parker | 2012 | Success factors Implementation and staff development | The processes used in developing the professional learning program are described, along with indicators of success that are emerging from the initiative. | Self-determination theory and other mini theories |
| Lawrence & Lentle-Keenan | 2013 | Beliefs | Examines the relationship between teaching beliefs and practice, institutional constraints, and the uptake of Web-based technology for teaching in higher education. | Activity theory |

Appendix 3a Levels of use (LoU) and categories defined

| Levels of Use of the Innovation | | | | | | | |
|---|---|---|--|--|--|---|---|
| CATEGORIES | | | | | | | |
| Scale point definitions of the levels of use of the Innovation | Knowledge | Acquiring information | Sharing | Assessing | Planning | Status reporting | Performing |
| Levels of use are distinct states that represent observably different types of behaviour and patterns of innovation use as exhibited by individuals and groups. These levels characterize a user's development in acquiring new skills and varying use of the innovation. Each level encompasses a range of behaviours, but limited by a set of identifiable Decision points. For descriptive purposes each level is defined by seven categories. | That which the user knows about that characterizes the innovation, how to use it, and consequences of its use. This is cognitive knowledge related to using an innovation, not feelings or attitudes. | Solicits information about the innovation in a variety of ways, including questioning resource persons, corresponding with resource agencies, reviewing printed materials, and making visits. | Discusses the innovation with others. Shares plans, ideas, resources, outcomes and problems related to use of the innovation. | Examines the potential or actual use of the innovation or some aspect of it. This can be mental assessment or can involve actual collection and analysis of data. | Designs and outlines short-and/or long-range steps to be taken during process of innovation adoption, i.e., aligns resources, schedules activities, meets with others to organize and/or coordinate the innovation. | Describes personal stand at the present time in relation to use of the innovation. | Carries out the actions and activities entailed in operationalizing the innovation. |
| LEVEL 0 NON-USE | Knowledge - 0 | Acquiring information - 0 | Sharing - 0 | Assessing - 0 | Planning - 0 | Status reporting - 0 | Performing - 0 |
| The state in which users has little or no knowledge of the innovation, no involvement with the innovation, and is doing nothing towards becoming involved. | Knows nothing about this or similar innovations or has very limited general knowledge of efforts to develop innovations in the area. | Takes little or no action to solicit information about beyond reviewing descriptive information about the innovation when it happens to come to personal attention. | Is not communicating with others about the innovation beyond possibly acknowledging that the innovation exist. | Takes to action to analyse the innovation, its characteristics, possible use, or consequences of use. | Schedules no time and specifies no steps for the study or use of the innovation. | Reports no or little personal involvement with the innovation. | Takes no discernible action or using the innovation. The innovation and/or its accountments are not present or in use. |
| Decision point A | Takes action to learn more detailed information about the innovation | | | | | | |
| LEVEL I ORIENTATION | Knowledge - 1 | Acquiring information - 1 | Sharing - 1 | Assessing - 1 | Planning - 1 | Status reporting - 1 | Performing - 1 |
| State in which the user has acquired or is acquiring information about the innovation and/or has explored or is exploring its value orientation and its demands upon user and user system. | Knows general information about the innovation such as the origin, characteristics, and, implementation requirements. | Seeks descriptive material about the innovation. Seeks opinions and knowledge of others through discussions, visits or workshops. | Discusses resources needed in general terms and/or ideas about the innovation and possible implications of its use. | Analyses and compares materials, content requirements for use, evaluation reports, potential outcomes, strengths and weaknesses for the purpose of making a decision about the innovation. | Plans to gather necessary information and resources as needed to make a decision for or against use of the innovation. | Reports preparing orienting self to what the innovation is or is not. | Explores the innovation and requirements for use by talking to others about it, reviewing descriptive information and sample material, attending orientation sessions, observing others using it. |
| Decision point B | Makes a decision to use he innovation by establishing a time to begin | | | | | | |
| LEVEL II PREPARATION | Knowledge - II | Acquiring information - II | Sharing - II | Assessing - II | Planning - II | Status reporting - II | Performing - II |
| State in which the users preparing for its first use of the innovation. | Knows logistical requirements, necessary resources and timing for initial use of the innovation, and details of initial experience for clients. | Seeks information and resources specifically related to preparation for use of the innovation in own setting. | Discusses resources needed for initial use of the innovation. Joins others in pre-use training, and in planning resources, logistics, schedules, etc. In preparation for first use. | Analyses detail requirements and available resources for initial use of the innovation. | Identifies steps and procedures entailed in obtaining resources and organising activities and events for initial use of the innovation. | Reports preparing self for the initial use of the innovation. | Studies reference material in depth, organises resources and logistics, schedules and receives skill training in preparation for initial use. |
| Decision point C | Changes, if any, and use are dominated by user needs. Clients may be valued, however management, time, or limited experimental knowledge dictate what the user does. | | | | | | |
| LEVEL III MECHANICAL USE | Knowledge - III | Acquiring information - III | Sharing - III | Assessing - III | Planning - III | Status reporting - III | Performing - III |
| State in which the user focuses most effort on the short-term, day-to-day use of the innovation with little time for reflection. Changes in use are made more to meet users needs than clients needs. The users is primarily engaged in a stepwise attempt to master the tasks required to use the innovation, often resulting in disjointed and superficial use. | Knows on day-to-day basis the requirements for using the innovation, is more knowledgeable on short-term activities and effects than long range activities and effects, of use of the innovation. | Solicits management information about such things as logistics, scheduling techniques, and ideas for reducing amount of time and work required of user. | Discusses management and logistical issues related to the use of the innovation. Resources and materials are shared for the purpose of reducing management, flow and logistical problems related to the use of the innovation. | Examines own use of the innovation with respect to problems of logistics, management, time, schedules, resources and general reactions to clients. | Plans for organising and managing resources, activities and events related primarily to immediate ongoing use of the innovation. Planned or changes address managerial or logistical issues with the short term perspective. | Reports that logistics, time, management, resources organization, etc...are the focus of most personal efforts to use the innovation. | Manages innovation with varying degrees of efficiency. Often lacks anticipation of immediate consequences. The flow of action between the user and clients is often disjointed, uneven and uncertain. When changes are made, they are primarily n response to logistical and organisational problems. |
| Decision point D-1 | A routine pattern of use is established. Changes for clients may be made routinely, but there are no recent changes outsidehte pattern. | | | | | | |
| LEVEL IVA ROUTINE USE | Knowledge - IVA | Acquiring information - IVA | Sharing - IVA | Assessing - IVA | Planning - IVA | Status reporting - IVA | Performing - IVA |
| Use of the innovation is stabilized. Few if any changes are being made in ongoing use. Little preparation or thought is being given to improving innovation use or its consequences. | Knows both short-and long-term requirements for use and how to use the innovation with minimum effort or stress. | Makes no special efforts to seek information as part of ongoing use of the information. | Describes current use of the innovation with little or no reference to ways of changing use. | Limits evaluation activities to those administratively required, with little attention paid to findings for the purpose of changing use. | Plans intermediate and long-range use with little projected variation on how the innovation will be used. Planning focuses on routine use of resources, personnel, etc. | Reports that personal use of the innovation is going on satisfactorily with few if any problems. | Uses the innovation smoothly with minimal management problems: over time, their is little variation in patterns of use. |
| Decision point D-2 | Changes of the innovation are based on formal and informal evaluation in order to increase client outcomes. They must be recent. | | | | | | |
| LEVEL IVB REFINEMENT | Knowledge - IVB | Acquiring information - IVB | Sharing - IVB | Assessing - IVB | Planning - IVB | Status reporting - IVB | Performing - IVB |
| State in which the user varies the use of the innovation to increase the impact on clients within his/her immediate sphere of influence. Variations are based on knowledge of both short and long term consequences for client. | Knows cognitive and affective affects of the innovation on clients and ways for increasing impact on clients. | Solicits information and materials that focus specifically on changing use of the innovation to affect the clients. | Discusses own methods of modifying use of the innovation to change client outcomes | Assesses use of innovation for the purpose of changing current practices to improve client outcomes. | Develop immediate and long-range plans that anticipate possible and needed steps, resources, and events designed to enhance client outcomes. | Reports varying use of the innovation in order to change client outcomes. | Explores and experiments with alternative combinations of the innovation with existing practices to maximize client outcomes. |
| Decision point E | Initiates changes in the use of the innovation based on input of and in coordination with what colleagues are doing. | | | | | | |
| LEVEL V INTEGRATION | Knowledge - V | Acquiring information - V | Sharing - V | Assessing - V | Planning - V | Status reporting - V | Performing - V |
| State in which the user is combining own efforts to use the innovation with related activities of colleagues to achieve a collective impact on clients within their sphere of influence. | Knows how to coordinate own use of the innovation with colleagues to provide a collective impact on clients. | Solicits information and opinions for the purpose of collaborating with others in use of the innovation. | Discusses efforts to increase client impact through collaboration with others on personal use of the innovation. | Appraises collaborative use of the innovation in terms of client outcomes and strengths and weaknesses of the integrated efforts. | Plans specific actions to coordinate own use of the innovation with others to achieve increased impact on clients | Reports spending time and energy collaborating with others about integrating own use of the innovation. | Collaborates with oters in the use of the innovation as a means of expanding the innovation's impact on clients. Changes in use are made in coordination wit others. |
| Decision point F | Begins exploring alternatives to or major modifications of the innovation presently in use. | | | | | | |
| LEVEL VI RENEWAL | Knowledge - VI | Acquiring information - VI | Sharing - VI | Assessing - VI | Planning - VI | Status reporting - VI | Performing - VI |
| State in which the user re-evaluates the quality of use of the innovation, seeks major modifications of or alternatives to present innovation to achieve increased impact on clients, examines new goals for self and the system. | Knows of alternatives that could be used to change or replace the present innovation that would improve the quality of outcomes of its use. | Seeks information and materials about others innovations as alternatives to present innovation or for making major adaptations in the innovation. | Focussing discussions on identifications of major alternatives or replacements for the current innovation. | Analyses advantages and disadvantages of major modifications or alternatives to enhance or replace the innovation. | Plans activities to involve pursui of alternatives to enhance or replace the innovation | Reports considering major modifications to present use of the innovation | Explores other innovations that could be used in combination with or in place of the present innovation in an attempt to develop more effective means of achieving client outcomes. |

From: Hall et al. (2008, pp. 72-73)

Appendix 4a Stages of Concern Questionnaire

SoCQ 075

Stages of Concern Questionnaire

Name (optional):

The purpose of this questionnaire is to determine what people who are using or thinking about using various programs are concerned about at various times during the adoption process.

The items were developed from typical responses of educators who ranged from no knowledge at all about various programs to many years' experience using them. Therefore, **many of the items on this questionnaire may appear to be of little relevance or irrelevant to you at this time.** For the completely irrelevant items, please circle "0" on the scale. Other items will represent those concerns you do have, in varying degrees of intensity, and should be marked higher on the scale.

For example:

| | |
|---|------------------------|
| This statement is very true of me at this time. | 0 1 2 3 4 5 6 7 |
| This statement is somewhat true of me now. | 0 1 2 3 4 5 6 7 |
| This statement is not at all true of me at this time. | 0 1 2 3 4 5 6 7 |
| This statement seems irrelevant to me. | 0 1 2 3 4 5 6 7 |

Please respond to the items in terms of **your present concerns**, or how you feel about your involvement with **this** innovation. We do not hold to any one definition of the innovation so please think of it in terms of your own perception of what it involves. Phrases such as "this approach" and "the new system" all refer to the same innovation (i.e. *new clickUP*). Remember to respond to each item in terms of your present concerns about your involvement or potential involvement with the innovation.

Thank you for taking time to complete this task.

Appendix 4a Stages of Concern Questionnaire (continued)

| 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
|------------|--------------------|---|-------------------------|---|---|---------------------|---|
| Irrelevant | Not true of me now | | Somewhat true of me now | | | Very true of me now | |

Circle one number for each item.

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| 1. I am concerned about students' attitudes toward the new clickUP. | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 2. I now know of some other approaches that might work better. | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 3. I am more concerned about another innovation. | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 4. I am concerned about not having enough time to organize myself each day. | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 5. I would like to help other faculty in their use of the new clickUP. | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 6. I have a very limited knowledge of the new clickUP. | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 7. I would like to know the effect of reorganization on my professional status. | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 8. I am concerned about conflict between my interests and my responsibilities. | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 9. I am concerned about revising my use of the new clickUP. | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 10. I would like to develop working relationships with both our faculty and outside faculty using this new clickUP. | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 11. I am concerned about how the new clickUP affects students. | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 12. I am not concerned about the new clickUP at this time. | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 13. I would like to know who will make the decisions in the new system. | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 14. I would like to discuss the possibility of using the new clickUP. | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 15. I would like to know what resources are available if we decide to adopt the new clickUP. | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 16. I am concerned about my inability to manage all that the new clickUP requires. | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 17. I would like to know how my teaching or administration is supposed to change. | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 18. I would like to familiarize other departments or persons with the progress of this new approach. | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 |

Appendix 4a Stages of Concern Questionnaire (continued)

| | | | | | | | |
|------------|--------------------|----------|-------------------------|----------|----------|---------------------|----------|
| 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| Irrelevant | Not true of me now | | Somewhat true of me now | | | Very true of me now | |

Circle one number for each item.

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| 19. I am concerned about evaluating my impact on students. | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 20. I would like to revise the new clickUP's approach. | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 21. I am preoccupied with things other than the new clickUP. | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 22. I would like to modify our use of the new clickUP based on the experiences of our students. | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 23. I spend little time thinking about the new clickUP. | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 24. I would like to excite my students about their part in this approach. | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 25. I am concerned about time spent working with nonacademic problems related to the new clickUP. | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 26. I would like to know what the use of the new clickUP will require in the immediate future. | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 27. I would like to coordinate my efforts with others to maximize the new clickUP's effects. | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 28. I would like to have more information on time and energy commitments required by the new clickUP. | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 29. I would like to know what other faculty are doing in this area. | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 30. Currently, other priorities prevent me from focusing my attention on the new clickUP. | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 31. I would like to determine how to supplement, enhance, or replace the new clickUP. | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 32. I would like to use feedback from students to change the program. | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 33. I would like to know how my role will change when I am using the new clickUP. | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 34. Coordination of tasks and people is taking too much of my time. | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 35. I would like to know how the new clickUP is better than what we have now. | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 |

Appendix 4b Demographic Information (SoCQi & SoCQii)

a. Demographic information - SoCQi

1. Lecturing experience

| | | | | | | | |
|-------------|--------------------------|-------------|--------------------------|--------------|--------------------------|--------------|--------------------------|
| a. ≤ 2 | <input type="checkbox"/> | b. 3-5 yrs | <input type="checkbox"/> | c. 6-10 yrs | <input type="checkbox"/> | d. 11-15 yrs | <input type="checkbox"/> |
| e. 16-20yrs | <input type="checkbox"/> | f. 21-25yrs | <input type="checkbox"/> | g. 26-30 yrs | <input type="checkbox"/> | h. ≥ 31 yrs | <input type="checkbox"/> |

2. Academic position (May choose more than 1)

| | | | | | | | |
|--------------------|--------------------------|-----------------------|--------------------------|--------------------|--------------------------|------------------------|--------------------------|
| a. Junior lecturer | <input type="checkbox"/> | b. Lecturer | <input type="checkbox"/> | c. Senior lecturer | <input type="checkbox"/> | d. Associate professor | <input type="checkbox"/> |
| e. Professor | <input type="checkbox"/> | f. Head of Department | <input type="checkbox"/> | g. Other (specify) | <input type="text"/> | | |

3. Appointment

| | | | | | |
|---------------------------|--------------------------|--------------------------------------|--------------------------|--------------------------------------|--------------------------|
| a. Permanent UP personnel | <input type="checkbox"/> | b. Guest lecturer | <input type="checkbox"/> | c. Extraordinary lecturer /professor | <input type="checkbox"/> |
| d. Temporary UP personnel | <input type="checkbox"/> | e. Dual appointment: Government & UP | <input type="checkbox"/> | g. Other (specify) | <input type="text"/> |

4. Number of modules for 2011

a. Please indicate the **number** of modules (e.g. ABC 123) you are solely or partially responsible for.

| | Number of *Sem 1 modules | Number of *Sem 2 modules | Number of Year modules |
|------------------|--------------------------|--------------------------|------------------------|
| Solely | <input type="text"/> | <input type="text"/> | <input type="text"/> |
| Partially | <input type="text"/> | <input type="text"/> | <input type="text"/> |

*Sem 1 include quarter 1 & 2 modules * Sem 2 include quarter 3&4 modules

b. How do you foresee will this number influence your use of the *new clickUP*?

5. Class size

a. Largest (number of students) class you lecture.

b. How do you foresee will this number influence your use of the *new clickUP*?

6. Which statement describes best your preference/attitude with regards to new technology? (Choose one)

a. I love new technologies and am among the first to experiment with and use them

b. I like new technologies and use them before most people I know do

Appendix 4b Demographic Information (SoCQi & SoCQii) (continued)

- c. I usually use new technologies when most people I know do
- d. I am usually one of the last people I know to use new technologies
- e. I am sceptical of new technologies and use them only when I have to
- f. Other:

7. Rate the following categories according to your own proficiency level / level of expertise

| | | | | | | | | |
|--|----------|---|---|---|---|---|---|--------|
| a. Use of Word processing (Word etc) software | No skill | 0 | 1 | 2 | 3 | 4 | 5 | Expert |
| b. Use of Spreadsheets (Excel etc) programs | No skill | 0 | 1 | 2 | 3 | 4 | 5 | Expert |
| c. Finding information on the Internet effectively | No skill | 0 | 1 | 2 | 3 | 4 | 5 | Expert |
| d. Making use of presentation software (PPT etc) | No skill | 0 | 1 | 2 | 3 | 4 | 5 | Expert |
| e. Manipulation (crop/resize etc) of images / photos | No skill | 0 | 1 | 2 | 3 | 4 | 5 | Expert |
| f. Use of the current clickUP | No skill | 0 | 1 | 2 | 3 | 4 | 5 | Expert |

8. Please rate how the following will impact the way you intend to use the new clickUP

| | Strong NEGATIVE impact | Moderate NEGATIVE impact | Little NEGATIVE impact | NO IMPACT AT ALL | Little POSITIVE impact | Moderate POSITIVE impact | Strong POSITIVE impact |
|---|------------------------------|--------------------------------|------------------------------|---------------------|------------------------------|--------------------------------|------------------------------|
| | -3 | -2 | -1 | 0 | 1 | 2 | 3 |
| a. Number of modules you lecture per semester | -3 | -2 | -1 | 0 | 1 | 2 | 3 |
| b. Largest class size you lecture currently | -3 | -2 | -1 | 0 | 1 | 2 | 3 |
| c. Content area (field of study) that you lecture | -3 | -2 | -1 | 0 | 1 | 2 | 3 |
| d. Support you receive from Education Innovation | -3 | -2 | -1 | 0 | 1 | 2 | 3 |
| e. Availability of self-help resources on <i>new clickUP</i> | -3 | -2 | -1 | 0 | 1 | 2 | 3 |
| f. The availability or option to attend further workshops in <i>new clickUP</i> | -3 | -2 | -1 | 0 | 1 | 2 | 3 |
| g. The available system functionalities (what the system can do for me) | -3 | -2 | -1 | 0 | 1 | 2 | 3 |
| h. User friendliness (ease of use) of the LMS | -3 | -2 | -1 | 0 | 1 | 2 | 3 |

Appendix 4b Demographic Information (SoCQi & SoCQii) (continued)

| | | | | | | | | |
|----|--|----|----|----|---|---|---|---|
| i. | Acknowledgement / receiving incentive(s) for your efforts to use of the <i>new clickUP</i> (e.g. score in the performance man. system) | -3 | -2 | -1 | 0 | 1 | 2 | 3 |
| j. | Availability of administrative staff or teaching assistants in your department that can help with the uploading of class notes etc. | -3 | -2 | -1 | 0 | 1 | 2 | 3 |
| k | Other (specify) | -3 | -2 | -1 | 0 | 1 | 2 | 3 |
| l | Other (specify) | -3 | -2 | -1 | 0 | 1 | 2 | 3 |
| m | Other (specify) | -3 | -2 | -1 | 0 | 1 | 2 | 3 |

8. Rate the following according to time you have available.

No time → Enough time

| | | | | | | | | | | | |
|----|--|---|---|---|---|---|---|---|---|---|----|
| a. | Time you have available to familiarise yourself / learn how to use (attend more training) <i>new clickUP</i> | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
| b. | Time to develop (build) a module in <i>new clickUP</i> | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
| c. | Time to manage and maintain the module(s) in <i>new clickUP</i> during the semester | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |

Thank you very much for completing this questionnaire.

Appendix 4b Demographic Information (continued)

b. Demographic information - SoCQii

1. Professional identity / qualification

- | | |
|--|--|
| a. Scientist (e.g. Microbiologist, Physiologist) <input type="checkbox"/> | b. Health Care practitioner (e.g. Physiotherapist) <input type="checkbox"/> |
| c. Medical doctor (e.g. Neurologist) / Dentist <input type="checkbox"/> | d. Other: _____ (specify) <input type="checkbox"/> |

2. How confident are you at using the new clickUP system?

- | | |
|--|--|
| a. Could do everything on my own <input type="checkbox"/> | b. Sometimes need assistance / help <input type="checkbox"/> |
| c. Often need support / assistance <input type="checkbox"/> | d. Need support or assistance most of the time <input type="checkbox"/> |

3. Have you used WebCT (Before 2006, old clickUP (2006-2012) and or new clickUP? (select all that apply)

- | | |
|--|---|
| a. Used WebCT (Before 2006) <input type="checkbox"/> | b. Used old clickUP (2006-2012) <input type="checkbox"/> |
| c. Are now using new clickUP <input type="checkbox"/> | |

4. Indicate which of the new clickUP workshops you have attended: (select all that apply)

- | |
|---|
| a. Overview workshop <input type="checkbox"/> |
| b. Content workshop <input type="checkbox"/> |
| c. Assessment workshop <input type="checkbox"/> |
| d. Collaboration workshop <input type="checkbox"/> |
| e. Management workshop <input type="checkbox"/> |
| f. Turnitin workshop <input type="checkbox"/> |
| g. Grades workshop <input type="checkbox"/> |
| h. None <input type="checkbox"/> |

5. Rate the following categories according to your own proficiency level / level of expertise

- | | | | | | | | | | |
|--------------------------------------|-----------------|---|---|---|---|---|---|---|---------------|
| f. Use of the current clickUP | No skill | <table border="1" style="display: inline-table; text-align: center;"> <tr> <td style="width: 20px;">0</td> <td style="width: 20px;">1</td> <td style="width: 20px;">2</td> <td style="width: 20px;">3</td> <td style="width: 20px;">4</td> <td style="width: 20px;">5</td> </tr> </table> | 0 | 1 | 2 | 3 | 4 | 5 | Expert |
| 0 | 1 | 2 | 3 | 4 | 5 | | | | |

6. Please select your age group.

- | |
|--|
| a. 20-29 <input type="checkbox"/> |
| b. 30-39 <input type="checkbox"/> |
| c. 40-49 <input type="checkbox"/> |
| d. 50-59 <input type="checkbox"/> |
| e. 60-69 <input type="checkbox"/> |
| f. 70+ <input type="checkbox"/> |

Appendix 4b Demographic Information (SoCQi & SoCQii) (continued)

7. Indicate your academic achievement: (select all that apply)

| | |
|--------------------|--------------------------|
| a. s Diploma | <input type="checkbox"/> |
| b. Bachelor degree | <input type="checkbox"/> |
| c. Honours degree | <input type="checkbox"/> |
| d. Masters degree | <input type="checkbox"/> |
| e. PhD / Doctoral | <input type="checkbox"/> |
| f. Post-doctoral | <input type="checkbox"/> |
| g. Professor | <input type="checkbox"/> |

8. Which of the following resources would you make use of to assist you with the new clickUP? (select all that apply)

| | |
|---|--------------------------|
| a. Departmental administrative person | <input type="checkbox"/> |
| b. Instructional designer(s)@ Department for Education Innovation | <input type="checkbox"/> |
| c. E-Support (e-support@up.ac.za) | <input type="checkbox"/> |
| d. Colleagues | <input type="checkbox"/> |
| e. Experienced students | <input type="checkbox"/> |
| f. Online resources (clickUP Help site) | <input type="checkbox"/> |
| g. Workshop handouts | <input type="checkbox"/> |
| h. None | <input type="checkbox"/> |
| g. Other: (Please specify) | <input type="checkbox"/> |

9. What is your general view of using a learning management system (like new clickUP) in a blended teaching model?

10. Please describe any significant barriers to your participation in the innovation.

11. Please describe what you perceive to be the greatest benefit of this innovation.

12. Indicate what proportion (%) of your time you devote to: a) Medical education (teaching, assessment, admin, research in medical education): % b) Clinical work: % c) Research: % d) Other? %

| |
|--|
| a) Medical education (teaching, assessment, admin, research in medical education): _____ % |
| b) Clinical work: _____ % |
| c) Research: _____ % |
| d) Other (please indicate what?) _____ : _____ % |

13. Comments or additional information you want to share?

Appendix 4c Letter of invitation to participate and Informed consent for the SoCQ

Faculty of Education

Letter of invitation and informed consent

TITLE OF RESEARCH PROJECT:

The needs of Health Science educators regarding professional staff development interventions to implement a learning management system.

INTRODUCTION:

You are invited to participate in a research study to identify the concerns Health Sciences educators have regarding the learning management system ('*new clickUP*') at the University of Pretoria. From the information collected and investigated in this project, we hope to learn more about the specific needs of Health Sciences educators in terms of professional staff development interventions to facilitate the implementation and use of the *new clickUP* system.

PROCEDURES:

With your permission, we would like to collect information about the concerns you may have in terms of the implementation of the (*new*) *clickUP* system, as well as how it is being used. We plan to collect this information about your concerns after each training session you attend by means of an open ended question and or a questionnaire that you will be asked to complete twice (first at the end of a workshop and the second one after implementation and use of the system) during the study. There are no *good* or *bad* stages of concerns involved in the use of *new clickUP*.

PARTICIPANTS' RIGHTS:

If you decide to participate in this study, please understand that your participation is voluntary and you have the right to withdraw your consent or discontinue participation at any time, without penalty or loss of benefits to which you or your department are otherwise entitled. Your decision whether or not to participate in this study will not affect any services or advice provided to you by the Department for Education Innovation (EI).

RISKS:

You might however feel exposed to make your concerns known regarding the learning management system, but be assured that there are no good or bad stages of concerns involved and not you or your teaching are hereby evaluated.

Appendix 4c Letter of invitation to participate and Informed consent for the SoCQ (continued)

BENEFITS:

From the results of the study, professional staff developers responsible for the facilitation of the implementation and use of the LMS, would be able to customize the facilitation session(s) to meet the needs (concerns) of Health Science educators. This type of intervention should positively influence their use of the system.

TIME INVOLVEMENT:

Your participation in this study will require your time to complete the 35-item questionnaire twice and an open ended question at the end of a training session.

COMPENSATION:

No compensation is offered for participation in this study.

CONFIDENTIALITY:

All information gathered will be treated as confidential. People who will have access to the data are the researcher, the study leader of the research project and the line manager of EI involved with the Faculty of Health Sciences. Your identity will not be disclosed in any written and published material resulting from the study.

VERIFICATION OF INFORMATION:

You will have opportunity to verify the accuracy of the information that you share with the researcher.

ETHICAL APPROVAL:

This study has received written approval from the Research Ethics Committee of the Faculty of Education at the University of Pretoria. A copy of the approval letter is available on request. **(Reference number: SM 11/05/01)**

INFORMATION AND CONTACT PERSON:

If you have any questions about the study, please contact the researcher, Mrs JSH Untiedt, on cell number: 012 354 1316 / 082 3995738, or alternatively the study leader: Prof JG Knoetze at 012 565 5894 / 083 284 5246 / 012 420 2886

**Appendix 4c Letter of invitation to participate and Informed consent
for the SoCQ (continued)**



UNIVERSITEIT VAN PRETORIA
UNIVERSITY OF PRETORIA
YUNIBESITHI YA PRETORIA

CONSENT TO PARTICIPATE IN RESEARCH STUDY

Questionnaire: Stages of Concerns

TITLE OF RESEARCH PROJECT

The needs of Health Science educators regarding professional staff development interventions to implement a learning management system.

1. I hereby voluntarily express my willingness to participate in the research study as explained to me by
2. The nature, purpose, and risks and possible benefits have been explained to me and I understand them.
3. I understand my right to choose whether or not to participate in the project and that the information furnished will be handled confidentially. I am aware that the results of the investigation may be used for publication purposes.

Signed: Date:
Research Subject

Researcher: Date:
Hannelie Untiedt

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To: Hannelie Untiedt (Licensee)
Senior Instructional Designer
University of Pretoria
P O Box 15902
Sinoville, Pretoria, Gauteng 0129
SOUTH AFRICA

From: Nancy Reynolds
Information Associate
SEDL
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Date: April 7, 2014

Thank you for your interest in using excerpts from SEDL products on the Concerns-Based Adoption Model (CBAM). From *Measuring Implementation in Schools: The Stages of Concern Questionnaire* written by Archie A. George, Gene E. Hall, and Suzanne M. Stiegelbauer, published by SEDL in 2006, and available as an on-demand publication through a link to Lulu.com at <http://www.sedl.org/pubs/catalog/items/cbam18.html> on the SEDL website, you have asked to use the following excerpts:

1. Appendix A: Stages of Concern Questionnaire, pp. 79-82
2. Appendix B: Stages of Concern Quick Scoring Device, pp. 85-87
3. Appendix C: Stages of Concern Profile, p. 91

From the online video *CBAM 101: Getting Your Feet Wet* on the SEDL website at http://highperformingschools.sedl.org/managing_implementation/cbam101.php, you have asked to use slide 10 that depicts a graphic image of the Concerns-Based Adoption Model diagram.

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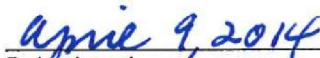
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Sincerely,



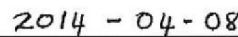
Nancy Reynolds for SEDL



Date signed

Agreed and accepted:

Signature:  _____



Date signed

Printed Name: JSH UNTIEDT

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To: Hannelle Untiedt (Licensee)
Senior Instructional Designer
University of Pretoria
P O Box 15902
Sinoville, Pretoria, Gauteng
SOUTH AFRICA

From: Nancy Reynolds
Information Associate
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Date: March 18, 2014

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1. Table 2.1: Levels of Use of the Innovation, p. 5
2. Appendix A: The Basic Interview Protocol, pp. 53-56
3. Appendix B: The Lou Rating Sheet, p. 57
4. Appendix E: Levels of Use (LoU) of the Innovation, pp. 72-73

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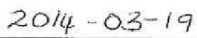
Nancy Reynolds for SEDL



Date signed

Agreed and accepted:

Signature:  _____



Date signed

Printed Name: JSH UNTIEDT

Appendix 4e Certification confirmation



29 November 2011

Hannelie Untiedt
PO Box 15902
Sinoville
Pretoria
SOUTH AFRICA
0129

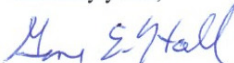
Dear Hannelie:

I am writing to confirm that you are Certified as a Levels of Use Interviewer. You attended the three day training workshop in Austin, Texas. During those sessions you demonstrated you understood the construct of Levels of Use and its operational definitions (The LoU Chart). You demonstrated reliability in rating Levels of Use Interviews.

Following the three day session in Austin, TX you submitted to me recordings of three of your interviews. Each of these demonstrated your competence to conduct Levels of Use Interviews with accuracy. Also, I appreciated your including transcripts and your discussion of your ratings with each interview.

I wish you great success in conducting your dissertation study. Please let me know if you have questions or if I might be of help in some other way.

Sincerely yours,


Gene E. Hall, Professor
Email: gene.hall@unlv.edu

Department of Educational Leadership
Box 453002 • 4505 S. Maryland Parkway
Las Vegas, NV 89154-3002
(702) 895-3491 • Fax (702) 895-3492
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Gene E. Hall, Ph.D.
Professor



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951.793.0000 • 951.793.0000 • 951.793.0000 • 951.793.0000

Appendix 4f Invitation to follow-up interview

Dear Dr/Prof/Mr/Mrs

Re: Needs of Health Professional Educators regarding professional development interventions and support to implement and use UP's new learning management system.

The first questionnaire you completed refers. Your valuable contribution has been analysed and I would like to follow up on that and learn what your experiences and needs are relating to the implementation and use of the new (upgraded) learning management system.

It would be appreciated if we can arrange a time to discuss your specific experiences and the needs you may have with regards to the use of the new clickUP system. We can schedule it anytime between 07:00 to 15:00 for an hour on the dates indicated in blue below.

| Mo | Tue | Wed | Thu | Fr |
|--------|--------|--------|--------|--------|
| May 28 | May 29 | May 30 | May 31 | Jun 1 |
| Jun 4 | Jun 5 | Jun 6 | Jun 7 | Jun 8 |
| Jun 11 | Jun 12 | Jun 13 | Jun 14 | Jun 15 |
| Jun 18 | Jun 19 | Jun 20 | Jun 21 | Jun 22 |
| Jun 25 | Jun 26 | Jun 27 | Jun 28 | Jun 29 |
| Jul 2 | Jul 3 | Jul 4 | Jul 5 | Jul 6 |

Please let me know which date and time would suite you best.

Looking forward to hear from you. Don't hesitate to call if you have any questions.

Yours sincerely

Hannelie Untiedt
012 354 1316 / 082 399 5738

Appendix 4f Invitation to follow-up interview (continued)

Beste Dr /Prof/Mnr/Me

I.s: Die behoeftes van professionele dosente in Gesondheidswetenskappe ten opsigte van die intervensies vir professionele ontwikkeling en ondersteuning om die nuwe leerbestuur stelsel van UP (clickUP) te implementeer en gebruik.

Die eerste vraelys wat u voltooi het, het betrekking. U waardevolle bydrae is geanaliseer en ek sal dit graag wil opvolg om uit te vind wat u ervaringe en behoeftes rakende die gebruik van die nuwe (opgegradeerde) leerbestuurstelsel is.

Daarom sal ek dit opreg waardeur indien ons 'n tyd kan reël om oor u spesifieke behoeftes te gesels met betrekking tot die tipe ondersteuning en opleiding nodig om die *nuwe* clickUP stelsel in u onderrig te integreer.

Laat my asb weet watter datum en tyd u die beste sal pas.

| Mo | Tue | Wed | Thu | Fr |
|--------|--------|--------|--------|--------|
| May 28 | May 29 | May 30 | May 31 | Jun 1 |
| Jun 4 | Jun 5 | Jun 6 | Jun 7 | Jun 8 |
| Jun 11 | Jun 12 | Jun 13 | Jun 14 | Jun 15 |
| Jun 18 | Jun 19 | Jun 20 | Jun 21 | Jun 22 |
| Jun 25 | Jun 26 | Jun 27 | Jun 28 | Jun 29 |
| Jul 2 | Jul 3 | Jul 4 | Jul 5 | Jul 6 |

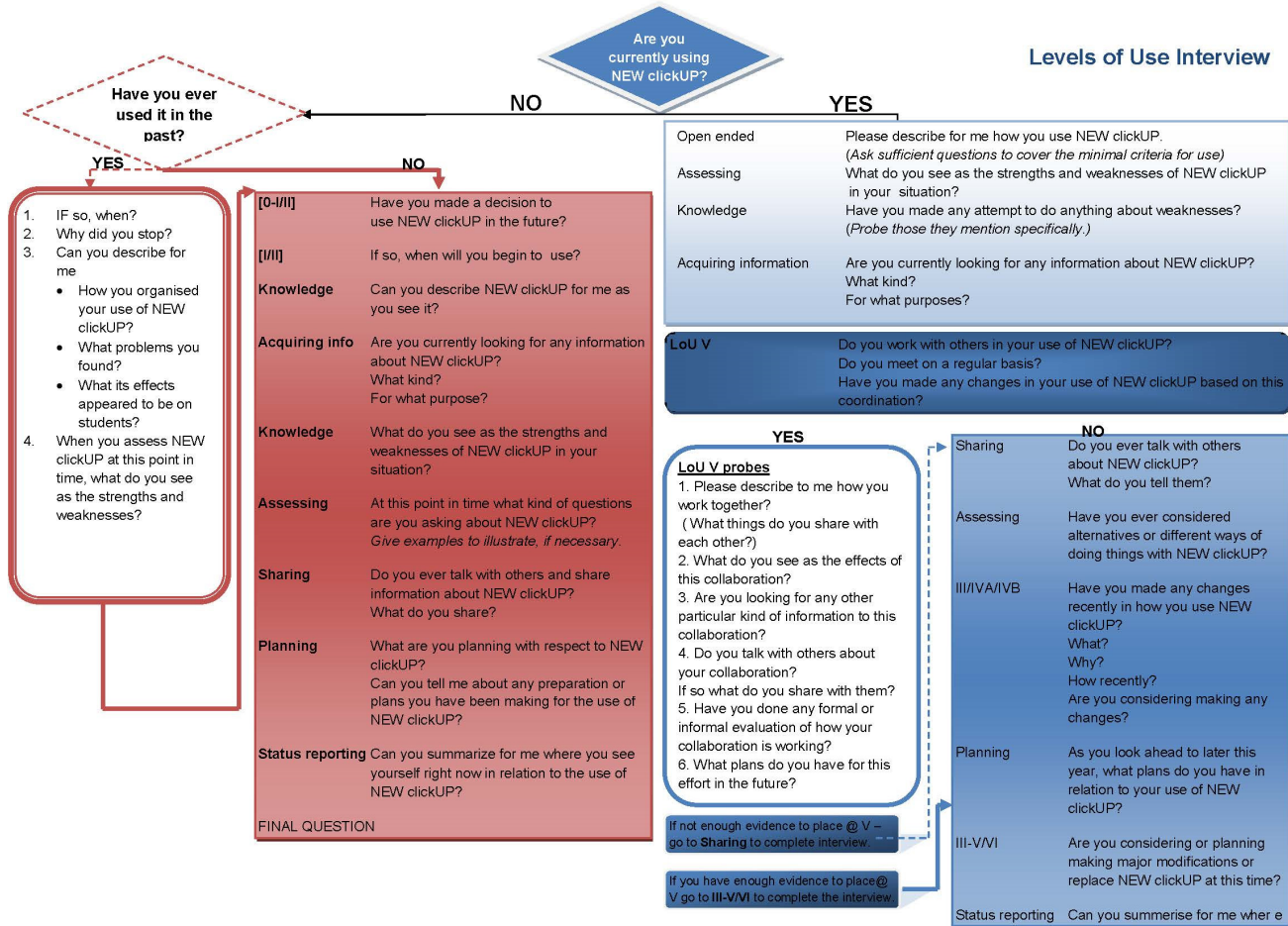
Enige tyd daaglik tussen 7:00 en 17:00 (ongeveer 'n uur nodig) op die datums in blou aangedui op die kalender is op hierdie stadium beskikbaar.

Ek sien baie daarna uit om met u te gesels. Moenie huiwer om te skakel indien u enige vrae het nie.

Vriendelike groete

Hannelie Untiedt
012 354 1316 / 82 399 5738

Appendix 4g Interview schedule for LoU



From: Hall et al. (2008, pp. 53 -56)

Appendix 4h Letter of invitation and informed consent for the interviews (LoU and Perceived expressed needs)

Faculty of Education

Date: _____

Letter of invitation and informed consent: Interview

TITLE OF RESEARCH PROJECT:

The needs of Health Science educators regarding professional staff development interventions to implement a learning management system.

INTRODUCTION:

You are invited to participate in a research study to identify the

- needs Health professional educators have with regards to the implementation and use of the learning management system ('new clickUP') and
- the levels at which Health Sciences educators use the learning management system ('new clickUP') at the University of Pretoria.

From the information collected and investigated in this project, we hope to learn more about the needs of Health Sciences educators in terms of professional staff development interventions to facilitate the implementation and use of the new clickUP system.

PROCEDURES:

With your permission, we plan to collect information about your level of use of the new clickUP system during the implementation phase. We will make use of a structured interview protocol. There are no *right/wrong* levels of use involved in the use of new clickUP.

PARTICIPANTS' RIGHTS:

If you decide to participate in this study, please understand that your participation is voluntary and you have the right to withdraw your consent or discontinue participation at any time, without penalty or loss of benefits to which you or your department are otherwise entitled. Your decision whether or not to participate in this study will not affect any services or advice provided to you by the Department for Education Innovation (EI).

RISKS AND BENEFITS:

There are no anticipated risks associated with this study. We cannot and do not guarantee or promise that you will receive any benefits from participating in this study.

Appendix 4h Letter of invitation and informed consent for the interviews (LoU and Perceived expressed needs) (continued)

TIME INVOLVEMENT:

Your participation in this part of the study will require 30 minutes of your time for the interview.

COMPENSATION:

No compensation is offered for participation in this study.

CONFIDENTIALITY:

All information gathered will be treated as confidential. People who will have access to the data are the researcher, the study leader of the research project, and the line manager of EI involved with the Faculty of Health Sciences. Your identity will not be disclosed in any written or published material resulting from the study.

VERIFICATION OF INFORMATION:

You will have opportunity to verify the accuracy of the information that you share with the researcher.

ETHICAL APPROVAL:

This study has received written approval from the Research Ethics Committee of the Faculty of Education at the University of Pretoria. A copy of the approval letter is available on request.

INFORMATION AND CONTACT PERSON:

If you have any questions about the study, please contact the researcher, Mrs JSH Untiedt, on cell number: 082 3995738 / 012 354 1316, or alternatively the study leader: Prof JG Knoetze at 012 565-5894 / 083 284 5246 / 012 420 2886.

**Appendix 4h Letter of invitation and informed consent for the interviews
(LoU and Perceived expressed needs) (continued)**



CONSENT TO PARTICIPATE IN RESEACRH STUDY

Interview

TITLE OF RESEARCH PROJECT

The needs of Health Science educators regarding professional staff development interventions to implement a learning management system.

4. I hereby voluntarily express my willingness to participate in the research study as explained to me by
.....
5. The nature, purpose, and possible risk implications have been explained to me and I understand them.
6. I understand my right to choose whether or not to participate in the project and that the information furnished will be handled confidentially. I am aware that the results of the investigation may be used for the publication purposes.
7. I herewith give consent that the interview may be audio taped. I understand that the recoding will only be used for this study. Once the study has been concluded the audio material will be archived with the other data collected for this study according to the regulations of the University of Pretoria. Should the researcher wish to use any audio material for any other purpose, additional written permission will be sought.

Signature of participant: Date:

Name of researcher: **Hannelie Untiedt**

Signature of researcher: Date:

Appendix 4i Perceived expressed needs interview guide

PHASE II – Interview guide (Perceived needs)

Introduction

Thank you for your willingness to share your experiences with regards to the implementation and use of the NEW clickUP system.

The purpose of this session/ interview is to:

Talk about your needs at different stages of the implementation of NEW clickUP and

Also how you are currently using / not using the system.

I have a set of questions that I would ask for everyone. Therefore I have to look on my questions to make sure I remember them.

If you agree that we continue, would you mind to complete the consent form?

Do you mind if I record this interview?

Questions:

| If you think back in time to when you started the journey to implement the new clickUP system. To the first time you were exposed to the new system. The next few questions will be about your plans and experiences at that time. | Rationale for question |
|---|--|
| What was it that you wanted to achieve (or be able to do) with the new clickUP system? | Conceptual map of study refer: Will the aim / goal with using the system indicate / reflect in the way it is used? |
| Why did you attend the training? | Motivation for use & attendance (why did they not do self-study) |
| What was your biggest concern about the implementation and use of clickUP then? | Link to the SoC / concerns that the participant may / may not have. |
| In your opinion what is it that you (or others) need with regards to training and support to be able to use the LMs effectively in teaching? | Training and support needs to interpret in terms of the SoC (categories or specific concerns) that the participant may / may not have. |
| Is there anything else that you would like to add with regards to the beginning of this new journey? | |
| B. NOW, if I may bring you back to today. If you <i>thinking about where you are now in this journey</i> to implement the new clickUP system. The next few questions will be about your plans and experiences that you have currently. | Rationale for question |
| What is it that you want to do or to achieve with the new clickUP system? Probe: Ultimately – what do you want to be able to do? | Conceptual map of study refer: Will the aim / goal with using the system indicate / reflect in the way it is used? |

Appendix 4i Perceived expressed needs interview guide (continued)

| | |
|---|---|
| What would encourage you to attend more / further workshops or training? | Deeper and wider exploration of the rationale for using and making the effort to learn new clickUP? Does that reveal concerns? |
| What is your biggest concern about the implementation and use of clickUP then currently? | Link to the SoC / concerns that the participant may / may not have. |
| In your opinion what is it that you (or others) need with regards to training and support to be able to use the LMs effectively in teaching? Now? In future? | Training and support needs to interpret in terms of the SoC (categories or specific concerns) that the participant may / may not have. |
| What is it that you need from me, instructional designers to achieve you goals? | Support needs to interpret in terms of the SoC (categories or specific concerns) that the participant may / may not have. |
| What is it that will keep you interested in clickUP and motivated to learn more about clickUP? | Deeper and wider exploration of the rationale for using and making the effort to learn new clickUP? Does that reveal concerns? |
| What is your biggest role in your current post? Probe: biggest role with regards to teaching and learning? | Roles the HPE's have – explore whether that plays a role in the use or non-use of new clickUP? |
| There are many ways in which one could introduce a new LMS to academics in a Faculty. I know that there are diverse opinions on how it should be done and very specific needs form lecturers that have to implement and use the system. Please describe (share) which of the things that were used to introduce the new updated LMS you thought worked well / was good? Which would you say (do you know) are not that positively received by staff members? What else or different approaches / strategies would you rather see should be introduced / added? | Deeper and wider exploration of what worked and what did not work with the new clickUP implementation? Does that reveal concerns about the innovation? |
| Do you think that clickUP addresses / can address the learning needs of your students? | Do participants see the benefit of using the innovation for the students? |
| Did you change anything in your teaching since you started to use the new clickUP? | Do participants see the benefit of using the innovation in terms of improve teaching strategies? |
| Is there anything else that you would like to add with regards to where you are currently in this journey and where you would like to be in future? | |

Appendix 4j LoU rating sheet (Hall et al., 2008, p. 57)

LEVEL OF USE RATING SHEET

Tape # _____ Site: _____ Interviewer: _____
 Date: _____ I.D. #: _____ Rater: _____

| LEVEL | Knowledge | Acquiring Information | Sharing | Assessing | Planning | Status Reporting | Performing | Overall LoU |
|--|--------------------------|-----------------------|---------|-----------|----------|------------------|------------|-------------|
| Non-Use | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Decision Point A Orientation | I | I | I | I | I | I | I | I |
| Decision Point B Preparation | II | II | II | II | II | II | II | II |
| ----- | | | | | | | | |
| Decision Point C Mechanical Use | III | III | III | III | III | III | III | III |
| Decision Point D-1 Routine | IVA | IVA | IVA | IVA | IVA | IVA | IVA | IVA |
| Decision Point D-2 Refinement | IVB | IVB | IVB | IVB | IVB | IVB | IVB | IVB |
| Decision Point E Integration | V | V | V | V | V | V | V | V |
| Decision Point F Renewal | VI | VI | VI | VI | VI | VI | VI | VI |
| User is not doing | ND | ND | ND | ND | ND | ND | ND | |
| No information in interview | NI | NI | NI | NI | NI | NI | NI | |
| Past User _____ | Estimated Past LoU _____ | | | | | | | |

©Concerns Based Systems International Revised 2/94

Appendix 4k Ethical clearance certificate from Faculty of Education, UP



UNIVERSITEIT VAN PRETORIA
UNIVERSITY OF PRETORIA
YUNIBESITHI YA PRETORIA
 Faculty of Education

RESEARCH ETHICS COMMITTEE

CLEARANCE CERTIFICATE

CLEARANCE NUMBER :

SM 11/05/01

DEGREE AND PROJECT PhD

Health professional educators' needs regarding strategies in the implementation of a learning management system

INVESTIGATOR(S)

Johanna S.H Untiedt

DEPARTMENT

Science, Mathematics and Technology Education

DATE CONSIDERED

10 March 2014

DECISION OF THE COMMITTEE

APPROVED

Please note:

For Masters applications, ethical clearance is valid for 2 years For PhD applications, ethical clearance is valid for 3 years.

CHAIRPERSON OF ETHICS

Prof Liesel Ebersöhn



COMMITTEE

DATE

10 March 2014

CC

Jeannie Beukes

Liesel Ebersöhn

Prof JG Knoetze

This ethical clearance certificate is issued subject to the following condition:

1. It remains the students' responsibility to ensure that all the necessary forms for informed consent are kept for future queries.

Please quote the clearance number in all enquiries.

Appendix 4I Approval of the Registrar at UP



UNIVERSITEIT VAN PRETORIA
UNIVERSITY OF PRETORIA
YUNIBESITHI YA PRETORIA
Faculty of Education

Faculty of Education

Ethics Committee

1 August 2011

Prof N. Grove
Registrar: University of Pretoria

Permission: Research involving University of Pretoria students and staff

Applicant: Mrs J.S.H. Unteidt
Reference: SM11/05/01

The Ethics Committee, Faculty of Education recently received an application for research involving University of Pretoria staff and students as research participants. In maintaining with University of Pretoria regulations in this regard, we attach the application form for your consideration.

The application for ethical clearance has already been reviewed by the Ethics Committee, Faculty of Education. During the Ethics Committee meeting on 8 June 2011 the decision was reached to approve the proposed research in terms of ethical considerations.

Kindly find attached to this letter:

1. The completed original ethics application form
2. An official letter conveying the decision of the Faculty of Education Ethics Committee.

Confirmation of your final decision regarding this applicant can be sent to our Ethics office at leverne.Wagner@up.ac.za or alternatively you can contact me at liesel.ebersohn@up.ac.za. Your attention to this matter is highly appreciated.

Best wishes,

Prof Liesel Ebersohn
Chair: Ethics Committee
Faculty of Education

*Prof Ebersohn
Die intekse
resep is in orde*

*A. J. J.
11/8/2011*

Appendix 4m Signed consent Dean: Faculty of Health Sciences



UNIVERSITEIT VAN PRETORIA
UNIVERSITY OF PRETORIA
YUNIBESITHI YA PRETORIA

Dean
Faculty of Health Sciences

16 August 2011

Letter of consent to conduct a research study using health professional educators in the Faculty of Health Sciences

TITLE OF RESEARCH PROJECT:

The needs of health professional educators regarding professional staff development interventions to implement a learning management system.

INTRODUCTION: From the information collected and investigated in this research study, we hope to learn more about the needs of health professional educators in terms of professional staff development interventions to facilitate the implementation and use of the new clickUP system.

PROCEDURES: With your permission, I would like to collect information about the concerns academic staff in the Faculty of Health Sciences has in terms of the implementation of the (new) clickUP system, as well as how it is being used. I plan to collect this information about their concerns after they attended a workshop by means of a questionnaire that they will be asked to complete. After implementation and use of the system in their teaching, academics will also be invited to an interview as well as completing the questionnaire for a second time.

PARTICIPANTS' RIGHTS: Participation is voluntary and academics will have the right to withdraw their consent or discontinue participation at any time, without penalty or loss of benefits to which they or their department are otherwise entitled. Their decision whether or not to participate in this study will not affect any services or advice provided to you by the Department for Education Innovation (EI).

RISKS AND BENEFITS: There are no anticipated risks associated with this study. I cannot and do not guarantee that they will receive any benefits from participating in this study.

TIME INVOLVEMENT: Their participation in this study will require time to complete the 35-item questionnaire twice at the end of a training session and attend an interview session of 20-30 minutes after implementation.

COMPENSATION: No compensation is offered for participation in this study.

Appendix 4m Signed consent Dean Faculty of Health Science (continue)

CONFIDENTIALITY: All information gathered will be treated as confidential. People who will have access to the data are the researcher, the study leader of the research project and the line manager of EI involved with the Faculty of Health Sciences. Identities will not be disclosed in any written and published material resulting from the study.

VERIFICATION OF INFORMATION: They will have opportunity to verify the accuracy of the information that they share with the researcher.

ETHICAL APPROVAL: This study received written approval from the Research Ethics Committee of the Faculty of Education at the University of Pretoria. A copy of the approval letter is available on request. **Reference number: SM 11/05/01.**

INFORMATION AND CONTACT PERSON: If you have any questions about the study, please contact the researcher, Mrs JSH Untiedt at 082 3995738 / 012 354 1316 /, or alternatively the study leader Prof JG Knoetze at 012 565 5894 / 083 284 5246 / 012 420 2886

I hereby express my consent that health professional educators in the Faculty of Health Sciences can participate in the research study as explained to me by Hannelie Untiedt.

subject to ① a copy of the research report being made available to the Faculty ② My seeing a copy of the informed consent form.

Signed: *E. Buch* Date: 2011 - 08 - 16
Dean Faculty of Health Sciences: Prof E Buch

Researcher: *H. Untiedt* Date: 2011 - 08-16
Hannelie Untiedt

*Sent on
17/8/2011
to: A. Maaslop
+ E Buch
@ email.*

Appendix 4n Signed consent Vice Dean and Head: School of Medicine



UNIVERSITEIT VAN PRETORIA
UNIVERSITY OF PRETORIA
YUNIBESITHI YA PRETORIA

Chairperson
School of Medicine

Exco meeting
19 July 2011

Letter of consent to conduct a research study using health professional educators in the School of Medicine

TITLE OF RESEARCH PROJECT:

The needs of health professional educators regarding professional staff development interventions to implement a learning management system.

INTRODUCTION: From the information collected and investigated in this research study, we hope to learn more about the needs of health professional educators in terms of professional staff development interventions to facilitate the implementation and use of the new clickUP system.

PROCEDURES: With your permission, I would like to collect information about the concerns academic staff in the School of Medicine has in terms of the implementation of the (new) clickUP system, as well as how it is being used. I plan to collect this information about their concerns after they attended a workshop by means of a questionnaire that they will be asked to complete. After implementation and use of the system in their teaching, academics will also be invited to an interview as well as completing the questionnaire for a second time.

PARTICIPANTS' RIGHTS: Participation is voluntary and academics will have the right to withdraw their consent or discontinue participation at any time, without penalty or loss of benefits to which they or their department are otherwise entitled. Their decision whether or not to participate in this study will not affect any services or advice provided to you by the Department for Education Innovation (EI).

RISKS AND BENEFITS: There are no anticipated risks associated with this study. I cannot and do not guarantee that they will receive any benefits from participating in this study.

TIME INVOLVEMENT: Their participation in this study will require time to complete the 35-item questionnaire twice at the end of a training session and attend an interview session of 20-30 minutes after implementation.

COMPENSATION: No compensation is offered for participation in this study.

**Appendix 4n. Signed consent Vice Dean and Head: School of Medicine
(continued)**

CONFIDENTIALITY: All information gathered will be treated as confidential. People who will have access to the data are the researcher, the study leader of the research project and the line manager of EI involved with the Faculty of Health Sciences. Identities will not be disclosed in any written and published material resulting from the study.


VERIFICATION OF INFORMATION: They will have opportunity to verify the accuracy of the information that they share with the researcher.

ETHICAL APPROVAL: This study received written approval from the Research Ethics Committee of the Faculty of Education at the University of Pretoria. A copy of the approval letter is available on request. **Reference number: SM 11/05/01.**

INFORMATION AND CONTACT PERSON: If you have any questions about the study, please contact the researcher, Mrs JSH Untiedt at 082 3995738 / 012 354 1316 /, or alternatively the study leader Prof JG Knoetze at 012 565 5894 / 083 284 5246 / 012 420 2886

I hereby express my consent that health professional educators in the School of Medicine, Faculty of Health Sciences can participate in the research study as explained to the Exco meeting by Hannelie Untiedt.

Signed:  Date: 2011 – 07 -19
Chairperson: Prof BG Lindeque

Researcher:  Date: 2011 – 07 -19
Hannelie Untiedt

Appendix 4o Signed consent Head: School of Health Care Sciences



UNIVERSITEIT VAN PRETORIA
UNIVERSITY OF PRETORIA
YUNIBESITHI YA PRETORIA

Chairperson
School of Health Care Sciences

22 July 2011

Letter of consent to conduct a research study using health professional educators in the School of Health Care Sciences

TITLE OF RESEARCH PROJECT:

The needs of health professional educators regarding professional staff development interventions to implement a learning management system.

INTRODUCTION: From the information collected and investigated in this research study, we hope to learn more about the needs of health professional educators in terms of professional staff development interventions to facilitate the implementation and use of the new clickUP system.

PROCEDURES: With your permission, I would like to collect information about the concerns academic staff in the School of Health Care Sciences has in terms of the implementation of the (new) clickUP system, as well as how it is being used. I plan to collect this information about their concerns after they attended a workshop by means of a questionnaire that they will be asked to complete. After implementation and use of the system in their teaching, academics will also be invited to an interview as well as completing the questionnaire for a second time.

PARTICIPANTS' RIGHTS: Participation is voluntary and academics will have the right to withdraw their consent or discontinue participation at any time, without penalty or loss of benefits to which they or their department are otherwise entitled. Their decision whether or not to participate in this study will not affect any services or advice provided to you by the Department for Education Innovation (EI).

RISKS AND BENEFITS: There are no anticipated risks associated with this study. I cannot and do not guarantee that they will receive any benefits from participating in this study.

TIME INVOLVEMENT: Their participation in this study will require time to complete the 35-item questionnaire twice at the end of a training session and attend an interview session of 20-30 minutes after implementation.

COMPENSATION: No compensation is offered for participation in this study.

**Appendix 4o Signed consent Head: School of Health Care Sciences
(continued)**

CONFIDENTIALITY: All information gathered will be treated as confidential. People who will have access to the data are the researcher, the study leader of the research project and the line manager of EI involved with the Faculty of Health Sciences. Identities will not be disclosed in any written and published material resulting from the study.


VERIFICATION OF INFORMATION: They will have opportunity to verify the accuracy of the information that they share with the researcher.

ETHICAL APPROVAL: This study received written approval from the Research Ethics Committee of the Faculty of Education at the University of Pretoria. A copy of the approval letter is available on request. **Reference number: SM 11/05/01.**

INFORMATION AND CONTACT PERSON: If you have any questions about the study, please contact the researcher, Mrs JSH Untiedt at 082 3995738 / 012 354 1316 /, or alternatively the study leader Prof JG Knoetze at 012 565 5894 / 083 284 5246 / 012 420 2886

I hereby express my consent that health professional educators in the School of Health Care Sciences, Faculty of Health Sciences can participate in the research study as explained to me by Hannelie Untiedt.

Signed:  Date: 2011 – 07 - 22
Chairperson: Prof T van Rooijen

Researcher:  Date: 2011 – 07 - 22
Hannelie Untiedt

Appendix 4p Signed consent Head: School of Health Systems and Public Health



UNIVERSITEIT VAN PRETORIA
UNIVERSITY OF PRETORIA
YUNIBESITHI YA PRETORIA

Chairperson
School of Health Systems & Public Health

22 July 2011

Letter of consent to conduct a research study using health professional educators in the School of Health Systems & Public Health

TITLE OF RESEARCH PROJECT:

The needs of health professional educators regarding professional staff development interventions to implement a learning management system.

INTRODUCTION: From the information collected and investigated in this research study, we hope to learn more about the needs of health professional educators in terms of professional staff development interventions to facilitate the implementation and use of the new clickUP system.

PROCEDURES: With your permission, I would like to collect information about the concerns academic staff in the School of Health Systems & Public Health has in terms of the implementation of the (new) clickUP system, as well as how it is being used. I plan to collect this information about their concerns after they attended a workshop by means of a questionnaire that they will be asked to complete. After implementation and use of the system in their teaching, academics will also be invited to an interview as well as completing the questionnaire for a second time.

PARTICIPANTS' RIGHTS: Participation is voluntary and academics will have the right to withdraw their consent or discontinue participation at any time, without penalty or loss of benefits to which they or their department are otherwise entitled. Their decision whether or not to participate in this study will not affect any services or advice provided to you by the Department for Education Innovation (EI).

RISKS AND BENEFITS: There are no anticipated risks associated with this study. I cannot and do not guarantee that they will receive any benefits from participating in this study.

TIME INVOLVEMENT: Their participation in this study will require time to complete the 35-item questionnaire twice at the end of a training session and attend an interview session of 20-30 minutes after implementation.

COMPENSATION: No compensation is offered for participation in this study.

Appendix 4p Signed consent Head: School of Health Systems and Public Health (continued)

CONFIDENTIALITY: All information gathered will be treated as confidential. People who will have access to the data are the researcher, the study leader of the research project and the line manager of EI involved with the Faculty of Health Sciences. Identities will not be disclosed in any written and published material resulting from the study.

VERIFICATION OF INFORMATION: They will have opportunity to verify the accuracy of the information that they share with the researcher.

ETHICAL APPROVAL: This study received written approval from the Research Ethics Committee of the Faculty of Education at the University of Pretoria. A copy of the approval letter is available on request. **Reference number: SM 11/05/01.**

INFORMATION AND CONTACT PERSON: If you have any questions about the study, please contact the researcher, Mrs JSH Untiedt at 082 3995738 / 012 354 1316 /, or alternatively the study leader Prof JG Knoetze at 012 565 5894 / 083 284 5246 / 012 420 2886

I hereby express my consent that health professional educators in the School of Health Systems & Public Health, Faculty of Health Sciences can participate in the research study as explained to me by Hannelie Untiedt.

Signed:
Chairperson: Prof Tiaan de Jager

Date: 2011 – 07 - 22

Researcher:
Hannelie Untiedt

Date: 2011 – 07 - 22

Appendix 4q Signed consent Head: School of Dentistry



UNIVERSITEIT VAN PRETORIA
UNIVERSITY OF PRETORIA
YUNIBESITHI YA PRETORIA

Deputy Dean
School of Dentistry

05 August 2011

Letter of consent to conduct study using health professional educators in the School of Dentistry

TITLE OF RESEARCH PROJECT:

The needs of health professional educators regarding professional staff development interventions to implement a learning management system

INTRODUCTION: The research study identifies the specific needs of health professional educators regarding professional staff development interventions to implement a learning management system ('new clickUP') at the University of Pretoria. From the information collected and investigated in this project, we hope to learn more about the needs of health professional educators in terms of professional staff development interventions to facilitate the implementation and use of the new clickUP system.

PROCEDURES: With your permission, I would like to collect information about the **concerns** academic staff in the School of Dentistry has in terms of the implementation of the (new) clickUP system, as well as how it is being used. I plan to collect this information about their concerns after each training session they attend by means of a questionnaire that they will be asked to complete twice during the study. After implementation and use of the system academics will also be invited to an interview.

PARTICIPANTS' RIGHTS: Participation is voluntary and academics will have the right to withdraw their consent or discontinue participation at any time, without penalty or loss of benefits to which they or their department are otherwise entitled. Their decision whether or not to participate in this study will not affect any services or advice provided to you by the Department for Education Innovation (EI).

RISKS AND BENEFITS: There are no anticipated risks associated with this study. I cannot and do not guarantee or promise that they will receive any benefits from participating in this study.

Appendix 4q Signed consent Head: School of Dentistry (continued)

TIME INVOLVEMENT: Their participation in this study will require time to complete the 35-item questionnaire twice at the end of each training session and attend an interview session of 20-30 minutes after implementation.

COMPENSATION: No compensation is offered for participation in this study.

CONFIDENTIALITY: All information gathered will be treated as confidential. People who will have access to the data are the researcher, the study leader of the research project and the line manager of EI involved with the Faculty of Health Sciences. Identities will not be disclosed in any written and published material resulting from the study.

VERIFICATION OF INFORMATION: They will have opportunity to verify the accuracy of the information that they share with the researcher.

ETHICAL APPROVAL: This study has received written approval from the Research Ethics Committee of the Faculty of Education at the University of Pretoria. A copy of the approval letter is available on request. **Reference number: SM 11/05/01**

INFORMATION AND CONTACT PERSON: If you have any questions about the study, please contact the researcher, Mrs JSH Untiedt, on cell number: 012 354 1316 / 082 3995738, or alternatively the study leader: Prof JG Knoetze at 012 565 5894 / 083 284 5246 / 012 420 2886

I hereby express my consent that health professional educators in the School of Dentistry can participate in the research project as explained to me by Hannelie Untiedt.

Signed:  Date: 2011-08-05
Deputy Dean: Prof de Wet

Researcher:  Date: 2011-08-05
Hannelie Untiedt

Prof FA de Wet
Deputy Dean
School of Dentistry
University of Pretoria
P.O. Box 1266,
Pretoria 0001
South Africa

Appendix 6a SoC statements per stage

| 0 - Awareness | 1- Informational | 2 - Personal | 3 – Management | 4 - Consequence | 5- Collaboration | 6 – Refocusing |
|---|---|--|---|--|--|---|
| 3 – I am more concerned about another innovation | 6 – I have a very limited knowledge of the new clickUP. | 7- I would like to know the effect of reorganization on my professional status. | 4 – I am concerned about not having enough time to organize myself each day | 1 – I am concerned about students' attitudes toward the new clickUP. | 5 – I would like to help other faculty in their use of the new clickUP. | 2 – I now know of some other approaches that might work better. |
| 12 – I am not concerned about the new clickUP at this time. | 14 – I would like to discuss the possibility of using the new clickUP | 13 - I would like to know who will make the decisions in the new system. | 8 – I am concerned about conflict between my interests and my responsibilities. | 11 – I am concerned about how the innovation affect students | 10 - I would like to develop working relationships with both our faculty and outside faculty using this new clickUP. | 9 – I am concerned about revising my use of the new clickUP. |
| 21 – I am preoccupied with things other than the new clickUP. | 15 – I would like to know what resources are available if we decide to adopt the new clickUP. | 17 – I would like to know how my teaching or administration is supposed to change | 16 – I am concerned about my inability to manage all that the new clickUP requires. | 19 – I am concerned about evaluating my impact on students. | 18 – I would like to familiarize other departments or persons with the progress of this new approach. | 20 – I would like to revise the new clickUP's approach. |
| 23 – I spend little time thinking about the new clickUP. | 26 – I would like to know what the use of the new clickUP will require in the immediate future. | 28 – I would like to have more information on time and energy commitments required by the new clickUP. | 25 - I am concerned about time spent working with non-academic problems related to the new clickUP. | 24 – I would like to excite my students about their part in this approach. | 27 – I would like to coordinate my efforts with others to maximize the new clickUP's effects. | 22 – I would like to modify our use of the new clickUP based on the experiences of our students |
| 30 – Currently, other priorities prevent me from focusing my attention on the new clickUP. | 35 – I would like to know how the new clickUP is better than what we have now. | 33 – I would like to use feedback from students to change the program. | 34 – Coordination of tasks and people is taking too much of my time. | 32 – I would like to know how my role will change when I am using the new clickUP. | 29 – I would like to know what other faculty are doing in this area | 31 - I would like to determine how to supplement, enhance, or replace the new clickUP. |

Appendix 6b SoC statements per stage – codes used

| Row | 0 – Awareness | 1 – Informational | 2 – Personal | 3- Management | 4 – Consequence | 5 – Collaboration | 6 – Refocusing |
|-----|--------------------|----------------------|---------------------|---------------------|---------------------|----------------------|---------------------|
| 1 | 3 – #Awa_01_03 | 6 – #Inf_01_06_ | 7- #Per_01_07_ | 4 – #Man_01_04_ | 1 – #Con_01_01_ | 5 – #Col_01_05_ | 2 – #Ref_01_02_ |
| 2 | 12 – #Awa_02_12 | 14 – #Inf_02_14_ | 13 - #Per_02_13_ | 8 – #Man_02_08_ | 11 – #Con_02_11_ | 10 – #Col_02_10_ | 9 – #Ref_02_09_ |
| 3 | 21 – #Awa_03_21 | 15 – #Inf_03_15_ | 17 – #Per_03_17_ | 16 – #Man_03_16_ | 19 – #Con_03_19_ | 18 – #Col_03_18_ | 20 – #Ref_03_20_ |
| 4 | 23 – #Awa_04_22 | 26 – #Inf_04_26_ | 28 – #Per_04_28_ | 25 – #Man_04_25_ | 24 – #Con_04_24_ | 27 – #Col_04_27_ | 22 – #Ref_04_22_ |
| 5 | 30 – #Awa_05_30 | 35 - #Inf_05_35_ | 33 – #Per_05_33_ | 34 – #Man_05_34_ | 32 – #Con_05_32_ | 29 – #Col_05_29_ | 31 – #Ref_05_31_ |

Additional concerns:

| | | | | | | | |
|---|----------|----------|----------|----------|----------|----------|----------|
| 6 | #Awa_06_ | #Inf_06_ | #Per_06_ | #Man_06_ | #Con_06_ | #Col_06_ | #Ref_06_ |
| 7 | #Awa_07_ | #Inf_07_ | #Per_07_ | #Man_07_ | #Con_07_ | #Col_07_ | #Ref_07_ |
| 8 | #Awa_08_ | #Inf_08_ | #Per_08_ | #Man_08_ | #Con_08_ | #Col_08_ | #Ref_08_ |
| 9 | #Awa_09_ | #Inf_09_ | #Per_09_ | #Man_09_ | #Con_09_ | #Col_09- | #Ref_09_ |

Appendix 7a List of needs of HPEs at the University of Pretoria when implementing a new LMS

| Stages of concerns to be addressed based on SoCQ results | Phase I Contextualised needs of HPEs at the start of the journey of implementing an LMS | Phase II Contextualised needs of HPEs at the later stage / in order to continue the journey of implementation of the LMS. |
|--|---|---|
| Unconcerned stage | <p>HPEs need to have a manageable workload to allow for time to learn and implement the new LMS (based on concern #30).</p> <p>HPEs need to understand how the new LMS will benefit them to be more efficient in managing their available time and the value it can add to their teaching and student learning (#30).</p> <p><i>Additional needs identified:</i></p> <p><i>The need to communicate the news of the new LMS clearly stating the rational why the change to the new LMS is necessary.</i></p> <p><i>The need to communicate what training and support options will be provided to support the implementation of the LMS.</i></p> <p><i>HPEs feel that courses should be made mandatory for every HPE to attend.</i></p> | <p>HPEs need to understand the strategic objective of the University executive management with regards to the implementation of the new LMS (#21).</p> <p>HPEs need to have a manageable workload to allow for time to learn and implement a new LMS (#30, #23).</p> <p>HPEs need to understand how the new LMS will benefit them to be more efficient in managing their available time and the value it can add to their teaching and student learning (#30, #23).</p> |
| Management stage | <p>HPEs need to have time available to attend training and practice what they were taught to then develop their own course(s). (#4)</p> <p>HPEs need <u>to be able</u> to implement the functionalities (<i>i.e. assessment, communication and providing students with access to information</i>) of the LMS identified for their teaching. (#16)</p> <p>HPEs need to know how the responsibilities for the LMS tasks is divided between DEI and the academic departments. (#16)</p> <p><i>(#25) HPEs need to be assured of the reliability and on-demand availability of the LMS.</i></p> | <p>HPEs need to have time available to attend training and practice what they were taught to then be able to plan the changes and develop their own course(s). (#4)</p> <p>HPEs need to know how the LMS can help them to manage time more efficiently (e.g. for online marking of assignments and performing administrative tasks).</p> <p>HPEs need to know how to manage the uploading of documents for students and how to manage the downloading of many assignments from home. (#16)</p> <p><i>HPEs need to be assured of the reliability and on-demand availability of the LMS. (#25)</i></p> <p><i>HPEs need time to test the new LMS for my courses' specific requirements. (#25)</i></p> <p>HPEs need to coordinate the course development tasks in the LMS where</p> |

Appendix 7a List of needs of HPEs at the University of Pretoria when implementing a new LMS (continued)

| Stages of concerns to be addressed based on SoCQ results | Phase I Contextualised needs of HPEs at the start of the journey of implementing an LMS | Phase II Contextualised needs of HPEs at the later stage / in order to continue the journey of implementation of the LMS. |
|--|--|--|
| | <p><u>Additional needs identified:</u></p> <p><i>The need to know how to use LMS more effectively and thereby making things easier.</i></p> <p><i>The need to know how their teaching methods can be accommodated by the LMS.</i></p> | <p><i>more than one lecturer are teaching in a course. (#34, #8)</i></p> <p><u>Additional needs identified:</u></p> <p><i>Need for HPEs to have the necessary knowledge and skills to use the LMS more efficiently and effectively in all courses throughout the faculty.</i></p> <p><i>The need to see that the LMS can meet the requirement in a specific subject area or a particular course.</i></p> <p><i>The need to monitor students' activity in a course in order to be able to provide evidence.</i></p> <p><i>The need to use specific functionalities (i.e. assessment and communication functionalities).</i></p> <p><i>Need for enhancement to specific functionalities the LMS provides (i.e. a user-friendly rubric to mark assignments and access to wider variety of question types).</i></p> <p><i>The need for students to have ubiquitous access to learning material.</i></p> <p><i>The need for students to have access to computers on campus.</i></p> |
| <p>Informational stage</p> | <p>The HPEs need to have knowledge regarding the system and specific functionalities such as the communication-, collaboration- and assessment functionalities. (#6)</p> <p>The HPEs need to learn the basics on how to navigate the system, get access to courses, what the system is all about, familiarise myself and upload content to the LMS. (#6)</p> <p>The HPEs need to know how to create a learning space and structure it properly. (#6)</p> <p>The HPEs need to have an overview of the possibilities in using the new LMS. (#14)</p> | <p>The HPEs need to have knowledge regarding assessment and mobile functionalities and managing files that are used in the courses. (#6)</p> <p>The HPEs need to have knowledge on how to structure a course and make it look pretty. (#6)</p> <p>The HPEs need to see further possibilities in using the LMS or revise the hand outs to see other possibilities that I am not using. (#14)</p> <p>The HPEs need to know how to adapt their ideas to match with the possibilities of the LMS provides. (#14)</p> |

Appendix 7a List of needs of HPEs at the University of Pretoria when implementing a new LMS (continued)

| Stages of concerns to be addressed based on SoCQ results | Phase I Contextualised needs of HPEs at the start of the journey of implementing an LMS | Phase II Contextualised needs of HPEs at the later stage / in order to continue the journey of implementation of the LMS. |
|--|---|---|
| | <p>The HPEs need to know what resources are available when using the LMS, specifically with regards to physical support as well as online resources and also to have a visual <i>process-map</i> and or a <i>basic recipe</i> available that can be followed when using the LMS. (#15)</p> <p>The HPEs need to know what the use of the LMS will require from them in the immediate future. (#26)</p> <p>The HPEs need to know how the new LMS is different from the previous LMS. (#35)</p> <p><u><i>Additional needs identified:</i></u></p> <p><i>The HPEs have a need for training in order to stay abreast with educational technology, but also have their specific individual needs to be addressed during training.</i></p> <p><i>The HPEs need to have hands-on demonstration and practice during training workshops.</i></p> <p><i>The HPEs need to discuss the feasibility of using the LMS for their specific needs.</i></p> <p><i>The HPEs need to have a feedback session on my use of the system.</i></p> <p><i>The HPEs need to know what the strategic objective of UP is with regards to the implementation of the new LMS.</i></p> | <p>HPEs need to see examples of how the LMS is used in similar contexts. (#14)</p> <p>HPEs need to do revision of the training hand-outs provided.</p> <p>HPEs need personal support to be provided in the form of just-in-time guidance, telephonic or email. (#15)</p> <p>HPEs need online support in the form of an electronic booklet or guide or a layman's manual indicating basic steps. (#15)</p> <p>The need to know how courses can be migrated to the new LMS. (#15)</p> <p>The need to know that the new LMS work just as well as the old/previous version. (#35)</p> <p><u><i>Additional needs identified:</i></u></p> <p><i>The HPEs have a need for training in order to stay abreast with educational technology.</i></p> <p><i>The HPEs need for training to be provided regularly in short courses, as a means of encouragement to continue use of the LMS.</i></p> <p><i>The need to work on own content during the training sessions.</i></p> <p><i>The HPEs need further training to benefit them in reviewing what they have previously learned and what would interest them.</i></p> <p><i>The HPEs need to discuss the feasibility of using the LMS for their specific needs.</i></p> <p><i>The HPEs need to know if the bandwidth stable enough (reliable) to use the LMS.</i></p> |
| Personal stage | <p>HPEs need to know how their teaching approach should change when planning using the LMS. (#17)</p> <p>HPEs need to understand the expectations of UP with regards to</p> | <p>HPEs need to know how their teaching approach should change when planning using the LMS. (#17)</p> |

Appendix 7a List of needs of HPEs at the University of Pretoria when implementing a new LMS (continued)

| Stages of concerns to be addressed based on SoCQ results | Phase I | Phase II |
|--|--|---|
| | Contextualised needs of HPEs at the start of the journey of implementing an LMS | Contextualised needs of HPEs at the later stage / in order to continue the journey of implementation of the LMS. |
| | <p>the use of the LMS in teaching. (#17, #28)</p> <p>The need to know if they will be able to cope with developing all “from scratch”. (#28)</p> <p>The need to know how much time and learning (training) it will require to implement the LMS.</p> <p><u>Additional needs identified:</u></p> <p><i>The HPEs need to feel confident that they will be able to master the use of the LMS by practicing after the training and use it independently.</i></p> <p><i>They need to feel confident about their personal computer skills that would enable them to use the LMS.</i></p> <p><i>The HPEs need to feel comfortable that they will be able to learn the LMS and keep up with the rest during the training workshop.</i></p> <p><i>The need for a digestible amount of information during workshops.</i></p> <p><i>The need to know that the system is worth my efforts and will not be a disastrous implementation.</i></p> | <p><u>Additional needs identified:</u></p> <p><i>The need to be confident that I will be able to master the LMS system.</i></p> <p><i>The need to do improve their computer skills required to implement the LMS.</i></p> <p><i>The need for a digestible amount of information on each day of the workshop days;</i></p> <p><i>The need to know that when they work in the system they will not be frustrated.</i></p> <p><i>The need to understand the need for the new LMS and the strategic objective of UP.</i></p> <p><i>The need for an adjustable pace at which the workshops are presented</i></p> |

Appendices

| | | |
|--------------|---|-----|
| Appendix 1a | Descriptions and topics covered in the new clickUP training workshops (Compiled by the DEI, 2011b – Internal document) | 406 |
| Appendix 2a | Studies reviewed in an international context | 408 |
| Appendix 2b | Studies reviewed that were conducted in a South African context | 415 |
| Appendix 2c | Medical education studies reviewed | 418 |
| Appendix 2d | Different LMS / technologies used in studies reviewed | 419 |
| Appendix 2e | Different LMS / technologies used in studies reviewed frameworks employed in studies reviewed | 420 |
| Appendix 3a | Levels of use (LoU) and categories defined..... | 422 |
| Appendix 4a | Stages of Concern Questionnaire..... | 423 |
| Appendix 4b | Demographic Information (SoCQi & SoCQii) | 426 |
| Appendix 4c | Letter of invitation to participate and Informed consent for the SoCQ | 431 |
| Appendix 4d | SEDL permission for copyright purposes | 434 |
| Appendix 4e | Certification confirmation | 438 |
| Appendix 4f | Invitation to follow-up interview | 439 |
| Appendix 4g | Interview schedule for LoU | 441 |
| Appendix 4h | Letter of invitation and informed consent for the interviews (LoU and Perceived expressed needs)..... | 442 |
| Appendix 4i | Perceived expressed needs interview guide | 445 |
| Appendix 4i | Perceived expressed needs interview guide | 446 |
| Appendix 4j | LoU rating sheet (Hall et al., 2008, p. 57)..... | 447 |
| Appendix 4k | Ethical clearance certificate from Faculty of Education, UP | 448 |
| Appendix 4l | Approval of the Registrar at UP..... | 449 |
| Appendix 4m | Signed consent from the Dean at the Faculty of Health Sciences | 450 |
| Appendix 4n | Signed consent of the vice dean and head: School of Medicine | 452 |
| Appendix 4o | Signed consent of the head: School of Health Care Sciences | 454 |
| Appendix 4p | Signed consent Head: School Of Health Systems And Public Health | 456 |
| Appendix 4q | Signed consent Head: School of Dentistry | 458 |
| Appendix 6a | SoC statements per stage | 460 |
| Appendix 6b. | SoC statements per stage – codes used..... | 461 |
| Appendix 7a | List of needs of HPEs at the University of Pretoria when implementing a new LMS | 462 |

Appendix 1a Descriptions and topics covered in the new clickUP training workshops (Compiled by the DEI, 2011b – Internal document) (continued)

| Name of the Workshop | Outcome, description and topics covered in each workshop |
|----------------------------|--|
| Overview workshop | <p>Identify possible new ways in which to apply the new clickUP environment; become familiar with the new environment and terminology and personalize and customize your module in the new clickUP environment.</p> <p>The clickUP Overview workshop helps to discover the functionalities of the new system. This workshop focuses on the similarities, differences and new functionalities of the new clickUP, as well as on how to personalize the system and customize your module. It also informs lecturers on how to prepare for the move to the new environment.</p> <p>Topics</p> <ul style="list-style-type: none"> • Application of a blended learning model in your module • Functionalities available in the new clickUP system • Changed and new concepts in the new clickUP system • New clickUP portal • New and different terminology and functions • Navigation & • Personalise the clickUP environment • Customize your module: loading a banner, changing menus, load lecturer information • The use of the content menu, content areas and module pages. • Identify your specific future training needs for your use of clickUP. |
| Content workshop | <p>Create a resource-led clickUP module that can serve as a prototype for your other modules.</p> <p>The clickUP Content workshop helps lectures discover the functionalities available to distribute resources through the new system. In this 4-hour workshop they create a resource-led clickUP module that may serve as an example for your other modules.</p> <p>Topics</p> <ul style="list-style-type: none"> • Use the UP teaching and learning principles to organise and plan the distribution of content within a module • Examples of how resources may be used in clickUP to promote active learning • Identify challenges with regard to the use of resources • Identify functionalities in clickUP that may solve your challenges • Changed and new concepts in the new clickUP system • New and changed terminology and functions & • Use of the Content Collection • Plan the use of content tools in clickUP (Visual editor, items, files, mash-ups, adaptive release, external links, syllabus, library pages, content folders, learning modules, lesson plans, etc.) • Build your own solution in your own module. |
| Assessment workshop | <p>Extend the module (built in the previous session) with clickUP collaboration tools that will enable your students to interact with and learn from each other. The Content workshop further extends the module (built in the previous session/s) with clickUP assessment tools that will enable you to assess your students; and for the students to self-assess or peer assess each other.</p> <p>Topics</p> <ul style="list-style-type: none"> • Apply the UP education and assessment principles that underpin assessment • Value of formative feedback and ways to provide feedback to students via clickUP |

Appendix 1a Descriptions and topics covered in the new clickUP training workshops (Compiled by the DEI, 2011b – Internal document) (continued)

| Name of the Workshop | Outcome, description and topics covered in each workshop |
|-------------------------------|---|
| | <ul style="list-style-type: none"> • Examples of how clickUP may be used to assess students • Principles of objective assessment • Identify challenges with regard to assessment. • Identify functionalities in clickUP that may solve your challenges • New and changed terminology and functions • Plan the use of assessment tools in clickUP (“tests, self- and peer assessment, assignments, Turnitin assignments, Grade Centre, rubrics, portfolio, graded discussion boards, journals, blogs and Wikis”, etc.) • Marking assignments using the Grade Centre • Build your own solution in your own module |
| Collaboration workshop | <p>Further extend the module (built in the previous session/s) with clickUP assessment tools that will enable you to assess your students; and for the students to self-assess or peer assess each other.</p> <p>The clickUP Collaborate workshop helps to discover the functionalities of the new system. In this 4-hour workshop you will extend your module (built in the previous session) with clickUP collaboration tools that will enable your students to interact with and learn from each other.</p> <p>Topics</p> <ul style="list-style-type: none"> • Apply the UP education principles that underpin collaboration • Examples of how clickUP may be used to promote collaboration/group work • Identify challenges with regard to the collaboration/group work • Identify functionalities in clickUP that may solve your challenges • New and changed terminology and functions • Detect emotions in written text and formulate appropriate responses in an online environment • Plan the use of collaboration tools in clickUP (discussion board, blogs, wikis, journals, groups, messages, collaboration, etc.) • Build your own solution in your own module |
| Management workshop | <p>Apply clickUP management tools to enable you to administrate, manage and track the performance of small, medium and large groups of students.</p> <p>The clickUP Management workshop helps to discover the functionalities of the new system. In this 4-hour workshop you will apply clickUP management tools to enable you to administrate, manage and track the performance of students.</p> <p>Topics</p> <ul style="list-style-type: none"> • Apply the UP education principle that underpin student support • Examples of how clickUP may be used to support students • Identify challenges with regard to the management of students and a module • Identify functionalities in clickUP that may solve your challenges • New and changed terminology and functions • Use of the Grade Center • Plan the use of management tools in clickUP (module pages, notifications, adaptive release, Grade Centre, Early Warning System, course reports, My Grades, etc.) • Build your own solution in your own module. |

Appendix 2a Studies reviewed in an international context

| | Author | Year | Journal | Type of article | Country | LMS used | Theme / topic | Purpose of study | Method and or instruments used to gather data | Participants: Sample size Institution(s), faculty(ies) and or department(s) |
|---|-------------------------|------|--|--|-----------|------------------------|-------------------------|---|--|---|
| 1 | Lee, Tan & Goh | 2004 | International Journal of Distance Education Technologies | Describe process followed during implementation and student satisfaction | Singapore | Blackboard | Adoption rate & process | Outline of the process followed to implement e-learning and other adjacent software on campus. And do a student satisfaction survey. | Used a staff and student satisfaction survey | n = 141 (staff) and n = 2771 (students) |
| 2 | Shannon & Doube | 2004 | Australasian Journal of Educational Technology | Research | Australia | Blackboard version 5.0 | Barriers / factors | Investigate the barriers to the adoption or extended use of the online learning management and content creation system. | Qualitative & Quantitative Questionnaire; Focus groups | n = 156: (Lecturers: full time and part time) |
| 3 | Shea, Pickett & Li | 2005 | International review of Research in Open and Distance learning | Research | USA | Not specified | Barriers / Factors | Reports on research to determine potential barriers to the continued growth in adoption of online teaching in higher education. | Quantitative Survey | n = 913 Math/Sciences, Art, Humanities, Social Sciences, Business |
| 4 | Coates, James & Baldwin | 2005 | Tertiary Education and Management | Conceptual | Australia | Not specified | Influence of LMS | Critical examination of the potential impact of online systems on teaching and learning in universities. It discusses the possible effects of LMS on teaching practices, student engagement, and the nature of academic work and on the | NA | NA |

NA: Not applicable

Appendix 2a Studies reviewed in an international context (continued)

| | Author | Year | Journal | Type of article | Country | LMS used | Theme / topic | Purpose of study | Method and or instruments used to gather data | Participants: Sample size Institution(s), faculty(ies) and or department(s) |
|---|--|------|---|-------------------------------------|-------------|--------------------------|--|---|--|---|
| | | | | | | | | control over academic knowledge. | | |
| 5 | Bongalos, Bulaon, Celedonio, de Guzman, Ogarte | 2006 | British Journal of Educational Technology | Research | Philippines | Blackboard | Experience | To describe the experiences of college teachers as they develop, implement and evaluate their courseware materials. | Qualitative study using an interview and observation. | N = 10 Colleague professors |
| 6 | Samarawickrema & Stacey | 2007 | Distance Education | Research | Australia | WebCT Vista | Barriers / Factors | Examine the factors that enable or impede the adoption of technology and their related pedagogical strategies. | Case study Interviews; Examination of artefacts and field notes | N = 22 University wide: Medicine, Nursing and Health Sciences; Arts; Business and law, Information technology, Education and Engineering |
| 7 | Fox | 2007 | International Journal on E-Learning | Research | Hong Kong | WebCT & Blackboard | Experience and staff perceptions of the benefits | To focus on staff perceptions of how ICTs provide benefits to learning and teaching also look at issues and common concerns that needs to be addressed. | Ethnographic qualitative study using interviews and document analysis. | n = 14 Departments: Nursing, Education, Journalism, engineering, Social sciences and Business |
| 8 | Weaver, Robbie & Borland | 2008 | International Journal on E-Learning | Experiences discussed & suggestions | Australia | Blackboard / WebCT Vista | Experience of PD staff | This article describes the experiences of staff responsible for developing and delivering professional | Case studies Questionnaire; Interview | n = 51 Professional staff developer |

Appendix 2a Studies reviewed in an international context (continued)

| | Author | Year | Journal | Type of article | Country | LMS used | Theme / topic | Purpose of study | Method and or instruments used to gather data | Participants: Sample size Institution(s), faculty(ies) and or department(s) |
|----|--------------------------------|------|--|-----------------|----------------|--|----------------------------------|--|--|---|
| | | | | | | | | development (PD) in online teaching. A model for an "ideal" implementation is presented. | | |
| 9 | Wang & Wang | 2009 | Computers & Education | Research | Taiwan | Not specified | Adoption / factors | This study develops an integrated model of instructor adoption of web-based learning systems by incorporating existing literature and multiple empirically theories. | Verify proposed theoretical model of instructor adoption Survey online | N = 268 3 Universities |
| 10 | Georgina & Hosford | 2009 | Teaching and Teacher Education | Research | USA | Bundle of technologies including LMS (Bb / WebCT) | Adoption and technology literacy | Examine how faculty technology literacy and technology training impact on the integration of technology into pedagogy. | A non-experimental quantitative study using an online questionnaire. | n = 237 Faculty members from 15 Colleges of Education |
| 11 | Christie & Juradob | 2009 | European Journal of Engineering Education | Research | Sweden | WebCT (Used since 1999) * investigated in 2006 | Barriers | Investigate to what extent lecturers made use of the different features available on the learning management system. | Descriptive analysis of a case study. Interview and Observation | n = 22 School of Engineering |
| 12 | Bhati, Mercer, Rankin & Thomas | 2009 | International Journal of Pedagogies and Learning | Review | UAE, Australia | Mobile tools, Learning Management Systems, and the | Barriers and facilitators | Examined the key factors that influence the instructors' satisfaction of LMS in blended learning, and how this satisfaction is related to | NA | |

Appendix 2a Studies reviewed in an international context (continued)

| Author | Year | Journal | Type of article | Country | LMS used | Theme / topic | Purpose of study | Method and or instruments used to gather data | Participants: Sample size Institution(s), faculty(ies) and or department(s) |
|-----------------------|------|--|-----------------|--------------|------------------------------------|------------------------------------|--|--|---|
| | | | | | virtual world program, Second Life | | their intention to continuously use LMS in blended learning and purely for distance education. | | |
| 13 Steel | 2009 | Australasian Journal of Educational Technology | Research | Australia | Blackboard environment | Beliefs and practice | The study uncovers faculty beliefs about the roles, affordances and limitations of educational technologies and how academics adapt these to their learning designs within an LMS environment. The aim of the study is to reveal the relationship between teacher beliefs and learning designs for web technologies such as LMS. | Qualitative, cases Concept mapping and stimulated recall tasks were used in conjunction with interviews to elicit their beliefs and learning designs in an LMS (Blackboard) environment. | n = 3 Not stated |
| 14 Klobas & McGill | 2010 | Journal of Computing in Higher Education | Research | Australia | WebCT (CE) | Role of Involvement in LMS success | Investigate the role of involvement by student and instructor in LMS success. | Hypotheses testing Online questionnaire | N > 20 Wide variety of courses and programmes |
| 15 Hussein | 2011 | The Turkish Online Journal of Educational Technology | Research | Saudi Arabia | JUSUR (self designed system) | Attitude | Identify the attitudes of academics towards using E-learning Management System JUSUR. More specifically what are their attitudes and what are the obstacles they encounter. | Descriptive analysis using an online survey (5-point Likert scale questions, which consists of 34 items) | n = 90 Medicine, Humanities and Sciences lecturers |

Appendix 2a Studies reviewed in an international context (continued)

| | Author | Year | Journal | Type of article | Country | LMS used | Theme / topic | Purpose of study | Method and or instruments used to gather data | Participants: Sample size Institution(s), faculty(ies) and or department(s) |
|----|---------------------------------------|------|--|-----------------|-----------|----------------------------|-------------------------------|--|---|--|
| 16 | Iqbal & Qureshi | 2011 | Information Management and Business Review | Research | Pakistan | Not specified | Barriers | Investigate what the major barriers in adoption of e-learning are and determine what kind of functionalities and teaching methodologies should be supported by LMSs. | Quantitative Survey | n = 98 Art & Humanities Engineering Management sciences Medical Social sciences |
| 17 | Abdous | 2011 | Journal for Computing in Higher Education | Theoretical | USA | Focus on online technology | Effective faculty development | Put forward a process framework for faculty development based on existing models and experience. | NA | |
| 18 | Gautreau | 2011 | The Journal of Educators Online | Research | USA | Blackboard | Motivation | The study analyses the demographic information and identify motivations factors to understand what determines the adoption of the LMS. | Quantitative study using a survey instrument based on Betts research (1998) | n = 42 Lecturers that taught in the College of Communications |
| 19 | Heirdsfield, Walker, Tambyah & Beutel | 2011 | Australian Journal of Teacher Education | Research | Australia | Blackboard | Perceptions | To investigate the perceptions of student and staff perceptions of using the online learning management system in teaching and learning. | Questionnaire and focus groups were used. | Staff: n = 43 (questionnaire) and n = 9 (focus group); Students: n = 459 (questionnaire) and n = 6 (focus group). Staff and students from Faculty of Education |

Appendix 2a Studies reviewed in an international context (continued)

| | Author | Year | Journal | Type of article | Country | LMS used | Theme / topic | Purpose of study | Method and or instruments used to gather data | Participants: Sample size Institution(s), faculty(ies) and or department(s) |
|----|----------------------------|------|--|-----------------|----------|---|---|---|---|---|
| 20 | Cabral, Pedro & Gonçalves | 2012 | World Academy of Science, Engineering and Technology | Research | Portugal | Moodle | Effect of training / extent of use levels | The study investigates the impact of ICT-related training in the adoption of a learning management systems (LMS). | Quantitative method Course attendance and course analysis | 1320 LMS courses and 265 faculties University wide |
| 21 | Ryan, Toye, Charron & Park | 2012 | International Review of research in Open and Distance learning | Research | Canada | WebCT / Blackboard CE to Blackboard Learn version | Impact and change | Explore the dynamics of the changes, the transition process, problems encountered, and lessons learned when moving from one LMSs to a new upgraded one. | Mixed method Online instrument & interview | n = 265 Arts & Science, Education, Applied and Professional Schools, Distance (In-service /AQ,ABQ), Distance, (CCE) |
| 22 | Gonçalves & Pedro | 2012 | World Academy of Science, Engineering and Technology | Research | Portugal | Moodle | Stages of implementation | Based on descriptive statistical data in a three years longitudinal study, the study investigates the different stages of a LMS adoption process. | This study aims to analyse, through a descriptive perspective, the process of LMS adoption in a European university, Making use of the data from the system | All courses and users on the system (2008 & 2011. Arts \7 Humanities, Health Sciences; Science & Technology; Legal, Economic \& Social Sciences, Institute of Social Sciences, Faculty of Psychology, Inst. of Education and Institute of Geography & Territorial Planning. |

Appendix 2a Studies reviewed in an international context (continued)

| | Author | Year | Journal | Type of article | Country | LMS used | Theme / topic | Purpose of study | Method and or instruments used to gather data | Participants: Sample size Institution(s), faculty(ies) and or department(s) |
|----|---|------|---|---|-------------|--------------------------------|--|--|--|---|
| 23 | Al-Busaidi & Al-Shihi | 2012 | Journal for Computing in Higher Education | Research | Oman | Moodle (after WebCT) | Satisfaction | What the key factors are that influence the lecturers' satisfaction of an LMS in and how their satisfaction relates to their intention to use the LMS. | Quantitative Questionnaire | n = 82 lecturers |
| 24 | McNeill, Arthur, Breyer, Huber & Parker | 2012 | Asian Social Science | Describe process followed during implementation | Australia | Move from Blackboard to Moodle | Success factors for implementation and staff development | The processes used in developing the professional learning program are described, along with indicators of success that are emerging from the initiative. | NA | Professional staff developer |
| 25 | Lwoga | 2012 | Campus-Wide Information Systems | Research | Tanzania | Web 2.0 technologies | | Assesses the extent to which learning and Web 2.0 technologies are utilised to support learning and teaching in Africa's higher learning institutions, with a specific focus on Tanzania's public universities | Content analysis and semi-structured interviews | Staff at 6 Tanzanian Universities ICT staff |
| 26 | Lawrence & Lentle-Keenan | 2013 | Distance Education | Research | New-Zealand | Moodle | Beliefs | Examines the relationship between teaching beliefs and practice, institutional constraints, and the uptake of Web-based technology for teaching in higher education. | Case studies are recorded using a semi-structured interview. | n = 6; Lecturers from business, information technology, social sciences, and engineering. |

NA: Not applicable

Appendix 2b Studies reviewed that were conducted in a South African context

| | Author(s) | Year | Database searched | Journal | Type of study / article | SA University | LMS used | Theme | Purpose of study | Method and or Instruments used | Sample |
|---|-----------------------------------|------|--------------------|---------------------------|-------------------------|---------------|----------|--------------------------------------|--|--|---|
| 1 | Van der Merwe | 2004 | Completed research | NA | PhD thesis | Stellenbosch | WebCT | Barriers challenges | Structured evaluation of the integration of ICTs in a University. | Case study using an online questionnaire | n = 232 Lecturers from different Faculties |
| 2 | Van der Merwe & Mouton | 2005 | SA e-Pub | Perspectives in Education | Research | Stellenbosch | WebCT | Barriers / perception of lecturers | Investigates what lecturers perceive as the major barriers and challenges related to the integration of ICTs as well as what type of incentives they prefer. | Online questionnaire | n = 232 Lecturers from different Faculties |
| 3 | Simelane, Bignaut & Van Reyneveld | 2007 | SA e-Pub | SAJHE | Research | TUT | WebCT | Strategies to use and implementation | Report on the strategies and approaches employed to prepare lecturers to use technology in order to enhance their teaching. | Qualitative case study. Document analyses, focus group interviews and bloggers (individual reflections). | n = 15 Lecturers |

Appendix 2b Studies reviewed that were conducted in a South African context

| | Author(s) | Year | Database searched | Journal | Type of study / article | SA University | LMS used | Theme | Purpose of study | Method and or Instruments used | Sample |
|---|--------------------|------|-------------------|---------------------|-------------------------|---------------|----------------------------------|-----------------------|---|--|---|
| 4 | Snowball & Mostert | 2010 | SA e-Pub | SAJHE | Case study | Rhodes | Moodle | Experience / impact | Experiences of the course coordinator, lecturers and an educational technologist are discussed as well as student perceptions. | Case study using feedback questionnaire from students and perspectives of lecturers. | n = 500 (students); n = 1 (technologist), n = 3 (lecturers) |
| 5 | Bothma & Cant | 2011 | SA e-Pub | Educational Studies | Research | Unisa | "MyUnisa" (Household name) | Adoption and use | The limited use of the LMS created a need to identify ways in which the use of increasing the use of MyUnisa amongst lecturers. | Interviews | n = 13 Lecturers in School of Management Sciences |
| 6 | Khoza | 2011 | SA e-Pub | Progressio | Research | KwaZulu-Natal | Different web-based technologies | Barriers / challenges | Reports about a case study of eight South African Educational Technology (ET) lecturers who use web-based teaching | Qualitative case study using interview, observations and a questionnaire. | n = 8 ET lecturers at four SA Universities |

Appendix 2b Studies reviewed that were conducted in a South African context

| Author(s) | Year | Database searched | Journal | Type of study / article | SA University | LMS used | Theme | Purpose of study | Method and or Instruments used | Sample |
|------------------------------|------|-------------------|--|-------------------------|---------------|--|-------------|--|---|---|
| | | | | | | | | and learning (WBTL) in teaching their modules and the challenges they face. | | |
| Esterhuizen, Bignaut & Ellis | 2013 | ERIC | International Review of Research in Open and Distance learning | Research | North-West | Bundle: Moodle / e-Fundi (Plus Electronic whiteboards, etc.) | Perceptions | Investigate the perceptions of academic staff involved with staff development in order to implementing new to technology in teaching and learning. | Explorative case study using interview; questionnaire and observations. | n = 21 (academics); n = 1 (learning technologist) |

Appendix 2c Medical education studies reviewed

| | Author(s) | Year | Journal | Type of article | Country | LMS used | Theme | Purpose of study | Method and or instruments used | Participants: Sample size and context |
|---|--|------|------------------------------------|-----------------|---------|---|------------------|--|---|---|
| 1 | Zayim, Yildirim & Saka | 2006 | Educational Technology and society | Research | Turkey | Bundle (Blackboard and 11 other educational technologies) | Adoption factors | Explore differences between faculty that do adopt technology and those that are reluctant to do so. Characteristics, adoption patterns, perceptions of computer-use. | Quantitative study using a questionnaire | n = 155; Lecturers from Basic and Clinical Sciences |
| 2 | Schifferdecker, Berman, Fall & Fischer | 2012 | Medical Education | Research | USA | CASUS online learning environment | Adoption factors | This study examines the key elements and processes that led to the widespread adoption of a CAL program in undergraduate medical education. | Mixed-methods used in an explanatory study employing questionnaire and a semi-structured interview. | n = 90; Paediatric clerkship directors |

Appendix 2d Different LMS / technologies used in studies reviewed

| AUTHORS | YEAR | LMS / TECHNOLOGIES USED |
|------------------------------------|------|---|
| International studies | | |
| Lee, Tan & Goh | 2004 | Blackboard |
| Bongalos et al. | 2006 | Blackboard |
| Gautreau | 2011 | Blackboard |
| Heirdsfield et al. | 2011 | Blackboard |
| Weaver, Robbie & Borland | 2008 | Blackboard / WebCT Vista |
| Steel | 2009 | Blackboard environment |
| Shannon & Doube | 2004 | Blackboard version 5.0 |
| Ryan, Toye, Charron & Park | 2012 | WebCT / Blackboard CE to Blackboard Learn |
| Samarawickrema & Stacey | 2007 | WebCT Vista |
| Cabral, Pedro & Gonçalves | 2012 | Moodle |
| Gonçalves & Pedro | 2012 | Moodle |
| Lawrence & Lentle-Keenan | 2013 | Moodle |
| Al-Busaidi & Al-Shihi | 2012 | Moodle (after WebCT) |
| McNeill et al. | 2012 | Move from Blackboard to Moodle |
| Fox | 2007 | WebCT (both Univ) |
| Klobas & McGill | 2010 | WebCT (CE) |
| Christie & Juradob | 2009 | WebCT (since 1999) * investigated in 2006 |
| Shea, Pickett & Li | 2005 | Not specified |
| Coates, James & Baldwin | 2005 | Not specified |
| Wang & Wang | 2009 | Not specified |
| Iqbal & Qureshi | 2011 | Not specified |
| Georgina & Hosford | 2009 | Bundle including LMS (Blackboard / WebCT) |
| Bhati, Mercer, Rankin & Thomas | 2009 | Mobile tools, LMSs, Second Life |
| Hussein | 2011 | JUSUR (self-designed system) |
| Abdous | 2011 | Focus on online technology |
| Lwoga | 2012 | Web 2.0 technologies |
| AUTHORS | YEAR | LMS / TECHNOLOGIES USED |
| South African Studies | | |
| Van der Merwe | 2004 | WebCT |
| Van der Merwe & Mouton | 2005 | WebCT |
| Simelane, Blignaut & Van Reyneveld | 2007 | WebCT |
| Snowball & Mostert | 2010 | Moodle |
| Bothma & Cant | 2011 | LMS not specified ("MyUnisa") |
| Khoza | 2011 | Different web-based technologies |
| Esterhuizen, Blignaut & Ellis | 2013 | Bundle: Moodle / e-Fundi (Plus others) |
| AUTHORS | YEAR | LMS / TECHNOLOGIES USED |
| Medical Education | | |
| Zayim, Yildirim & Saka | 2006 | Bundle (Blackboard and 11 other educational technologies) |

Schifferdecker, Berman, Fall & Fischer 2012 CASUS online learning environment

**Appendix 2e Different frameworks employed in studies reviewed
(continued)**

| Author | Year | Theme | Purpose of study | Theoretical framework |
|-------------------------|------|-----------------------------------|---|--|
| Shea, Pickett & Li | 2005 | Barriers / Factors | Reports on research to determine potential barriers to the continued growth in adoption of online teaching in higher education. | Rogers' (2003) Diffusion of Innovation Model |
| Samarawickrema & Stacey | 2007 | Barriers / Factors | Examine the factors that enable or impede the adoption of technology and their related pedagogical strategies. | Rogers' theory of diffusion of innovations; The theory of perceived attributes; Actor-network theory |
| Wang & Wang | 2009 | Adoption / factors | This study develops an integrated model of instructor adoption of web-based learning systems by incorporating existing literature and multiple empirically verified theories. | Technology acceptance model and DeLone and McLean's information system success model. |
| Georgina & Hosford | 2009 | Adoption and technology literacy | Examine how faculty technology literacy and technology training impact on the integration of technology into pedagogy. | Rogers' (1980) central hypothesis for person-centred learning. |
| Klobas & McGill | 2010 | Role of Involvement - LMS success | Investigate the role of involvement by student and instructor in LMS success. | DeLone and McLean (2003) |
| Hussein | 2011 | Attitude | Identify the attitudes of academics towards using E-learning Management System JUSUR. -More specifically what are their attitudes and what are the obstacles they encounter. | The personal view towards E-learning and JUSUR; the need to use JUSUR; and the need for training on using JUSUR |
| Gautreau | 2011 | Motivation | The study analyses the demographic information and identify motivations factors to understand what determines the adoption of the LMS. | Three theories: (a) motivation hygiene theory (Herzberg et al., 1959); (b) diffusion of innovations theory (Rogers, 1995); |

**Appendix 2e Different frameworks employed in studies reviewed
(continued)**

| Author | Year | Theme | Purpose of study | Theoretical framework |
|---|------|--|--|---|
| | | | | (c) change theory as it relates to technology integration (Fullan, 2001). |
| Gonçalves & Pedro | 2012 | Implementation stages | Based on descriptive statistical data in a three year longitudinal study this study investigates the different stages of a LMS adoption process. | Rogers theory of innovation diffusion |
| McNeill, Arthur, Breyer, Huber & Parker | 2012 | Success factors Implementation and staff development | The processes used in developing the professional learning program are described, along with indicators of success that are emerging from the initiative. | Self-determination theory and other mini theories |
| Lawrence & Lentle-Keenan | 2013 | Beliefs | Examines the relationship between teaching beliefs and practice, institutional constraints, and the uptake of Web-based technology for teaching in higher education. | Activity theory |

Appendix 3a Levels of use (LoU) and categories defined

| Levels of Use of the Innovation | | | | | | | |
|---|---|---|--|--|--|---|---|
| CATEGORIES | | | | | | | |
| Scale point definitions of the levels of use of the Innovation | Knowledge | Acquiring information | Sharing | Assessing | Planning | Status reporting | Performing |
| Levels of use are distinct states that represent observably different types of behaviour and patterns of innovation use as exhibited by individuals and groups. These levels characterize a user's development in acquiring new skills and varying use of the innovation. Each level encompasses a range of behaviours, but limited by a set of identifiable Decision points. For descriptive purposes each level is defined by seven categories. | That which the user knows about that characterizes the innovation, how to use it, and consequences of its use. This is cognitive knowledge related to using an innovation, not feelings or attitudes. | Solicits information about the innovation in a variety of ways, including questioning resource persons, corresponding with resource agencies, reviewing printed materials, and making visits. | Discusses the innovation with others. Shares plans, ideas, resources, outcomes and problems related to use of the innovation. | Examines the potential or actual use of the innovation or some aspect of it. This can be mental assessment or can involve actual collection and analysis of data. | Designs and outlines short-and/or long-range steps to be taken during process of innovation adoption, i.e., aligns resources, schedules activities, meets with others to organize and/or coordinate the innovation. | Describes personal stand at the present time in relation to use of the innovation. | Carries out the actions and activities entailed in operationalizing the innovation. |
| LEVEL 0 NON-USE | Knowledge - 0 | Acquiring information - 0 | Sharing - 0 | Assessing - 0 | Planning - 0 | Status reporting - 0 | Performing - 0 |
| The state in which users has little or no knowledge of the innovation, no involvement with the innovation, and is doing nothing towards becoming involved. | Knows nothing about this or similar innovations or has very limited general knowledge of efforts to develop innovations in the area. | Takes little or no action to solicit information about beyond reviewing descriptive information about the innovation when it happens to come to personal attention. | Is not communicating with others about the innovation beyond possibly acknowledging that the innovation exist. | Takes to action to analyse the innovation, its characteristics, possible use, or consequences of use. | Schedules no time and specifies no steps for the study or use of the innovation. | Reports no or little personal involvement with the innovation. | Takes no discernible action or using the innovation. The innovation and/or its accountments are not present or in use. |
| Decision point A | Takes action to learn more detailed information about the innovation | | | | | | |
| LEVEL I ORIENTATION | Knowledge - 1 | Acquiring information - 1 | Sharing - 1 | Assessing - 1 | Planning - 1 | Status reporting - 1 | Performing - 1 |
| State in which the user has acquired or is acquiring information about the innovation and/or has explored or is exploring its value orientation and its demands upon user and user system. | Knows general information about the innovation such as the origin, characteristics, and, implementation requirements. | Seeks descriptive material about the innovation. Seeks opinions and knowledge of others through discussions, visits or workshops. | Discusses resources needed in general terms and/or ideas about the innovation and possible implications of its use. | Analyses and compares materials, content requirements for use, evaluation reports, potential outcomes, strengths and weaknesses for the purpose of making a decision about the innovation. | Plans to gather necessary information and resources as needed to make a decision for or against use of the innovation. | Reports preparing orienting self to what the innovation is or is not. | Explores the innovation and requirements for use by talking to others about it, reviewing descriptive information and sample material, attending orientation sessions, observing others using it. |
| Decision point B | Makes a decision to use he innovation by establishing a time to begin | | | | | | |
| LEVEL II PREPARATION | Knowledge - II | Acquiring information - II | Sharing - II | Assessing - II | Planning - II | Status reporting - II | Performing - II |
| State in which the users preparing for its first use of the innovation. | Knows logistical requirements, necessary resources and timing for initial use of the innovation, and details of initial experience for clients. | Seeks information and resources specifically related to preparation for use of the innovation in own setting. | Discusses resources needed for initial use of the innovation. Joins others in pre-use training, and in planning resources, logistics, schedules, etc. In preparation for first use. | Analyses detail requirements and available resources for initial use of the innovation. | Identifies steps and procedures entailed in obtaining resources and organising activities and events for initial use of the innovation. | Reports preparing self for the initial use of the innovation. | Studies reference material in depth, organises resources and logistics, schedules and receives skill training in preparation for initial use. |
| Decision point C | Changes, if any, and use are dominated by user needs. Clients may be valued, however management, time, or limited experimental knowledge dictate what the user does. | | | | | | |
| LEVEL III MECHANICAL USE | Knowledge - III | Acquiring information - III | Sharing - III | Assessing - III | Planning - III | Status reporting - III | Performing - III |
| State in which the user focuses most effort on the short-term, day-to-day use of the innovation with little time for reflection. Changes in use are made more to meet users needs than clients needs. The users is primarily engaged in a stepwise attempt to master the tasks required to use the innovation, often resulting in disjointed and superficial use. | Knows on day-to-day basis the requirements for using the innovation, is more knowledgeable on short-term activities and effects than long range activities and effects, of use of the innovation. | Solicits management information about such things as logistics, scheduling techniques, and ideas for reducing amount of time and work required of user. | Discusses management and logistical issues related to the use of the innovation. Resources and materials are shared for the purpose of reducing management, flow and logistical problems related to the use of the innovation. | Examines own use of the innovation with respect to problems of logistics, management, time, schedules, resources and general reactions to clients. | Plans for organising and managing resources, activities and events related primarily to immediate ongoing use of the innovation. Plannedfor changes address managerial or logistical issues with the short term perspective. | Reports that logistics, time, management, resources organization, etc...are the focus of most personal efforts to use the innovation. | Manages innovation with varying degrees of efficiency. Often lacks anticipation of immediate consequences. The flow of action between the user and clients is often disjointed, uneven and uncertain. When changes are made, they are primarily n response to logistical and organisational problems. |
| Decision point D-1 | A routine pattern of use is established. Changes for clients may be made routinely, but there are no recent changes outsidehte pattern. | | | | | | |
| LEVEL IVA ROUTINE USE | Knowledge - IVA | Acquiring information - IVA | Sharing - IVA | Assessing - IVA | Planning - IVA | Status reporting - IVA | Performing - IVA |
| Use of the innovation is stabilized. Few if any changes are being made in ongoing use. Little preparation or thought is being given to improving innovation use or its consequences. | Knows both short-and long-term requirements for use and how to use the innovation with minimum effort or stress. | Makes no special efforts to seek information as part of ongoing use of the information. | Describes current use of the innovation with little or no reference to ways of changing use. | Limits evaluation activities to those administratively required, with little attention paid to findings for the purpose of changing use. | Plans intermediate and long-range use with little projected variation on how the innovation will be used. Planning focuses on routine use of resources, personnel, etc. | Reports that personal use of the innovation is going on satisfactorily with few if any problems. | Uses the innovation smoothly with minimal management problems: over time, their is little variation in patterns of use. |
| Decision point D-2 | Changes of the innovation are based on formal and informal evaluation in order to increase client outcomes. They must be recent. | | | | | | |
| LEVEL IVB REFINEMENT | Knowledge - IVB | Acquiring information - IVB | Sharing - IVB | Assessing - IVB | Planning - IVB | Status reporting - IVB | Performing - IVB |
| State in which the user varies the use of the innovation to increase the impact on clients within his/her immediate sphere of influence. Variations are based on knowledge of both short and long term consequences for client. | Knows cognitive and affective affects of the innovation on clients and ways for increasing impact on clients. | Solicits information and materials that focus specifically on changing use of the innovation to affect the clients. | Discusses own methods of modifying use of the innovation to change client outcomes | Assesses use of innovation for the purpose of changing current practices to improve client outcomes. | Develop immediate and long-range plans that anticipate possible and needed steps, resources, and events designed to enhance client outcomes. | Reports varying use of the innovation in order to change client outcomes. | Explores and experiments with alternative combinations of the innovation with existing practices to maximize client outcomes. |
| Decision point E | Initiates changes in the use of the innovation based on input of and in coordination with what colleagues are doing. | | | | | | |
| LEVEL V INTEGRATION | Knowledge - V | Acquiring information - V | Sharing - V | Assessing - V | Planning - V | Status reporting - V | Performing - V |
| State in which the user is combining own efforts to use the innovation with related activities of colleagues to achieve a collective impact on clients within their sphere of influence. | Knows how to coordinate own use of the innovation with colleagues to provide a collective impact on clients. | Solicits information and opinions for the purpose of collaborating withothers in use of the innovation. | Discusses efforts to increase client impact through collaboration with others on personal use of the innovation. | Appraises collaborative use of the innovation in terms of client outcomes and strengths and weaknesses of the integrated efforts. | Plans specific actions to coordinate own use of the innovation with others to achieve increased impact on clients | Reports spending time and energy collaborating with others about integrating own use of the innovation. | Collaborates with oters in the use of the innovation as a means of expanding the innovation's impact on clients. Changes in use are made in coordination wit others. |
| Decision point F | Begins exploring alternatives to or major modifications of the innovation presently in use. | | | | | | |
| LEVEL VI RENEWAL | Knowledge - VI | Acquiring information - VI | Sharing - VI | Assessing - VI | Planning - VI | Status reporting - VI | Performing - VI |
| State in which the user re-evaluates the quality of use of the innovation, seeks major modifications of or alternatives to present innovation to achieve increased impact on clients, examines new goals for self and the system. | Knows of alternatives that could be used to change or replace the present innovation that would improve the quality of outcomes of its use. | Seeks information and materials about others innovations as alternatives to present innovation or for making major adaptations in the innovation. | Focussing discussions on identifications of major alternatives or replacements for the current innovation. | Analyses advantages and disadvantages of major modifications or alternatives to enhance or replace the innovation. | Plans activities to involve pursui of alternatives to enhance or replace the innovation | Reports considering major modifications to present use of the innovation | Explores other innovations that could be used in combination with or in place of the present innovation in an attempt to develop more effective means of achieving client outcomes. |

From: Hall et al. (2008, pp. 72-73)

Appendix 4a Stages of Concern Questionnaire

SoCQ 075 _____

Stages of Concern Questionnaire

Name (optional): _____

The purpose of this questionnaire is to determine what people who are using or thinking about using various programs are concerned about at various times during the adoption process.

The items were developed from typical responses of educators who ranged from no knowledge at all about various programs to many years' experience using them. Therefore, **many of the items on this questionnaire may appear to be of little relevance or irrelevant to you at this time.** For the completely irrelevant items, please circle "0" on the scale. Other items will represent those concerns you do have, in varying degrees of intensity, and should be marked higher on the scale.

For example:

- | | |
|---|------------------------|
| This statement is very true of me at this time. | 0 1 2 3 4 5 6 7 |
| This statement is somewhat true of me now. | 0 1 2 3 4 5 6 7 |
| This statement is not at all true of me at this time. | 0 1 2 3 4 5 6 7 |
| This statement seems irrelevant to me. | 0 1 2 3 4 5 6 7 |

Please respond to the items in terms of **your present concerns**, or how you feel about your involvement with **this** innovation. We do not hold to any one definition of the innovation so please think of it in terms of your own perception of what it involves. Phrases such as "this approach" and "the new system" all refer to the same innovation (i.e. *new clickUP*). Remember to respond to each item in terms of your present concerns about your involvement or potential involvement with the innovation.

Thank you for taking time to complete this task.

Appendix 4a Stages of Concern Questionnaire (continued)

| 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
|------------|--------------------|---|-------------------------|---|---|---------------------|---|
| Irrelevant | Not true of me now | | Somewhat true of me now | | | Very true of me now | |

Circle one number for each item.

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| 1. I am concerned about students' attitudes toward the new clickUP. | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 2. I now know of some other approaches that might work better. | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 3. I am more concerned about another innovation. | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 4. I am concerned about not having enough time to organize myself each day. | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 5. I would like to help other faculty in their use of the new clickUP. | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 6. I have a very limited knowledge of the new clickUP. | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 7. I would like to know the effect of reorganization on my professional status. | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 8. I am concerned about conflict between my interests and my responsibilities. | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 9. I am concerned about revising my use of the new clickUP. | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 10. I would like to develop working relationships with both our faculty and outside faculty using this new clickUP. | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 11. I am concerned about how the new clickUP affects students. | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 12. I am not concerned about the new clickUP at this time. | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 13. I would like to know who will make the decisions in the new system. | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 14. I would like to discuss the possibility of using the new clickUP. | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 15. I would like to know what resources are available if we decide to adopt the new clickUP. | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 16. I am concerned about my inability to manage all that the new clickUP requires. | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 17. I would like to know how my teaching or administration is supposed to change. | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 18. I would like to familiarize other departments or persons with the progress of this new approach. | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 |

Appendix 4a Stages of Concern Questionnaire (continued)

| 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
|------------|--------------------|---|-------------------------|---|---|---------------------|---|
| Irrelevant | Not true of me now | | Somewhat true of me now | | | Very true of me now | |

Circle one number for each item.

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| 19. I am concerned about evaluating my impact on students. | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 20. I would like to revise the new clickUP's approach. | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 21. I am preoccupied with things other than the new clickUP. | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 22. I would like to modify our use of the new clickUP based on the experiences of our students. | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 23. I spend little time thinking about the new clickUP. | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 24. I would like to excite my students about their part in this approach. | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 25. I am concerned about time spent working with nonacademic problems related to the new clickUP. | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 26. I would like to know what the use of the new clickUP will require in the immediate future. | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 27. I would like to coordinate my efforts with others to maximize the new clickUP's effects. | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 28. I would like to have more information on time and energy commitments required by the new clickUP. | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 29. I would like to know what other faculty are doing in this area. | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 30. Currently, other priorities prevent me from focusing my attention on the new clickUP. | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 31. I would like to determine how to supplement, enhance, or replace the new clickUP. | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 32. I would like to use feedback from students to change the program. | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 33. I would like to know how my role will change when I am using the new clickUP. | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 34. Coordination of tasks and people is taking too much of my time. | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 35. I would like to know how the new clickUP is better than what we have now. | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 |

Appendix 4b Demographic Information (SoCQi & SoCQii)

a. Demographic information - SoCQi

1. Lecturing experience

| | | | | | | | |
|-------------|--------------------------|-------------|--------------------------|--------------|--------------------------|--------------|--------------------------|
| a. ≤ 2 | <input type="checkbox"/> | b. 3-5 yrs | <input type="checkbox"/> | c. 6-10 yrs | <input type="checkbox"/> | d. 11-15 yrs | <input type="checkbox"/> |
| e. 16-20yrs | <input type="checkbox"/> | f. 21-25yrs | <input type="checkbox"/> | g. 26-30 yrs | <input type="checkbox"/> | h. ≥ 31 yrs | <input type="checkbox"/> |

2. Academic position (May choose more than 1)

| | | | | | | | |
|--------------------|--------------------------|-----------------------|--------------------------|--------------------|--------------------------|------------------------|--------------------------|
| a. Junior lecturer | <input type="checkbox"/> | b. Lecturer | <input type="checkbox"/> | c. Senior lecturer | <input type="checkbox"/> | d. Associate professor | <input type="checkbox"/> |
| e. Professor | <input type="checkbox"/> | f. Head of Department | <input type="checkbox"/> | g. Other (specify) | <input type="text"/> | | |

3. Appointment

| | | | | | |
|---------------------------|--------------------------|--------------------------------------|--------------------------|--------------------------------------|--------------------------|
| a. Permanent UP personnel | <input type="checkbox"/> | b. Guest lecturer | <input type="checkbox"/> | c. Extraordinary lecturer /professor | <input type="checkbox"/> |
| d. Temporary UP personnel | <input type="checkbox"/> | e. Dual appointment: Government & UP | <input type="checkbox"/> | g. Other (specify) | <input type="text"/> |

4. Number of modules for 2011

a. Please indicate the **number** of modules (e.g. ABC 123) you are solely or partially responsible for.

| | Number of *Sem 1 modules | Number of *Sem 2 modules | Number of Year modules |
|------------------|--------------------------|--------------------------|------------------------|
| Solely | <input type="text"/> | <input type="text"/> | <input type="text"/> |
| Partially | <input type="text"/> | <input type="text"/> | <input type="text"/> |

*Sem 1 include quarter 1 & 2 modules * Sem 2 include quarter 3&4 modules

b. How do you foresee will this number influence your use of the *new clickUP*?

5. Class size

| | |
|---|----------------------|
| a. Largest (number of students) class you lecture. | <input type="text"/> |
| b. How do you foresee will this number influence your use of the <i>new clickUP</i> ? | <input type="text"/> |

6. Which statement describes best your preference/attitude with regards to new technology? (Choose one)

| | |
|---|--------------------------|
| a. I love new technologies and am among the first to experiment with and use them | <input type="checkbox"/> |
| b. I like new technologies and use them before most people I know do | <input type="checkbox"/> |

Appendix 4b Demographic Information (SoCQi & SoCQii) (continued)

- c. I usually use new technologies when most people I know do
- d. I am usually one of the last people I know to use new technologies
- e. I am sceptical of new technologies and use them only when I have to
- f. Other:

7. Rate the following categories according to your own proficiency level / level of expertise

- a. Use of Word processing (Word etc) software **No skill** 0 1 2 3 4 5 **Expert**
- b. Use of Spreadsheets (Excel etc) programs **No skill** 0 1 2 3 4 5 **Expert**
- c. Finding information on the Internet effectively **No skill** 0 1 2 3 4 5 **Expert**
- d. Making use of presentation software (PPT etc) **No skill** 0 1 2 3 4 5 **Expert**
- e. Manipulation (crop/resize etc) of images / photos **No skill** 0 1 2 3 4 5 **Expert**
- f. Use of the current clickUP **No skill** 0 1 2 3 4 5 **Expert**

8. Please rate how the following will impact the way you intend to use the new clickUP

| | Strong NEGATIVE impact | Moderate NEGATIVE impact | Little NEGATIVE impact | NO IMPACT AT ALL | Little POSITIVE impact | Moderate POSITIVE impact | Strong POSITIVE impact |
|---|------------------------------|--------------------------------|------------------------------|---------------------|------------------------------|--------------------------------|------------------------------|
| | -3 | -2 | -1 | 0 | 1 | 2 | 3 |
| a. Number of modules you lecture per semester | -3 | -2 | -1 | 0 | 1 | 2 | 3 |
| b. Largest class size you lecture currently | -3 | -2 | -1 | 0 | 1 | 2 | 3 |
| c. Content area (field of study) that you lecture | -3 | -2 | -1 | 0 | 1 | 2 | 3 |
| d. Support you receive from Education Innovation | -3 | -2 | -1 | 0 | 1 | 2 | 3 |
| e. Availability of self-help resources on <i>new clickUP</i> | -3 | -2 | -1 | 0 | 1 | 2 | 3 |
| f. The availability or option to attend further workshops in <i>new clickUP</i> | -3 | -2 | -1 | 0 | 1 | 2 | 3 |
| g. The available system functionalities (what the system can do for me) | -3 | -2 | -1 | 0 | 1 | 2 | 3 |
| h. User friendliness (ease of use) of the LMS | -3 | -2 | -1 | 0 | 1 | 2 | 3 |

Appendix 4b Demographic Information (SoCQi & SoCQii) (continued)

| | | | | | | | | |
|-----------|--|----|----|----|---|---|---|---|
| i. | Acknowledgement / receiving incentive(s) for your efforts to use of the <i>new clickUP</i> (e.g. score in the performance man. system) | -3 | -2 | -1 | 0 | 1 | 2 | 3 |
| j. | Availability of administrative staff or teaching assistants in your department that can help with the uploading of class notes etc. | -3 | -2 | -1 | 0 | 1 | 2 | 3 |
| k. | Other (specify) | -3 | -2 | -1 | 0 | 1 | 2 | 3 |
| l. | Other (specify) | -3 | -2 | -1 | 0 | 1 | 2 | 3 |
| m. | Other (specify) | -3 | -2 | -1 | 0 | 1 | 2 | 3 |

8. Rate the following according to time you have available.

| | | No time | —————→ | | | | | | | | Enough time |
|-----------|--|---------|--------|---|---|---|---|---|---|---|-------------|
| a. | Time you have available to familiarise yourself / learn how to use (attend more training) <i>new clickUP</i> | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
| b. | Time to develop (build) a module in <i>new clickUP</i> | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
| c. | Time to manage and maintain the module(s) in <i>new clickUP</i> during the semester | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |

Thank you very much for completing this questionnaire.

Appendix 4b Demographic Information (continued)

b. Demographic information - SoCQii

1. Professional identity / qualification

| | | | |
|---|--------------------------|---|--------------------------|
| a. Scientist (e.g. Microbiologist, Physiologist) | <input type="checkbox"/> | b. Health Care practitioner (e.g. Physiotherapist) | <input type="checkbox"/> |
| c. Medical doctor (e.g. Neurologist) / Dentist | <input type="checkbox"/> | d. Other: _____ (specify) | <input type="checkbox"/> |

2. How confident are you at using the new clickUP system?

| | | | |
|---|--------------------------|---|--------------------------|
| a. Could do everything on my own | <input type="checkbox"/> | b. Sometimes need assistance / help | <input type="checkbox"/> |
| c. Often need support / assistance | <input type="checkbox"/> | d. Need support or assistance most of the time | <input type="checkbox"/> |

3. Have you used WebCT (Before 2006, old clickUP (2006-2012) and or new clickUP? (select all that apply)

| | | | |
|-------------------------------------|--------------------------|--|--------------------------|
| a. Used WebCT (Before 2006) | <input type="checkbox"/> | b. Used old clickUP (2006-2012) | <input type="checkbox"/> |
| c. Are now using new clickUP | <input type="checkbox"/> | | |

4. Indicate which of the new clickUP workshops you have attended: (select all that apply)

| | |
|----------------------------------|--------------------------|
| a. Overview workshop | <input type="checkbox"/> |
| b. Content workshop | <input type="checkbox"/> |
| c. Assessment workshop | <input type="checkbox"/> |
| d. Collaboration workshop | <input type="checkbox"/> |
| e. Management workshop | <input type="checkbox"/> |
| f. Turnitin workshop | <input type="checkbox"/> |
| g. Grades workshop | <input type="checkbox"/> |
| h. None | <input type="checkbox"/> |

5. Rate the following categories according to your own proficiency level / level of expertise

| | | | | | | | | | |
|--------------------------------------|----------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------|
| f. Use of the current clickUP | No skill | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | Expert |
|--------------------------------------|----------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------|

6. Please select your age group.

| | |
|-----------------|--------------------------|
| a. 20-29 | <input type="checkbox"/> |
| b. 30-39 | <input type="checkbox"/> |
| c. 40-49 | <input type="checkbox"/> |
| d. 50-59 | <input type="checkbox"/> |
| e. 60-69 | <input type="checkbox"/> |
| f. 70+ | <input type="checkbox"/> |

Appendix 4b Demographic Information (SoCQi & SoCQii) (continued)

7. Indicate your academic achievement: (select all that apply)

- a. s Diploma
- b. Bachelor degree
- c. Honours degree
- d. Masters degree
- e. PhD / Doctoral
- f. Post-doctoral
- g. Professor

8. Which of the following resources would you make use of to assist you with the new clickUP? (select all that apply)

- a. Departmental administrative person
- b. Instructional designer(s)@ Department for Education Innovation
- c. E-Support (e-support@up.ac.za)
- d. Colleagues
- e. Experienced students
- f. Online resources (clickUP Help site)
- g. Workshop handouts
- h. None
- g. Other: (Please specify)

9. What is your general view of using a learning management system (like new clickUP) in a blended teaching model?

10. Please describe any significant barriers to your participation in the innovation.

11. Please describe what you perceive to be the greatest benefit of this innovation.

12. Indicate what proportion (%) of your time you devote to: a) Medical education (teaching, assessment, admin, research in medical education): % b) Clinical work: % c) Research: % d) Other? %

- a) Medical education (teaching, assessment, admin, research in medical education): _____ %
- b) Clinical work: _____ %
- c) Research: _____ %
- d) Other (please indicate what?) _____ : _____ %

13. Comments or additional information you want to share?

Appendix 4c Letter of invitation to participate and Informed consent for the SoCQ

Faculty of Education

Letter of invitation and informed consent

TITLE OF RESEARCH PROJECT:

The needs of Health Science educators regarding professional staff development interventions to implement a learning management system.

INTRODUCTION:

You are invited to participate in a research study to identify the concerns Health Sciences educators have regarding the learning management system (*new clickUP*) at the University of Pretoria. From the information collected and investigated in this project, we hope to learn more about the specific needs of Health Sciences educators in terms of professional staff development interventions to facilitate the implementation and use of the *new clickUP* system.

PROCEDURES:

With your permission, we would like to collect information about the concerns you may have in terms of the implementation of the (*new*) *clickUP* system, as well as how it is being used. We plan to collect this information about your concerns after each training session you attend by means of an open ended question and or a questionnaire that you will be asked to complete twice (first at the end of a workshop and the second one after implementation and use of the system) during the study. There are no *good* or *bad* stages of concerns involved in the use of *new clickUP*.

PARTICIPANTS' RIGHTS:

If you decide to participate in this study, please understand that your participation is voluntary and you have the right to withdraw your consent or discontinue participation at any time, without penalty or loss of benefits to which you or your department are otherwise entitled. Your decision whether or not to participate in this study will not affect any services or advice provided to you by the Department for Education Innovation (EI).

RISKS:

You might however feel exposed to make your concerns known regarding the learning management system, but be assured that there are no good or bad stages of concerns involved and not you or your teaching are hereby evaluated.

Appendix 4c Letter of invitation to participate and Informed consent for the SoCQ (continued)

BENEFITS:

From the results of the study, professional staff developers responsible for the facilitation of the implementation and use of the LMS, would be able to customize the facilitation session(s) to meet the needs (concerns) of Health Science educators. This type of intervention should positively influence their use of the system.

TIME INVOLVEMENT:

Your participation in this study will require your time to complete the 35-item questionnaire twice and an open ended question at the end of a training session.

COMPENSATION:

No compensation is offered for participation in this study.

CONFIDENTIALITY:

All information gathered will be treated as confidential. People who will have access to the data are the researcher, the study leader of the research project and the line manager of EI involved with the Faculty of Health Sciences. Your identity will not be disclosed in any written and published material resulting from the study.

VERIFICATION OF INFORMATION:

You will have opportunity to verify the accuracy of the information that you share with the researcher.

ETHICAL APPROVAL:

This study has received written approval from the Research Ethics Committee of the Faculty of Education at the University of Pretoria. A copy of the approval letter is available on request. **(Reference number: SM 11/05/01)**

INFORMATION AND CONTACT PERSON:

If you have any questions about the study, please contact the researcher, Mrs JSH Untiedt, on cell number: 012 354 1316 / 082 3995738, or alternatively the study leader: Prof JG Knoetze at 012 565 5894 / 083 284 5246 / 012 420 2886

Appendix 4c Letter of invitation to participate and Informed consent for the SoCQ (continued)



UNIVERSITEIT VAN PRETORIA
UNIVERSITY OF PRETORIA
YUNIBESITHI YA PRETORIA

CONSENT TO PARTICIPATE IN RESEARCH STUDY

Questionnaire: Stages of Concerns

TITLE OF RESEARCH PROJECT

The needs of Health Science educators regarding professional staff development interventions to implement a learning management system.

1. I hereby voluntarily express my willingness to participate in the research study as explained to me by
2. The nature, purpose, and risks and possible benefits have been explained to me and I understand them.
3. I understand my right to choose whether or not to participate in the project and that the information furnished will be handled confidentially. I am aware that the results of the investigation may be used for publication purposes.

Signed: Date:
Research Subject

Researcher: Date:
Hannelie Untiedt

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To: Hannelie Untiedt (Licensee)
Senior Instructional Designer
University of Pretoria
P O Box 15902
Sinoville, Pretoria, Gauteng 0129
SOUTH AFRICA

From: Nancy Reynolds
Information Associate
SEDL
Information Resource Center-Copyright Permissions
4700 Mueller Blvd.
Austin, TX 78723

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Date: April 7, 2014

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1. Appendix A: Stages of Concern Questionnaire, pp. 79-82
2. Appendix B: Stages of Concern Quick Scoring Device, pp. 85-87
3. Appendix C: Stages of Concern Profile, p. 91

From the online video *CBAM 101: Getting Your Feet Wet* on the SEDL website at http://highperformingschools.sedl.org/managing_implementation/cbam101.php, you have asked to use slide 10 that depicts a graphic image of the Concerns-Based Adoption Model diagram.

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Sincerely,

Nancy Reynolds
Nancy Reynolds for SEDL

April 9, 2014
Date signed

Agreed and accepted:

Signature: [Signature]

2014 - 04 - 08
Date signed

Printed Name: JSH UNTIEDT

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To: Hannelle Untiedt (Licensee)
Senior Instructional Designer
University of Pretoria
P O Box 15902
Sinoville, Pretoria, Gauteng
SOUTH AFRICA

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Information Associate
SEDL
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Date: March 18, 2014

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1. Table 2.1: Levels of Use of the Innovation, p. 5
2. Appendix A: The Basic Interview Protocol, pp. 53-56
3. Appendix B: The Lou Rating Sheet, p. 57
4. Appendix E: Levels of Use (LoU) of the Innovation, pp. 72-73

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SEDL License Agreement, p. 2

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Sincerely,



Nancy Reynolds for SEDL

March 25, 2014
Date signed

Agreed and accepted:

Signature:  _____

2014-03-19
Date signed

Printed Name: JSH UNTIEDT

Appendix 4e Certification confirmation



29 November 2011

Hannelie Untiedt
PO Box 15902
Sinoville
Pretoria
SOUTH AFRICA
0129

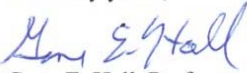
Dear Hannelie:

I am writing to confirm that you are Certified as a Levels of Use Interviewer. You attended the three day training workshop in Austin, Texas. During those sessions you demonstrated you understood the construct of Levels of Use and its operational definitions (The LoU Chart). You demonstrated reliability in rating Levels of Use Interviews.

Following the three day session in Austin, TX you submitted to me recordings of three of your interviews. Each of these demonstrated your competence to conduct Levels of Use Interviews with accuracy. Also, I appreciated your including transcripts and your discussion of your ratings with each interview.

I wish you great success in conducting your dissertation study. Please let me know if you have questions or if I might be of help in some other way.

Sincerely yours,


Gene E. Hall, Professor
Email: gene.hall@unlv.edu

Department of Educational Leadership
Box 453002 • 4505 S. Maryland Parkway
Las Vegas, NV 89154-3002
(702) 895-3491 • Fax (702) 895-3492
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Gene E. Hall, Ph.D.
Professor



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4505 S. Maryland Parkway • Box 454030 • Las Vegas, NV 89154-4030
M: 702.895.3491 • F: 702.895.3492 • E: gene.hall@unlv.edu

Appendix 4f Invitation to follow-up interview

Dear Dr/Prof/Mr/Mrs

Re: Needs of Health Professional Educators regarding professional development interventions and support to implement and use UP's new learning management system.

The first questionnaire you completed refers. Your valuable contribution has been analysed and I would like to follow up on that and learn what your experiences and needs are relating to the implementation and use of the new (upgraded) learning management system.

It would be appreciated if we can arrange a time to discuss your specific experiences and the needs you may have with regards to the use of the new clickUP system. We can schedule it anytime between 07:00 to 15:00 for an hour on the dates indicated in blue below.

| Mo | Tue | Wed | Thu | Fr |
|--------|--------|--------|--------|--------|
| May 28 | May 29 | May 30 | May 31 | Jun 1 |
| Jun 4 | Jun 5 | Jun 6 | Jun 7 | Jun 8 |
| Jun 11 | Jun 12 | Jun 13 | Jun 14 | Jun 15 |
| Jun 18 | Jun 19 | Jun 20 | Jun 21 | Jun 22 |
| Jun 25 | Jun 26 | Jun 27 | Jun 28 | Jun 29 |
| Jul 2 | Jul 3 | Jul 4 | Jul 5 | Jul 6 |

Please let me know which date and time would suite you best.

Looking forward to hear from you. Don't hesitate to call if you have any questions.

Yours sincerely

Hannelie Untiedt
012 354 1316 / 082 399 5738

Appendix 4f Invitation to follow-up interview (continued)

Beste Dr /Prof/Mnr/Me

I.s: Die behoeftes van professionele dosente in Gesondheidswetenskappe ten opsigte van die intervensies vir professionele ontwikkeling en ondersteuning om die nuwe leerbestuur stelsel van UP (clickUP) te implementeer en gebruik.

Die eerste vraelys wat u voltooi het, het betrekking. U waardevolle bydrae is geanaliseer en ek sal dit graag wil opvolg om uit te vind wat u ervaringe en behoeftes rakende die gebruik van die nuwe (opgegradeerde) leerbestuurstelsel is.

Daarom sal ek dit opreg waardeer indien ons 'n tyd kan reël om oor u spesifieke behoeftes te gesels met betrekking tot die tipe ondersteuning en opleiding nodig om die *nuwe* clickUP stelsel in u onderrig te integreer.

Laat my asb weet watter datum en tyd u die beste sal pas.

| Mo | Tue | Wed | Thu | Fr |
|--------|--------|--------|--------|--------|
| May 28 | May 29 | May 30 | May 31 | Jun 1 |
| Jun 4 | Jun 5 | Jun 6 | Jun 7 | Jun 8 |
| Jun 11 | Jun 12 | Jun 13 | Jun 14 | Jun 15 |
| Jun 18 | Jun 19 | Jun 20 | Jun 21 | Jun 22 |
| Jun 25 | Jun 26 | Jun 27 | Jun 28 | Jun 29 |
| Jul 2 | Jul 3 | Jul 4 | Jul 5 | Jul 6 |

Enige tyd daaglik tussens 7:00 en 17:00 (ongeveer 'n uur nodig) op die datums in blou aangedui op die kalender is op hierdie stadium beskikbaar.

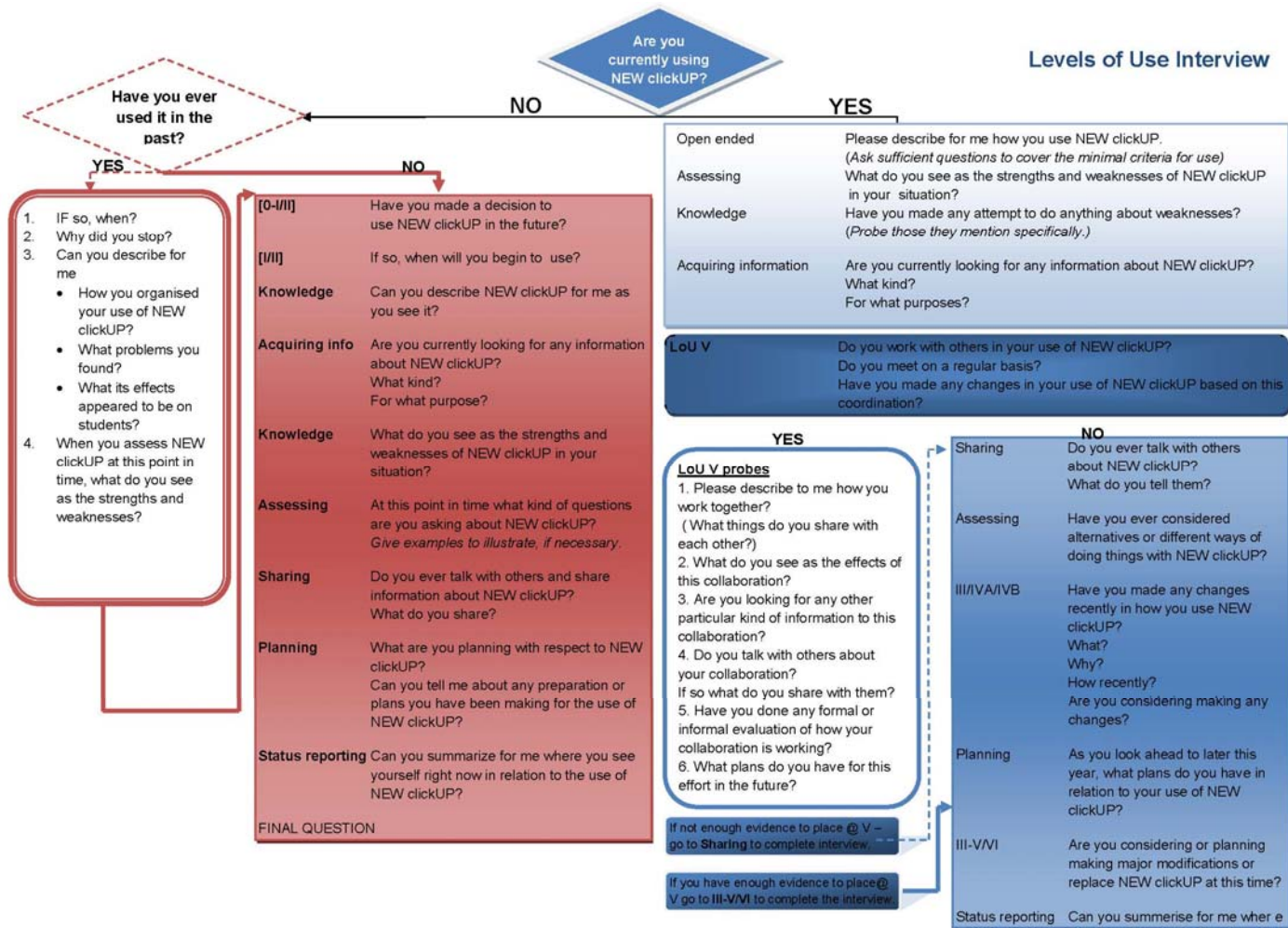
Ek sien baie daarna uit om met u te gesels. Moenie huiwer om te skakel indien u enige vrae het nie.

Vriendelike groete

Hannelie Untiedt

012 354 1316 / 82 399 5738

Appendix 4g Interview schedule for LoU



From: Hall et al. (2008, pp. 53 -56)

Appendix 4h Letter of invitation and informed consent for the interviews (LoU and Perceived expressed needs)

Faculty of Education

Date: _____

Letter of invitation and informed consent: Interview

TITLE OF RESEARCH PROJECT:

The needs of Health Science educators regarding professional staff development interventions to implement a learning management system.

INTRODUCTION:

You are invited to participate in a research study to identify the

- needs Health professional educators have with regards to the implementation and use of the learning management system ('new clickUP') and
- the levels at which Health Sciences educators use the learning management system ('new clickUP') at the University of Pretoria.

From the information collected and investigated in this project, we hope to learn more about the needs of Health Sciences educators in terms of professional staff development interventions to facilitate the implementation and use of the new clickUP system.

PROCEDURES:

With your permission, we plan to collect information about your level of use of the new clickUP system during the implementation phase. We will make use of a structured interview protocol. There are no *right/wrong* levels of use involved in the use of new clickUP.

PARTICIPANTS' RIGHTS:

If you decide to participate in this study, please understand that your participation is voluntary and you have the right to withdraw your consent or discontinue participation at any time, without penalty or loss of benefits to which you or your department are otherwise entitled. Your decision whether or not to participate in this study will not affect any services or advice provided to you by the Department for Education Innovation (EI).

RISKS AND BENEFITS:

There are no anticipated risks associated with this study. We cannot and do not guarantee or promise that you will receive any benefits from participating in this study.

Appendix 4h Letter of invitation and informed consent for the interviews (LoU and Perceived expressed needs) (continued)

TIME INVOLVEMENT:

Your participation in this part of the study will require 30 minutes of your time for the interview.

COMPENSATION:

No compensation is offered for participation in this study.

CONFIDENTIALITY:

All information gathered will be treated as confidential. People who will have access to the data are the researcher, the study leader of the research project, and the line manager of EI involved with the Faculty of Health Sciences. Your identity will not be disclosed in any written or published material resulting from the study.

VERIFICATION OF INFORMATION:

You will have opportunity to verify the accuracy of the information that you share with the researcher.

ETHICAL APPROVAL:

This study has received written approval from the Research Ethics Committee of the Faculty of Education at the University of Pretoria. A copy of the approval letter is available on request.

INFORMATION AND CONTACT PERSON:

If you have any questions about the study, please contact the researcher, Mrs JSH Untiedt, on cell number: 082 3995738 / 012 354 1316, or alternatively the study leader: Prof JG Knoetze at 012 565-5894 / 083 284 5246 / 012 420 2886.

Appendix 4h Letter of invitation and informed consent for the interviews (LoU and Perceived expressed needs) (continued)



CONSENT TO PARTICIPATE IN RESEACRH STUDY

Interview

TITLE OF RESEARCH PROJECT

The needs of Health Science educators regarding professional staff development interventions to implement a learning management system.

4. I hereby voluntarily express my willingness to participate in the research study as explained to me by

.....

5. The nature, purpose, and possible risk implications have been explained to me and I understand them.
6. I understand my right to choose whether or not to participate in the project and that the information furnished will be handled confidentially. I am aware that the results of the investigation may be used for the publication purposes.
7. I herewith give consent that the interview may be audio taped. I understand that the recoding will only be used for this study. Once the study has been concluded the audio material will be archived with the other data collected for this study according to the regulations of the University of Pretoria. Should the researcher wish to use any audio material for any other purpose, additional written permission will be sought.

Signature of participant: Date:

Name of researcher: **Hannelie Untiedt**

Signature of researcher: Date:

Appendix 4i Perceived expressed needs interview guide

PHASE II – Interview guide (Perceived needs)

Introduction

Thank you for your willingness to share your experiences with regards to the implementation and use of the NEW clickUP system.

The purpose of this session/ interview is to:

Talk about your needs at different stages of the implementation of NEW clickUP and

Also how you are currently using / not using the system.

I have a set of questions that I would ask for everyone. Therefore I have to look on my questions to make sure I remember them.

If you agree that we continue, would you mind to complete the consent form?

Do you mind if I record this interview?

Questions:

| If you <i>think back in time to when you started the journey to implement the new clickUP system. To the first time you were exposed to the new system. The next few questions will be about your plans and experiences at that time.</i> | Rationale for question |
|---|--|
| What was it that you wanted to achieve (or be able to do) with the new clickUP system? | Conceptual map of study refer: Will the aim / goal with using the system indicate / reflect in the way it is used? |
| Why did you attend the training? | Motivation for use & attendance (why did they not do self-study) |
| What was your biggest concern about the implementation and use of clickUP then? | Link to the SoC / concerns that the participant may / may not have. |
| In your opinion what is it that you (or others) need with regards to training and support to be able to use the LMs effectively in teaching? | Training and support needs to interpret in terms of the SoC (categories or specific concerns) that the participant may / may not have. |
| Is there anything else that you would like to add with regards to the beginning of this new journey? | |
| B. NOW, if I may bring you back to today. If you <i>thinking about where you are now in this journey</i> to implement the new clickUP system. The next few questions will be about your plans and experiences that you have currently. | Rationale for question |
| What is it that you want to do or to achieve with the new clickUP system? Probe: Ultimately – what do you want to be able to do? | Conceptual map of study refer: Will the aim / goal with using the system indicate / reflect in the way it is used? |

Appendix 4i Perceived expressed needs interview guide (continued)

| | |
|---|---|
| <p>What would encourage you to attend more / further workshops or training?</p> | <p>Deeper and wider exploration of the rationale for using and making the effort to learn new clickUP? Does that reveal concerns?</p> |
| <p>What is your biggest concern about the implementation and use of clickUP then currently?</p> | <p>Link to the SoC / concerns that the participant may / may not have.</p> |
| <p>In your opinion what is it that you (or others) need with regards to training and support to be able to use the LMs effectively in teaching? Now? In future?</p> | <p>Training and support needs to interpret in terms of the SoC (categories or specific concerns) that the participant may / may not have.</p> |
| <p>What is it that you need from me, instructional designers to achieve you goals?</p> | <p>Support needs to interpret in terms of the SoC (categories or specific concerns) that the participant may / may not have.</p> |
| <p>What is it that will keep you interested in clickUP and motivated to learn more about clickUP?</p> | <p>Deeper and wider exploration of the rationale for using and making the effort to learn new clickUP? Does that reveal concerns?</p> |
| <p>What is your biggest role in your current post? Probe: biggest role with regards to teaching and learning?</p> | <p>Roles the HPE's have – explore whether that plays a role in the use or non-use of new clickUP?</p> |
| <p>There are many ways in which one could introduce a new LMS to academics in a Faculty. I know that there are diverse opinions on how it should be done and very specific needs form lecturers that have to implement and use the system. Please describe (share) which of the things that were used to introduce the new updated LMS you thought worked well / was good? Which would you say (do you know) are not that positively received by staff members? What else or different approaches / strategies would you rather see should be introduced / added?</p> | <p>Deeper and wider exploration of what worked and what did not work with the new clickUP implementation? Does that reveal concerns about the innovation?</p> |
| <p>Do you think that clickUP addresses / can address the learning needs of your students?</p> | <p>Do participants see the benefit of using the innovation for the students?</p> |
| <p>Did you change anything in your teaching since you started to use the new clickUP?</p> | <p>Do participants see the benefit of using the innovation in terms of improve teaching strategies?</p> |
| <p>Is there anything else that you would like to add with regards to where you are currently in this journey and where you would like to be in future?</p> | |

Appendix 4j LoU rating sheet (Hall et al., 2008, p. 57)

LEVEL OF USE RATING SHEET

Tape # _____ Site: _____ Interviewer: _____
Date: _____ I.D. #: _____ Rater: _____

| LEVEL | Knowledge | Acquiring Information | Sharing | Assessing | Planning | Status Reporting | Performing | Overall LoU |
|---|--------------------------|-----------------------|---------|-----------|----------|------------------|------------|-------------|
| Non-Use | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| <i>Decision Point A Orientation</i> | I | I | I | I | I | I | I | I |
| <i>Decision Point B Preparation</i> | II | II | II | II | II | II | II | II |
| <hr style="border-top: 1px dashed black;"/> | | | | | | | | |
| <i>Decision Point C Mechanical Use</i> | III | III | III | III | III | III | III | III |
| <i>Decision Point D-1 Routine</i> | IVA | IVA | IVA | IVA | IVA | IVA | IVA | IVA |
| <i>Decision Point D-2 Refinement</i> | IVB | IVB | IVB | IVB | IVB | IVB | IVB | IVB |
| <i>Decision Point E Integration</i> | V | V | V | V | V | V | V | V |
| <i>Decision Point F Renewal</i> | VI | VI | VI | VI | VI | VI | VI | VI |
| User is not doing | ND | ND | ND | ND | ND | ND | ND | |
| No information in interview | NI | NI | NI | NI | NI | NI | NI | |
| Past User _____ | Estimated Past LoU _____ | | | | | | | |

Appendix 4k Ethical clearance certificate from Faculty of Education, UP



UNIVERSITEIT VAN PRETORIA
UNIVERSITY OF PRETORIA
YUNIBESITHI YA PRETORIA
Faculty of Education

RESEARCH ETHICS COMMITTEE

CLEARANCE CERTIFICATE

CLEARANCE NUMBER :

SM 11/05/01

DEGREE AND PROJECT PhD

Health professional educators' needs regarding strategies in the implementation of a learning management system

INVESTIGATOR(S)

Johanna S.H Untiedt

DEPARTMENT

Science, Mathematics and Technology Education

DATE CONSIDERED

10 March 2014

DECISION OF THE COMMITTEE

APPROVED

Please note:

For Masters applications, ethical clearance is valid for 2 years For PhD applications, ethical clearance is valid for 3 years.

CHAIRPERSON OF ETHICS

Prof Liesel Ebersöhn



COMMITTEE

DATE

10 March 2014

CC

Jeannie Beukes

Liesel Ebersöhn

Prof JG Knoetze

This ethical clearance certificate is issued subject to the following condition:

1. It remains the students' responsibility to ensure that all the necessary forms for informed consent are kept for future queries.

Please quote the clearance number in all enquiries.

Appendix 4I Approval of the Registrar at UP



UNIVERSITEIT VAN PRETORIA
UNIVERSITY OF PRETORIA
YUNIBESITHI YA PRETORIA
Faculty of Education

Faculty of Education

Ethics Committee

1 August 2011

Prof N. Grove
Registrar: University of Pretoria

Permission: Research involving University of Pretoria students and staff

Applicant: Mrs J.S.H. Unteidt
Reference: SM11/05/01

The Ethics Committee, Faculty of Education recently received an application for research involving University of Pretoria staff and students as research participants. In maintaining with University of Pretoria regulations in this regard, we attach the application form for your consideration.

The application for ethical clearance has already been reviewed by the Ethics Committee, Faculty of Education. During the Ethics Committee meeting on 8 June 2011 the decision was reached to approve the proposed research in terms of ethical considerations.

Kindly find attached to this letter:

1. The completed original ethics application form
2. An official letter conveying the decision of the Faculty of Education Ethics Committee.

Confirmation of your final decision regarding this applicant can be sent to our Ethics office at leverne.Wagner@up.ac.za or alternatively you can contact me at liesel.ebersohn@up.ac.za. Your attention to this matter is highly appreciated.

Best wishes,

Prof Liesel Ebersohn
Chair: Ethics Committee
Faculty of Education

*Prof Ebersohn
Die ntwake
reun is in orde*

*A. J. J.
11/8/2011*

Appendix 4m Signed consent Dean: Faculty of Health Sciences



UNIVERSITEIT VAN PRETORIA
UNIVERSITY OF PRETORIA
YUNIBESITHI YA PRETORIA

Dean
Faculty of Health Sciences

16 August 2011

Letter of consent to conduct a research study using health professional educators in the Faculty of Health Sciences

TITLE OF RESEARCH PROJECT:

The needs of health professional educators regarding professional staff development interventions to implement a learning management system.

INTRODUCTION: From the information collected and investigated in this research study, we hope to learn more about the needs of health professional educators in terms of professional staff development interventions to facilitate the implementation and use of the new clickUP system.

PROCEDURES: With your permission, I would like to collect information about the concerns academic staff in the Faculty of Health Sciences has in terms of the implementation of the (new) clickUP system, as well as how it is being used. I plan to collect this information about their concerns after they attended a workshop by means of a questionnaire that they will be asked to complete. After implementation and use of the system in their teaching, academics will also be invited to an interview as well as completing the questionnaire for a second time.

PARTICIPANTS' RIGHTS: Participation is voluntary and academics will have the right to withdraw their consent or discontinue participation at any time, without penalty or loss of benefits to which they or their department are otherwise entitled. Their decision whether or not to participate in this study will not affect any services or advice provided to you by the Department for Education Innovation (EI).

RISKS AND BENEFITS: There are no anticipated risks associated with this study. I cannot and do not guarantee that they will receive any benefits from participating in this study.

TIME INVOLVEMENT: Their participation in this study will require time to complete the 35-item questionnaire twice at the end of a training session and attend an interview session of 20-30 minutes after implementation.

COMPENSATION: No compensation is offered for participation in this study.

Appendix 4m Signed consent Dean Faculty of Health Science (continue)

CONFIDENTIALITY: All information gathered will be treated as confidential. People who will have access to the data are the researcher, the study leader of the research project and the line manager of EI involved with the Faculty of Health Sciences. Identities will not be disclosed in any written and published material resulting from the study.

VERIFICATION OF INFORMATION: They will have opportunity to verify the accuracy of the information that they share with the researcher.

ETHICAL APPROVAL: This study received written approval from the Research Ethics Committee of the Faculty of Education at the University of Pretoria. A copy of the approval letter is available on request. **Reference number: SM 11/05/01.**

INFORMATION AND CONTACT PERSON: If you have any questions about the study, please contact the researcher, Mrs JSH Untiedt at 082 3995738 / 012 354 1316 /, or alternatively the study leader Prof JG Knoetze at 012 565 5894 / 083 284 5246 / 012 420 2886

I hereby express my consent that health professional educators in the Faculty of Health Sciences can participate in the research study as explained to me by Hannelie Untiedt.

subject to ① a copy of the research report being made available to the Faculty ② My seeing a copy of the informed consent form.

Signed: *[Signature]* Date: 2011 - 08 - 16
Dean Faculty of Health Sciences: Prof E Buch

Researcher: *[Signature]* Date: 2011 - 08-16
Hannelie Untiedt

Sent on
17/8/2011
to: A. Maaschop
+ E Buch
@ email.

Appendix 4n Signed consent Vice Dean and Head: School of Medicine



UNIVERSITEIT VAN PRETORIA
UNIVERSITY OF PRETORIA
YUNIBESITHI YA PRETORIA

Chairperson
School of Medicine

Exco meeting
19 July 2011

Letter of consent to conduct a research study using health professional educators in the School of Medicine

TITLE OF RESEARCH PROJECT:

The needs of health professional educators regarding professional staff development interventions to implement a learning management system.

INTRODUCTION: From the information collected and investigated in this research study, we hope to learn more about the needs of health professional educators in terms of professional staff development interventions to facilitate the implementation and use of the new clickUP system.

PROCEDURES: With your permission, I would like to collect information about the concerns academic staff in the School of Medicine has in terms of the implementation of the (new) clickUP system, as well as how it is being used. I plan to collect this information about their concerns after they attended a workshop by means of a questionnaire that they will be asked to complete. After implementation and use of the system in their teaching, academics will also be invited to an interview as well as completing the questionnaire for a second time.

PARTICIPANTS' RIGHTS: Participation is voluntary and academics will have the right to withdraw their consent or discontinue participation at any time, without penalty or loss of benefits to which they or their department are otherwise entitled. Their decision whether or not to participate in this study will not affect any services or advice provided to you by the Department for Education Innovation (EI).

RISKS AND BENEFITS: There are no anticipated risks associated with this study. I cannot and do not guarantee that they will receive any benefits from participating in this study.

TIME INVOLVEMENT: Their participation in this study will require time to complete the 35-item questionnaire twice at the end of a training session and attend an interview session of 20-30 minutes after implementation.

COMPENSATION: No compensation is offered for participation in this study.

Appendix 4n. Signed consent Vice Dean and Head: School of Medicine (continued)

CONFIDENTIALITY: All information gathered will be treated as confidential. People who will have access to the data are the researcher, the study leader of the research project and the line manager of EI involved with the Faculty of Health Sciences. Identities will not be disclosed in any written and published material resulting from the study.


VERIFICATION OF INFORMATION: They will have opportunity to verify the accuracy of the information that they share with the researcher.

ETHICAL APPROVAL: This study received written approval from the Research Ethics Committee of the Faculty of Education at the University of Pretoria. A copy of the approval letter is available on request. **Reference number: SM 11/05/01.**

INFORMATION AND CONTACT PERSON: If you have any questions about the study, please contact the researcher, Mrs JSH Untiedt at 082 3995738 / 012 354 1316 /, or alternatively the study leader Prof JG Knoetze at 012 565 5894 / 083 284 5246 / 012 420 2886

I hereby express my consent that health professional educators in the School of Medicine, Faculty of Health Sciences can participate in the research study as explained to the Exco meeting by Hannelie Untiedt.

Signed:  Date: 2011 – 07 -19
Chairperson: Prof BG Lindeque

Researcher:  Date: 2011 – 07 -19
Hannelie Untiedt

Appendix 4o Signed consent Head: School of Health Care Sciences



UNIVERSITEIT VAN PRETORIA
UNIVERSITY OF PRETORIA
YUNIBESITHI YA PRETORIA

Chairperson
School of Health Care Sciences

22 July 2011

Letter of consent to conduct a research study using health professional educators in the School of Health Care Sciences

TITLE OF RESEARCH PROJECT:

The needs of health professional educators regarding professional staff development interventions to implement a learning management system.

INTRODUCTION: From the information collected and investigated in this research study, we hope to learn more about the needs of health professional educators in terms of professional staff development interventions to facilitate the implementation and use of the new clickUP system.

PROCEDURES: With your permission, I would like to collect information about the concerns academic staff in the School of Health Care Sciences has in terms of the implementation of the (new) clickUP system, as well as how it is being used. I plan to collect this information about their concerns after they attended a workshop by means of a questionnaire that they will be asked to complete. After implementation and use of the system in their teaching, academics will also be invited to an interview as well as completing the questionnaire for a second time.

PARTICIPANTS' RIGHTS: Participation is voluntary and academics will have the right to withdraw their consent or discontinue participation at any time, without penalty or loss of benefits to which they or their department are otherwise entitled. Their decision whether or not to participate in this study will not affect any services or advice provided to you by the Department for Education Innovation (EI).

RISKS AND BENEFITS: There are no anticipated risks associated with this study. I cannot and do not guarantee that they will receive any benefits from participating in this study.

TIME INVOLVEMENT: Their participation in this study will require time to complete the 35-item questionnaire twice at the end of a training session and attend an interview session of 20-30 minutes after implementation.

COMPENSATION: No compensation is offered for participation in this study.

Appendix 4o Signed consent Head: School of Health Care Sciences (continued)

CONFIDENTIALITY: All information gathered will be treated as confidential. People who will have access to the data are the researcher, the study leader of the research project and the line manager of EI involved with the Faculty of Health Sciences. Identities will not be disclosed in any written and published material resulting from the study.


VERIFICATION OF INFORMATION: They will have opportunity to verify the accuracy of the information that they share with the researcher.

ETHICAL APPROVAL: This study received written approval from the Research Ethics Committee of the Faculty of Education at the University of Pretoria. A copy of the approval letter is available on request. **Reference number: SM 11/05/01.**

INFORMATION AND CONTACT PERSON: If you have any questions about the study, please contact the researcher, Mrs JSH Untiedt at 082 3995738 / 012 354 1316 /, or alternatively the study leader Prof JG Knoetze at 012 565 5894 / 083 284 5246 / 012 420 2886

I hereby express my consent that health professional educators in the School of Health Care Sciences, Faculty of Health Sciences can participate in the research study as explained to me by Hannelie Untiedt.

Signed:  Date: 2011 – 07 - 22
Chairperson: Prof T van Rooijen

Researcher:  Date: 2011 – 07 - 22
Hannelie Untiedt

Appendix 4p Signed consent Head: School of Health Systems and Public Health



UNIVERSITEIT VAN PRETORIA
UNIVERSITY OF PRETORIA
YUNIBESITHI YA PRETORIA

Chairperson
School of Health Systems & Public Health

22 July 2011

Letter of consent to conduct a research study using health professional educators in the School of Health Systems & Public Health

TITLE OF RESEARCH PROJECT:

The needs of health professional educators regarding professional staff development interventions to implement a learning management system.

INTRODUCTION: From the information collected and investigated in this research study, we hope to learn more about the needs of health professional educators in terms of professional staff development interventions to facilitate the implementation and use of the new clickUP system.

PROCEDURES: With your permission, I would like to collect information about the concerns academic staff in the School of Health Systems & Public Health has in terms of the implementation of the (new) clickUP system, as well as how it is being used. I plan to collect this information about their concerns after they attended a workshop by means of a questionnaire that they will be asked to complete. After implementation and use of the system in their teaching, academics will also be invited to an interview as well as completing the questionnaire for a second time.

PARTICIPANTS' RIGHTS: Participation is voluntary and academics will have the right to withdraw their consent or discontinue participation at any time, without penalty or loss of benefits to which they or their department are otherwise entitled. Their decision whether or not to participate in this study will not affect any services or advice provided to you by the Department for Education Innovation (EI).

RISKS AND BENEFITS: There are no anticipated risks associated with this study. I cannot and do not guarantee that they will receive any benefits from participating in this study.

TIME INVOLVEMENT: Their participation in this study will require time to complete the 35-item questionnaire twice at the end of a training session and attend an interview session of 20-30 minutes after implementation.

COMPENSATION: No compensation is offered for participation in this study.

Appendix 4p Signed consent Head: School of Health Systems and Public Health (continued)

CONFIDENTIALITY: All information gathered will be treated as confidential. People who will have access to the data are the researcher, the study leader of the research project and the line manager of EI involved with the Faculty of Health Sciences. Identities will not be disclosed in any written and published material resulting from the study.

VERIFICATION OF INFORMATION: They will have opportunity to verify the accuracy of the information that they share with the researcher.

ETHICAL APPROVAL: This study received written approval from the Research Ethics Committee of the Faculty of Education at the University of Pretoria. A copy of the approval letter is available on request. **Reference number: SM 11/05/01.**

INFORMATION AND CONTACT PERSON: If you have any questions about the study, please contact the researcher, Mrs JSH Untiedt at 082 3995738 / 012 354 1316 /, or alternatively the study leader Prof JG Knoetze at 012 565 5894 / 083 284 5246 / 012 420 2886

I hereby express my consent that health professional educators in the School of Health Systems & Public Health, Faculty of Health Sciences can participate in the research study as explained to me by Hannelie Untiedt.

Signed:
Chairperson: Prof Tiaan de Jager

Date: 2011 – 07 - 22

Researcher:
Hannelie Untiedt

Date: 2011 – 07 - 22

Appendix 4q Signed consent Head: School of Dentistry



UNIVERSITEIT VAN PRETORIA
UNIVERSITY OF PRETORIA
YUNIBESITHI YA PRETORIA

Deputy Dean
School of Dentistry

05 August 2011

Letter of consent to conduct study using health professional educators in the School of Dentistry

TITLE OF RESEARCH PROJECT:

The needs of health professional educators regarding professional staff development interventions to implement a learning management system

INTRODUCTION:The research study identifies the specific needs of health professional educators regarding professional staff development interventions to implement a learning management system('new clickUP') at the University of Pretoria. From the information collected and investigated in this project, we hope to learn more about the needs of health professional educators in terms of professional staff development interventions to facilitate the implementation and use of the new clickUP system.

PROCEDURES:With your permission, I would like to collect information about the **concerns**academic staff in the School of Dentistryhasin terms of the implementation of the (new) clickUP system, as well as howit is being used. Iplan to collect thisinformation about theirconcerns after each training session they attend by means of a questionnaire that they will be asked to complete twice during the study. After implementation and use of the system academics will also be invited to an interview.

PARTICIPANTS' RIGHTS:Participation is voluntary and academics will have the right to withdraw their consent or discontinue participation at any time, without penalty or loss of benefits to which theyor their department are otherwise entitled.Their decision whether or not to participate in this study will not affect any services or advice provided to you by the Department for Education Innovation (EI).

RISKS AND BENEFITS:There are no anticipated risks associated with this study. I cannot and do not guarantee or promise that they will receive any benefits from participating in this study.

Appendix 4q Signed consent Head: School of Dentistry (continued)

TIME INVOLVEMENT: Their participation in this study will require time to complete the 35-item questionnaire twice at the end of each training session and attend an interview session of 20-30 minutes after implementation.

COMPENSATION: No compensation is offered for participation in this study.

CONFIDENTIALITY: All information gathered will be treated as confidential. People who will have access to the data are the researcher, the study leader of the research project and the line manager of EI involved with the Faculty of Health Sciences. Identities will not be disclosed in any written and published material resulting from the study.

VERIFICATION OF INFORMATION: They will have opportunity to verify the accuracy of the information that they share with the researcher.

ETHICAL APPROVAL: This study has received written approval from the Research Ethics Committee of the Faculty of Education at the University of Pretoria. A copy of the approval letter is available on request. **Reference number: SM 11/05/01**

INFORMATION AND CONTACT PERSON: If you have any questions about the study, please contact the researcher, Mrs JSH Untiedt, on cell number: 012 354 1316 / 082 3995738, or alternatively the study leader: Prof JG Knoetze at 012 565 5894 / 083 284 5246 / 012 420 2886

I hereby express my consent that health professional educators in the School of Dentistry can participate in the research project as explained to me by Hannelie Untiedt.

Signed:  Date: 2011-08-05
Deputy Dean: Prof de Wet

Researcher:  Date: 2011-08-05
Hannelie Untiedt

Prof FA de Wet
Deputy Dean
School of Dentistry
University of Pretoria
P.O. Box 1266,
Pretoria 0001
South Africa

Appendix 6a SoC statements per stage

| 0 - Awareness | 1- Informational | 2 - Personal | 3 – Management | 4 - Consequence | 5- Collaboration | 6 – Refocusing |
|---|---|--|---|--|--|---|
| 3 – I am more concerned about another innovation | 6 – I have a very limited knowledge of the new clickUP. | 7- I would like to know the effect of reorganization on my professional status. | 4 – I am concerned about not having enough time to organize myself each day | 1 – I am concerned about students' attitudes toward the new clickUP. | 5 – I would like to help other faculty in their use of the new clickUP. | 2 – I now know of some other approaches that might work better. |
| 12 – I am not concerned about the new clickUP at this time. | 14 – I would like to discuss the possibility of using the new clickUP | 13 - I would like to know who will make the decisions in the new system. | 8 – I am concerned about conflict between my interests and my responsibilities. | 11 – I am concerned about how the innovation affect students | 10 - I would like to develop working relationships with both our faculty and outside faculty using this new clickUP. | 9 – I am concerned about revising my use of the new clickUP. |
| 21 – I am preoccupied with things other than the new clickUP. | 15 – I would like to know what resources are available if we decide to adopt the new clickUP. | 17 – I would like to know how my teaching or administration is supposed to change | 16 – I am concerned about my inability to manage all that the new clickUP requires. | 19 – I am concerned about evaluating my impact on students. | 18 – I would like to familiarize other departments or persons with the progress of this new approach. | 20 – I would like to revise the new clickUP's approach. |
| 23 – I spend little time thinking about the new clickUP. | 26 – I would like to know what the use of the new clickUP will require in the immediate future. | 28 – I would like to have more information on time and energy commitments required by the new clickUP. | 25 - I am concerned about time spent working with non-academic problems related to the new clickUP. | 24 – I would like to excite my students about their part in this approach. | 27 – I would like to coordinate my efforts with others to maximize the new clickUP's effects. | 22 – I would like to modify our use of the new clickUP based on the experiences of our students |
| 30 – Currently, other priorities prevent me from focusing my attention on the new clickUP. | 35 – I would like to know how the new clickUP is better than what we have now. | 33 – I would like to use feedback from students to change the program. | 34 – Coordination of tasks and people is taking too much of my time. | 32 – I would like to know how my role will change when I am using the new clickUP. | 29 – I would like to know what other faculty are doing in this area | 31 - I would like to determine how to supplement, enhance, or replace the new clickUP. |

Appendix 6b SoC statements per stage – codes used

| Row | 0 – Awareness | 1 – Informational | 2 – Personal | 3- Management | 4 – Consequence | 5 – Collaboration | 6 – Refocusing |
|-----|--------------------|----------------------|---------------------|---------------------|---------------------|----------------------|---------------------|
| 1 | 3 – #Awa_01_03 | 6 – #Inf_01_06_ | 7- #Per_01_07_ | 4 – #Man_01_04_ | 1 – #Con_01_01_ | 5 – #Col_01_05_ | 2 – #Ref_01_02_ |
| 2 | 12 – #Awa_02_12 | 14 – #Inf_02_14_ | 13 - #Per_02_13_ | 8 – #Man_02_08_ | 11 – #Con_02_11_ | 10 – #Col_02_10_ | 9 – #Ref_02_09_ |
| 3 | 21 – #Awa_03_21 | 15 – #Inf_03_15_ | 17 – #Per_03_17_ | 16 – #Man_03_16_ | 19 – #Con_03_19_ | 18 – #Col_03_18_ | 20 – #Ref_03_20_ |
| 4 | 23 – #Awa_04_22 | 26 – #Inf_04_26_ | 28 – #Per_04_28_ | 25 – #Man_04_25_ | 24 – #Con_04_24_ | 27 – #Col_04_27_ | 22 – #Ref_04_22_ |
| 5 | 30 – #Awa_05_30 | 35 - #Inf_05_35_ | 33 – #Per_05_33_ | 34 – #Man_05_34_ | 32 – #Con_05_32_ | 29 – #Col_05_29_ | 31 – #Ref_05_31_ |

Additional concerns:

| | | | | | | | |
|---|----------|----------|----------|----------|----------|----------|----------|
| 6 | #Awa_06_ | #Inf_06_ | #Per_06_ | #Man_06_ | #Con_06_ | #Col_06_ | #Ref_06_ |
| 7 | #Awa_07_ | #Inf_07_ | #Per_07_ | #Man_07_ | #Con_07_ | #Col_07_ | #Ref_07_ |
| 8 | #Awa_08_ | #Inf_08_ | #Per_08_ | #Man_08_ | #Con_08_ | #Col_08_ | #Ref_08_ |
| 9 | #Awa_09_ | #Inf_09_ | #Per_09_ | #Man_09_ | #Con_09_ | #Col_09- | #Ref_09_ |

Appendix 7a List of needs of HPEs at the University of Pretoria when implementing a new LMS

| Stages of concerns to be addressed based on SoCQ results | Phase I Contextualised needs of HPEs at the start of the journey of implementing an LMS | Phase II Contextualised needs of HPEs at the later stage / in order to continue the journey of implementation of the LMS. |
|--|---|---|
| <p>Unconcerned stage</p> | <p>HPEs need to have a manageable workload to allow for time to learn and implement the new LMS (based on concern #30).</p> <p>HPEs need to understand how the new LMS will benefit them to be more efficient in managing their available time and the value it can add to their teaching and student learning (#30).</p> <p><u>Additional needs identified:</u></p> <p><i>The need to communicate the news of the new LMS clearly stating the rational why the change to the new LMS is necessary.</i></p> <p><i>The need to communicate what training and support options will be provided to support the implementation of the LMS.</i></p> <p><i>HPEs feel that courses should be made mandatory for every HPE to attend.</i></p> | <p>HPEs need to understand the strategic objective of the University executive management with regards to the implementation of the new LMS (#21).</p> <p>HPEs need to have a manageable workload to allow for time to learn and implement a new LMS (#30, #23).</p> <p>HPEs need to understand how the new LMS will benefit them to be more efficient in managing their available time and the value it can add to their teaching and student learning (#30, #23).</p> |
| <p>Management stage</p> | <p>HPEs need to have time available to attend training and practice what they were taught to then develop their own course(s). (#4)</p> <p>HPEs need <u>to be able</u> to implement the functionalities (<i>i.e. assessment, communication and providing students with access to information</i>) of the LMS identified for their teaching. (#16)</p> <p>HPEs need to know how the responsibilities for the LMS tasks is divided between DEI and the academic departments. (#16)</p> <p><i>(#25) HPEs need to be assured of the reliability and on-demand availability of the LMS.</i></p> | <p>HPEs need to have time available to attend training and practice what they were taught to then be able to plan the changes and develop their own course(s). (#4)</p> <p>HPEs need to know how the LMS can help them to manage time more efficiently (e.g. for online marking of assignments and performing administrative tasks).</p> <p>HPEs need to know how to manage the uploading of documents for students and how to manage the downloading of many assignments from home. (#16)</p> <p><i>HPEs need to be assured of the reliability and on-demand availability of the LMS. (#25)</i></p> <p><i>HPEs need time to test the new LMS for my courses' specific requirements. (#25)</i></p> <p>HPEs need to coordinate the course development tasks in the LMS where</p> |

Appendix 7a List of needs of HPEs at the University of Pretoria when implementing a new LMS (continued)

| Stages of concerns to be addressed based on SoCQ results | Phase I Contextualised needs of HPEs at the start of the journey of implementing an LMS | Phase II Contextualised needs of HPEs at the later stage / in order to continue the journey of implementation of the LMS. |
|--|--|--|
| | <p><u>Additional needs identified:</u></p> <p><i>The need to know how to use LMS more effectively and thereby making things easier.</i></p> <p><i>The need to know how their teaching methods can be accommodated by the LMS.</i></p> | <p><i>more than one lecturer are teaching in a course. (#34, #8)</i></p> <p><u>Additional needs identified:</u></p> <p><i>Need for HPEs to have the necessary knowledge and skills to use the LMS more efficiently and effectively in all courses throughout the faculty.</i></p> <p><i>The need to see that the LMS can meet the requirement in a specific subject area or a particular course.</i></p> <p><i>The need to monitor students' activity in a course in order to be able to provide evidence.</i></p> <p><i>The need to use specific functionalities (i.e. assessment and communication functionalities).</i></p> <p><i>Need for enhancement to specific functionalities the LMS provides (i.e. a user-friendly rubric to mark assignments and access to wider variety of question types).</i></p> <p><i>The need for students to have ubiquitous access to learning material.</i></p> <p><i>The need for students to have access to computers on campus.</i></p> |
| Informational stage | <p>The HPEs need to have knowledge regarding the system and specific functionalities such as the communication-, collaboration- and assessment functionalities. (#6)</p> <p>The HPEs need to learn the basics on how to navigate the system, get access to courses, what the system is all about, familiarise myself and upload content to the LMS. (#6)</p> <p>The HPEs need to know how to create a learning space and structure it properly. (#6)</p> <p>The HPEs need to have an overview of the possibilities in using the new LMS. (#14)</p> | <p>The HPEs need to have knowledge regarding assessment and mobile functionalities and managing files that are used in the courses. (#6)</p> <p>The HPEs need to have knowledge on how to structure a course and make it look pretty. (#6)</p> <p>The HPEs need to see further possibilities in using the LMS or revise the hand outs to see other possibilities that I am not using. (#14)</p> <p>The HPEs need to know how to adapt their ideas to match with the possibilities of the LMS provides. (#14)</p> |

Appendix 7a List of needs of HPEs at the University of Pretoria when implementing a new LMS (continued)

| Stages of concerns to be addressed based on SoCQ results | Phase I Contextualised needs of HPEs at the start of the journey of implementing an LMS | Phase II Contextualised needs of HPEs at the later stage / in order to continue the journey of implementation of the LMS. |
|--|--|--|
| | <p>The HPEs need to know what resources are available when using the LMS, specifically with regards to physical support as well as online resources and also to have a visual <i>process-map</i> and or a <i>basic recipe</i> available that can be followed when using the LMS. (#15)</p> <p>The HPEs need to know what the use of the LMS will require from them in the immediate future. (#26)</p> <p>The HPEs need to know how the new LMS is different from the previous LMS. (#35)</p> <p><u>Additional needs identified:</u></p> <p><i>The HPEs have a need for training in order to stay abreast with educational technology, but also have their specific individual needs to be addressed during training.</i></p> <p><i>The HPEs need to have hands-on demonstration and practice during training workshops.</i></p> <p><i>The HPEs need to discuss the feasibility of using the LMS for their specific needs.</i></p> <p><i>The HPEs need to have a feedback session on my use of the system.</i></p> <p><i>The HPEs need to know what the strategic objective of UP is with regards to the implementation of the new LMS.</i></p> | <p>HPEs need to see examples of how the LMS is used in similar contexts. (#14)</p> <p>HPEs need to do revision of the training hand-outs provided.</p> <p>HPEs need personal support to be provided in the form of just-in-time guidance, telephonic or email. (#15)</p> <p>HPEs need online support in the form of an electronic booklet or guide or a layman's manual indicating basic steps. (#15)</p> <p>The need to know how courses can be migrated to the new LMS. (#15)</p> <p>The need to know that the new LMS work just as well as the old/previous version. (#35)</p> <p><u>Additional needs identified:</u></p> <p><i>The HPEs have a need for training in order to stay abreast with educational technology.</i></p> <p><i>The HPEs need for training to be provided regularly in short courses, as a means of encouragement to continue use of the LMS.</i></p> <p><i>The need to work on own content during the training sessions.</i></p> <p><i>The HPEs need further training to benefit them in reviewing what they have previously learned and what would interest them.</i></p> <p><i>The HPEs need to discuss the feasibility of using the LMS for their specific needs.</i></p> <p><i>The HPEs need to know if the bandwidth stable enough (reliable) to use the LMS.</i></p> |
| Personal stage | <p>HPEs need to know how their teaching approach should change when planning using the LMS. (#17)</p> <p>HPEs need to understand the expectations of UP with regards to</p> | <p>HPEs need to know how their teaching approach should change when planning using the LMS. (#17)</p> |

Appendix 7a List of needs of HPEs at the University of Pretoria when implementing a new LMS (continued)

| Stages of concerns to be addressed based on SoCQ results | Phase I Contextualised needs of HPEs at the start of the journey of implementing an LMS | Phase II Contextualised needs of HPEs at the later stage / in order to continue the journey of implementation of the LMS. |
|--|--|---|
| | <p>the use of the LMS in teaching. (#17, #28)</p> <p>The need to know if they will be able to cope with developing all “from scratch”. (#28)</p> <p>The need to know how much time and learning (training) it will require to implement the LMS.</p> <p><u>Additional needs identified:</u></p> <p><i>The HPEs need to feel confident that they will be able to master the use of the LMS by practicing after the training and use it independently.</i></p> <p><i>They need to feel confident about their personal computer skills that would enable them to use the LMS.</i></p> <p><i>The HPEs need to feel comfortable that they will be able to learn the LMS and keep up with the rest during the training workshop.</i></p> <p><i>The need for a digestible amount of information during workshops.</i></p> <p><i>The need to know that the system is worth my efforts and will not be a disastrous implementation.</i></p> | <p><u>Additional needs identified:</u></p> <p><i>The need to be confident that I will be able to master the LMS system.</i></p> <p><i>The need to do improve their computer skills required to implement the LMS.</i></p> <p><i>The need for a digestible amount of information on each day of the workshop days;</i></p> <p><i>The need to know that when they work in the system they will not be frustrated.</i></p> <p><i>The need to understand the need for the new LMS and the strategic objective of UP.</i></p> <p><i>The need for an adjustable pace at which the workshops are presented</i></p> |

```

USE ALL.
FILTER BY PSIIAwa0.
EXECUTE.
*Nonparametric Tests: Related Samples.
NPTESTS
  /RELATED TEST(PSIAwa0 PSIIAwa0)
  /MISSING SCOPE=ANALYSIS USERMISSING=EXCLUDE
  /CRITERIA ALPHA=0.05 CILEVEL=95.

```

Nonparametric Tests

Notes

| | | |
|----------------|--|--|
| Output Created | 05-OCT-2013 17:04:52 | |
| Comments | | |
| Input | Data | C: \Users\Hannelie\Documents\BACKUP_External HDD_studies\Statomet_2013\Hannelie_SPSS\SoC1and2_demo_LoU_new_13April_Hi_low_23Edited.sav |
| | Active Dataset | DataSet1 |
| | Filter | Awareness (ii) |
| | Weight | <none> |
| | Split File | <none> |
| | N of Rows in Working Data File | 40 |
| Syntax | NPTESTS /RELATED TEST(PSIAwa0 PSIIAwa0) /MISSING SCOPE=ANALYSIS USERMISSING=EXCLUDE /CRITERIA ALPHA=0.05 CILEVEL=95. | |
| Resources | Processor Time | 00:00:00.30 |
| | Elapsed Time | 00:00:00.35 |

[DataSet1] C:\Users\Hannelie\Documents\BACKUP_External HDD_studies\Statomet_2013\Hannelie_SPSS\SoC1and2_demo_LoU_new_13April_Hi_low_23Edited.sav

Hypothesis Test Summary

| | Null Hypothesis | Test | Sig. | Decision |
|---|--|---|------|-----------------------------|
| 1 | The median of differences between Awareness (i) and Awareness (ii) equals 0. | Related-Samples Wilcoxon Signed Rank Test | .590 | Retain the null hypothesis. |

Asymptotic significances are displayed. The significance level is .05.

NPAR TESTS

```

/WILCOXON=PSIAwa0 PSIIInf1 PSIPer2 PSIMan3 PSICon4 PSIColl15 PSISRef6 WITH PSII
Awa0 PSIIInf1 PSIIPer2 PSIIMan3 PSIICon4 PSIIColl15 PSIIRef6 (PAIRED)
/SIGN=PSIAwa0 PSIIInf1 PSIPer2 PSIMan3 PSICon4 PSIColl15 PSISRef6 WITH PSIIAwa0
PSIIInf1 PSIIPer2 PSIIMan3 PSIICon4 PSIIColl15 PSIIRef6 (PAIRED)
/STATISTICS DESCRIPTIVES
/MISSING ANALYSIS.

```

NPar Tests

Notes

| | | |
|------------------------|---|--|
| Output Created | 05-OCT-2013 17:07:23 | |
| Comments | | |
| Input | Data | C: \Users\Hannelie\Documents\BACKUP_External HDD_studies\Statomet_2013\Hannelie_SPSS\SoC1and2_demo_LoU_new_13April_Hi_low_23Edited.sav |
| | Active Dataset | DataSet1 |
| | Filter | Awareness (ii) |
| | Weight | <none> |
| | Split File | <none> |
| | N of Rows in Working Data File | 40 |
| Missing Value Handling | Definition of Missing | User-defined missing values are treated as missing. |
| | Cases Used | Statistics for each test are based on all cases with valid data for the variable(s) used in that test. |
| Syntax | <pre> NPAR TESTS /WILCOXON=PSIAwa0 PSIIInf1 PSIPer2 PSIMan3 PSICon4 PSIColl5 PSISRef6 WITH PSIIAwa0 PSIIInf1 PSIIPer2 PSIIMan3 PSIICon4 PSIIColl5 PSIIRef6 (PAIREd) /SIGN=PSIAwa0 PSIIInf1 PSIPer2 PSIMan3 PSICon4 PSIColl5 PSISRef6 WITH PSIIAwa0 PSIIInf1 PSIIPer2 PSIIMan3 PSIICon4 PSIIColl5 PSIIRef6 (PAIREd) /STATISTICS DESCRIPTIVES /MISSING ANALYSIS. </pre> | |
| Resources | Processor Time | 00:00:00.03 |
| | Elapsed Time | 00:00:00.06 |
| | Number of Cases Allowed ^a | 41391 |

a. Based on availability of workspace memory.

[DataSet1] C:\Users\Hannelie\Documents\BACKUP_External HDD_studies\Statomet_2013\Hannelie_SPSS\SoC1and2_demo_LoU_new_13April_Hi_low_23Edited.sav

Descriptive Statistics

| | N | Mean | Std. Deviation | Minimum | Maximum |
|--------------------|----|-------|----------------|---------|---------|
| Awareness (i) | 40 | 86.85 | 14.050 | 31 | 99 |
| Informational (i) | 40 | 65.20 | 20.428 | 30 | 99 |
| Personal (i) | 40 | 59.80 | 19.977 | 21 | 92 |
| Management (i) | 40 | 65.83 | 25.871 | 15 | 99 |
| Consequence (i) | 40 | 29.13 | 20.659 | 3 | 76 |
| Collaboration (i) | 40 | 33.95 | 20.506 | 2 | 88 |
| Refocusing (i) | 40 | 50.57 | 22.342 | 11 | 97 |
| Awareness (ii) | 40 | 81.00 | 24.567 | 14 | 99 |
| Informational (ii) | 40 | 59.05 | 21.510 | 23 | 97 |
| Personal (ii) | 40 | 57.28 | 21.142 | 5 | 94 |
| Management (ii) | 40 | 62.28 | 23.776 | 15 | 99 |
| Consequence (ii) | 40 | 29.28 | 21.470 | 1 | 96 |
| Collaboration (ii) | 40 | 36.15 | 25.114 | 3 | 98 |
| Refocusing (ii) | 40 | 46.07 | 24.530 | 5 | 99 |

Wilcoxon Signed Ranks Test

Ranks

| | | N | Mean Rank | Sum of Ranks |
|--|----------------|-----------------|-----------|--------------|
| Awareness (ii) - Awareness (i) | Negative Ranks | 18 ^a | 18.28 | 329.00 |
| | Positive Ranks | 16 ^b | 16.63 | 266.00 |
| | Ties | 6 ^c | | |
| | Total | 40 | | |
| Informational (ii) - Informational (i) | Negative Ranks | 27 ^d | 18.13 | 489.50 |
| | Positive Ranks | 11 ^e | 22.86 | 251.50 |
| | Ties | 2 ^f | | |
| | Total | 40 | | |
| Personal (ii) - Personal (i) | Negative Ranks | 22 ^g | 20.00 | 440.00 |
| | Positive Ranks | 16 ^h | 18.81 | 301.00 |
| | Ties | 2 ⁱ | | |
| | Total | 40 | | |
| Management (ii) - Management (i) | Negative Ranks | 20 ^j | 20.73 | 414.50 |
| | Positive Ranks | 18 ^k | 18.14 | 326.50 |
| | Ties | 2 ^l | | |
| | Total | 40 | | |
| Consequence (ii) - Consequence (i) | Negative Ranks | 18 ^m | 17.64 | 317.50 |
| | Positive Ranks | 17 ⁿ | 18.38 | 312.50 |
| | Ties | 5 ^o | | |
| | Total | 40 | | |

Ranks

| | | N | Mean Rank | Sum of Ranks |
|--|----------------|-----------------|-----------|--------------|
| Collaboration (ii) - Collaboration (i) | Negative Ranks | 19 ^p | 20.53 | 390.00 |
| | Positive Ranks | 21 ^q | 20.48 | 430.00 |
| | Ties | 0 ^r | | |
| | Total | 40 | | |
| Refocusing (ii) - Refocusing (i) | Negative Ranks | 23 ^s | 18.89 | 434.50 |
| | Positive Ranks | 14 ^t | 19.18 | 268.50 |
| | Ties | 3 ^u | | |
| | Total | 40 | | |

- a. Awareness (ii) < Awareness (i)
- b. Awareness (ii) > Awareness (i)
- c. Awareness (ii) = Awareness (i)
- d. Informational (ii) < Informational (i)
- e. Informational (ii) > Informational (i)
- f. Informational (ii) = Informational (i)
- g. Personal (ii) < Personal (i)
- h. Personal (ii) > Personal (i)
- i. Personal (ii) = Personal (i)
- j. Management (ii) < Management (i)
- k. Management (ii) > Management (i)
- l. Management (ii) = Management (i)
- m. Consequence (ii) < Consequence (i)
- n. Consequence (ii) > Consequence (i)
- o. Consequence (ii) = Consequence (i)
- p. Collaboration (ii) < Collaboration (i)
- q. Collaboration (ii) > Collaboration (i)
- r. Collaboration (ii) = Collaboration (i)
- s. Refocusing (ii) < Refocusing (i)
- t. Refocusing (ii) > Refocusing (i)
- u. Refocusing (ii) = Refocusing (i)

Test Statistics^a

| | Awareness (ii) - Awareness (i) | Informational (ii) - Informational (i) | Personal (ii) - Personal (i) | Management (ii) - Management (i) | Consequence (ii) - Consequence (i) |
|------------------------|-----------------------------------|--|---------------------------------|--|---|
| Z | -.539 ^b | -1.726 ^b | -1.008 ^b | -.638 ^b | -.041 ^b |
| Asymp. Sig. (2-tailed) | .590 | .084 | .313 | .523 | .967 |

Test Statistics^a

| | Collaboration (ii) - Collaboration (i) | Refocusing (ii) - Refocusing (i) |
|------------------------|--|-------------------------------------|
| Z | -.269 ^c | -1.253 ^b |
| Asymp. Sig. (2-tailed) | .788 | .210 |

a. Wilcoxon Signed Ranks Test

b. Based on positive ranks.

c. Based on negative ranks.

Wilcoxon Signed Rank Test Analysis for SoCi_ii for Awareness stage

| PSIAwa0 | PSIIAwa0 | Verskil | Rank | Ware rank | Sum - rank | Sum pos rank | Median |
|---------|----------|---------|------|-----------|------------|--------------|-----------------------|
| 96.00 | 22.00 | -74 | 74 | 34 | 34 | | Count + + - (N) |
| 87.00 | 14.00 | -73 | 73 | 33 | 33 | | T (Mean) |
| 87.00 | 22.00 | -65 | 65 | 32 | 32 | | SE |
| 91.00 | 40.00 | -51 | 51 | 31 | 31 | | T |
| 94.00 | 69.00 | -25 | 25 | 28 | 28.5 | | Z |
| 94.00 | 69.00 | -25 | 25 | 29 | 28.5 | | |
| 94.00 | 75.00 | -19 | 19 | 26 | 26.5 | | r |
| 91.00 | 75.00 | -16 | 16 | 23 | 23.5 | | |
| 96.00 | 81.00 | -15 | 15 | 22 | 22 | | |
| 81.00 | 69.00 | -12 | 12 | 20 | 20.5 | | |
| 75.00 | 69.00 | -6 | 6 | 11 | 13.00 | | |
| 97.00 | 91.00 | -6 | 6 | 12 | 13.00 | | |
| 96.00 | 91.00 | -5 | 5 | 7 | 8.5 | | |
| 98.00 | 96.00 | -2 | 2 | 3 | 4 | | |
| 96.00 | 94.00 | -2 | 2 | 4 | 4 | | |
| 99.00 | 97.00 | -2 | 2 | 5 | 4 | | |
| 99.00 | 98.00 | -1 | 1 | 1 | 1.5 | 18 | |
| 99.00 | 98.00 | -1 | 1 | 2 | 1.5 | 329 | 21.25 (I > II) |
| 87.00 | 91.00 | 4 | 4 | 6 | 6 | | |
| 94.00 | 99.00 | 5 | 5 | 8 | 8.5 | | |
| 94.00 | 99.00 | 5 | 5 | 9 | 8.5 | | |
| 94.00 | 99.00 | 5 | 5 | 10 | 8.5 | | |
| 75.00 | 81.00 | 6 | 6 | 13 | 13 | | |
| 81.00 | 87.00 | 6 | 6 | 14 | 13 | | |
| 69.00 | 75.00 | 6 | 6 | 15 | 13 | | |
| 91.00 | 99.00 | 8 | 8 | 16 | 17 | | |
| 91.00 | 99.00 | 8 | 8 | 17 | 17 | | |
| 91.00 | 99.00 | 8 | 8 | 18 | 17 | | |
| 87.00 | 97.00 | 10 | 10 | 19 | 19 | | |
| 87.00 | 99.00 | 12 | 12 | 21 | 20.5 | | |
| 81.00 | 97.00 | 16 | 16 | 24 | 23.5 | | |
| 81.00 | 99.00 | 18 | 18 | 25 | 25 | | |
| 75.00 | 94.00 | 19 | 19 | 27 | 26.5 | 16 | |
| 69.00 | 99.00 | 30 | 30 | 30 | 30 | 266 | 17 (II > I) / i < II) |

Wilcoxon Signed Rank Test Analysis for SoCi_ii for Collaboration stage

| | PSIColl5 | PSIIColl5 | Verskil | ABS (Verskil) | Rank | Ware rank | |
|----|----------|-----------|---------|---------------|------|-----------|------------------|
| 1 | 59.00 | 19.00 | -40.00 | 40.00 | 37 | 37 | |
| 2 | 44.00 | 14.00 | -30.00 | 30.00 | 35 | 35 | |
| 3 | 48.00 | 22.00 | -26.00 | 26.00 | 31 | 31 | |
| 4 | 40.00 | 16.00 | -24.00 | 24.00 | 29 | 29.5 | |
| 5 | 88.00 | 64.00 | -24.00 | 24.00 | 30 | 29.5 | |
| 6 | 36.00 | 14.00 | -22.00 | 22.00 | 28 | 28 | |
| 7 | 72.00 | 55.00 | -17.00 | 17.00 | 23 | 24 | |
| 8 | 22.00 | 5.00 | -17.00 | 17.00 | 24 | 24 | |
| 9 | 36.00 | 19.00 | -17.00 | 17.00 | 25 | 24 | |
| 10 | 40.00 | 25.00 | -15.00 | 15.00 | 20 | 20.5 | |
| 11 | 16.00 | 3.00 | -13.00 | 13.00 | 18 | 18.5 | |
| 12 | 44.00 | 31.00 | -13.00 | 13.00 | 19 | 18.5 | |
| 13 | 40.00 | 28.00 | -12.00 | 12.00 | 14 | 15.5 | |
| 14 | 80.00 | 68.00 | -12.00 | 12.00 | 15 | 15.5 | |
| 15 | 19.00 | 9.00 | -10.00 | 10.00 | 13 | 13 | |
| 16 | 72.00 | 64.00 | -8.00 | 8.00 | 10 | 10.5 | |
| 17 | 12.00 | 7.00 | -5.00 | 5.00 | 6 | 7 | |
| 18 | 12.00 | 7.00 | -5.00 | 5.00 | 7 | 7 | |
| 19 | 14.00 | 12.00 | -2.00 | 2.00 | 2 | 2 | 20.50 390 i > ii |
| 20 | 2.00 | 3.00 | 1.00 | 1.00 | 1 | 1 | |
| 21 | 25.00 | 28.00 | 3.00 | 3.00 | 3 | 3.5 | |
| 22 | 16.00 | 19.00 | 3.00 | 3.00 | 4 | 3.5 | |
| 23 | 10.00 | 14.00 | 4.00 | 4.00 | 5 | 5 | |
| 24 | 14.00 | 19.00 | 5.00 | 5.00 | 8 | 7 | |
| 25 | 48.00 | 55.00 | 7.00 | 7.00 | 9 | 9 | |
| 26 | 28.00 | 36.00 | 8.00 | 8.00 | 11 | 10.5 | |
| 27 | 22.00 | 31.00 | 9.00 | 9.00 | 12 | 12 | |
| 28 | 7.00 | 19.00 | 12.00 | 12.00 | 16 | 15.5 | |
| 29 | 19.00 | 31.00 | 12.00 | 12.00 | 17 | 15.5 | |
| 30 | 40.00 | 55.00 | 15.00 | 15.00 | 21 | 20.5 | |
| 31 | 48.00 | 64.00 | 16.00 | 16.00 | 22 | 22 | |
| 32 | 25.00 | 44.00 | 19.00 | 19.00 | 26 | 26.5 | |
| 33 | 25.00 | 44.00 | 19.00 | 19.00 | 27 | 26.5 | |
| 34 | 44.00 | 72.00 | 28.00 | 28.00 | 32 | 32.5 | |
| 35 | 44.00 | 72.00 | 28.00 | 28.00 | 33 | 32.5 | |
| 36 | 36.00 | 64.00 | 28.00 | 28.00 | 34 | 34 | |
| 37 | 40.00 | 72.00 | 32.00 | 32.00 | 36 | 36 | |
| 38 | 31.00 | 72.00 | 41.00 | 41.00 | 38 | 38 | |
| 39 | 4.00 | 52.00 | 48.00 | 48.00 | 39 | 39 | |
| 40 | 36.00 | 98.00 | 62.00 | 62.00 | 40 | 40 | 21 430 |

| | |
|-----------------|---------|
| Count + + - (N) | 40.000 |
| T (Mean) | 410.000 |
| SE | 74.398 |
| T | 390.000 |
| Z | -0.269 |
| r | -0.030 |

Wilcoxon Signed Rank Test Analysis for SoCi_ii for Consequence stage

| | PSICon4 | PSICon4 | Verskil | ABS (Verskil) | Rank | Ware rank | MEDIAN | |
|----|---------|---------|---------|---------------|------|-----------|--------------|--------|
| 1 | 43.00 | 1.00 | -42.00 | 42 | 33 | 33 | | |
| 2 | 71.00 | 33.00 | -38.00 | 38 | 32 | 32 | | |
| 3 | 66.00 | 30.00 | -36.00 | 36 | 31 | 31 | | |
| 4 | 63.00 | 30.00 | -33.00 | 33 | 30 | 30 | | |
| 5 | 33.00 | 5.00 | -28.00 | 28 | 28 | 28 | | |
| 6 | 30.00 | 3.00 | -27.00 | 27 | 27 | 27 | | |
| 7 | 27.00 | 7.00 | -20.00 | 20 | 21 | 21.00 | | |
| 8 | 76.00 | 59.00 | -17.00 | 17 | 19 | 19.00 | | |
| 9 | 19.00 | 4.00 | -15.00 | 15 | 16 | 16.50 | | |
| 10 | 63.00 | 48.00 | -15.00 | 15 | 17 | 16.50 | | |
| 11 | 66.00 | 54.00 | -12.00 | 12 | 14 | 14.00 | | |
| 12 | 54.00 | 43.00 | -11.00 | 11 | 12 | 12.50 | | |
| 13 | 27.00 | 16.00 | -11.00 | 11 | 13 | 12.50 | | |
| 14 | 27.00 | 19.00 | -8.00 | 8 | 8 | 8.00 | | |
| 15 | 54.00 | 48.00 | -6.00 | 6 | 6 | 6.50 | | |
| 16 | 7.00 | 2.00 | -5.00 | 5 | 3 | 4.00 | | |
| 17 | 24.00 | 19.00 | -5.00 | 5 | 4 | 4.00 | 18 | |
| 18 | 19.00 | 16.00 | -3.00 | 3 | 2 | 2.00 | 16.5 | 317.5 |
| 19 | 8.00 | 9.00 | 1.00 | 1 | 1 | 1.00 | | |
| 20 | 3.00 | 8.00 | 5.00 | 5 | 5 | 4.00 | | |
| 21 | 27.00 | 33.00 | 6.00 | 6 | 7 | 6.50 | | |
| 22 | 9.00 | 19.00 | 10.00 | 10 | 9 | 10.00 | | |
| 23 | 11.00 | 21.00 | 10.00 | 10 | 10 | 10.00 | | |
| 24 | 11.00 | 21.00 | 10.00 | 10 | 11 | 10.00 | | |
| 25 | 16.00 | 30.00 | 14.00 | 14 | 15 | 15.00 | | |
| 26 | 27.00 | 43.00 | 16.00 | 16 | 18 | 18.00 | | |
| 27 | 9.00 | 27.00 | 18.00 | 18 | 20 | 20.00 | | |
| 28 | 33.00 | 54.00 | 21.00 | 21 | 22 | 22.00 | | |
| 29 | 8.00 | 30.00 | 22.00 | 22 | 23 | 23.50 | | |
| 30 | 11.00 | 33.00 | 22.00 | 22 | 24 | 23.50 | | |
| 31 | 24.00 | 48.00 | 24.00 | 24 | 25 | 25.50 | | |
| 32 | 24.00 | 48.00 | 24.00 | 24 | 26 | 25.50 | | |
| 33 | 9.00 | 38.00 | 29.00 | 29 | 29 | 29 | | |
| 34 | 48.00 | 96.00 | 48.00 | 48 | 34 | 34 | 17 | |
| 35 | 24.00 | 82.00 | 58.00 | 58 | 35 | 35 | 20.00 | 312.50 |

| | |
|-----------------|---------|
| Count + + - (N) | 35.000 |
| T (Mean) | 312.500 |
| SE | 61.053 |
| T | 314.000 |
| Z | 0.025 |
| r | 0.003 |

Wilcoxon Signed Rank Test Analysis for SoCi_ii for Informational stage

| | PSIInf1 | PSIInf1 | Verskil | ABS (Verskil) | Rank | Ware rank | Sum Neg | Sum Pos | Median of the ranks | Median of the differences | Mean of the differences |
|----|---------|---------|---------|---------------|------|-----------|---------|---------|---------------------|---------------------------|-------------------------|
| 1 | 96.00 | 37.00 | -59.00 | 59.00 | 38 | 38.00 | | | | | |
| 2 | 95.00 | 48.00 | -47.00 | 47.00 | 36 | 36.00 | | | | | |
| 3 | 72.00 | 37.00 | -35.00 | 35.00 | 33 | 33.50 | | | | | |
| 4 | 93.00 | 60.00 | -33.00 | 33.00 | 32 | 32.00 | | | | | |
| 5 | 72.00 | 40.00 | -32.00 | 32.00 | 31 | 31.00 | | | | | |
| 6 | 54.00 | 23.00 | -31.00 | 31.00 | 30 | 30.00 | | | | | |
| 7 | 60.00 | 30.00 | -30.00 | 30.00 | 29 | 29.00 | | | | | |
| 8 | 91.00 | 66.00 | -25.00 | 25.00 | 26 | 26.00 | | | | | |
| 9 | 51.00 | 30.00 | -21.00 | 21.00 | 24 | 24.00 | | | | | |
| 10 | 99.00 | 80.00 | -19.00 | 19.00 | 23 | 23.00 | | | | | |
| 11 | 72.00 | 54.00 | -18.00 | 18.00 | 22 | 22.00 | | | | | |
| 12 | 80.00 | 63.00 | -17.00 | 17.00 | 19 | 20.00 | | | | | |
| 13 | 60.00 | 43.00 | -17.00 | 17.00 | 20 | 20.00 | | | | | |
| 14 | 88.00 | 72.00 | -16.00 | 16.00 | 18 | 18.00 | | | | | |
| 15 | 90.00 | 75.00 | -15.00 | 15.00 | 17 | 17.00 | | | | | |
| 16 | 48.00 | 34.00 | -14.00 | 14.00 | 15 | 15.50 | | | | | |
| 17 | 54.00 | 40.00 | -14.00 | 14.00 | 16 | 15.50 | | | | | |
| 18 | 95.00 | 84.00 | -11.00 | 11.00 | 12 | 12.00 | | | | | |
| 19 | 51.00 | 43.00 | -8.00 | 8.00 | 10 | 10.00 | | | | | |
| 20 | 91.00 | 84.00 | -7.00 | 7.00 | 7 | 8.00 | | | | | |
| 21 | 37.00 | 30.00 | -7.00 | 7.00 | 8 | 8.00 | | | | | |
| 22 | 54.00 | 48.00 | -6.00 | 6.00 | 5 | 5.50 | | | | | |
| 23 | 66.00 | 60.00 | -6.00 | 6.00 | 6 | 5.50 | | | | | |
| 24 | 45.00 | 40.00 | -5.00 | 5.00 | 4 | 4.00 | W -/T | | | | |
| 25 | 88.00 | 84.00 | -4.00 | 4.00 | 3 | 3.00 | | | | | |
| 26 | 30.00 | 27.00 | -3.00 | 3.00 | 1 | 1.50 | 27 | | | | |
| 27 | 43.00 | 40.00 | -3.00 | 3.00 | 2 | 1.50 | 489.50 | | 18.00 | | -18.63 |
| 28 | 84.00 | 91.00 | 7.00 | 7.00 | 9 | 8.00 | | | | | |
| 29 | 54.00 | 63.00 | 9.00 | 9.00 | 11 | 11.00 | | | | | |
| 30 | 57.00 | 69.00 | 12.00 | 12.00 | 13 | 13.00 | | | | | |
| 31 | 84.00 | 97.00 | 13.00 | 13.00 | 14 | 14.00 | | | | | |
| 32 | 63.00 | 80.00 | 17.00 | 17.00 | 21 | 20.00 | | | | | |
| 33 | 57.00 | 80.00 | 23.00 | 23.00 | 25 | 25.00 | | | | | |
| 34 | 54.00 | 80.00 | 26.00 | 26.00 | 27 | 27.00 | | | | | |
| 35 | 34.00 | 63.00 | 29.00 | 29.00 | 28 | 28.00 | | | | | |
| 36 | 40.00 | 75.00 | 35.00 | 35.00 | 34 | 33.50 | | | | | |
| 37 | 48.00 | 84.00 | 36.00 | 36.00 | 35 | 35.00 | | 11 | | | |
| 38 | 43.00 | 93.00 | 50.00 | 50.00 | 37 | 37.00 | | 251.50 | 25.00 | | 23.36 |

W+/T

| | |
|-----------------|---------|
| Count + + - (N) | 38.000 |
| T (Mean) | 370.500 |
| SE | 68.955 |
| T | 251.500 |
| Z | -1.726 |
| r | -0.193 |

Wilcoxon Signed Rank Test Analysis for SoCi_ii for Management stage

| ID | PSIMan3 | PSIIMan3 | Verskil | ABS (Verskil) | Rank | Ware rank | Sum Neg | Sum Pos | MEDIAN |
|----|---------|----------|---------|---------------|------|-----------|---------|---------|--------|
| 1 | 90.00 | 23.00 | -67.00 | 67 | 38 | 38 | | | |
| 2 | 88.00 | 30.00 | -58.00 | 58 | 37 | 37 | | | |
| 3 | 73.00 | 34.00 | -39.00 | 39 | 35 | 35 | | | |
| 4 | 94.00 | 56.00 | -38.00 | 38 | 33 | 33.5 | | | |
| 5 | 83.00 | 47.00 | -36.00 | 36 | 32 | 32 | | | |
| 6 | 94.00 | 60.00 | -34.00 | 34 | 31 | 31 | | | |
| 7 | 69.00 | 47.00 | -22.00 | 22 | 28 | 28 | | | |
| 8 | 43.00 | 23.00 | -20.00 | 20 | 25 | 25.5 | | | |
| 9 | 65.00 | 47.00 | -18.00 | 18 | 23 | 23.5 | | | |
| 10 | 65.00 | 47.00 | -18.00 | 18 | 24 | 23.5 | | | |
| 11 | 65.00 | 52.00 | -13.00 | 13 | 19 | 20 | | | |
| 12 | 65.00 | 52.00 | -13.00 | 13 | 20 | 20 | | | |
| 13 | 90.00 | 80.00 | -10.00 | 10 | 17 | 17 | | | |
| 14 | 99.00 | 90.00 | -9.00 | 9 | 14 | 15 | | | |
| 15 | 88.00 | 83.00 | -5.00 | 5 | 10 | 11 | | | |
| 16 | 43.00 | 39.00 | -4.00 | 4 | 7 | 8 | | | |
| 17 | 56.00 | 52.00 | -4.00 | 4 | 8 | 8 | | | |
| 18 | 83.00 | 80.00 | -3.00 | 3 | 4 | 5 | | | |
| 19 | 85.00 | 83.00 | -2.00 | 2 | 2 | 2.5 | | | |
| 20 | 95.00 | 94.00 | -1.00 | 1 | 1 | 1 | 20 | | |
| 21 | 97.00 | 99.00 | 2.00 | 2 | 3 | 2.5 | 414.5 | | 21.75 |
| 22 | 80.00 | 83.00 | 3.00 | 3 | 5 | 5 | | | |
| 23 | 92.00 | 95.00 | 3.00 | 3 | 6 | 5 | | | |
| 24 | 88.00 | 92.00 | 4.00 | 4 | 9 | 8 | | | |
| 25 | 92.00 | 97.00 | 5.00 | 5 | 11 | 11 | | | |
| 26 | 92.00 | 97.00 | 5.00 | 5 | 12 | 11 | | | |
| 27 | 39.00 | 47.00 | 8.00 | 8 | 13 | 13 | | | |
| 28 | 60.00 | 69.00 | 9.00 | 9 | 15 | 15 | | | |
| 29 | 43.00 | 52.00 | 9.00 | 9 | 16 | 15 | | | |
| 30 | 18.00 | 30.00 | 12.00 | 12 | 18 | 18 | | | |
| 31 | 47.00 | 60.00 | 13.00 | 13 | 21 | 20 | | | |
| 32 | 23.00 | 39.00 | 16.00 | 16 | 22 | 22 | | | |
| 33 | 60.00 | 80.00 | 20.00 | 20 | 26 | 25.5 | | | |
| 34 | 69.00 | 90.00 | 21.00 | 21 | 27 | 27 | | | |
| 35 | 27.00 | 52.00 | 25.00 | 25 | 29 | 29 | | | |
| 36 | 27.00 | 56.00 | 29.00 | 29 | 30 | 30 | | | |
| 37 | 27.00 | 65.00 | 38.00 | 38 | 34 | 33.5 | | 18 | |
| 38 | 27.00 | 77.00 | 50.00 | 50 | 36 | 36 | 326.5 | | 16.5 |

| | |
|-----------------|---------|
| Count + + - (N) | 38.000 |
| T (Mean) | 370.500 |
| SE | 68.955 |
| T | 326.500 |
| Z | -0.638 |
| r | -0.071 |

Wilcoxon Signed Rank Test Analysis for SoCi_ii for Personal stage

| | PSIPer2 | PSIIPer2 | Verskil | ABS (Verskil) | Rank | Ware rank | Sum Neg | Sum Pos | Median | -1 | |
|----|---------|----------|---------|---------------|------|-----------|---------|---------|--------|----|--|
| 1 | 52.00 | 5.00 | -47.00 | 47 | 38 | 38 | -38 | | | | |
| 2 | 80.00 | 35.00 | -45.00 | 45 | 36 | 36 | -36 | | | | |
| 3 | 87.00 | 45.00 | -42.00 | 42 | 34 | 34 | -34 | | | | |
| 4 | 83.00 | 59.00 | -24.00 | 24 | 29 | 29.50 | -30 | | | | |
| 5 | 91.00 | 67.00 | -24.00 | 24 | 30 | 29.50 | -30 | | | | |
| 6 | 76.00 | 55.00 | -21.00 | 21 | 27 | 27 | -27 | | | | |
| 7 | 48.00 | 28.00 | -20.00 | 20 | 26 | 26 | -26 | | | | |
| 8 | 67.00 | 48.00 | -19.00 | 19 | 25 | 25 | -25 | | | | |
| 9 | 57.00 | 39.00 | -18.00 | 18 | 24 | 24 | -24 | | | | |
| 10 | 48.00 | 31.00 | -17.00 | 17 | 23 | 23 | -23 | | | | |
| 11 | 92.00 | 76.00 | -16.00 | 16 | 21 | 21.50 | -22 | | | | |
| 12 | 41.00 | 25.00 | -16.00 | 16 | 22 | 21.50 | -22 | | | | |
| 13 | 63.00 | 48.00 | -15.00 | 15 | 20 | 20.00 | -20 | | | | |
| 14 | 59.00 | 45.00 | -14.00 | 14 | 17 | 18.00 | -18 | | | | |
| 15 | 70.00 | 57.00 | -13.00 | 13 | 15 | 15.50 | -16 | | | | |
| 16 | 87.00 | 78.00 | -9.00 | 9 | 11 | 12.00 | -12 | | | | |
| 17 | 57.00 | 48.00 | -9.00 | 9 | 12 | 12.00 | -12 | | | | |
| 18 | 67.00 | 59.00 | -8.00 | 8 | 10 | 10.00 | -10 | | | | |
| 19 | 31.00 | 25.00 | -6.00 | 6 | 5 | 6.50 | -7 | | | | |
| 20 | 45.00 | 39.00 | -6.00 | 6 | 6 | 6.50 | -7 | | | | |
| 21 | 89.00 | 85.00 | -4.00 | 4 | 3 | 3.50 | -4 | 22 | | | |
| 22 | 91.00 | 89.00 | -2.00 | 2 | 1 | 1.00 | -1 | 440 | 22 | | |
| 23 | 52.00 | 55.00 | 3.00 | 3 | 2 | 2.00 | | | | | |
| 24 | 72.00 | 76.00 | 4.00 | 4 | 4 | 3.50 | | | | | |
| 25 | 70.00 | 76.00 | 6.00 | 6 | 7 | 6.50 | | | | | |
| 26 | 72.00 | 78.00 | 6.00 | 6 | 8 | 6.50 | | | | | |
| 27 | 63.00 | 70.00 | 7.00 | 7 | 9 | 9.00 | | | | | |
| 28 | 80.00 | 89.00 | 9.00 | 9 | 13 | 12.00 | | | | | |
| 29 | 31.00 | 41.00 | 10.00 | 10 | 14 | 14.00 | | | | | |
| 30 | 39.00 | 52.00 | 13.00 | 13 | 16 | 15.50 | | | | | |
| 31 | 31.00 | 45.00 | 14.00 | 14 | 18 | 18.00 | | | | | |
| 32 | 41.00 | 55.00 | 14.00 | 14 | 19 | 18.00 | | | | | |
| 33 | 48.00 | 70.00 | 22.00 | 22 | 28 | 28 | | | | | |
| 34 | 21.00 | 48.00 | 27.00 | 27 | 31 | 31 | | | | | |
| 35 | 35.00 | 67.00 | 32.00 | 32 | 32 | 32 | | | | | |
| 36 | 57.00 | 94.00 | 37.00 | 37 | 33 | 33 | | | | | |
| 37 | 39.00 | 83.00 | 44.00 | 44 | 35 | 35 | | 16 | | | |
| 38 | 41.00 | 87.00 | 46.00 | 46 | 37 | 37 | | 301 | 16.75 | | |
| | | | | | | | 301.00 | -440.00 | | | |
| | | | | | | | -139.00 | | | | |

| | |
|----------------|---------|
| Count ++ - (N) | 38.000 |
| T (Mean) | 370.500 |
| SE | 68.955 |
| T | 301.000 |
| Z | -1.008 |
| r | -0.113 |

Wilcoxon Signed Rank Test Analysis for SoCi_ii for Refocus stage

| ID | PSIRef6 | PSIIRef6 | Verskil | ABS (Verskil) | Rank | Ware rank | MEDIAN |
|----|---------|----------|---------|---------------|------|-----------|--------|
| 1 | 77.00 | 20.00 | -57.00 | 57 | 36 | 36.00 | |
| 2 | 84.00 | 34.00 | -50.00 | 50 | 34 | 34.00 | |
| 3 | 57.00 | 11.00 | -46.00 | 46 | 32 | 32.00 | |
| 4 | 42.00 | 5.00 | -37.00 | 37 | 27 | 27.50 | |
| 5 | 57.00 | 20.00 | -37.00 | 37 | 28 | 27.50 | |
| 6 | 57.00 | 26.00 | -31.00 | 31 | 25 | 25.00 | |
| 7 | 42.00 | 14.00 | -28.00 | 28 | 24 | 24.00 | |
| 8 | 47.00 | 20.00 | -27.00 | 27 | 20 | 21.50 | |
| 9 | 38.00 | 11.00 | -27.00 | 27 | 21 | 21.50 | |
| 10 | 84.00 | 57.00 | -27.00 | 27 | 22 | 21.50 | |
| 11 | 57.00 | 30.00 | -27.00 | 27 | 23 | 21.50 | |
| 12 | 73.00 | 47.00 | -26.00 | 26 | 19 | 19.00 | |
| 13 | 69.00 | 47.00 | -22.00 | 22 | 17 | 17.50 | |
| 14 | 87.00 | 65.00 | -22.00 | 22 | 18 | 17.50 | |
| 15 | 52.00 | 34.00 | -18.00 | 18 | 16 | 16.00 | |
| 16 | 38.00 | 22.00 | -16.00 | 16 | 15 | 15.00 | |
| 17 | 65.00 | 52.00 | -13.00 | 13 | 12 | 13.00 | |
| 18 | 65.00 | 52.00 | -13.00 | 13 | 14 | 13.00 | |
| 19 | 47.00 | 38.00 | -9.00 | 9 | 11 | 11.00 | |
| 20 | 73.00 | 65.00 | -8.00 | 8 | 9 | 9.50 | |
| 21 | 65.00 | 60.00 | -5.00 | 5 | 7 | 6.50 | |
| 22 | 73.00 | 69.00 | -4.00 | 4 | 5 | 3.50 | |
| 23 | 97.00 | 96.00 | -1.00 | 1 | 1 | 1.00 | 19.00 |
| 24 | 26.00 | 30.00 | 4.00 | 4 | 2 | 3.50 | |
| 25 | 22.00 | 26.00 | 4.00 | 4 | 3 | 3.50 | |
| 26 | 34.00 | 38.00 | 4.00 | 4 | 4 | 3.50 | |
| 27 | 17.00 | 22.00 | 5.00 | 5 | 6 | 6.50 | |
| 28 | 77.00 | 84.00 | 7.00 | 7 | 8 | 8.00 | |
| 29 | 52.00 | 60.00 | 8.00 | 8 | 10 | 9.50 | |
| 30 | 47.00 | 60.00 | 13.00 | 13 | 13 | 13.00 | |
| 31 | 11.00 | 47.00 | 36.00 | 36 | 26 | 26.00 | |
| 32 | 34.00 | 73.00 | 39.00 | 39 | 29 | 29.50 | |
| 33 | 60.00 | 99.00 | 39.00 | 39 | 30 | 29.50 | |
| 34 | 22.00 | 65.00 | 43.00 | 43 | 31 | 31.00 | |
| 35 | 17.00 | 65.00 | 48.00 | 48 | 33 | 33.00 | |
| 36 | 22.00 | 73.00 | 51.00 | 51 | 35 | 35.00 | |
| 37 | 20.00 | 90.00 | 70.00 | 70 | 37 | 37.00 | 19.50 |

| | |
|-----------------|---------|
| Count + + - (N) | 37.000 |
| T (Mean) | 351.500 |
| SE | 66.285 |
| T | 268.500 |
| Z | -1.252 |
| r | -0.140 |

434.50
268.50

*Nonparametric Tests: Independent Samples.

NPTESTS

```

/INDEPENDENT TEST (PSIIAwa0 PSIIInf1 PSIIPer2 PSIIMan3 PSIICon4 PSIIColl5 PS
IIRef6) GROUP (School)
/MISSING SCOPE=ANALYSIS USERMISSING=EXCLUDE
/CRITERIA ALPHA=0.05 CILEVEL=95.

```

Nonparametric Tests

Notes

| | | |
|----------------|---|--|
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| Comments | | |
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| | Active Dataset | DataSet1 |
| | Filter | <none> |
| | Weight | <none> |
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| | N of Rows in Working Data File | 54 |
| Syntax | NPTESTS /INDEPENDENT TEST (PSIIAwa0 PSIIInf1 PSIIPer2 PSIIMan3 PSIICon4 PSIIColl5 PSIIRef6) GROUP (School) /MISSING SCOPE=ANALYSIS USERMISSING=EXCLUDE /CRITERIA ALPHA=0.05 CILEVEL=95. | |
| Resources | Processor Time | 00:00:00.17 |
| | Elapsed Time | 00:00:00.17 |

[DataSet1] E:\Statomet_2013\Hannelie_SPSS\SoC1and2_demo_LoU_new_13April_Hi_low_23Edited.sav

Hypothesis Test Summary

| | Null Hypothesis | Test | Sig. | Decision |
|---|---|---|------|-----------------------------|
| 1 | The distribution of Awareness (ii) is the same across categories of School. | Independent-Samples Kruskal-Wallis Test | .582 | Retain the null hypothesis. |
| 2 | The distribution of Informational (ii) is the same across categories of School. | Independent-Samples Kruskal-Wallis Test | .938 | Retain the null hypothesis. |
| 3 | The distribution of Management (ii) is the same across categories of School. | Independent-Samples Kruskal-Wallis Test | .839 | Retain the null hypothesis. |
| 4 | The distribution of Management (ii) is the same across categories of School. | Independent-Samples Kruskal-Wallis Test | .392 | Retain the null hypothesis. |
| 5 | The distribution of Consequence (ii) is the same across categories of School. | Independent-Samples Kruskal-Wallis Test | .789 | Retain the null hypothesis. |
| 6 | The distribution of Collaboration (ii) is the same across categories of School. | Independent-Samples Kruskal-Wallis Test | .400 | Retain the null hypothesis. |
| 7 | The distribution of Refocusing (ii) is the same across categories of School. | Independent-Samples Kruskal-Wallis Test | .581 | Retain the null hypothesis. |

Asymptotic significances are displayed. The significance level is .05.

*Nonparametric Tests: Independent Samples.

NPTESTS

/INDEPENDENT TEST (PSIIAwa0 PSIIInf1 PSIIPer2 PSIIMan3 PSIICon4 PSIIColl15 PSIIRef6) GROUP (Gender)

/MISSING SCOPE=ANALYSIS USERMISSING=EXCLUDE

/CRITERIA ALPHA=0.05 CILEVEL=95.

Nonparametric Tests

Notes

| | | |
|----------------|--|--|
| Output Created | 25-APR-2013 20:08:24 | |
| Comments | | |
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| | Active Dataset | DataSet1 |
| | Filter | <none> |
| | Weight | <none> |
| | Split File | <none> |
| | N of Rows in Working Data File | 54 |
| Syntax | <pre> NPTESTS /INDEPENDENT TEST (PSIIAwa0 PSIIInf1 PSIIPer2 PSIIMan3 PSIICon4 PSIIColl5 PSIIRef6) GROUP (Gender) /MISSING SCOPE=ANALYSIS USERMISSING=EXCLUDE /CRITERIA ALPHA=0.05 CILEVEL=95. </pre> | |
| Resources | Processor Time | 00:00:00.14 |
| | Elapsed Time | 00:00:00.18 |

[DataSet1] E:\Statomet_2013\Hannelie_SPSS\SoC1and2_demo_LoU_new_13April_Hi_low_23Edited.sav

Hypothesis Test Summary

| | Null Hypothesis | Test | Sig. | Decision |
|---|---|---|-------------------|-----------------------------|
| 1 | The distribution of Awareness (ii) is the same across categories of Gender. | Independent-Samples Mann-Whitney U Test | .246 ¹ | Retain the null hypothesis. |
| 2 | The distribution of Informational (ii) is the same across categories of Gender. | Independent-Samples Mann-Whitney U Test | .754 ¹ | Retain the null hypothesis. |
| 3 | The distribution of Management (ii) is the same across categories of Gender. | Independent-Samples Mann-Whitney U Test | .344 ¹ | Retain the null hypothesis. |
| 4 | The distribution of Management (ii) is the same across categories of Gender. | Independent-Samples Mann-Whitney U Test | .945 ¹ | Retain the null hypothesis. |
| 5 | The distribution of Consequence (ii) is the same across categories of Gender. | Independent-Samples Mann-Whitney U Test | .463 ¹ | Retain the null hypothesis. |
| 6 | The distribution of Collaboration (ii) is the same across categories of Gender. | Independent-Samples Mann-Whitney U Test | .807 ¹ | Retain the null hypothesis. |
| 7 | The distribution of Refocusing (ii) is the same across categories of Gender. | Independent-Samples Mann-Whitney U Test | .507 ¹ | Retain the null hypothesis. |

Asymptotic significances are displayed. The significance level is .05.

¹Exact significance is displayed for this test.

*Nonparametric Tests: Independent Samples.

NPTESTS

/INDEPENDENT TEST (PSIIAwa0 PSIIInf1 PSIIPer2 PSIIMan3 PSIICon4 PSIIColl5 PSIIRef6) GROUP (V37)

/MISSING SCOPE=ANALYSIS USERMISSING=EXCLUDE

/CRITERIA ALPHA=0.05 CILEVEL=95.

Nonparametric Tests

Notes

| | | |
|----------------|---|--|
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| Input | Data | E: \Statomet_2013\Hannelie_SPSS\SoC1and2_demo_LoU_new_13April_Hi_low_23Edited.sav |
| | Active Dataset | DataSet1 |
| | Filter | <none> |
| | Weight | <none> |
| | Split File | <none> |
| | N of Rows in Working Data File | 54 |
| Syntax | NPTESTS /INDEPENDENT TEST (PSIIAwa0 PSIIInf1 PSIIPer2 PSIIMan3 PSIICon4 PSIIColl5 PSIIRef6) GROUP (V37) /MISSING SCOPE=ANALYSIS USERMISSING=EXCLUDE /CRITERIA ALPHA=0.05 CILEVEL=95. | |
| Resources | Processor Time | 00:00:00.20 |
| | Elapsed Time | 00:00:01.04 |

[DataSet1] E:\Statomet_2013\Hannelie_SPSS\SoC1and2_demo_LoU_new_13April_Hi_low_23Edited.sav

Hypothesis Test Summary

| | Null Hypothesis | Test | Sig. | Decision |
|---|--|---|------|-----------------------------|
| 1 | The distribution of Awareness (ii) is the same across categories of V37. | Independent-Samples Kruskal-Wallis Test | .073 | Retain the null hypothesis. |
| 2 | The distribution of Informational (ii) is the same across categories of V37. | Independent-Samples Kruskal-Wallis Test | .063 | Retain the null hypothesis. |
| 3 | The distribution of Management (ii) is the same across categories of V37. | Independent-Samples Kruskal-Wallis Test | .642 | Retain the null hypothesis. |
| 4 | The distribution of Management (ii) is the same across categories of V37. | Independent-Samples Kruskal-Wallis Test | .547 | Retain the null hypothesis. |
| 5 | The distribution of Consequence (ii) is the same across categories of V37. | Independent-Samples Kruskal-Wallis Test | .880 | Retain the null hypothesis. |
| 6 | The distribution of Collaboration (ii) is the same across categories of V37. | Independent-Samples Kruskal-Wallis Test | .707 | Retain the null hypothesis. |
| 7 | The distribution of Refocusing (ii) is the same across categories of V37. | Independent-Samples Kruskal-Wallis Test | .680 | Retain the null hypothesis. |

Asymptotic significances are displayed. The significance level is .05.

*Nonparametric Tests: Independent Samples.

NPTESTS

/INDEPENDENT TEST (PSIIAwa0 PSIIInf1 PSIIPer2 PSIIMan3 PSIICon4 PSIIColl15 PSIIRef6) GROUP (V38)

/MISSING SCOPE=ANALYSIS USERMISSING=EXCLUDE

/CRITERIA ALPHA=0.05 CILEVEL=95.

Nonparametric Tests

Notes

| | | |
|----------------|---|--|
| Output Created | 25-APR-2013 20:09:03 | |
| Comments | | |
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| | Active Dataset | DataSet1 |
| | Filter | <none> |
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| | N of Rows in Working Data File | 54 |
| Syntax | <pre> NPTESTS /INDEPENDENT TEST (PSIIAwa0 PSIIInf1 PSIIPer2 PSIIMan3 PSIICon4 PSIIColl5 PSIIRef6) GROUP (V38) /MISSING SCOPE=ANALYSIS USERMISSING=EXCLUDE /CRITERIA ALPHA=0.05 CILEVEL=95. </pre> | |
| Resources | Processor Time | 00:00:00.17 |
| | Elapsed Time | 00:00:00.17 |

[DataSet1] E:\Statomet_2013\Hannelie_SPSS\SoC1and2_demo_LoU_new_13April_Hi_low_23Edited.sav

Hypothesis Test Summary

| | Null Hypothesis | Test | Sig. | Decision |
|---|--|---|-------------------|-----------------------------|
| 1 | The distribution of Awareness (ii) is the same across categories of V38. | Independent-Samples Mann-Whitney U Test | .134 ¹ | Retain the null hypothesis. |
| 2 | The distribution of Informational (ii) is the same across categories of V38. | Independent-Samples Mann-Whitney U Test | .678 ¹ | Retain the null hypothesis. |
| 3 | The distribution of Management (ii) is the same across categories of V38. | Independent-Samples Mann-Whitney U Test | .630 ¹ | Retain the null hypothesis. |
| 4 | The distribution of Management (ii) is the same across categories of V38. | Independent-Samples Mann-Whitney U Test | .539 ¹ | Retain the null hypothesis. |
| 5 | The distribution of Consequence (ii) is the same across categories of V38. | Independent-Samples Mann-Whitney U Test | .095 ¹ | Retain the null hypothesis. |
| 6 | The distribution of Collaboration (ii) is the same across categories of V38. | Independent-Samples Mann-Whitney U Test | .804 ¹ | Retain the null hypothesis. |
| 7 | The distribution of Refocusing (ii) is the same across categories of V38. | Independent-Samples Mann-Whitney U Test | .454 ¹ | Retain the null hypothesis. |

Asymptotic significances are displayed. The significance level is .05.

¹ Exact significance is displayed for this test.

*Nonparametric Tests: Independent Samples.

NPTESTS

/INDEPENDENT TEST (PSIIAwa0 PSIIInf1 PSIIPer2 PSIIMan3 PSIICon4 PSIIColl5 PSIIRef6) GROUP (V45)

/MISSING SCOPE=ANALYSIS USERMISSING=EXCLUDE

/CRITERIA ALPHA=0.05 CILEVEL=95.

Nonparametric Tests

Notes

| | | |
|----------------|---|--|
| Output Created | 25-APR-2013 20:09:19 | |
| Comments | | |
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| | Split File | <none> |
| | N of Rows in Working Data File | 54 |
| Syntax | NPTESTS /INDEPENDENT TEST (PSIIAwa0 PSIIInf1 PSIIPer2 PSIIMan3 PSIICon4 PSIIColl5 PSIIRef6) GROUP (V45) /MISSING SCOPE=ANALYSIS USERMISSING=EXCLUDE /CRITERIA ALPHA=0.05 CILEVEL=95. | |
| Resources | Processor Time | 00:00:00.19 |
| | Elapsed Time | 00:00:00.23 |

[DataSet1] E:\Statomet_2013\Hannelie_SPSS\SoC1and2_demo_LoU_new_13April_Hi_low_23Edited.sav

Hypothesis Test Summary

| | Null Hypothesis | Test | Sig. | Decision |
|---|--|---|------|-----------------------------|
| 1 | The distribution of Awareness (ii) is the same across categories of V45. | Independent-Samples Kruskal-Wallis Test | .535 | Retain the null hypothesis. |
| 2 | The distribution of Informational (ii) is the same across categories of V45. | Independent-Samples Kruskal-Wallis Test | .981 | Retain the null hypothesis. |
| 3 | The distribution of Management (ii) is the same across categories of V45. | Independent-Samples Kruskal-Wallis Test | .793 | Retain the null hypothesis. |
| 4 | The distribution of Management (ii) is the same across categories of V45. | Independent-Samples Kruskal-Wallis Test | .802 | Retain the null hypothesis. |
| 5 | The distribution of Consequence (ii) is the same across categories of V45. | Independent-Samples Kruskal-Wallis Test | .852 | Retain the null hypothesis. |
| 6 | The distribution of Collaboration (ii) is the same across categories of V45. | Independent-Samples Kruskal-Wallis Test | .763 | Retain the null hypothesis. |
| 7 | The distribution of Refocusing (ii) is the same across categories of V45. | Independent-Samples Kruskal-Wallis Test | .322 | Retain the null hypothesis. |

Asymptotic significances are displayed. The significance level is .05.

*Nonparametric Tests: Independent Samples.

NPTESTS

/INDEPENDENT TEST (PSIIAwa0 PSIIInf1 PSIIPer2 PSIIMan3 PSIICon4 PSIIColl15 PSIIRef6) GROUP (V97)

/MISSING SCOPE=ANALYSIS USERMISSING=EXCLUDE

/CRITERIA ALPHA=0.05 CILEVEL=95.

Nonparametric Tests

Notes

| | | |
|----------------|--|--|
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| | Split File | <none> |
| | N of Rows in Working Data File | 54 |
| Syntax | NPTESTS /INDEPENDENT TEST (PSIIAwa0 PSIIInf1 PSIIPer2 PSIIMan3 PSIICon4 PSIIColl5 PSIIRef6) GROUP (V97) /MISSING SCOPE=ANALYSIS USERMISSING=EXCLUDE /CRITERIA ALPHA=0.05 CILEVEL=95. | |
| Resources | Processor Time | 00:00:00.16 |
| | Elapsed Time | 00:00:00.19 |

[DataSet1] E:\Statomet_2013\Hannelie_SPSS\SoC1and2_demo_LoU_new_13April_Hi_low_23Edited.sav

Hypothesis Test Summary

| | Null Hypothesis | Test | Sig. | Decision |
|---|--|---|------|-----------------------------|
| 6 | The distribution of Collaboration (ii) is the same across categories of Professional identity / qualification. | Independent-Samples Kruskal-Wallis Test | .031 | Reject the null hypothesis. |

Asymptotic significances are displayed. The significance level is .05.

*Nonparametric Tests: Independent Samples.
NPTESTS

```

/INDEPENDENT TEST (PSIIAwa0 PSIIInf1 PSIIPer2 PSIIMan3 PSIICon4 PSIIColl5 PS
IIRef6) GROUP (V111)
/MISSING SCOPE=ANALYSIS USERMISSING=EXCLUDE
/CRITERIA ALPHA=0.05 CILEVEL=95.

```

Nonparametric Tests

Notes

| | | |
|----------------|---|--|
| Output Created | 25-APR-2013 20:09:56 | |
| Comments | | |
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| | Filter | <none> |
| | Weight | <none> |
| | Split File | <none> |
| | N of Rows in Working Data File | 54 |
| Syntax | NPTESTS /INDEPENDENT TEST (PSIIAwa0 PSIIInf1 PSIIPer2 PSIIMan3 PSIICon4 PSIIColl5 PSIIRef6) GROUP (V111) /MISSING SCOPE=ANALYSIS USERMISSING=EXCLUDE /CRITERIA ALPHA=0.05 CILEVEL=95. | |
| Resources | Processor Time | 00:00:00.19 |
| | Elapsed Time | 00:00:00.20 |

[DataSet1] E:\Statomet_2013\Hannelie_SPSS\SoC1and2_demo_LoU_new_13April_Hi_low_23Edited.sav

Hypothesis Test Summary

| | Null Hypothesis | Test | Sig. | Decision |
|---|--|---|------|-----------------------------|
| 1 | The distribution of Awareness (ii) is the same across categories of Age. | Independent-Samples Kruskal-Wallis Test | .731 | Retain the null hypothesis. |
| 2 | The distribution of Informational (ii) is the same across categories of Age. | Independent-Samples Kruskal-Wallis Test | .319 | Retain the null hypothesis. |
| 3 | The distribution of Management (ii) is the same across categories of Age. | Independent-Samples Kruskal-Wallis Test | .228 | Retain the null hypothesis. |
| 4 | The distribution of Management (ii) is the same across categories of Age. | Independent-Samples Kruskal-Wallis Test | .252 | Retain the null hypothesis. |
| 5 | The distribution of Consequence (ii) is the same across categories of Age. | Independent-Samples Kruskal-Wallis Test | .627 | Retain the null hypothesis. |
| 6 | The distribution of Collaboration (ii) is the same across categories of Age. | Independent-Samples Kruskal-Wallis Test | .898 | Retain the null hypothesis. |
| 7 | The distribution of Refocusing (ii) is the same across categories of Age. | Independent-Samples Kruskal-Wallis Test | .707 | Retain the null hypothesis. |

Asymptotic significances are displayed. The significance level is .05.

*Nonparametric Tests: Independent Samples.

NPTESTS

/INDEPENDENT TEST (PSIIAwa0 PSIIInf1 PSIIPer2 PSIIMan3 PSIICon4 PSIIColl15 PSIIRef6) GROUP (V112)

/MISSING SCOPE=ANALYSIS USERMISSING=EXCLUDE

/CRITERIA ALPHA=0.05 CILEVEL=95.

Nonparametric Tests

Notes

| | | |
|----------------|--|--|
| Output Created | 25-APR-2013 20:10:19 | |
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| | Filter | <none> |
| | Weight | <none> |
| | Split File | <none> |
| | N of Rows in Working Data File | 54 |
| Syntax | <pre> NPTESTS /INDEPENDENT TEST (PSIIAwa0 PSIIInf1 PSIIPer2 PSIIMan3 PSIICon4 PSIIColl5 PSIIRef6) GROUP (V112) /MISSING SCOPE=ANALYSIS USERMISSING=EXCLUDE /CRITERIA ALPHA=0.05 CILEVEL=95. </pre> | |
| Resources | Processor Time | 00:00:00.16 |
| | Elapsed Time | 00:00:00.19 |

[DataSet1] E:\Statomet_2013\Hannelie_SPSS\SoC1and2_demo_LoU_new_13April_Hi_low_23Edited.sav

Hypothesis Test Summary

| | Null Hypothesis | Test | Sig. | Decision |
|---|---|---|------|-----------------------------|
| 1 | The distribution of Awareness (ii) is the same across categories of Academic qualification. | Independent-Samples Kruskal-Wallis Test | .598 | Retain the null hypothesis. |
| 2 | The distribution of Informational (ii) is the same across categories of Academic qualification. | Independent-Samples Kruskal-Wallis Test | .194 | Retain the null hypothesis. |
| 3 | The distribution of Management (ii) is the same across categories of Academic qualification. | Independent-Samples Kruskal-Wallis Test | .040 | Reject the null hypothesis. |
| 4 | The distribution of Management (ii) is the same across categories of Academic qualification. | Independent-Samples Kruskal-Wallis Test | .105 | Retain the null hypothesis. |
| 5 | The distribution of Consequence (ii) is the same across categories of Academic qualification. | Independent-Samples Kruskal-Wallis Test | .169 | Retain the null hypothesis. |
| 6 | The distribution of Collaboration (ii) is the same across categories of Academic qualification. | Independent-Samples Kruskal-Wallis Test | .556 | Retain the null hypothesis. |
| 7 | The distribution of Refocusing (ii) is the same across categories of Academic qualification. | Independent-Samples Kruskal-Wallis Test | .173 | Retain the null hypothesis. |

Asymptotic significances are displayed. The significance level is .05.

*Nonparametric Tests: Independent Samples.

NPTESTS

/INDEPENDENT TEST (PSIIAwa0 PSIIInf1 PSIIPer2 PSIIMan3 PSIICon4 PSIIColl15 PSIIRef6) GROUP (V71)

/MISSING SCOPE=ANALYSIS USERMISSING=EXCLUDE

/CRITERIA ALPHA=0.05 CILEVEL=95.

Nonparametric Tests

Notes

| | | |
|----------------|--|--|
| Output Created | 25-APR-2013 20:11:16 | |
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| | Active Dataset | DataSet1 |
| | Filter | <none> |
| | Weight | <none> |
| | Split File | <none> |
| | N of Rows in Working Data File | 54 |
| Syntax | NPTESTS /INDEPENDENT TEST (PSIIAwa0 PSIIInf1 PSIIPer2 PSIIMan3 PSIICon4 PSIIColl5 PSIIRef6) GROUP (V71) /MISSING SCOPE=ANALYSIS USERMISSING=EXCLUDE /CRITERIA ALPHA=0.05 CILEVEL=95. | |
| Resources | Processor Time | 00:00:00.25 |
| | Elapsed Time | 00:00:00.35 |

[DataSet1] E:\Statomet_2013\Hannelie_SPSS\SoC1and2_demo_LoU_new_13April_Hi_lo
w_23Edited.sav

Hypothesis Test Summary

| | Null Hypothesis | Test | Sig. | Decision |
|---|---|---|------|-----------------------------|
| 1 | The distribution of Awareness (ii) is the same across categories of statement describes best your preference/attitude with regards to new technology. | Independent-Samples Kruskal-Wallis Test | .365 | Retain the null hypothesis. |
| 2 | The distribution of Informational (ii) is the same across categories of statement describes best your preference/attitude with regards to new technology. | Independent-Samples Kruskal-Wallis Test | .597 | Retain the null hypothesis. |
| 3 | The distribution of Management (ii) is the same across categories of statement describes best your preference/attitude with regards to new technology. | Independent-Samples Kruskal-Wallis Test | .076 | Retain the null hypothesis. |
| 4 | The distribution of Management (ii) is the same across categories of statement describes best your preference/attitude with regards to new technology. | Independent-Samples Kruskal-Wallis Test | .145 | Retain the null hypothesis. |
| 5 | The distribution of Consequence (ii) is the same across categories of statement describes best your preference/attitude with regards to new technology. | Independent-Samples Kruskal-Wallis Test | .565 | Retain the null hypothesis. |
| 6 | The distribution of Collaboration (ii) is the same across categories of statement describes best your preference/attitude with regards to new technology. | Independent-Samples Kruskal-Wallis Test | .358 | Retain the null hypothesis. |
| 7 | The distribution of Refocusing (ii) is the same across categories of statement describes best your preference/attitude with regards to new technology. | Independent-Samples Kruskal-Wallis Test | .665 | Retain the null hypothesis. |

Asymptotic significances are displayed. The significance level is .05.

*Nonparametric Tests: Independent Samples.

NPTESTS

```

/INDEPENDENT TEST (PSIIAwa0 PSIIInf1 PSIIPer2 PSIIMan3 PSIICon4 PSIIColl5 PS
IIRef6) GROUP (V98)
/MISSING SCOPE=ANALYSIS USERMISSING=EXCLUDE
/CRITERIA ALPHA=0.05 CILEVEL=95.
  
```

Nonparametric Tests

Notes

| | | |
|----------------|--|--|
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| | Filter | <none> |
| | Weight | <none> |
| | Split File | <none> |
| | N of Rows in Working Data File | 54 |
| Syntax | NPTESTS /INDEPENDENT TEST (PSIIAwa0 PSIIInf1 PSIIPer2 PSIIMan3 PSIICon4 PSIIColl5 PSIIRef6) GROUP (V98) /MISSING SCOPE=ANALYSIS USERMISSING=EXCLUDE /CRITERIA ALPHA=0.05 CILEVEL=95. | |
| Resources | Processor Time | 00:00:00.17 |
| | Elapsed Time | 00:00:00.20 |

[DataSet1] E:\Statomet_2013\Hannelie_SPSS\SoC1and2_demo_LoU_new_13April_Hi_low_23Edited.sav

Hypothesis Test Summary

| | Null Hypothesis | Test | Sig. | Decision |
|---|---|---|------|-----------------------------|
| 4 | The distribution of Management (ii) is the same across categories of Confidence level . | Independent-Samples Kruskal-Wallis Test | .002 | Reject the null hypothesis. |

Asymptotic significances are displayed. The significance level is .05.

*Nonparametric Tests: Independent Samples.

NPTESTS

```

/INDEPENDENT TEST (PSIIAwa0 PSIIInf1 PSIIPer2 PSIIMan3 PSIICon4 PSIIColl5 PS
IIRef6) GROUP (V100)
/MISSING SCOPE=ANALYSIS USERMISSING=EXCLUDE
/CRITERIA ALPHA=0.05 CILEVEL=95.

```

Nonparametric Tests

Notes

| | | |
|----------------|---|--|
| Output Created | 25-APR-2013 20:12:02 | |
| Comments | | |
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| | Active Dataset | DataSet1 |
| | Filter | <none> |
| | Weight | <none> |
| | Split File | <none> |
| | N of Rows in Working Data File | 54 |
| Syntax | NPTESTS /INDEPENDENT TEST (PSIIAwa0 PSIIInf1 PSIIPer2 PSIIMan3 PSIICon4 PSIIColl5 PSIIRef6) GROUP (V100) /MISSING SCOPE=ANALYSIS USERMISSING=EXCLUDE /CRITERIA ALPHA=0.05 CILEVEL=95. | |
| Resources | Processor Time | 00:00:00.19 |
| | Elapsed Time | 00:00:00.19 |

[DataSet1] E:\Statomet_2013\Hannelie_SPSS\SoC1and2_demo_LoU_new_13April_Hi_low_23Edited.sav

Hypothesis Test Summary

| | Null Hypothesis | Test | Sig. | Decision |
|---|---|---|-------------------|-----------------------------|
| 1 | The distribution of Awareness (ii) is the same across categories of Used old clickUP (2006-2012). | Independent-Samples Mann-Whitney U Test | .299 ¹ | Retain the null hypothesis. |
| 2 | The distribution of Informational (ii) is the same across categories of Used old clickUP (2006-2012). | Independent-Samples Mann-Whitney U Test | .094 ¹ | Retain the null hypothesis. |
| 3 | The distribution of Management (ii) is the same across categories of Used old clickUP (2006-2012). | Independent-Samples Mann-Whitney U Test | .704 ¹ | Retain the null hypothesis. |
| 4 | The distribution of Management (ii) is the same across categories of Used old clickUP (2006-2012). | Independent-Samples Mann-Whitney U Test | .526 ¹ | Retain the null hypothesis. |
| 5 | The distribution of Consequence (ii) is the same across categories of Used old clickUP (2006-2012). | Independent-Samples Mann-Whitney U Test | .158 ¹ | Retain the null hypothesis. |
| 6 | The distribution of Collaboration (ii) is the same across categories of Used old clickUP (2006-2012). | Independent-Samples Mann-Whitney U Test | .758 ¹ | Retain the null hypothesis. |
| 7 | The distribution of Refocusing (ii) is the same across categories of Used old clickUP (2006-2012). | Independent-Samples Mann-Whitney U Test | .393 ¹ | Retain the null hypothesis. |

Asymptotic significances are displayed. The significance level is .05.

¹Exact significance is displayed for this test.

*Nonparametric Tests: Independent Samples.

NPTESTS

/INDEPENDENT TEST (PSIIAwa0 PSIIInf1 PSIIPer2 PSIIMan3 PSIICon4 PSIIColl5 PSIIRef6) GROUP (V110)

/MISSING SCOPE=ANALYSIS USERMISSING=EXCLUDE

/CRITERIA ALPHA=0.05 CILEVEL=95.

Nonparametric Tests

Notes

| | | |
|----------------|--|--|
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| Comments | | |
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| | Filter | <none> |
| | Weight | <none> |
| | Split File | <none> |
| | N of Rows in Working Data File | 54 |
| Syntax | NPTESTS /INDEPENDENT TEST (PSIIAwa0 PSIIInf1 PSIIPer2 PSIIMan3 PSIICon4 PSIIColl5 PSIIRef6) GROUP (V110) /MISSING SCOPE=ANALYSIS USERMISSING=EXCLUDE /CRITERIA ALPHA=0.05 CILEVEL=95. | |
| Resources | Processor Time | 00:00:00.19 |
| | Elapsed Time | 00:00:00.21 |

[DataSet1] E:\Statomet_2013\Hannelie_SPSS\SoC1and2_demo_LoU_new_13April_Hi_low_23Edited.sav

Hypothesis Test Summary

| | Null Hypothesis | Test | Sig. | Decision |
|---|---|---|------|-----------------------------|
| 5 | The distribution of Consequence (ii) is the same across categories of Proficiency in new clickUP. | Independent-Samples Kruskal-Wallis Test | .003 | Reject the null hypothesis. |

Asymptotic significances are displayed. The significance level is .05.

*Nonparametric Tests: Independent Samples.

NPTESTS

/INDEPENDENT TEST (PSIIAwa0 PSIIInf1 PSIIPer2 PSIIMan3 PSIICon4 PSIIColl5 PSIIRef6) GROUP (V111)

/MISSING SCOPE=ANALYSIS USERMISSING=EXCLUDE

/CRITERIA ALPHA=0.05 CILEVEL=95.

Nonparametric Tests

Notes

| | | |
|----------------|---|--|
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| Comments | | |
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| | Active Dataset | DataSet1 |
| | Filter | <none> |
| | Weight | <none> |
| | Split File | <none> |
| | N of Rows in Working Data File | 54 |
| Syntax | NPTESTS /INDEPENDENT TEST (PSIIAwa0 PSIIInf1 PSIIPer2 PSIIMan3 PSIICon4 PSIIColl5 PSIIRef6) GROUP (V111) /MISSING SCOPE=ANALYSIS USERMISSING=EXCLUDE /CRITERIA ALPHA=0.05 CILEVEL=95. | |
| Resources | Processor Time | 00:00:00.17 |
| | Elapsed Time | 00:00:00.19 |

[DataSet1] E:\Statomet_2013\Hannelie_SPSS\SoC1and2_demo_LoU_new_13April_Hi_low_23Edited.sav

Hypothesis Test Summary

| | Null Hypothesis | Test | Sig. | Decision |
|---|--|---|------|-----------------------------|
| 1 | The distribution of Awareness (ii) is the same across categories of Age. | Independent-Samples Kruskal-Wallis Test | .731 | Retain the null hypothesis. |
| 2 | The distribution of Informational (ii) is the same across categories of Age. | Independent-Samples Kruskal-Wallis Test | .319 | Retain the null hypothesis. |
| 3 | The distribution of Management (ii) is the same across categories of Age. | Independent-Samples Kruskal-Wallis Test | .228 | Retain the null hypothesis. |
| 4 | The distribution of Management (ii) is the same across categories of Age. | Independent-Samples Kruskal-Wallis Test | .252 | Retain the null hypothesis. |
| 5 | The distribution of Consequence (ii) is the same across categories of Age. | Independent-Samples Kruskal-Wallis Test | .627 | Retain the null hypothesis. |
| 6 | The distribution of Collaboration (ii) is the same across categories of Age. | Independent-Samples Kruskal-Wallis Test | .898 | Retain the null hypothesis. |
| 7 | The distribution of Refocusing (ii) is the same across categories of Age. | Independent-Samples Kruskal-Wallis Test | .707 | Retain the null hypothesis. |

Asymptotic significances are displayed. The significance level is .05.

*Nonparametric Tests: Independent Samples.

NPTESTS

/INDEPENDENT TEST (PSIIAwa0 PSIIInf1 PSIIPer2 PSIIMan3 PSIICon4 PSIIColl15 PSIIRef6) GROUP (V112)

/MISSING SCOPE=ANALYSIS USERMISSING=EXCLUDE

/CRITERIA ALPHA=0.05 CILEVEL=95.

Nonparametric Tests

Notes

| | | |
|----------------|---|--|
| Output Created | 25-APR-2013 20:13:20 | |
| Comments | | |
| Input | Data | E: \Statomet_2013\Hannelie_SPSS\SoC1and2_demo_LoU_new_13April_Hi_low_23Edited.sav |
| | Active Dataset | DataSet1 |
| | Filter | <none> |
| | Weight | <none> |
| | Split File | <none> |
| | N of Rows in Working Data File | 54 |
| Syntax | NPTESTS /INDEPENDENT TEST (PSIIAwa0 PSIIInf1 PSIIPer2 PSIIMan3 PSIICon4 PSIIColl5 PSIIRef6) GROUP (V112) /MISSING SCOPE=ANALYSIS USERMISSING=EXCLUDE /CRITERIA ALPHA=0.05 CILEVEL=95. | |
| Resources | Processor Time | 00:00:00.17 |
| | Elapsed Time | 00:00:00.19 |

[DataSet1] E:\Statomet_2013\Hannelie_SPSS\SoC1and2_demo_LoU_new_13April_Hi_low_23Edited.sav

Hypothesis Test Summary

| | Null Hypothesis | Test | Sig. | Decision |
|---|--|---|------|-----------------------------|
| 3 | The distribution of Management (ii) is the same across categories of Academic qualification. | Independent-Samples Kruskal-Wallis Test | .040 | Reject the null hypothesis. |

Asymptotic significances are displayed. The significance level is .05.

*Nonparametric Tests: Independent Samples.
NPTESTS

```

/INDEPENDENT TEST (PSIIAwa0 PSIIInf1 PSIIPer2 PSIIMan3 PSIICon4 PSIIColl5 PS
IIRef6) GROUP (V128)
/MISSING SCOPE=ANALYSIS USERMISSING=EXCLUDE
/CRITERIA ALPHA=0.05 CILEVEL=95.

```

Nonparametric Tests

Notes

| | | |
|----------------|---|--|
| Output Created | 25-APR-2013 20:13:41 | |
| Comments | | |
| Input | Data | E: \Statomet_2013\Hannelie_SPSS\So C1and2_demo_LoU_new_13April_H i_low_23Edited.sav |
| | Active Dataset | DataSet1 |
| | Filter | <none> |
| | Weight | <none> |
| | Split File | <none> |
| | N of Rows in Working Data File | 54 |
| Syntax | NPTESTS /INDEPENDENT TEST (PSIIAwa0 PSIIInf1 PSIIPer2 PSIIMan3 PSIICon4 PSIIColl5 PSIIRef6) GROUP (V128) /MISSING SCOPE=ANALYSIS USERMISSING=EXCLUDE /CRITERIA ALPHA=0.05 CILEVEL=95. | |
| Resources | Processor Time | 00:00:00.20 |
| | Elapsed Time | 00:00:00.19 |

[DataSet1] E:\Statomet_2013\Hannelie_SPSS\SoC1and2_demo_LoU_new_13April_Hi_lo
w_23Edited.sav

Hypothesis Test Summary

| | Null Hypothesis | Test | Sig. | Decision |
|---|--|---|------|-----------------------------|
| 1 | The distribution of Awareness (ii) is the same across categories of significant barriers . | Independent-Samples Kruskal-Wallis Test | .181 | Retain the null hypothesis. |
| 2 | The distribution of Informational (ii) is the same across categories of significant barriers . | Independent-Samples Kruskal-Wallis Test | .439 | Retain the null hypothesis. |
| 3 | The distribution of Management (ii) is the same across categories of significant barriers . | Independent-Samples Kruskal-Wallis Test | .251 | Retain the null hypothesis. |
| 4 | The distribution of Management (ii) is the same across categories of significant barriers . | Independent-Samples Kruskal-Wallis Test | .050 | Retain the null hypothesis. |
| 5 | The distribution of Consequence (ii) is the same across categories of significant barriers . | Independent-Samples Kruskal-Wallis Test | .341 | Retain the null hypothesis. |
| 6 | The distribution of Collaboration (ii) is the same across categories of significant barriers . | Independent-Samples Kruskal-Wallis Test | .548 | Retain the null hypothesis. |
| 7 | The distribution of Refocusing (ii) is the same across categories of significant barriers . | Independent-Samples Kruskal-Wallis Test | .253 | Retain the null hypothesis. |

Asymptotic significances are displayed. The significance level is .05.

*Nonparametric Tests: Independent Samples.

NPTESTS

/INDEPENDENT TEST (PSIIAwa0 PSIIInf1 PSIIPer2 PSIIMan3 PSIICon4 PSIIColl15 PSIIRef6) GROUP (V129)

/MISSING SCOPE=ANALYSIS USERMISSING=EXCLUDE

/CRITERIA ALPHA=0.05 CILEVEL=95.

Nonparametric Tests

Notes

| | | |
|----------------|---|--|
| Output Created | 25-APR-2013 20:13:54 | |
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| | Active Dataset | DataSet1 |
| | Filter | <none> |
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| | N of Rows in Working Data File | 54 |
| Syntax | NPTESTS /INDEPENDENT TEST (PSIIAwa0 PSIIInf1 PSIIPer2 PSIIMan3 PSIICon4 PSIIColl5 PSIIRef6) GROUP (V129) /MISSING SCOPE=ANALYSIS USERMISSING=EXCLUDE /CRITERIA ALPHA=0.05 CILEVEL=95. | |
| Resources | Processor Time | 00:00:00.17 |
| | Elapsed Time | 00:00:00.20 |

[DataSet1] E:\Statomet_2013\Hannelie_SPSS\SoC1and2_demo_LoU_new_13April_Hi_low_23Edited.sav

Hypothesis Test Summary

| | Null Hypothesis | Test | Sig. | Decision |
|---|--|---|------|-----------------------------|
| 1 | The distribution of Awareness (ii) is the same across categories of greatest benefit . | Independent-Samples Kruskal-Wallis Test | .998 | Retain the null hypothesis. |
| 2 | The distribution of Informational (ii) is the same across categories of greatest benefit . | Independent-Samples Kruskal-Wallis Test | .256 | Retain the null hypothesis. |
| 3 | The distribution of Management (ii) is the same across categories of greatest benefit . | Independent-Samples Kruskal-Wallis Test | .606 | Retain the null hypothesis. |
| 4 | The distribution of Management (ii) is the same across categories of greatest benefit . | Independent-Samples Kruskal-Wallis Test | .634 | Retain the null hypothesis. |
| 5 | The distribution of Consequence (ii) is the same across categories of greatest benefit . | Independent-Samples Kruskal-Wallis Test | .856 | Retain the null hypothesis. |
| 6 | The distribution of Collaboration (ii) is the same across categories of greatest benefit . | Independent-Samples Kruskal-Wallis Test | .294 | Retain the null hypothesis. |
| 7 | The distribution of Refocusing (ii) is the same across categories of greatest benefit . | Independent-Samples Kruskal-Wallis Test | .568 | Retain the null hypothesis. |

Asymptotic significances are displayed. The significance level is .05.

*Nonparametric Tests: Independent Samples.

NPTESTS

/INDEPENDENT TEST (PSIIAwa0 PSIIInf1 PSIIPer2 PSIIMan3 PSIICon4 PSIICon15 PSIIRef6) GROUP (V67)

/MISSING SCOPE=ANALYSIS USERMISSING=EXCLUDE

/CRITERIA ALPHA=0.05 CILEVEL=95.

Nonparametric Tests

Notes

| | | |
|----------------|--|--|
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| | N of Rows in Working Data File | 54 |
| Syntax | NPTESTS /INDEPENDENT TEST (PSIIAwa0 PSIIInf1 PSIIPer2 PSIIMan3 PSIICon4 PSIIColl5 PSIIRef6) GROUP (V67) /MISSING SCOPE=ANALYSIS USERMISSING=EXCLUDE /CRITERIA ALPHA=0.05 CILEVEL=95. | |
| Resources | Processor Time | 00:00:00.23 |
| | Elapsed Time | 00:00:00.28 |

[DataSet1] E:\Statomet_2013\Hannelie_SPSS\SoC1and2_demo_LoU_new_13April_Hi_low_23Edited.sav

Hypothesis Test Summary

| | Null Hypothesis | Test | Sig. | Decision |
|---|--|---|------|-----------------------------|
| 1 | The distribution of Awareness (ii) is the same across categories of V67. | Independent-Samples Kruskal-Wallis Test | .321 | Retain the null hypothesis. |
| 2 | The distribution of Informational (ii) is the same across categories of V67. | Independent-Samples Kruskal-Wallis Test | .414 | Retain the null hypothesis. |
| 3 | The distribution of Management (ii) is the same across categories of V67. | Independent-Samples Kruskal-Wallis Test | .482 | Retain the null hypothesis. |
| 4 | The distribution of Management (ii) is the same across categories of V67. | Independent-Samples Kruskal-Wallis Test | .714 | Retain the null hypothesis. |
| 5 | The distribution of Consequence (ii) is the same across categories of V67. | Independent-Samples Kruskal-Wallis Test | .541 | Retain the null hypothesis. |
| 6 | The distribution of Collaboration (ii) is the same across categories of V67. | Independent-Samples Kruskal-Wallis Test | .667 | Retain the null hypothesis. |
| 7 | The distribution of Refocusing (ii) is the same across categories of V67. | Independent-Samples Kruskal-Wallis Test | .190 | Retain the null hypothesis. |

Asymptotic significances are displayed. The significance level is .05.

*Nonparametric Tests: Independent Samples.

NPTESTS

/INDEPENDENT TEST (PSIIAwa0 PSIIInf1 PSIIPer2 PSIIMan3 PSIICon4 PSIIColl15 PSIIRef6) GROUP (V122)

/MISSING SCOPE=ANALYSIS USERMISSING=EXCLUDE

/CRITERIA ALPHA=0.05 CILEVEL=95.

Nonparametric Tests

Notes

| | | |
|----------------|--|--|
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| Comments | | |
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| | N of Rows in Working Data File | 54 |
| Syntax | <pre> NPTESTS /INDEPENDENT TEST (PSIIAwa0 PSIIInf1 PSIIPer2 PSIIMan3 PSIICon4 PSIIColl5 PSIIRef6) GROUP (V122) /MISSING SCOPE=ANALYSIS USERMISSING=EXCLUDE /CRITERIA ALPHA=0.05 CILEVEL=95. </pre> | |
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| | Elapsed Time | 00:00:00.20 |

[DataSet1] E:\Statomet_2013\Hannelie_SPSS\SoC1and2_demo_LoU_new_13April_Hi_low_23Edited.sav

Hypothesis Test Summary

| | Null Hypothesis | Test | Sig. | Decision |
|---|---|---|------|-----------------------------|
| 1 | The distribution of Awareness (ii) is the same across categories of Medical education . | Independent-Samples Kruskal-Wallis Test | .513 | Retain the null hypothesis. |
| 2 | The distribution of Informational (ii) is the same across categories of Medical education . | Independent-Samples Kruskal-Wallis Test | .611 | Retain the null hypothesis. |
| 3 | The distribution of Management (ii) is the same across categories of Medical education . | Independent-Samples Kruskal-Wallis Test | .349 | Retain the null hypothesis. |
| 4 | The distribution of Management (ii) is the same across categories of Medical education . | Independent-Samples Kruskal-Wallis Test | .484 | Retain the null hypothesis. |
| 5 | The distribution of Consequence (ii) is the same across categories of Medical education . | Independent-Samples Kruskal-Wallis Test | .555 | Retain the null hypothesis. |
| 6 | The distribution of Collaboration (ii) is the same across categories of Medical education . | Independent-Samples Kruskal-Wallis Test | .234 | Retain the null hypothesis. |
| 7 | The distribution of Refocusing (ii) is the same across categories of Medical education . | Independent-Samples Kruskal-Wallis Test | .811 | Retain the null hypothesis. |

Asymptotic significances are displayed. The significance level is .05.

*Nonparametric Tests: Independent Samples.

NPTESTS

/INDEPENDENT TEST (PSIIAwa0 PSIIInf1 PSIIPer2 PSIIMan3 PSIICon4 PSIIColl15 PSIIRef6) GROUP (V123)

/MISSING SCOPE=ANALYSIS USERMISSING=EXCLUDE

/CRITERIA ALPHA=0.05 CILEVEL=95.

Nonparametric Tests

Notes

| | | |
|----------------|---|--|
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| Comments | | |
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| | Filter | <none> |
| | Weight | <none> |
| | Split File | <none> |
| | N of Rows in Working Data File | 54 |
| Syntax | NPTESTS /INDEPENDENT TEST (PSIIAwa0 PSIIInf1 PSIIPer2 PSIIMan3 PSIICon4 PSIIColl5 PSIIRef6) GROUP (V123) /MISSING SCOPE=ANALYSIS USERMISSING=EXCLUDE /CRITERIA ALPHA=0.05 CILEVEL=95. | |
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| | Elapsed Time | 00:00:00.27 |

[DataSet1] E:\Statomet_2013\Hannelie_SPSS\SoC1and2_demo_LoU_new_13April_Hi_low_23Edited.sav

Hypothesis Test Summary

| | Null Hypothesis | Test | Sig. | Decision |
|---|--|---|------|-----------------------------|
| 1 | The distribution of Awareness (ii) is the same across categories of Clinical work. | Independent-Samples Kruskal-Wallis Test | .865 | Retain the null hypothesis. |
| 2 | The distribution of Informational (ii) is the same across categories of Clinical work. | Independent-Samples Kruskal-Wallis Test | .760 | Retain the null hypothesis. |
| 3 | The distribution of Management (ii) is the same across categories of Clinical work. | Independent-Samples Kruskal-Wallis Test | .576 | Retain the null hypothesis. |
| 4 | The distribution of Management (ii) is the same across categories of Clinical work. | Independent-Samples Kruskal-Wallis Test | .244 | Retain the null hypothesis. |
| 5 | The distribution of Consequence (ii) is the same across categories of Clinical work. | Independent-Samples Kruskal-Wallis Test | .410 | Retain the null hypothesis. |
| 6 | The distribution of Collaboration (ii) is the same across categories of Clinical work. | Independent-Samples Kruskal-Wallis Test | .228 | Retain the null hypothesis. |
| 7 | The distribution of Refocusing (ii) is the same across categories of Clinical work. | Independent-Samples Kruskal-Wallis Test | .619 | Retain the null hypothesis. |

Asymptotic significances are displayed. The significance level is .05.

*Nonparametric Tests: Independent Samples.

NPTESTS

/INDEPENDENT TEST (PSIIAwa0 PSIIInf1 PSIIPer2 PSIIMan3 PSIICon4 PSIIColl15 PSIIRef6) GROUP (V124)

/MISSING SCOPE=ANALYSIS USERMISSING=EXCLUDE

/CRITERIA ALPHA=0.05 CILEVEL=95.

Nonparametric Tests

Notes

| | | |
|----------------|---|--|
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| | N of Rows in Working Data File | 54 |
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| | Elapsed Time | 00:00:00.34 |

[DataSet1] E:\Statomet_2013\Hannelie_SPSS\SoC1and2_demo_LoU_new_13April_Hi_lo
w_23Edited.sav

Hypothesis Test Summary

| | Null Hypothesis | Test | Sig. | Decision |
|---|---|---|------|-----------------------------|
| 1 | The distribution of Awareness (ii) is the same across categories of Research. | Independent-Samples Kruskal-Wallis Test | .056 | Retain the null hypothesis. |
| 2 | The distribution of Informational (ii) is the same across categories of Research. | Independent-Samples Kruskal-Wallis Test | .995 | Retain the null hypothesis. |
| 3 | The distribution of Management (ii) is the same across categories of Research. | Independent-Samples Kruskal-Wallis Test | .939 | Retain the null hypothesis. |
| 4 | The distribution of Management (ii) is the same across categories of Research. | Independent-Samples Kruskal-Wallis Test | .264 | Retain the null hypothesis. |
| 5 | The distribution of Consequence (ii) is the same across categories of Research. | Independent-Samples Kruskal-Wallis Test | .769 | Retain the null hypothesis. |
| 6 | The distribution of Collaboration (ii) is the same across categories of Research. | Independent-Samples Kruskal-Wallis Test | .167 | Retain the null hypothesis. |
| 7 | The distribution of Refocusing (ii) is the same across categories of Research. | Independent-Samples Kruskal-Wallis Test | .741 | Retain the null hypothesis. |

Asymptotic significances are displayed. The significance level is .05.

*Nonparametric Tests: Independent Samples.

NPTESTS

/INDEPENDENT TEST (PSIIAwa0 PSIIInf1 PSIIPer2 PSIIMan3 PSIICon4 PSIIColl15 PSIIRef6) GROUP (V125)

/MISSING SCOPE=ANALYSIS USERMISSING=EXCLUDE

/CRITERIA ALPHA=0.05 CILEVEL=95.

Nonparametric Tests

Notes

| | | |
|----------------|---|--|
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| | Split File | <none> |
| | N of Rows in Working Data File | 54 |
| Syntax | NPTESTS /INDEPENDENT TEST (PSIIAwa0 PSIIInf1 PSIIPer2 PSIIMan3 PSIICon4 PSIIColl5 PSIIRef6) GROUP (V125) /MISSING SCOPE=ANALYSIS USERMISSING=EXCLUDE /CRITERIA ALPHA=0.05 CILEVEL=95. | |
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| | Elapsed Time | 00:00:00.23 |

[DataSet1] E:\Statomet_2013\Hannelie_SPSS\SoC1and2_demo_LoU_new_13April_Hi_lo
w_23Edited.sav

Hypothesis Test Summary

| | Null Hypothesis | Test | Sig. | Decision |
|---|---|---|------|-----------------------------|
| 1 | The distribution of Awareness (ii) is the same across categories of Other . | Independent-Samples Kruskal-Wallis Test | .019 | Reject the null hypothesis. |
| 2 | The distribution of Informational (ii) is the same across categories of Other . | Independent-Samples Kruskal-Wallis Test | .091 | Retain the null hypothesis. |
| 3 | The distribution of Management (ii) is the same across categories of Other . | Independent-Samples Kruskal-Wallis Test | .293 | Retain the null hypothesis. |
| 4 | The distribution of Management (ii) is the same across categories of Other . | Independent-Samples Kruskal-Wallis Test | .076 | Retain the null hypothesis. |
| 5 | The distribution of Consequence (ii) is the same across categories of Other . | Independent-Samples Kruskal-Wallis Test | .232 | Retain the null hypothesis. |
| 6 | The distribution of Collaboration (ii) is the same across categories of Other . | Independent-Samples Kruskal-Wallis Test | .265 | Retain the null hypothesis. |
| 7 | The distribution of Refocusing (ii) is the same across categories of Other . | Independent-Samples Kruskal-Wallis Test | .303 | Retain the null hypothesis. |

Asymptotic significances are displayed. The significance level is .05.

*Nonparametric Tests: Independent Samples.

NPTESTS

```

/INDEPENDENT TEST (PSIIAwa0 PSIIInf1 PSIIPer2 PSIIMan3 PSIICon4 PSIIColl15 PS
IIRef6) GROUP (TIME_Medu)
/MISSING SCOPE=ANALYSIS USERMISSING=EXCLUDE
/CRITERIA ALPHA=0.05 CILEVEL=95.

```

Nonparametric Tests

Notes

| | | |
|----------------|--|--|
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| | Split File | <none> |
| | N of Rows in Working Data File | 54 |
| Syntax | NPTESTS /INDEPENDENT TEST (PSIIAwa0 PSIIInf1 PSIIPer2 PSIIMan3 PSIICon4 PSIIColl5 PSIIRef6) GROUP (TIME_Medu) /MISSING SCOPE=ANALYSIS USERMISSING=EXCLUDE /CRITERIA ALPHA=0.05 CILEVEL=95. | |
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[DataSet1] E:\Statomet_2013\Hannelie_SPSS\SoC1and2_demo_LoU_new_13April_Hi_low_23Edited.sav

Hypothesis Test Summary

| | Null Hypothesis | Test | Sig. | Decision |
|---|--|---|------|-----------------------------|
| 1 | The distribution of Awareness (ii) is the same across categories of TIME_Medu. | Independent-Samples Kruskal-Wallis Test | .827 | Retain the null hypothesis. |
| 2 | The distribution of Informational (ii) is the same across categories of TIME_Medu. | Independent-Samples Kruskal-Wallis Test | .689 | Retain the null hypothesis. |
| 3 | The distribution of Management (ii) is the same across categories of TIME_Medu. | Independent-Samples Kruskal-Wallis Test | .236 | Retain the null hypothesis. |
| 4 | The distribution of Management (ii) is the same across categories of TIME_Medu. | Independent-Samples Kruskal-Wallis Test | .544 | Retain the null hypothesis. |
| 5 | The distribution of Consequence (ii) is the same across categories of TIME_Medu. | Independent-Samples Kruskal-Wallis Test | .935 | Retain the null hypothesis. |
| 6 | The distribution of Collaboration (ii) is the same across categories of TIME_Medu. | Independent-Samples Kruskal-Wallis Test | .081 | Retain the null hypothesis. |
| 7 | The distribution of Refocusing (ii) is the same across categories of TIME_Medu. | Independent-Samples Kruskal-Wallis Test | .847 | Retain the null hypothesis. |

Asymptotic significances are displayed. The significance level is .05.

*Nonparametric Tests: Independent Samples.

NPTESTS

```

/INDEPENDENT TEST (PSIIAwa0 PSIIInf1 PSIIPer2 PSIIMan3 PSIICon4 PSIIColl15 PS
IIRef6) GROUP (TIME_Clin)
/MISSING SCOPE=ANALYSIS USERMISSING=EXCLUDE
/CRITERIA ALPHA=0.05 CILEVEL=95.

```

Nonparametric Tests

Notes

| | | |
|----------------|---|--|
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| Syntax | <pre> NPTESTS /INDEPENDENT TEST (PSIIAwa0 PSIIInf1 PSIIPer2 PSIIMan3 PSIICon4 PSIIColl5 PSIIRef6) GROUP (TIME_Clin) /MISSING SCOPE=ANALYSIS USERMISSING=EXCLUDE /CRITERIA ALPHA=0.05 CILEVEL=95. </pre> | |
| Resources | Processor Time | 00:00:00.17 |
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[DataSet1] E:\Statomet_2013\Hannelie_SPSS\SoC1and2_demo_LoU_new_13April_Hi_low_23Edited.sav

Hypothesis Test Summary

| | Null Hypothesis | Test | Sig. | Decision |
|---|--|---|------|-----------------------------|
| 1 | The distribution of Awareness (ii) is the same across categories of TIME_Clin. | Independent-Samples Kruskal-Wallis Test | .573 | Retain the null hypothesis. |
| 2 | The distribution of Informational (ii) is the same across categories of TIME_Clin. | Independent-Samples Kruskal-Wallis Test | .220 | Retain the null hypothesis. |
| 3 | The distribution of Management (ii) is the same across categories of TIME_Clin. | Independent-Samples Kruskal-Wallis Test | .226 | Retain the null hypothesis. |
| 4 | The distribution of Management (ii) is the same across categories of TIME_Clin. | Independent-Samples Kruskal-Wallis Test | .082 | Retain the null hypothesis. |
| 5 | The distribution of Consequence (ii) is the same across categories of TIME_Clin. | Independent-Samples Kruskal-Wallis Test | .081 | Retain the null hypothesis. |
| 6 | The distribution of Collaboration (ii) is the same across categories of TIME_Clin. | Independent-Samples Kruskal-Wallis Test | .110 | Retain the null hypothesis. |
| 7 | The distribution of Refocusing (ii) is the same across categories of TIME_Clin. | Independent-Samples Kruskal-Wallis Test | .309 | Retain the null hypothesis. |

Asymptotic significances are displayed. The significance level is .05.

*Nonparametric Tests: Independent Samples.

NPTESTS

```

/INDEPENDENT TEST (PSIIAwa0 PSIIInf1 PSIIPer2 PSIIMan3 PSIICon4 PSIIColl15 PS
IIRef6) GROUP (TIME_Res)
/MISSING SCOPE=ANALYSIS USERMISSING=EXCLUDE
/CRITERIA ALPHA=0.05 CILEVEL=95.

```

Nonparametric Tests

Notes

| | | |
|----------------|---|--|
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| | Split File | <none> |
| | N of Rows in Working Data File | 54 |
| Syntax | NPTESTS /INDEPENDENT TEST (PSIIAwa0 PSIIInf1 PSIIPer2 PSIIMan3 PSIICon4 PSIIColl5 PSIIRef6) GROUP (TIME_Res) /MISSING SCOPE=ANALYSIS USERMISSING=EXCLUDE /CRITERIA ALPHA=0.05 CILEVEL=95. | |
| Resources | Processor Time | 00:00:00.16 |
| | Elapsed Time | 00:00:00.17 |

[DataSet1] E:\Statomet_2013\Hannelie_SPSS\SoC1and2_demo_LoU_new_13April_Hi_low_23Edited.sav

Hypothesis Test Summary

| | Null Hypothesis | Test | Sig. | Decision |
|---|---|---|------|-----------------------------|
| 1 | The distribution of Awareness (ii) is the same across categories of TIME_Res. | Independent-Samples Kruskal-Wallis Test | .060 | Retain the null hypothesis. |
| 2 | The distribution of Informational (ii) is the same across categories of TIME_Res. | Independent-Samples Kruskal-Wallis Test | .883 | Retain the null hypothesis. |
| 3 | The distribution of Management (ii) is the same across categories of TIME_Res. | Independent-Samples Kruskal-Wallis Test | .999 | Retain the null hypothesis. |
| 4 | The distribution of Management (ii) is the same across categories of TIME_Res. | Independent-Samples Kruskal-Wallis Test | .452 | Retain the null hypothesis. |
| 5 | The distribution of Consequence (ii) is the same across categories of TIME_Res. | Independent-Samples Kruskal-Wallis Test | .700 | Retain the null hypothesis. |
| 6 | The distribution of Collaboration (ii) is the same across categories of TIME_Res. | Independent-Samples Kruskal-Wallis Test | .388 | Retain the null hypothesis. |
| 7 | The distribution of Refocusing (ii) is the same across categories of TIME_Res. | Independent-Samples Kruskal-Wallis Test | .749 | Retain the null hypothesis. |

Asymptotic significances are displayed. The significance level is .05.

*Nonparametric Tests: Independent Samples.

NPTESTS

```

/INDEPENDENT TEST (PSIIAwa0 PSIIInf1 PSIIPer2 PSIIMan3 PSIICon4 PSIIColl15 PS
IIRef6) GROUP (TIME_Oth)
/MISSING SCOPE=ANALYSIS USERMISSING=EXCLUDE
/CRITERIA ALPHA=0.05 CILEVEL=95.

```

Nonparametric Tests

Notes

| | | |
|----------------|--|--|
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| | Split File | <none> |
| | N of Rows in Working Data File | 54 |
| Syntax | <pre> NPTESTS /INDEPENDENT TEST (PSIIAwa0 PSIIInf1 PSIIPer2 PSIIMan3 PSIICon4 PSIIColl5 PSIIRef6) GROUP (TIME_Oth) /MISSING SCOPE=ANALYSIS USERMISSING=EXCLUDE /CRITERIA ALPHA=0.05 CILEVEL=95. </pre> | |
| Resources | Processor Time | 00:00:00.14 |
| | Elapsed Time | 00:00:00.20 |

[DataSet1] E:\Statomet_2013\Hannelie_SPSS\SoC1and2_demo_LoU_new_13April_Hi_low_23Edited.sav

Hypothesis Test Summary

| | Null Hypothesis | Test | Sig. | Decision |
|---|---|---|------|-----------------------------|
| 1 | The distribution of Awareness (ii) is the same across categories of TIME_Oth. | Independent-Samples Kruskal-Wallis Test | .012 | Reject the null hypothesis. |
| 2 | The distribution of Informational (ii) is the same across categories of TIME_Oth. | Independent-Samples Kruskal-Wallis Test | .897 | Retain the null hypothesis. |
| 3 | The distribution of Management (ii) is the same across categories of TIME_Oth. | Independent-Samples Kruskal-Wallis Test | .787 | Retain the null hypothesis. |
| 4 | The distribution of Management (ii) is the same across categories of TIME_Oth. | Independent-Samples Kruskal-Wallis Test | .337 | Retain the null hypothesis. |
| 5 | The distribution of Consequence (ii) is the same across categories of TIME_Oth. | Independent-Samples Kruskal-Wallis Test | .207 | Retain the null hypothesis. |
| 6 | The distribution of Collaboration (ii) is the same across categories of TIME_Oth. | Independent-Samples Kruskal-Wallis Test | .732 | Retain the null hypothesis. |
| 7 | The distribution of Refocusing (ii) is the same across categories of TIME_Oth. | Independent-Samples Kruskal-Wallis Test | .752 | Retain the null hypothesis. |

Asymptotic significances are displayed. The significance level is .05.

DATASET ACTIVATE DataSet1.

SAVE OUTFILE='E:\Statomet_2013\Hannelie_SPSS\SoCland2_demo_LoU_new13April_Hi_low_23Edited.sav'

/COMPRESSED.

FREQUENCIES VARIABLES=TIME_Oth

/ORDER=ANALYSIS.

Frequencies

Notes

| | | |
|------------------------|--------------------------------|--|
| Output Created | | 25-APR-2013 20:52:53 |
| Comments | | |
| Input | Data | E: \Statomet_2013\Hannelie_SPSS\So C1and2_demo_LoU_new_13April_H i_low_23Edited.sav |
| | Active Dataset | DataSet1 |
| | Filter | <none> |
| | Weight | <none> |
| | Split File | <none> |
| | N of Rows in Working Data File | 54 |
| Missing Value Handling | Definition of Missing | User-defined missing values are treated as missing. |
| | Cases Used | Statistics are based on all cases with valid data. |
| Syntax | | FREQUENCIES VARIABLES=TIME_Oth /ORDER=ANALYSIS. |
| Resources | Processor Time | 00:00:00.00 |
| | Elapsed Time | 00:00:00.02 |

[DataSet1] E:\Statomet_2013\Hannelie_SPSS\SoC1and2_demo_LoU_new_13April_Hi_lo
w_23Edited.sav

Statistics

TIME_Oth

| | | |
|---|---------|----|
| N | Valid | 38 |
| | Missing | 16 |

TIME_Oth

| | | Frequency | Percent | Valid Percent | Cumulative Percent |
|---------|--------|-----------|---------|---------------|-----------------------|
| Valid | 0 | 22 | 40.7 | 57.9 | 57.9 |
| | 0% | 14 | 25.9 | 36.8 | 94.7 |
| | 26-50% | 2 | 3.7 | 5.3 | 100.0 |
| | Total | 38 | 70.4 | 100.0 | |
| Missing | System | 16 | 29.6 | | |
| Total | | 54 | 100.0 | | |


```
GET
FILE='E:\Statomet_2013\Hannelie_SPSS\SoC1and2_demo_LoU_new_13April_Hi_low23
Edited.sav'.
DATASET NAME DataSet1 WINDOW=FRONT.
NPAR TESTS
  /K-W=PSIIAwa0 PSIIInf1 PSIIPer2 PSIIMan3 PSIICon4 PSIIColl5 PSIIRef6 BY V97(
1 3)
  /MISSING ANALYSIS.
```

NPar Tests

Notes

| | | |
|------------------------|--|--|
| Output Created | 16-MAY-2013 20:58:04 | |
| Comments | | |
| Input | Data | E: \Statomet_2013\Hannelie_SPSS\So C1and2_demo_LoU_new_13April_H i_low_23Edited.sav |
| | Active Dataset | DataSet1 |
| | Filter | <none> |
| | Weight | <none> |
| | Split File | <none> |
| | N of Rows in Working Data File | 54 |
| Missing Value Handling | Definition of Missing | User-defined missing values are treated as missing. |
| | Cases Used | Statistics for each test are based on all cases with valid data for the variable(s) used in that test. |
| Syntax | NPAR TESTS /K-W=PSIIAwa0 PSIIInf1 PSIIPer2 PSIIMan3 PSIICon4 PSIIColl5 PSIIRef6 BY V97(1 3) /MISSING ANALYSIS. | |
| Resources | Processor Time | 00:00:00.02 |
| | Elapsed Time | 00:00:00.02 |
| | Number of Cases Allowed ^a | 60494 |

a. Based on availability of workspace memory.

```
[DataSet1] E:\Statomet_2013\Hannelie_SPSS\SoC1and2_demo_LoU_new_13April_Hi_lo
w_23Edited.sav
```

Kruskal-Wallis Test

Ranks

| Professional identity / qualification | | N | Mean Rank |
|---------------------------------------|-------|----|-----------|
| Awareness (ii) | 1 | 9 | 16.17 |
| | 2 | 24 | 21.19 |
| | 3 | 7 | 23.71 |
| | Total | 40 | |
| Informational (ii) | 1 | 9 | 18.44 |
| | 2 | 24 | 21.21 |
| | 3 | 7 | 20.71 |
| | Total | 40 | |
| Personal (ii) | 1 | 9 | 21.44 |
| | 2 | 24 | 18.92 |
| | 3 | 7 | 24.71 |
| | Total | 40 | |
| Management (ii) | 1 | 9 | 14.17 |
| | 2 | 24 | 22.31 |
| | 3 | 7 | 22.43 |
| | Total | 40 | |
| Consequence (ii) | 1 | 9 | 16.17 |
| | 2 | 24 | 21.38 |
| | 3 | 7 | 23.07 |
| | Total | 40 | |
| Collaboration (ii) | 1 | 9 | 16.39 |
| | 2 | 24 | 19.04 |
| | 3 | 7 | 30.79 |
| | Total | 40 | |
| Refocusing (ii) | 1 | 9 | 21.83 |
| | 2 | 24 | 19.06 |
| | 3 | 7 | 23.71 |
| | Total | 40 | |

Test Statistics^{a,b}

| | Awareness (ii) | Informational (ii) | Personal (ii) | Management (ii) | Consequence (ii) |
|-------------|----------------|--------------------|---------------|-----------------|------------------|
| Chi-Square | 1.905 | .371 | 1.413 | 3.427 | 1.716 |
| df | 2 | 2 | 2 | 2 | 2 |
| Asymp. Sig. | .386 | .831 | .493 | .180 | .424 |

Test Statistics^{a,b}

| | Collaboration (ii) | Refocusing (ii) |
|-------------|-----------------------|-----------------|
| Chi-Square | 6.942 | 1.013 |
| df | 2 | 2 |
| Asymp. Sig. | .031 | .603 |

a. Kruskal Wallis Test

b. Grouping Variable: Professional identity / qualification

DATASET ACTIVATE DataSet1.

SAVE OUTFILE='E:\Statomet_2013\Hannelie_SPSS\SoCland2_demo_LoU_new_13April_Hi_low_23Edited.sav'

/COMPRESSED.

*Nonparametric Tests: Independent Samples.

NPTESTS

/INDEPENDENT TEST (PSIAwa0 PSIIInf1 PSIPer2 PSIMan3 PSICon4 PSIColl5 PSIRef6)

GROUP (V97)

/MISSING SCOPE=ANALYSIS USERMISSING=EXCLUDE

/CRITERIA ALPHA=0.05 CILEVEL=95.

Nonparametric Tests

Notes

| | | |
|----------------|--|--|
| Output Created | 16-MAY-2013 20:59:36 | |
| Comments | | |
| Input | Data | E: \Statomet_2013\Hannelie_SPSS\SoC1and2_demo_LoU_new_13April_Hi_low_23Edited.sav |
| | Active Dataset | DataSet1 |
| | Filter | <none> |
| | Weight | <none> |
| | Split File | <none> |
| | N of Rows in Working Data File | 54 |
| Syntax | NPTESTS /INDEPENDENT TEST (PSIAwa0 PSIIInf1 PSIPer2 PSIMan3 PSICon4 PSIColl5 PSISRef6) GROUP (V97) /MISSING SCOPE=ANALYSIS USERMISSING=EXCLUDE /CRITERIA ALPHA=0.05 CILEVEL=95. | |
| Resources | Processor Time | 00:00:00.59 |
| | Elapsed Time | 00:00:01.27 |

[DataSet1] E:\Statomet_2013\Hannelie_SPSS\SoC1and2_demo_LoU_new_13April_Hi_low_23Edited.sav

Hypothesis Test Summary

| | Null Hypothesis | Test | Sig. | Decision |
|---|---|---|------|-----------------------------|
| 1 | The distribution of Awareness (i) is the same across categories of Professional identity / qualification. | Independent-Samples Kruskal-Wallis Test | .292 | Retain the null hypothesis. |
| 2 | The distribution of Informational (i) is the same across categories of Professional identity / qualification. | Independent-Samples Kruskal-Wallis Test | .992 | Retain the null hypothesis. |
| 3 | The distribution of Personal (i) is the same across categories of Professional identity / qualification. | Independent-Samples Kruskal-Wallis Test | .724 | Retain the null hypothesis. |
| 4 | The distribution of Management (i) is the same across categories of Professional identity / qualification. | Independent-Samples Kruskal-Wallis Test | .255 | Retain the null hypothesis. |
| 5 | The distribution of Consequence (i) is the same across categories of Professional identity / qualification. | Independent-Samples Kruskal-Wallis Test | .808 | Retain the null hypothesis. |
| 6 | The distribution of Collaboration (i) is the same across categories of Professional identity / qualification. | Independent-Samples Kruskal-Wallis Test | .584 | Retain the null hypothesis. |
| 7 | The distribution of Refocusing (i) is the same across categories of Professional identity / qualification. | Independent-Samples Kruskal-Wallis Test | .424 | Retain the null hypothesis. |

Asymptotic significances are displayed. The significance level is .05.

*Nonparametric Tests: Independent Samples.

NPTESTS

/INDEPENDENT TEST (PSIIAwa0 PSIIInf1 PSIIPer2 PSIIMan3 PSIICon4 PSIIColl15 PSIIRef6) GROUP (V97)

/MISSING SCOPE=ANALYSIS USERMISSING=EXCLUDE

/CRITERIA ALPHA=0.05 CILEVEL=95.

Nonparametric Tests

Notes

| | | |
|----------------|--|--|
| Output Created | 16-MAY-2013 21:00:23 | |
| Comments | | |
| Input | Data | E: \Statomet_2013\Hannelie_SPSS\SoC1and2_demo_LoU_new_13April_Hi_low_23Edited.sav |
| | Active Dataset | DataSet1 |
| | Filter | <none> |
| | Weight | <none> |
| | Split File | <none> |
| | N of Rows in Working Data File | 54 |
| Syntax | NPTESTS /INDEPENDENT TEST (PSIIAwa0 PSIIInf1 PSIIPer2 PSIIMan3 PSIICon4 PSIIColl5 PSIIRef6) GROUP (V97) /MISSING SCOPE=ANALYSIS USERMISSING=EXCLUDE /CRITERIA ALPHA=0.05 CILEVEL=95. | |
| Resources | Processor Time | 00:00:00.31 |
| | Elapsed Time | 00:00:00.56 |

[DataSet1] E:\Statomet_2013\Hannelie_SPSS\SoC1and2_demo_LoU_new_13April_Hi_low_23Edited.sav

Hypothesis Test Summary

| | Null Hypothesis | Test | Sig. | Decision |
|---|--|---|------|-----------------------------|
| 6 | The distribution of Collaboration (ii) is the same across categories of Professional identity / qualification. | Independent-Samples Kruskal-Wallis Test | .031 | Reject the null hypothesis. |

Asymptotic significances are displayed. The significance level is .05.

EXAMINE VARIABLES=V98 BY PSIIMan3
/PLOT BOXPLOT

```

/COMPARE GROUPS
/STATISTICS NONE
/CINTERVAL 95
/MISSING LISTWISE
/NOTOTAL.

```

Explore

Notes

| | | |
|------------------------|--------------------------------|---|
| Output Created | | 16-MAY-2013 22:49:24 |
| Comments | | |
| Input | Data | E: \Statomet_2013\Hannelie_SPSS\So C1and2_demo_LoU_new_13April_H i_low_23Edited.sav |
| | Active Dataset | DataSet1 |
| | Filter | <none> |
| | Weight | <none> |
| | Split File | <none> |
| | N of Rows in Working Data File | 54 |
| Missing Value Handling | Definition of Missing | User-defined missing values for dependent variables are treated as missing. |
| | Cases Used | Statistics are based on cases with no missing values for any dependent variable or factor used. |
| Syntax | | EXAMINE VARIABLES=V98 BY PSIIMan3 /PLOT BOXPLOT /COMPARE GROUPS /STATISTICS NONE /CINTERVAL 95 /MISSING LISTWISE /NOTOTAL. |
| Resources | Processor Time | 00:00:00.99 |
| | Elapsed Time | 00:00:01.47 |

```

[DataSet1] E:\Statomet_2013\Hannelie_SPSS\SoC1and2_demo_LoU_new_13April_Hi_lo  
w_23Edited.sav

```

Warnings

Confidence level is constant when Management (ii) = 15. It will be included in any boxplots produced but other output will be omitted.

Confidence level is constant when Management (ii) = 23. It will be included in any boxplots produced but other output will be omitted.

Confidence level is constant when Management (ii) = 30. It will be included in any boxplots produced but other output will be omitted.

Confidence level is constant when Management (ii) = 34. It will be included in any boxplots produced but other output will be omitted.

Confidence level is constant when Management (ii) = 39. It will be included in any boxplots produced but other output will be omitted.

Confidence level is constant when Management (ii) = 65. It will be included in any boxplots produced but other output will be omitted.

Confidence level is constant when Management (ii) = 69. It will be included in any boxplots produced but other output will be omitted.

Confidence level is constant when Management (ii) = 77. It will be included in any boxplots produced but other output will be omitted.

Confidence level is constant when Management (ii) = 83. It will be included in any boxplots produced but other output will be omitted.

Confidence level is constant when Management (ii) = 90. It will be included in any boxplots produced but other output will be omitted.

Confidence level is constant when Management (ii) = 92. It will be included in any boxplots produced but other output will be omitted.

Confidence level is constant when Management (ii) = 94. It will be included in any boxplots produced but other output will be omitted.

Confidence level is constant when Management (ii) = 95. It will be included in any boxplots produced but other output will be omitted.

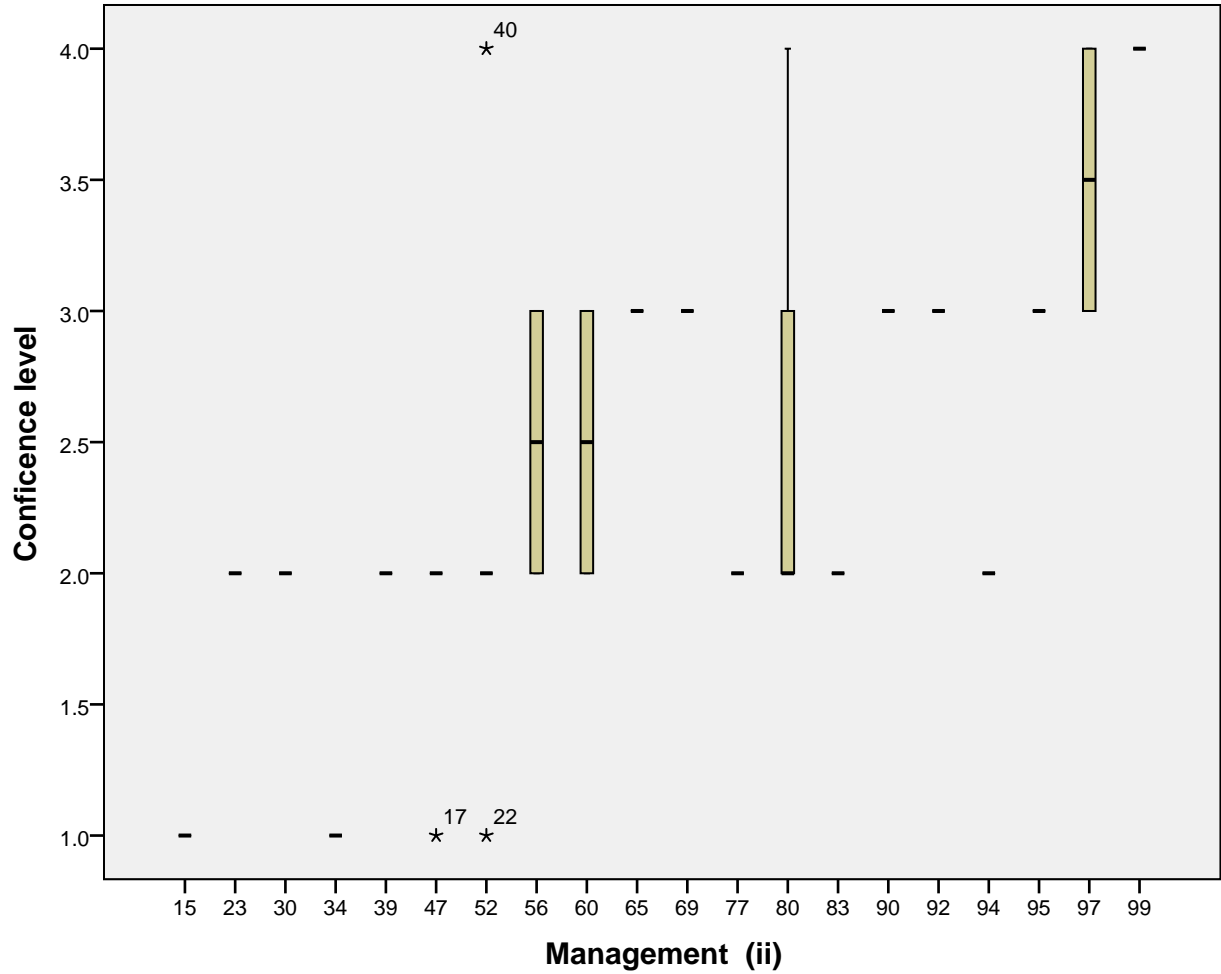
Confidence level is constant when Management (ii) = 99. It will be included in any boxplots produced but other output will be omitted.

Management (ii)

Case Processing Summary

| | | Cases | | | | | |
|------------------|----|-------|---------|---------|---------|-------|---------|
| | | Valid | | Missing | | Total | |
| | | N | Percent | N | Percent | N | Percent |
| Confidence level | 15 | 1 | 100.0% | 0 | 0.0% | 1 | 100.0% |
| | 23 | 2 | 100.0% | 0 | 0.0% | 2 | 100.0% |
| | 30 | 2 | 100.0% | 0 | 0.0% | 2 | 100.0% |
| | 34 | 1 | 100.0% | 0 | 0.0% | 1 | 100.0% |
| | 39 | 2 | 100.0% | 0 | 0.0% | 2 | 100.0% |
| | 47 | 5 | 100.0% | 0 | 0.0% | 5 | 100.0% |
| | 52 | 5 | 100.0% | 0 | 0.0% | 5 | 100.0% |
| | 56 | 2 | 100.0% | 0 | 0.0% | 2 | 100.0% |
| | 60 | 2 | 100.0% | 0 | 0.0% | 2 | 100.0% |
| | 65 | 1 | 100.0% | 0 | 0.0% | 1 | 100.0% |
| | 69 | 1 | 100.0% | 0 | 0.0% | 1 | 100.0% |
| | 77 | 2 | 100.0% | 0 | 0.0% | 2 | 100.0% |
| | 80 | 3 | 100.0% | 0 | 0.0% | 3 | 100.0% |
| | 83 | 3 | 100.0% | 0 | 0.0% | 3 | 100.0% |
| | 90 | 2 | 100.0% | 0 | 0.0% | 2 | 100.0% |
| | 92 | 1 | 100.0% | 0 | 0.0% | 1 | 100.0% |
| | 94 | 1 | 100.0% | 0 | 0.0% | 1 | 100.0% |
| | 95 | 1 | 100.0% | 0 | 0.0% | 1 | 100.0% |
| | 97 | 2 | 100.0% | 0 | 0.0% | 2 | 100.0% |
| | 99 | 1 | 100.0% | 0 | 0.0% | 1 | 100.0% |

Confidence level



```
EXAMINE VARIABLES=PSIIMan3 BY V98
/PLOT BOXPLOT
/COMPARE GROUPS
/STATISTICS NONE
/CINTERVAL 95
/MISSING LISTWISE
/NOTOTAL.
```

Explore

Notes

| | | | |
|------------------------|---|---|--|
| Output Created | 16-MAY-2013 22:49:42 | | |
| Comments | | | |
| Input | Data | E: \Statomet_2013\Hannelie_SPSS\SoC1and2_demo_LoU_new_13April_Hi_low_23Edited.sav | |
| | Active Dataset | DataSet1 | |
| | Filter | <none> | |
| | Weight | <none> | |
| | Split File | <none> | |
| | N of Rows in Working Data File | 54 | |
| Missing Value Handling | Definition of Missing | User-defined missing values for dependent variables are treated as missing. | |
| | Cases Used | Statistics are based on cases with no missing values for any dependent variable or factor used. | |
| Syntax | EXAMINE VARIABLES=PSIIMan3 BY V98 /PLOT BOXPLOT /COMPARE GROUPS /STATISTICS NONE /INTERVAL 95 /MISSING LISTWISE /NOTOTAL. | | |
| Resources | Processor Time | 00:00:00.48 | |
| | Elapsed Time | 00:00:00.83 | |

[DataSet1] E:\Statomet_2013\Hannelie_SPSS\SoC1and2_demo_LoU_new_13April_Hi_low_23Edited.sav

Confidence level

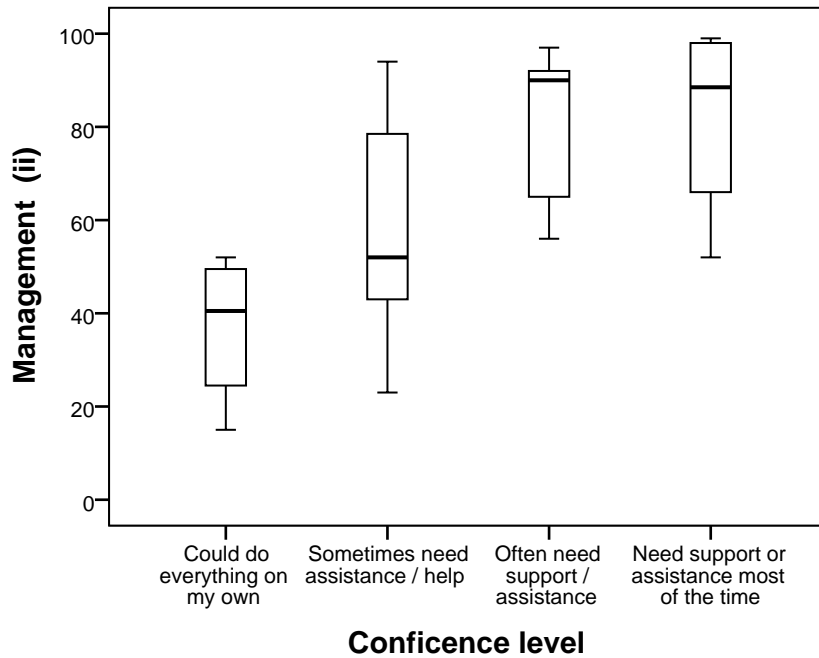
Case Processing Summary

| Confidence level | | Cases | | |
|------------------|---|-------|---------|---------|
| | | Valid | | Missing |
| | | N | Percent | N |
| Management (ii) | Could do everything on my own | 4 | 100.0% | 0 |
| | Sometimes need assistance / help | 23 | 100.0% | 0 |
| | Often need support / assistance | 9 | 100.0% | 0 |
| | Need support or assistance most of the time | 4 | 100.0% | 0 |

Case Processing Summary

| | | Cases | | |
|------------------|---|---------|-------|---------|
| | | Missing | Total | |
| | | Percent | N | Percent |
| Confidence level | | | | |
| Management (ii) | Could do everything on my own | 0.0% | 4 | 100.0% |
| | Sometimes need assistance / help | 0.0% | 23 | 100.0% |
| | Often need support / assistance | 0.0% | 9 | 100.0% |
| | Need support or assistance most of the time | 0.0% | 4 | 100.0% |

Management (ii)



MEANS TABLES=PSIIMan3 BY V98
/CELLS MEDIAN.

Means

Notes

| | | |
|------------------------|--------------------------------|--|
| Output Created | 16-MAY-2013 23:01:03 | |
| Comments | | |
| Input | Data | E: \Statomet_2013\Hannelie_SPSS\SoC1and2_demo_LoU_new_13April_Hi_low_23Edited.sav |
| | Active Dataset | DataSet1 |
| | Filter | <none> |
| | Weight | <none> |
| | Split File | <none> |
| | N of Rows in Working Data File | 54 |
| Missing Value Handling | Definition of Missing | For each dependent variable in a table, user-defined missing values for the dependent and all grouping variables are treated as missing. |
| | Cases Used | Cases used for each table have no missing values in any independent variable, and not all dependent variables have missing values. |
| Syntax | | MEANS TABLES=PSIIMan3 BY V98 /CELLS MEDIAN. |
| Resources | Processor Time | 00:00:00.02 |
| | Elapsed Time | 00:00:00.01 |

[DataSet1] E:\Statomet_2013\Hannelie_SPSS\SoC1and2_demo_LoU_new_13April_Hi_low_23Edited.sav

Case Processing Summary

| | Cases | | | | | |
|------------------------------------|----------|---------|----------|---------|-------|---------|
| | Included | | Excluded | | Total | |
| | N | Percent | N | Percent | N | Percent |
| Management (ii) * Conficence level | 40 | 74.1% | 14 | 25.9% | 54 | 100.0% |

Report

Median

| | Management (ii) |
|---|-----------------|
| Conficence level | |
| Could do everything on my own | 40.50 |
| Sometimes need assistance / help | 52.00 |
| Often need support / assistance | 90.00 |
| Need support or assistance most of the time | 88.50 |
| Total | 58.00 |

MEANS TABLES=PSICon4 BY V100
 /CELLS MEDIAN.

Means

Notes

| | | |
|------------------------|--|--|
| Output Created | 16-MAY-2013 23:29:00 | |
| Comments | | |
| Input | Data | E: \Statomet_2013\Hannelie_SPSS\SoC1and2_demo_LoU_new_13April_Hi_low_23Edited.sav |
| | Active Dataset | DataSet1 |
| | Filter | <none> |
| | Weight | <none> |
| | Split File | <none> |
| | N of Rows in Working Data File | 54 |
| Missing Value Handling | Definition of Missing | For each dependent variable in a table, user-defined missing values for the dependent and all grouping variables are treated as missing. |
| | Cases Used | Cases used for each table have no missing values in any independent variable, and not all dependent variables have missing values. |
| Syntax | MEANS TABLES=PSICon4 BY V100 /CELLS MEDIAN. | |
| Resources | Processor Time | 00:00:00.00 |
| | Elapsed Time | 00:00:00.01 |

[DataSet1] E:\Statomet_2013\Hannelie_SPSS\SoC1and2_demo_LoU_new_13April_Hi_low_23Edited.sav

Case Processing Summary

| | Cases | | | | |
|--|----------|---------|----------|---------|-------|
| | Included | | Excluded | | Total |
| | N | Percent | N | Percent | N |
| Consequence (i) * Used old clickUP (2006-2012) | 37 | 68.5% | 17 | 31.5% | 54 |

Case Processing Summary

| | Cases |
|--|---------|
| | Total |
| | Percent |
| Consequence (i) * Used old clickUP (2006-2012) | 100.0% |

Report

Median

| Used old clickUP (2006-2012) | Consequence (i) |
|------------------------------|-----------------|
| 0 | 11.00 |
| 2 | 27.00 |
| Total | 24.00 |

```

EXAMINE VARIABLES=PSICon4 BY V100
/PLOT BOXPLOT
/COMPARE GROUPS
/STATISTICS NONE
/CINTERVAL 95
/MISSING LISTWISE
/NOTOTAL.
  
```

Explore

Notes

| | | |
|------------------------|--------------------------------|---|
| Output Created | | 16-MAY-2013 23:29:36 |
| Comments | | |
| Input | Data | E: \Statomet_2013\Hannelie_SPSS\So C1and2_demo_LoU_new_13April_H i_low_23Edited.sav |
| | Active Dataset | DataSet1 |
| | Filter | <none> |
| | Weight | <none> |
| | Split File | <none> |
| | N of Rows in Working Data File | 54 |
| Missing Value Handling | Definition of Missing | User-defined missing values for dependent variables are treated as missing. |
| | Cases Used | Statistics are based on cases with no missing values for any dependent variable or factor used. |
| Syntax | | EXAMINE VARIABLES=PSICon4 BY V100 /PLOT BOXPLOT /COMPARE GROUPS /STATISTICS NONE /CINTERVAL 95 /MISSING LISTWISE /NOTOTAL. |

Notes

| | | |
|-----------|----------------|-------------|
| Resources | Processor Time | 00:00:00.47 |
| | Elapsed Time | 00:00:00.75 |

[DataSet1] E:\Statomet_2013\Hannelie_SPSS\SoCland2_demo_LoU_new_13April_Hi_low_23Edited.sav

Used old clickUP (2006-2012)

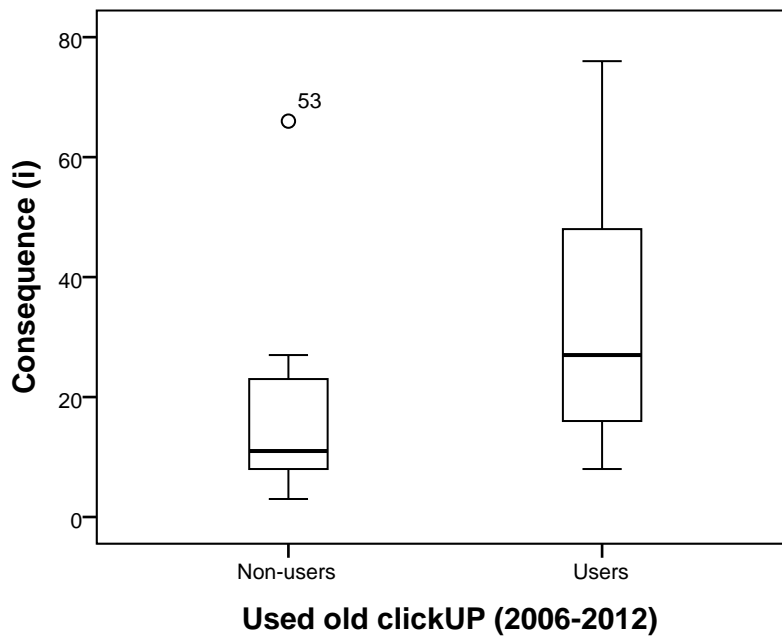
Case Processing Summary

| | | Cases | | | | |
|------------------------------|---|-------|---------|---------|---------|-------|
| | | Valid | | Missing | | Total |
| | | N | Percent | N | Percent | N |
| Used old clickUP (2006-2012) | | | | | | |
| Consequence (i) | 0 | 8 | 100.0% | 0 | 0.0% | 8 |
| | 2 | 29 | 100.0% | 0 | 0.0% | 29 |

Case Processing Summary

| | | Cases |
|------------------------------|---|---------|
| | | Total |
| | | Percent |
| Used old clickUP (2006-2012) | | |
| Consequence (i) | 0 | 100.0% |
| | 2 | 100.0% |

Consequence (i)




```
EXAMINE VARIABLES=PSICon4 BY V110
/PLOT BOXPLOT
/COMPARE GROUPS
/STATISTICS NONE
/CINTERVAL 95
/MISSING LISTWISE
/NOTOTAL.
```

Explore

Notes

| | | |
|------------------------|--------------------------------|---|
| Output Created | | 16-MAY-2013 23:43:21 |
| Comments | | |
| Input | Data | E: \Statomet_2013\Hannelie_SPSS\So C1and2_demo_LoU_new_13April_H i_low_23Edited.sav |
| | Active Dataset | DataSet1 |
| | Filter | <none> |
| | Weight | <none> |
| | Split File | <none> |
| | N of Rows in Working Data File | 54 |
| Missing Value Handling | Definition of Missing | User-defined missing values for dependent variables are treated as missing. |
| | Cases Used | Statistics are based on cases with no missing values for any dependent variable or factor used. |
| Syntax | | EXAMINE VARIABLES=PSICon4 BY V110 /PLOT BOXPLOT /COMPARE GROUPS /STATISTICS NONE /CINTERVAL 95 /MISSING LISTWISE /NOTOTAL. |
| Resources | Processor Time | 00:00:00.44 |
| | Elapsed Time | 00:00:00.78 |

[DataSet1] E:\Statomet_2013\Hannelie_SPSS\SoC1and2_demo_LoU_new_13April_Hi_low_23Edited.sav

Proficiency in new clickUP

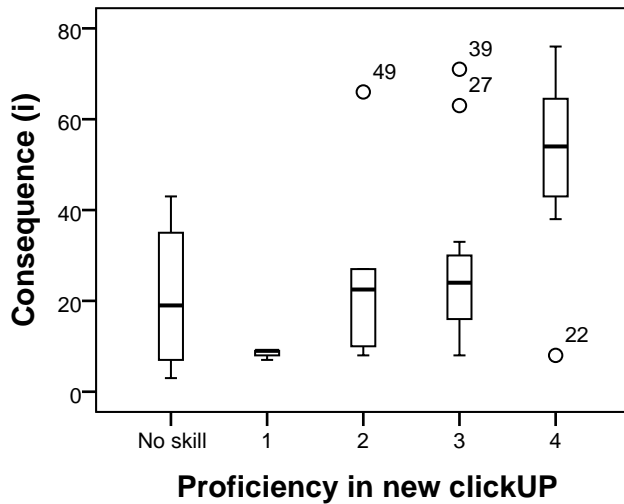
Case Processing Summary

| Proficiency in new clickUP | | Cases | | | | |
|----------------------------|----------|-------|---------|---------|---------|-------|
| | | Valid | | Missing | | Total |
| | | N | Percent | N | Percent | N |
| Consequence (i) | No skill | 4 | 100.0% | 0 | 0.0% | 4 |
| | 1 | 3 | 100.0% | 0 | 0.0% | 3 |
| | 2 | 8 | 100.0% | 0 | 0.0% | 8 |
| | 3 | 17 | 100.0% | 0 | 0.0% | 17 |
| | 4 | 8 | 100.0% | 0 | 0.0% | 8 |

Case Processing Summary

| Proficiency in new clickUP | | Cases |
|----------------------------|----------|---------|
| | | Total |
| | | Percent |
| Consequence (i) | No skill | 100.0% |
| | 1 | 100.0% |
| | 2 | 100.0% |
| | 3 | 100.0% |
| | 4 | 100.0% |

Consequence (i)



EXAMINE VARIABLES=PSICon4 BY V77

/PLOT BOXPLOT
 /COMPARE GROUPS
 /STATISTICS NONE
 /CINTERVAL 95

/MISSING LISTWISE

/NOTOTAL.

Explore

Notes

| | | |
|------------------------|--------------------------------|--|
| Output Created | | 16-MAY-2013 23:43:41 |
| Comments | | |
| Input | Data | E: \Statomet_2013\Hannelie_SPSS\So C1and2_demo_LoU_new_13April_H i_low_23Edited.sav |
| | Active Dataset | DataSet1 |
| | Filter | <none> |
| | Weight | <none> |
| | Split File | <none> |
| | N of Rows in Working Data File | 54 |
| Missing Value Handling | Definition of Missing | User-defined missing values for dependent variables are treated as missing. |
| | Cases Used | Statistics are based on cases with no missing values for any dependent variable or factor used. |
| Syntax | | EXAMINE VARIABLES=PSICon4 BY V77 /PLOT BOXPLOT /COMPARE GROUPS /STATISTICS NONE /CINTERVAL 95 /MISSING LISTWISE /NOTOTAL. |
| Resources | Processor Time | 00:00:00.52 |
| | Elapsed Time | 00:00:00.72 |

[DataSet1] E:\Statomet_2013\Hannelie_SPSS\SoC1and2_demo_LoU_new_13April_Hi_low_23Edited.sav

Warnings

Consequence (i) is constant when Use of the current clickUP = Expert. It will be included in any boxplots produced but other output will be omitted.

Use of the current clickUP

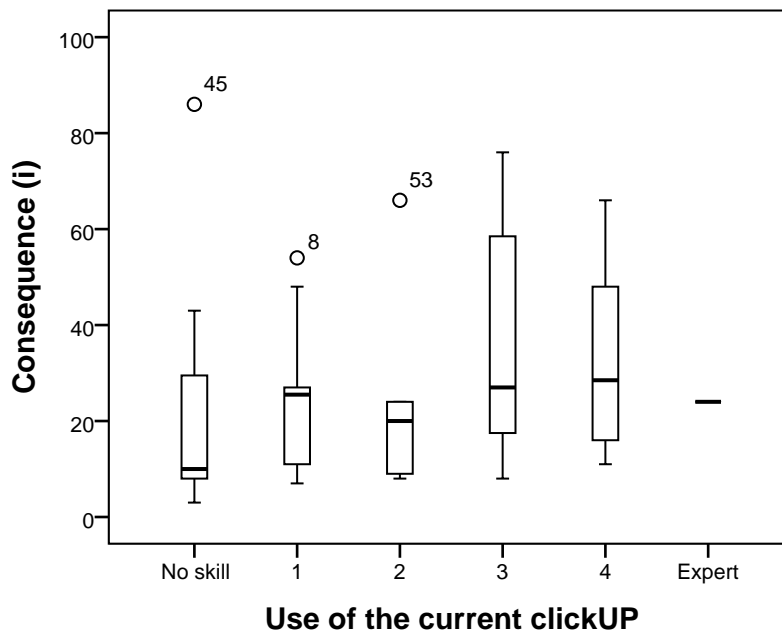
Case Processing Summary

| | | Cases | | | | |
|-----------------|----------|-------|---------|---------|---------|-------|
| | | Valid | | Missing | | Total |
| | | N | Percent | N | Percent | N |
| Consequence (i) | No skill | 8 | 100.0% | 0 | 0.0% | 8 |
| | 1 | 10 | 100.0% | 0 | 0.0% | 10 |
| | 2 | 6 | 100.0% | 0 | 0.0% | 6 |
| | 3 | 19 | 100.0% | 0 | 0.0% | 19 |
| | 4 | 10 | 100.0% | 0 | 0.0% | 10 |
| | Expert | 1 | 100.0% | 0 | 0.0% | 1 |

Case Processing Summary

| Use of the current clickUP | | Cases |
|----------------------------|----------|---------|
| | | Total |
| | | Percent |
| Consequence (i) | No skill | 100.0% |
| | 1 | 100.0% |
| | 2 | 100.0% |
| | 3 | 100.0% |
| | 4 | 100.0% |
| | Expert | 100.0% |

Consequence (i)



*Nonparametric Tests: Independent Samples.

NPTESTS

/INDEPENDENT TEST (PSIIAwa0 PSIIInf1 PSIIPer2 PSIIMan3 PSIICon4 PSIIColl5 PSIIRef6) GROUP (V77)

/MISSING SCOPE=ANALYSIS USERMISSING=EXCLUDE

/CRITERIA ALPHA=0.05 CILEVEL=95.

Nonparametric Tests

Notes

| | | |
|----------------|---|--|
| Output Created | 16-MAY-2013 23:46:35 | |
| Comments | | |
| Input | Data | E: \Statomet_2013\Hannelie_SPSS\SoC1and2_demo_LoU_new_13April_Hi_low_23Edited.sav |
| | Active Dataset | DataSet1 |
| | Filter | <none> |
| | Weight | <none> |
| | Split File | <none> |
| | N of Rows in Working Data File | 54 |
| Syntax | NPTESTS /INDEPENDENT TEST (PSIIAwa0 PSIIInf1 PSIIPer2 PSIIMan3 PSIICon4 PSIIColl5 PSIIRef6) GROUP (V77) /MISSING SCOPE=ANALYSIS USERMISSING=EXCLUDE /CRITERIA ALPHA=0.05 CILEVEL=95. | |
| Resources | Processor Time | 00:00:00.36 |
| | Elapsed Time | 00:00:00.41 |

[DataSet1] E:\Statomet_2013\Hannelie_SPSS\SoC1and2_demo_LoU_new_13April_Hi_low_23Edited.sav

*Nonparametric Tests: Independent Samples.

NPTESTS

/INDEPENDENT TEST (PSIAwa0 PSIIInf1 PSIIPer2 PSIIMan3 PSIICon4 PSIIColl5 PSIIRef6) GROUP (V77)

/MISSING SCOPE=ANALYSIS USERMISSING=EXCLUDE

/CRITERIA ALPHA=0.05 CILEVEL=95.

Nonparametric Tests

Notes

| | | |
|----------------|---|--|
| Output Created | 16-MAY-2013 23:48:01 | |
| Comments | | |
| Input | Data | E: \Statomet_2013\Hannelie_SPSS\SoC1and2_demo_LoU_new_13April_Hi_low_23Edited.sav |
| | Active Dataset | DataSet1 |
| | Filter | <none> |
| | Weight | <none> |
| | Split File | <none> |
| | N of Rows in Working Data File | 54 |
| Syntax | <pre> NPTESTS /INDEPENDENT TEST (PSIAwa0 PSIInf1 PSIPer2 PSIMan3 PSICon4 PSIColl5 PSISRef6) GROUP (V77) /MISSING SCOPE=ANALYSIS USERMISSING=EXCLUDE /CRITERIA ALPHA=0.05 CILEVEL=95. </pre> | |
| Resources | Processor Time | 00:00:00.22 |
| | Elapsed Time | 00:00:00.30 |

[DataSet1] E:\Statomet_2013\Hannelie_SPSS\SoC1and2_demo_LoU_new_13April_Hi_low_23Edited.sav

Hypothesis Test Summary

| | Null Hypothesis | Test | Sig. | Decision |
|---|--|---|------|-----------------------------|
| 1 | The distribution of Awareness (i) is the same across categories of Use of the current clickUP. | Independent-Samples Kruskal-Wallis Test | .679 | Retain the null hypothesis. |
| 2 | The distribution of Informational (i) is the same across categories of Use of the current clickUP. | Independent-Samples Kruskal-Wallis Test | .559 | Retain the null hypothesis. |
| 3 | The distribution of Personal (i) is the same across categories of Use of the current clickUP. | Independent-Samples Kruskal-Wallis Test | .718 | Retain the null hypothesis. |
| 4 | The distribution of Management (i) is the same across categories of Use of the current clickUP. | Independent-Samples Kruskal-Wallis Test | .543 | Retain the null hypothesis. |
| 5 | The distribution of Consequence (i) is the same across categories of Use of the current clickUP. | Independent-Samples Kruskal-Wallis Test | .340 | Retain the null hypothesis. |
| 6 | The distribution of Collaboration (i) is the same across categories of Use of the current clickUP. | Independent-Samples Kruskal-Wallis Test | .279 | Retain the null hypothesis. |
| 7 | The distribution of Refocusing (i) is the same across categories of Use of the current clickUP. | Independent-Samples Kruskal-Wallis Test | .991 | Retain the null hypothesis. |

Asymptotic significances are displayed. The significance level is .05.

EXAMINE VARIABLES=PSIIcon4 BY V110

/PLOT BOXPLOT

/COMPARE GROUPS

/STATISTICS NONE

/CINTERVAL 95

/MISSING LISTWISE

/NOTOTAL.

Explore

Notes

| | | |
|------------------------|--------------------------------|--|
| Output Created | | 16-MAY-2013 23:52:36 |
| Comments | | |
| Input | Data | E: \Statomet_2013\Hannelie_SPSS\SoC1and2_demo_LoU_new_13April_Hi_low_23Edited.sav |
| | Active Dataset | DataSet1 |
| | Filter | <none> |
| | Weight | <none> |
| | Split File | <none> |
| | N of Rows in Working Data File | 54 |
| Missing Value Handling | Definition of Missing | User-defined missing values for dependent variables are treated as missing. |
| | Cases Used | Statistics are based on cases with no missing values for any dependent variable or factor used. |
| Syntax | | EXAMINE VARIABLES=PSICon4 BY V110 /PLOT BOXPLOT /COMPARE GROUPS /STATISTICS NONE /INTERVAL 95 /MISSING LISTWISE /NOTOTAL. |
| Resources | Processor Time | 00:00:00.48 |
| | Elapsed Time | 00:00:01.52 |

[DataSet1] E:\Statomet_2013\Hannelie_SPSS\SoC1and2_demo_LoU_new_13April_Hi_low_23Edited.sav

Proficiency in new clickUP

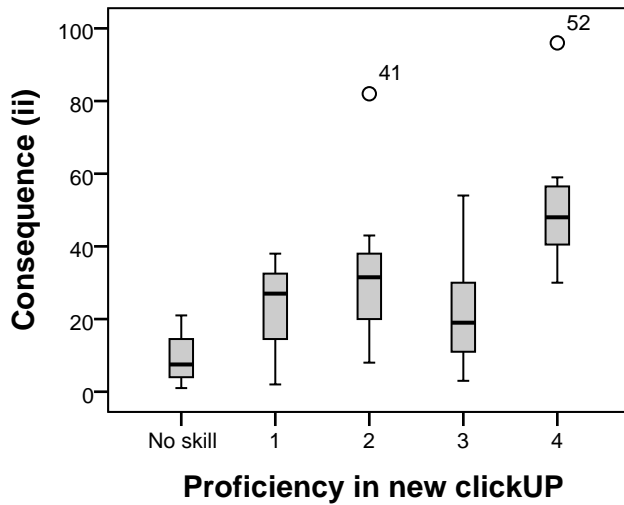
Case Processing Summary

| | | Cases | | | | |
|------------------|----------|-------|---------|---------|---------|-------|
| | | Valid | | Missing | | Total |
| | | N | Percent | N | Percent | N |
| Consequence (ii) | No skill | 4 | 100.0% | 0 | 0.0% | 4 |
| | 1 | 3 | 100.0% | 0 | 0.0% | 3 |
| | 2 | 8 | 100.0% | 0 | 0.0% | 8 |
| | 3 | 17 | 100.0% | 0 | 0.0% | 17 |
| | 4 | 8 | 100.0% | 0 | 0.0% | 8 |

Case Processing Summary

| | | Cases |
|----------------------------|----------|---------|
| | | Total |
| Proficiency in new clickUP | | Percent |
| Consequence (ii) | No skill | 100.0% |
| | 1 | 100.0% |
| | 2 | 100.0% |
| | 3 | 100.0% |
| | 4 | 100.0% |

Consequence (ii)



MEANS TABLES=PSIIcon4 BY V110
/CELLS MEDIAN.

Means

Notes

| | | |
|------------------------|--------------------------------|--|
| Output Created | 17-MAY-2013 00:30:07 | |
| Comments | | |
| Input | Data | E: \Statomet_2013\Hannelie_SPSS\SoC1and2_demo_LoU_new_13April_Hi_low_23Edited.sav |
| | Active Dataset | DataSet1 |
| | Filter | <none> |
| | Weight | <none> |
| | Split File | <none> |
| | N of Rows in Working Data File | 54 |
| Missing Value Handling | Definition of Missing | For each dependent variable in a table, user-defined missing values for the dependent and all grouping variables are treated as missing. |
| | Cases Used | Cases used for each table have no missing values in any independent variable, and not all dependent variables have missing values. |
| Syntax | | MEANS TABLES=PSICon4 BY V110... |
| Resources | Processor Time | 00:00:00.00 |
| | Elapsed Time | 00:00:00.01 |

[DataSet1] E:\Statomet_2013\Hannelie_SPSS\SoC1and2_demo_LoU_new_13April_Hi_low_23Edited.sav

Case Processing Summary

| | Cases | | | | Total N |
|---|----------|---------|----------|---------|------------|
| | Included | | Excluded | | |
| | N | Percent | N | Percent | |
| Consequence (ii) * Proficiency in new clickUP | 40 | 74.1% | 14 | 25.9% | 54 |

Case Processing Summary

| | Cases |
|---|---------|
| | Total |
| | Percent |
| Consequence (ii) * Proficiency in new clickUP | 100.0% |

Report

Median

| Proficiency in new clickUP | Consequence (ii) |
|----------------------------|---------------------|
| No skill | 7.50 |
| 1 | 27.00 |
| 2 | 31.50 |
| 3 | 19.00 |
| 4 | 48.00 |
| Total | 28.50 |

EXAMINE VARIABLES=PSIIColl15 BY V97

/PLOT BOXPLOT

/COMPARE GROUPS

/STATISTICS NONE

/CINTERVAL 95

/MISSING LISTWISE

/NOTOTAL.

Explore

Notes

| | | | |
|------------------------|--|---|--|
| Output Created | 17-MAY-2013 00:47:30 | | |
| Comments | | | |
| Input | Data | E: \Statomet_2013\Hannelie_SPSS\SoC1and2_demo_LoU_new_13April_Hi_low_23Edited.sav | |
| | Active Dataset | DataSet1 | |
| | Filter | <none> | |
| | Weight | <none> | |
| | Split File | <none> | |
| | N of Rows in Working Data File | 54 | |
| Missing Value Handling | Definition of Missing | User-defined missing values for dependent variables are treated as missing. | |
| | Cases Used | Statistics are based on cases with no missing values for any dependent variable or factor used. | |
| Syntax | EXAMINE VARIABLES=PSIIColl5 BY V97 /PLOT BOXPLOT /COMPARE GROUPS /STATISTICS NONE /INTERVAL 95 /MISSING LISTWISE /NOTOTAL. | | |
| Resources | Processor Time | 00:00:00.42 | |
| | Elapsed Time | 00:00:00.72 | |

[DataSet1] E:\Statomet_2013\Hannelie_SPSS\SoC1and2_demo_LoU_new_13April_Hi_low_23Edited.sav

Professional identity / qualification

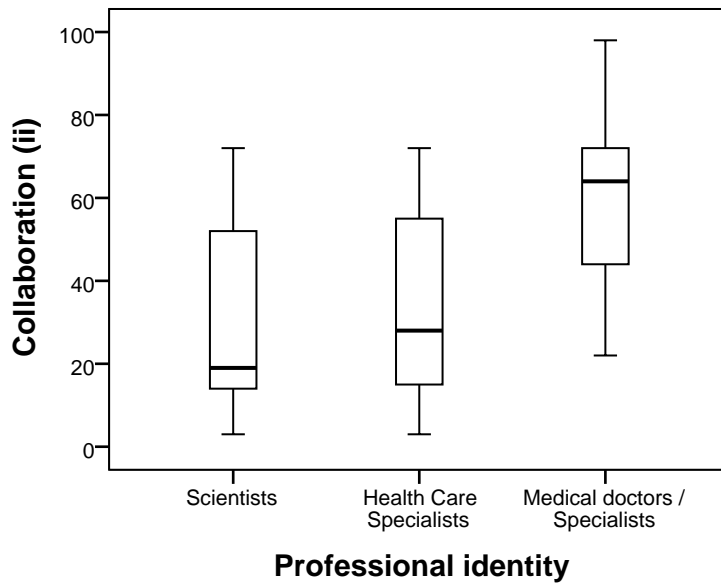
Case Processing Summary

| Professional identity / qualification | | Cases | | | |
|---------------------------------------|---|-------|---------|---------|---------|
| | | Valid | | Missing | |
| | | N | Percent | N | Percent |
| Collaboration (ii) | 1 | 9 | 90.0% | 1 | 10.0% |
| | 2 | 24 | 68.6% | 11 | 31.4% |
| | 3 | 7 | 77.8% | 2 | 22.2% |

Case Processing Summary

| Professional identity / qualification | | Cases | |
|---------------------------------------|---|-------|---------|
| | | Total | |
| | | N | Percent |
| Collaboration (ii) | 1 | 10 | 100.0% |
| | 2 | 35 | 100.0% |
| | 3 | 9 | 100.0% |

Collaboration (ii)



DATASET ACTIVATE DataSet1.

SAVE OUTFILE='E:\Statomet_2013\Hannelie_SPSS\SoCland2_demo_LoU_new_13April_Hi_low_23Edited.sav'

/COMPRESSED.

MEANS TABLES=PSIIColl15 BY V97

/CELLS MEDIAN.

Means

Notes

| | |
|---|---|
| Output Created Comments Input Data Active Dataset Filter Weight Split File N of Rows in Working Data File Missing Value Handling Definition of Missing Cases Used Syntax Resources Processor Time Elapsed Time | 17-MAY-2013 01:04:25 E: \Statomet_2013\Hannelie_SPSS\SoC1and2_demo_LoU_new_13April_Hi_low_23Edited.sav DataSet1 <none> <none> <none> 54 For each dependent variable in a table, user-defined missing values for the dependent and all grouping variables are treated as missing. Cases used for each table have no missing values in any independent variable, and not all dependent variables have missing values. MEANS TABLES=PSIIColl5 BY V97 /CELLS MEDIAN. 00:00:00.02 00:00:00.02 |
|---|---|

[DataSet1] E:\Statomet_2013\Hannelie_SPSS\SoC1and2_demo_LoU_new_13April_Hi_low_23Edited.sav

Case Processing Summary

| | Cases | | | | |
|--|----------|---------|----------|---------|-------|
| | Included | | Excluded | | Total |
| | N | Percent | N | Percent | N |
| Collaboration (ii) * Professional identity / qualification | 40 | 74.1% | 14 | 25.9% | 54 |

Case Processing Summary

| | Cases |
|--|---------|
| | Total |
| | Percent |
| Collaboration (ii) * Professional identity / qualification | 100.0% |

Report

Median

| Professional identity / qualification | Collaboration (ii) |
|---------------------------------------|-----------------------|
| Scientist | 19.00 |
| Health Care Specialist | 28.00 |
| Medical doctor | 64.00 |
| Total | 29.50 |

GET

FILE='C:\Users\Hannelie\Documents\BACKUP_ExternalHDD_studies\Statomet_2013\Hannelie_SPSS\SoCland2_demo_LoU_new_13April_Hi_low23Edited.sav'.

DATASET NAME DataSet1 WINDOW=FRONT.

*Nonparametric Tests: Independent Samples.

NPTESTS

/INDEPENDENT TEST (PSIIAwa0 PSIIInf1 PSIIPer2 PSIIMan3 PSIICon4 PSIIColl5 PSIIRef6) GROUP (V112)

/MISSING SCOPE=ANALYSIS USERMISSING=EXCLUDE

/CRITERIA ALPHA=0.05 CILEVEL=95.

Nonparametric Tests

Notes

| | | |
|----------------|---|--|
| Output Created | 20-FEB-2014 20:12:04 | |
| Comments | | |
| Input | Data | C: \Users\Hannelie\Documents\BACKUP_External HDD_studies\Statomet_2013\Hannelie_SPSS\SoC1and2_demo_LoU_new_13April_Hi_low_23Edited.sav |
| | Active Dataset | DataSet1 |
| | Filter | <none> |
| | Weight | <none> |
| | Split File | <none> |
| | N of Rows in Working Data File | 54 |
| Syntax | NPTESTS /INDEPENDENT TEST (PSIIAwa0 PSIIInf1 PSIIPer2 PSIIMan3 PSIICon4 PSIIColl5 PSIIRef6) GROUP (V112) /MISSING SCOPE=ANALYSIS USERMISSING=EXCLUDE /CRITERIA ALPHA=0.05 CILEVEL=95. | |
| Resources | Processor Time | 00:00:01.11 |
| | Elapsed Time | 00:00:01.48 |

[DataSet1] C:\Users\Hannelie\Documents\BACKUP_External HDD_studies\Statomet_2013\Hannelie_SPSS\SoC1and2_demo_LoU_new_13April_Hi_low_23Edited.sav

Hypothesis Test Summary

| | Null Hypothesis | Test | Sig. | Decision |
|----------|--|---|------|-----------------------------|
| 3 | The distribution of Personal (ii) is the same across categories of Academic qualification. | Independent-Samples Kruskal-Wallis Test | .040 | Reject the null hypothesis. |

Asymptotic significances are displayed. The significance level is .05.

STATS OUTPUT ATTRS
ORIENTATION=PORTRAIT.

EXAMINE VARIABLES=PSIIPer2

/COMPARE VARIABLE

/PLOT=BOXPLOT

/STATISTICS=NONE

/NOTOTAL

/ID=V112

/MISSING=LISTWISE.

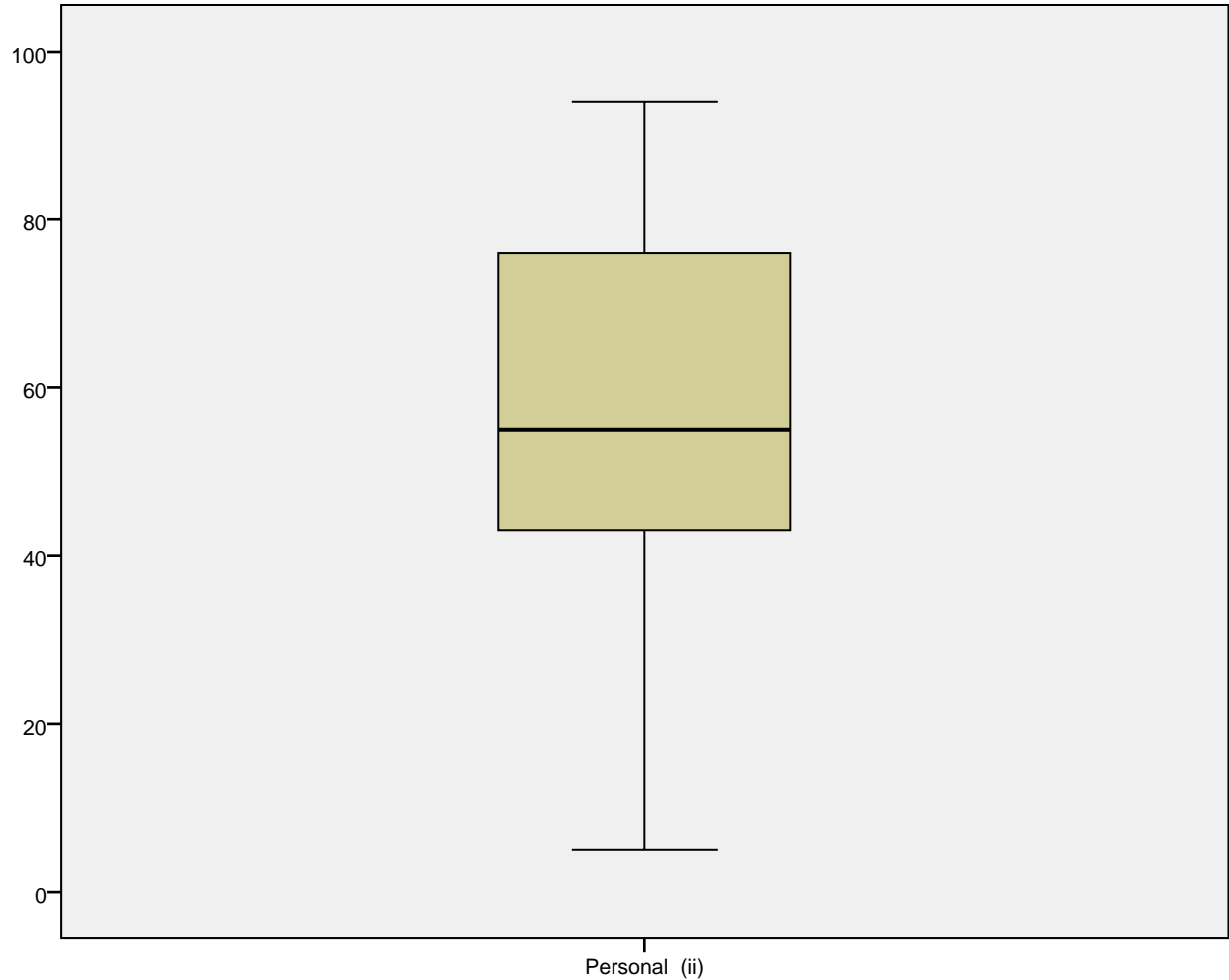
Explore

Notes

| | | |
|------------------------|--------------------------------|--|
| Output Created | | 20-FEB-2014 20:26:09 |
| Comments | | |
| Input | Data | C: \Users\Hannelie\Documents\BACKUP_External HDD_studies\Statomet_2013\Hannelie_SPSS\SoC1and2_demo_LoU_new_13April_Hi_low_23Edited.sav |
| | Active Dataset | DataSet1 |
| | Filter | <none> |
| | Weight | <none> |
| | Split File | <none> |
| | N of Rows in Working Data File | 54 |
| Missing Value Handling | Definition of Missing | User-defined missing values for dependent variables are treated as missing. |
| | Cases Used | Statistics are based on cases with no missing values for any dependent variable or factor used. |
| Syntax | | EXAMINE VARIABLES=PSIIPer2 /COMPARE VARIABLE /PLOT=BOXPLOT /STATISTICS=NONE /NOTOTAL /ID=V112 /MISSING=LISTWISE. |
| Resources | Processor Time | 00:00:01.11 |
| | Elapsed Time | 00:00:01.60 |

Case Processing Summary

| | Cases | | | | | |
|---------------|-------|---------|---------|---------|-------|---------|
| | Valid | | Missing | | Total | |
| | N | Percent | N | Percent | N | Percent |
| Personal (ii) | 40 | 74.1% | 14 | 25.9% | 54 | 100.0% |



```
SET TLook=None TABLERENDER=light SUMMARY=None ROWSBREAK=100 TOLERANCE=1 TFit=Both CELLSBREAK=10000.
```

```
SET TLook=None TABLERENDER=light SUMMARY=None ROWSBREAK=100 TOLERANCE=1 TFit=Both CELLSBREAK=10000.
```

```
SET TLook=None TABLERENDER=light SUMMARY=None ROWSBREAK=100 TOLERANCE=1 TFit=Both CELLSBREAK=10000.
```

```
EXAMINE VARIABLES=PSIIPer2 BY V112
```

```
  /PLOT BOXPLOT STEMLEAF
```

```
  /COMPARE GROUPS
```

```
  /STATISTICS NONE
```

```
  /CINTERVAL 95
```

```
  /MISSING LISTWISE
```

```
  /NOTOTAL.
```

Explore

Notes

| | | |
|------------------------|--------------------------------|---|
| Output Created | | 20-FEB-2014 21:10:47 |
| Comments | | |
| Input | Data | C: \Users\Hannelie\Documents\BACKUP_External HDD_studies\Statomet_2013\Hannelie_SPSS\SoC1and2_demo_LoU_new_13April_Hi_low_23Edited.sav |
| | Active Dataset | DataSet1 |
| | Filter | <none> |
| | Weight | <none> |
| | Split File | <none> |
| | N of Rows in Working Data File | 54 |
| Missing Value Handling | Definition of Missing | User-defined missing values for dependent variables are treated as missing. |
| | Cases Used | Statistics are based on cases with no missing values for any dependent variable or factor used. |
| Syntax | | EXAMINE VARIABLES=PSIIPer2 BY V112 /PLOT BOXPLOT STEMLEAF /COMPARE GROUPS /STATISTICS NONE /CINTERVAL 95 /MISSING LISTWISE /NOTOTAL. |
| Resources | Processor Time | 00:00:00.64 |
| | Elapsed Time | 00:00:00.70 |

Warnings

Personal (ii) is constant when Academic qualification = Professor. It will be included in any boxplots produced but other output will be omitted.

Academic qualification

Case Processing Summary

| Academic qualification | | Cases | | | | |
|------------------------|--------------|-------|---------|---------|---------|-------|
| | | Valid | | Missing | | Total |
| | | N | Percent | N | Percent | N |
| Personal (ii) | Diploma | 3 | 100.0% | 0 | 0.0% | 3 |
| | Bachelor | 4 | 100.0% | 0 | 0.0% | 4 |
| | Honours | 4 | 100.0% | 0 | 0.0% | 4 |
| | Masters | 21 | 100.0% | 0 | 0.0% | 21 |
| | PhD/Doctoral | 3 | 100.0% | 0 | 0.0% | 3 |
| | Post Doc | 3 | 100.0% | 0 | 0.0% | 3 |
| | Professor | 1 | 100.0% | 0 | 0.0% | 1 |

Case Processing Summary

| Academic qualification | | Cases |
|------------------------|--------------|---------|
| | | Total |
| | | Percent |
| Personal (ii) | Diploma | 100.0% |
| | Bachelor | 100.0% |
| | Honours | 100.0% |
| | Masters | 100.0% |
| | PhD/Doctoral | 100.0% |
| | Post Doc | 100.0% |
| | Professor | 100.0% |

Personal (ii)

Stem-and-Leaf Plots

Personal (ii) Stem-and-Leaf Plot for
V112= Diploma

```

Frequency      Stem & Leaf
      2.00      7 . 08
      1.00      8 . 3
  
```

Stem width: 10
Each leaf: 1 case(s)

Personal (ii) Stem-and-Leaf Plot for
V112= Bachelor

| Frequency | Stem & | Leaf |
|-----------|--------|------|
| 3.00 | 0 . | 233 |
| 1.00 | 0 . | 8 |

Stem width: **
Each leaf: 1 case(s)

Personal (ii) Stem-and-Leaf Plot for
V112= Honours

| Frequency | Stem & | Leaf |
|-----------|--------|------|
| 1.00 | 3 . | 9 |
| 1.00 | 4 . | 8 |
| 1.00 | 5 . | 5 |
| .00 | 6 . | |
| 1.00 | 7 . | 6 |

Stem width: 10
Each leaf: 1 case(s)

Personal (ii) Stem-and-Leaf Plot for
V112= Masters

| Frequency | Stem & | Leaf |
|-----------|--------|--------|
| 1.00 | 2 . | 5 |
| 1.00 | 3 . | 9 |
| 6.00 | 4 . | 115588 |
| 5.00 | 5 . | 55799 |
| 2.00 | 6 . | 77 |
| 3.00 | 7 . | 068 |
| 3.00 | 8 . | 599 |

Stem width: 10
Each leaf: 1 case(s)

Personal (ii) Stem-and-Leaf Plot for
V112= PhD/Doctoral

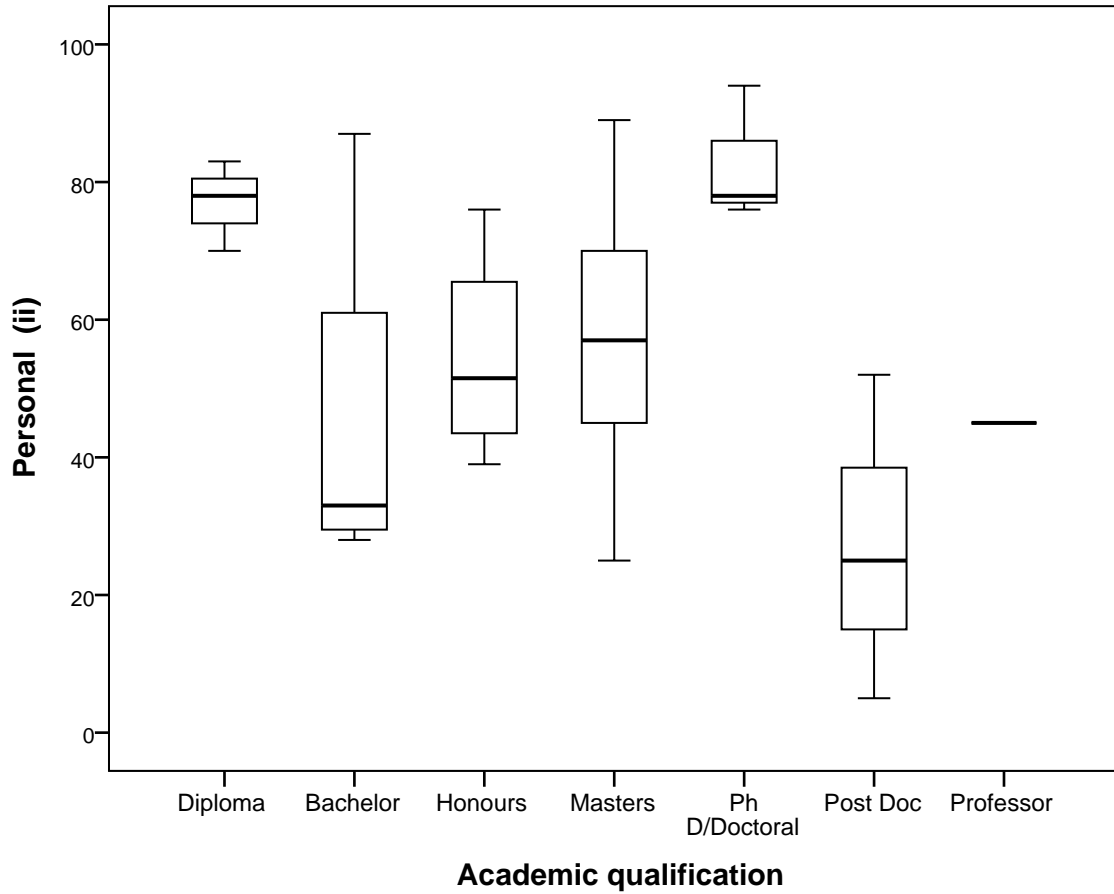
| Frequency | Stem & | Leaf |
|-----------|--------|------|
| 2.00 | 7 . | 68 |
| .00 | 8 . | |
| 1.00 | 9 . | 4 |

Stem width: 10
Each leaf: 1 case(s)

Personal (ii) Stem-and-Leaf Plot for
V112= Post Doc

| Frequency | Stem & | Leaf |
|-----------|--------|------|
| 2.00 | 0 . | 02 |
| 1.00 | 0 . | 5 |

Stem width: **
Each leaf: 1 case(s)



```
EXAMINE VARIABLES=PSIIcon4 BY V110  
/PLOT BOXPLOT STEMLEAF  
/COMPARE GROUPS  
/STATISTICS NONE  
/CINTERVAL 95  
/MISSING LISTWISE  
/NOTOTAL.
```

Explore

Notes

| | | |
|------------------------|---|--|
| Output Created | 20-FEB-2014 21:17:04 | |
| Comments | | |
| Input | Data | C: \Users\Hannelie\Documents\BACKUP_External HDD_studies\Statomet_2013\Hannelie_SPSS\SoC1and2_demo_LoU_new_13April_Hi_low_23Edited.sav |
| | Active Dataset | DataSet1 |
| | Filter | <none> |
| | Weight | <none> |
| | Split File | <none> |
| | N of Rows in Working Data File | 54 |
| Missing Value Handling | Definition of Missing | User-defined missing values for dependent variables are treated as missing. |
| | Cases Used | Statistics are based on cases with no missing values for any dependent variable or factor used. |
| Syntax | EXAMINE VARIABLES=PSIICon4 BY V110 /PLOT BOXPLOT STEMLEAF /COMPARE GROUPS /STATISTICS NONE /CINTERVAL 95 /MISSING LISTWISE /NOTOTAL. | |
| Resources | Processor Time | 00:00:00.53 |
| | Elapsed Time | 00:00:00.58 |

Proficiency in new clickUP

Case Processing Summary

| | | Cases | | | | |
|------------------|----------|-------|---------|---------|---------|-------|
| | | Valid | | Missing | | Total |
| | | N | Percent | N | Percent | N |
| Consequence (ii) | No skill | 4 | 100.0% | 0 | 0.0% | 4 |
| | 1 | 3 | 100.0% | 0 | 0.0% | 3 |
| | 2 | 8 | 100.0% | 0 | 0.0% | 8 |
| | 3 | 17 | 100.0% | 0 | 0.0% | 17 |
| | 4 | 8 | 100.0% | 0 | 0.0% | 8 |

Case Processing Summary

| | | Cases |
|------------------|----------|---------|
| | | Total |
| | | Percent |
| Consequence (ii) | No skill | 100.0% |
| | 1 | 100.0% |
| | 2 | 100.0% |
| | 3 | 100.0% |
| | 4 | 100.0% |

Consequence (ii)

Stem-and-Leaf Plots

Consequence (ii) Stem-and-Leaf Plot for
 V110= No skill

| Frequency | Stem & Leaf |
|-----------|-------------|
| 3.00 | 0 . 178 |
| .00 | 1 . |
| 1.00 | 2 . 1 |

Stem width: 10
 Each leaf: 1 case(s)

Consequence (ii) Stem-and-Leaf Plot for
 V110= 1

| Frequency | Stem & Leaf |
|-----------|-------------|
| 3.00 | 0 . 023 |

Stem width: **
 Each leaf: 1 case(s)

Consequence (ii) Stem-and-Leaf Plot for
 V110= 2

| Frequency | Stem & | Leaf |
|-----------|----------|--------|
| 1.00 | 0 . | 8 |
| 1.00 | 1 . | 9 |
| 1.00 | 2 . | 1 |
| 3.00 | 3 . | 033 |
| 1.00 | 4 . | 3 |
| 1.00 | Extremes | (>=82) |

Stem width: 10
Each leaf: 1 case(s)

Consequence (ii) Stem-and-Leaf Plot for
V110= 3

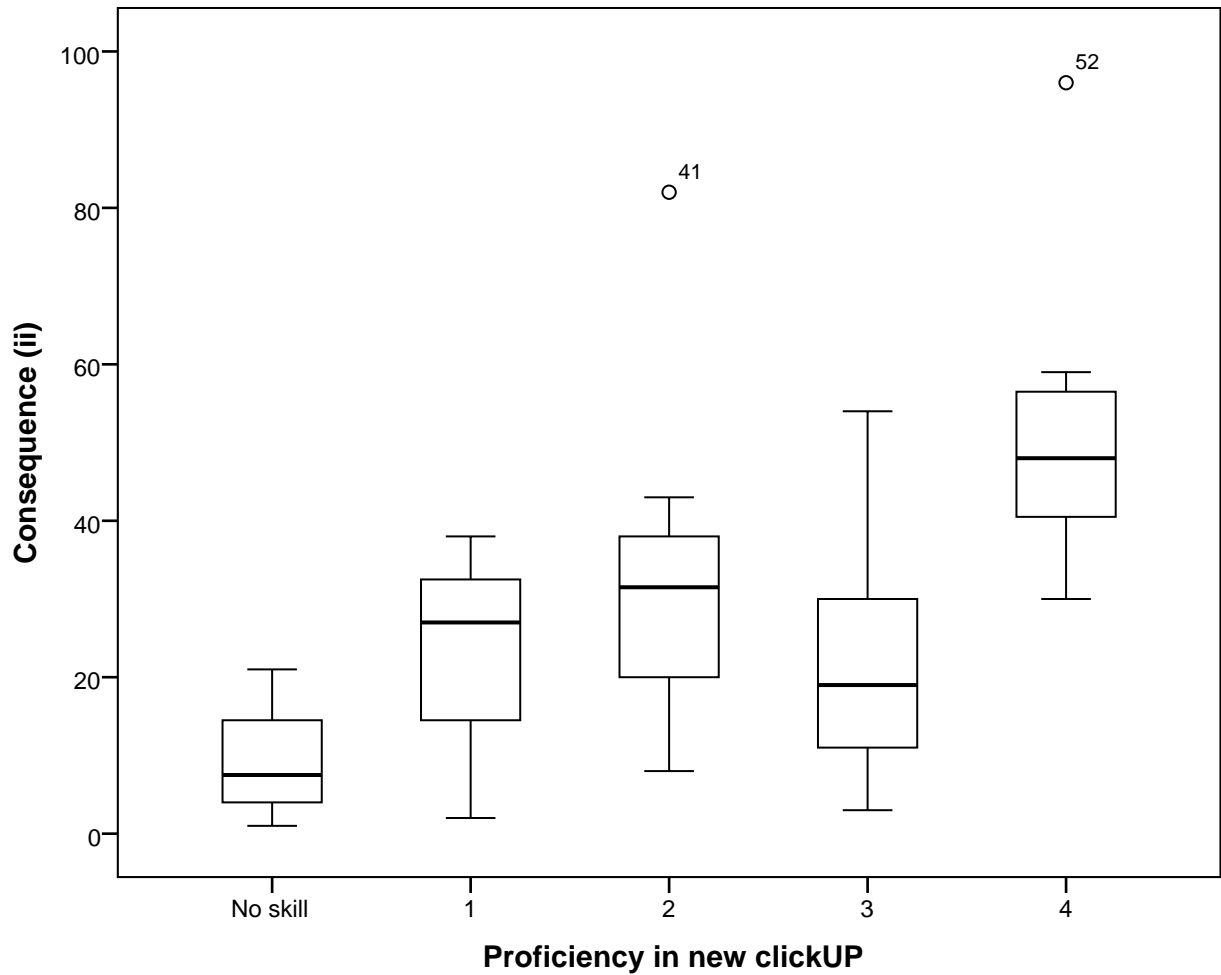
| Frequency | Stem & | Leaf |
|-----------|--------|--------|
| 4.00 | 0 . | 3459 |
| 6.00 | 1 . | 166699 |
| 1.00 | 2 . | 1 |
| 3.00 | 3 . | 003 |
| 2.00 | 4 . | 88 |
| 1.00 | 5 . | 4 |

Stem width: 10
Each leaf: 1 case(s)

Consequence (ii) Stem-and-Leaf Plot for
V110= 4

| Frequency | Stem & | Leaf |
|-----------|----------|--------|
| 2.00 | 3 . | 08 |
| 3.00 | 4 . | 388 |
| 2.00 | 5 . | 49 |
| 1.00 | Extremes | (>=96) |

Stem width: 10
Each leaf: 1 case(s)



```
EXAMINE VARIABLES=MaxPCTL_2 BY vv37  
/PLOT BOXPLOT STEMLEAF  
/COMPARE GROUPS  
/STATISTICS NONE  
/CINTERVAL 95  
/MISSING LISTWISE  
/NOTOTAL.
```

Explore

Notes

| | | |
|------------------------|--------------------------------|---|
| Output Created | | 20-FEB-2014 21:22:03 |
| Comments | | |
| Input | Data | C: \Users\Hannelie\Documents\BACKUP_External HDD_studies\Statomet_2013\Hannelie_SPSS\SoC1and2_demo_LoU_new_13April_Hi_low_23Edited.sav |
| | Active Dataset | DataSet1 |
| | Filter | <none> |
| | Weight | <none> |
| | Split File | <none> |
| | N of Rows in Working Data File | 54 |
| Missing Value Handling | Definition of Missing | User-defined missing values for dependent variables are treated as missing. |
| | Cases Used | Statistics are based on cases with no missing values for any dependent variable or factor used. |
| Syntax | | EXAMINE VARIABLES=MaxPCTL__2 BY vv37 /PLOT BOXPLOT STEMLEAF /COMPARE GROUPS /STATISTICS NONE /CINTERVAL 95 /MISSING LISTWISE /NOTOTAL. |
| Resources | Processor Time | 00:00:00.59 |
| | Elapsed Time | 00:00:00.70 |

Warnings

| |
|---|
| Highest_SoCii is constant when Lecturing experience = 11-15 years. It will be included in any boxplots produced but other output will be omitted. |
|---|

Lecturing experience

Case Processing Summary

| | | Cases | | | | |
|---------------|----------------------|-------|---------|---------|---------|-------|
| | | Valid | | Missing | | Total |
| | | N | Percent | N | Percent | N |
| Highest_SoCii | Lecturing experience | | | | | |
| | 5 years | 15 | 68.2% | 7 | 31.8% | 22 |
| | 6-10 years | 7 | 77.8% | 2 | 22.2% | 9 |
| | 11-15 years | 7 | 87.5% | 1 | 12.5% | 8 |
| | 16-20 years | 4 | 100.0% | 0 | 0.0% | 4 |
| | 21 years | 7 | 63.6% | 4 | 36.4% | 11 |

Case Processing Summary

| | | Cases |
|----------------------|-------------|---------|
| | | Total |
| Lecturing experience | | Percent |
| Highest_SoCii | 5 years | 100.0% |
| | 6-10 years | 100.0% |
| | 11-15 years | 100.0% |
| | 16-20 years | 100.0% |
| | 21 years | 100.0% |

Highest_SoCii

Stem-and-Leaf Plots

Highest_SoCii Stem-and-Leaf Plot for
vv37= 5 years

```

Frequency      Stem & Leaf

    11.00      1 . 00000000000
     .00      1 .
     1.00      2 . 0
     3.00 Extremes      (>=3)
  
```

```

Stem width: 1
Each leaf: 1 case(s)
  
```

Highest_SoCii Stem-and-Leaf Plot for
vv37= 6-10 years

```

Frequency      Stem & Leaf

     6.00      1 . 000000
     1.00 Extremes      (>=6)
  
```

```

Stem width: 1
Each leaf: 1 case(s)
  
```

Highest_SoCii Stem-and-Leaf Plot for

vv37= 16-20 years

| Frequency | Stem & | Leaf |
|-----------|--------|------|
| 3.00 | 0 . | 244 |
| 1.00 | 0 . | 7 |

Stem width: *

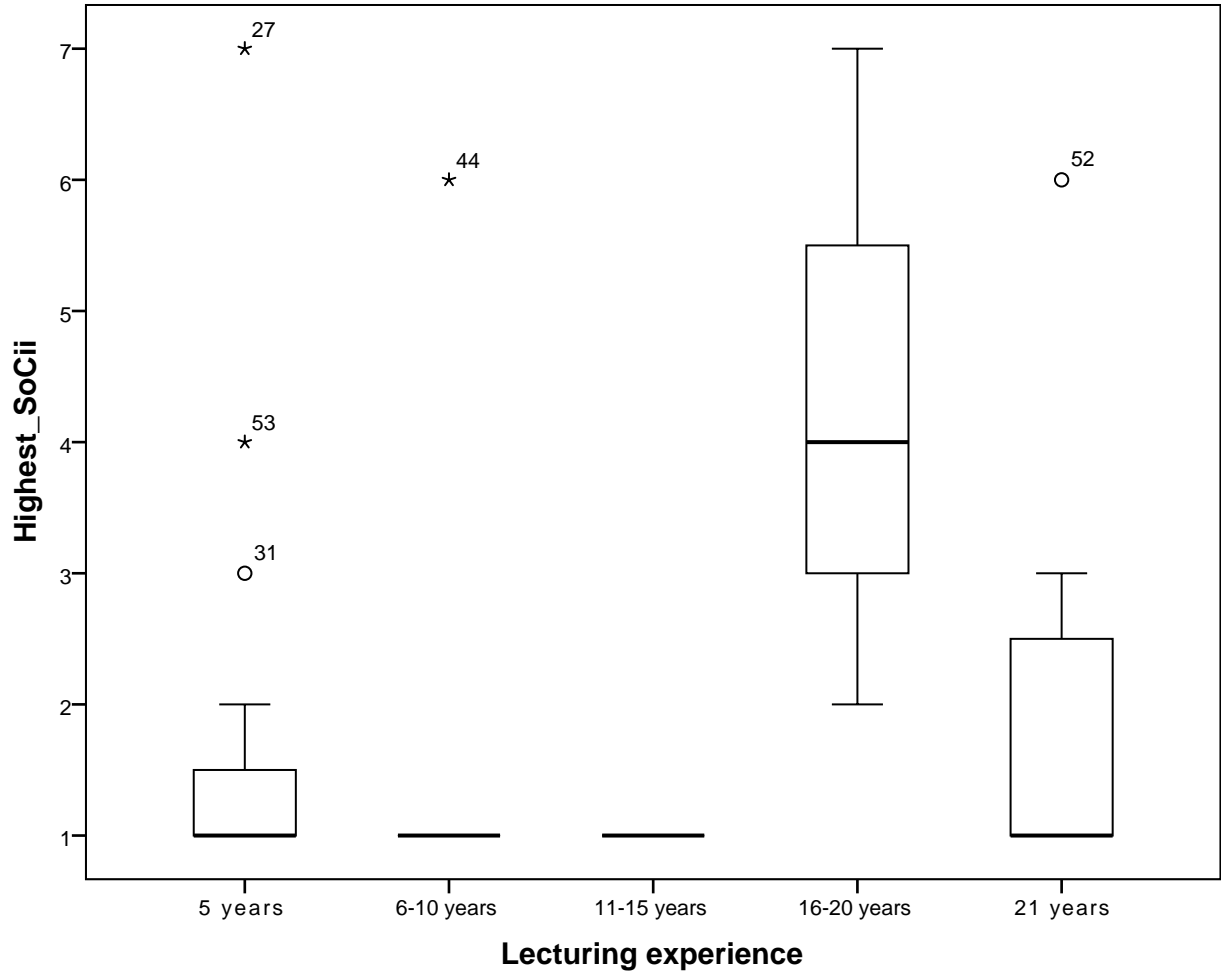
Each leaf: 1 case(s)

Highest_SoCii Stem-and-Leaf Plot for
vv37= 21 years

| Frequency | Stem & | Leaf |
|-----------|----------|-------|
| 4.00 | 1 . | 0000 |
| .00 | 1 . | |
| 1.00 | 2 . | 0 |
| .00 | 2 . | |
| 1.00 | 3 . | 0 |
| 1.00 | Extremes | (>=6) |

Stem width: 1

Each leaf: 1 case(s)



NONPAR CORR

/VARIABLES=Gender PSIAwa0 PSIInf1 PSIPer2 PSIMan3 PSICon4 PSIColl5 PSIRef

6

/PRINT=SPEARMAN TWOTAIL NOSIG

/MISSING=PAIRWISE.

Nonparametric Correlations

Notes

| | | |
|------------------------|--------------------------------|--|
| Output Created | | 25-APR-2013 21:24:33 |
| Comments | | |
| Input | Data | E: \Statomet_2013\Hannelie_SPSS\SoC1and2_demo_LoU_new_13April_Hi_low_23Edited.sav |
| | Active Dataset | DataSet1 |
| | Filter | <none> |
| | Weight | <none> |
| | Split File | <none> |
| | N of Rows in Working Data File | 54 |
| Missing Value Handling | Definition of Missing | User-defined missing values are treated as missing. |
| | Cases Used | Statistics for each pair of variables are based on all the cases with valid data for that pair. |
| Syntax | | NONPAR CORR /VARIABLES=Gender PSIAwa0 PSIInf1 PSIPer2 PSIMan3 PSICon4 PSIColl5 PSIRef6 /PRINT=SPEARMAN TWOTAIL NOSIG /MISSING=PAIRWISE. |
| Resources | Processor Time | 00:00:00.02 |
| | Elapsed Time | 00:00:00.02 |
| | Number of Cases Allowed | 71493 cases ^a |

a. Based on availability of workspace memory

[DataSet1] E:\Statomet_2013\Hannelie_SPSS\SoC1and2_demo_LoU_new_13April_Hi_low_23Edited.sav

Correlations

| | | | Gender | Awareness (i) |
|----------------|-------------------|-------------------------|--------|---------------|
| Spearman's rho | Gender | Correlation Coefficient | 1.000 | .086 |
| | | Sig. (2-tailed) | . | .536 |
| | | N | 54 | 54 |
| | Awareness (i) | Correlation Coefficient | .086 | 1.000 |
| | | Sig. (2-tailed) | .536 | . |
| | | N | 54 | 54 |
| | Informational (i) | Correlation Coefficient | .127 | .228 |
| | | Sig. (2-tailed) | .359 | .098 |
| | | N | 54 | 54 |
| | Personal (i) | Correlation Coefficient | .112 | .205 |
| | | Sig. (2-tailed) | .419 | .136 |
| | | N | 54 | 54 |
| | Management (i) | Correlation Coefficient | -.072 | .307* |
| | | Sig. (2-tailed) | .605 | .024 |
| | | N | 54 | 54 |
| | Consequence (i) | Correlation Coefficient | -.134 | -.026 |
| | | Sig. (2-tailed) | .334 | .853 |
| | | N | 54 | 54 |
| | Collaboration (i) | Correlation Coefficient | .013 | .126 |
| | | Sig. (2-tailed) | .923 | .363 |
| | | N | 54 | 54 |
| | Refocusing (i) | Correlation Coefficient | .122 | .028 |
| | | Sig. (2-tailed) | .378 | .841 |
| | | N | 54 | 54 |

Correlations

| | | | Informational (i) | Personal (i) |
|-------------------|--------|-------------------------|-------------------|--------------|
| Spearman's rho | Gender | Correlation Coefficient | .127 | .112 |
| | | Sig. (2-tailed) | .359 | .419 |
| | | N | 54 | 54 |
| Awareness (i) | | Correlation Coefficient | .228 | .205 |
| | | Sig. (2-tailed) | .098 | .136 |
| | | N | 54 | 54 |
| Informational (i) | | Correlation Coefficient | 1.000 | .506** |
| | | Sig. (2-tailed) | . | .000 |
| | | N | 54 | 54 |
| Personal (i) | | Correlation Coefficient | .506** | 1.000 |
| | | Sig. (2-tailed) | .000 | . |
| | | N | 54 | 54 |
| Management (i) | | Correlation Coefficient | .396** | .482** |
| | | Sig. (2-tailed) | .003 | .000 |
| | | N | 54 | 54 |
| Consequence (i) | | Correlation Coefficient | .229 | .449** |
| | | Sig. (2-tailed) | .096 | .001 |
| | | N | 54 | 54 |
| Collaboration (i) | | Correlation Coefficient | .368** | .520** |
| | | Sig. (2-tailed) | .006 | .000 |
| | | N | 54 | 54 |
| Refocusing (i) | | Correlation Coefficient | .236 | .403** |
| | | Sig. (2-tailed) | .086 | .003 |
| | | N | 54 | 54 |

Correlations

| | | | Management (i) | Consequence (i) |
|-------------------|-------------------------|-------------------------|----------------|-----------------|
| Spearman's rho | Gender | Correlation Coefficient | -.072 | -.134 |
| | | Sig. (2-tailed) | .605 | .334 |
| | | N | 54 | 54 |
| | Awareness (i) | Correlation Coefficient | .307* | -.026 |
| | | Sig. (2-tailed) | .024 | .853 |
| | | N | 54 | 54 |
| | Informational (i) | Correlation Coefficient | .396** | .229 |
| | | Sig. (2-tailed) | .003 | .096 |
| | | N | 54 | 54 |
| | Personal (i) | Correlation Coefficient | .482** | .449** |
| Sig. (2-tailed) | | .000 | .001 | |
| N | | 54 | 54 | |
| Management (i) | Correlation Coefficient | 1.000 | .115 | |
| | Sig. (2-tailed) | . | .410 | |
| | N | 54 | 54 | |
| Consequence (i) | Correlation Coefficient | .115 | 1.000 | |
| | Sig. (2-tailed) | .410 | . | |
| | N | 54 | 54 | |
| Collaboration (i) | Correlation Coefficient | -.025 | .480** | |
| | Sig. (2-tailed) | .857 | .000 | |
| | N | 54 | 54 | |
| Refocusing (i) | Correlation Coefficient | .182 | .376** | |
| | Sig. (2-tailed) | .187 | .005 | |
| | N | 54 | 54 | |

Correlations

| | | | Collaboration (i) | Refocusing (i) |
|-------------------|--------|-------------------------|-------------------|----------------|
| Spearman's rho | Gender | Correlation Coefficient | .013 | .122 |
| | | Sig. (2-tailed) | .923 | .378 |
| | | N | 54 | 54 |
| Awareness (i) | | Correlation Coefficient | .126 | .028 |
| | | Sig. (2-tailed) | .363 | .841 |
| | | N | 54 | 54 |
| Informational (i) | | Correlation Coefficient | .368** | .236 |
| | | Sig. (2-tailed) | .006 | .086 |
| | | N | 54 | 54 |
| Personal (i) | | Correlation Coefficient | .520** | .403** |
| | | Sig. (2-tailed) | .000 | .003 |
| | | N | 54 | 54 |
| Management (i) | | Correlation Coefficient | -.025 | .182 |
| | | Sig. (2-tailed) | .857 | .187 |
| | | N | 54 | 54 |
| Consequence (i) | | Correlation Coefficient | .480** | .376** |
| | | Sig. (2-tailed) | .000 | .005 |
| | | N | 54 | 54 |
| Collaboration (i) | | Correlation Coefficient | 1.000 | .194 |
| | | Sig. (2-tailed) | . | .160 |
| | | N | 54 | 54 |
| Refocusing (i) | | Correlation Coefficient | .194 | 1.000 |
| | | Sig. (2-tailed) | .160 | . |
| | | N | 54 | 54 |

*. Correlation is significant at the 0.05 level (2-tailed).

**.. Correlation is significant at the 0.01 level (2-tailed).

NONPAR CORR

/VARIABLES=Gender PSIIAwa0 PSIIInf1 PSIIPer2 PSIIMan3 PSIIcon4 PSIIColl5
PSIIRef6

/PRINT=SPEARMAN TWOTAIL NOSIG

/MISSING=PAIRWISE.

Nonparametric Correlations

Notes

| | | |
|------------------------|--------------------------------|--|
| Output Created | | 25-APR-2013 21:25:17 |
| Comments | | |
| Input | Data | E: \Statomet_2013\Hannelie_SPSS\So C1and2_demo_LoU_new_13April_H i_low_23Edited.sav |
| | Active Dataset | DataSet1 |
| | Filter | <none> |
| | Weight | <none> |
| | Split File | <none> |
| | N of Rows in Working Data File | 54 |
| Missing Value Handling | Definition of Missing | User-defined missing values are treated as missing. |
| | Cases Used | Statistics for each pair of variables are based on all the cases with valid data for that pair. |
| Syntax | | NONPAR CORR /VARIABLES=Gender PSIIAwa0 PSIIInf1 PSIIPer2 PSIIMan3 PSIICon4 PSIIColl5 PSIIRef6 /PRINT=SPEARMAN TWOTAIL NOSIG /MISSING=PAIRWISE. |
| Resources | Processor Time | 00:00:00.02 |
| | Elapsed Time | 00:00:00.02 |
| | Number of Cases Allowed | 71493 cases ^a |

a. Based on availability of workspace memory

[DataSet1] E:\Statomet_2013\Hannelie_SPSS\SoC1and2_demo_LoU_new_13April_Hi_low_23Edited.sav

Correlations

| | | | Gender | Awareness (ii) |
|--------------------|--------------------|-------------------------|--------|--------------------|
| Spearman's rho | Gender | Correlation Coefficient | 1.000 | -.194 |
| | | Sig. (2-tailed) | . | .231 |
| | | N | 54 | 40 |
| Awareness (ii) | Awareness (ii) | Correlation Coefficient | -.194 | 1.000 |
| | | Sig. (2-tailed) | .231 | . |
| | | N | 40 | 40 |
| Informational (ii) | Informational (ii) | Correlation Coefficient | .054 | -.137 |
| | | Sig. (2-tailed) | .739 | .398 |
| | | N | 40 | 40 |
| Personal (ii) | Personal (ii) | Correlation Coefficient | .154 | .005 |
| | | Sig. (2-tailed) | .342 | .977 |
| | | N | 40 | 40 |
| Management (ii) | Management (ii) | Correlation Coefficient | -.011 | .153 |
| | | Sig. (2-tailed) | .944 | .347 |
| | | N | 40 | 40 |
| Consequence (ii) | Consequence (ii) | Correlation Coefficient | -.120 | -.332 [*] |
| | | Sig. (2-tailed) | .461 | .037 |
| | | N | 40 | 40 |
| Collaboration (ii) | Collaboration (ii) | Correlation Coefficient | -.043 | -.142 |
| | | Sig. (2-tailed) | .793 | .383 |
| | | N | 40 | 40 |
| Refocusing (ii) | Refocusing (ii) | Correlation Coefficient | .108 | -.073 |
| | | Sig. (2-tailed) | .505 | .654 |
| | | N | 40 | 40 |

Correlations

| | | | Informational (ii) | Personal (ii) |
|----------------|--------------------|-------------------------|-----------------------|---------------|
| Spearman's rho | Gender | Correlation Coefficient | .054 | .154 |
| | | Sig. (2-tailed) | .739 | .342 |
| | | N | 40 | 40 |
| | Awareness (ii) | Correlation Coefficient | -.137 | .005 |
| | | Sig. (2-tailed) | .398 | .977 |
| | | N | 40 | 40 |
| | Informational (ii) | Correlation Coefficient | 1.000 | .650** |
| | | Sig. (2-tailed) | . | .000 |
| | | N | 40 | 40 |
| | Personal (ii) | Correlation Coefficient | .650** | 1.000 |
| | | Sig. (2-tailed) | .000 | . |
| | | N | 40 | 40 |
| | Management (ii) | Correlation Coefficient | .490** | .477** |
| | | Sig. (2-tailed) | .001 | .002 |
| | | N | 40 | 40 |
| | Consequence (ii) | Correlation Coefficient | .311 | .247 |
| | | Sig. (2-tailed) | .051 | .125 |
| | | N | 40 | 40 |
| | Collaboration (ii) | Correlation Coefficient | .306 | .423** |
| | | Sig. (2-tailed) | .055 | .007 |
| | | N | 40 | 40 |
| | Refocusing (ii) | Correlation Coefficient | .385* | .359* |
| | | Sig. (2-tailed) | .014 | .023 |
| | | N | 40 | 40 |

Correlations

| | | | Management (ii) | Consequence (ii) |
|--------------------|-------------------------|-------------------------|--------------------|---------------------|
| Spearman's rho | Gender | Correlation Coefficient | -.011 | -.120 |
| | | Sig. (2-tailed) | .944 | .461 |
| | | N | 40 | 40 |
| | Awareness (ii) | Correlation Coefficient | .153 | -.332 [*] |
| | | Sig. (2-tailed) | .347 | .037 |
| | | N | 40 | 40 |
| | Informational (ii) | Correlation Coefficient | .490 ^{**} | .311 |
| | | Sig. (2-tailed) | .001 | .051 |
| | | N | 40 | 40 |
| | Personal (ii) | Correlation Coefficient | .477 ^{**} | .247 |
| | | Sig. (2-tailed) | .002 | .125 |
| | | N | 40 | 40 |
| | Management (ii) | Correlation Coefficient | 1.000 | .190 |
| | | Sig. (2-tailed) | . | .241 |
| | | N | 40 | 40 |
| | Consequence (ii) | Correlation Coefficient | .190 | 1.000 |
| | | Sig. (2-tailed) | .241 | . |
| | | N | 40 | 40 |
| Collaboration (ii) | Correlation Coefficient | .277 | .315 [*] | |
| | Sig. (2-tailed) | .083 | .048 | |
| | N | 40 | 40 | |
| Refocusing (ii) | Correlation Coefficient | .232 | .534 ^{**} | |
| | Sig. (2-tailed) | .150 | .000 | |
| | N | 40 | 40 | |

Correlations

| | | | Collaboration (ii) | Refocusing (ii) |
|--------------------|--------|-------------------------|-----------------------|-----------------|
| Spearman's rho | Gender | Correlation Coefficient | -.043 | .108 |
| | | Sig. (2-tailed) | .793 | .505 |
| | | N | 40 | 40 |
| Awareness (ii) | | Correlation Coefficient | -.142 | -.073 |
| | | Sig. (2-tailed) | .383 | .654 |
| | | N | 40 | 40 |
| Informational (ii) | | Correlation Coefficient | .306 | .385* |
| | | Sig. (2-tailed) | .055 | .014 |
| | | N | 40 | 40 |
| Personal (ii) | | Correlation Coefficient | .423** | .359* |
| | | Sig. (2-tailed) | .007 | .023 |
| | | N | 40 | 40 |
| Management (ii) | | Correlation Coefficient | .277 | .232 |
| | | Sig. (2-tailed) | .083 | .150 |
| | | N | 40 | 40 |
| Consequence (ii) | | Correlation Coefficient | .315* | .534** |
| | | Sig. (2-tailed) | .048 | .000 |
| | | N | 40 | 40 |
| Collaboration (ii) | | Correlation Coefficient | 1.000 | .252 |
| | | Sig. (2-tailed) | . | .117 |
| | | N | 40 | 40 |
| Refocusing (ii) | | Correlation Coefficient | .252 | 1.000 |
| | | Sig. (2-tailed) | .117 | . |
| | | N | 40 | 40 |

*. Correlation is significant at the 0.05 level (2-tailed).

** . Correlation is significant at the 0.01 level (2-tailed).

NONPAR CORR

/VARIABLES=vv37 PSIAwa0 PSIInf1 PSIPer2 PSIMan3 PSICon4 PSIColl5 PSIRef6

/PRINT=SPEARMAN TWOTAIL NOSIG

/MISSING=PAIRWISE.

Nonparametric Correlations

Notes

| | | |
|------------------------|--------------------------------|---|
| Output Created | | 25-APR-2013 21:26:41 |
| Comments | | |
| Input | Data | E: \Statomet_2013\Hannelie_SPSS\SoC1and2_demo_LoU_new_13April_Hi_low_23Edited.sav |
| | Active Dataset | DataSet1 |
| | Filter | <none> |
| | Weight | <none> |
| | Split File | <none> |
| | N of Rows in Working Data File | 54 |
| Missing Value Handling | Definition of Missing | User-defined missing values are treated as missing. |
| | Cases Used | Statistics for each pair of variables are based on all the cases with valid data for that pair. |
| Syntax | | NONPAR CORR /VARIABLES=vv37 PSIAwa0 PSIIInf1 PSIPer2 PSIMan3 PSICon4 PSIColl5 PSISRef6 /PRINT=SPEARMAN TWOTAIL NOSIG /MISSING=PAIRWISE. |
| Resources | Processor Time | 00:00:00.02 |
| | Elapsed Time | 00:00:00.01 |
| | Number of Cases Allowed | 71493 cases ^a |

a. Based on availability of workspace memory

[DataSet1] E:\Statomet_2013\Hannelie_SPSS\SoC1and2_demo_LoU_new_13April_Hi_low_23Edited.sav

Correlations

| | | | Lecturing experience | Awareness (i) |
|-------------------|----------------------|-------------------------|----------------------|---------------|
| Spearman's rho | Lecturing experience | Correlation Coefficient | 1.000 | .190 |
| | | Sig. (2-tailed) | . | .169 |
| | | N | 54 | 54 |
| Awareness (i) | Awareness (i) | Correlation Coefficient | .190 | 1.000 |
| | | Sig. (2-tailed) | .169 | . |
| | | N | 54 | 54 |
| Informational (i) | Informational (i) | Correlation Coefficient | .032 | .228 |
| | | Sig. (2-tailed) | .818 | .098 |
| | | N | 54 | 54 |
| Personal (i) | Personal (i) | Correlation Coefficient | -.207 | .205 |
| | | Sig. (2-tailed) | .133 | .136 |
| | | N | 54 | 54 |
| Management (i) | Management (i) | Correlation Coefficient | -.027 | .307* |
| | | Sig. (2-tailed) | .846 | .024 |
| | | N | 54 | 54 |
| Consequence (i) | Consequence (i) | Correlation Coefficient | -.177 | -.026 |
| | | Sig. (2-tailed) | .200 | .853 |
| | | N | 54 | 54 |
| Collaboration (i) | Collaboration (i) | Correlation Coefficient | -.203 | .126 |
| | | Sig. (2-tailed) | .141 | .363 |
| | | N | 54 | 54 |
| Refocusing (i) | Refocusing (i) | Correlation Coefficient | -.047 | .028 |
| | | Sig. (2-tailed) | .737 | .841 |
| | | N | 54 | 54 |

Correlations

| | | | Informational (i) | Personal (i) |
|-------------------|----------------------|-------------------------|-------------------|--------------|
| Spearman's rho | Lecturing experience | Correlation Coefficient | .032 | -.207 |
| | | Sig. (2-tailed) | .818 | .133 |
| | | N | 54 | 54 |
| Awareness (i) | | Correlation Coefficient | .228 | .205 |
| | | Sig. (2-tailed) | .098 | .136 |
| | | N | 54 | 54 |
| Informational (i) | | Correlation Coefficient | 1.000 | .506** |
| | | Sig. (2-tailed) | . | .000 |
| | | N | 54 | 54 |
| Personal (i) | | Correlation Coefficient | .506** | 1.000 |
| | | Sig. (2-tailed) | .000 | . |
| | | N | 54 | 54 |
| Management (i) | | Correlation Coefficient | .396** | .482** |
| | | Sig. (2-tailed) | .003 | .000 |
| | | N | 54 | 54 |
| Consequence (i) | | Correlation Coefficient | .229 | .449** |
| | | Sig. (2-tailed) | .096 | .001 |
| | | N | 54 | 54 |
| Collaboration (i) | | Correlation Coefficient | .368** | .520** |
| | | Sig. (2-tailed) | .006 | .000 |
| | | N | 54 | 54 |
| Refocusing (i) | | Correlation Coefficient | .236 | .403** |
| | | Sig. (2-tailed) | .086 | .003 |
| | | N | 54 | 54 |

Correlations

| | | | Management (i) | Consequence (i) |
|-------------------|----------------------|-------------------------|--------------------|--------------------|
| Spearman's rho | Lecturing experience | Correlation Coefficient | -.027 | -.177 |
| | | Sig. (2-tailed) | .846 | .200 |
| | | N | 54 | 54 |
| Awareness (i) | | Correlation Coefficient | .307 [*] | -.026 |
| | | Sig. (2-tailed) | .024 | .853 |
| | | N | 54 | 54 |
| Informational (i) | | Correlation Coefficient | .396 ^{**} | .229 |
| | | Sig. (2-tailed) | .003 | .096 |
| | | N | 54 | 54 |
| Personal (i) | | Correlation Coefficient | .482 ^{**} | .449 ^{**} |
| | | Sig. (2-tailed) | .000 | .001 |
| | | N | 54 | 54 |
| Management (i) | | Correlation Coefficient | 1.000 | .115 |
| | | Sig. (2-tailed) | . | .410 |
| | | N | 54 | 54 |
| Consequence (i) | | Correlation Coefficient | .115 | 1.000 |
| | | Sig. (2-tailed) | .410 | . |
| | | N | 54 | 54 |
| Collaboration (i) | | Correlation Coefficient | -.025 | .480 ^{**} |
| | | Sig. (2-tailed) | .857 | .000 |
| | | N | 54 | 54 |
| Refocusing (i) | | Correlation Coefficient | .182 | .376 ^{**} |
| | | Sig. (2-tailed) | .187 | .005 |
| | | N | 54 | 54 |

Correlations

| | | | Collaboration (i) | Refocusing (i) |
|-------------------|----------------------|-------------------------|-------------------|----------------|
| Spearman's rho | Lecturing experience | Correlation Coefficient | -.203 | -.047 |
| | | Sig. (2-tailed) | .141 | .737 |
| | | N | 54 | 54 |
| Awareness (i) | Awareness (i) | Correlation Coefficient | .126 | .028 |
| | | Sig. (2-tailed) | .363 | .841 |
| | | N | 54 | 54 |
| Informational (i) | Informational (i) | Correlation Coefficient | .368** | .236 |
| | | Sig. (2-tailed) | .006 | .086 |
| | | N | 54 | 54 |
| Personal (i) | Personal (i) | Correlation Coefficient | .520** | .403** |
| | | Sig. (2-tailed) | .000 | .003 |
| | | N | 54 | 54 |
| Management (i) | Management (i) | Correlation Coefficient | -.025 | .182 |
| | | Sig. (2-tailed) | .857 | .187 |
| | | N | 54 | 54 |
| Consequence (i) | Consequence (i) | Correlation Coefficient | .480** | .376** |
| | | Sig. (2-tailed) | .000 | .005 |
| | | N | 54 | 54 |
| Collaboration (i) | Collaboration (i) | Correlation Coefficient | 1.000 | .194 |
| | | Sig. (2-tailed) | . | .160 |
| | | N | 54 | 54 |
| Refocusing (i) | Refocusing (i) | Correlation Coefficient | .194 | 1.000 |
| | | Sig. (2-tailed) | .160 | . |
| | | N | 54 | 54 |

*. Correlation is significant at the 0.05 level (2-tailed).

**. Correlation is significant at the 0.01 level (2-tailed).

NONPAR CORR

/VARIABLES=vv37 PSIIAwa0 PSIIInf1 PSIIPer2 PSIIMan3 PSIIcon4 PSIIColl5 PS
IIRef6

/PRINT=SPEARMAN TWOTAIL NOSIG

/MISSING=PAIRWISE.

Nonparametric Correlations

Notes

| | | |
|------------------------|--------------------------------|--|
| Output Created | | 25-APR-2013 21:28:36 |
| Comments | | |
| Input | Data | E: \Statomet_2013\Hannelie_SPSS\So C1and2_demo_LoU_new_13April_H i_low_23Edited.sav |
| | Active Dataset | DataSet1 |
| | Filter | <none> |
| | Weight | <none> |
| | Split File | <none> |
| | N of Rows in Working Data File | 54 |
| Missing Value Handling | Definition of Missing | User-defined missing values are treated as missing. |
| | Cases Used | Statistics for each pair of variables are based on all the cases with valid data for that pair. |
| Syntax | | NONPAR CORR /VARIABLES=vv37 PSIIAwa0 PSIIInf1 PSIIPer2 PSIIMan3 PSIICon4 PSIIColl5 PSIIRef6 /PRINT=SPEARMAN TWOTAIL NOSIG /MISSING=PAIRWISE. |
| Resources | Processor Time | 00:00:00.00 |
| | Elapsed Time | 00:00:00.02 |
| | Number of Cases Allowed | 71493 cases ^a |

a. Based on availability of workspace memory

[DataSet1] E:\Statomet_2013\Hannelie_SPSS\SoC1and2_demo_LoU_new_13April_Hi_low_23Edited.sav

Correlations

| | | | Lecturing experience | Awareness (ii) |
|--------------------|----------------------|-------------------------|----------------------|--------------------|
| Spearman's rho | Lecturing experience | Correlation Coefficient | 1.000 | -.124 |
| | | Sig. (2-tailed) | . | .447 |
| | | N | 54 | 40 |
| Awareness (ii) | Awareness (ii) | Correlation Coefficient | -.124 | 1.000 |
| | | Sig. (2-tailed) | .447 | . |
| | | N | 40 | 40 |
| Informational (ii) | Informational (ii) | Correlation Coefficient | .288 | -.137 |
| | | Sig. (2-tailed) | .072 | .398 |
| | | N | 40 | 40 |
| Personal (ii) | Personal (ii) | Correlation Coefficient | .156 | .005 |
| | | Sig. (2-tailed) | .336 | .977 |
| | | N | 40 | 40 |
| Management (ii) | Management (ii) | Correlation Coefficient | .098 | .153 |
| | | Sig. (2-tailed) | .548 | .347 |
| | | N | 40 | 40 |
| Consequence (ii) | Consequence (ii) | Correlation Coefficient | .029 | -.332 [*] |
| | | Sig. (2-tailed) | .857 | .037 |
| | | N | 40 | 40 |
| Collaboration (ii) | Collaboration (ii) | Correlation Coefficient | .034 | -.142 |
| | | Sig. (2-tailed) | .834 | .383 |
| | | N | 40 | 40 |
| Refocusing (ii) | Refocusing (ii) | Correlation Coefficient | .035 | -.073 |
| | | Sig. (2-tailed) | .832 | .654 |
| | | N | 40 | 40 |

Correlations

| | | Informational (ii) | Personal (ii) |
|--------------------|----------------------|-------------------------|---------------|
| Spearman's rho | Lecturing experience | Correlation Coefficient | .288 |
| | | Sig. (2-tailed) | .072 |
| | | N | 40 |
| Awareness (ii) | | Correlation Coefficient | -.137 |
| | | Sig. (2-tailed) | .398 |
| | | N | 40 |
| Informational (ii) | | Correlation Coefficient | 1.000 |
| | | Sig. (2-tailed) | . |
| | | N | 40 |
| Personal (ii) | | Correlation Coefficient | .650** |
| | | Sig. (2-tailed) | .000 |
| | | N | 40 |
| Management (ii) | | Correlation Coefficient | .490** |
| | | Sig. (2-tailed) | .001 |
| | | N | 40 |
| Consequence (ii) | | Correlation Coefficient | .311 |
| | | Sig. (2-tailed) | .051 |
| | | N | 40 |
| Collaboration (ii) | | Correlation Coefficient | .306 |
| | | Sig. (2-tailed) | .055 |
| | | N | 40 |
| Refocusing (ii) | | Correlation Coefficient | .385* |
| | | Sig. (2-tailed) | .014 |
| | | N | 40 |

Correlations

| | | | Management (ii) | Consequence (ii) |
|--------------------|----------------------|-------------------------|--------------------|---------------------|
| Spearman's rho | Lecturing experience | Correlation Coefficient | .098 | .029 |
| | | Sig. (2-tailed) | .548 | .857 |
| | | N | 40 | 40 |
| Awareness (ii) | | Correlation Coefficient | .153 | -.332 [*] |
| | | Sig. (2-tailed) | .347 | .037 |
| | | N | 40 | 40 |
| Informational (ii) | | Correlation Coefficient | .490 ^{**} | .311 |
| | | Sig. (2-tailed) | .001 | .051 |
| | | N | 40 | 40 |
| Personal (ii) | | Correlation Coefficient | .477 ^{**} | .247 |
| | | Sig. (2-tailed) | .002 | .125 |
| | | N | 40 | 40 |
| Management (ii) | | Correlation Coefficient | 1.000 | .190 |
| | | Sig. (2-tailed) | . | .241 |
| | | N | 40 | 40 |
| Consequence (ii) | | Correlation Coefficient | .190 | 1.000 |
| | | Sig. (2-tailed) | .241 | . |
| | | N | 40 | 40 |
| Collaboration (ii) | | Correlation Coefficient | .277 | .315 [*] |
| | | Sig. (2-tailed) | .083 | .048 |
| | | N | 40 | 40 |
| Refocusing (ii) | | Correlation Coefficient | .232 | .534 ^{**} |
| | | Sig. (2-tailed) | .150 | .000 |
| | | N | 40 | 40 |

Correlations

| | | | Collaboration (ii) | Refocusing (ii) |
|--------------------|----------------------|-------------------------|-----------------------|-----------------|
| Spearman's rho | Lecturing experience | Correlation Coefficient | .034 | .035 |
| | | Sig. (2-tailed) | .834 | .832 |
| | | N | 40 | 40 |
| Awareness (ii) | Awareness (ii) | Correlation Coefficient | -.142 | -.073 |
| | | Sig. (2-tailed) | .383 | .654 |
| | | N | 40 | 40 |
| Informational (ii) | Informational (ii) | Correlation Coefficient | .306 | .385* |
| | | Sig. (2-tailed) | .055 | .014 |
| | | N | 40 | 40 |
| Personal (ii) | Personal (ii) | Correlation Coefficient | .423** | .359* |
| | | Sig. (2-tailed) | .007 | .023 |
| | | N | 40 | 40 |
| Management (ii) | Management (ii) | Correlation Coefficient | .277 | .232 |
| | | Sig. (2-tailed) | .083 | .150 |
| | | N | 40 | 40 |
| Consequence (ii) | Consequence (ii) | Correlation Coefficient | .315* | .534** |
| | | Sig. (2-tailed) | .048 | .000 |
| | | N | 40 | 40 |
| Collaboration (ii) | Collaboration (ii) | Correlation Coefficient | 1.000 | .252 |
| | | Sig. (2-tailed) | . | .117 |
| | | N | 40 | 40 |
| Refocusing (ii) | Refocusing (ii) | Correlation Coefficient | .252 | 1.000 |
| | | Sig. (2-tailed) | .117 | . |
| | | N | 40 | 40 |

*. Correlation is significant at the 0.05 level (2-tailed).

** . Correlation is significant at the 0.01 level (2-tailed).

NONPAR CORR

/VARIABLES=Acadpos PSIAwa0 PSIInf1 PSIPer2 PSIMan3 PSICon4 PSIColl15 PSIRef6

/PRINT=SPEARMAN TWOTAIL NOSIG

/MISSING=PAIRWISE.

Nonparametric Correlations

Notes

| | | |
|------------------------|--------------------------------|--|
| Output Created | | 25-APR-2013 21:29:13 |
| Comments | | |
| Input | Data | E: \Statomet_2013\Hannelie_SPSS\SoC1and2_demo_LoU_new_13April_Hi_low_23Edited.sav |
| | Active Dataset | DataSet1 |
| | Filter | <none> |
| | Weight | <none> |
| | Split File | <none> |
| | N of Rows in Working Data File | 54 |
| Missing Value Handling | Definition of Missing | User-defined missing values are treated as missing. |
| | Cases Used | Statistics for each pair of variables are based on all the cases with valid data for that pair. |
| Syntax | | NONPAR CORR /VARIABLES=Acadpos PSIAwa0 PSIIInf1 PSIPer2 PSIMan3 PSICon4 PSIColl5 PSISRef6 /PRINT=SPEARMAN TWOTAIL NOSIG /MISSING=PAIRWISE. |
| Resources | Processor Time | 00:00:00.02 |
| | Elapsed Time | 00:00:00.02 |
| | Number of Cases Allowed | 71493 cases ^a |

a. Based on availability of workspace memory

[DataSet1] E:\Statomet_2013\Hannelie_SPSS\SoC1and2_demo_LoU_new_13April_Hi_low_23Edited.sav

Correlations

| | | | AcadPos | Awareness (i) |
|-------------------|-------------------|-------------------------|--------------------|--------------------|
| Spearman's rho | AcadPos | Correlation Coefficient | 1.000 | .363 ^{**} |
| | | Sig. (2-tailed) | . | .007 |
| | | N | 54 | 54 |
| Awareness (i) | Awareness (i) | Correlation Coefficient | .363 ^{**} | 1.000 |
| | | Sig. (2-tailed) | .007 | . |
| | | N | 54 | 54 |
| Informational (i) | Informational (i) | Correlation Coefficient | .119 | .228 |
| | | Sig. (2-tailed) | .393 | .098 |
| | | N | 54 | 54 |
| Personal (i) | Personal (i) | Correlation Coefficient | -.116 | .205 |
| | | Sig. (2-tailed) | .405 | .136 |
| | | N | 54 | 54 |
| Management (i) | Management (i) | Correlation Coefficient | .054 | .307 [*] |
| | | Sig. (2-tailed) | .698 | .024 |
| | | N | 54 | 54 |
| Consequence (i) | Consequence (i) | Correlation Coefficient | .021 | -.026 |
| | | Sig. (2-tailed) | .878 | .853 |
| | | N | 54 | 54 |
| Collaboration (i) | Collaboration (i) | Correlation Coefficient | -.061 | .126 |
| | | Sig. (2-tailed) | .663 | .363 |
| | | N | 54 | 54 |
| Refocusing (i) | Refocusing (i) | Correlation Coefficient | -.163 | .028 |
| | | Sig. (2-tailed) | .240 | .841 |
| | | N | 54 | 54 |

Correlations

| | | | Informational (i) | Personal (i) |
|-------------------|---------|-------------------------|-------------------|--------------|
| Spearman's rho | AcadPos | Correlation Coefficient | .119 | -.116 |
| | | Sig. (2-tailed) | .393 | .405 |
| | | N | 54 | 54 |
| Awareness (i) | | Correlation Coefficient | .228 | .205 |
| | | Sig. (2-tailed) | .098 | .136 |
| | | N | 54 | 54 |
| Informational (i) | | Correlation Coefficient | 1.000 | .506** |
| | | Sig. (2-tailed) | . | .000 |
| | | N | 54 | 54 |
| Personal (i) | | Correlation Coefficient | .506** | 1.000 |
| | | Sig. (2-tailed) | .000 | . |
| | | N | 54 | 54 |
| Management (i) | | Correlation Coefficient | .396** | .482** |
| | | Sig. (2-tailed) | .003 | .000 |
| | | N | 54 | 54 |
| Consequence (i) | | Correlation Coefficient | .229 | .449** |
| | | Sig. (2-tailed) | .096 | .001 |
| | | N | 54 | 54 |
| Collaboration (i) | | Correlation Coefficient | .368** | .520** |
| | | Sig. (2-tailed) | .006 | .000 |
| | | N | 54 | 54 |
| Refocusing (i) | | Correlation Coefficient | .236 | .403** |
| | | Sig. (2-tailed) | .086 | .003 |
| | | N | 54 | 54 |

Correlations

| | | | Management (i) | Consequence (i) |
|-------------------|---------|-------------------------|----------------|-----------------|
| Spearman's rho | AcadPos | Correlation Coefficient | .054 | .021 |
| | | Sig. (2-tailed) | .698 | .878 |
| | | N | 54 | 54 |
| Awareness (i) | | Correlation Coefficient | .307* | -.026 |
| | | Sig. (2-tailed) | .024 | .853 |
| | | N | 54 | 54 |
| Informational (i) | | Correlation Coefficient | .396** | .229 |
| | | Sig. (2-tailed) | .003 | .096 |
| | | N | 54 | 54 |
| Personal (i) | | Correlation Coefficient | .482** | .449** |
| | | Sig. (2-tailed) | .000 | .001 |
| | | N | 54 | 54 |
| Management (i) | | Correlation Coefficient | 1.000 | .115 |
| | | Sig. (2-tailed) | . | .410 |
| | | N | 54 | 54 |
| Consequence (i) | | Correlation Coefficient | .115 | 1.000 |
| | | Sig. (2-tailed) | .410 | . |
| | | N | 54 | 54 |
| Collaboration (i) | | Correlation Coefficient | -.025 | .480** |
| | | Sig. (2-tailed) | .857 | .000 |
| | | N | 54 | 54 |
| Refocusing (i) | | Correlation Coefficient | .182 | .376** |
| | | Sig. (2-tailed) | .187 | .005 |
| | | N | 54 | 54 |

Correlations

| | | | Collaboration (i) | Refocusing (i) |
|-------------------|---------|-------------------------|-------------------|----------------|
| Spearman's rho | AcadPos | Correlation Coefficient | -.061 | -.163 |
| | | Sig. (2-tailed) | .663 | .240 |
| | | N | 54 | 54 |
| Awareness (i) | | Correlation Coefficient | .126 | .028 |
| | | Sig. (2-tailed) | .363 | .841 |
| | | N | 54 | 54 |
| Informational (i) | | Correlation Coefficient | .368** | .236 |
| | | Sig. (2-tailed) | .006 | .086 |
| | | N | 54 | 54 |
| Personal (i) | | Correlation Coefficient | .520** | .403** |
| | | Sig. (2-tailed) | .000 | .003 |
| | | N | 54 | 54 |
| Management (i) | | Correlation Coefficient | -.025 | .182 |
| | | Sig. (2-tailed) | .857 | .187 |
| | | N | 54 | 54 |
| Consequence (i) | | Correlation Coefficient | .480** | .376** |
| | | Sig. (2-tailed) | .000 | .005 |
| | | N | 54 | 54 |
| Collaboration (i) | | Correlation Coefficient | 1.000 | .194 |
| | | Sig. (2-tailed) | . | .160 |
| | | N | 54 | 54 |
| Refocusing (i) | | Correlation Coefficient | .194 | 1.000 |
| | | Sig. (2-tailed) | .160 | . |
| | | N | 54 | 54 |

** . Correlation is significant at the 0.01 level (2-tailed).

* . Correlation is significant at the 0.05 level (2-tailed).

NONPAR CORR

/VARIABLES=Acadpos PSIIAwa0 PSIIInf1 PSIIPer2 PSIIMan3 PSIIcon4 PSIIColl5
PSIIRef6

/PRINT=SPEARMAN TWOTAIL NOSIG

/MISSING=PAIRWISE.

Nonparametric Correlations

Notes

| | | |
|------------------------|--------------------------------|---|
| Output Created | | 25-APR-2013 21:29:48 |
| Comments | | |
| Input | Data | E: \Statomet_2013\Hannelie_SPSS\So C1and2_demo_LoU_new_13April_H i_low_23Edited.sav |
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| | Filter | <none> |
| | Weight | <none> |
| | Split File | <none> |
| | N of Rows in Working Data File | 54 |
| Missing Value Handling | Definition of Missing | User-defined missing values are treated as missing. |
| | Cases Used | Statistics for each pair of variables are based on all the cases with valid data for that pair. |
| Syntax | | NONPAR CORR /VARIABLES=Acadpos PSIIAwa0 PSIIInf1 PSIIPer2 PSIIMan3 PSIICon4 PSIIColl5 PSIIRef6 /PRINT=SPEARMAN TWOTAIL NOSIG /MISSING=PAIRWISE. |
| Resources | Processor Time | 00:00:00.02 |
| | Elapsed Time | 00:00:00.02 |
| | Number of Cases Allowed | 71493 cases ^a |

a. Based on availability of workspace memory

[DataSet1] E:\Statomet_2013\Hannelie_SPSS\SoC1and2_demo_LoU_new_13April_Hi_low_23Edited.sav

Correlations

| | | | AcadPos | Awareness (ii) |
|--------------------|--------------------|-------------------------|---------|--------------------|
| Spearman's rho | AcadPos | Correlation Coefficient | 1.000 | .127 |
| | | Sig. (2-tailed) | . | .435 |
| | | N | 54 | 40 |
| Awareness (ii) | Awareness (ii) | Correlation Coefficient | .127 | 1.000 |
| | | Sig. (2-tailed) | .435 | . |
| | | N | 40 | 40 |
| Informational (ii) | Informational (ii) | Correlation Coefficient | .094 | -.137 |
| | | Sig. (2-tailed) | .566 | .398 |
| | | N | 40 | 40 |
| Personal (ii) | Personal (ii) | Correlation Coefficient | .046 | .005 |
| | | Sig. (2-tailed) | .776 | .977 |
| | | N | 40 | 40 |
| Management (ii) | Management (ii) | Correlation Coefficient | -.136 | .153 |
| | | Sig. (2-tailed) | .403 | .347 |
| | | N | 40 | 40 |
| Consequence (ii) | Consequence (ii) | Correlation Coefficient | -.102 | -.332 [*] |
| | | Sig. (2-tailed) | .532 | .037 |
| | | N | 40 | 40 |
| Collaboration (ii) | Collaboration (ii) | Correlation Coefficient | .086 | -.142 |
| | | Sig. (2-tailed) | .599 | .383 |
| | | N | 40 | 40 |
| Refocusing (ii) | Refocusing (ii) | Correlation Coefficient | -.050 | -.073 |
| | | Sig. (2-tailed) | .758 | .654 |
| | | N | 40 | 40 |

Correlations

| | | | Informational (ii) | Personal (ii) |
|--------------------|---------|-------------------------|-----------------------|---------------|
| Spearman's rho | AcadPos | Correlation Coefficient | .094 | .046 |
| | | Sig. (2-tailed) | .566 | .776 |
| | | N | 40 | 40 |
| Awareness (ii) | | Correlation Coefficient | -.137 | .005 |
| | | Sig. (2-tailed) | .398 | .977 |
| | | N | 40 | 40 |
| Informational (ii) | | Correlation Coefficient | 1.000 | .650** |
| | | Sig. (2-tailed) | . | .000 |
| | | N | 40 | 40 |
| Personal (ii) | | Correlation Coefficient | .650** | 1.000 |
| | | Sig. (2-tailed) | .000 | . |
| | | N | 40 | 40 |
| Management (ii) | | Correlation Coefficient | .490** | .477** |
| | | Sig. (2-tailed) | .001 | .002 |
| | | N | 40 | 40 |
| Consequence (ii) | | Correlation Coefficient | .311 | .247 |
| | | Sig. (2-tailed) | .051 | .125 |
| | | N | 40 | 40 |
| Collaboration (ii) | | Correlation Coefficient | .306 | .423** |
| | | Sig. (2-tailed) | .055 | .007 |
| | | N | 40 | 40 |
| Refocusing (ii) | | Correlation Coefficient | .385* | .359* |
| | | Sig. (2-tailed) | .014 | .023 |
| | | N | 40 | 40 |

Correlations

| | | | Management (ii) | Consequence (ii) |
|--------------------|-------------------------|-------------------------|--------------------|---------------------|
| Spearman's rho | AcadPos | Correlation Coefficient | -.136 | -.102 |
| | | Sig. (2-tailed) | .403 | .532 |
| | | N | 40 | 40 |
| | Awareness (ii) | Correlation Coefficient | .153 | -.332 [*] |
| | | Sig. (2-tailed) | .347 | .037 |
| | | N | 40 | 40 |
| | Informational (ii) | Correlation Coefficient | .490 ^{**} | .311 |
| | | Sig. (2-tailed) | .001 | .051 |
| | | N | 40 | 40 |
| | Personal (ii) | Correlation Coefficient | .477 ^{**} | .247 |
| | | Sig. (2-tailed) | .002 | .125 |
| | | N | 40 | 40 |
| Management (ii) | Correlation Coefficient | 1.000 | .190 | |
| | Sig. (2-tailed) | . | .241 | |
| | N | 40 | 40 | |
| Consequence (ii) | Correlation Coefficient | .190 | 1.000 | |
| | Sig. (2-tailed) | .241 | . | |
| | N | 40 | 40 | |
| Collaboration (ii) | Correlation Coefficient | .277 | .315 [*] | |
| | Sig. (2-tailed) | .083 | .048 | |
| | N | 40 | 40 | |
| Refocusing (ii) | Correlation Coefficient | .232 | .534 ^{**} | |
| | Sig. (2-tailed) | .150 | .000 | |
| | N | 40 | 40 | |

Correlations

| | | | Collaboration (ii) | Refocusing (ii) |
|----------------|--------------------|-------------------------|-----------------------|-----------------|
| Spearman's rho | AcadPos | Correlation Coefficient | .086 | -.050 |
| | | Sig. (2-tailed) | .599 | .758 |
| | | N | 40 | 40 |
| | Awareness (ii) | Correlation Coefficient | -.142 | -.073 |
| | | Sig. (2-tailed) | .383 | .654 |
| | | N | 40 | 40 |
| | Informational (ii) | Correlation Coefficient | .306 | .385* |
| | | Sig. (2-tailed) | .055 | .014 |
| | | N | 40 | 40 |
| | Personal (ii) | Correlation Coefficient | .423** | .359* |
| | | Sig. (2-tailed) | .007 | .023 |
| | | N | 40 | 40 |
| | Management (ii) | Correlation Coefficient | .277 | .232 |
| | | Sig. (2-tailed) | .083 | .150 |
| | | N | 40 | 40 |
| | Consequence (ii) | Correlation Coefficient | .315* | .534** |
| | | Sig. (2-tailed) | .048 | .000 |
| | | N | 40 | 40 |
| | Collaboration (ii) | Correlation Coefficient | 1.000 | .252 |
| | | Sig. (2-tailed) | . | .117 |
| | | N | 40 | 40 |
| | Refocusing (ii) | Correlation Coefficient | .252 | 1.000 |
| | | Sig. (2-tailed) | .117 | . |
| | | N | 40 | 40 |

*. Correlation is significant at the 0.05 level (2-tailed).

** . Correlation is significant at the 0.01 level (2-tailed).

NONPAR CORR

/VARIABLES=V45 PSIAwa0 PSIInf1 PSIPer2 PSIMan3 PSICon4 PSIColl5 PSISref6

/PRINT=SPEARMAN TWOTAIL NOSIG

/MISSING=PAIRWISE.

Nonparametric Correlations

Notes

| | | |
|------------------------|--------------------------------|---|
| Output Created | | 25-APR-2013 21:30:53 |
| Comments | | |
| Input | Data | E: \Statomet_2013\Hannelie_SPSS\SoC1and2_demo_LoU_new_13April_Hi_low_23Edited.sav |
| | Active Dataset | DataSet1 |
| | Filter | <none> |
| | Weight | <none> |
| | Split File | <none> |
| | N of Rows in Working Data File | 54 |
| Missing Value Handling | Definition of Missing | User-defined missing values are treated as missing. |
| | Cases Used | Statistics for each pair of variables are based on all the cases with valid data for that pair. |
| Syntax | | NONPAR CORR /VARIABLES=V45 PSIAwa0 PSIInf1 PSIPer2 PSIMan3 PSICon4 PSIColl5 PSISRef6 /PRINT=SPEARMAN TWOTAIL NOSIG /MISSING=PAIRWISE. |
| Resources | Processor Time | 00:00:00.00 |
| | Elapsed Time | 00:00:00.01 |
| | Number of Cases Allowed | 71493 cases ^a |

a. Based on availability of workspace memory

[DataSet1] E:\Statomet_2013\Hannelie_SPSS\SoC1and2_demo_LoU_new_13April_Hi_low_23Edited.sav

Correlations

| | | | V45 | Awareness (i) |
|-------------------|-----|-------------------------|-------|---------------|
| Spearman's rho | V45 | Correlation Coefficient | 1.000 | -.043 |
| | | Sig. (2-tailed) | . | .759 |
| | | N | 54 | 54 |
| Awareness (i) | | Correlation Coefficient | -.043 | 1.000 |
| | | Sig. (2-tailed) | .759 | . |
| | | N | 54 | 54 |
| Informational (i) | | Correlation Coefficient | .049 | .228 |
| | | Sig. (2-tailed) | .727 | .098 |
| | | N | 54 | 54 |
| Personal (i) | | Correlation Coefficient | .064 | .205 |
| | | Sig. (2-tailed) | .645 | .136 |
| | | N | 54 | 54 |
| Management (i) | | Correlation Coefficient | .067 | .307* |
| | | Sig. (2-tailed) | .631 | .024 |
| | | N | 54 | 54 |
| Consequence (i) | | Correlation Coefficient | -.039 | -.026 |
| | | Sig. (2-tailed) | .782 | .853 |
| | | N | 54 | 54 |
| Collaboration (i) | | Correlation Coefficient | -.051 | .126 |
| | | Sig. (2-tailed) | .715 | .363 |
| | | N | 54 | 54 |
| Refocusing (i) | | Correlation Coefficient | .086 | .028 |
| | | Sig. (2-tailed) | .539 | .841 |
| | | N | 54 | 54 |

Correlations

| | | | Informational (i) | Personal (i) |
|-------------------|-----|-------------------------|--------------------|--------------------|
| Spearman's rho | V45 | Correlation Coefficient | .049 | .064 |
| | | Sig. (2-tailed) | .727 | .645 |
| | | N | 54 | 54 |
| Awareness (i) | | Correlation Coefficient | .228 | .205 |
| | | Sig. (2-tailed) | .098 | .136 |
| | | N | 54 | 54 |
| Informational (i) | | Correlation Coefficient | 1.000 | .506 ^{**} |
| | | Sig. (2-tailed) | . | .000 |
| | | N | 54 | 54 |
| Personal (i) | | Correlation Coefficient | .506 ^{**} | 1.000 |
| | | Sig. (2-tailed) | .000 | . |
| | | N | 54 | 54 |
| Management (i) | | Correlation Coefficient | .396 ^{**} | .482 ^{**} |
| | | Sig. (2-tailed) | .003 | .000 |
| | | N | 54 | 54 |
| Consequence (i) | | Correlation Coefficient | .229 | .449 ^{**} |
| | | Sig. (2-tailed) | .096 | .001 |
| | | N | 54 | 54 |
| Collaboration (i) | | Correlation Coefficient | .368 ^{**} | .520 ^{**} |
| | | Sig. (2-tailed) | .006 | .000 |
| | | N | 54 | 54 |
| Refocusing (i) | | Correlation Coefficient | .236 | .403 ^{**} |
| | | Sig. (2-tailed) | .086 | .003 |
| | | N | 54 | 54 |

Correlations

| | | | Management (i) | Consequence (i) |
|-------------------|-----|-------------------------|----------------|-----------------|
| Spearman's rho | V45 | Correlation Coefficient | .067 | -.039 |
| | | Sig. (2-tailed) | .631 | .782 |
| | | N | 54 | 54 |
| Awareness (i) | | Correlation Coefficient | .307* | -.026 |
| | | Sig. (2-tailed) | .024 | .853 |
| | | N | 54 | 54 |
| Informational (i) | | Correlation Coefficient | .396** | .229 |
| | | Sig. (2-tailed) | .003 | .096 |
| | | N | 54 | 54 |
| Personal (i) | | Correlation Coefficient | .482** | .449** |
| | | Sig. (2-tailed) | .000 | .001 |
| | | N | 54 | 54 |
| Management (i) | | Correlation Coefficient | 1.000 | .115 |
| | | Sig. (2-tailed) | . | .410 |
| | | N | 54 | 54 |
| Consequence (i) | | Correlation Coefficient | .115 | 1.000 |
| | | Sig. (2-tailed) | .410 | . |
| | | N | 54 | 54 |
| Collaboration (i) | | Correlation Coefficient | -.025 | .480** |
| | | Sig. (2-tailed) | .857 | .000 |
| | | N | 54 | 54 |
| Refocusing (i) | | Correlation Coefficient | .182 | .376** |
| | | Sig. (2-tailed) | .187 | .005 |
| | | N | 54 | 54 |

Correlations

| | | | Collaboration (i) | Refocusing (i) |
|-------------------|-----|-------------------------|-------------------|----------------|
| Spearman's rho | V45 | Correlation Coefficient | -.051 | .086 |
| | | Sig. (2-tailed) | .715 | .539 |
| | | N | 54 | 54 |
| Awareness (i) | | Correlation Coefficient | .126 | .028 |
| | | Sig. (2-tailed) | .363 | .841 |
| | | N | 54 | 54 |
| Informational (i) | | Correlation Coefficient | .368** | .236 |
| | | Sig. (2-tailed) | .006 | .086 |
| | | N | 54 | 54 |
| Personal (i) | | Correlation Coefficient | .520** | .403** |
| | | Sig. (2-tailed) | .000 | .003 |
| | | N | 54 | 54 |
| Management (i) | | Correlation Coefficient | -.025 | .182 |
| | | Sig. (2-tailed) | .857 | .187 |
| | | N | 54 | 54 |
| Consequence (i) | | Correlation Coefficient | .480** | .376** |
| | | Sig. (2-tailed) | .000 | .005 |
| | | N | 54 | 54 |
| Collaboration (i) | | Correlation Coefficient | 1.000 | .194 |
| | | Sig. (2-tailed) | . | .160 |
| | | N | 54 | 54 |
| Refocusing (i) | | Correlation Coefficient | .194 | 1.000 |
| | | Sig. (2-tailed) | .160 | . |
| | | N | 54 | 54 |

*. Correlation is significant at the 0.05 level (2-tailed).

**. Correlation is significant at the 0.01 level (2-tailed).

NONPAR CORR

/VARIABLES=V45 PSIIAwa0 PSIIInf1 PSIIPer2 PSIIMan3 PSIIcon4 PSIIColl15 PSIIRef6

/PRINT=SPEARMAN TWOTAIL NOSIG

/MISSING=PAIRWISE.

Nonparametric Correlations

Notes

| | | |
|------------------------|--------------------------------|---|
| Output Created | | 25-APR-2013 21:31:13 |
| Comments | | |
| Input | Data | E: \Statomet_2013\Hannelie_SPSS\SoC1and2_demo_LoU_new_13April_Hi_low_23Edited.sav |
| | Active Dataset | DataSet1 |
| | Filter | <none> |
| | Weight | <none> |
| | Split File | <none> |
| | N of Rows in Working Data File | 54 |
| Missing Value Handling | Definition of Missing | User-defined missing values are treated as missing. |
| | Cases Used | Statistics for each pair of variables are based on all the cases with valid data for that pair. |
| Syntax | | NONPAR CORR /VARIABLES=V45 PSIIAwa0 PSIIInf1 PSIIPer2 PSIIMan3 PSIICon4 PSIIColl5 PSIIRef6 /PRINT=SPEARMAN TWOTAIL NOSIG /MISSING=PAIRWISE. |
| Resources | Processor Time | 00:00:00.03 |
| | Elapsed Time | 00:00:00.02 |
| | Number of Cases Allowed | 71493 cases ^a |

a. Based on availability of workspace memory

[DataSet1] E:\Statomet_2013\Hannelie_SPSS\SoC1and2_demo_LoU_new_13April_Hi_low_23Edited.sav

Correlations

| | | | V45 | Awareness (ii) |
|--------------------|-----|-------------------------|-------|--------------------|
| Spearman's rho | V45 | Correlation Coefficient | 1.000 | .225 |
| | | Sig. (2-tailed) | . | .163 |
| | | N | 54 | 40 |
| Awareness (ii) | | Correlation Coefficient | .225 | 1.000 |
| | | Sig. (2-tailed) | .163 | . |
| | | N | 40 | 40 |
| Informational (ii) | | Correlation Coefficient | .016 | -.137 |
| | | Sig. (2-tailed) | .923 | .398 |
| | | N | 40 | 40 |
| Personal (ii) | | Correlation Coefficient | .051 | .005 |
| | | Sig. (2-tailed) | .753 | .977 |
| | | N | 40 | 40 |
| Management (ii) | | Correlation Coefficient | .123 | .153 |
| | | Sig. (2-tailed) | .448 | .347 |
| | | N | 40 | 40 |
| Consequence (ii) | | Correlation Coefficient | .038 | -.332 [*] |
| | | Sig. (2-tailed) | .816 | .037 |
| | | N | 40 | 40 |
| Collaboration (ii) | | Correlation Coefficient | .052 | -.142 |
| | | Sig. (2-tailed) | .751 | .383 |
| | | N | 40 | 40 |
| Refocusing (ii) | | Correlation Coefficient | .216 | -.073 |
| | | Sig. (2-tailed) | .180 | .654 |
| | | N | 40 | 40 |

Correlations

| | | | Informational (ii) | Personal (ii) |
|--------------------|-----|-------------------------|-----------------------|---------------|
| Spearman's rho | V45 | Correlation Coefficient | .016 | .051 |
| | | Sig. (2-tailed) | .923 | .753 |
| | | N | 40 | 40 |
| Awareness (ii) | | Correlation Coefficient | -.137 | .005 |
| | | Sig. (2-tailed) | .398 | .977 |
| | | N | 40 | 40 |
| Informational (ii) | | Correlation Coefficient | 1.000 | .650** |
| | | Sig. (2-tailed) | . | .000 |
| | | N | 40 | 40 |
| Personal (ii) | | Correlation Coefficient | .650** | 1.000 |
| | | Sig. (2-tailed) | .000 | . |
| | | N | 40 | 40 |
| Management (ii) | | Correlation Coefficient | .490** | .477** |
| | | Sig. (2-tailed) | .001 | .002 |
| | | N | 40 | 40 |
| Consequence (ii) | | Correlation Coefficient | .311 | .247 |
| | | Sig. (2-tailed) | .051 | .125 |
| | | N | 40 | 40 |
| Collaboration (ii) | | Correlation Coefficient | .306 | .423** |
| | | Sig. (2-tailed) | .055 | .007 |
| | | N | 40 | 40 |
| Refocusing (ii) | | Correlation Coefficient | .385* | .359* |
| | | Sig. (2-tailed) | .014 | .023 |
| | | N | 40 | 40 |

Correlations

| | | | Management (ii) | Consequence (ii) |
|--------------------|-----|-------------------------|--------------------|---------------------|
| Spearman's rho | V45 | Correlation Coefficient | .123 | .038 |
| | | Sig. (2-tailed) | .448 | .816 |
| | | N | 40 | 40 |
| Awareness (ii) | | Correlation Coefficient | .153 | -.332 [*] |
| | | Sig. (2-tailed) | .347 | .037 |
| | | N | 40 | 40 |
| Informational (ii) | | Correlation Coefficient | .490 ^{**} | .311 |
| | | Sig. (2-tailed) | .001 | .051 |
| | | N | 40 | 40 |
| Personal (ii) | | Correlation Coefficient | .477 ^{**} | .247 |
| | | Sig. (2-tailed) | .002 | .125 |
| | | N | 40 | 40 |
| Management (ii) | | Correlation Coefficient | 1.000 | .190 |
| | | Sig. (2-tailed) | . | .241 |
| | | N | 40 | 40 |
| Consequence (ii) | | Correlation Coefficient | .190 | 1.000 |
| | | Sig. (2-tailed) | .241 | . |
| | | N | 40 | 40 |
| Collaboration (ii) | | Correlation Coefficient | .277 | .315 [*] |
| | | Sig. (2-tailed) | .083 | .048 |
| | | N | 40 | 40 |
| Refocusing (ii) | | Correlation Coefficient | .232 | .534 ^{**} |
| | | Sig. (2-tailed) | .150 | .000 |
| | | N | 40 | 40 |

Correlations

| | | | Collaboration (ii) | Refocusing (ii) |
|--------------------|-----|-------------------------|-----------------------|-----------------|
| Spearman's rho | V45 | Correlation Coefficient | .052 | .216 |
| | | Sig. (2-tailed) | .751 | .180 |
| | | N | 40 | 40 |
| Awareness (ii) | | Correlation Coefficient | -.142 | -.073 |
| | | Sig. (2-tailed) | .383 | .654 |
| | | N | 40 | 40 |
| Informational (ii) | | Correlation Coefficient | .306 | .385* |
| | | Sig. (2-tailed) | .055 | .014 |
| | | N | 40 | 40 |
| Personal (ii) | | Correlation Coefficient | .423** | .359* |
| | | Sig. (2-tailed) | .007 | .023 |
| | | N | 40 | 40 |
| Management (ii) | | Correlation Coefficient | .277 | .232 |
| | | Sig. (2-tailed) | .083 | .150 |
| | | N | 40 | 40 |
| Consequence (ii) | | Correlation Coefficient | .315* | .534** |
| | | Sig. (2-tailed) | .048 | .000 |
| | | N | 40 | 40 |
| Collaboration (ii) | | Correlation Coefficient | 1.000 | .252 |
| | | Sig. (2-tailed) | . | .117 |
| | | N | 40 | 40 |
| Refocusing (ii) | | Correlation Coefficient | .252 | 1.000 |
| | | Sig. (2-tailed) | .117 | . |
| | | N | 40 | 40 |

*. Correlation is significant at the 0.05 level (2-tailed).

** . Correlation is significant at the 0.01 level (2-tailed).

NONPAR CORR

/VARIABLES=V97 PSIAwa0 PSIInf1 PSIPer2 PSIMan3 PSICon4 PSIColl5 PSIRef6

/PRINT=SPEARMAN TWOTAIL NOSIG

/MISSING=PAIRWISE.

Nonparametric Correlations

Notes

| | | |
|------------------------|--------------------------------|---|
| Output Created | | 25-APR-2013 21:31:52 |
| Comments | | |
| Input | Data | E: \Statomet_2013\Hannelie_SPSS\SoC1and2_demo_LoU_new_13April_Hi_low_23Edited.sav |
| | Active Dataset | DataSet1 |
| | Filter | <none> |
| | Weight | <none> |
| | Split File | <none> |
| | N of Rows in Working Data File | 54 |
| Missing Value Handling | Definition of Missing | User-defined missing values are treated as missing. |
| | Cases Used | Statistics for each pair of variables are based on all the cases with valid data for that pair. |
| Syntax | | NONPAR CORR /VARIABLES=V97 PSIAwa0 PSIInf1 PSIPer2 PSIMan3 PSICon4 PSIColl5 PSISRef6 /PRINT=SPEARMAN TWOTAIL NOSIG /MISSING=PAIRWISE. |
| Resources | Processor Time | 00:00:00.02 |
| | Elapsed Time | 00:00:00.02 |
| | Number of Cases Allowed | 71493 cases ^a |

a. Based on availability of workspace memory

[DataSet1] E:\Statomet_2013\Hannelie_SPSS\SoC1and2_demo_LoU_new_13April_Hi_low_23Edited.sav

Correlations

| | | | Professional identity / qualification |
|-------------------|---------------------------------------|-------------------------|---------------------------------------|
| Spearman's rho | Professional identity / qualification | Correlation Coefficient | 1.000 |
| | | Sig. (2-tailed) | . |
| | | N | 54 |
| | Awareness (i) | Correlation Coefficient | .126 |
| | | Sig. (2-tailed) | .365 |
| | | N | 54 |
| | Informational (i) | Correlation Coefficient | .012 |
| | | Sig. (2-tailed) | .930 |
| | | N | 54 |
| | Personal (i) | Correlation Coefficient | -.085 |
| | Sig. (2-tailed) | .542 | |
| | N | 54 | |
| Management (i) | Correlation Coefficient | .125 | |
| | Sig. (2-tailed) | .367 | |
| | N | 54 | |
| Consequence (i) | Correlation Coefficient | .086 | |
| | Sig. (2-tailed) | .538 | |
| | N | 54 | |
| Collaboration (i) | Correlation Coefficient | .115 | |
| | Sig. (2-tailed) | .409 | |
| | N | 54 | |
| Refocusing (i) | Correlation Coefficient | -.004 | |
| | Sig. (2-tailed) | .975 | |
| | N | 54 | |

Correlations

| | | | Awareness (i) |
|-------------------|---------------------------------------|-------------------------|---------------|
| Spearman's rho | Professional identity / qualification | Correlation Coefficient | .126 |
| | | Sig. (2-tailed) | .365 |
| | | N | 54 |
| Awareness (i) | | Correlation Coefficient | 1.000 |
| | | Sig. (2-tailed) | . |
| | | N | 54 |
| Informational (i) | | Correlation Coefficient | .228 |
| | | Sig. (2-tailed) | .098 |
| | | N | 54 |
| Personal (i) | | Correlation Coefficient | .205 |
| | | Sig. (2-tailed) | .136 |
| | | N | 54 |
| Management (i) | | Correlation Coefficient | .307* |
| | | Sig. (2-tailed) | .024 |
| | | N | 54 |
| Consequence (i) | | Correlation Coefficient | -.026 |
| | | Sig. (2-tailed) | .853 |
| | | N | 54 |
| Collaboration (i) | | Correlation Coefficient | .126 |
| | | Sig. (2-tailed) | .363 |
| | | N | 54 |
| Refocusing (i) | | Correlation Coefficient | .028 |
| | | Sig. (2-tailed) | .841 |
| | | N | 54 |

Correlations

| | | | Informational (i) |
|-------------------|---------------------------------------|-------------------------|-------------------|
| Spearman's rho | Professional identity / qualification | Correlation Coefficient | .012 |
| | | Sig. (2-tailed) | .930 |
| | | N | 54 |
| Awareness (i) | | Correlation Coefficient | .228 |
| | | Sig. (2-tailed) | .098 |
| | | N | 54 |
| Informational (i) | | Correlation Coefficient | 1.000 |
| | | Sig. (2-tailed) | . |
| | | N | 54 |
| Personal (i) | | Correlation Coefficient | .506** |
| | | Sig. (2-tailed) | .000 |
| | | N | 54 |
| Management (i) | | Correlation Coefficient | .396** |
| | | Sig. (2-tailed) | .003 |
| | | N | 54 |
| Consequence (i) | | Correlation Coefficient | .229 |
| | | Sig. (2-tailed) | .096 |
| | | N | 54 |
| Collaboration (i) | | Correlation Coefficient | .368** |
| | | Sig. (2-tailed) | .006 |
| | | N | 54 |
| Refocusing (i) | | Correlation Coefficient | .236 |
| | | Sig. (2-tailed) | .086 |
| | | N | 54 |

Correlations

| | | | Personal (i) |
|-------------------|---------------------------------------|-------------------------|--------------------|
| Spearman's rho | Professional identity / qualification | Correlation Coefficient | -.085 |
| | | Sig. (2-tailed) | .542 |
| | | N | 54 |
| Awareness (i) | | Correlation Coefficient | .205 |
| | | Sig. (2-tailed) | .136 |
| | | N | 54 |
| Informational (i) | | Correlation Coefficient | .506 ^{**} |
| | | Sig. (2-tailed) | .000 |
| | | N | 54 |
| Personal (i) | | Correlation Coefficient | 1.000 |
| | | Sig. (2-tailed) | . |
| | | N | 54 |
| Management (i) | | Correlation Coefficient | .482 ^{**} |
| | | Sig. (2-tailed) | .000 |
| | | N | 54 |
| Consequence (i) | | Correlation Coefficient | .449 ^{**} |
| | | Sig. (2-tailed) | .001 |
| | | N | 54 |
| Collaboration (i) | | Correlation Coefficient | .520 ^{**} |
| | | Sig. (2-tailed) | .000 |
| | | N | 54 |
| Refocusing (i) | | Correlation Coefficient | .403 ^{**} |
| | | Sig. (2-tailed) | .003 |
| | | N | 54 |

Correlations

| | | | Management (i) |
|-------------------|---------------------------------------|-------------------------|--------------------|
| Spearman's rho | Professional identity / qualification | Correlation Coefficient | .125 |
| | | Sig. (2-tailed) | .367 |
| | | N | 54 |
| Awareness (i) | | Correlation Coefficient | .307 [*] |
| | | Sig. (2-tailed) | .024 |
| | | N | 54 |
| Informational (i) | | Correlation Coefficient | .396 ^{**} |
| | | Sig. (2-tailed) | .003 |
| | | N | 54 |
| Personal (i) | | Correlation Coefficient | .482 ^{**} |
| | | Sig. (2-tailed) | .000 |
| | | N | 54 |
| Management (i) | | Correlation Coefficient | 1.000 |
| | | Sig. (2-tailed) | . |
| | | N | 54 |
| Consequence (i) | | Correlation Coefficient | .115 |
| | | Sig. (2-tailed) | .410 |
| | | N | 54 |
| Collaboration (i) | | Correlation Coefficient | -.025 |
| | | Sig. (2-tailed) | .857 |
| | | N | 54 |
| Refocusing (i) | | Correlation Coefficient | .182 |
| | | Sig. (2-tailed) | .187 |
| | | N | 54 |

Correlations

| | | | Consequence (i) |
|-------------------|---------------------------------------|-------------------------|--------------------|
| Spearman's rho | Professional identity / qualification | Correlation Coefficient | .086 |
| | | Sig. (2-tailed) | .538 |
| | | N | 54 |
| Awareness (i) | | Correlation Coefficient | -.026 |
| | | Sig. (2-tailed) | .853 |
| | | N | 54 |
| Informational (i) | | Correlation Coefficient | .229 |
| | | Sig. (2-tailed) | .096 |
| | | N | 54 |
| Personal (i) | | Correlation Coefficient | .449** |
| | | Sig. (2-tailed) | .001 |
| | | N | 54 |
| Management (i) | | Correlation Coefficient | .115 |
| | | Sig. (2-tailed) | .410 |
| | | N | 54 |
| Consequence (i) | | Correlation Coefficient | 1.000 |
| | | Sig. (2-tailed) | . |
| | | N | 54 |
| Collaboration (i) | | Correlation Coefficient | .480** |
| | | Sig. (2-tailed) | .000 |
| | | N | 54 |
| Refocusing (i) | | Correlation Coefficient | .376** |
| | | Sig. (2-tailed) | .005 |
| | | N | 54 |

Correlations

| | | | Collaboration (i) |
|-------------------|---------------------------------------|-------------------------|-------------------|
| Spearman's rho | Professional identity / qualification | Correlation Coefficient | .115 |
| | | Sig. (2-tailed) | .409 |
| | | N | 54 |
| Awareness (i) | | Correlation Coefficient | .126 |
| | | Sig. (2-tailed) | .363 |
| | | N | 54 |
| Informational (i) | | Correlation Coefficient | .368** |
| | | Sig. (2-tailed) | .006 |
| | | N | 54 |
| Personal (i) | | Correlation Coefficient | .520** |
| | | Sig. (2-tailed) | .000 |
| | | N | 54 |
| Management (i) | | Correlation Coefficient | -.025 |
| | | Sig. (2-tailed) | .857 |
| | | N | 54 |
| Consequence (i) | | Correlation Coefficient | .480** |
| | | Sig. (2-tailed) | .000 |
| | | N | 54 |
| Collaboration (i) | | Correlation Coefficient | 1.000 |
| | | Sig. (2-tailed) | . |
| | | N | 54 |
| Refocusing (i) | | Correlation Coefficient | .194 |
| | | Sig. (2-tailed) | .160 |
| | | N | 54 |

Correlations

| | | | Refocusing (i) |
|-------------------|---------------------------------------|-------------------------|----------------|
| Spearman's rho | Professional identity / qualification | Correlation Coefficient | -.004 |
| | | Sig. (2-tailed) | .975 |
| | | N | 54 |
| Awareness (i) | | Correlation Coefficient | .028 |
| | | Sig. (2-tailed) | .841 |
| | | N | 54 |
| Informational (i) | | Correlation Coefficient | .236 |
| | | Sig. (2-tailed) | .086 |
| | | N | 54 |
| Personal (i) | | Correlation Coefficient | .403** |
| | | Sig. (2-tailed) | .003 |
| | | N | 54 |
| Management (i) | | Correlation Coefficient | .182 |
| | | Sig. (2-tailed) | .187 |
| | | N | 54 |
| Consequence (i) | | Correlation Coefficient | .376** |
| | | Sig. (2-tailed) | .005 |
| | | N | 54 |
| Collaboration (i) | | Correlation Coefficient | .194 |
| | | Sig. (2-tailed) | .160 |
| | | N | 54 |
| Refocusing (i) | | Correlation Coefficient | 1.000 |
| | | Sig. (2-tailed) | . |
| | | N | 54 |

*. Correlation is significant at the 0.05 level (2-tailed).

**. Correlation is significant at the 0.01 level (2-tailed).

NONPAR CORR

/VARIABLES=V97 PSIIAwa0 PSIIInf1 PSIIPer2 PSIIMan3 PSIIcon4 PSIIColl15 PSIRef6

/PRINT=SPEARMAN TWOTAIL NOSIG

/MISSING=PAIRWISE.

Nonparametric Correlations

Notes

| | | |
|------------------------|--------------------------------|---|
| Output Created | | 25-APR-2013 21:32:20 |
| Comments | | |
| Input | Data | E: \Statomet_2013\Hannelie_SPSS\SoC1and2_demo_LoU_new_13April_Hi_low_23Edited.sav |
| | Active Dataset | DataSet1 |
| | Filter | <none> |
| | Weight | <none> |
| | Split File | <none> |
| | N of Rows in Working Data File | 54 |
| Missing Value Handling | Definition of Missing | User-defined missing values are treated as missing. |
| | Cases Used | Statistics for each pair of variables are based on all the cases with valid data for that pair. |
| Syntax | | NONPAR CORR /VARIABLES=V97 PSIIAwa0 PSIIInf1 PSIIPer2 PSIIMan3 PSIICon4 PSIIColl5 PSIIRef6 /PRINT=SPEARMAN TWOTAIL NOSIG /MISSING=PAIRWISE. |
| Resources | Processor Time | 00:00:00.00 |
| | Elapsed Time | 00:00:00.02 |
| | Number of Cases Allowed | 71493 cases ^a |

a. Based on availability of workspace memory

[DataSet1] E:\Statomet_2013\Hannelie_SPSS\SoC1and2_demo_LoU_new_13April_Hi_low_23Edited.sav

Correlations

| | | | Professional identity / qualification |
|--------------------|---------------------------------------|-------------------------|---------------------------------------|
| Spearman's rho | Professional identity / qualification | Correlation Coefficient | 1.000 |
| | | Sig. (2-tailed) | . |
| | | N | 54 |
| | Awareness (ii) | Correlation Coefficient | .216 |
| | | Sig. (2-tailed) | .181 |
| | | N | 40 |
| | Informational (ii) | Correlation Coefficient | .071 |
| | | Sig. (2-tailed) | .665 |
| | | N | 40 |
| | Personal (ii) | Correlation Coefficient | .068 |
| | Sig. (2-tailed) | .677 | |
| | N | 40 | |
| Management (ii) | Correlation Coefficient | .247 | |
| | Sig. (2-tailed) | .125 | |
| | N | 40 | |
| Consequence (ii) | Correlation Coefficient | .198 | |
| | Sig. (2-tailed) | .221 | |
| | N | 40 | |
| Collaboration (ii) | Correlation Coefficient | .371 [*] | |
| | Sig. (2-tailed) | .019 | |
| | N | 40 | |
| Refocusing (ii) | Correlation Coefficient | .032 | |
| | Sig. (2-tailed) | .843 | |
| | N | 40 | |

Correlations

| | | | Awareness (ii) |
|--------------------|---------------------------------------|-------------------------|--------------------|
| Spearman's rho | Professional identity / qualification | Correlation Coefficient | .216 |
| | | Sig. (2-tailed) | .181 |
| | | N | 40 |
| Awareness (ii) | | Correlation Coefficient | 1.000 |
| | | Sig. (2-tailed) | . |
| | | N | 40 |
| Informational (ii) | | Correlation Coefficient | -.137 |
| | | Sig. (2-tailed) | .398 |
| | | N | 40 |
| Personal (ii) | | Correlation Coefficient | .005 |
| | | Sig. (2-tailed) | .977 |
| | | N | 40 |
| Management (ii) | | Correlation Coefficient | .153 |
| | | Sig. (2-tailed) | .347 |
| | | N | 40 |
| Consequence (ii) | | Correlation Coefficient | -.332 [*] |
| | | Sig. (2-tailed) | .037 |
| | | N | 40 |
| Collaboration (ii) | | Correlation Coefficient | -.142 |
| | | Sig. (2-tailed) | .383 |
| | | N | 40 |
| Refocusing (ii) | | Correlation Coefficient | -.073 |
| | | Sig. (2-tailed) | .654 |
| | | N | 40 |

Correlations

| | | | Informational (ii) |
|----------------|---------------------------------------|-------------------------|-----------------------|
| Spearman's rho | Professional identity / qualification | Correlation Coefficient | .071 |
| | | Sig. (2-tailed) | .665 |
| | | N | 40 |
| | Awareness (ii) | Correlation Coefficient | -.137 |
| | | Sig. (2-tailed) | .398 |
| | | N | 40 |
| | Informational (ii) | Correlation Coefficient | 1.000 |
| | | Sig. (2-tailed) | . |
| | | N | 40 |
| | Personal (ii) | Correlation Coefficient | .650** |
| | | Sig. (2-tailed) | .000 |
| | | N | 40 |
| | Management (ii) | Correlation Coefficient | .490** |
| | | Sig. (2-tailed) | .001 |
| | | N | 40 |
| | Consequence (ii) | Correlation Coefficient | .311 |
| | | Sig. (2-tailed) | .051 |
| | | N | 40 |
| | Collaboration (ii) | Correlation Coefficient | .306 |
| | | Sig. (2-tailed) | .055 |
| | | N | 40 |
| | Refocusing (ii) | Correlation Coefficient | .385* |
| | | Sig. (2-tailed) | .014 |
| | | N | 40 |

Correlations

| | | | Personal (ii) |
|--------------------|---------------------------------------|-------------------------|---------------|
| Spearman's rho | Professional identity / qualification | Correlation Coefficient | .068 |
| | | Sig. (2-tailed) | .677 |
| | | N | 40 |
| Awareness (ii) | | Correlation Coefficient | .005 |
| | | Sig. (2-tailed) | .977 |
| | | N | 40 |
| Informational (ii) | | Correlation Coefficient | .650** |
| | | Sig. (2-tailed) | .000 |
| | | N | 40 |
| Personal (ii) | | Correlation Coefficient | 1.000 |
| | | Sig. (2-tailed) | . |
| | | N | 40 |
| Management (ii) | | Correlation Coefficient | .477** |
| | | Sig. (2-tailed) | .002 |
| | | N | 40 |
| Consequence (ii) | | Correlation Coefficient | .247 |
| | | Sig. (2-tailed) | .125 |
| | | N | 40 |
| Collaboration (ii) | | Correlation Coefficient | .423** |
| | | Sig. (2-tailed) | .007 |
| | | N | 40 |
| Refocusing (ii) | | Correlation Coefficient | .359* |
| | | Sig. (2-tailed) | .023 |
| | | N | 40 |

Correlations

| | | | Management (ii) |
|--------------------|---------------------------------------|-------------------------|--------------------|
| Spearman's rho | Professional identity / qualification | Correlation Coefficient | .247 |
| | | Sig. (2-tailed) | .125 |
| | | N | 40 |
| Awareness (ii) | | Correlation Coefficient | .153 |
| | | Sig. (2-tailed) | .347 |
| | | N | 40 |
| Informational (ii) | | Correlation Coefficient | .490** |
| | | Sig. (2-tailed) | .001 |
| | | N | 40 |
| Personal (ii) | | Correlation Coefficient | .477** |
| | | Sig. (2-tailed) | .002 |
| | | N | 40 |
| Management (ii) | | Correlation Coefficient | 1.000 |
| | | Sig. (2-tailed) | . |
| | | N | 40 |
| Consequence (ii) | | Correlation Coefficient | .190 |
| | | Sig. (2-tailed) | .241 |
| | | N | 40 |
| Collaboration (ii) | | Correlation Coefficient | .277 |
| | | Sig. (2-tailed) | .083 |
| | | N | 40 |
| Refocusing (ii) | | Correlation Coefficient | .232 |
| | | Sig. (2-tailed) | .150 |
| | | N | 40 |

Correlations

| | | | Consequence (ii) |
|----------------|---------------------------------------|-------------------------|---------------------|
| Spearman's rho | Professional identity / qualification | Correlation Coefficient | .198 |
| | | Sig. (2-tailed) | .221 |
| | | N | 40 |
| | Awareness (ii) | Correlation Coefficient | -.332 [*] |
| | | Sig. (2-tailed) | .037 |
| | | N | 40 |
| | Informational (ii) | Correlation Coefficient | .311 |
| | | Sig. (2-tailed) | .051 |
| | | N | 40 |
| | Personal (ii) | Correlation Coefficient | .247 |
| | | Sig. (2-tailed) | .125 |
| | | N | 40 |
| | Management (ii) | Correlation Coefficient | .190 |
| | | Sig. (2-tailed) | .241 |
| | | N | 40 |
| | Consequence (ii) | Correlation Coefficient | 1.000 |
| | | Sig. (2-tailed) | . |
| | | N | 40 |
| | Collaboration (ii) | Correlation Coefficient | .315 [*] |
| | | Sig. (2-tailed) | .048 |
| | | N | 40 |
| | Refocusing (ii) | Correlation Coefficient | .534 ^{**} |
| | | Sig. (2-tailed) | .000 |
| | | N | 40 |

Correlations

| | | | Collaboration (ii) |
|--------------------|---------------------------------------|-------------------------|-----------------------|
| Spearman's rho | Professional identity / qualification | Correlation Coefficient | .371 [*] |
| | | Sig. (2-tailed) | .019 |
| | | N | 40 |
| Awareness (ii) | | Correlation Coefficient | -.142 |
| | | Sig. (2-tailed) | .383 |
| | | N | 40 |
| Informational (ii) | | Correlation Coefficient | .306 |
| | | Sig. (2-tailed) | .055 |
| | | N | 40 |
| Personal (ii) | | Correlation Coefficient | .423 ^{**} |
| | | Sig. (2-tailed) | .007 |
| | | N | 40 |
| Management (ii) | | Correlation Coefficient | .277 |
| | | Sig. (2-tailed) | .083 |
| | | N | 40 |
| Consequence (ii) | | Correlation Coefficient | .315 [*] |
| | | Sig. (2-tailed) | .048 |
| | | N | 40 |
| Collaboration (ii) | | Correlation Coefficient | 1.000 |
| | | Sig. (2-tailed) | . |
| | | N | 40 |
| Refocusing (ii) | | Correlation Coefficient | .252 |
| | | Sig. (2-tailed) | .117 |
| | | N | 40 |

Correlations

| | | | Refocusing (ii) |
|--------------------|---------------------------------------|-------------------------|--------------------|
| Spearman's rho | Professional identity / qualification | Correlation Coefficient | .032 |
| | | Sig. (2-tailed) | .843 |
| | | N | 40 |
| Awareness (ii) | | Correlation Coefficient | -.073 |
| | | Sig. (2-tailed) | .654 |
| | | N | 40 |
| Informational (ii) | | Correlation Coefficient | .385 [*] |
| | | Sig. (2-tailed) | .014 |
| | | N | 40 |
| Personal (ii) | | Correlation Coefficient | .359 [*] |
| | | Sig. (2-tailed) | .023 |
| | | N | 40 |
| Management (ii) | | Correlation Coefficient | .232 |
| | | Sig. (2-tailed) | .150 |
| | | N | 40 |
| Consequence (ii) | | Correlation Coefficient | .534 ^{**} |
| | | Sig. (2-tailed) | .000 |
| | | N | 40 |
| Collaboration (ii) | | Correlation Coefficient | .252 |
| | | Sig. (2-tailed) | .117 |
| | | N | 40 |
| Refocusing (ii) | | Correlation Coefficient | 1.000 |
| | | Sig. (2-tailed) | . |
| | | N | 40 |

*. Correlation is significant at the 0.05 level (2-tailed).

** . Correlation is significant at the 0.01 level (2-tailed).

NONPAR CORR

/VARIABLES=V111 PSIAwa0 PSIIInf1 PSIPer2 PSIMan3 PSICon4 PSIColl15 PSIRef6

/PRINT=SPEARMAN TWOTAIL NOSIG

/MISSING=PAIRWISE.

Nonparametric Correlations

Notes

| | | |
|------------------------|--------------------------------|--|
| Output Created | | 25-APR-2013 21:32:58 |
| Comments | | |
| Input | Data | E: \Statomet_2013\Hannelie_SPSS\SoC1and2_demo_LoU_new_13April_Hi_low_23Edited.sav |
| | Active Dataset | DataSet1 |
| | Filter | <none> |
| | Weight | <none> |
| | Split File | <none> |
| | N of Rows in Working Data File | 54 |
| Missing Value Handling | Definition of Missing | User-defined missing values are treated as missing. |
| | Cases Used | Statistics for each pair of variables are based on all the cases with valid data for that pair. |
| Syntax | | NONPAR CORR /VARIABLES=V111 PSIAwa0 PSIInf1 PSIPer2 PSIMan3 PSIcon4 PSIColl5 PSISRef6 /PRINT=SPEARMAN TWOTAIL NOSIG /MISSING=PAIRWISE. |
| Resources | Processor Time | 00:00:00.03 |
| | Elapsed Time | 00:00:00.02 |
| | Number of Cases Allowed | 71493 cases ^a |

a. Based on availability of workspace memory

[DataSet1] E:\Statomet_2013\Hannelie_SPSS\SoC1and2_demo_LoU_new_13April_Hi_low_23Edited.sav

Correlations

| | | | Age | Awareness (i) |
|----------------|-------------------|-------------------------|-------|---------------|
| Spearman's rho | Age | Correlation Coefficient | 1.000 | .036 |
| | | Sig. (2-tailed) | . | .827 |
| | | N | 40 | 40 |
| | Awareness (i) | Correlation Coefficient | .036 | 1.000 |
| | | Sig. (2-tailed) | .827 | . |
| | | N | 40 | 54 |
| | Informational (i) | Correlation Coefficient | .093 | .228 |
| | | Sig. (2-tailed) | .567 | .098 |
| | | N | 40 | 54 |
| | Personal (i) | Correlation Coefficient | -.162 | .205 |
| | | Sig. (2-tailed) | .318 | .136 |
| | | N | 40 | 54 |
| | Management (i) | Correlation Coefficient | .204 | .307* |
| | | Sig. (2-tailed) | .207 | .024 |
| | | N | 40 | 54 |
| | Consequence (i) | Correlation Coefficient | -.115 | -.026 |
| | | Sig. (2-tailed) | .482 | .853 |
| | | N | 40 | 54 |
| | Collaboration (i) | Correlation Coefficient | -.192 | .126 |
| | | Sig. (2-tailed) | .235 | .363 |
| | | N | 40 | 54 |
| | Refocusing (i) | Correlation Coefficient | -.073 | .028 |
| | | Sig. (2-tailed) | .655 | .841 |
| | | N | 40 | 54 |

Correlations

| | | | Informational (i) | Personal (i) |
|-------------------|-----|-------------------------|-------------------|--------------|
| Spearman's rho | Age | Correlation Coefficient | .093 | -.162 |
| | | Sig. (2-tailed) | .567 | .318 |
| | | N | 40 | 40 |
| Awareness (i) | | Correlation Coefficient | .228 | .205 |
| | | Sig. (2-tailed) | .098 | .136 |
| | | N | 54 | 54 |
| Informational (i) | | Correlation Coefficient | 1.000 | .506** |
| | | Sig. (2-tailed) | . | .000 |
| | | N | 54 | 54 |
| Personal (i) | | Correlation Coefficient | .506** | 1.000 |
| | | Sig. (2-tailed) | .000 | . |
| | | N | 54 | 54 |
| Management (i) | | Correlation Coefficient | .396** | .482** |
| | | Sig. (2-tailed) | .003 | .000 |
| | | N | 54 | 54 |
| Consequence (i) | | Correlation Coefficient | .229 | .449** |
| | | Sig. (2-tailed) | .096 | .001 |
| | | N | 54 | 54 |
| Collaboration (i) | | Correlation Coefficient | .368** | .520** |
| | | Sig. (2-tailed) | .006 | .000 |
| | | N | 54 | 54 |
| Refocusing (i) | | Correlation Coefficient | .236 | .403** |
| | | Sig. (2-tailed) | .086 | .003 |
| | | N | 54 | 54 |

Correlations

| | | | Management (i) | Consequence (i) |
|----------------|-------------------|-------------------------|----------------|-----------------|
| Spearman's rho | Age | Correlation Coefficient | .204 | -.115 |
| | | Sig. (2-tailed) | .207 | .482 |
| | | N | 40 | 40 |
| | Awareness (i) | Correlation Coefficient | .307* | -.026 |
| | | Sig. (2-tailed) | .024 | .853 |
| | | N | 54 | 54 |
| | Informational (i) | Correlation Coefficient | .396** | .229 |
| | | Sig. (2-tailed) | .003 | .096 |
| | | N | 54 | 54 |
| | Personal (i) | Correlation Coefficient | .482** | .449** |
| | | Sig. (2-tailed) | .000 | .001 |
| | | N | 54 | 54 |
| | Management (i) | Correlation Coefficient | 1.000 | .115 |
| | | Sig. (2-tailed) | . | .410 |
| | | N | 54 | 54 |
| | Consequence (i) | Correlation Coefficient | .115 | 1.000 |
| | | Sig. (2-tailed) | .410 | . |
| | | N | 54 | 54 |
| | Collaboration (i) | Correlation Coefficient | -.025 | .480** |
| | | Sig. (2-tailed) | .857 | .000 |
| | | N | 54 | 54 |
| | Refocusing (i) | Correlation Coefficient | .182 | .376** |
| | | Sig. (2-tailed) | .187 | .005 |
| | | N | 54 | 54 |

Correlations

| | | | Collaboration (i) | Refocusing (i) |
|-------------------|-----|-------------------------|-------------------|----------------|
| Spearman's rho | Age | Correlation Coefficient | -.192 | -.073 |
| | | Sig. (2-tailed) | .235 | .655 |
| | | N | 40 | 40 |
| Awareness (i) | | Correlation Coefficient | .126 | .028 |
| | | Sig. (2-tailed) | .363 | .841 |
| | | N | 54 | 54 |
| Informational (i) | | Correlation Coefficient | .368** | .236 |
| | | Sig. (2-tailed) | .006 | .086 |
| | | N | 54 | 54 |
| Personal (i) | | Correlation Coefficient | .520** | .403** |
| | | Sig. (2-tailed) | .000 | .003 |
| | | N | 54 | 54 |
| Management (i) | | Correlation Coefficient | -.025 | .182 |
| | | Sig. (2-tailed) | .857 | .187 |
| | | N | 54 | 54 |
| Consequence (i) | | Correlation Coefficient | .480** | .376** |
| | | Sig. (2-tailed) | .000 | .005 |
| | | N | 54 | 54 |
| Collaboration (i) | | Correlation Coefficient | 1.000 | .194 |
| | | Sig. (2-tailed) | . | .160 |
| | | N | 54 | 54 |
| Refocusing (i) | | Correlation Coefficient | .194 | 1.000 |
| | | Sig. (2-tailed) | .160 | . |
| | | N | 54 | 54 |

*. Correlation is significant at the 0.05 level (2-tailed).

**. Correlation is significant at the 0.01 level (2-tailed).

NONPAR CORR

/VARIABLES=V111 PSIIAwa0 PSIIInf1 PSIIPer2 PSIIMan3 PSIIcon4 PSIIColl5 PS
IIRef6

/PRINT=SPEARMAN TWOTAIL NOSIG

/MISSING=PAIRWISE.

Nonparametric Correlations

Notes

| | | |
|------------------------|--------------------------------|--|
| Output Created | | 25-APR-2013 21:35:15 |
| Comments | | |
| Input | Data | E: \Statomet_2013\Hannelie_SPSS\SoC1and2_demo_LoU_new_13April_Hi_low_23Edited.sav |
| | Active Dataset | DataSet1 |
| | Filter | <none> |
| | Weight | <none> |
| | Split File | <none> |
| | N of Rows in Working Data File | 54 |
| Missing Value Handling | Definition of Missing | User-defined missing values are treated as missing. |
| | Cases Used | Statistics for each pair of variables are based on all the cases with valid data for that pair. |
| Syntax | | NONPAR CORR /VARIABLES=V111 PSIIAwa0 PSIIInf1 PSIIPer2 PSIIMan3 PSIICon4 PSIIColl5 PSIIRef6 /PRINT=SPEARMAN TWOTAIL NOSIG /MISSING=PAIRWISE. |
| Resources | Processor Time | 00:00:00.02 |
| | Elapsed Time | 00:00:00.02 |
| | Number of Cases Allowed | 71493 cases ^a |

a. Based on availability of workspace memory

[DataSet1] E:\Statomet_2013\Hannelie_SPSS\SoC1and2_demo_LoU_new_13April_Hi_low_23Edited.sav

Correlations

| | | | Age | Awareness (ii) |
|----------------|--------------------|-------------------------|-------------------|--------------------|
| Spearman's rho | Age | Correlation Coefficient | 1.000 | .157 |
| | | Sig. (2-tailed) | . | .334 |
| | | N | 40 | 40 |
| | Awareness (ii) | Correlation Coefficient | .157 | 1.000 |
| | | Sig. (2-tailed) | .334 | . |
| | | N | 40 | 40 |
| | Informational (ii) | Correlation Coefficient | .266 | -.137 |
| | | Sig. (2-tailed) | .097 | .398 |
| | | N | 40 | 40 |
| | Personal (ii) | Correlation Coefficient | .151 | .005 |
| | | Sig. (2-tailed) | .353 | .977 |
| | | N | 40 | 40 |
| | Management (ii) | Correlation Coefficient | .330 [*] | .153 |
| | | Sig. (2-tailed) | .038 | .347 |
| | | N | 40 | 40 |
| | Consequence (ii) | Correlation Coefficient | -.107 | -.332 [*] |
| | | Sig. (2-tailed) | .509 | .037 |
| | | N | 40 | 40 |
| | Collaboration (ii) | Correlation Coefficient | .113 | -.142 |
| | | Sig. (2-tailed) | .488 | .383 |
| | | N | 40 | 40 |
| | Refocusing (ii) | Correlation Coefficient | -.121 | -.073 |
| | | Sig. (2-tailed) | .456 | .654 |
| | | N | 40 | 40 |

Correlations

| | | | Informational (ii) | Personal (ii) |
|----------------|--------------------|-------------------------|-----------------------|---------------|
| Spearman's rho | Age | Correlation Coefficient | .266 | .151 |
| | | Sig. (2-tailed) | .097 | .353 |
| | | N | 40 | 40 |
| | Awareness (ii) | Correlation Coefficient | -.137 | .005 |
| | | Sig. (2-tailed) | .398 | .977 |
| | | N | 40 | 40 |
| | Informational (ii) | Correlation Coefficient | 1.000 | .650** |
| | | Sig. (2-tailed) | . | .000 |
| | | N | 40 | 40 |
| | Personal (ii) | Correlation Coefficient | .650** | 1.000 |
| | | Sig. (2-tailed) | .000 | . |
| | | N | 40 | 40 |
| | Management (ii) | Correlation Coefficient | .490** | .477** |
| | | Sig. (2-tailed) | .001 | .002 |
| | | N | 40 | 40 |
| | Consequence (ii) | Correlation Coefficient | .311 | .247 |
| | | Sig. (2-tailed) | .051 | .125 |
| | | N | 40 | 40 |
| | Collaboration (ii) | Correlation Coefficient | .306 | .423** |
| | | Sig. (2-tailed) | .055 | .007 |
| | | N | 40 | 40 |
| | Refocusing (ii) | Correlation Coefficient | .385* | .359* |
| | | Sig. (2-tailed) | .014 | .023 |
| | | N | 40 | 40 |

Correlations

| | | | Management (ii) | Consequence (ii) |
|--------------------|-------------------------|-------------------------|--------------------|---------------------|
| Spearman's rho | Age | Correlation Coefficient | .330 [*] | -.107 |
| | | Sig. (2-tailed) | .038 | .509 |
| | | N | 40 | 40 |
| | Awareness (ii) | Correlation Coefficient | .153 | -.332 [*] |
| | | Sig. (2-tailed) | .347 | .037 |
| | | N | 40 | 40 |
| | Informational (ii) | Correlation Coefficient | .490 ^{**} | .311 |
| | | Sig. (2-tailed) | .001 | .051 |
| | | N | 40 | 40 |
| | Personal (ii) | Correlation Coefficient | .477 ^{**} | .247 |
| | | Sig. (2-tailed) | .002 | .125 |
| | | N | 40 | 40 |
| | Management (ii) | Correlation Coefficient | 1.000 | .190 |
| | | Sig. (2-tailed) | . | .241 |
| | | N | 40 | 40 |
| | Consequence (ii) | Correlation Coefficient | .190 | 1.000 |
| | | Sig. (2-tailed) | .241 | . |
| | | N | 40 | 40 |
| Collaboration (ii) | Correlation Coefficient | .277 | .315 [*] | |
| | Sig. (2-tailed) | .083 | .048 | |
| | N | 40 | 40 | |
| Refocusing (ii) | Correlation Coefficient | .232 | .534 ^{**} | |
| | Sig. (2-tailed) | .150 | .000 | |
| | N | 40 | 40 | |

Correlations

| | | | Collaboration (ii) | Refocusing (ii) |
|----------------|--------------------|-------------------------|-----------------------|-----------------|
| Spearman's rho | Age | Correlation Coefficient | .113 | -.121 |
| | | Sig. (2-tailed) | .488 | .456 |
| | | N | 40 | 40 |
| | Awareness (ii) | Correlation Coefficient | -.142 | -.073 |
| | | Sig. (2-tailed) | .383 | .654 |
| | | N | 40 | 40 |
| | Informational (ii) | Correlation Coefficient | .306 | .385* |
| | | Sig. (2-tailed) | .055 | .014 |
| | | N | 40 | 40 |
| | Personal (ii) | Correlation Coefficient | .423** | .359* |
| | | Sig. (2-tailed) | .007 | .023 |
| | | N | 40 | 40 |
| | Management (ii) | Correlation Coefficient | .277 | .232 |
| | | Sig. (2-tailed) | .083 | .150 |
| | | N | 40 | 40 |
| | Consequence (ii) | Correlation Coefficient | .315* | .534** |
| | | Sig. (2-tailed) | .048 | .000 |
| | | N | 40 | 40 |
| | Collaboration (ii) | Correlation Coefficient | 1.000 | .252 |
| | | Sig. (2-tailed) | . | .117 |
| | | N | 40 | 40 |
| | Refocusing (ii) | Correlation Coefficient | .252 | 1.000 |
| | | Sig. (2-tailed) | .117 | . |
| | | N | 40 | 40 |

*. Correlation is significant at the 0.05 level (2-tailed).

** . Correlation is significant at the 0.01 level (2-tailed).

NONPAR CORR

/VARIABLES=V112 PSIAwa0 PSIInf1 PSIPer2 PSIMan3 PSICon4 PSIColl5 PSIRef6

/PRINT=SPEARMAN TWOTAIL NOSIG

/MISSING=PAIRWISE.

Nonparametric Correlations

Notes

| | | |
|------------------------|--------------------------------|--|
| Output Created | | 25-APR-2013 21:35:50 |
| Comments | | |
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| | Active Dataset | DataSet1 |
| | Filter | <none> |
| | Weight | <none> |
| | Split File | <none> |
| | N of Rows in Working Data File | 54 |
| Missing Value Handling | Definition of Missing | User-defined missing values are treated as missing. |
| | Cases Used | Statistics for each pair of variables are based on all the cases with valid data for that pair. |
| Syntax | | NONPAR CORR /VARIABLES=V112 PSIAwa0 PSIInf1 PSIPer2 PSIMan3 PSIcon4 PSIColl5 PSISRef6 /PRINT=SPEARMAN TWOTAIL NOSIG /MISSING=PAIRWISE. |
| Resources | Processor Time | 00:00:00.00 |
| | Elapsed Time | 00:00:00.04 |
| | Number of Cases Allowed | 71493 cases ^a |

a. Based on availability of workspace memory

[DataSet1] E:\Statomet_2013\Hannelie_SPSS\SoC1and2_demo_LoU_new_13April_Hi_low_23Edited.sav

Correlations

| | | | Academic qualification | Awareness (i) |
|----------------|------------------------|-------------------------|------------------------|-------------------|
| Spearman's rho | Academic qualification | Correlation Coefficient | 1.000 | .075 |
| | | Sig. (2-tailed) | . | .650 |
| | | N | 39 | 39 |
| | Awareness (i) | Correlation Coefficient | .075 | 1.000 |
| | | Sig. (2-tailed) | .650 | . |
| | | N | 39 | 54 |
| | Informational (i) | Correlation Coefficient | .289 | .228 |
| | | Sig. (2-tailed) | .075 | .098 |
| | | N | 39 | 54 |
| | Personal (i) | Correlation Coefficient | -.024 | .205 |
| | | Sig. (2-tailed) | .883 | .136 |
| | | N | 39 | 54 |
| | Management (i) | Correlation Coefficient | -.034 | .307 [*] |
| | | Sig. (2-tailed) | .835 | .024 |
| | | N | 39 | 54 |
| | Consequence (i) | Correlation Coefficient | -.020 | -.026 |
| | | Sig. (2-tailed) | .904 | .853 |
| | | N | 39 | 54 |
| | Collaboration (i) | Correlation Coefficient | -.042 | .126 |
| | | Sig. (2-tailed) | .797 | .363 |
| | | N | 39 | 54 |
| | Refocusing (i) | Correlation Coefficient | -.370 [*] | .028 |
| | | Sig. (2-tailed) | .021 | .841 |
| | | N | 39 | 54 |

Correlations

| | | | Informational (i) | Personal (i) |
|-------------------|------------------------|-------------------------|-------------------|--------------|
| Spearman's rho | Academic qualification | Correlation Coefficient | .289 | -.024 |
| | | Sig. (2-tailed) | .075 | .883 |
| | | N | 39 | 39 |
| Awareness (i) | | Correlation Coefficient | .228 | .205 |
| | | Sig. (2-tailed) | .098 | .136 |
| | | N | 54 | 54 |
| Informational (i) | | Correlation Coefficient | 1.000 | .506** |
| | | Sig. (2-tailed) | . | .000 |
| | | N | 54 | 54 |
| Personal (i) | | Correlation Coefficient | .506** | 1.000 |
| | | Sig. (2-tailed) | .000 | . |
| | | N | 54 | 54 |
| Management (i) | | Correlation Coefficient | .396** | .482** |
| | | Sig. (2-tailed) | .003 | .000 |
| | | N | 54 | 54 |
| Consequence (i) | | Correlation Coefficient | .229 | .449** |
| | | Sig. (2-tailed) | .096 | .001 |
| | | N | 54 | 54 |
| Collaboration (i) | | Correlation Coefficient | .368** | .520** |
| | | Sig. (2-tailed) | .006 | .000 |
| | | N | 54 | 54 |
| Refocusing (i) | | Correlation Coefficient | .236 | .403** |
| | | Sig. (2-tailed) | .086 | .003 |
| | | N | 54 | 54 |

Correlations

| | | | Management (i) | Consequence (i) |
|-------------------|------------------------|-------------------------|--------------------|--------------------|
| Spearman's rho | Academic qualification | Correlation Coefficient | -.034 | -.020 |
| | | Sig. (2-tailed) | .835 | .904 |
| | | N | 39 | 39 |
| Awareness (i) | | Correlation Coefficient | .307 [*] | -.026 |
| | | Sig. (2-tailed) | .024 | .853 |
| | | N | 54 | 54 |
| Informational (i) | | Correlation Coefficient | .396 ^{**} | .229 |
| | | Sig. (2-tailed) | .003 | .096 |
| | | N | 54 | 54 |
| Personal (i) | | Correlation Coefficient | .482 ^{**} | .449 ^{**} |
| | | Sig. (2-tailed) | .000 | .001 |
| | | N | 54 | 54 |
| Management (i) | | Correlation Coefficient | 1.000 | .115 |
| | | Sig. (2-tailed) | . | .410 |
| | | N | 54 | 54 |
| Consequence (i) | | Correlation Coefficient | .115 | 1.000 |
| | | Sig. (2-tailed) | .410 | . |
| | | N | 54 | 54 |
| Collaboration (i) | | Correlation Coefficient | -.025 | .480 ^{**} |
| | | Sig. (2-tailed) | .857 | .000 |
| | | N | 54 | 54 |
| Refocusing (i) | | Correlation Coefficient | .182 | .376 ^{**} |
| | | Sig. (2-tailed) | .187 | .005 |
| | | N | 54 | 54 |

Correlations

| | | | Collaboration (i) | Refocusing (i) |
|-------------------|------------------------|-------------------------|--------------------|--------------------|
| Spearman's rho | Academic qualification | Correlation Coefficient | -.042 | -.370 [*] |
| | | Sig. (2-tailed) | .797 | .021 |
| | | N | 39 | 39 |
| Awareness (i) | Awareness (i) | Correlation Coefficient | .126 | .028 |
| | | Sig. (2-tailed) | .363 | .841 |
| | | N | 54 | 54 |
| Informational (i) | Informational (i) | Correlation Coefficient | .368 ^{**} | .236 |
| | | Sig. (2-tailed) | .006 | .086 |
| | | N | 54 | 54 |
| Personal (i) | Personal (i) | Correlation Coefficient | .520 ^{**} | .403 ^{**} |
| | | Sig. (2-tailed) | .000 | .003 |
| | | N | 54 | 54 |
| Management (i) | Management (i) | Correlation Coefficient | -.025 | .182 |
| | | Sig. (2-tailed) | .857 | .187 |
| | | N | 54 | 54 |
| Consequence (i) | Consequence (i) | Correlation Coefficient | .480 ^{**} | .376 ^{**} |
| | | Sig. (2-tailed) | .000 | .005 |
| | | N | 54 | 54 |
| Collaboration (i) | Collaboration (i) | Correlation Coefficient | 1.000 | .194 |
| | | Sig. (2-tailed) | . | .160 |
| | | N | 54 | 54 |
| Refocusing (i) | Refocusing (i) | Correlation Coefficient | .194 | 1.000 |
| | | Sig. (2-tailed) | .160 | . |
| | | N | 54 | 54 |

*. Correlation is significant at the 0.05 level (2-tailed).

**.. Correlation is significant at the 0.01 level (2-tailed).

NONPAR CORR

/VARIABLES=V112 PSIIAwa0 PSIIInf1 PSIIPer2 PSIIMan3 PSIIcon4 PSIIColl5 PSIIRef6

/PRINT=SPEARMAN TWOTAIL NOSIG

/MISSING=PAIRWISE.

Nonparametric Correlations

Notes

| | | |
|------------------------|--------------------------------|---|
| Output Created | | 25-APR-2013 21:36:09 |
| Comments | | |
| Input | Data | E: \Statomet_2013\Hannelie_SPSS\SoC1and2_demo_LoU_new_13April_Hi_low_23Edited.sav |
| | Active Dataset | DataSet1 |
| | Filter | <none> |
| | Weight | <none> |
| | Split File | <none> |
| | N of Rows in Working Data File | 54 |
| Missing Value Handling | Definition of Missing | User-defined missing values are treated as missing. |
| | Cases Used | Statistics for each pair of variables are based on all the cases with valid data for that pair. |
| Syntax | | NONPAR CORR /VARIABLES=V112 PSIIAwa0 PSIIInf1 PSIIPer2 PSIIMan3 PSIICon4 PSIIColl5 PSIIRef6 /PRINT=SPEARMAN TWOTAIL NOSIG /MISSING=PAIRWISE. |
| Resources | Processor Time | 00:00:00.02 |
| | Elapsed Time | 00:00:00.02 |
| | Number of Cases Allowed | 71493 cases ^a |

a. Based on availability of workspace memory

[DataSet1] E:\Statomet_2013\Hannelie_SPSS\SoC1and2_demo_LoU_new_13April_Hi_low_23Edited.sav

Correlations

| | | | Academic qualification | Awareness (ii) |
|--------------------|------------------------|-------------------------|------------------------|----------------|
| Spearman's rho | Academic qualification | Correlation Coefficient | 1.000 | .239 |
| | | Sig. (2-tailed) | . | .144 |
| | | N | 39 | 39 |
| Awareness (ii) | Awareness (ii) | Correlation Coefficient | .239 | 1.000 |
| | | Sig. (2-tailed) | .144 | . |
| | | N | 39 | 40 |
| Informational (ii) | Informational (ii) | Correlation Coefficient | -.142 | -.137 |
| | | Sig. (2-tailed) | .389 | .398 |
| | | N | 39 | 40 |
| Personal (ii) | Personal (ii) | Correlation Coefficient | -.067 | .005 |
| | | Sig. (2-tailed) | .687 | .977 |
| | | N | 39 | 40 |
| Management (ii) | Management (ii) | Correlation Coefficient | -.019 | .153 |
| | | Sig. (2-tailed) | .909 | .347 |
| | | N | 39 | 40 |
| Consequence (ii) | Consequence (ii) | Correlation Coefficient | -.284 | -.332* |
| | | Sig. (2-tailed) | .080 | .037 |
| | | N | 39 | 40 |
| Collaboration (ii) | Collaboration (ii) | Correlation Coefficient | .078 | -.142 |
| | | Sig. (2-tailed) | .635 | .383 |
| | | N | 39 | 40 |
| Refocusing (ii) | Refocusing (ii) | Correlation Coefficient | -.269 | -.073 |
| | | Sig. (2-tailed) | .098 | .654 |
| | | N | 39 | 40 |

Correlations

| | | | Informational (ii) | Personal (ii) |
|----------------|------------------------|-------------------------|-----------------------|---------------|
| Spearman's rho | Academic qualification | Correlation Coefficient | -.142 | -.067 |
| | | Sig. (2-tailed) | .389 | .687 |
| | | N | 39 | 39 |
| | Awareness (ii) | Correlation Coefficient | -.137 | .005 |
| | | Sig. (2-tailed) | .398 | .977 |
| | | N | 40 | 40 |
| | Informational (ii) | Correlation Coefficient | 1.000 | .650** |
| | | Sig. (2-tailed) | . | .000 |
| | | N | 40 | 40 |
| | Personal (ii) | Correlation Coefficient | .650** | 1.000 |
| | | Sig. (2-tailed) | .000 | . |
| | | N | 40 | 40 |
| | Management (ii) | Correlation Coefficient | .490** | .477** |
| | | Sig. (2-tailed) | .001 | .002 |
| | | N | 40 | 40 |
| | Consequence (ii) | Correlation Coefficient | .311 | .247 |
| | | Sig. (2-tailed) | .051 | .125 |
| | | N | 40 | 40 |
| | Collaboration (ii) | Correlation Coefficient | .306 | .423** |
| | | Sig. (2-tailed) | .055 | .007 |
| | | N | 40 | 40 |
| | Refocusing (ii) | Correlation Coefficient | .385* | .359* |
| | | Sig. (2-tailed) | .014 | .023 |
| | | N | 40 | 40 |

Correlations

| | | | Management (ii) | Consequence (ii) |
|--------------------|------------------------|-------------------------|--------------------|---------------------|
| Spearman's rho | Academic qualification | Correlation Coefficient | -.019 | -.284 |
| | | Sig. (2-tailed) | .909 | .080 |
| | | N | 39 | 39 |
| Awareness (ii) | Awareness (ii) | Correlation Coefficient | .153 | -.332* |
| | | Sig. (2-tailed) | .347 | .037 |
| | | N | 40 | 40 |
| Informational (ii) | Informational (ii) | Correlation Coefficient | .490** | .311 |
| | | Sig. (2-tailed) | .001 | .051 |
| | | N | 40 | 40 |
| Personal (ii) | Personal (ii) | Correlation Coefficient | .477** | .247 |
| | | Sig. (2-tailed) | .002 | .125 |
| | | N | 40 | 40 |
| Management (ii) | Management (ii) | Correlation Coefficient | 1.000 | .190 |
| | | Sig. (2-tailed) | . | .241 |
| | | N | 40 | 40 |
| Consequence (ii) | Consequence (ii) | Correlation Coefficient | .190 | 1.000 |
| | | Sig. (2-tailed) | .241 | . |
| | | N | 40 | 40 |
| Collaboration (ii) | Collaboration (ii) | Correlation Coefficient | .277 | .315* |
| | | Sig. (2-tailed) | .083 | .048 |
| | | N | 40 | 40 |
| Refocusing (ii) | Refocusing (ii) | Correlation Coefficient | .232 | .534** |
| | | Sig. (2-tailed) | .150 | .000 |
| | | N | 40 | 40 |

Correlations

| | | | Collaboration (ii) | Refocusing (ii) |
|--------------------|------------------------|-------------------------|-----------------------|-----------------|
| Spearman's rho | Academic qualification | Correlation Coefficient | .078 | -.269 |
| | | Sig. (2-tailed) | .635 | .098 |
| | | N | 39 | 39 |
| Awareness (ii) | Awareness (ii) | Correlation Coefficient | -.142 | -.073 |
| | | Sig. (2-tailed) | .383 | .654 |
| | | N | 40 | 40 |
| Informational (ii) | Informational (ii) | Correlation Coefficient | .306 | .385* |
| | | Sig. (2-tailed) | .055 | .014 |
| | | N | 40 | 40 |
| Personal (ii) | Personal (ii) | Correlation Coefficient | .423** | .359* |
| | | Sig. (2-tailed) | .007 | .023 |
| | | N | 40 | 40 |
| Management (ii) | Management (ii) | Correlation Coefficient | .277 | .232 |
| | | Sig. (2-tailed) | .083 | .150 |
| | | N | 40 | 40 |
| Consequence (ii) | Consequence (ii) | Correlation Coefficient | .315* | .534** |
| | | Sig. (2-tailed) | .048 | .000 |
| | | N | 40 | 40 |
| Collaboration (ii) | Collaboration (ii) | Correlation Coefficient | 1.000 | .252 |
| | | Sig. (2-tailed) | . | .117 |
| | | N | 40 | 40 |
| Refocusing (ii) | Refocusing (ii) | Correlation Coefficient | .252 | 1.000 |
| | | Sig. (2-tailed) | .117 | . |
| | | N | 40 | 40 |

*. Correlation is significant at the 0.05 level (2-tailed).

** . Correlation is significant at the 0.01 level (2-tailed).

NONPAR CORR

/VARIABLES=V98 PSIAwa0 PSIInf1 PSIPer2 PSIMan3 PSICon4 PSIColl15 PSIRef6

/PRINT=SPEARMAN TWOTAIL NOSIG

/MISSING=PAIRWISE.

Nonparametric Correlations

Notes

| | | |
|------------------------|--------------------------------|---|
| Output Created | | 25-APR-2013 21:37:06 |
| Comments | | |
| Input | Data | E: \Statomet_2013\Hannelie_SPSS\SoC1and2_demo_LoU_new_13April_Hi_low_23Edited.sav |
| | Active Dataset | DataSet1 |
| | Filter | <none> |
| | Weight | <none> |
| | Split File | <none> |
| | N of Rows in Working Data File | 54 |
| Missing Value Handling | Definition of Missing | User-defined missing values are treated as missing. |
| | Cases Used | Statistics for each pair of variables are based on all the cases with valid data for that pair. |
| Syntax | | NONPAR CORR /VARIABLES=V98 PSIAwa0 PSIInf1 PSIPer2 PSIMan3 PSICon4 PSIColl5 PSISRef6 /PRINT=SPEARMAN TWOTAIL NOSIG /MISSING=PAIRWISE. |
| Resources | Processor Time | 00:00:00.00 |
| | Elapsed Time | 00:00:00.02 |
| | Number of Cases Allowed | 71493 cases ^a |

a. Based on availability of workspace memory

[DataSet1] E:\Statomet_2013\Hannelie_SPSS\SoC1and2_demo_LoU_new_13April_Hi_low_23Edited.sav

Correlations

| | | | Confidence level | Awareness (i) |
|-------------------|------------------|-------------------------|-------------------|-------------------|
| Spearman's rho | Confidence level | Correlation Coefficient | 1.000 | .047 |
| | | Sig. (2-tailed) | . | .774 |
| | | N | 40 | 40 |
| Awareness (i) | Confidence level | Correlation Coefficient | .047 | 1.000 |
| | | Sig. (2-tailed) | .774 | . |
| | | N | 40 | 54 |
| Informational (i) | Confidence level | Correlation Coefficient | .144 | .228 |
| | | Sig. (2-tailed) | .374 | .098 |
| | | N | 40 | 54 |
| Personal (i) | Confidence level | Correlation Coefficient | .027 | .205 |
| | | Sig. (2-tailed) | .870 | .136 |
| | | N | 40 | 54 |
| Management (i) | Confidence level | Correlation Coefficient | .344 [*] | .307 [*] |
| | | Sig. (2-tailed) | .030 | .024 |
| | | N | 40 | 54 |
| Consequence (i) | Confidence level | Correlation Coefficient | -.211 | -.026 |
| | | Sig. (2-tailed) | .191 | .853 |
| | | N | 40 | 54 |
| Collaboration (i) | Confidence level | Correlation Coefficient | -.096 | .126 |
| | | Sig. (2-tailed) | .554 | .363 |
| | | N | 40 | 54 |
| Refocusing (i) | Confidence level | Correlation Coefficient | .101 | .028 |
| | | Sig. (2-tailed) | .534 | .841 |
| | | N | 40 | 54 |

Correlations

| | | | Informational (i) | Personal (i) |
|-------------------|------------------|-------------------------|--------------------|--------------------|
| Spearman's rho | Confidence level | Correlation Coefficient | .144 | .027 |
| | | Sig. (2-tailed) | .374 | .870 |
| | | N | 40 | 40 |
| Awareness (i) | | Correlation Coefficient | .228 | .205 |
| | | Sig. (2-tailed) | .098 | .136 |
| | | N | 54 | 54 |
| Informational (i) | | Correlation Coefficient | 1.000 | .506 ^{**} |
| | | Sig. (2-tailed) | . | .000 |
| | | N | 54 | 54 |
| Personal (i) | | Correlation Coefficient | .506 ^{**} | 1.000 |
| | | Sig. (2-tailed) | .000 | . |
| | | N | 54 | 54 |
| Management (i) | | Correlation Coefficient | .396 ^{**} | .482 ^{**} |
| | | Sig. (2-tailed) | .003 | .000 |
| | | N | 54 | 54 |
| Consequence (i) | | Correlation Coefficient | .229 | .449 ^{**} |
| | | Sig. (2-tailed) | .096 | .001 |
| | | N | 54 | 54 |
| Collaboration (i) | | Correlation Coefficient | .368 ^{**} | .520 ^{**} |
| | | Sig. (2-tailed) | .006 | .000 |
| | | N | 54 | 54 |
| Refocusing (i) | | Correlation Coefficient | .236 | .403 ^{**} |
| | | Sig. (2-tailed) | .086 | .003 |
| | | N | 54 | 54 |

Correlations

| | | | Management (i) | Consequence (i) |
|-------------------|-------------------------|-------------------------|--------------------|--------------------|
| Spearman's rho | Confidence level | Correlation Coefficient | .344 [*] | -.211 |
| | | Sig. (2-tailed) | .030 | .191 |
| | | N | 40 | 40 |
| | Awareness (i) | Correlation Coefficient | .307 [*] | -.026 |
| | | Sig. (2-tailed) | .024 | .853 |
| | | N | 54 | 54 |
| | Informational (i) | Correlation Coefficient | .396 ^{**} | .229 |
| | | Sig. (2-tailed) | .003 | .096 |
| | | N | 54 | 54 |
| | Personal (i) | Correlation Coefficient | .482 ^{**} | .449 ^{**} |
| Sig. (2-tailed) | | .000 | .001 | |
| N | | 54 | 54 | |
| Management (i) | Correlation Coefficient | 1.000 | .115 | |
| | Sig. (2-tailed) | . | .410 | |
| | N | 54 | 54 | |
| Consequence (i) | Correlation Coefficient | .115 | 1.000 | |
| | Sig. (2-tailed) | .410 | . | |
| | N | 54 | 54 | |
| Collaboration (i) | Correlation Coefficient | -.025 | .480 ^{**} | |
| | Sig. (2-tailed) | .857 | .000 | |
| | N | 54 | 54 | |
| Refocusing (i) | Correlation Coefficient | .182 | .376 ^{**} | |
| | Sig. (2-tailed) | .187 | .005 | |
| | N | 54 | 54 | |

Correlations

| | | | Collaboration (i) | Refocusing (i) |
|-------------------|------------------|-------------------------|-------------------|----------------|
| Spearman's rho | Confidence level | Correlation Coefficient | -.096 | .101 |
| | | Sig. (2-tailed) | .554 | .534 |
| | | N | 40 | 40 |
| Awareness (i) | | Correlation Coefficient | .126 | .028 |
| | | Sig. (2-tailed) | .363 | .841 |
| | | N | 54 | 54 |
| Informational (i) | | Correlation Coefficient | .368** | .236 |
| | | Sig. (2-tailed) | .006 | .086 |
| | | N | 54 | 54 |
| Personal (i) | | Correlation Coefficient | .520** | .403** |
| | | Sig. (2-tailed) | .000 | .003 |
| | | N | 54 | 54 |
| Management (i) | | Correlation Coefficient | -.025 | .182 |
| | | Sig. (2-tailed) | .857 | .187 |
| | | N | 54 | 54 |
| Consequence (i) | | Correlation Coefficient | .480** | .376** |
| | | Sig. (2-tailed) | .000 | .005 |
| | | N | 54 | 54 |
| Collaboration (i) | | Correlation Coefficient | 1.000 | .194 |
| | | Sig. (2-tailed) | . | .160 |
| | | N | 54 | 54 |
| Refocusing (i) | | Correlation Coefficient | .194 | 1.000 |
| | | Sig. (2-tailed) | .160 | . |
| | | N | 54 | 54 |

*. Correlation is significant at the 0.05 level (2-tailed).

** . Correlation is significant at the 0.01 level (2-tailed).

NONPAR CORR

/VARIABLES=V100 PSIAwa0 PSIIInf1 PSIPer2 PSIMan3 PSICon4 PSIColl5 PSIRef6

/PRINT=SPEARMAN TWOTAIL NOSIG

/MISSING=PAIRWISE.

Nonparametric Correlations

Notes

| | | |
|------------------------|--------------------------------|--|
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| Comments | | |
| Input | Data | E: \Statomet_2013\Hannelie_SPSS\SoC1and2_demo_LoU_new_13April_Hi_low_23Edited.sav |
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| | Filter | <none> |
| | Weight | <none> |
| | Split File | <none> |
| | N of Rows in Working Data File | 54 |
| Missing Value Handling | Definition of Missing | User-defined missing values are treated as missing. |
| | Cases Used | Statistics for each pair of variables are based on all the cases with valid data for that pair. |
| Syntax | | NONPAR CORR /VARIABLES=V100 PSIAwa0 PSIIInf1 PSIPer2 PSIMan3 PSICon4 PSIColl5 PSISRef6 /PRINT=SPEARMAN TWOTAIL NOSIG /MISSING=PAIRWISE. |
| Resources | Processor Time | 00:00:00.02 |
| | Elapsed Time | 00:00:00.02 |
| | Number of Cases Allowed | 71493 cases ^a |

a. Based on availability of workspace memory

[DataSet1] E:\Statomet_2013\Hannelie_SPSS\SoC1and2_demo_LoU_new_13April_Hi_low_23Edited.sav

Correlations

| | | | Used old clickUP (2006- 2012) |
|-------------------|------------------------------|-------------------------|-------------------------------------|
| Spearman's rho | Used old clickUP (2006-2012) | Correlation Coefficient | 1.000 |
| | | Sig. (2-tailed) | . |
| | | N | 37 |
| Awareness (i) | | Correlation Coefficient | .087 |
| | | Sig. (2-tailed) | .610 |
| | | N | 37 |
| Informational (i) | | Correlation Coefficient | .194 |
| | | Sig. (2-tailed) | .250 |
| | | N | 37 |
| Personal (i) | | Correlation Coefficient | -.040 |
| | | Sig. (2-tailed) | .814 |
| | | N | 37 |
| Management (i) | | Correlation Coefficient | -.265 |
| | | Sig. (2-tailed) | .113 |
| | | N | 37 |
| Consequence (i) | | Correlation Coefficient | .333 [*] |
| | | Sig. (2-tailed) | .044 |
| | | N | 37 |
| Collaboration (i) | | Correlation Coefficient | .197 |
| | | Sig. (2-tailed) | .242 |
| | | N | 37 |
| Refocusing (i) | | Correlation Coefficient | .240 |
| | | Sig. (2-tailed) | .152 |
| | | N | 37 |

Correlations

| | | | Awareness (i) |
|-------------------|------------------------------|-------------------------|-------------------|
| Spearman's rho | Used old clickUP (2006-2012) | Correlation Coefficient | .087 |
| | | Sig. (2-tailed) | .610 |
| | | N | 37 |
| Awareness (i) | | Correlation Coefficient | 1.000 |
| | | Sig. (2-tailed) | . |
| | | N | 54 |
| Informational (i) | | Correlation Coefficient | .228 |
| | | Sig. (2-tailed) | .098 |
| | | N | 54 |
| Personal (i) | | Correlation Coefficient | .205 |
| | | Sig. (2-tailed) | .136 |
| | | N | 54 |
| Management (i) | | Correlation Coefficient | .307 [*] |
| | | Sig. (2-tailed) | .024 |
| | | N | 54 |
| Consequence (i) | | Correlation Coefficient | -.026 |
| | | Sig. (2-tailed) | .853 |
| | | N | 54 |
| Collaboration (i) | | Correlation Coefficient | .126 |
| | | Sig. (2-tailed) | .363 |
| | | N | 54 |
| Refocusing (i) | | Correlation Coefficient | .028 |
| | | Sig. (2-tailed) | .841 |
| | | N | 54 |

Correlations

| | | | Informational (i) |
|-------------------|------------------------------|-------------------------|--------------------|
| Spearman's rho | Used old clickUP (2006-2012) | Correlation Coefficient | .194 |
| | | Sig. (2-tailed) | .250 |
| | | N | 37 |
| Awareness (i) | | Correlation Coefficient | .228 |
| | | Sig. (2-tailed) | .098 |
| | | N | 54 |
| Informational (i) | | Correlation Coefficient | 1.000 |
| | | Sig. (2-tailed) | . |
| | | N | 54 |
| Personal (i) | | Correlation Coefficient | .506 ^{**} |
| | | Sig. (2-tailed) | .000 |
| | | N | 54 |
| Management (i) | | Correlation Coefficient | .396 ^{**} |
| | | Sig. (2-tailed) | .003 |
| | | N | 54 |
| Consequence (i) | | Correlation Coefficient | .229 |
| | | Sig. (2-tailed) | .096 |
| | | N | 54 |
| Collaboration (i) | | Correlation Coefficient | .368 ^{**} |
| | | Sig. (2-tailed) | .006 |
| | | N | 54 |
| Refocusing (i) | | Correlation Coefficient | .236 |
| | | Sig. (2-tailed) | .086 |
| | | N | 54 |

Correlations

| | | | Personal (i) |
|-------------------|------------------------------|-------------------------|--------------|
| Spearman's rho | Used old clickUP (2006-2012) | Correlation Coefficient | -.040 |
| | | Sig. (2-tailed) | .814 |
| | | N | 37 |
| Awareness (i) | | Correlation Coefficient | .205 |
| | | Sig. (2-tailed) | .136 |
| | | N | 54 |
| Informational (i) | | Correlation Coefficient | .506** |
| | | Sig. (2-tailed) | .000 |
| | | N | 54 |
| Personal (i) | | Correlation Coefficient | 1.000 |
| | | Sig. (2-tailed) | . |
| | | N | 54 |
| Management (i) | | Correlation Coefficient | .482** |
| | | Sig. (2-tailed) | .000 |
| | | N | 54 |
| Consequence (i) | | Correlation Coefficient | .449** |
| | | Sig. (2-tailed) | .001 |
| | | N | 54 |
| Collaboration (i) | | Correlation Coefficient | .520** |
| | | Sig. (2-tailed) | .000 |
| | | N | 54 |
| Refocusing (i) | | Correlation Coefficient | .403** |
| | | Sig. (2-tailed) | .003 |
| | | N | 54 |

Correlations

| | | | Management (i) |
|-------------------|------------------------------|-------------------------|----------------|
| Spearman's rho | Used old clickUP (2006-2012) | Correlation Coefficient | -.265 |
| | | Sig. (2-tailed) | .113 |
| | | N | 37 |
| Awareness (i) | | Correlation Coefficient | .307* |
| | | Sig. (2-tailed) | .024 |
| | | N | 54 |
| Informational (i) | | Correlation Coefficient | .396** |
| | | Sig. (2-tailed) | .003 |
| | | N | 54 |
| Personal (i) | | Correlation Coefficient | .482** |
| | | Sig. (2-tailed) | .000 |
| | | N | 54 |
| Management (i) | | Correlation Coefficient | 1.000 |
| | | Sig. (2-tailed) | . |
| | | N | 54 |
| Consequence (i) | | Correlation Coefficient | .115 |
| | | Sig. (2-tailed) | .410 |
| | | N | 54 |
| Collaboration (i) | | Correlation Coefficient | -.025 |
| | | Sig. (2-tailed) | .857 |
| | | N | 54 |
| Refocusing (i) | | Correlation Coefficient | .182 |
| | | Sig. (2-tailed) | .187 |
| | | N | 54 |

Correlations

| | | | Consequence (i) |
|-------------------|------------------------------|-------------------------|--------------------|
| Spearman's rho | Used old clickUP (2006-2012) | Correlation Coefficient | .333 [*] |
| | | Sig. (2-tailed) | .044 |
| | | N | 37 |
| Awareness (i) | | Correlation Coefficient | -.026 |
| | | Sig. (2-tailed) | .853 |
| | | N | 54 |
| Informational (i) | | Correlation Coefficient | .229 |
| | | Sig. (2-tailed) | .096 |
| | | N | 54 |
| Personal (i) | | Correlation Coefficient | .449 ^{**} |
| | | Sig. (2-tailed) | .001 |
| | | N | 54 |
| Management (i) | | Correlation Coefficient | .115 |
| | | Sig. (2-tailed) | .410 |
| | | N | 54 |
| Consequence (i) | | Correlation Coefficient | 1.000 |
| | | Sig. (2-tailed) | . |
| | | N | 54 |
| Collaboration (i) | | Correlation Coefficient | .480 ^{**} |
| | | Sig. (2-tailed) | .000 |
| | | N | 54 |
| Refocusing (i) | | Correlation Coefficient | .376 ^{**} |
| | | Sig. (2-tailed) | .005 |
| | | N | 54 |

Correlations

| | | | Collaboration (i) |
|-------------------|------------------------------|-------------------------|-------------------|
| Spearman's rho | Used old clickUP (2006-2012) | Correlation Coefficient | .197 |
| | | Sig. (2-tailed) | .242 |
| | | N | 37 |
| Awareness (i) | | Correlation Coefficient | .126 |
| | | Sig. (2-tailed) | .363 |
| | | N | 54 |
| Informational (i) | | Correlation Coefficient | .368** |
| | | Sig. (2-tailed) | .006 |
| | | N | 54 |
| Personal (i) | | Correlation Coefficient | .520** |
| | | Sig. (2-tailed) | .000 |
| | | N | 54 |
| Management (i) | | Correlation Coefficient | -.025 |
| | | Sig. (2-tailed) | .857 |
| | | N | 54 |
| Consequence (i) | | Correlation Coefficient | .480** |
| | | Sig. (2-tailed) | .000 |
| | | N | 54 |
| Collaboration (i) | | Correlation Coefficient | 1.000 |
| | | Sig. (2-tailed) | . |
| | | N | 54 |
| Refocusing (i) | | Correlation Coefficient | .194 |
| | | Sig. (2-tailed) | .160 |
| | | N | 54 |

Correlations

| | | | Refocusing (i) |
|-------------------|------------------------------|-------------------------|----------------|
| Spearman's rho | Used old clickUP (2006-2012) | Correlation Coefficient | .240 |
| | | Sig. (2-tailed) | .152 |
| | | N | 37 |
| Awareness (i) | | Correlation Coefficient | .028 |
| | | Sig. (2-tailed) | .841 |
| | | N | 54 |
| Informational (i) | | Correlation Coefficient | .236 |
| | | Sig. (2-tailed) | .086 |
| | | N | 54 |
| Personal (i) | | Correlation Coefficient | .403** |
| | | Sig. (2-tailed) | .003 |
| | | N | 54 |
| Management (i) | | Correlation Coefficient | .182 |
| | | Sig. (2-tailed) | .187 |
| | | N | 54 |
| Consequence (i) | | Correlation Coefficient | .376** |
| | | Sig. (2-tailed) | .005 |
| | | N | 54 |
| Collaboration (i) | | Correlation Coefficient | .194 |
| | | Sig. (2-tailed) | .160 |
| | | N | 54 |
| Refocusing (i) | | Correlation Coefficient | 1.000 |
| | | Sig. (2-tailed) | . |
| | | N | 54 |

*. Correlation is significant at the 0.05 level (2-tailed).

** . Correlation is significant at the 0.01 level (2-tailed).

NONPAR CORR

/VARIABLES=V110 PSIAwa0 PSIIInf1 PSIPer2 PSIMan3 PSICon4 PSIColl15 PSIRef6

/PRINT=SPEARMAN TWOTAIL NOSIG

/MISSING=PAIRWISE.

Nonparametric Correlations

Notes

| | | |
|------------------------|--------------------------------|--|
| Output Created | | 25-APR-2013 21:37:53 |
| Comments | | |
| Input | Data | E: \Statomet_2013\Hannelie_SPSS\SoC1and2_demo_LoU_new_13April_Hi_low_23Edited.sav |
| | Active Dataset | DataSet1 |
| | Filter | <none> |
| | Weight | <none> |
| | Split File | <none> |
| | N of Rows in Working Data File | 54 |
| Missing Value Handling | Definition of Missing | User-defined missing values are treated as missing. |
| | Cases Used | Statistics for each pair of variables are based on all the cases with valid data for that pair. |
| Syntax | | NONPAR CORR /VARIABLES=V110 PSIAwa0 PSIInf1 PSIPer2 PSIMan3 PSIcon4 PSIColl5 PSISRef6 /PRINT=SPEARMAN TWOTAIL NOSIG /MISSING=PAIRWISE. |
| Resources | Processor Time | 00:00:00.00 |
| | Elapsed Time | 00:00:00.03 |
| | Number of Cases Allowed | 71493 cases ^a |

a. Based on availability of workspace memory

[DataSet1] E:\Statomet_2013\Hannelie_SPSS\SoC1and2_demo_LoU_new_13April_Hi_low_23Edited.sav

Correlations

| | | | Proficiency in new clickUP | Awareness (i) |
|-------------------|----------------------------|-------------------------|-------------------------------|---------------|
| Spearman's rho | Proficiency in new clickUP | Correlation Coefficient | 1.000 | .000 |
| | | Sig. (2-tailed) | . | .998 |
| | | N | 40 | 40 |
| Awareness (i) | Awareness (i) | Correlation Coefficient | .000 | 1.000 |
| | | Sig. (2-tailed) | .998 | . |
| | | N | 40 | 54 |
| Informational (i) | Informational (i) | Correlation Coefficient | -.165 | .228 |
| | | Sig. (2-tailed) | .308 | .098 |
| | | N | 40 | 54 |
| Personal (i) | Personal (i) | Correlation Coefficient | -.037 | .205 |
| | | Sig. (2-tailed) | .823 | .136 |
| | | N | 40 | 54 |
| Management (i) | Management (i) | Correlation Coefficient | -.241 | .307* |
| | | Sig. (2-tailed) | .135 | .024 |
| | | N | 40 | 54 |
| Consequence (i) | Consequence (i) | Correlation Coefficient | .481** | -.026 |
| | | Sig. (2-tailed) | .002 | .853 |
| | | N | 40 | 54 |
| Collaboration (i) | Collaboration (i) | Correlation Coefficient | .168 | .126 |
| | | Sig. (2-tailed) | .300 | .363 |
| | | N | 40 | 54 |
| Refocusing (i) | Refocusing (i) | Correlation Coefficient | -.022 | .028 |
| | | Sig. (2-tailed) | .893 | .841 |
| | | N | 40 | 54 |

Correlations

| | | | Informational (i) | Personal (i) |
|-------------------|----------------------------|-------------------------|-------------------|--------------|
| Spearman's rho | Proficiency in new clickUP | Correlation Coefficient | -.165 | -.037 |
| | | Sig. (2-tailed) | .308 | .823 |
| | | N | 40 | 40 |
| Awareness (i) | | Correlation Coefficient | .228 | .205 |
| | | Sig. (2-tailed) | .098 | .136 |
| | | N | 54 | 54 |
| Informational (i) | | Correlation Coefficient | 1.000 | .506** |
| | | Sig. (2-tailed) | . | .000 |
| | | N | 54 | 54 |
| Personal (i) | | Correlation Coefficient | .506** | 1.000 |
| | | Sig. (2-tailed) | .000 | . |
| | | N | 54 | 54 |
| Management (i) | | Correlation Coefficient | .396** | .482** |
| | | Sig. (2-tailed) | .003 | .000 |
| | | N | 54 | 54 |
| Consequence (i) | | Correlation Coefficient | .229 | .449** |
| | | Sig. (2-tailed) | .096 | .001 |
| | | N | 54 | 54 |
| Collaboration (i) | | Correlation Coefficient | .368** | .520** |
| | | Sig. (2-tailed) | .006 | .000 |
| | | N | 54 | 54 |
| Refocusing (i) | | Correlation Coefficient | .236 | .403** |
| | | Sig. (2-tailed) | .086 | .003 |
| | | N | 54 | 54 |

Correlations

| | | | Management (i) |
|-------------------|----------------------------|-------------------------|----------------|
| Spearman's rho | Proficiency in new clickUP | Correlation Coefficient | -.241 |
| | | Sig. (2-tailed) | .135 |
| | | N | 40 |
| Awareness (i) | | Correlation Coefficient | .307* |
| | | Sig. (2-tailed) | .024 |
| | | N | 54 |
| Informational (i) | | Correlation Coefficient | .396** |
| | | Sig. (2-tailed) | .003 |
| | | N | 54 |
| Personal (i) | | Correlation Coefficient | .482** |
| | | Sig. (2-tailed) | .000 |
| | | N | 54 |
| Management (i) | | Correlation Coefficient | 1.000 |
| | | Sig. (2-tailed) | . |
| | | N | 54 |
| Consequence (i) | | Correlation Coefficient | .115 |
| | | Sig. (2-tailed) | .410 |
| | | N | 54 |
| Collaboration (i) | | Correlation Coefficient | -.025 |
| | | Sig. (2-tailed) | .857 |
| | | N | 54 |
| Refocusing (i) | | Correlation Coefficient | .182 |
| | | Sig. (2-tailed) | .187 |
| | | N | 54 |

Correlations

| | | | Consequence (i) |
|-------------------|----------------------------|-------------------------|--------------------|
| Spearman's rho | Proficiency in new clickUP | Correlation Coefficient | .481 ^{**} |
| | | Sig. (2-tailed) | .002 |
| | | N | 40 |
| Awareness (i) | | Correlation Coefficient | -.026 |
| | | Sig. (2-tailed) | .853 |
| | | N | 54 |
| Informational (i) | | Correlation Coefficient | .229 |
| | | Sig. (2-tailed) | .096 |
| | | N | 54 |
| Personal (i) | | Correlation Coefficient | .449 ^{**} |
| | | Sig. (2-tailed) | .001 |
| | | N | 54 |
| Management (i) | | Correlation Coefficient | .115 |
| | | Sig. (2-tailed) | .410 |
| | | N | 54 |
| Consequence (i) | | Correlation Coefficient | 1.000 |
| | | Sig. (2-tailed) | . |
| | | N | 54 |
| Collaboration (i) | | Correlation Coefficient | .480 ^{**} |
| | | Sig. (2-tailed) | .000 |
| | | N | 54 |
| Refocusing (i) | | Correlation Coefficient | .376 ^{**} |
| | | Sig. (2-tailed) | .005 |
| | | N | 54 |

Correlations

| | | | Collaboration (i) |
|-------------------|----------------------------|-------------------------|-------------------|
| Spearman's rho | Proficiency in new clickUP | Correlation Coefficient | .168 |
| | | Sig. (2-tailed) | .300 |
| | | N | 40 |
| Awareness (i) | | Correlation Coefficient | .126 |
| | | Sig. (2-tailed) | .363 |
| | | N | 54 |
| Informational (i) | | Correlation Coefficient | .368** |
| | | Sig. (2-tailed) | .006 |
| | | N | 54 |
| Personal (i) | | Correlation Coefficient | .520** |
| | | Sig. (2-tailed) | .000 |
| | | N | 54 |
| Management (i) | | Correlation Coefficient | -.025 |
| | | Sig. (2-tailed) | .857 |
| | | N | 54 |
| Consequence (i) | | Correlation Coefficient | .480** |
| | | Sig. (2-tailed) | .000 |
| | | N | 54 |
| Collaboration (i) | | Correlation Coefficient | 1.000 |
| | | Sig. (2-tailed) | . |
| | | N | 54 |
| Refocusing (i) | | Correlation Coefficient | .194 |
| | | Sig. (2-tailed) | .160 |
| | | N | 54 |

Correlations

| | | | Refocusing (i) |
|-------------------|----------------------------|-------------------------|----------------|
| Spearman's rho | Proficiency in new clickUP | Correlation Coefficient | -.022 |
| | | Sig. (2-tailed) | .893 |
| | | N | 40 |
| Awareness (i) | | Correlation Coefficient | .028 |
| | | Sig. (2-tailed) | .841 |
| | | N | 54 |
| Informational (i) | | Correlation Coefficient | .236 |
| | | Sig. (2-tailed) | .086 |
| | | N | 54 |
| Personal (i) | | Correlation Coefficient | .403** |
| | | Sig. (2-tailed) | .003 |
| | | N | 54 |
| Management (i) | | Correlation Coefficient | .182 |
| | | Sig. (2-tailed) | .187 |
| | | N | 54 |
| Consequence (i) | | Correlation Coefficient | .376** |
| | | Sig. (2-tailed) | .005 |
| | | N | 54 |
| Collaboration (i) | | Correlation Coefficient | .194 |
| | | Sig. (2-tailed) | .160 |
| | | N | 54 |
| Refocusing (i) | | Correlation Coefficient | 1.000 |
| | | Sig. (2-tailed) | . |
| | | N | 54 |

** . Correlation is significant at the 0.01 level (2-tailed).

* . Correlation is significant at the 0.05 level (2-tailed).

NONPAR CORR

/VARIABLES=V128 PSIAwa0 PSIIInf1 PSIPer2 PSIMan3 PSICon4 PSIColl15 PSIRef6

/PRINT=SPEARMAN TWOTAIL NOSIG

/MISSING=PAIRWISE.

Nonparametric Correlations

Notes

| | | |
|------------------------|--------------------------------|--|
| Output Created | | 25-APR-2013 21:38:19 |
| Comments | | |
| Input | Data | E: \Statomet_2013\Hannelie_SPSS\SoC1and2_demo_LoU_new_13April_Hi_low_23Edited.sav |
| | Active Dataset | DataSet1 |
| | Filter | <none> |
| | Weight | <none> |
| | Split File | <none> |
| | N of Rows in Working Data File | 54 |
| Missing Value Handling | Definition of Missing | User-defined missing values are treated as missing. |
| | Cases Used | Statistics for each pair of variables are based on all the cases with valid data for that pair. |
| Syntax | | NONPAR CORR /VARIABLES=V128 PSIAwa0 PSIInf1 PSIPer2 PSIMan3 PSIcon4 PSIColl5 PSISRef6 /PRINT=SPEARMAN TWOTAIL NOSIG /MISSING=PAIRWISE. |
| Resources | Processor Time | 00:00:00.02 |
| | Elapsed Time | 00:00:00.01 |
| | Number of Cases Allowed | 71493 cases ^a |

a. Based on availability of workspace memory

[DataSet1] E:\Statomet_2013\Hannelie_SPSS\SoC1and2_demo_LoU_new_13April_Hi_low_23Edited.sav

Correlations

| | | significant barriers | Awareness (i) |
|-------------------|----------------------|-------------------------|---------------|
| Spearman's rho | significant barriers | Correlation Coefficient | 1.000 |
| | | Sig. (2-tailed) | . |
| | | N | 37 |
| Awareness (i) | Awareness (i) | Correlation Coefficient | -.025 |
| | | Sig. (2-tailed) | .882 |
| | | N | 37 |
| Informational (i) | Informational (i) | Correlation Coefficient | -.035 |
| | | Sig. (2-tailed) | .836 |
| | | N | 37 |
| Personal (i) | Personal (i) | Correlation Coefficient | -.210 |
| | | Sig. (2-tailed) | .213 |
| | | N | 37 |
| Management (i) | Management (i) | Correlation Coefficient | -.133 |
| | | Sig. (2-tailed) | .433 |
| | | N | 37 |
| Consequence (i) | Consequence (i) | Correlation Coefficient | .134 |
| | | Sig. (2-tailed) | .430 |
| | | N | 37 |
| Collaboration (i) | Collaboration (i) | Correlation Coefficient | -.083 |
| | | Sig. (2-tailed) | .627 |
| | | N | 37 |
| Refocusing (i) | Refocusing (i) | Correlation Coefficient | .017 |
| | | Sig. (2-tailed) | .920 |
| | | N | 37 |

Correlations

| | | | Informational (i) | Personal (i) |
|-------------------|----------------------|-------------------------|-------------------|--------------|
| Spearman's rho | significant barriers | Correlation Coefficient | -.035 | -.210 |
| | | Sig. (2-tailed) | .836 | .213 |
| | | N | 37 | 37 |
| Awareness (i) | | Correlation Coefficient | .228 | .205 |
| | | Sig. (2-tailed) | .098 | .136 |
| | | N | 54 | 54 |
| Informational (i) | | Correlation Coefficient | 1.000 | .506** |
| | | Sig. (2-tailed) | . | .000 |
| | | N | 54 | 54 |
| Personal (i) | | Correlation Coefficient | .506** | 1.000 |
| | | Sig. (2-tailed) | .000 | . |
| | | N | 54 | 54 |
| Management (i) | | Correlation Coefficient | .396** | .482** |
| | | Sig. (2-tailed) | .003 | .000 |
| | | N | 54 | 54 |
| Consequence (i) | | Correlation Coefficient | .229 | .449** |
| | | Sig. (2-tailed) | .096 | .001 |
| | | N | 54 | 54 |
| Collaboration (i) | | Correlation Coefficient | .368** | .520** |
| | | Sig. (2-tailed) | .006 | .000 |
| | | N | 54 | 54 |
| Refocusing (i) | | Correlation Coefficient | .236 | .403** |
| | | Sig. (2-tailed) | .086 | .003 |
| | | N | 54 | 54 |

Correlations

| | | | Management (i) | Consequence (i) |
|-------------------|----------------------|-------------------------|----------------|-----------------|
| Spearman's rho | significant barriers | Correlation Coefficient | -.133 | .134 |
| | | Sig. (2-tailed) | .433 | .430 |
| | | N | 37 | 37 |
| Awareness (i) | | Correlation Coefficient | .307* | -.026 |
| | | Sig. (2-tailed) | .024 | .853 |
| | | N | 54 | 54 |
| Informational (i) | | Correlation Coefficient | .396** | .229 |
| | | Sig. (2-tailed) | .003 | .096 |
| | | N | 54 | 54 |
| Personal (i) | | Correlation Coefficient | .482** | .449** |
| | | Sig. (2-tailed) | .000 | .001 |
| | | N | 54 | 54 |
| Management (i) | | Correlation Coefficient | 1.000 | .115 |
| | | Sig. (2-tailed) | . | .410 |
| | | N | 54 | 54 |
| Consequence (i) | | Correlation Coefficient | .115 | 1.000 |
| | | Sig. (2-tailed) | .410 | . |
| | | N | 54 | 54 |
| Collaboration (i) | | Correlation Coefficient | -.025 | .480** |
| | | Sig. (2-tailed) | .857 | .000 |
| | | N | 54 | 54 |
| Refocusing (i) | | Correlation Coefficient | .182 | .376** |
| | | Sig. (2-tailed) | .187 | .005 |
| | | N | 54 | 54 |

Correlations

| | | | Collaboration (i) | Refocusing (i) |
|-------------------|----------------------|-------------------------|-------------------|----------------|
| Spearman's rho | significant barriers | Correlation Coefficient | -.083 | .017 |
| | | Sig. (2-tailed) | .627 | .920 |
| | | N | 37 | 37 |
| Awareness (i) | | Correlation Coefficient | .126 | .028 |
| | | Sig. (2-tailed) | .363 | .841 |
| | | N | 54 | 54 |
| Informational (i) | | Correlation Coefficient | .368** | .236 |
| | | Sig. (2-tailed) | .006 | .086 |
| | | N | 54 | 54 |
| Personal (i) | | Correlation Coefficient | .520** | .403** |
| | | Sig. (2-tailed) | .000 | .003 |
| | | N | 54 | 54 |
| Management (i) | | Correlation Coefficient | -.025 | .182 |
| | | Sig. (2-tailed) | .857 | .187 |
| | | N | 54 | 54 |
| Consequence (i) | | Correlation Coefficient | .480** | .376** |
| | | Sig. (2-tailed) | .000 | .005 |
| | | N | 54 | 54 |
| Collaboration (i) | | Correlation Coefficient | 1.000 | .194 |
| | | Sig. (2-tailed) | . | .160 |
| | | N | 54 | 54 |
| Refocusing (i) | | Correlation Coefficient | .194 | 1.000 |
| | | Sig. (2-tailed) | .160 | . |
| | | N | 54 | 54 |

*. Correlation is significant at the 0.05 level (2-tailed).

** . Correlation is significant at the 0.01 level (2-tailed).

NONPAR CORR

/VARIABLES=V129 PSIAwa0 PSIInf1 PSIPer2 PSIMan3 PSICon4 PSIColl5 PSIRef6

/PRINT=SPEARMAN TWOTAIL NOSIG

/MISSING=PAIRWISE.

Nonparametric Correlations

Notes

| | | |
|------------------------|--------------------------------|--|
| Output Created | | 25-APR-2013 21:38:34 |
| Comments | | |
| Input | Data | E: \Statomet_2013\Hannelie_SPSS\So C1and2_demo_LoU_new_13April_H i_low_23Edited.sav |
| | Active Dataset | DataSet1 |
| | Filter | <none> |
| | Weight | <none> |
| | Split File | <none> |
| | N of Rows in Working Data File | 54 |
| Missing Value Handling | Definition of Missing | User-defined missing values are treated as missing. |
| | Cases Used | Statistics for each pair of variables are based on all the cases with valid data for that pair. |
| Syntax | | NONPAR CORR /VARIABLES=V129 PSIAwa0 PSIInf1 PSIPer2 PSIMan3 PSIcon4 PSIColl5 PSISRef6 /PRINT=SPEARMAN TWOTAIL NOSIG /MISSING=PAIRWISE. |
| Resources | Processor Time | 00:00:00.02 |
| | Elapsed Time | 00:00:00.01 |
| | Number of Cases Allowed | 71493 cases ^a |

a. Based on availability of workspace memory

[DataSet1] E:\Statomet_2013\Hannelie_SPSS\SoC1and2_demo_LoU_new_13April_Hi_low_23Edited.sav

Correlations

| | | | greatest benefit | Awareness (i) |
|-------------------|-------------------|-------------------------|---------------------|-------------------|
| Spearman's rho | greatest benefit | Correlation Coefficient | 1.000 | -.196 |
| | | Sig. (2-tailed) | . | .237 |
| | | N | 38 | 38 |
| Awareness (i) | Awareness (i) | Correlation Coefficient | -.196 | 1.000 |
| | | Sig. (2-tailed) | .237 | . |
| | | N | 38 | 54 |
| Informational (i) | Informational (i) | Correlation Coefficient | -.161 | .228 |
| | | Sig. (2-tailed) | .333 | .098 |
| | | N | 38 | 54 |
| Personal (i) | Personal (i) | Correlation Coefficient | -.504 ^{**} | .205 |
| | | Sig. (2-tailed) | .001 | .136 |
| | | N | 38 | 54 |
| Management (i) | Management (i) | Correlation Coefficient | -.318 | .307 [*] |
| | | Sig. (2-tailed) | .052 | .024 |
| | | N | 38 | 54 |
| Consequence (i) | Consequence (i) | Correlation Coefficient | -.227 | -.026 |
| | | Sig. (2-tailed) | .170 | .853 |
| | | N | 38 | 54 |
| Collaboration (i) | Collaboration (i) | Correlation Coefficient | -.286 | .126 |
| | | Sig. (2-tailed) | .082 | .363 |
| | | N | 38 | 54 |
| Refocusing (i) | Refocusing (i) | Correlation Coefficient | -.066 | .028 |
| | | Sig. (2-tailed) | .695 | .841 |
| | | N | 38 | 54 |

Correlations

| | | | Informational (i) | Personal (i) |
|-------------------|------------------|-------------------------|-------------------|--------------|
| Spearman's rho | greatest benefit | Correlation Coefficient | -.161 | -.504** |
| | | Sig. (2-tailed) | .333 | .001 |
| | | N | 38 | 38 |
| Awareness (i) | | Correlation Coefficient | .228 | .205 |
| | | Sig. (2-tailed) | .098 | .136 |
| | | N | 54 | 54 |
| Informational (i) | | Correlation Coefficient | 1.000 | .506** |
| | | Sig. (2-tailed) | . | .000 |
| | | N | 54 | 54 |
| Personal (i) | | Correlation Coefficient | .506** | 1.000 |
| | | Sig. (2-tailed) | .000 | . |
| | | N | 54 | 54 |
| Management (i) | | Correlation Coefficient | .396** | .482** |
| | | Sig. (2-tailed) | .003 | .000 |
| | | N | 54 | 54 |
| Consequence (i) | | Correlation Coefficient | .229 | .449** |
| | | Sig. (2-tailed) | .096 | .001 |
| | | N | 54 | 54 |
| Collaboration (i) | | Correlation Coefficient | .368** | .520** |
| | | Sig. (2-tailed) | .006 | .000 |
| | | N | 54 | 54 |
| Refocusing (i) | | Correlation Coefficient | .236 | .403** |
| | | Sig. (2-tailed) | .086 | .003 |
| | | N | 54 | 54 |

Correlations

| | | | Management (i) | Consequence (i) |
|-------------------|------------------|-------------------------|----------------|-----------------|
| Spearman's rho | greatest benefit | Correlation Coefficient | -.318 | -.227 |
| | | Sig. (2-tailed) | .052 | .170 |
| | | N | 38 | 38 |
| Awareness (i) | | Correlation Coefficient | .307* | -.026 |
| | | Sig. (2-tailed) | .024 | .853 |
| | | N | 54 | 54 |
| Informational (i) | | Correlation Coefficient | .396** | .229 |
| | | Sig. (2-tailed) | .003 | .096 |
| | | N | 54 | 54 |
| Personal (i) | | Correlation Coefficient | .482** | .449** |
| | | Sig. (2-tailed) | .000 | .001 |
| | | N | 54 | 54 |
| Management (i) | | Correlation Coefficient | 1.000 | .115 |
| | | Sig. (2-tailed) | . | .410 |
| | | N | 54 | 54 |
| Consequence (i) | | Correlation Coefficient | .115 | 1.000 |
| | | Sig. (2-tailed) | .410 | . |
| | | N | 54 | 54 |
| Collaboration (i) | | Correlation Coefficient | -.025 | .480** |
| | | Sig. (2-tailed) | .857 | .000 |
| | | N | 54 | 54 |
| Refocusing (i) | | Correlation Coefficient | .182 | .376** |
| | | Sig. (2-tailed) | .187 | .005 |
| | | N | 54 | 54 |

Correlations

| | | | Collaboration (i) | Refocusing (i) |
|-------------------|------------------|-------------------------|-------------------|----------------|
| Spearman's rho | greatest benefit | Correlation Coefficient | -.286 | -.066 |
| | | Sig. (2-tailed) | .082 | .695 |
| | | N | 38 | 38 |
| Awareness (i) | | Correlation Coefficient | .126 | .028 |
| | | Sig. (2-tailed) | .363 | .841 |
| | | N | 54 | 54 |
| Informational (i) | | Correlation Coefficient | .368** | .236 |
| | | Sig. (2-tailed) | .006 | .086 |
| | | N | 54 | 54 |
| Personal (i) | | Correlation Coefficient | .520** | .403** |
| | | Sig. (2-tailed) | .000 | .003 |
| | | N | 54 | 54 |
| Management (i) | | Correlation Coefficient | -.025 | .182 |
| | | Sig. (2-tailed) | .857 | .187 |
| | | N | 54 | 54 |
| Consequence (i) | | Correlation Coefficient | .480** | .376** |
| | | Sig. (2-tailed) | .000 | .005 |
| | | N | 54 | 54 |
| Collaboration (i) | | Correlation Coefficient | 1.000 | .194 |
| | | Sig. (2-tailed) | . | .160 |
| | | N | 54 | 54 |
| Refocusing (i) | | Correlation Coefficient | .194 | 1.000 |
| | | Sig. (2-tailed) | .160 | . |
| | | N | 54 | 54 |

** . Correlation is significant at the 0.01 level (2-tailed).

* . Correlation is significant at the 0.05 level (2-tailed).

NONPAR CORR

/VARIABLES=V98 PSIIAwa0 PSIIInf1 PSIIPer2 PSIIMan3 PSIIcon4 PSIIColl15 PSIIRef6

/PRINT=SPEARMAN TWOTAIL NOSIG

/MISSING=PAIRWISE.

Nonparametric Correlations

Notes

| | | |
|------------------------|--------------------------------|---|
| Output Created | | 25-APR-2013 21:39:31 |
| Comments | | |
| Input | Data | E: \Statomet_2013\Hannelie_SPSS\SoC1and2_demo_LoU_new_13April_Hi_low_23Edited.sav |
| | Active Dataset | DataSet1 |
| | Filter | <none> |
| | Weight | <none> |
| | Split File | <none> |
| | N of Rows in Working Data File | 54 |
| Missing Value Handling | Definition of Missing | User-defined missing values are treated as missing. |
| | Cases Used | Statistics for each pair of variables are based on all the cases with valid data for that pair. |
| Syntax | | NONPAR CORR /VARIABLES=V98 PSIIAwa0 PSIIInf1 PSIIPer2 PSIIMan3 PSIICon4 PSIIColl5 PSIIRef6 /PRINT=SPEARMAN TWOTAIL NOSIG /MISSING=PAIRWISE. |
| Resources | Processor Time | 00:00:00.02 |
| | Elapsed Time | 00:00:00.02 |
| | Number of Cases Allowed | 71493 cases ^a |

a. Based on availability of workspace memory

[DataSet1] E:\Statomet_2013\Hannelie_SPSS\SoC1and2_demo_LoU_new_13April_Hi_low_23Edited.sav

Correlations

| | | | Confidence level | Awareness (ii) |
|--------------------|--------------------|-------------------------|------------------|----------------|
| Spearman's rho | Confidence level | Correlation Coefficient | 1.000 | .169 |
| | | Sig. (2-tailed) | . | .298 |
| | | N | 40 | 40 |
| Awareness (ii) | Awareness (ii) | Correlation Coefficient | .169 | 1.000 |
| | | Sig. (2-tailed) | .298 | . |
| | | N | 40 | 40 |
| Informational (ii) | Informational (ii) | Correlation Coefficient | .350* | -.137 |
| | | Sig. (2-tailed) | .027 | .398 |
| | | N | 40 | 40 |
| Personal (ii) | Personal (ii) | Correlation Coefficient | .215 | .005 |
| | | Sig. (2-tailed) | .182 | .977 |
| | | N | 40 | 40 |
| Management (ii) | Management (ii) | Correlation Coefficient | .602** | .153 |
| | | Sig. (2-tailed) | .000 | .347 |
| | | N | 40 | 40 |
| Consequence (ii) | Consequence (ii) | Correlation Coefficient | -.090 | -.332* |
| | | Sig. (2-tailed) | .581 | .037 |
| | | N | 40 | 40 |
| Collaboration (ii) | Collaboration (ii) | Correlation Coefficient | .066 | -.142 |
| | | Sig. (2-tailed) | .686 | .383 |
| | | N | 40 | 40 |
| Refocusing (ii) | Refocusing (ii) | Correlation Coefficient | -.064 | -.073 |
| | | Sig. (2-tailed) | .693 | .654 |
| | | N | 40 | 40 |

Correlations

| | | | Informational (ii) | Personal (ii) |
|--------------------|-------------------------|-------------------------|-----------------------|--------------------|
| Spearman's rho | Confidence level | Correlation Coefficient | .350 [*] | .215 |
| | | Sig. (2-tailed) | .027 | .182 |
| | | N | 40 | 40 |
| | Awareness (ii) | Correlation Coefficient | -.137 | .005 |
| | | Sig. (2-tailed) | .398 | .977 |
| | | N | 40 | 40 |
| | Informational (ii) | Correlation Coefficient | 1.000 | .650 ^{**} |
| | | Sig. (2-tailed) | . | .000 |
| | | N | 40 | 40 |
| | Personal (ii) | Correlation Coefficient | .650 ^{**} | 1.000 |
| | | Sig. (2-tailed) | .000 | . |
| | | N | 40 | 40 |
| Management (ii) | Correlation Coefficient | .490 ^{**} | .477 ^{**} | |
| | Sig. (2-tailed) | .001 | .002 | |
| | N | 40 | 40 | |
| Consequence (ii) | Correlation Coefficient | .311 | .247 | |
| | Sig. (2-tailed) | .051 | .125 | |
| | N | 40 | 40 | |
| Collaboration (ii) | Correlation Coefficient | .306 | .423 ^{**} | |
| | Sig. (2-tailed) | .055 | .007 | |
| | N | 40 | 40 | |
| Refocusing (ii) | Correlation Coefficient | .385 [*] | .359 [*] | |
| | Sig. (2-tailed) | .014 | .023 | |
| | N | 40 | 40 | |

Correlations

| | | | Management (ii) | Consequence (ii) |
|--------------------|-------------------------|-------------------------|--------------------|---------------------|
| Spearman's rho | Confidence level | Correlation Coefficient | .602 ^{**} | -.090 |
| | | Sig. (2-tailed) | .000 | .581 |
| | | N | 40 | 40 |
| | Awareness (ii) | Correlation Coefficient | .153 | -.332 [*] |
| | | Sig. (2-tailed) | .347 | .037 |
| | | N | 40 | 40 |
| | Informational (ii) | Correlation Coefficient | .490 ^{**} | .311 |
| | | Sig. (2-tailed) | .001 | .051 |
| | | N | 40 | 40 |
| | Personal (ii) | Correlation Coefficient | .477 ^{**} | .247 |
| | | Sig. (2-tailed) | .002 | .125 |
| | | N | 40 | 40 |
| Management (ii) | Correlation Coefficient | 1.000 | .190 | |
| | Sig. (2-tailed) | . | .241 | |
| | N | 40 | 40 | |
| Consequence (ii) | Correlation Coefficient | .190 | 1.000 | |
| | Sig. (2-tailed) | .241 | . | |
| | N | 40 | 40 | |
| Collaboration (ii) | Correlation Coefficient | .277 | .315 [*] | |
| | Sig. (2-tailed) | .083 | .048 | |
| | N | 40 | 40 | |
| Refocusing (ii) | Correlation Coefficient | .232 | .534 ^{**} | |
| | Sig. (2-tailed) | .150 | .000 | |
| | N | 40 | 40 | |

Correlations

| | | | Collaboration (ii) | Refocusing (ii) |
|--------------------|------------------|-------------------------|-----------------------|-----------------|
| Spearman's rho | Confidence level | Correlation Coefficient | .066 | -.064 |
| | | Sig. (2-tailed) | .686 | .693 |
| | | N | 40 | 40 |
| Awareness (ii) | | Correlation Coefficient | -.142 | -.073 |
| | | Sig. (2-tailed) | .383 | .654 |
| | | N | 40 | 40 |
| Informational (ii) | | Correlation Coefficient | .306 | .385* |
| | | Sig. (2-tailed) | .055 | .014 |
| | | N | 40 | 40 |
| Personal (ii) | | Correlation Coefficient | .423** | .359* |
| | | Sig. (2-tailed) | .007 | .023 |
| | | N | 40 | 40 |
| Management (ii) | | Correlation Coefficient | .277 | .232 |
| | | Sig. (2-tailed) | .083 | .150 |
| | | N | 40 | 40 |
| Consequence (ii) | | Correlation Coefficient | .315* | .534** |
| | | Sig. (2-tailed) | .048 | .000 |
| | | N | 40 | 40 |
| Collaboration (ii) | | Correlation Coefficient | 1.000 | .252 |
| | | Sig. (2-tailed) | . | .117 |
| | | N | 40 | 40 |
| Refocusing (ii) | | Correlation Coefficient | .252 | 1.000 |
| | | Sig. (2-tailed) | .117 | . |
| | | N | 40 | 40 |

*. Correlation is significant at the 0.05 level (2-tailed).

** . Correlation is significant at the 0.01 level (2-tailed).

NONPAR CORR

/VARIABLES=V100 PSIIAwa0 PSIIInf1 PSIIPer2 PSIIMan3 PSIIcon4 PSIIColl15 PS
IIRef6

/PRINT=SPEARMAN TWOTAIL NOSIG

/MISSING=PAIRWISE.

Nonparametric Correlations

Notes

| | | |
|------------------------|--------------------------------|---|
| Output Created | | 25-APR-2013 21:39:51 |
| Comments | | |
| Input | Data | E: \Statomet_2013\Hannelie_SPSS\SoC1and2_demo_LoU_new_13April_Hi_low_23Edited.sav |
| | Active Dataset | DataSet1 |
| | Filter | <none> |
| | Weight | <none> |
| | Split File | <none> |
| | N of Rows in Working Data File | 54 |
| Missing Value Handling | Definition of Missing | User-defined missing values are treated as missing. |
| | Cases Used | Statistics for each pair of variables are based on all the cases with valid data for that pair. |
| Syntax | | NONPAR CORR /VARIABLES=V100 PSIIAwa0 PSIIInf1 PSIIPer2 PSIIMan3 PSIICon4 PSIICol5 PSIIRef6 /PRINT=SPEARMAN TWOTAIL NOSIG /MISSING=PAIRWISE. |
| Resources | Processor Time | 00:00:00.02 |
| | Elapsed Time | 00:00:00.01 |
| | Number of Cases Allowed | 71493 cases ^a |

a. Based on availability of workspace memory

[DataSet1] E:\Statomet_2013\Hannelie_SPSS\SoC1and2_demo_LoU_new_13April_Hi_low_23Edited.sav

Correlations

| | | | Used old clickUP (2006- 2012) |
|--------------------|------------------------------|-------------------------|-------------------------------------|
| Spearman's rho | Used old clickUP (2006-2012) | Correlation Coefficient | 1.000 |
| | | Sig. (2-tailed) | . |
| | | N | 37 |
| Awareness (ii) | | Correlation Coefficient | -.181 |
| | | Sig. (2-tailed) | .284 |
| | | N | 37 |
| Informational (ii) | | Correlation Coefficient | .284 |
| | | Sig. (2-tailed) | .089 |
| | | N | 37 |
| Personal (ii) | | Correlation Coefficient | .065 |
| | | Sig. (2-tailed) | .704 |
| | | N | 37 |
| Management (ii) | | Correlation Coefficient | -.108 |
| | | Sig. (2-tailed) | .525 |
| | | N | 37 |
| Consequence (ii) | | Correlation Coefficient | .237 |
| | | Sig. (2-tailed) | .157 |
| | | N | 37 |
| Collaboration (ii) | | Correlation Coefficient | -.052 |
| | | Sig. (2-tailed) | .758 |
| | | N | 37 |
| Refocusing (ii) | | Correlation Coefficient | .148 |
| | | Sig. (2-tailed) | .382 |
| | | N | 37 |

Correlations

| | | | Awareness (ii) |
|----------------|------------------------------|-------------------------|----------------|
| Spearman's rho | Used old clickUP (2006-2012) | Correlation Coefficient | -.181 |
| | | Sig. (2-tailed) | .284 |
| | | N | 37 |
| | Awareness (ii) | Correlation Coefficient | 1.000 |
| | | Sig. (2-tailed) | . |
| | | N | 40 |
| | Informational (ii) | Correlation Coefficient | -.137 |
| | | Sig. (2-tailed) | .398 |
| | | N | 40 |
| | Personal (ii) | Correlation Coefficient | .005 |
| | | Sig. (2-tailed) | .977 |
| | | N | 40 |
| | Management (ii) | Correlation Coefficient | .153 |
| | | Sig. (2-tailed) | .347 |
| | | N | 40 |
| | Consequence (ii) | Correlation Coefficient | -.332* |
| | | Sig. (2-tailed) | .037 |
| | | N | 40 |
| | Collaboration (ii) | Correlation Coefficient | -.142 |
| | | Sig. (2-tailed) | .383 |
| | | N | 40 |
| | Refocusing (ii) | Correlation Coefficient | -.073 |
| | | Sig. (2-tailed) | .654 |
| | | N | 40 |

Correlations

| | | | Informational (ii) |
|--------------------|------------------------------|-------------------------|-----------------------|
| Spearman's rho | Used old clickUP (2006-2012) | Correlation Coefficient | .284 |
| | | Sig. (2-tailed) | .089 |
| | | N | 37 |
| Awareness (ii) | | Correlation Coefficient | -.137 |
| | | Sig. (2-tailed) | .398 |
| | | N | 40 |
| Informational (ii) | | Correlation Coefficient | 1.000 |
| | | Sig. (2-tailed) | . |
| | | N | 40 |
| Personal (ii) | | Correlation Coefficient | .650** |
| | | Sig. (2-tailed) | .000 |
| | | N | 40 |
| Management (ii) | | Correlation Coefficient | .490** |
| | | Sig. (2-tailed) | .001 |
| | | N | 40 |
| Consequence (ii) | | Correlation Coefficient | .311 |
| | | Sig. (2-tailed) | .051 |
| | | N | 40 |
| Collaboration (ii) | | Correlation Coefficient | .306 |
| | | Sig. (2-tailed) | .055 |
| | | N | 40 |
| Refocusing (ii) | | Correlation Coefficient | .385* |
| | | Sig. (2-tailed) | .014 |
| | | N | 40 |

Correlations

| | | | Personal (ii) |
|--------------------|------------------------------|-------------------------|---------------|
| Spearman's rho | Used old clickUP (2006-2012) | Correlation Coefficient | .065 |
| | | Sig. (2-tailed) | .704 |
| | | N | 37 |
| Awareness (ii) | | Correlation Coefficient | .005 |
| | | Sig. (2-tailed) | .977 |
| | | N | 40 |
| Informational (ii) | | Correlation Coefficient | .650** |
| | | Sig. (2-tailed) | .000 |
| | | N | 40 |
| Personal (ii) | | Correlation Coefficient | 1.000 |
| | | Sig. (2-tailed) | . |
| | | N | 40 |
| Management (ii) | | Correlation Coefficient | .477** |
| | | Sig. (2-tailed) | .002 |
| | | N | 40 |
| Consequence (ii) | | Correlation Coefficient | .247 |
| | | Sig. (2-tailed) | .125 |
| | | N | 40 |
| Collaboration (ii) | | Correlation Coefficient | .423** |
| | | Sig. (2-tailed) | .007 |
| | | N | 40 |
| Refocusing (ii) | | Correlation Coefficient | .359* |
| | | Sig. (2-tailed) | .023 |
| | | N | 40 |

Correlations

| | | | Management (ii) |
|--------------------|------------------------------|-------------------------|--------------------|
| Spearman's rho | Used old clickUP (2006-2012) | Correlation Coefficient | -.108 |
| | | Sig. (2-tailed) | .525 |
| | | N | 37 |
| Awareness (ii) | | Correlation Coefficient | .153 |
| | | Sig. (2-tailed) | .347 |
| | | N | 40 |
| Informational (ii) | | Correlation Coefficient | .490** |
| | | Sig. (2-tailed) | .001 |
| | | N | 40 |
| Personal (ii) | | Correlation Coefficient | .477** |
| | | Sig. (2-tailed) | .002 |
| | | N | 40 |
| Management (ii) | | Correlation Coefficient | 1.000 |
| | | Sig. (2-tailed) | . |
| | | N | 40 |
| Consequence (ii) | | Correlation Coefficient | .190 |
| | | Sig. (2-tailed) | .241 |
| | | N | 40 |
| Collaboration (ii) | | Correlation Coefficient | .277 |
| | | Sig. (2-tailed) | .083 |
| | | N | 40 |
| Refocusing (ii) | | Correlation Coefficient | .232 |
| | | Sig. (2-tailed) | .150 |
| | | N | 40 |

Correlations

| | | | Consequence (ii) |
|--------------------|------------------------------|-------------------------|---------------------|
| Spearman's rho | Used old clickUP (2006-2012) | Correlation Coefficient | .237 |
| | | Sig. (2-tailed) | .157 |
| | | N | 37 |
| Awareness (ii) | | Correlation Coefficient | -.332 [*] |
| | | Sig. (2-tailed) | .037 |
| | | N | 40 |
| Informational (ii) | | Correlation Coefficient | .311 |
| | | Sig. (2-tailed) | .051 |
| | | N | 40 |
| Personal (ii) | | Correlation Coefficient | .247 |
| | | Sig. (2-tailed) | .125 |
| | | N | 40 |
| Management (ii) | | Correlation Coefficient | .190 |
| | | Sig. (2-tailed) | .241 |
| | | N | 40 |
| Consequence (ii) | | Correlation Coefficient | 1.000 |
| | | Sig. (2-tailed) | . |
| | | N | 40 |
| Collaboration (ii) | | Correlation Coefficient | .315 [*] |
| | | Sig. (2-tailed) | .048 |
| | | N | 40 |
| Refocusing (ii) | | Correlation Coefficient | .534 ^{**} |
| | | Sig. (2-tailed) | .000 |
| | | N | 40 |

Correlations

| | | | Collaboration (ii) |
|--------------------|------------------------------|-------------------------|-----------------------|
| Spearman's rho | Used old clickUP (2006-2012) | Correlation Coefficient | -.052 |
| | | Sig. (2-tailed) | .758 |
| | | N | 37 |
| Awareness (ii) | | Correlation Coefficient | -.142 |
| | | Sig. (2-tailed) | .383 |
| | | N | 40 |
| Informational (ii) | | Correlation Coefficient | .306 |
| | | Sig. (2-tailed) | .055 |
| | | N | 40 |
| Personal (ii) | | Correlation Coefficient | .423 ^{**} |
| | | Sig. (2-tailed) | .007 |
| | | N | 40 |
| Management (ii) | | Correlation Coefficient | .277 |
| | | Sig. (2-tailed) | .083 |
| | | N | 40 |
| Consequence (ii) | | Correlation Coefficient | .315 [*] |
| | | Sig. (2-tailed) | .048 |
| | | N | 40 |
| Collaboration (ii) | | Correlation Coefficient | 1.000 |
| | | Sig. (2-tailed) | . |
| | | N | 40 |
| Refocusing (ii) | | Correlation Coefficient | .252 |
| | | Sig. (2-tailed) | .117 |
| | | N | 40 |

Correlations

| | | | Refocusing (ii) |
|--------------------|------------------------------|-------------------------|-----------------|
| Spearman's rho | Used old clickUP (2006-2012) | Correlation Coefficient | .148 |
| | | Sig. (2-tailed) | .382 |
| | | N | 37 |
| Awareness (ii) | | Correlation Coefficient | -.073 |
| | | Sig. (2-tailed) | .654 |
| | | N | 40 |
| Informational (ii) | | Correlation Coefficient | .385* |
| | | Sig. (2-tailed) | .014 |
| | | N | 40 |
| Personal (ii) | | Correlation Coefficient | .359* |
| | | Sig. (2-tailed) | .023 |
| | | N | 40 |
| Management (ii) | | Correlation Coefficient | .232 |
| | | Sig. (2-tailed) | .150 |
| | | N | 40 |
| Consequence (ii) | | Correlation Coefficient | .534** |
| | | Sig. (2-tailed) | .000 |
| | | N | 40 |
| Collaboration (ii) | | Correlation Coefficient | .252 |
| | | Sig. (2-tailed) | .117 |
| | | N | 40 |
| Refocusing (ii) | | Correlation Coefficient | 1.000 |
| | | Sig. (2-tailed) | . |
| | | N | 40 |

*. Correlation is significant at the 0.05 level (2-tailed).

** . Correlation is significant at the 0.01 level (2-tailed).

NONPAR CORR

/VARIABLES=V110 PSIIAwa0 PSIIInf1 PSIIPer2 PSIIMan3 PSIIcon4 PSIIColl15 PS
IIRef6

/PRINT=SPEARMAN TWOTAIL NOSIG

/MISSING=PAIRWISE.

Nonparametric Correlations

Notes

| | | |
|------------------------|--------------------------------|--|
| Output Created | | 25-APR-2013 21:40:09 |
| Comments | | |
| Input | Data | E: \Statomet_2013\Hannelie_SPSS\So C1and2_demo_LoU_new_13April_H i_low_23Edited.sav |
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| | Filter | <none> |
| | Weight | <none> |
| | Split File | <none> |
| | N of Rows in Working Data File | 54 |
| Missing Value Handling | Definition of Missing | User-defined missing values are treated as missing. |
| | Cases Used | Statistics for each pair of variables are based on all the cases with valid data for that pair. |
| Syntax | | NONPAR CORR /VARIABLES=V110 PSIIAwa0 PSIIInf1 PSIIPer2 PSIIMan3 PSIICon4 PSIIColl5 PSIIRef6 /PRINT=SPEARMAN TWOTAIL NOSIG /MISSING=PAIRWISE. |
| Resources | Processor Time | 00:00:00.02 |
| | Elapsed Time | 00:00:00.02 |
| | Number of Cases Allowed | 71493 cases ^a |

a. Based on availability of workspace memory

[DataSet1] E:\Statomet_2013\Hannelie_SPSS\SoC1and2_demo_LoU_new_13April_Hi_low_23Edited.sav

Correlations

| | | | Proficiency in new clickUP |
|--------------------|----------------------------|-------------------------|----------------------------|
| Spearman's rho | Proficiency in new clickUP | Correlation Coefficient | 1.000 |
| | | Sig. (2-tailed) | . |
| | | N | 40 |
| Awareness (ii) | | Correlation Coefficient | -.310 |
| | | Sig. (2-tailed) | .052 |
| | | N | 40 |
| Informational (ii) | | Correlation Coefficient | .069 |
| | | Sig. (2-tailed) | .673 |
| | | N | 40 |
| Personal (ii) | | Correlation Coefficient | -.055 |
| | | Sig. (2-tailed) | .737 |
| | | N | 40 |
| Management (ii) | | Correlation Coefficient | -.158 |
| | | Sig. (2-tailed) | .331 |
| | | N | 40 |
| Consequence (ii) | | Correlation Coefficient | .443** |
| | | Sig. (2-tailed) | .004 |
| | | N | 40 |
| Collaboration (ii) | | Correlation Coefficient | .101 |
| | | Sig. (2-tailed) | .536 |
| | | N | 40 |
| Refocusing (ii) | | Correlation Coefficient | .245 |
| | | Sig. (2-tailed) | .127 |
| | | N | 40 |

Correlations

| | | | Awareness (ii) |
|--------------------|----------------------------|-------------------------|----------------|
| Spearman's rho | Proficiency in new clickUP | Correlation Coefficient | -.310 |
| | | Sig. (2-tailed) | .052 |
| | | N | 40 |
| Awareness (ii) | Awareness (ii) | Correlation Coefficient | 1.000 |
| | | Sig. (2-tailed) | . |
| | | N | 40 |
| Informational (ii) | Informational (ii) | Correlation Coefficient | -.137 |
| | | Sig. (2-tailed) | .398 |
| | | N | 40 |
| Personal (ii) | Personal (ii) | Correlation Coefficient | .005 |
| | | Sig. (2-tailed) | .977 |
| | | N | 40 |
| Management (ii) | Management (ii) | Correlation Coefficient | .153 |
| | | Sig. (2-tailed) | .347 |
| | | N | 40 |
| Consequence (ii) | Consequence (ii) | Correlation Coefficient | -.332* |
| | | Sig. (2-tailed) | .037 |
| | | N | 40 |
| Collaboration (ii) | Collaboration (ii) | Correlation Coefficient | -.142 |
| | | Sig. (2-tailed) | .383 |
| | | N | 40 |
| Refocusing (ii) | Refocusing (ii) | Correlation Coefficient | -.073 |
| | | Sig. (2-tailed) | .654 |
| | | N | 40 |

Correlations

| | | | Informational (ii) | Personal (ii) |
|--------------------|----------------------------|-------------------------|-----------------------|---------------|
| Spearman's rho | Proficiency in new clickUP | Correlation Coefficient | .069 | -.055 |
| | | Sig. (2-tailed) | .673 | .737 |
| | | N | 40 | 40 |
| Awareness (ii) | | Correlation Coefficient | -.137 | .005 |
| | | Sig. (2-tailed) | .398 | .977 |
| | | N | 40 | 40 |
| Informational (ii) | | Correlation Coefficient | 1.000 | .650** |
| | | Sig. (2-tailed) | . | .000 |
| | | N | 40 | 40 |
| Personal (ii) | | Correlation Coefficient | .650** | 1.000 |
| | | Sig. (2-tailed) | .000 | . |
| | | N | 40 | 40 |
| Management (ii) | | Correlation Coefficient | .490** | .477** |
| | | Sig. (2-tailed) | .001 | .002 |
| | | N | 40 | 40 |
| Consequence (ii) | | Correlation Coefficient | .311 | .247 |
| | | Sig. (2-tailed) | .051 | .125 |
| | | N | 40 | 40 |
| Collaboration (ii) | | Correlation Coefficient | .306 | .423** |
| | | Sig. (2-tailed) | .055 | .007 |
| | | N | 40 | 40 |
| Refocusing (ii) | | Correlation Coefficient | .385* | .359* |
| | | Sig. (2-tailed) | .014 | .023 |
| | | N | 40 | 40 |

Correlations

| | | | Management (ii) |
|--------------------|----------------------------|-------------------------|--------------------|
| Spearman's rho | Proficiency in new clickUP | Correlation Coefficient | -.158 |
| | | Sig. (2-tailed) | .331 |
| | | N | 40 |
| Awareness (ii) | | Correlation Coefficient | .153 |
| | | Sig. (2-tailed) | .347 |
| | | N | 40 |
| Informational (ii) | | Correlation Coefficient | .490** |
| | | Sig. (2-tailed) | .001 |
| | | N | 40 |
| Personal (ii) | | Correlation Coefficient | .477** |
| | | Sig. (2-tailed) | .002 |
| | | N | 40 |
| Management (ii) | | Correlation Coefficient | 1.000 |
| | | Sig. (2-tailed) | . |
| | | N | 40 |
| Consequence (ii) | | Correlation Coefficient | .190 |
| | | Sig. (2-tailed) | .241 |
| | | N | 40 |
| Collaboration (ii) | | Correlation Coefficient | .277 |
| | | Sig. (2-tailed) | .083 |
| | | N | 40 |
| Refocusing (ii) | | Correlation Coefficient | .232 |
| | | Sig. (2-tailed) | .150 |
| | | N | 40 |

Correlations

| | | | Consequence (ii) |
|--------------------|----------------------------|-------------------------|---------------------|
| Spearman's rho | Proficiency in new clickUP | Correlation Coefficient | .443 ^{**} |
| | | Sig. (2-tailed) | .004 |
| | | N | 40 |
| Awareness (ii) | | Correlation Coefficient | -.332 [*] |
| | | Sig. (2-tailed) | .037 |
| | | N | 40 |
| Informational (ii) | | Correlation Coefficient | .311 |
| | | Sig. (2-tailed) | .051 |
| | | N | 40 |
| Personal (ii) | | Correlation Coefficient | .247 |
| | | Sig. (2-tailed) | .125 |
| | | N | 40 |
| Management (ii) | | Correlation Coefficient | .190 |
| | | Sig. (2-tailed) | .241 |
| | | N | 40 |
| Consequence (ii) | | Correlation Coefficient | 1.000 |
| | | Sig. (2-tailed) | . |
| | | N | 40 |
| Collaboration (ii) | | Correlation Coefficient | .315 [*] |
| | | Sig. (2-tailed) | .048 |
| | | N | 40 |
| Refocusing (ii) | | Correlation Coefficient | .534 ^{**} |
| | | Sig. (2-tailed) | .000 |
| | | N | 40 |

Correlations

| | | | Collaboration (ii) |
|--------------------|----------------------------|-------------------------|-----------------------|
| Spearman's rho | Proficiency in new clickUP | Correlation Coefficient | .101 |
| | | Sig. (2-tailed) | .536 |
| | | N | 40 |
| Awareness (ii) | | Correlation Coefficient | -.142 |
| | | Sig. (2-tailed) | .383 |
| | | N | 40 |
| Informational (ii) | | Correlation Coefficient | .306 |
| | | Sig. (2-tailed) | .055 |
| | | N | 40 |
| Personal (ii) | | Correlation Coefficient | .423** |
| | | Sig. (2-tailed) | .007 |
| | | N | 40 |
| Management (ii) | | Correlation Coefficient | .277 |
| | | Sig. (2-tailed) | .083 |
| | | N | 40 |
| Consequence (ii) | | Correlation Coefficient | .315* |
| | | Sig. (2-tailed) | .048 |
| | | N | 40 |
| Collaboration (ii) | | Correlation Coefficient | 1.000 |
| | | Sig. (2-tailed) | . |
| | | N | 40 |
| Refocusing (ii) | | Correlation Coefficient | .252 |
| | | Sig. (2-tailed) | .117 |
| | | N | 40 |

Correlations

| | | | Refocusing (ii) |
|--------------------|----------------------------|-------------------------|-----------------|
| Spearman's rho | Proficiency in new clickUP | Correlation Coefficient | .245 |
| | | Sig. (2-tailed) | .127 |
| | | N | 40 |
| Awareness (ii) | | Correlation Coefficient | -.073 |
| | | Sig. (2-tailed) | .654 |
| | | N | 40 |
| Informational (ii) | | Correlation Coefficient | .385* |
| | | Sig. (2-tailed) | .014 |
| | | N | 40 |
| Personal (ii) | | Correlation Coefficient | .359* |
| | | Sig. (2-tailed) | .023 |
| | | N | 40 |
| Management (ii) | | Correlation Coefficient | .232 |
| | | Sig. (2-tailed) | .150 |
| | | N | 40 |
| Consequence (ii) | | Correlation Coefficient | .534** |
| | | Sig. (2-tailed) | .000 |
| | | N | 40 |
| Collaboration (ii) | | Correlation Coefficient | .252 |
| | | Sig. (2-tailed) | .117 |
| | | N | 40 |
| Refocusing (ii) | | Correlation Coefficient | 1.000 |
| | | Sig. (2-tailed) | . |
| | | N | 40 |

** . Correlation is significant at the 0.01 level (2-tailed).

* . Correlation is significant at the 0.05 level (2-tailed).

NONPAR CORR

/VARIABLES=V128 PSIIAwa0 PSIIInf1 PSIIPer2 PSIIMan3 PSIIcon4 PSIIColl15 PS
IIRef6

/PRINT=SPEARMAN TWOTAIL NOSIG

/MISSING=PAIRWISE.

Nonparametric Correlations

Notes

| | | |
|------------------------|--------------------------------|---|
| Output Created | | 25-APR-2013 21:40:38 |
| Comments | | |
| Input | Data | E: \Statomet_2013\Hannelie_SPSS\SoC1and2_demo_LoU_new_13April_Hi_low_23Edited.sav |
| | Active Dataset | DataSet1 |
| | Filter | <none> |
| | Weight | <none> |
| | Split File | <none> |
| | N of Rows in Working Data File | 54 |
| Missing Value Handling | Definition of Missing | User-defined missing values are treated as missing. |
| | Cases Used | Statistics for each pair of variables are based on all the cases with valid data for that pair. |
| Syntax | | NONPAR CORR /VARIABLES=V128 PSIIAwa0 PSIIInf1 PSIIPer2 PSIIMan3 PSIICon4 PSIIColl5 PSIIRef6 /PRINT=SPEARMAN TWOTAIL NOSIG /MISSING=PAIRWISE. |
| Resources | Processor Time | 00:00:00.00 |
| | Elapsed Time | 00:00:00.01 |
| | Number of Cases Allowed | 71493 cases ^a |

a. Based on availability of workspace memory

[DataSet1] E:\Statomet_2013\Hannelie_SPSS\SoC1and2_demo_LoU_new_13April_Hi_low_23Edited.sav

Correlations

| | | | significant barriers | Awareness (ii) |
|--------------------|----------------------|-------------------------|----------------------|----------------|
| Spearman's rho | significant barriers | Correlation Coefficient | 1.000 | -.242 |
| | | Sig. (2-tailed) | . | .149 |
| | | N | 37 | 37 |
| Awareness (ii) | | Correlation Coefficient | -.242 | 1.000 |
| | | Sig. (2-tailed) | .149 | . |
| | | N | 37 | 40 |
| Informational (ii) | | Correlation Coefficient | .014 | -.137 |
| | | Sig. (2-tailed) | .933 | .398 |
| | | N | 37 | 40 |
| Personal (ii) | | Correlation Coefficient | -.064 | .005 |
| | | Sig. (2-tailed) | .709 | .977 |
| | | N | 37 | 40 |
| Management (ii) | | Correlation Coefficient | -.265 | .153 |
| | | Sig. (2-tailed) | .113 | .347 |
| | | N | 37 | 40 |
| Consequence (ii) | | Correlation Coefficient | .120 | -.332* |
| | | Sig. (2-tailed) | .480 | .037 |
| | | N | 37 | 40 |
| Collaboration (ii) | | Correlation Coefficient | .068 | -.142 |
| | | Sig. (2-tailed) | .689 | .383 |
| | | N | 37 | 40 |
| Refocusing (ii) | | Correlation Coefficient | -.082 | -.073 |
| | | Sig. (2-tailed) | .632 | .654 |
| | | N | 37 | 40 |

Correlations

| | | | Informational (ii) | Personal (ii) |
|--------------------|----------------------|-------------------------|-----------------------|--------------------|
| Spearman's rho | significant barriers | Correlation Coefficient | .014 | -.064 |
| | | Sig. (2-tailed) | .933 | .709 |
| | | N | 37 | 37 |
| Awareness (ii) | | Correlation Coefficient | -.137 | .005 |
| | | Sig. (2-tailed) | .398 | .977 |
| | | N | 40 | 40 |
| Informational (ii) | | Correlation Coefficient | 1.000 | .650 ^{**} |
| | | Sig. (2-tailed) | . | .000 |
| | | N | 40 | 40 |
| Personal (ii) | | Correlation Coefficient | .650 ^{**} | 1.000 |
| | | Sig. (2-tailed) | .000 | . |
| | | N | 40 | 40 |
| Management (ii) | | Correlation Coefficient | .490 ^{**} | .477 ^{**} |
| | | Sig. (2-tailed) | .001 | .002 |
| | | N | 40 | 40 |
| Consequence (ii) | | Correlation Coefficient | .311 | .247 |
| | | Sig. (2-tailed) | .051 | .125 |
| | | N | 40 | 40 |
| Collaboration (ii) | | Correlation Coefficient | .306 | .423 ^{**} |
| | | Sig. (2-tailed) | .055 | .007 |
| | | N | 40 | 40 |
| Refocusing (ii) | | Correlation Coefficient | .385 [*] | .359 [*] |
| | | Sig. (2-tailed) | .014 | .023 |
| | | N | 40 | 40 |

Correlations

| | | | Management (ii) | Consequence (ii) |
|--------------------|----------------------|-------------------------|--------------------|---------------------|
| Spearman's rho | significant barriers | Correlation Coefficient | -.265 | .120 |
| | | Sig. (2-tailed) | .113 | .480 |
| | | N | 37 | 37 |
| Awareness (ii) | | Correlation Coefficient | .153 | -.332* |
| | | Sig. (2-tailed) | .347 | .037 |
| | | N | 40 | 40 |
| Informational (ii) | | Correlation Coefficient | .490** | .311 |
| | | Sig. (2-tailed) | .001 | .051 |
| | | N | 40 | 40 |
| Personal (ii) | | Correlation Coefficient | .477** | .247 |
| | | Sig. (2-tailed) | .002 | .125 |
| | | N | 40 | 40 |
| Management (ii) | | Correlation Coefficient | 1.000 | .190 |
| | | Sig. (2-tailed) | . | .241 |
| | | N | 40 | 40 |
| Consequence (ii) | | Correlation Coefficient | .190 | 1.000 |
| | | Sig. (2-tailed) | .241 | . |
| | | N | 40 | 40 |
| Collaboration (ii) | | Correlation Coefficient | .277 | .315* |
| | | Sig. (2-tailed) | .083 | .048 |
| | | N | 40 | 40 |
| Refocusing (ii) | | Correlation Coefficient | .232 | .534** |
| | | Sig. (2-tailed) | .150 | .000 |
| | | N | 40 | 40 |

Correlations

| | | | Collaboration (ii) | Refocusing (ii) |
|--------------------|----------------------|-------------------------|-----------------------|-----------------|
| Spearman's rho | significant barriers | Correlation Coefficient | .068 | -.082 |
| | | Sig. (2-tailed) | .689 | .632 |
| | | N | 37 | 37 |
| Awareness (ii) | | Correlation Coefficient | -.142 | -.073 |
| | | Sig. (2-tailed) | .383 | .654 |
| | | N | 40 | 40 |
| Informational (ii) | | Correlation Coefficient | .306 | .385* |
| | | Sig. (2-tailed) | .055 | .014 |
| | | N | 40 | 40 |
| Personal (ii) | | Correlation Coefficient | .423** | .359* |
| | | Sig. (2-tailed) | .007 | .023 |
| | | N | 40 | 40 |
| Management (ii) | | Correlation Coefficient | .277 | .232 |
| | | Sig. (2-tailed) | .083 | .150 |
| | | N | 40 | 40 |
| Consequence (ii) | | Correlation Coefficient | .315* | .534** |
| | | Sig. (2-tailed) | .048 | .000 |
| | | N | 40 | 40 |
| Collaboration (ii) | | Correlation Coefficient | 1.000 | .252 |
| | | Sig. (2-tailed) | . | .117 |
| | | N | 40 | 40 |
| Refocusing (ii) | | Correlation Coefficient | .252 | 1.000 |
| | | Sig. (2-tailed) | .117 | . |
| | | N | 40 | 40 |

*. Correlation is significant at the 0.05 level (2-tailed).

** . Correlation is significant at the 0.01 level (2-tailed).

NONPAR CORR

/VARIABLES=V129 PSIIAwa0 PSIIInf1 PSIIPer2 PSIIMan3 PSIIcon4 PSIIColl5 PS
IIRef6

/PRINT=SPEARMAN TWOTAIL NOSIG

/MISSING=PAIRWISE.

Nonparametric Correlations

Notes

| | | |
|------------------------|--------------------------------|--|
| Output Created | | 25-APR-2013 21:40:52 |
| Comments | | |
| Input | Data | E: \Statomet_2013\Hannelie_SPSS\So C1and2_demo_LoU_new_13April_H i_low_23Edited.sav |
| | Active Dataset | DataSet1 |
| | Filter | <none> |
| | Weight | <none> |
| | Split File | <none> |
| | N of Rows in Working Data File | 54 |
| Missing Value Handling | Definition of Missing | User-defined missing values are treated as missing. |
| | Cases Used | Statistics for each pair of variables are based on all the cases with valid data for that pair. |
| Syntax | | NONPAR CORR /VARIABLES=V129 PSIIAwa0 PSIIInf1 PSIIPer2 PSIIMan3 PSIICon4 PSIIColl5 PSIIRef6 /PRINT=SPEARMAN TWOTAIL NOSIG /MISSING=PAIRWISE. |
| Resources | Processor Time | 00:00:00.02 |
| | Elapsed Time | 00:00:00.01 |
| | Number of Cases Allowed | 71493 cases ^a |

a. Based on availability of workspace memory

[DataSet1] E:\Statomet_2013\Hannelie_SPSS\SoC1and2_demo_LoU_new_13April_Hi_low_23Edited.sav

Correlations

| | | | greatest benefit | Awareness (ii) |
|--------------------|--------------------|-------------------------|------------------|----------------|
| Spearman's rho | greatest benefit | Correlation Coefficient | 1.000 | .024 |
| | | Sig. (2-tailed) | . | .884 |
| | | N | 38 | 38 |
| Awareness (ii) | Awareness (ii) | Correlation Coefficient | .024 | 1.000 |
| | | Sig. (2-tailed) | .884 | . |
| | | N | 38 | 40 |
| Informational (ii) | Informational (ii) | Correlation Coefficient | -.041 | -.137 |
| | | Sig. (2-tailed) | .805 | .398 |
| | | N | 38 | 40 |
| Personal (ii) | Personal (ii) | Correlation Coefficient | -.136 | .005 |
| | | Sig. (2-tailed) | .416 | .977 |
| | | N | 38 | 40 |
| Management (ii) | Management (ii) | Correlation Coefficient | -.212 | .153 |
| | | Sig. (2-tailed) | .202 | .347 |
| | | N | 38 | 40 |
| Consequence (ii) | Consequence (ii) | Correlation Coefficient | -.082 | -.332* |
| | | Sig. (2-tailed) | .625 | .037 |
| | | N | 38 | 40 |
| Collaboration (ii) | Collaboration (ii) | Correlation Coefficient | -.128 | -.142 |
| | | Sig. (2-tailed) | .443 | .383 |
| | | N | 38 | 40 |
| Refocusing (ii) | Refocusing (ii) | Correlation Coefficient | -.170 | -.073 |
| | | Sig. (2-tailed) | .308 | .654 |
| | | N | 38 | 40 |

Correlations

| | | | Informational (ii) | Personal (ii) |
|--------------------|------------------|-------------------------|-----------------------|---------------|
| Spearman's rho | greatest benefit | Correlation Coefficient | -.041 | -.136 |
| | | Sig. (2-tailed) | .805 | .416 |
| | | N | 38 | 38 |
| Awareness (ii) | | Correlation Coefficient | -.137 | .005 |
| | | Sig. (2-tailed) | .398 | .977 |
| | | N | 40 | 40 |
| Informational (ii) | | Correlation Coefficient | 1.000 | .650** |
| | | Sig. (2-tailed) | . | .000 |
| | | N | 40 | 40 |
| Personal (ii) | | Correlation Coefficient | .650** | 1.000 |
| | | Sig. (2-tailed) | .000 | . |
| | | N | 40 | 40 |
| Management (ii) | | Correlation Coefficient | .490** | .477** |
| | | Sig. (2-tailed) | .001 | .002 |
| | | N | 40 | 40 |
| Consequence (ii) | | Correlation Coefficient | .311 | .247 |
| | | Sig. (2-tailed) | .051 | .125 |
| | | N | 40 | 40 |
| Collaboration (ii) | | Correlation Coefficient | .306 | .423** |
| | | Sig. (2-tailed) | .055 | .007 |
| | | N | 40 | 40 |
| Refocusing (ii) | | Correlation Coefficient | .385* | .359* |
| | | Sig. (2-tailed) | .014 | .023 |
| | | N | 40 | 40 |

Correlations

| | | | Management (ii) | Consequence (ii) |
|--------------------|------------------|-------------------------|--------------------|---------------------|
| Spearman's rho | greatest benefit | Correlation Coefficient | -.212 | -.082 |
| | | Sig. (2-tailed) | .202 | .625 |
| | | N | 38 | 38 |
| Awareness (ii) | | Correlation Coefficient | .153 | -.332* |
| | | Sig. (2-tailed) | .347 | .037 |
| | | N | 40 | 40 |
| Informational (ii) | | Correlation Coefficient | .490** | .311 |
| | | Sig. (2-tailed) | .001 | .051 |
| | | N | 40 | 40 |
| Personal (ii) | | Correlation Coefficient | .477** | .247 |
| | | Sig. (2-tailed) | .002 | .125 |
| | | N | 40 | 40 |
| Management (ii) | | Correlation Coefficient | 1.000 | .190 |
| | | Sig. (2-tailed) | . | .241 |
| | | N | 40 | 40 |
| Consequence (ii) | | Correlation Coefficient | .190 | 1.000 |
| | | Sig. (2-tailed) | .241 | . |
| | | N | 40 | 40 |
| Collaboration (ii) | | Correlation Coefficient | .277 | .315* |
| | | Sig. (2-tailed) | .083 | .048 |
| | | N | 40 | 40 |
| Refocusing (ii) | | Correlation Coefficient | .232 | .534** |
| | | Sig. (2-tailed) | .150 | .000 |
| | | N | 40 | 40 |

Correlations

| | | | Collaboration (ii) | Refocusing (ii) |
|--------------------|------------------|-------------------------|-----------------------|-----------------|
| Spearman's rho | greatest benefit | Correlation Coefficient | -.128 | -.170 |
| | | Sig. (2-tailed) | .443 | .308 |
| | | N | 38 | 38 |
| Awareness (ii) | | Correlation Coefficient | -.142 | -.073 |
| | | Sig. (2-tailed) | .383 | .654 |
| | | N | 40 | 40 |
| Informational (ii) | | Correlation Coefficient | .306 | .385* |
| | | Sig. (2-tailed) | .055 | .014 |
| | | N | 40 | 40 |
| Personal (ii) | | Correlation Coefficient | .423** | .359* |
| | | Sig. (2-tailed) | .007 | .023 |
| | | N | 40 | 40 |
| Management (ii) | | Correlation Coefficient | .277 | .232 |
| | | Sig. (2-tailed) | .083 | .150 |
| | | N | 40 | 40 |
| Consequence (ii) | | Correlation Coefficient | .315* | .534** |
| | | Sig. (2-tailed) | .048 | .000 |
| | | N | 40 | 40 |
| Collaboration (ii) | | Correlation Coefficient | 1.000 | .252 |
| | | Sig. (2-tailed) | . | .117 |
| | | N | 40 | 40 |
| Refocusing (ii) | | Correlation Coefficient | .252 | 1.000 |
| | | Sig. (2-tailed) | .117 | . |
| | | N | 40 | 40 |

*. Correlation is significant at the 0.05 level (2-tailed).

** . Correlation is significant at the 0.01 level (2-tailed).

NONPAR CORR

/VARIABLES=Gender PSIAwa0 PSIInf1 PSIPer2 PSIMan3 PSICon4 PSIColl5 PSIRef

6

/PRINT=SPEARMAN TWOTAIL NOSIG

/MISSING=PAIRWISE.

Nonparametric Correlations

Notes

| | | |
|------------------------|--------------------------------|--|
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| Comments | | |
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| | Filter | <none> |
| | Weight | <none> |
| | Split File | <none> |
| | N of Rows in Working Data File | 54 |
| Missing Value Handling | Definition of Missing | User-defined missing values are treated as missing. |
| | Cases Used | Statistics for each pair of variables are based on all the cases with valid data for that pair. |
| Syntax | | NONPAR CORR /VARIABLES=Gender PSIAwa0 PSIInf1 PSIPer2 PSIMan3 PSICon4 PSIColl5 PSIRef6 /PRINT=SPEARMAN TWOTAIL NOSIG /MISSING=PAIRWISE. |
| Resources | Processor Time | 00:00:00.02 |
| | Elapsed Time | 00:00:00.02 |
| | Number of Cases Allowed | 71493 cases ^a |

a. Based on availability of workspace memory

[DataSet1] E:\Statomet_2013\Hannelie_SPSS\SoC1and2_demo_LoU_new_13April_Hi_low_23Edited.sav

Correlations

| | | | Gender | Awareness (i) |
|----------------|-------------------|-------------------------|--------|-------------------|
| Spearman's rho | Gender | Correlation Coefficient | 1.000 | .086 |
| | | Sig. (2-tailed) | . | .536 |
| | | N | 54 | 54 |
| | Awareness (i) | Correlation Coefficient | .086 | 1.000 |
| | | Sig. (2-tailed) | .536 | . |
| | | N | 54 | 54 |
| | Informational (i) | Correlation Coefficient | .127 | .228 |
| | | Sig. (2-tailed) | .359 | .098 |
| | | N | 54 | 54 |
| | Personal (i) | Correlation Coefficient | .112 | .205 |
| | | Sig. (2-tailed) | .419 | .136 |
| | | N | 54 | 54 |
| | Management (i) | Correlation Coefficient | -.072 | .307 [*] |
| | | Sig. (2-tailed) | .605 | .024 |
| | | N | 54 | 54 |
| | Consequence (i) | Correlation Coefficient | -.134 | -.026 |
| | | Sig. (2-tailed) | .334 | .853 |
| | | N | 54 | 54 |
| | Collaboration (i) | Correlation Coefficient | .013 | .126 |
| | | Sig. (2-tailed) | .923 | .363 |
| | | N | 54 | 54 |
| | Refocusing (i) | Correlation Coefficient | .122 | .028 |
| | | Sig. (2-tailed) | .378 | .841 |
| | | N | 54 | 54 |

Correlations

| | | | Informational (i) | Personal (i) |
|-------------------|--------|-------------------------|-------------------|--------------|
| Spearman's rho | Gender | Correlation Coefficient | .127 | .112 |
| | | Sig. (2-tailed) | .359 | .419 |
| | | N | 54 | 54 |
| Awareness (i) | | Correlation Coefficient | .228 | .205 |
| | | Sig. (2-tailed) | .098 | .136 |
| | | N | 54 | 54 |
| Informational (i) | | Correlation Coefficient | 1.000 | .506** |
| | | Sig. (2-tailed) | . | .000 |
| | | N | 54 | 54 |
| Personal (i) | | Correlation Coefficient | .506** | 1.000 |
| | | Sig. (2-tailed) | .000 | . |
| | | N | 54 | 54 |
| Management (i) | | Correlation Coefficient | .396** | .482** |
| | | Sig. (2-tailed) | .003 | .000 |
| | | N | 54 | 54 |
| Consequence (i) | | Correlation Coefficient | .229 | .449** |
| | | Sig. (2-tailed) | .096 | .001 |
| | | N | 54 | 54 |
| Collaboration (i) | | Correlation Coefficient | .368** | .520** |
| | | Sig. (2-tailed) | .006 | .000 |
| | | N | 54 | 54 |
| Refocusing (i) | | Correlation Coefficient | .236 | .403** |
| | | Sig. (2-tailed) | .086 | .003 |
| | | N | 54 | 54 |

Correlations

| | | | Management (i) | Consequence (i) |
|-------------------|-------------------------|-------------------------|----------------|-----------------|
| Spearman's rho | Gender | Correlation Coefficient | -.072 | -.134 |
| | | Sig. (2-tailed) | .605 | .334 |
| | | N | 54 | 54 |
| | Awareness (i) | Correlation Coefficient | .307* | -.026 |
| | | Sig. (2-tailed) | .024 | .853 |
| | | N | 54 | 54 |
| | Informational (i) | Correlation Coefficient | .396** | .229 |
| | | Sig. (2-tailed) | .003 | .096 |
| | | N | 54 | 54 |
| | Personal (i) | Correlation Coefficient | .482** | .449** |
| Sig. (2-tailed) | | .000 | .001 | |
| N | | 54 | 54 | |
| Management (i) | Correlation Coefficient | 1.000 | .115 | |
| | Sig. (2-tailed) | . | .410 | |
| | N | 54 | 54 | |
| Consequence (i) | Correlation Coefficient | .115 | 1.000 | |
| | Sig. (2-tailed) | .410 | . | |
| | N | 54 | 54 | |
| Collaboration (i) | Correlation Coefficient | -.025 | .480** | |
| | Sig. (2-tailed) | .857 | .000 | |
| | N | 54 | 54 | |
| Refocusing (i) | Correlation Coefficient | .182 | .376** | |
| | Sig. (2-tailed) | .187 | .005 | |
| | N | 54 | 54 | |

Correlations

| | | | Collaboration (i) | Refocusing (i) |
|-------------------|--------|-------------------------|-------------------|----------------|
| Spearman's rho | Gender | Correlation Coefficient | .013 | .122 |
| | | Sig. (2-tailed) | .923 | .378 |
| | | N | 54 | 54 |
| Awareness (i) | | Correlation Coefficient | .126 | .028 |
| | | Sig. (2-tailed) | .363 | .841 |
| | | N | 54 | 54 |
| Informational (i) | | Correlation Coefficient | .368** | .236 |
| | | Sig. (2-tailed) | .006 | .086 |
| | | N | 54 | 54 |
| Personal (i) | | Correlation Coefficient | .520** | .403** |
| | | Sig. (2-tailed) | .000 | .003 |
| | | N | 54 | 54 |
| Management (i) | | Correlation Coefficient | -.025 | .182 |
| | | Sig. (2-tailed) | .857 | .187 |
| | | N | 54 | 54 |
| Consequence (i) | | Correlation Coefficient | .480** | .376** |
| | | Sig. (2-tailed) | .000 | .005 |
| | | N | 54 | 54 |
| Collaboration (i) | | Correlation Coefficient | 1.000 | .194 |
| | | Sig. (2-tailed) | . | .160 |
| | | N | 54 | 54 |
| Refocusing (i) | | Correlation Coefficient | .194 | 1.000 |
| | | Sig. (2-tailed) | .160 | . |
| | | N | 54 | 54 |

*. Correlation is significant at the 0.05 level (2-tailed).

**. Correlation is significant at the 0.01 level (2-tailed).

NONPAR CORR

/VARIABLES=Gender PSIIAwa0 PSIIInf1 PSIIPer2 PSIIMan3 PSIIcon4 PSIIColl5
PSIIRef6

/PRINT=SPEARMAN TWOTAIL NOSIG

/MISSING=PAIRWISE.

Nonparametric Correlations

Notes

| | | |
|------------------------|--------------------------------|--|
| Output Created | | 25-APR-2013 21:25:17 |
| Comments | | |
| Input | Data | E: \Statomet_2013\Hannelie_SPSS\SoC1and2_demo_LoU_new_13April_Hi_low_23Edited.sav |
| | Active Dataset | DataSet1 |
| | Filter | <none> |
| | Weight | <none> |
| | Split File | <none> |
| | N of Rows in Working Data File | 54 |
| Missing Value Handling | Definition of Missing | User-defined missing values are treated as missing. |
| | Cases Used | Statistics for each pair of variables are based on all the cases with valid data for that pair. |
| Syntax | | NONPAR CORR /VARIABLES=Gender PSIIAwa0 PSIIInf1 PSIIPer2 PSIIMan3 PSIICon4 PSIIColl5 PSIIRef6 /PRINT=SPEARMAN TWOTAIL NOSIG /MISSING=PAIRWISE. |
| Resources | Processor Time | 00:00:00.02 |
| | Elapsed Time | 00:00:00.02 |
| | Number of Cases Allowed | 71493 cases ^a |

a. Based on availability of workspace memory

[DataSet1] E:\Statomet_2013\Hannelie_SPSS\SoC1and2_demo_LoU_new_13April_Hi_low_23Edited.sav

Correlations

| | | | Gender | Awareness (ii) |
|--------------------|--------------------|-------------------------|--------|----------------|
| Spearman's rho | Gender | Correlation Coefficient | 1.000 | -.194 |
| | | Sig. (2-tailed) | . | .231 |
| | | N | 54 | 40 |
| Awareness (ii) | Awareness (ii) | Correlation Coefficient | -.194 | 1.000 |
| | | Sig. (2-tailed) | .231 | . |
| | | N | 40 | 40 |
| Informational (ii) | Informational (ii) | Correlation Coefficient | .054 | -.137 |
| | | Sig. (2-tailed) | .739 | .398 |
| | | N | 40 | 40 |
| Personal (ii) | Personal (ii) | Correlation Coefficient | .154 | .005 |
| | | Sig. (2-tailed) | .342 | .977 |
| | | N | 40 | 40 |
| Management (ii) | Management (ii) | Correlation Coefficient | -.011 | .153 |
| | | Sig. (2-tailed) | .944 | .347 |
| | | N | 40 | 40 |
| Consequence (ii) | Consequence (ii) | Correlation Coefficient | -.120 | -.332* |
| | | Sig. (2-tailed) | .461 | .037 |
| | | N | 40 | 40 |
| Collaboration (ii) | Collaboration (ii) | Correlation Coefficient | -.043 | -.142 |
| | | Sig. (2-tailed) | .793 | .383 |
| | | N | 40 | 40 |
| Refocusing (ii) | Refocusing (ii) | Correlation Coefficient | .108 | -.073 |
| | | Sig. (2-tailed) | .505 | .654 |
| | | N | 40 | 40 |

Correlations

| | | | Informational (ii) | Personal (ii) |
|----------------|--------------------|-------------------------|-----------------------|---------------|
| Spearman's rho | Gender | Correlation Coefficient | .054 | .154 |
| | | Sig. (2-tailed) | .739 | .342 |
| | | N | 40 | 40 |
| | Awareness (ii) | Correlation Coefficient | -.137 | .005 |
| | | Sig. (2-tailed) | .398 | .977 |
| | | N | 40 | 40 |
| | Informational (ii) | Correlation Coefficient | 1.000 | .650** |
| | | Sig. (2-tailed) | . | .000 |
| | | N | 40 | 40 |
| | Personal (ii) | Correlation Coefficient | .650** | 1.000 |
| | | Sig. (2-tailed) | .000 | . |
| | | N | 40 | 40 |
| | Management (ii) | Correlation Coefficient | .490** | .477** |
| | | Sig. (2-tailed) | .001 | .002 |
| | | N | 40 | 40 |
| | Consequence (ii) | Correlation Coefficient | .311 | .247 |
| | | Sig. (2-tailed) | .051 | .125 |
| | | N | 40 | 40 |
| | Collaboration (ii) | Correlation Coefficient | .306 | .423** |
| | | Sig. (2-tailed) | .055 | .007 |
| | | N | 40 | 40 |
| | Refocusing (ii) | Correlation Coefficient | .385* | .359* |
| | | Sig. (2-tailed) | .014 | .023 |
| | | N | 40 | 40 |

Correlations

| | | | Management (ii) | Consequence (ii) |
|--------------------|-------------------------|-------------------------|--------------------|---------------------|
| Spearman's rho | Gender | Correlation Coefficient | -.011 | -.120 |
| | | Sig. (2-tailed) | .944 | .461 |
| | | N | 40 | 40 |
| | Awareness (ii) | Correlation Coefficient | .153 | -.332* |
| | | Sig. (2-tailed) | .347 | .037 |
| | | N | 40 | 40 |
| | Informational (ii) | Correlation Coefficient | .490** | .311 |
| | | Sig. (2-tailed) | .001 | .051 |
| | | N | 40 | 40 |
| | Personal (ii) | Correlation Coefficient | .477** | .247 |
| | | Sig. (2-tailed) | .002 | .125 |
| | | N | 40 | 40 |
| | Management (ii) | Correlation Coefficient | 1.000 | .190 |
| | | Sig. (2-tailed) | . | .241 |
| | | N | 40 | 40 |
| | Consequence (ii) | Correlation Coefficient | .190 | 1.000 |
| | | Sig. (2-tailed) | .241 | . |
| | | N | 40 | 40 |
| Collaboration (ii) | Correlation Coefficient | .277 | .315* | |
| | Sig. (2-tailed) | .083 | .048 | |
| | N | 40 | 40 | |
| Refocusing (ii) | Correlation Coefficient | .232 | .534** | |
| | Sig. (2-tailed) | .150 | .000 | |
| | N | 40 | 40 | |

Correlations

| | | | Collaboration (ii) | Refocusing (ii) |
|--------------------|--------|-------------------------|-----------------------|-----------------|
| Spearman's rho | Gender | Correlation Coefficient | -.043 | .108 |
| | | Sig. (2-tailed) | .793 | .505 |
| | | N | 40 | 40 |
| Awareness (ii) | | Correlation Coefficient | -.142 | -.073 |
| | | Sig. (2-tailed) | .383 | .654 |
| | | N | 40 | 40 |
| Informational (ii) | | Correlation Coefficient | .306 | .385* |
| | | Sig. (2-tailed) | .055 | .014 |
| | | N | 40 | 40 |
| Personal (ii) | | Correlation Coefficient | .423** | .359* |
| | | Sig. (2-tailed) | .007 | .023 |
| | | N | 40 | 40 |
| Management (ii) | | Correlation Coefficient | .277 | .232 |
| | | Sig. (2-tailed) | .083 | .150 |
| | | N | 40 | 40 |
| Consequence (ii) | | Correlation Coefficient | .315* | .534** |
| | | Sig. (2-tailed) | .048 | .000 |
| | | N | 40 | 40 |
| Collaboration (ii) | | Correlation Coefficient | 1.000 | .252 |
| | | Sig. (2-tailed) | . | .117 |
| | | N | 40 | 40 |
| Refocusing (ii) | | Correlation Coefficient | .252 | 1.000 |
| | | Sig. (2-tailed) | .117 | . |
| | | N | 40 | 40 |

*. Correlation is significant at the 0.05 level (2-tailed).

** . Correlation is significant at the 0.01 level (2-tailed).

NONPAR CORR

/VARIABLES=vv37 PSIAwa0 PSIInf1 PSIPer2 PSIMan3 PSICon4 PSIColl5 PSIRef6

/PRINT=SPEARMAN TWOTAIL NOSIG

/MISSING=PAIRWISE.

Nonparametric Correlations

Notes

| | | |
|------------------------|--------------------------------|--|
| Output Created | | 25-APR-2013 21:26:41 |
| Comments | | |
| Input | Data | E: \Statomet_2013\Hannelie_SPSS\SoC1and2_demo_LoU_new_13April_Hi_low_23Edited.sav |
| | Active Dataset | DataSet1 |
| | Filter | <none> |
| | Weight | <none> |
| | Split File | <none> |
| | N of Rows in Working Data File | 54 |
| Missing Value Handling | Definition of Missing | User-defined missing values are treated as missing. |
| | Cases Used | Statistics for each pair of variables are based on all the cases with valid data for that pair. |
| Syntax | | NONPAR CORR /VARIABLES=vv37 PSIAwa0 PSIIInf1 PSIPer2 PSIMan3 PSICon4 PSIColl5 PSISRef6 /PRINT=SPEARMAN TWOTAIL NOSIG /MISSING=PAIRWISE. |
| Resources | Processor Time | 00:00:00.02 |
| | Elapsed Time | 00:00:00.01 |
| | Number of Cases Allowed | 71493 cases ^a |

a. Based on availability of workspace memory

[DataSet1] E:\Statomet_2013\Hannelie_SPSS\SoC1and2_demo_LoU_new_13April_Hi_low_23Edited.sav

Correlations

| | | | Lecturing experience | Awareness (i) |
|-------------------|----------------------|-------------------------|----------------------|---------------|
| Spearman's rho | Lecturing experience | Correlation Coefficient | 1.000 | .190 |
| | | Sig. (2-tailed) | . | .169 |
| | | N | 54 | 54 |
| Awareness (i) | Awareness (i) | Correlation Coefficient | .190 | 1.000 |
| | | Sig. (2-tailed) | .169 | . |
| | | N | 54 | 54 |
| Informational (i) | Informational (i) | Correlation Coefficient | .032 | .228 |
| | | Sig. (2-tailed) | .818 | .098 |
| | | N | 54 | 54 |
| Personal (i) | Personal (i) | Correlation Coefficient | -.207 | .205 |
| | | Sig. (2-tailed) | .133 | .136 |
| | | N | 54 | 54 |
| Management (i) | Management (i) | Correlation Coefficient | -.027 | .307* |
| | | Sig. (2-tailed) | .846 | .024 |
| | | N | 54 | 54 |
| Consequence (i) | Consequence (i) | Correlation Coefficient | -.177 | -.026 |
| | | Sig. (2-tailed) | .200 | .853 |
| | | N | 54 | 54 |
| Collaboration (i) | Collaboration (i) | Correlation Coefficient | -.203 | .126 |
| | | Sig. (2-tailed) | .141 | .363 |
| | | N | 54 | 54 |
| Refocusing (i) | Refocusing (i) | Correlation Coefficient | -.047 | .028 |
| | | Sig. (2-tailed) | .737 | .841 |
| | | N | 54 | 54 |

Correlations

| | | | Informational (i) | Personal (i) |
|-------------------|----------------------|-------------------------|-------------------|--------------|
| Spearman's rho | Lecturing experience | Correlation Coefficient | .032 | -.207 |
| | | Sig. (2-tailed) | .818 | .133 |
| | | N | 54 | 54 |
| Awareness (i) | | Correlation Coefficient | .228 | .205 |
| | | Sig. (2-tailed) | .098 | .136 |
| | | N | 54 | 54 |
| Informational (i) | | Correlation Coefficient | 1.000 | .506** |
| | | Sig. (2-tailed) | . | .000 |
| | | N | 54 | 54 |
| Personal (i) | | Correlation Coefficient | .506** | 1.000 |
| | | Sig. (2-tailed) | .000 | . |
| | | N | 54 | 54 |
| Management (i) | | Correlation Coefficient | .396** | .482** |
| | | Sig. (2-tailed) | .003 | .000 |
| | | N | 54 | 54 |
| Consequence (i) | | Correlation Coefficient | .229 | .449** |
| | | Sig. (2-tailed) | .096 | .001 |
| | | N | 54 | 54 |
| Collaboration (i) | | Correlation Coefficient | .368** | .520** |
| | | Sig. (2-tailed) | .006 | .000 |
| | | N | 54 | 54 |
| Refocusing (i) | | Correlation Coefficient | .236 | .403** |
| | | Sig. (2-tailed) | .086 | .003 |
| | | N | 54 | 54 |

Correlations

| | | | Management (i) | Consequence (i) |
|-------------------|----------------------|-------------------------|--------------------|--------------------|
| Spearman's rho | Lecturing experience | Correlation Coefficient | -.027 | -.177 |
| | | Sig. (2-tailed) | .846 | .200 |
| | | N | 54 | 54 |
| Awareness (i) | | Correlation Coefficient | .307 [*] | -.026 |
| | | Sig. (2-tailed) | .024 | .853 |
| | | N | 54 | 54 |
| Informational (i) | | Correlation Coefficient | .396 ^{**} | .229 |
| | | Sig. (2-tailed) | .003 | .096 |
| | | N | 54 | 54 |
| Personal (i) | | Correlation Coefficient | .482 ^{**} | .449 ^{**} |
| | | Sig. (2-tailed) | .000 | .001 |
| | | N | 54 | 54 |
| Management (i) | | Correlation Coefficient | 1.000 | .115 |
| | | Sig. (2-tailed) | . | .410 |
| | | N | 54 | 54 |
| Consequence (i) | | Correlation Coefficient | .115 | 1.000 |
| | | Sig. (2-tailed) | .410 | . |
| | | N | 54 | 54 |
| Collaboration (i) | | Correlation Coefficient | -.025 | .480 ^{**} |
| | | Sig. (2-tailed) | .857 | .000 |
| | | N | 54 | 54 |
| Refocusing (i) | | Correlation Coefficient | .182 | .376 ^{**} |
| | | Sig. (2-tailed) | .187 | .005 |
| | | N | 54 | 54 |

Correlations

| | | | Collaboration (i) | Refocusing (i) |
|-------------------|----------------------|-------------------------|-------------------|----------------|
| Spearman's rho | Lecturing experience | Correlation Coefficient | -.203 | -.047 |
| | | Sig. (2-tailed) | .141 | .737 |
| | | N | 54 | 54 |
| Awareness (i) | Awareness (i) | Correlation Coefficient | .126 | .028 |
| | | Sig. (2-tailed) | .363 | .841 |
| | | N | 54 | 54 |
| Informational (i) | Informational (i) | Correlation Coefficient | .368** | .236 |
| | | Sig. (2-tailed) | .006 | .086 |
| | | N | 54 | 54 |
| Personal (i) | Personal (i) | Correlation Coefficient | .520** | .403** |
| | | Sig. (2-tailed) | .000 | .003 |
| | | N | 54 | 54 |
| Management (i) | Management (i) | Correlation Coefficient | -.025 | .182 |
| | | Sig. (2-tailed) | .857 | .187 |
| | | N | 54 | 54 |
| Consequence (i) | Consequence (i) | Correlation Coefficient | .480** | .376** |
| | | Sig. (2-tailed) | .000 | .005 |
| | | N | 54 | 54 |
| Collaboration (i) | Collaboration (i) | Correlation Coefficient | 1.000 | .194 |
| | | Sig. (2-tailed) | . | .160 |
| | | N | 54 | 54 |
| Refocusing (i) | Refocusing (i) | Correlation Coefficient | .194 | 1.000 |
| | | Sig. (2-tailed) | .160 | . |
| | | N | 54 | 54 |

*. Correlation is significant at the 0.05 level (2-tailed).

**. Correlation is significant at the 0.01 level (2-tailed).

NONPAR CORR

/VARIABLES=vv37 PSIIAwa0 PSIIInf1 PSIIPer2 PSIIMan3 PSIIcon4 PSIIColl5 PS
IIRef6

/PRINT=SPEARMAN TWOTAIL NOSIG

/MISSING=PAIRWISE.

Nonparametric Correlations

Notes

| | | |
|------------------------|--------------------------------|--|
| Output Created | | 25-APR-2013 21:28:36 |
| Comments | | |
| Input | Data | E: \Statomet_2013\Hannelie_SPSS\So C1and2_demo_LoU_new_13April_H i_low_23Edited.sav |
| | Active Dataset | DataSet1 |
| | Filter | <none> |
| | Weight | <none> |
| | Split File | <none> |
| | N of Rows in Working Data File | 54 |
| Missing Value Handling | Definition of Missing | User-defined missing values are treated as missing. |
| | Cases Used | Statistics for each pair of variables are based on all the cases with valid data for that pair. |
| Syntax | | NONPAR CORR /VARIABLES=vv37 PSIIAwa0 PSIIInf1 PSIIPer2 PSIIMan3 PSIICon4 PSIIColl5 PSIIRef6 /PRINT=SPEARMAN TWOTAIL NOSIG /MISSING=PAIRWISE. |
| Resources | Processor Time | 00:00:00.00 |
| | Elapsed Time | 00:00:00.02 |
| | Number of Cases Allowed | 71493 cases ^a |

a. Based on availability of workspace memory

[DataSet1] E:\Statomet_2013\Hannelie_SPSS\SoC1and2_demo_LoU_new_13April_Hi_low_23Edited.sav

Correlations

| | | | Lecturing experience | Awareness (ii) |
|--------------------|----------------------|-------------------------|----------------------|--------------------|
| Spearman's rho | Lecturing experience | Correlation Coefficient | 1.000 | -.124 |
| | | Sig. (2-tailed) | . | .447 |
| | | N | 54 | 40 |
| Awareness (ii) | Awareness (ii) | Correlation Coefficient | -.124 | 1.000 |
| | | Sig. (2-tailed) | .447 | . |
| | | N | 40 | 40 |
| Informational (ii) | Informational (ii) | Correlation Coefficient | .288 | -.137 |
| | | Sig. (2-tailed) | .072 | .398 |
| | | N | 40 | 40 |
| Personal (ii) | Personal (ii) | Correlation Coefficient | .156 | .005 |
| | | Sig. (2-tailed) | .336 | .977 |
| | | N | 40 | 40 |
| Management (ii) | Management (ii) | Correlation Coefficient | .098 | .153 |
| | | Sig. (2-tailed) | .548 | .347 |
| | | N | 40 | 40 |
| Consequence (ii) | Consequence (ii) | Correlation Coefficient | .029 | -.332 [*] |
| | | Sig. (2-tailed) | .857 | .037 |
| | | N | 40 | 40 |
| Collaboration (ii) | Collaboration (ii) | Correlation Coefficient | .034 | -.142 |
| | | Sig. (2-tailed) | .834 | .383 |
| | | N | 40 | 40 |
| Refocusing (ii) | Refocusing (ii) | Correlation Coefficient | .035 | -.073 |
| | | Sig. (2-tailed) | .832 | .654 |
| | | N | 40 | 40 |

Correlations

| | | Informational (ii) | Personal (ii) |
|--------------------|----------------------|-------------------------|---------------|
| Spearman's rho | Lecturing experience | Correlation Coefficient | .288 |
| | | Sig. (2-tailed) | .072 |
| | | N | 40 |
| Awareness (ii) | | Correlation Coefficient | -.137 |
| | | Sig. (2-tailed) | .398 |
| | | N | 40 |
| Informational (ii) | | Correlation Coefficient | 1.000 |
| | | Sig. (2-tailed) | . |
| | | N | 40 |
| Personal (ii) | | Correlation Coefficient | .650** |
| | | Sig. (2-tailed) | .000 |
| | | N | 40 |
| Management (ii) | | Correlation Coefficient | .490** |
| | | Sig. (2-tailed) | .001 |
| | | N | 40 |
| Consequence (ii) | | Correlation Coefficient | .311 |
| | | Sig. (2-tailed) | .051 |
| | | N | 40 |
| Collaboration (ii) | | Correlation Coefficient | .306 |
| | | Sig. (2-tailed) | .055 |
| | | N | 40 |
| Refocusing (ii) | | Correlation Coefficient | .385* |
| | | Sig. (2-tailed) | .014 |
| | | N | 40 |

Correlations

| | | | Management (ii) | Consequence (ii) |
|--------------------|----------------------|-------------------------|--------------------|---------------------|
| Spearman's rho | Lecturing experience | Correlation Coefficient | .098 | .029 |
| | | Sig. (2-tailed) | .548 | .857 |
| | | N | 40 | 40 |
| Awareness (ii) | | Correlation Coefficient | .153 | -.332 [*] |
| | | Sig. (2-tailed) | .347 | .037 |
| | | N | 40 | 40 |
| Informational (ii) | | Correlation Coefficient | .490 ^{**} | .311 |
| | | Sig. (2-tailed) | .001 | .051 |
| | | N | 40 | 40 |
| Personal (ii) | | Correlation Coefficient | .477 ^{**} | .247 |
| | | Sig. (2-tailed) | .002 | .125 |
| | | N | 40 | 40 |
| Management (ii) | | Correlation Coefficient | 1.000 | .190 |
| | | Sig. (2-tailed) | . | .241 |
| | | N | 40 | 40 |
| Consequence (ii) | | Correlation Coefficient | .190 | 1.000 |
| | | Sig. (2-tailed) | .241 | . |
| | | N | 40 | 40 |
| Collaboration (ii) | | Correlation Coefficient | .277 | .315 [*] |
| | | Sig. (2-tailed) | .083 | .048 |
| | | N | 40 | 40 |
| Refocusing (ii) | | Correlation Coefficient | .232 | .534 ^{**} |
| | | Sig. (2-tailed) | .150 | .000 |
| | | N | 40 | 40 |

Correlations

| | | | Collaboration (ii) | Refocusing (ii) |
|--------------------|----------------------|-------------------------|-----------------------|-----------------|
| Spearman's rho | Lecturing experience | Correlation Coefficient | .034 | .035 |
| | | Sig. (2-tailed) | .834 | .832 |
| | | N | 40 | 40 |
| Awareness (ii) | Awareness (ii) | Correlation Coefficient | -.142 | -.073 |
| | | Sig. (2-tailed) | .383 | .654 |
| | | N | 40 | 40 |
| Informational (ii) | Informational (ii) | Correlation Coefficient | .306 | .385* |
| | | Sig. (2-tailed) | .055 | .014 |
| | | N | 40 | 40 |
| Personal (ii) | Personal (ii) | Correlation Coefficient | .423** | .359* |
| | | Sig. (2-tailed) | .007 | .023 |
| | | N | 40 | 40 |
| Management (ii) | Management (ii) | Correlation Coefficient | .277 | .232 |
| | | Sig. (2-tailed) | .083 | .150 |
| | | N | 40 | 40 |
| Consequence (ii) | Consequence (ii) | Correlation Coefficient | .315* | .534** |
| | | Sig. (2-tailed) | .048 | .000 |
| | | N | 40 | 40 |
| Collaboration (ii) | Collaboration (ii) | Correlation Coefficient | 1.000 | .252 |
| | | Sig. (2-tailed) | . | .117 |
| | | N | 40 | 40 |
| Refocusing (ii) | Refocusing (ii) | Correlation Coefficient | .252 | 1.000 |
| | | Sig. (2-tailed) | .117 | . |
| | | N | 40 | 40 |

*. Correlation is significant at the 0.05 level (2-tailed).

** . Correlation is significant at the 0.01 level (2-tailed).

NONPAR CORR

/VARIABLES=Acadpos PSIAwa0 PSIInf1 PSIPer2 PSIMan3 PSICon4 PSIColl15 PSIRef6

/PRINT=SPEARMAN TWOTAIL NOSIG

/MISSING=PAIRWISE.

Nonparametric Correlations

Notes

| | | |
|------------------------|--------------------------------|--|
| Output Created | | 25-APR-2013 21:29:13 |
| Comments | | |
| Input | Data | E: \Statomet_2013\Hannelie_SPSS\SoC1and2_demo_LoU_new_13April_Hi_low_23Edited.sav |
| | Active Dataset | DataSet1 |
| | Filter | <none> |
| | Weight | <none> |
| | Split File | <none> |
| | N of Rows in Working Data File | 54 |
| Missing Value Handling | Definition of Missing | User-defined missing values are treated as missing. |
| | Cases Used | Statistics for each pair of variables are based on all the cases with valid data for that pair. |
| Syntax | | NONPAR CORR /VARIABLES=Acadpos PSIAwa0 PSIIInf1 PSIPer2 PSIMan3 PSICon4 PSIColl5 PSISRef6 /PRINT=SPEARMAN TWOTAIL NOSIG /MISSING=PAIRWISE. |
| Resources | Processor Time | 00:00:00.02 |
| | Elapsed Time | 00:00:00.02 |
| | Number of Cases Allowed | 71493 cases ^a |

a. Based on availability of workspace memory

[DataSet1] E:\Statomet_2013\Hannelie_SPSS\SoC1and2_demo_LoU_new_13April_Hi_low_23Edited.sav

Correlations

| | | | AcadPos | Awareness (i) |
|-------------------|-------------------|-------------------------|--------------------|--------------------|
| Spearman's rho | AcadPos | Correlation Coefficient | 1.000 | .363 ^{**} |
| | | Sig. (2-tailed) | . | .007 |
| | | N | 54 | 54 |
| Awareness (i) | Awareness (i) | Correlation Coefficient | .363 ^{**} | 1.000 |
| | | Sig. (2-tailed) | .007 | . |
| | | N | 54 | 54 |
| Informational (i) | Informational (i) | Correlation Coefficient | .119 | .228 |
| | | Sig. (2-tailed) | .393 | .098 |
| | | N | 54 | 54 |
| Personal (i) | Personal (i) | Correlation Coefficient | -.116 | .205 |
| | | Sig. (2-tailed) | .405 | .136 |
| | | N | 54 | 54 |
| Management (i) | Management (i) | Correlation Coefficient | .054 | .307 [*] |
| | | Sig. (2-tailed) | .698 | .024 |
| | | N | 54 | 54 |
| Consequence (i) | Consequence (i) | Correlation Coefficient | .021 | -.026 |
| | | Sig. (2-tailed) | .878 | .853 |
| | | N | 54 | 54 |
| Collaboration (i) | Collaboration (i) | Correlation Coefficient | -.061 | .126 |
| | | Sig. (2-tailed) | .663 | .363 |
| | | N | 54 | 54 |
| Refocusing (i) | Refocusing (i) | Correlation Coefficient | -.163 | .028 |
| | | Sig. (2-tailed) | .240 | .841 |
| | | N | 54 | 54 |

Correlations

| | | | Informational (i) | Personal (i) |
|-------------------|---------|-------------------------|-------------------|--------------|
| Spearman's rho | AcadPos | Correlation Coefficient | .119 | -.116 |
| | | Sig. (2-tailed) | .393 | .405 |
| | | N | 54 | 54 |
| Awareness (i) | | Correlation Coefficient | .228 | .205 |
| | | Sig. (2-tailed) | .098 | .136 |
| | | N | 54 | 54 |
| Informational (i) | | Correlation Coefficient | 1.000 | .506** |
| | | Sig. (2-tailed) | . | .000 |
| | | N | 54 | 54 |
| Personal (i) | | Correlation Coefficient | .506** | 1.000 |
| | | Sig. (2-tailed) | .000 | . |
| | | N | 54 | 54 |
| Management (i) | | Correlation Coefficient | .396** | .482** |
| | | Sig. (2-tailed) | .003 | .000 |
| | | N | 54 | 54 |
| Consequence (i) | | Correlation Coefficient | .229 | .449** |
| | | Sig. (2-tailed) | .096 | .001 |
| | | N | 54 | 54 |
| Collaboration (i) | | Correlation Coefficient | .368** | .520** |
| | | Sig. (2-tailed) | .006 | .000 |
| | | N | 54 | 54 |
| Refocusing (i) | | Correlation Coefficient | .236 | .403** |
| | | Sig. (2-tailed) | .086 | .003 |
| | | N | 54 | 54 |

Correlations

| | | | Management (i) | Consequence (i) |
|-------------------|---------|-------------------------|----------------|-----------------|
| Spearman's rho | AcadPos | Correlation Coefficient | .054 | .021 |
| | | Sig. (2-tailed) | .698 | .878 |
| | | N | 54 | 54 |
| Awareness (i) | | Correlation Coefficient | .307* | -.026 |
| | | Sig. (2-tailed) | .024 | .853 |
| | | N | 54 | 54 |
| Informational (i) | | Correlation Coefficient | .396** | .229 |
| | | Sig. (2-tailed) | .003 | .096 |
| | | N | 54 | 54 |
| Personal (i) | | Correlation Coefficient | .482** | .449** |
| | | Sig. (2-tailed) | .000 | .001 |
| | | N | 54 | 54 |
| Management (i) | | Correlation Coefficient | 1.000 | .115 |
| | | Sig. (2-tailed) | . | .410 |
| | | N | 54 | 54 |
| Consequence (i) | | Correlation Coefficient | .115 | 1.000 |
| | | Sig. (2-tailed) | .410 | . |
| | | N | 54 | 54 |
| Collaboration (i) | | Correlation Coefficient | -.025 | .480** |
| | | Sig. (2-tailed) | .857 | .000 |
| | | N | 54 | 54 |
| Refocusing (i) | | Correlation Coefficient | .182 | .376** |
| | | Sig. (2-tailed) | .187 | .005 |
| | | N | 54 | 54 |

Correlations

| | | | Collaboration (i) | Refocusing (i) |
|-------------------|-------------------|-------------------------|-------------------|----------------|
| Spearman's rho | AcadPos | Correlation Coefficient | -.061 | -.163 |
| | | Sig. (2-tailed) | .663 | .240 |
| | | N | 54 | 54 |
| Awareness (i) | Awareness (i) | Correlation Coefficient | .126 | .028 |
| | | Sig. (2-tailed) | .363 | .841 |
| | | N | 54 | 54 |
| Informational (i) | Informational (i) | Correlation Coefficient | .368** | .236 |
| | | Sig. (2-tailed) | .006 | .086 |
| | | N | 54 | 54 |
| Personal (i) | Personal (i) | Correlation Coefficient | .520** | .403** |
| | | Sig. (2-tailed) | .000 | .003 |
| | | N | 54 | 54 |
| Management (i) | Management (i) | Correlation Coefficient | -.025 | .182 |
| | | Sig. (2-tailed) | .857 | .187 |
| | | N | 54 | 54 |
| Consequence (i) | Consequence (i) | Correlation Coefficient | .480** | .376** |
| | | Sig. (2-tailed) | .000 | .005 |
| | | N | 54 | 54 |
| Collaboration (i) | Collaboration (i) | Correlation Coefficient | 1.000 | .194 |
| | | Sig. (2-tailed) | . | .160 |
| | | N | 54 | 54 |
| Refocusing (i) | Refocusing (i) | Correlation Coefficient | .194 | 1.000 |
| | | Sig. (2-tailed) | .160 | . |
| | | N | 54 | 54 |

** . Correlation is significant at the 0.01 level (2-tailed).

* . Correlation is significant at the 0.05 level (2-tailed).

NONPAR CORR

/VARIABLES=Acadpos PSIIAwa0 PSIIInf1 PSIIPer2 PSIIMan3 PSIIcon4 PSIIColl5
PSIIRef6

/PRINT=SPEARMAN TWOTAIL NOSIG

/MISSING=PAIRWISE.

Nonparametric Correlations

Notes

| | | |
|------------------------|--------------------------------|---|
| Output Created | | 25-APR-2013 21:29:48 |
| Comments | | |
| Input | Data | E: \Statomet_2013\Hannelie_SPSS\So C1and2_demo_LoU_new_13April_H i_low_23Edited.sav |
| | Active Dataset | DataSet1 |
| | Filter | <none> |
| | Weight | <none> |
| | Split File | <none> |
| | N of Rows in Working Data File | 54 |
| Missing Value Handling | Definition of Missing | User-defined missing values are treated as missing. |
| | Cases Used | Statistics for each pair of variables are based on all the cases with valid data for that pair. |
| Syntax | | NONPAR CORR /VARIABLES=Acadpos PSIIAwa0 PSIIInf1 PSIIPer2 PSIIMan3 PSIICon4 PSIIColl5 PSIIRef6 /PRINT=SPEARMAN TWOTAIL NOSIG /MISSING=PAIRWISE. |
| Resources | Processor Time | 00:00:00.02 |
| | Elapsed Time | 00:00:00.02 |
| | Number of Cases Allowed | 71493 cases ^a |

a. Based on availability of workspace memory

[DataSet1] E:\Statomet_2013\Hannelie_SPSS\SoC1and2_demo_LoU_new_13April_Hi_low_23Edited.sav

Correlations

| | | | AcadPos | Awareness (ii) |
|--------------------|--------------------|-------------------------|---------|--------------------|
| Spearman's rho | AcadPos | Correlation Coefficient | 1.000 | .127 |
| | | Sig. (2-tailed) | . | .435 |
| | | N | 54 | 40 |
| Awareness (ii) | Awareness (ii) | Correlation Coefficient | .127 | 1.000 |
| | | Sig. (2-tailed) | .435 | . |
| | | N | 40 | 40 |
| Informational (ii) | Informational (ii) | Correlation Coefficient | .094 | -.137 |
| | | Sig. (2-tailed) | .566 | .398 |
| | | N | 40 | 40 |
| Personal (ii) | Personal (ii) | Correlation Coefficient | .046 | .005 |
| | | Sig. (2-tailed) | .776 | .977 |
| | | N | 40 | 40 |
| Management (ii) | Management (ii) | Correlation Coefficient | -.136 | .153 |
| | | Sig. (2-tailed) | .403 | .347 |
| | | N | 40 | 40 |
| Consequence (ii) | Consequence (ii) | Correlation Coefficient | -.102 | -.332 [*] |
| | | Sig. (2-tailed) | .532 | .037 |
| | | N | 40 | 40 |
| Collaboration (ii) | Collaboration (ii) | Correlation Coefficient | .086 | -.142 |
| | | Sig. (2-tailed) | .599 | .383 |
| | | N | 40 | 40 |
| Refocusing (ii) | Refocusing (ii) | Correlation Coefficient | -.050 | -.073 |
| | | Sig. (2-tailed) | .758 | .654 |
| | | N | 40 | 40 |

Correlations

| | | | Informational (ii) | Personal (ii) |
|--------------------|---------|-------------------------|-----------------------|---------------|
| Spearman's rho | AcadPos | Correlation Coefficient | .094 | .046 |
| | | Sig. (2-tailed) | .566 | .776 |
| | | N | 40 | 40 |
| Awareness (ii) | | Correlation Coefficient | -.137 | .005 |
| | | Sig. (2-tailed) | .398 | .977 |
| | | N | 40 | 40 |
| Informational (ii) | | Correlation Coefficient | 1.000 | .650** |
| | | Sig. (2-tailed) | . | .000 |
| | | N | 40 | 40 |
| Personal (ii) | | Correlation Coefficient | .650** | 1.000 |
| | | Sig. (2-tailed) | .000 | . |
| | | N | 40 | 40 |
| Management (ii) | | Correlation Coefficient | .490** | .477** |
| | | Sig. (2-tailed) | .001 | .002 |
| | | N | 40 | 40 |
| Consequence (ii) | | Correlation Coefficient | .311 | .247 |
| | | Sig. (2-tailed) | .051 | .125 |
| | | N | 40 | 40 |
| Collaboration (ii) | | Correlation Coefficient | .306 | .423** |
| | | Sig. (2-tailed) | .055 | .007 |
| | | N | 40 | 40 |
| Refocusing (ii) | | Correlation Coefficient | .385* | .359* |
| | | Sig. (2-tailed) | .014 | .023 |
| | | N | 40 | 40 |

Correlations

| | | | Management (ii) | Consequence (ii) |
|--------------------|-------------------------|-------------------------|--------------------|---------------------|
| Spearman's rho | AcadPos | Correlation Coefficient | -.136 | -.102 |
| | | Sig. (2-tailed) | .403 | .532 |
| | | N | 40 | 40 |
| | Awareness (ii) | Correlation Coefficient | .153 | -.332* |
| | | Sig. (2-tailed) | .347 | .037 |
| | | N | 40 | 40 |
| | Informational (ii) | Correlation Coefficient | .490** | .311 |
| | | Sig. (2-tailed) | .001 | .051 |
| | | N | 40 | 40 |
| | Personal (ii) | Correlation Coefficient | .477** | .247 |
| | | Sig. (2-tailed) | .002 | .125 |
| | | N | 40 | 40 |
| Management (ii) | Correlation Coefficient | 1.000 | .190 | |
| | Sig. (2-tailed) | . | .241 | |
| | N | 40 | 40 | |
| Consequence (ii) | Correlation Coefficient | .190 | 1.000 | |
| | Sig. (2-tailed) | .241 | . | |
| | N | 40 | 40 | |
| Collaboration (ii) | Correlation Coefficient | .277 | .315* | |
| | Sig. (2-tailed) | .083 | .048 | |
| | N | 40 | 40 | |
| Refocusing (ii) | Correlation Coefficient | .232 | .534** | |
| | Sig. (2-tailed) | .150 | .000 | |
| | N | 40 | 40 | |

Correlations

| | | | Collaboration (ii) | Refocusing (ii) |
|----------------|--------------------|-------------------------|-----------------------|-----------------|
| Spearman's rho | AcadPos | Correlation Coefficient | .086 | -.050 |
| | | Sig. (2-tailed) | .599 | .758 |
| | | N | 40 | 40 |
| | Awareness (ii) | Correlation Coefficient | -.142 | -.073 |
| | | Sig. (2-tailed) | .383 | .654 |
| | | N | 40 | 40 |
| | Informational (ii) | Correlation Coefficient | .306 | .385* |
| | | Sig. (2-tailed) | .055 | .014 |
| | | N | 40 | 40 |
| | Personal (ii) | Correlation Coefficient | .423** | .359* |
| | | Sig. (2-tailed) | .007 | .023 |
| | | N | 40 | 40 |
| | Management (ii) | Correlation Coefficient | .277 | .232 |
| | | Sig. (2-tailed) | .083 | .150 |
| | | N | 40 | 40 |
| | Consequence (ii) | Correlation Coefficient | .315* | .534** |
| | | Sig. (2-tailed) | .048 | .000 |
| | | N | 40 | 40 |
| | Collaboration (ii) | Correlation Coefficient | 1.000 | .252 |
| | | Sig. (2-tailed) | . | .117 |
| | | N | 40 | 40 |
| | Refocusing (ii) | Correlation Coefficient | .252 | 1.000 |
| | | Sig. (2-tailed) | .117 | . |
| | | N | 40 | 40 |

*. Correlation is significant at the 0.05 level (2-tailed).

** . Correlation is significant at the 0.01 level (2-tailed).

NONPAR CORR

/VARIABLES=School PSIAwa0

/PRINT=SPEARMAN TWOTAIL NOSIG

/MISSING=PAIRWISE.

Nonparametric Correlations

Notes

| | | |
|------------------------|---|---|
| Output Created | 25-APR-2013 21:18:20 | |
| Comments | | |
| Input | Data | E: \Statomet_2013\Hannelie_SPSS\SoC1and2_demo_LoU_new_13April_Hi_low_23Edited.sav |
| | Active Dataset | DataSet1 |
| | Filter | <none> |
| | Weight | <none> |
| | Split File | <none> |
| | N of Rows in Working Data File | 54 |
| Missing Value Handling | Definition of Missing | User-defined missing values are treated as missing. |
| | Cases Used | Statistics for each pair of variables are based on all the cases with valid data for that pair. |
| Syntax | NONPAR CORR /VARIABLES=School PSIAwa0 /PRINT=SPEARMAN TWOTAIL NOSIG /MISSING=PAIRWISE. | |
| Resources | Processor Time | 00:00:00.00 |
| | Elapsed Time | 00:00:00.01 |
| | Number of Cases Allowed | 157286 cases ^a |

a. Based on availability of workspace memory

[DataSet1] E:\Statomet_2013\Hannelie_SPSS\SoC1and2_demo_LoU_new_13April_Hi_low_23Edited.sav

Correlations

| | | | School | Awareness (i) |
|----------------|---------------|-------------------------|--------|---------------|
| Spearman's rho | School | Correlation Coefficient | 1.000 | -.043 |
| | | Sig. (2-tailed) | . | .759 |
| | | N | 54 | 54 |
| | Awareness (i) | Correlation Coefficient | -.043 | 1.000 |
| | | Sig. (2-tailed) | .759 | . |
| | | N | 54 | 54 |

NONPAR CORR

/VARIABLES=School PSIIInf1

/PRINT=SPEARMAN TWOTAIL NOSIG

/MISSING=PAIRWISE.

Nonparametric Correlations

Notes

| | | |
|------------------------|---|---|
| Output Created | 25-APR-2013 21:18:36 | |
| Comments | | |
| Input | Data | E: \Statomet_2013\Hannelie_SPSS\So C1and2_demo_LoU_new_13April_H i_low_23Edited.sav |
| | Active Dataset | DataSet1 |
| | Filter | <none> |
| | Weight | <none> |
| | Split File | <none> |
| | N of Rows in Working Data File | 54 |
| Missing Value Handling | Definition of Missing | User-defined missing values are treated as missing. |
| | Cases Used | Statistics for each pair of variables are based on all the cases with valid data for that pair. |
| Syntax | NONPAR CORR /VARIABLES=School PSIIInf1 /PRINT=SPEARMAN TWOTAIL NOSIG /MISSING=PAIRWISE. | |
| Resources | Processor Time | 00:00:00.00 |
| | Elapsed Time | 00:00:00.01 |
| | Number of Cases Allowed | 157286 cases ^a |

a. Based on availability of workspace memory

[DataSet1] E:\Statomet_2013\Hannelie_SPSS\SoC1and2_demo_LoU_new_13April_Hi_low_23Edited.sav

Correlations

| | | | School | Informational (i) |
|----------------|-------------------|-------------------------|--------|-------------------|
| Spearman's rho | School | Correlation Coefficient | 1.000 | -.156 |
| | | Sig. (2-tailed) | . | .261 |
| | | N | 54 | 54 |
| | Informational (i) | Correlation Coefficient | -.156 | 1.000 |
| | | Sig. (2-tailed) | .261 | . |
| | | N | 54 | 54 |

NONPAR CORR

```
/VARIABLES=School PSIPer2
/PRINT=SPEARMAN TWOTAIL NOSIG
/MISSING=PAIRWISE.
```

Nonparametric Correlations

Notes

| | | |
|------------------------|---|---|
| Output Created | 25-APR-2013 21:18:55 | |
| Comments | | |
| Input | Data | E: \Statomet_2013\Hannelie_SPSS\SoC1and2_demo_LoU_new_13April_Hi_low_23Edited.sav |
| | Active Dataset | DataSet1 |
| | Filter | <none> |
| | Weight | <none> |
| | Split File | <none> |
| | N of Rows in Working Data File | 54 |
| Missing Value Handling | Definition of Missing | User-defined missing values are treated as missing. |
| | Cases Used | Statistics for each pair of variables are based on all the cases with valid data for that pair. |
| Syntax | NONPAR CORR /VARIABLES=School PSIPer2 /PRINT=SPEARMAN TWOTAIL NOSIG /MISSING=PAIRWISE. | |

Notes

| | | |
|-----------|-------------------------|---------------------------|
| Resources | Processor Time | 00:00:00.02 |
| | Elapsed Time | 00:00:00.01 |
| | Number of Cases Allowed | 157286 cases ^a |

a. Based on availability of workspace memory

[DataSet1] E:\Statomet_2013\Hannelie_SPSS\SoCland2_demo_LoU_new_13April_Hi_low_23Edited.sav

Correlations

| | | | School | Personal (i) |
|----------------|--------------|-------------------------|--------|--------------|
| Spearman's rho | School | Correlation Coefficient | 1.000 | -.174 |
| | | Sig. (2-tailed) | . | .207 |
| | | N | 54 | 54 |
| | Personal (i) | Correlation Coefficient | -.174 | 1.000 |
| | | Sig. (2-tailed) | .207 | . |
| | | N | 54 | 54 |

NONPAR CORR

/VARIABLES=School PSIMan3

/PRINT=SPEARMAN TWOTAIL NOSIG

/MISSING=PAIRWISE.

Nonparametric Correlations

Notes

| | | |
|------------------------|--------------------------------|---|
| Output Created | | 25-APR-2013 21:19:08 |
| Comments | | |
| Input | Data | E: \Statomet_2013\Hannelie_SPSS\SoC1and2_demo_LoU_new_13April_Hi_low_23Edited.sav |
| | Active Dataset | DataSet1 |
| | Filter | <none> |
| | Weight | <none> |
| | Split File | <none> |
| | N of Rows in Working Data File | 54 |
| Missing Value Handling | Definition of Missing | User-defined missing values are treated as missing. |
| | Cases Used | Statistics for each pair of variables are based on all the cases with valid data for that pair. |
| Syntax | | NONPAR CORR /VARIABLES=School PSIMan3 /PRINT=SPEARMAN TWOTAIL NOSIG /MISSING=PAIRWISE. |
| Resources | Processor Time | 00:00:00.02 |
| | Elapsed Time | 00:00:00.01 |
| | Number of Cases Allowed | 157286 cases ^a |

a. Based on availability of workspace memory

[DataSet1] E:\Statomet_2013\Hannelie_SPSS\SoC1and2_demo_LoU_new_13April_Hi_low_23Edited.sav

Correlations

| | | | School | Management (i) |
|----------------|----------------|-------------------------|--------|----------------|
| Spearman's rho | School | Correlation Coefficient | 1.000 | -.295* |
| | | Sig. (2-tailed) | . | .030 |
| | | N | 54 | 54 |
| | Management (i) | Correlation Coefficient | -.295* | 1.000 |
| | | Sig. (2-tailed) | .030 | . |
| | | N | 54 | 54 |

*. Correlation is significant at the 0.05 level (2-tailed).

NONPAR CORR

/VARIABLES=School PSICon4

/PRINT=SPEARMAN TWOTAIL NOSIG
 /MISSING=PAIRWISE.

Nonparametric Correlations

Notes

| | | |
|------------------------|--|---|
| Output Created | 25-APR-2013 21:19:36 | |
| Comments | | |
| Input | Data | E: \Statomet_2013\Hannelie_SPSS\SoC1and2_demo_LoU_new_13April_Hi_low_23Edited.sav |
| | Active Dataset | DataSet1 |
| | Filter | <none> |
| | Weight | <none> |
| | Split File | <none> |
| | N of Rows in Working Data File | 54 |
| Missing Value Handling | Definition of Missing | User-defined missing values are treated as missing. |
| | Cases Used | Statistics for each pair of variables are based on all the cases with valid data for that pair. |
| Syntax | NONPAR CORR /VARIABLES=School PSCon4 /PRINT=SPEARMAN TWOTAIL NOSIG /MISSING=PAIRWISE. | |
| Resources | Processor Time | 00:00:00.00 |
| | Elapsed Time | 00:00:00.01 |
| | Number of Cases Allowed | 157286 cases ^a |

a. Based on availability of workspace memory

[DataSet1] E:\Statomet_2013\Hannelie_SPSS\SoC1and2_demo_LoU_new_13April_Hi_low_23Edited.sav

Correlations

| | | | School | Consequence (i) |
|----------------|-----------------|-------------------------|--------|-----------------|
| Spearman's rho | School | Correlation Coefficient | 1.000 | -.175 |
| | | Sig. (2-tailed) | . | .205 |
| | | N | 54 | 54 |
| | Consequence (i) | Correlation Coefficient | -.175 | 1.000 |
| | | Sig. (2-tailed) | .205 | . |
| | | N | 54 | 54 |

NONPAR CORR

/VARIABLES=School PSIColl5

/PRINT=SPEARMAN TWOTAIL NOSIG

Nonparametric Correlations

Notes

| | | |
|------------------------|--------------------------------|---|
| Output Created | | 25-APR-2013 21:19:52 |
| Comments | | |
| Input | Data | E: \Statomet_2013\Hannelie_SPSS\So C1and2_demo_LoU_new_13April_H i_low_23Edited.sav |
| | Active Dataset | DataSet1 |
| | Filter | <none> |
| | Weight | <none> |
| | Split File | <none> |
| | N of Rows in Working Data File | 54 |
| Missing Value Handling | Definition of Missing | User-defined missing values are treated as missing. |
| | Cases Used | Statistics for each pair of variables are based on all the cases with valid data for that pair. |
| Syntax | | NONPAR CORR /VARIABLES=School PSIColl5 /PRINT=SPEARMAN TWOTAIL NOSIG /MISSING=PAIRWISE. |
| Resources | Processor Time | 00:00:00.02 |
| | Elapsed Time | 00:00:00.01 |
| | Number of Cases Allowed | 157286 cases ^a |

a. Based on availability of workspace memory

[DataSet1] E:\Statomet_2013\Hannelie_SPSS\SoC1and2_demo_LoU_new_13April_Hi_lo
w_23Edited.sav

Correlations

| | | | School | Collaboration (i) |
|----------------|-------------------|-------------------------|--------|-------------------|
| Spearman's rho | School | Correlation Coefficient | 1.000 | .015 |
| | | Sig. (2-tailed) | . | .915 |
| | | N | 54 | 54 |
| | Collaboration (i) | Correlation Coefficient | .015 | 1.000 |
| | | Sig. (2-tailed) | .915 | . |
| | | N | 54 | 54 |

NONPAR CORR

/VARIABLES=School PSIRef6

/PRINT=SPEARMAN TWOTAIL NOSIG

/MISSING=PAIRWISE.

Nonparametric Correlations

Notes

| | | |
|------------------------|--|---|
| Output Created | 25-APR-2013 21:20:04 | |
| Comments | | |
| Input | Data | E: \Statomet_2013\Hannelie_SPSS\So C1and2_demo_LoU_new_13April_H i_low_23Edited.sav |
| | Active Dataset | DataSet1 |
| | Filter | <none> |
| | Weight | <none> |
| | Split File | <none> |
| | N of Rows in Working Data File | 54 |
| Missing Value Handling | Definition of Missing | User-defined missing values are treated as missing. |
| | Cases Used | Statistics for each pair of variables are based on all the cases with valid data for that pair. |
| Syntax | NONPAR CORR /VARIABLES=School PSIRef6 /PRINT=SPEARMAN TWOTAIL NOSIG /MISSING=PAIRWISE. | |
| Resources | Processor Time | 00:00:00.00 |
| | Elapsed Time | 00:00:00.01 |
| | Number of Cases Allowed | 157286 cases ^a |

a. Based on availability of workspace memory

[DataSet1] E:\Statomet_2013\Hannelie_SPSS\SoC1and2_demo_LoU_new_13April_Hi_low_23Edited.sav

Correlations

| | | | School | Refocusing (i) |
|----------------|----------------|-------------------------|--------|----------------|
| Spearman's rho | School | Correlation Coefficient | 1.000 | -.150 |
| | | Sig. (2-tailed) | . | .279 |
| | | N | 54 | 54 |
| | Refocusing (i) | Correlation Coefficient | -.150 | 1.000 |
| | | Sig. (2-tailed) | .279 | . |
| | | N | 54 | 54 |

NONPAR CORR

/VARIABLES=School PSIIAwa0

/PRINT=SPEARMAN TWOTAIL NOSIG

/MISSING=PAIRWISE.

Nonparametric Correlations

Notes

| | | |
|------------------------|--------------------------------|--|
| Output Created | | 25-APR-2013 21:20:34 |
| Comments | | |
| Input | Data | E: \Statomet_2013\Hannelie_SPSS\SoC1and2_demo_LoU_new_13April_Hi_low_23Edited.sav |
| | Active Dataset | DataSet1 |
| | Filter | <none> |
| | Weight | <none> |
| | Split File | <none> |
| | N of Rows in Working Data File | 54 |
| Missing Value Handling | Definition of Missing | User-defined missing values are treated as missing. |
| | Cases Used | Statistics for each pair of variables are based on all the cases with valid data for that pair. |
| Syntax | | NONPAR CORR /VARIABLES=School PSIIAwa0 /PRINT=SPEARMAN TWOTAIL NOSIG /MISSING=PAIRWISE. |
| Resources | Processor Time | 00:00:00.00 |
| | Elapsed Time | 00:00:00.02 |
| | Number of Cases Allowed | 157286 cases ^a |

a. Based on availability of workspace memory

[DataSet1] E:\Statomet_2013\Hannelie_SPSS\SoCland2_demo_LoU_new_13April_Hi_low_23Edited.sav

Correlations

| | | | School | Awareness (ii) |
|----------------|----------------|-------------------------|--------|----------------|
| Spearman's rho | School | Correlation Coefficient | 1.000 | -.111 |
| | | Sig. (2-tailed) | . | .497 |
| | | N | 54 | 40 |
| | Awareness (ii) | Correlation Coefficient | -.111 | 1.000 |
| | | Sig. (2-tailed) | .497 | . |
| | | N | 40 | 40 |

```
NONPAR CORR
/VARIABLES=School PSIIInf1
/PRINT=SPEARMAN TWOTAIL NOSIG
/MISSING=PAIRWISE.
```

Nonparametric Correlations

Notes

| | | |
|------------------------|--|---|
| Output Created | 25-APR-2013 21:20:46 | |
| Comments | | |
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| | Active Dataset | DataSet1 |
| | Filter | <none> |
| | Weight | <none> |
| | Split File | <none> |
| | N of Rows in Working Data File | 54 |
| Missing Value Handling | Definition of Missing | User-defined missing values are treated as missing. |
| | Cases Used | Statistics for each pair of variables are based on all the cases with valid data for that pair. |
| Syntax | NONPAR CORR /VARIABLES=School PSIIInf1 /PRINT=SPEARMAN TWOTAIL NOSIG /MISSING=PAIRWISE. | |
| Resources | Processor Time | 00:00:00.02 |
| | Elapsed Time | 00:00:00.01 |
| | Number of Cases Allowed | 157286 cases ^a |

a. Based on availability of workspace memory

[DataSet1] E:\Statomet_2013\Hannelie_SPSS\SoC1and2_demo_LoU_new_13April_Hi_low_23Edited.sav

Correlations

| | | | School | Informational (ii) |
|----------------|--------------------|-------------------------|--------|--------------------|
| Spearman's rho | School | Correlation Coefficient | 1.000 | -.035 |
| | | Sig. (2-tailed) | . | .829 |
| | | N | 54 | 40 |
| | Informational (ii) | Correlation Coefficient | -.035 | 1.000 |
| | | Sig. (2-tailed) | .829 | . |
| | | N | 40 | 40 |

NONPAR CORR

/VARIABLES=School PSIIPer2
/PRINT=SPEARMAN TWOTAIL NOSIG
/MISSING=PAIRWISE.

Nonparametric Correlations

Notes

| | | |
|------------------------|--------------------------------|--|
| Output Created | | 25-APR-2013 21:20:56 |
| Comments | | |
| Input | Data | E: \Statomet_2013\Hannelie_SPSS\SoC1and2_demo_LoU_new_13April_Hi_low_23Edited.sav |
| | Active Dataset | DataSet1 |
| | Filter | <none> |
| | Weight | <none> |
| | Split File | <none> |
| | N of Rows in Working Data File | 54 |
| Missing Value Handling | Definition of Missing | User-defined missing values are treated as missing. |
| | Cases Used | Statistics for each pair of variables are based on all the cases with valid data for that pair. |
| Syntax | | NONPAR CORR /VARIABLES=School PSIIPer2 /PRINT=SPEARMAN TWOTAIL NOSIG /MISSING=PAIRWISE. |
| Resources | Processor Time | 00:00:00.00 |
| | Elapsed Time | 00:00:00.01 |
| | Number of Cases Allowed | 157286 cases ^a |

a. Based on availability of workspace memory

[DataSet1] E:\Statomet_2013\Hannelie_SPSS\SoC1and2_demo_LoU_new_13April_Hi_low_23Edited.sav

Correlations

| | | | School | Personal (ii) |
|----------------|---------------|-------------------------|--------|---------------|
| Spearman's rho | School | Correlation Coefficient | 1.000 | .110 |
| | | Sig. (2-tailed) | . | .499 |
| | | N | 54 | 40 |
| | Personal (ii) | Correlation Coefficient | .110 | 1.000 |
| | | Sig. (2-tailed) | .499 | . |
| | | N | 40 | 40 |

NONPAR CORR

/VARIABLES=School PSIIMan3

```

/PRINT=SPEARMAN TWOTAIL NOSIG
/MISSING=PAIRWISE.

```

Nonparametric Correlations

Notes

| | | |
|------------------------|--|---|
| Output Created | 25-APR-2013 21:21:08 | |
| Comments | | |
| Input | Data | E: \Statomet_2013\Hannelie_SPSS\SoC1and2_demo_LoU_new_13April_Hi_low_23Edited.sav |
| | Active Dataset | DataSet1 |
| | Filter | <none> |
| | Weight | <none> |
| | Split File | <none> |
| | N of Rows in Working Data File | 54 |
| Missing Value Handling | Definition of Missing | User-defined missing values are treated as missing. |
| | Cases Used | Statistics for each pair of variables are based on all the cases with valid data for that pair. |
| Syntax | NONPAR CORR /VARIABLES=School PSIIMan3 /PRINT=SPEARMAN TWOTAIL NOSIG /MISSING=PAIRWISE. | |
| Resources | Processor Time | 00:00:00.02 |
| | Elapsed Time | 00:00:00.01 |
| | Number of Cases Allowed | 157286 cases ^a |

a. Based on availability of workspace memory

[DataSet1] E:\Statomet_2013\Hannelie_SPSS\SoC1and2_demo_LoU_new_13April_Hi_low_23Edited.sav

Correlations

| | | | School | Management (ii) |
|----------------|-----------------|-------------------------|--------|-----------------|
| Spearman's rho | School | Correlation Coefficient | 1.000 | -.219 |
| | | Sig. (2-tailed) | . | .174 |
| | | N | 54 | 40 |
| | Management (ii) | Correlation Coefficient | -.219 | 1.000 |
| | | Sig. (2-tailed) | .174 | . |
| | | N | 40 | 40 |

NONPAR CORR

/VARIABLES=School PSIIcon4

/PRINT=SPEARMAN TWOTAIL NOSIG

Nonparametric Correlations

Notes

| | | |
|------------------------|--------------------------------|---|
| Output Created | | 25-APR-2013 21:21:24 |
| Comments | | |
| Input | Data | E: \Statomet_2013\Hannelie_SPSS\So C1and2_demo_LoU_new_13April_H i_low_23Edited.sav |
| | Active Dataset | DataSet1 |
| | Filter | <none> |
| | Weight | <none> |
| | Split File | <none> |
| | N of Rows in Working Data File | 54 |
| Missing Value Handling | Definition of Missing | User-defined missing values are treated as missing. |
| | Cases Used | Statistics for each pair of variables are based on all the cases with valid data for that pair. |
| Syntax | | NONPAR CORR /VARIABLES=School PSIIcon4 /PRINT=SPEARMAN TWOTAIL NOSIG /MISSING=PAIRWISE. |
| Resources | Processor Time | 00:00:00.00 |
| | Elapsed Time | 00:00:00.01 |
| | Number of Cases Allowed | 157286 cases ^a |

a. Based on availability of workspace memory

[DataSet1] E:\Statomet_2013\Hannelie_SPSS\SoC1and2_demo_LoU_new_13April_Hi_lo
w_23Edited.sav

Correlations

| | | | School | Consequence (ii) |
|----------------|------------------|-------------------------|--------|------------------|
| Spearman's rho | School | Correlation Coefficient | 1.000 | -.104 |
| | | Sig. (2-tailed) | . | .524 |
| | | N | 54 | 40 |
| | Consequence (ii) | Correlation Coefficient | -.104 | 1.000 |
| | | Sig. (2-tailed) | .524 | . |
| | | N | 40 | 40 |

NONPAR CORR

/VARIABLES=School PSIIColl5

/PRINT=SPEARMAN TWOTAIL NOSIG

/MISSING=PAIRWISE.

Nonparametric Correlations

Notes

| | | |
|------------------------|--|---|
| Output Created | 25-APR-2013 21:21:37 | |
| Comments | | |
| Input | Data | E: \Statomet_2013\Hannelie_SPSS\So C1and2_demo_LoU_new_13April_H i_low_23Edited.sav |
| | Active Dataset | DataSet1 |
| | Filter | <none> |
| | Weight | <none> |
| | Split File | <none> |
| | N of Rows in Working Data File | 54 |
| Missing Value Handling | Definition of Missing | User-defined missing values are treated as missing. |
| | Cases Used | Statistics for each pair of variables are based on all the cases with valid data for that pair. |
| Syntax | NONPAR CORR /VARIABLES=School PSIIColl5 /PRINT=SPEARMAN TWOTAIL NOSIG /MISSING=PAIRWISE. | |
| Resources | Processor Time | 00:00:00.02 |
| | Elapsed Time | 00:00:00.02 |
| | Number of Cases Allowed | 157286 cases ^a |

a. Based on availability of workspace memory

[DataSet1] E:\Statomet_2013\Hannelie_SPSS\SoCland2_demo_LoU_new_13April_Hi_low_23Edited.sav

Correlations

| | | | School | Collaboration (ii) |
|----------------|--------------------|-------------------------|--------|--------------------|
| Spearman's rho | School | Correlation Coefficient | 1.000 | .094 |
| | | Sig. (2-tailed) | . | .564 |
| | | N | 54 | 40 |
| | Collaboration (ii) | Correlation Coefficient | .094 | 1.000 |
| | | Sig. (2-tailed) | .564 | . |
| | | N | 40 | 40 |

NONPAR CORR

```

/VARIABLES=School PSIIRef6
/PRINT=SPEARMAN TWOTAIL NOSIG
/MISSING=PAIRWISE.
  
```

Nonparametric Correlations

Notes

| | | |
|------------------------|--------------------------------|---|
| Output Created | | 25-APR-2013 21:21:55 |
| Comments | | |
| Input | Data | E: \Statomet_2013\Hannelie_SPSS\So C1and2_demo_LoU_new_13April_H i_low_23Edited.sav |
| | Active Dataset | DataSet1 |
| | Filter | <none> |
| | Weight | <none> |
| | Split File | <none> |
| | N of Rows in Working Data File | 54 |
| Missing Value Handling | Definition of Missing | User-defined missing values are treated as missing. |
| | Cases Used | Statistics for each pair of variables are based on all the cases with valid data for that pair. |
| Syntax | | NONPAR CORR /VARIABLES=School PSIIRef6 /PRINT=SPEARMAN TWOTAIL NOSIG /MISSING=PAIRWISE. |

Notes

| | | |
|-----------|-------------------------|---------------------------|
| Resources | Processor Time | 00:00:00.00 |
| | Elapsed Time | 00:00:00.01 |
| | Number of Cases Allowed | 157286 cases ^a |

a. Based on availability of workspace memory

[DataSet1] E:\Statomet_2013\Hannelie_SPSS\SoCland2_demo_LoU_new_13April_Hi_low_23Edited.sav

Correlations

| | | | School | Refocusing (ii) |
|----------------|-----------------|-------------------------|--------|-----------------|
| Spearman's rho | School | Correlation Coefficient | 1.000 | .096 |
| | | Sig. (2-tailed) | . | .556 |
| | | N | 54 | 40 |
| | Refocusing (ii) | Correlation Coefficient | .096 | 1.000 |
| | | Sig. (2-tailed) | .556 | . |
| | | N | 40 | 40 |

NONPAR CORR

/VARIABLES=School PSIIAwa0 PSIIInf1 PSIIPer2 PSIIMan3 PSIIcon4 PSIIColl5 PSIIRef6

/PRINT=SPEARMAN TWOTAIL NOSIG

/MISSING=PAIRWISE.

Nonparametric Correlations

Notes

| | | |
|------------------------|--------------------------------|---|
| Output Created | | 25-APR-2013 22:26:41 |
| Comments | | |
| Input | Data | E: \Statomet_2013\Hannelie_SPSS\SoC1and2_demo_LoU_new_13April_Hi_low_23Edited.sav |
| | Active Dataset | DataSet1 |
| | Filter | <none> |
| | Weight | <none> |
| | Split File | <none> |
| | N of Rows in Working Data File | 54 |
| Missing Value Handling | Definition of Missing | User-defined missing values are treated as missing. |
| | Cases Used | Statistics for each pair of variables are based on all the cases with valid data for that pair. |
| Syntax | | NONPAR CORR /VARIABLES=School PSIIAwa0 PSIIInf1 PSIIPer2 PSIIMan3 PSIICon4 PSIICol5 PSIIRef6 /PRINT=SPEARMAN TWOTAIL NOSIG /MISSING=PAIRWISE. |
| Resources | Processor Time | 00:00:00.00 |
| | Elapsed Time | 00:00:00.02 |
| | Number of Cases Allowed | 71493 cases ^a |

a. Based on availability of workspace memory

[DataSet1] E:\Statomet_2013\Hannelie_SPSS\SoC1and2_demo_LoU_new_13April_Hi_low_23Edited.sav

Correlations

| | | | School | Awareness (ii) | Informational (ii) |
|----------------|--------------------|-------------------------|--------|----------------|--------------------|
| Spearman's rho | School | Correlation Coefficient | 1.000 | -.111 | -.035 |
| | | Sig. (2-tailed) | . | .497 | .829 |
| | | N | 54 | 40 | 40 |
| | Awareness (ii) | Correlation Coefficient | -.111 | 1.000 | -.137 |
| | | Sig. (2-tailed) | .497 | . | .398 |
| | | N | 40 | 40 | 40 |
| | Informational (ii) | Correlation Coefficient | -.035 | -.137 | 1.000 |
| | | Sig. (2-tailed) | .829 | .398 | . |
| | | N | 40 | 40 | 40 |
| | Personal (ii) | Correlation Coefficient | .110 | .005 | .650** |
| | | Sig. (2-tailed) | .499 | .977 | .000 |
| | | N | 40 | 40 | 40 |
| | Management (ii) | Correlation Coefficient | -.219 | .153 | .490** |
| | | Sig. (2-tailed) | .174 | .347 | .001 |
| | | N | 40 | 40 | 40 |
| | Consequence (ii) | Correlation Coefficient | -.104 | -.332* | .311 |
| | | Sig. (2-tailed) | .524 | .037 | .051 |
| | | N | 40 | 40 | 40 |
| | Collaboration (ii) | Correlation Coefficient | .094 | -.142 | .306 |
| | | Sig. (2-tailed) | .564 | .383 | .055 |
| | | N | 40 | 40 | 40 |
| | Refocusing (ii) | Correlation Coefficient | .096 | -.073 | .385* |
| | | Sig. (2-tailed) | .556 | .654 | .014 |
| | | N | 40 | 40 | 40 |

Correlations

| | | | Personal (ii) | Management (ii) |
|----------------|--------------------|-------------------------|---------------|-----------------|
| Spearman's rho | School | Correlation Coefficient | .110 | -.219 |
| | | Sig. (2-tailed) | .499 | .174 |
| | | N | 40 | 40 |
| | Awareness (ii) | Correlation Coefficient | .005 | .153 |
| | | Sig. (2-tailed) | .977 | .347 |
| | | N | 40 | 40 |
| | Informational (ii) | Correlation Coefficient | .650** | .490** |
| | | Sig. (2-tailed) | .000 | .001 |
| | | N | 40 | 40 |
| | Personal (ii) | Correlation Coefficient | 1.000 | .477** |
| | | Sig. (2-tailed) | . | .002 |
| | | N | 40 | 40 |
| | Management (ii) | Correlation Coefficient | .477** | 1.000 |
| | | Sig. (2-tailed) | .002 | . |
| | | N | 40 | 40 |
| | Consequence (ii) | Correlation Coefficient | .247 | .190 |
| | | Sig. (2-tailed) | .125 | .241 |
| | | N | 40 | 40 |
| | Collaboration (ii) | Correlation Coefficient | .423** | .277 |
| | | Sig. (2-tailed) | .007 | .083 |
| | | N | 40 | 40 |
| | Refocusing (ii) | Correlation Coefficient | .359* | .232 |
| | | Sig. (2-tailed) | .023 | .150 |
| | | N | 40 | 40 |

Correlations

| | | | Consequence (ii) | Collaboration (ii) |
|--------------------|-------------------------|-------------------------|---------------------|-----------------------|
| Spearman's rho | School | Correlation Coefficient | -.104 | .094 |
| | | Sig. (2-tailed) | .524 | .564 |
| | | N | 40 | 40 |
| | Awareness (ii) | Correlation Coefficient | -.332 [*] | -.142 |
| | | Sig. (2-tailed) | .037 | .383 |
| | | N | 40 | 40 |
| | Informational (ii) | Correlation Coefficient | .311 | .306 |
| | | Sig. (2-tailed) | .051 | .055 |
| | | N | 40 | 40 |
| | Personal (ii) | Correlation Coefficient | .247 | .423 ^{**} |
| | | Sig. (2-tailed) | .125 | .007 |
| | | N | 40 | 40 |
| | Management (ii) | Correlation Coefficient | .190 | .277 |
| | | Sig. (2-tailed) | .241 | .083 |
| | | N | 40 | 40 |
| | Consequence (ii) | Correlation Coefficient | 1.000 | .315 [*] |
| | | Sig. (2-tailed) | . | .048 |
| | | N | 40 | 40 |
| Collaboration (ii) | Correlation Coefficient | .315 [*] | 1.000 | |
| | Sig. (2-tailed) | .048 | . | |
| | N | 40 | 40 | |
| Refocusing (ii) | Correlation Coefficient | .534 ^{**} | .252 | |
| | Sig. (2-tailed) | .000 | .117 | |
| | N | 40 | 40 | |

Correlations

| | | | Refocusing (ii) |
|--------------------|-------------------------|-------------------------|-----------------|
| Spearman's rho | School | Correlation Coefficient | .096 |
| | | Sig. (2-tailed) | .556 |
| | | N | 40 |
| | Awareness (ii) | Correlation Coefficient | -.073 |
| | | Sig. (2-tailed) | .654 |
| | | N | 40 |
| | Informational (ii) | Correlation Coefficient | .385* |
| | | Sig. (2-tailed) | .014 |
| | | N | 40 |
| Personal (ii) | Correlation Coefficient | .359* | |
| | Sig. (2-tailed) | .023 | |
| | N | 40 | |
| Management (ii) | Correlation Coefficient | .232 | |
| | Sig. (2-tailed) | .150 | |
| | N | 40 | |
| Consequence (ii) | Correlation Coefficient | .534** | |
| | Sig. (2-tailed) | .000 | |
| | N | 40 | |
| Collaboration (ii) | Correlation Coefficient | .252 | |
| | Sig. (2-tailed) | .117 | |
| | N | 40 | |
| Refocusing (ii) | Correlation Coefficient | 1.000 | |
| | Sig. (2-tailed) | . | |
| | N | 40 | |

*. Correlation is significant at the 0.05 level (2-tailed).

**. Correlation is significant at the 0.01 level (2-tailed).

NONPAR CORR

/VARIABLES=School PSIAwa0 PSIIInf1 PSIPer2 PSIMan3 PSICon4 PSIColl15 PSISRef6

/PRINT=SPEARMAN TWOTAIL NOSIG

/MISSING=PAIRWISE.

Nonparametric Correlations

Notes

| | | |
|------------------------|--------------------------------|--|
| Output Created | | 25-APR-2013 22:26:57 |
| Comments | | |
| Input | Data | E: \Statomet_2013\Hannelie_SPSS\SoC1and2_demo_LoU_new_13April_Hi_low_23Edited.sav |
| | Active Dataset | DataSet1 |
| | Filter | <none> |
| | Weight | <none> |
| | Split File | <none> |
| | N of Rows in Working Data File | 54 |
| Missing Value Handling | Definition of Missing | User-defined missing values are treated as missing. |
| | Cases Used | Statistics for each pair of variables are based on all the cases with valid data for that pair. |
| Syntax | | NONPAR CORR /VARIABLES=School PSIAwa0 PSIIInf1 PSIPer2 PSIMan3 PSIcon4 PSIColl5 PSISRef6 /PRINT=SPEARMAN TWOTAIL NOSIG /MISSING=PAIRWISE. |
| Resources | Processor Time | 00:00:00.00 |
| | Elapsed Time | 00:00:00.02 |
| | Number of Cases Allowed | 71493 cases ^a |

a. Based on availability of workspace memory

[DataSet1] E:\Statomet_2013\Hannelie_SPSS\SoC1and2_demo_LoU_new_13April_Hi_low_23Edited.sav

Correlations

| | | | School | Awareness (i) | Informational (i) |
|-------------------|-------------------|-------------------------|--------|---------------|-------------------|
| Spearman's rho | School | Correlation Coefficient | 1.000 | -.043 | -.156 |
| | | Sig. (2-tailed) | . | .759 | .261 |
| | | N | 54 | 54 | 54 |
| Awareness (i) | Awareness (i) | Correlation Coefficient | -.043 | 1.000 | .228 |
| | | Sig. (2-tailed) | .759 | . | .098 |
| | | N | 54 | 54 | 54 |
| Informational (i) | Informational (i) | Correlation Coefficient | -.156 | .228 | 1.000 |
| | | Sig. (2-tailed) | .261 | .098 | . |
| | | N | 54 | 54 | 54 |
| Personal (i) | Personal (i) | Correlation Coefficient | -.174 | .205 | .506** |
| | | Sig. (2-tailed) | .207 | .136 | .000 |
| | | N | 54 | 54 | 54 |
| Management (i) | Management (i) | Correlation Coefficient | -.295* | .307* | .396** |
| | | Sig. (2-tailed) | .030 | .024 | .003 |
| | | N | 54 | 54 | 54 |
| Consequence (i) | Consequence (i) | Correlation Coefficient | -.175 | -.026 | .229 |
| | | Sig. (2-tailed) | .205 | .853 | .096 |
| | | N | 54 | 54 | 54 |
| Collaboration (i) | Collaboration (i) | Correlation Coefficient | .015 | .126 | .368** |
| | | Sig. (2-tailed) | .915 | .363 | .006 |
| | | N | 54 | 54 | 54 |
| Refocusing (i) | Refocusing (i) | Correlation Coefficient | -.150 | .028 | .236 |
| | | Sig. (2-tailed) | .279 | .841 | .086 |
| | | N | 54 | 54 | 54 |

Correlations

| | | | Personal (i) | Management (i) |
|----------------|-------------------------|-------------------------|--------------|----------------|
| Spearman's rho | School | Correlation Coefficient | -.174 | -.295* |
| | | Sig. (2-tailed) | .207 | .030 |
| | | N | 54 | 54 |
| | Awareness (i) | Correlation Coefficient | .205 | .307* |
| | | Sig. (2-tailed) | .136 | .024 |
| | | N | 54 | 54 |
| | Informational (i) | Correlation Coefficient | .506** | .396** |
| | | Sig. (2-tailed) | .000 | .003 |
| | | N | 54 | 54 |
| | Personal (i) | Correlation Coefficient | 1.000 | .482** |
| | | Sig. (2-tailed) | . | .000 |
| | | N | 54 | 54 |
| | Management (i) | Correlation Coefficient | .482** | 1.000 |
| | | Sig. (2-tailed) | .000 | . |
| | | N | 54 | 54 |
| | Consequence (i) | Correlation Coefficient | .449** | .115 |
| | | Sig. (2-tailed) | .001 | .410 |
| | | N | 54 | 54 |
| | Collaboration (i) | Correlation Coefficient | .520** | -.025 |
| | | Sig. (2-tailed) | .000 | .857 |
| | | N | 54 | 54 |
| Refocusing (i) | Correlation Coefficient | .403** | .182 | |
| | Sig. (2-tailed) | .003 | .187 | |
| | N | 54 | 54 | |

Correlations

| | | | Consequence (i) | Collaboration (i) |
|-------------------|-------------------------|-------------------------|--------------------|-------------------|
| Spearman's rho | School | Correlation Coefficient | -.175 | .015 |
| | | Sig. (2-tailed) | .205 | .915 |
| | | N | 54 | 54 |
| | Awareness (i) | Correlation Coefficient | -.026 | .126 |
| | | Sig. (2-tailed) | .853 | .363 |
| | | N | 54 | 54 |
| | Informational (i) | Correlation Coefficient | .229 | .368** |
| | | Sig. (2-tailed) | .096 | .006 |
| | | N | 54 | 54 |
| | Personal (i) | Correlation Coefficient | .449** | .520** |
| | | Sig. (2-tailed) | .001 | .000 |
| | | N | 54 | 54 |
| | Management (i) | Correlation Coefficient | .115 | -.025 |
| | | Sig. (2-tailed) | .410 | .857 |
| | | N | 54 | 54 |
| | Consequence (i) | Correlation Coefficient | 1.000 | .480** |
| | | Sig. (2-tailed) | . | .000 |
| | | N | 54 | 54 |
| Collaboration (i) | Correlation Coefficient | .480** | 1.000 | |
| | Sig. (2-tailed) | .000 | . | |
| | N | 54 | 54 | |
| Refocusing (i) | Correlation Coefficient | .376** | .194 | |
| | Sig. (2-tailed) | .005 | .160 | |
| | N | 54 | 54 | |

Correlations

| | | | Refocusing (i) |
|-------------------|-------------------------|-------------------------|----------------|
| Spearman's rho | School | Correlation Coefficient | -.150 |
| | | Sig. (2-tailed) | .279 |
| | | N | 54 |
| | Awareness (i) | Correlation Coefficient | .028 |
| | | Sig. (2-tailed) | .841 |
| | | N | 54 |
| | Informational (i) | Correlation Coefficient | .236 |
| | | Sig. (2-tailed) | .086 |
| | | N | 54 |
| | Personal (i) | Correlation Coefficient | .403** |
| Sig. (2-tailed) | | .003 | |
| N | | 54 | |
| Management (i) | Correlation Coefficient | .182 | |
| | Sig. (2-tailed) | .187 | |
| | N | 54 | |
| Consequence (i) | Correlation Coefficient | .376** | |
| | Sig. (2-tailed) | .005 | |
| | N | 54 | |
| Collaboration (i) | Correlation Coefficient | .194 | |
| | Sig. (2-tailed) | .160 | |
| | N | 54 | |
| Refocusing (i) | Correlation Coefficient | 1.000 | |
| | Sig. (2-tailed) | . | |
| | N | 54 | |

*. Correlation is significant at the 0.05 level (2-tailed).

**. Correlation is significant at the 0.01 level (2-tailed).

SoCi_Correlation_Demo_Spearman

Correlations

| Spearman's rho | | School | Gender | Lecturing experience | AcadPos | V45 | Professional identity / qualification | Age | Academic qualification | Confidence level | Used old clickUP (2006-2012) | Proficiency in new clickUP | significant barriers | greatest benefit |
|--------------------------|-------------------------|--------|--------|----------------------|---------|-------|---------------------------------------|-------|------------------------|------------------|------------------------------|----------------------------|----------------------|------------------|
| Correlation Coefficient | | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 |
| Sig. (2-tailed) | | | | | | | | | | | | | | |
| N | | 54 | 54 | 54 | 54 | 54 | 54 | 40 | 39 | 40 | 37 | 40 | 37 | 38 |
| Awareness (i) | Correlation Coefficient | -.043 | .086 | .190 | .363** | -.043 | .126 | .036 | .075 | .047 | .087 | .000 | -.025 | -.196 |
| | Sig. (2-tailed) | .759 | .536 | .169 | .007 | .759 | .365 | .827 | .650 | .774 | .610 | .998 | .882 | .237 |
| | N | 54 | 54 | 54 | 54 | 54 | 54 | 40 | 39 | 40 | 37 | 40 | 37 | 38 |
| Informational (i) | Correlation Coefficient | -.156 | .127 | .032 | .119 | .049 | .012 | .093 | .289 | .144 | .194 | -.165 | -.035 | -.161 |
| | Sig. (2-tailed) | .261 | .359 | .818 | .393 | .727 | .930 | .567 | .075 | .374 | .250 | .308 | .836 | .333 |
| | N | 54 | 54 | 54 | 54 | 54 | 54 | 40 | 39 | 40 | 37 | 40 | 37 | 38 |
| Personal (i) | Correlation Coefficient | -.174 | .112 | -.207 | -.116 | .064 | -.085 | -.162 | -.024 | .027 | -.040 | -.037 | -.210 | -.504** |
| | Sig. (2-tailed) | .207 | .419 | .133 | .405 | .645 | .542 | .318 | .883 | .870 | .814 | .823 | .213 | .001 |
| | N | 54 | 54 | 54 | 54 | 54 | 54 | 40 | 39 | 40 | 37 | 40 | 37 | 38 |
| Management (i) | Correlation Coefficient | -.295* | -.072 | -.027 | .054 | .067 | .125 | .204 | -.034 | .344* | -.265 | -.241 | -.133 | -.318 |
| | Sig. (2-tailed) | .030 | .605 | .846 | .698 | .631 | .367 | .207 | .835 | .030 | .113 | .135 | .433 | .052 |
| | N | 54 | 54 | 54 | 54 | 54 | 54 | 40 | 39 | 40 | 37 | 40 | 37 | 38 |
| Consequence (i) | Correlation Coefficient | -.175 | -.134 | -.177 | .021 | -.039 | .086 | -.115 | -.020 | -.211 | .333* | .481** | .134 | -.227 |
| | Sig. (2-tailed) | .205 | .334 | .200 | .878 | .782 | .538 | .482 | .904 | .191 | .044 | .002 | .430 | .170 |
| | N | 54 | 54 | 54 | 54 | 54 | 54 | 40 | 39 | 40 | 37 | 40 | 37 | 38 |
| Collaboration (i) | Correlation Coefficient | .015 | .013 | -.203 | -.061 | -.051 | .115 | -.192 | -.042 | -.096 | .197 | .168 | -.083 | -.286 |
| | Sig. (2-tailed) | .915 | .923 | .141 | .663 | .715 | .409 | .235 | .797 | .554 | .242 | .300 | .627 | .082 |
| | N | 54 | 54 | 54 | 54 | 54 | 54 | 40 | 39 | 40 | 37 | 40 | 37 | 38 |
| Refocusing (i) | Correlation Coefficient | -.150 | .122 | -.047 | -.163 | .086 | -.004 | -.073 | -.370* | .101 | .240 | -.022 | .017 | -.066 |
| | Sig. (2-tailed) | .279 | .378 | .737 | .240 | .539 | .975 | .655 | .021 | .534 | .152 | .893 | .920 | .695 |
| | N | 54 | 54 | 54 | 54 | 54 | 54 | 40 | 39 | 40 | 37 | 40 | 37 | 38 |

*. Correlation is significant at the 0.05 level (2-tailed).

**. Correlation is significant at the 0.01 level (2-tailed).

SoCii_Correlation_Demo_Spearman

Correlations

| Spearman's rho | | School | Gender | Lecturing experience | AcadPos | V45 | Professional identity / qualification | Age | Academic qualification | Confidence level | Used old clickUP (2006-2012) | Proficiency in new clickUP | significant barriers | greatest benefit |
|--------------------|-------------------------|--------|--------|----------------------|---------|------|---------------------------------------|-------|------------------------|------------------|------------------------------|----------------------------|----------------------|------------------|
| Awareness (ii) | Correlation Coefficient | -.111 | -.194 | -.124 | .127 | .225 | .216 | .157 | .239 | .169 | -.181 | -.310 | -.242 | .024 |
| | Sig. (2-tailed) | .497 | .231 | .447 | .435 | .163 | .181 | .334 | .144 | .298 | .284 | .052 | .149 | .884 |
| | N | 40 | 40 | 40 | 40 | 40 | 40 | 40 | 39 | 40 | 37 | 40 | 37 | 38 |
| Informational (ii) | Correlation Coefficient | -.035 | .054 | .288 | .094 | .016 | .071 | .266 | -.142 | .350* | .284 | .069 | .014 | -.041 |
| | Sig. (2-tailed) | .829 | .739 | .072 | .566 | .923 | .665 | .097 | .389 | .027 | .089 | .673 | .933 | .805 |
| | N | 40 | 40 | 40 | 40 | 40 | 40 | 40 | 39 | 40 | 37 | 40 | 37 | 38 |
| Personal (ii) | Correlation Coefficient | .110 | .154 | .156 | .046 | .051 | .068 | .151 | -.067 | .215 | .065 | -.055 | -.064 | -.136 |
| | Sig. (2-tailed) | .499 | .342 | .336 | .776 | .753 | .677 | .353 | .687 | .182 | .704 | .737 | .709 | .416 |
| | N | 40 | 40 | 40 | 40 | 40 | 40 | 40 | 39 | 40 | 37 | 40 | 37 | 38 |
| Management (ii) | Correlation Coefficient | -.219 | -.011 | .098 | -.136 | .123 | .247 | .330* | -.019 | .602** | -.108 | -.158 | -.265 | -.212 |
| | Sig. (2-tailed) | .174 | .944 | .548 | .403 | .448 | .125 | .038 | .909 | .000 | .525 | .331 | .113 | .202 |
| | N | 40 | 40 | 40 | 40 | 40 | 40 | 40 | 39 | 40 | 37 | 40 | 37 | 38 |
| Consequence (ii) | Correlation Coefficient | -.104 | -.120 | .029 | -.102 | .038 | .198 | -.107 | -.284 | -.090 | .237 | .443** | .120 | -.082 |
| | Sig. (2-tailed) | .524 | .461 | .857 | .532 | .816 | .221 | .509 | .080 | .581 | .157 | .004 | .480 | .625 |
| | N | 40 | 40 | 40 | 40 | 40 | 40 | 40 | 39 | 40 | 37 | 40 | 37 | 38 |
| Collaboration (ii) | Correlation Coefficient | .094 | -.043 | .034 | .086 | .052 | .371** | .113 | .078 | .066 | -.052 | .101 | .068 | -.128 |
| | Sig. (2-tailed) | .564 | .793 | .834 | .599 | .751 | .019 | .488 | .635 | .686 | .758 | .536 | .689 | .443 |
| | N | 40 | 40 | 40 | 40 | 40 | 40 | 40 | 39 | 40 | 37 | 40 | 37 | 38 |
| Refocusing (ii) | Correlation Coefficient | .096 | .108 | .035 | -.050 | .216 | .032 | -.121 | -.269 | -.064 | .148 | .245 | -.082 | -.170 |
| | Sig. (2-tailed) | .556 | .505 | .832 | .758 | .180 | .843 | .456 | .098 | .693 | .382 | .127 | .632 | .308 |
| | N | 40 | 40 | 40 | 40 | 40 | 40 | 40 | 39 | 40 | 37 | 40 | 37 | 38 |

*. Correlation is significant at the 0.05 level (2-tailed).

** . Correlation is significant at the 0.01 level (2-tailed).

Correlations

| Spearman's rho | | | Awareness (ii) | Informational (ii) | Personal (ii) | Management (ii) | Consequence (ii) | Collaboration (ii) | Refocusing (ii) |
|----------------------|-------------------------|--------|----------------|--------------------|---------------|-----------------|------------------|--------------------|-----------------|
| significant barriers | Correlation Coefficient | -.242 | .014 | -.064 | -.265 | .120 | .068 | -.082 | |
| | Sig. (2-tailed) | .149 | .933 | .709 | .113 | .480 | .689 | .632 | |
| | N | 37 | 37 | 37 | 37 | 37 | 37 | 37 | |
| Awareness (ii) | Correlation Coefficient | 1.000 | -.137 | .005 | .153 | -.332* | -.142 | -.073 | |
| | Sig. (2-tailed) | | .398 | .977 | .347 | .037 | .383 | .654 | |
| | N | 40 | 40 | 40 | 40 | 40 | 40 | 40 | |
| Informational (ii) | Correlation Coefficient | -.137 | 1.000 | .650** | .490** | .311 | .306 | .385* | |
| | Sig. (2-tailed) | | .398 | .000 | .001 | .051 | .055 | .014 | |
| | N | 40 | 40 | 40 | 40 | 40 | 40 | 40 | |
| Personal (ii) | Correlation Coefficient | .005 | .650** | 1.000 | .477** | .247 | .423** | .359* | |
| | Sig. (2-tailed) | | .977 | .000 | .002 | .125 | .007 | .023 | |
| | N | 40 | 40 | 40 | 40 | 40 | 40 | 40 | |
| Management (ii) | Correlation Coefficient | .153 | .490** | .477** | 1.000 | .190 | .277 | .232 | |
| | Sig. (2-tailed) | | .347 | .001 | .002 | .241 | .083 | .150 | |
| | N | 40 | 40 | 40 | 40 | 40 | 40 | 40 | |
| Consequence (ii) | Correlation Coefficient | -.332* | .311 | .247 | .190 | 1.000 | .315* | .534** | |
| | Sig. (2-tailed) | | .037 | .051 | .125 | .241 | .048 | .000 | |
| | N | 40 | 40 | 40 | 40 | 40 | 40 | 40 | |
| Collaboration (ii) | Correlation Coefficient | -.142 | .306 | .423** | .277 | .315* | 1.000 | .252 | |
| | Sig. (2-tailed) | | .383 | .055 | .083 | .048 | | .117 | |
| | N | 40 | 40 | 40 | 40 | 40 | 40 | 40 | |
| Refocusing (ii) | Correlation Coefficient | -.073 | .385* | .359* | .232 | .534** | .252 | 1.000 | |
| | Sig. (2-tailed) | | .654 | .014 | .023 | .150 | .000 | .117 | |
| | N | 40 | 40 | 40 | 40 | 40 | 40 | 40 | |

*. Correlation is significant at the 0.05 level (2-tailed).

** . Correlation is significant at the 0.01 level (2-tailed).

SoCi_KruskalWallis_Demo

Correlations

| Independent Samples Kruskal-Wallis Test | School | Gender | Lecturing experience | AcadPos | V45 | Professional identity / qualification | Age | Academic qualification | Confidence level | Used old clickUP (2006-2012) | Proficiency in new clickUP | significant barriers | greatest benefit |
|---|--------|--------|----------------------|---------|------|---------------------------------------|------|------------------------|------------------|------------------------------|----------------------------|----------------------|------------------|
| Awareness (i) Sig. (2-tailed) | .886 | .542 | .299 | .108 | .973 | .292 | .713 | .584 | .709 | .625 | .771 | .281 | .397 |
| Informational (i) Sig. (2-tailed) | .648 | .368 | .472 | .138 | .939 | .992 | .561 | .069 | .382 | .251 | .162 | .149 | .225 |
| Personal (i) Sig. (2-tailed) | .484 | .422 | .153 | .364 | .171 | .724 | .284 | .291 | .455 | .814 | .389 | .804 | .017 |
| Management (i) Sig. (2-tailed) | .093 | .607 | .367 | .379 | .627 | .255 | .342 | .653 | .155 | .118 | .339 | .203 | .201 |
| Consequence (i) Sig. (2-tailed) | .476 | .343 | .308 | .537 | .284 | .808 | .405 | .521 | .257 | .047 | .017 | .534 | .069 |
| Collaboration (i) Sig. (2-tailed) | .896 | .933 | .314 | .637 | .580 | .584 | .766 | .947 | .932 | .251 | .592 | .134 | .266 |
| Refocusing (i) Sig. (2-tailed) | .538 | .381 | .517 | .228 | .120 | .424 | .500 | .233 | .595 | .158 | .930 | .682 | .893 |

*. Correlation is significant at the 0.05 level (2-tailed).

**. Correlation is significant at the 0.01 level (2-tailed).

SoCii_KruskalWallis_Demo

| Independent Samples Kruskal-Wallis Test | School | Gender | Lecturing experience | AcadPos | V45 | Professional identity / qualification | Age | Academic qualification | Confidence level | Used old clickUP (2006-2012) | Proficiency in new clickUP | significant barriers | greatest benefit |
|--|---------------|---------------|-----------------------------|----------------|------------|--|------------|-------------------------------|-------------------------|-------------------------------------|-----------------------------------|-----------------------------|-------------------------|
| Awareness (ii) Sig. (2-tailed) | .582 | .246 | .073 | | .535 | .386 | .731 | .598 | .518 | .299 | .326 | .181 | .998 |
| Informational (ii) Sig. (2-tailed) | .938 | .754 | .063 | | .981 | .831 | .319 | .194 | .070 | .094 | .983 | .439 | .256 |
| Personal (ii) Sig. (2-tailed) | .839 | .344 | .642 | | .793 | .493 | .228 | .040 | .495 | .704 | .653 | .251 | .606 |
| Management (ii) Sig. (2-tailed) | .392 | .945 | .547 | | .802 | .180 | .252 | .105 | .002 | .526 | .835 | .050 | .634 |
| Consequence (ii) Sig. (2-tailed) | .789 | .463 | .880 | | .852 | .424 | .627 | .169 | .737 | .158 | .003 | .341 | .856 |
| Collaboration (ii) Sig. (2-tailed) | .400 | .807 | .707 | | .763 | .031 | .898 | .556 | .684 | .758 | .919 | .548 | .294 |
| Refocusing (ii) Sig. (2-tailed) | .581 | .507 | .680 | | .322 | .630 | .707 | .173 | .105 | .393 | .557 | .253 | .568 |

*. Correlation is significant at the 0.05 level (2-tailed).

** . Correlation is significant at the 0.01 level (2-tailed).

SoCQi Junior Lecturer

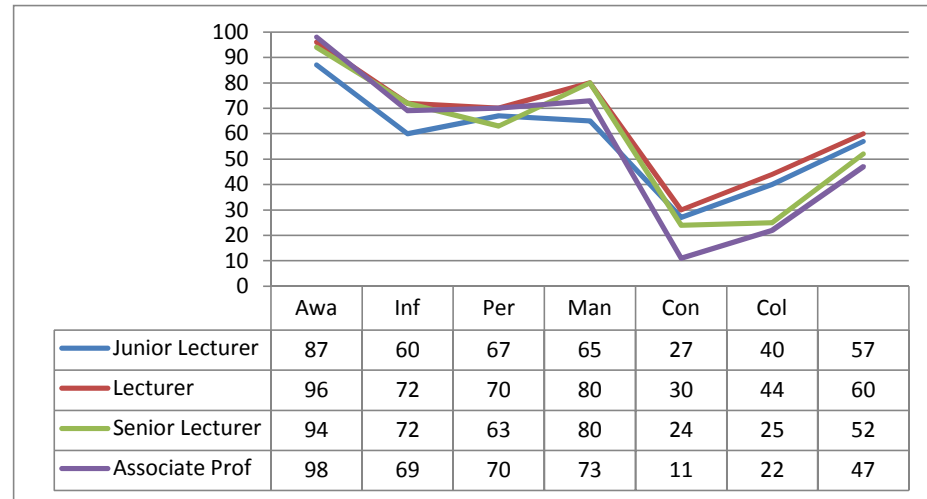
Descriptive Statistics

| | N | Sum | Avg | Percentile |
|--------------------|----|-----|------|------------|
| RSIAwa0 | 11 | 166 | 15.1 | 87 |
| RSIInf1 | 11 | 180 | 16.4 | 60 |
| RSIPer2 | 11 | 198 | 18.0 | 67 |
| RSIMan3 | 11 | 187 | 17.0 | 65 |
| RSICon4 | 11 | 216 | 19.6 | 27 |
| RSIColl5 | 11 | 200 | 18.2 | 40 |
| RSIRef6 | 11 | 202 | 18.4 | 57 |
| Valid N (listwise) | 11 | | | |

Lecturer

Descriptive Statistics

| | N | Sum | Avg | Percentile |
|--------------------|----|-----|------|------------|
| RSIAwa0 | 32 | 525 | 16.4 | 91 |
| RSIInf1 | 32 | 577 | 18.0 | 66 |
| RSIPer2 | 32 | 538 | 16.8 | 59 |
| RSIMan3 | 32 | 632 | 19.8 | 73 |
| RSICon4 | 32 | 555 | 17.3 | 21 |
| RSIColl5 | 32 | 520 | 16.3 | 31 |
| RSIRef6 | 32 | 539 | 16.8 | 47 |
| Valid N (listwise) | 32 | | | |



Senior Lecturer

Descriptive Statistics

| | N | Sum | Avg | Percentile |
|--------------------|---|-----|------|------------|
| RSIAwa0 | 7 | 151 | 21.6 | 99 |
| RSIInf1 | 7 | 157 | 22.4 | 80 |
| RSIPer2 | 7 | 116 | 16.6 | 59 |
| RSIMan3 | 7 | 138 | 19.7 | 73 |
| RSICon4 | 7 | 140 | 20.0 | 30 |
| RSIColl5 | 7 | 114 | 16.3 | 31 |
| RSIRef6 | 7 | 109 | 15.6 | 42 |
| Valid N (listwise) | 7 | | | |

Associate Prof

Descriptive Statistics

| | N | Sum | Avg | Percentile |
|--------------------|---|-----|------|------------|
| RSIAwa0 | 2 | 35 | 17.5 | 94 |
| RSIInf1 | 2 | 25 | 12.5 | 48 |
| RSIPer2 | 2 | 16 | 8.0 | 35 |
| RSIMan3 | 2 | 18 | 9.0 | 30 |
| RSICon4 | 2 | 42 | 21.0 | 33 |
| RSIColl5 | 2 | 35 | 17.5 | 36 |
| RSIRef6 | 2 | 19 | 9.5 | 20 |
| Valid N (listwise) | 2 | | | |

SoCQi Diploma

Descriptive Statistics

| | N | Sum | Avg | Percentile |
|--------------------|---|-----|------|------------|
| RSIAwa0 | 3 | 54 | 18.0 | 96 |
| RSIInf1 | 3 | 58 | 19.3 | 69 |
| RSIPer2 | 3 | 48 | 16.0 | 59 |
| RSIMan3 | 3 | 61 | 20.3 | 77 |
| RSICon4 | 3 | 43 | 14.3 | 13 |
| RSIColl5 | 3 | 57 | 19.0 | 44 |
| RSIRef6 | 3 | 67 | 22.3 | 73 |
| Valid N (listwise) | 3 | | | |

Bachelor

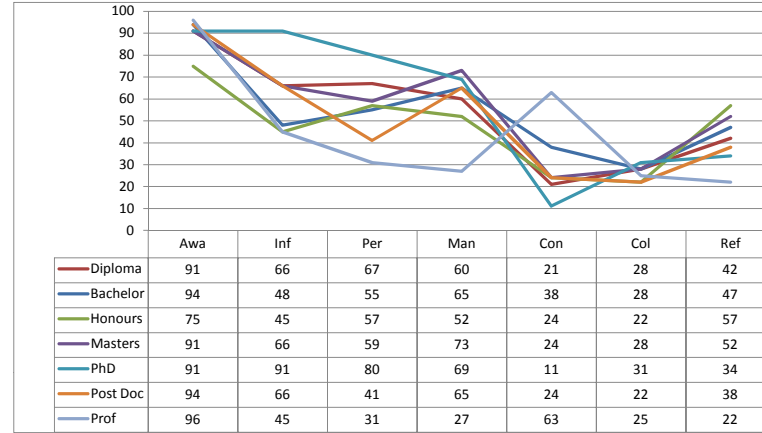
Descriptive Statistics

| | N | Sum | Avg | Percentile |
|--------------------|---|-----|------|------------|
| RSIAwa0 | 4 | 68 | 17.0 | 94 |
| RSIInf1 | 4 | 48 | 12.0 | 48 |
| RSIPer2 | 4 | 57 | 14.3 | 55 |
| RSIMan3 | 4 | 68 | 17.0 | 65 |
| RSICon4 | 4 | 88 | 22.0 | 38 |
| RSIColl5 | 4 | 63 | 15.8 | 28 |
| RSIRef6 | 4 | 66 | 16.5 | 47 |
| Valid N (listwise) | 4 | | | |

Honours

Descriptive Statistics

| | N | Sum | Avg | Percentile |
|--------------------|---|-----|------|------------|
| RSIAwa0 | 4 | 55 | 13.8 | 75 |
| RSIInf1 | 4 | 47 | 11.8 | 45 |
| RSIPer2 | 4 | 62 | 15.5 | 57 |
| RSIMan3 | 4 | 58 | 14.5 | 52 |
| RSICon4 | 4 | 72 | 18.0 | 24 |
| RSIColl5 | 4 | 54 | 13.5 | 22 |
| RSIRef6 | 4 | 73 | 18.3 | 57 |
| Valid N (listwise) | 4 | | | |



Masters

| Descriptive Statistics | | | | |
|------------------------|----|-----|------|------------|
| | N | Sum | Avg | Percentile |
| RSIAwa0 | 21 | 354 | 16.9 | 91 |
| RSIInf1 | 21 | 388 | 18.5 | 66 |
| RSIPer2 | 21 | 356 | 17.0 | 59 |
| RSIMan3 | 21 | 419 | 20.0 | 73 |
| RSICon4 | 21 | 388 | 18.5 | 24 |
| RSIColl5 | 21 | 332 | 15.8 | 28 |
| RSIRef6 | 21 | 360 | 17.1 | 52 |
| Valid N (listwise) | 21 | | | |

PhD

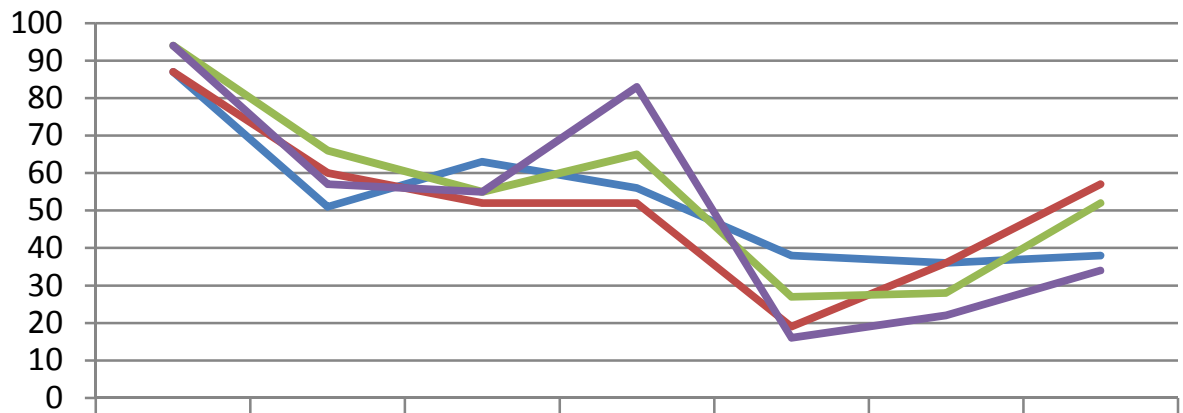
| Descriptive Statistics | | | | |
|------------------------|---|-----|------|------------|
| | N | Sum | Avg | Percentile |
| RSIAwa0 | 3 | 48 | 16.0 | 91 |
| RSIInf1 | 3 | 80 | 26.7 | 91 |
| RSIPer2 | 3 | 70 | 23.3 | 80 |
| RSIMan3 | 3 | 54 | 18.0 | 69 |
| RSICon4 | 3 | 41 | 13.7 | 11 |
| RSIColl5 | 3 | 50 | 16.7 | 31 |
| RSIRef6 | 3 | 39 | 13.0 | 34 |
| Valid N (listwise) | 3 | | | |

Post Doc

| Descriptive Statistics | | | | |
|------------------------|---|-----|------|------------|
| | N | Sum | Avg | Percentile |
| RSIAwa0 | 3 | 53 | 17.7 | 94 |
| RSIInf1 | 3 | 56 | 18.7 | 66 |
| RSIPer2 | 3 | 32 | 10.7 | 41 |
| RSIMan3 | 3 | 53 | 17.7 | 65 |
| RSICon4 | 3 | 56 | 18.7 | 24 |
| RSIColl5 | 3 | 41 | 13.7 | 22 |
| RSIRef6 | 3 | 42 | 14.0 | 38 |
| Valid N (listwise) | 3 | | | |

Prof

| Descriptive Statistics | | | | |
|------------------------|---|-----|------|------------|
| | N | Sum | Avg | Percentile |
| RSIAwa0 | 1 | 18 | 18.0 | 96 |
| RSIInf1 | 1 | 11 | 11.0 | 45 |
| RSIPer2 | 1 | 7 | 7.0 | 31 |
| RSIMan3 | 1 | 8 | 8.0 | 27 |
| RSICon4 | 1 | 27 | 27.0 | 63 |
| RSIColl5 | 1 | 14 | 14.0 | 25 |
| RSIRef6 | 1 | 10 | 10.0 | 22 |
| Valid N (listwise) | 1 | | | |



| | Awa | Inf | Per | Man | Con | Col | Ref |
|-------|-----|-----|-----|-----|-----|-----|-----|
| 20-29 | 87 | 51 | 63 | 56 | 38 | 36 | 38 |
| 30-39 | 87 | 60 | 52 | 52 | 19 | 36 | 57 |
| 50-59 | 94 | 66 | 55 | 65 | 27 | 28 | 52 |
| 60+ | 94 | 57 | 55 | 83 | 16 | 22 | 34 |

SoCQ i Female

Descriptive Statistics

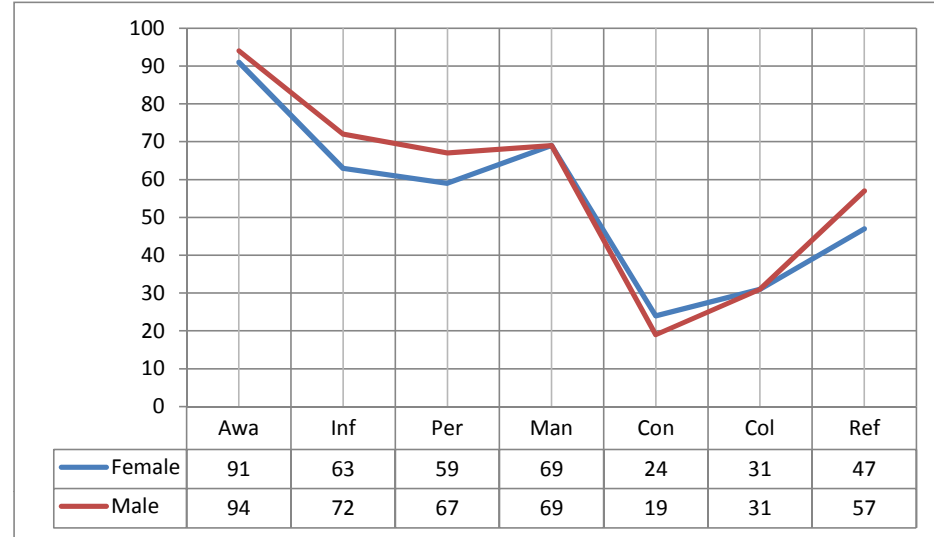
| | N | Sum |
|--------------------|----|-----|
| RSIAwa0 | 46 | 772 |
| RSIInf1 | 46 | 811 |
| RSIPer2 | 46 | 760 |
| RSIMan3 | 46 | 869 |
| RSICon4 | 46 | 864 |
| RSIColl5 | 46 | 767 |
| RSIRef6 | 46 | 768 |
| Valid N (listwise) | 46 | |

Avg

Percentile

16.8
17.6
16.5
18.9
18.8
16.7
16.7

91
63
59
69
24
31
47



SoCQ i Male

Descriptive Statistics

| | N | Sum |
|--------------------|---|-----|
| RSIAwa0 | 8 | 138 |
| RSIInf1 | 8 | 161 |
| RSIPer2 | 8 | 149 |
| RSIMan3 | 8 | 147 |
| RSICon4 | 8 | 131 |
| RSIColl5 | 8 | 131 |
| RSIRef6 | 8 | 144 |
| Valid N (listwise) | 8 | |

Avg

Percentile

17.3
20.1
18.6
18.4
16.4
16.4
18.0

94
72
67
69
19
31
57

Awa
Inf
Per
Man
Con
Col
Ref

SoCQi LectExp ≤5

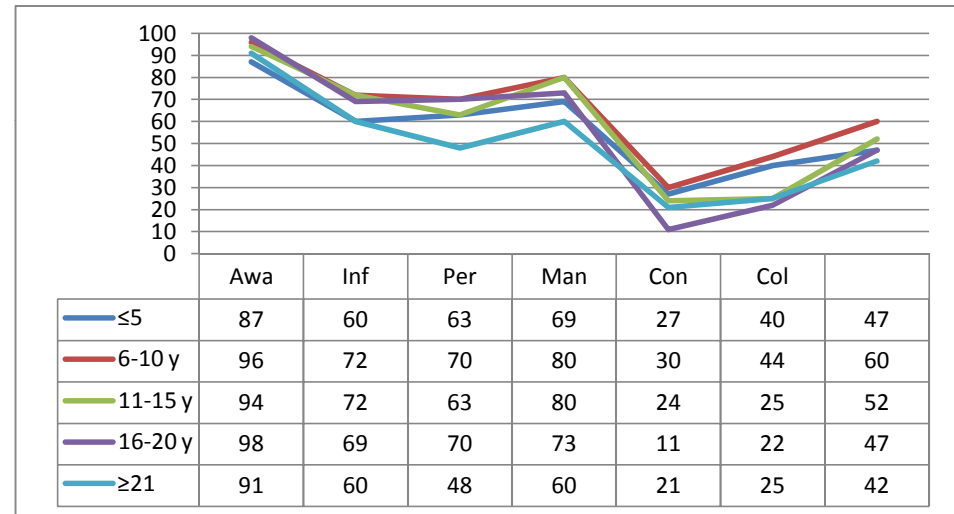
Descriptive Statistics

| | N | Sum | Avg | Percentile |
|--------------------|----|-----|------|------------|
| RSIAwa0 | 22 | 344 | 15.6 | 87 |
| RSIInf1 | 22 | 368 | 16.7 | 60 |
| RSIPer2 | 22 | 384 | 17.5 | 63 |
| RSIMan3 | 22 | 396 | 18.0 | 69 |
| RSICon4 | 22 | 419 | 19.0 | 27 |
| RSIColl5 | 22 | 397 | 18.0 | 40 |
| RSIRef6 | 22 | 367 | 16.7 | 47 |
| Valid N (listwise) | 22 | | | |

6-10 y

Descriptive Statistics

| | N | Sum | Avg | Percentile |
|--------------------|---|-----|------|------------|
| RSIAwa0 | 9 | 166 | 18.4 | 96 |
| RSIInf1 | 9 | 185 | 20.6 | 72 |
| RSIPer2 | 9 | 178 | 19.8 | 70 |
| RSIMan3 | 9 | 191 | 21.2 | 80 |
| RSICon4 | 9 | 188 | 20.9 | 30 |
| RSIColl5 | 9 | 171 | 19.0 | 44 |
| RSIRef6 | 9 | 175 | 19.4 | 60 |
| Valid N (listwise) | 9 | | | |



11-15 y

Descriptive Statistics

| | N | Sum | Avg | Percentile |
|-----------------------|---|-----|------|------------|
| RSIAwa0 | 8 | 140 | 17.5 | 94 |
| RSIInf1 | 8 | 160 | 20.0 | 72 |
| RSIPer2 | 8 | 136 | 17.0 | 63 |
| RSIMan3 | 8 | 174 | 21.8 | 80 |
| RSICon4 | 8 | 147 | 18.4 | 24 |
| RSIColl5 | 8 | 117 | 14.6 | 25 |
| RSIRef6 | 8 | 138 | 17.3 | 52 |
| Valid N (listwise) | 8 | | | |

16-20 y

Descriptive Statistics

| | N | Sum | Avg | Percentile |
|-----------------------|---|-----|------|------------|
| RSIAwa0 | 4 | 81 | 20.3 | 98 |
| RSIInf1 | 4 | 77 | 19.3 | 69 |
| RSIPer2 | 4 | 76 | 19.0 | 70 |
| RSIMan3 | 4 | 76 | 19.0 | 73 |
| RSICon4 | 4 | 52 | 13.0 | 11 |
| RSIColl5 | 4 | 55 | 13.8 | 22 |
| RSIRef6 | 4 | 65 | 16.3 | 47 |
| Valid N (listwise) | 4 | | | |

≥21

Descriptive Statistics

| | N | Sum | Avg | Percentile |
|-----------------------|----|-----|------|------------|
| RSIAwa0 | 11 | 179 | 16.3 | 91 |
| RSIInf1 | 11 | 182 | 16.5 | 60 |
| RSIPer2 | 11 | 135 | 12.3 | 48 |
| RSIMan3 | 11 | 179 | 16.3 | 60 |
| RSICon4 | 11 | 189 | 17.2 | 21 |
| RSIColl5 | 11 | 158 | 14.4 | 25 |
| RSIRef6 | 11 | 167 | 15.2 | 42 |
| Valid N (listwise) | 11 | | | |

SoCQi Pref 1

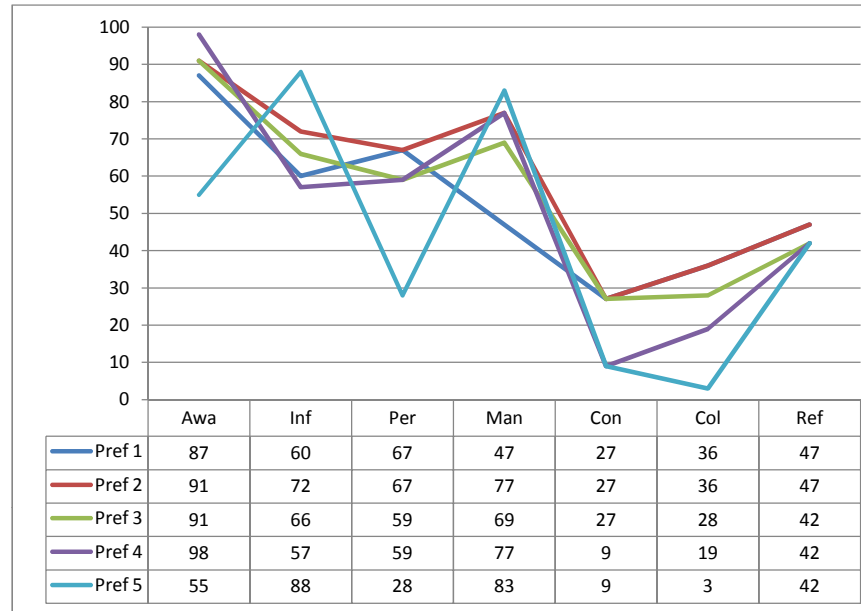
| Descriptive Statistics | | | Avg | Percentile |
|------------------------|----|-----|------|------------|
| | N | Sum | | |
| RSIAwa0 | 10 | 156 | 15.6 | 87 |
| RSIInf1 | 10 | 166 | 16.6 | 60 |
| RSIPer2 | 10 | 183 | 18.3 | 67 |
| RSIMan3 | 10 | 136 | 13.6 | 47 |
| RSICon4 | 10 | 198 | 19.8 | 27 |
| RSIColl5 | 10 | 171 | 17.1 | 36 |
| RSIRef6 | 10 | 164 | 16.4 | 47 |
| Valid N (listwise) | 10 | | | |

Pref 2

| Descriptive Statistics | | | Avg | Percentile |
|------------------------|----|-----|------|------------|
| | N | Sum | | |
| RSIAwa0 | 24 | 391 | 16.3 | 91 |
| RSIInf1 | 24 | 450 | 18.8 | 66 |
| RSIPer2 | 24 | 388 | 16.2 | 59 |
| RSIMan3 | 24 | 465 | 19.4 | 73 |
| RSICon4 | 24 | 476 | 19.8 | 27 |
| RSIColl5 | 24 | 450 | 18.8 | 40 |
| RSIRef6 | 24 | 397 | 16.5 | 47 |
| Valid N (listwise) | 24 | | | |

Pref 3

| Descriptive Statistics | | | Avg | Percentile |
|------------------------|----|-----|------|------------|
| | N | Sum | | |
| RSIAwa0 | 13 | 232 | 17.8 | 94 |
| RSIInf1 | 13 | 240 | 18.5 | 66 |
| RSIPer2 | 13 | 233 | 17.9 | 63 |
| RSIMan3 | 13 | 269 | 20.7 | 77 |
| RSICon4 | 13 | 234 | 18.0 | 24 |
| RSIColl5 | 13 | 202 | 15.5 | 28 |
| RSIRef6 | 13 | 243 | 18.7 | 57 |
| Valid N (listwise) | 13 | | | |



Pref 4

Descriptive Statistics

| | N | Sum | Avg | Percentile |
|-----------------------|---|-----|------|------------|
| RSIAwa0 | 6 | 121 | 20.2 | 98 |
| RSIInf1 | 6 | 92 | 15.3 | 57 |
| RSIPer2 | 6 | 99 | 16.5 | 59 |
| RSIMan3 | 6 | 124 | 20.7 | 77 |
| RSICon4 | 6 | 75 | 12.5 | 9 |
| RSIColl5 | 6 | 72 | 12.0 | 19 |
| RSIRef6 | 6 | 93 | 15.5 | 42 |
| Valid N (listwise) | 6 | | | |

Pref 5

Descriptive Statistics

| | N | Sum | Avg | Percentile |
|-----------------------|---|-----|------|------------|
| RSIAwa0 | 1 | 10 | 10.0 | 55 |
| RSIInf1 | 1 | 24 | 24.0 | 88 |
| RSIPer2 | 1 | 6 | 6.0 | 28 |
| RSIMan3 | 1 | 22 | 22.0 | 83 |
| RSICon4 | 1 | 12 | 12.0 | 9 |
| RSIColl5 | 1 | 3 | 3.0 | 3 |
| RSIRef6 | 1 | 15 | 15.0 | 42 |
| Valid N (listwise) | 1 | | | |

SoCQ1 Prof Id = 1

| Descriptive Statistics | | |
|------------------------|----|-----|
| | N | Sum |
| RSIAwa0 | 10 | 165 |
| RSIInf1 | 10 | 182 |
| RSIPer2 | 10 | 182 |
| RSIMan3 | 10 | 162 |
| RSICon4 | 10 | 173 |
| RSIColl5 | 10 | 159 |
| RSIRef6 | 10 | 155 |
| Valid N (listwise) | 10 | |

| | Avg | Percentile |
|----------|------|------------|
| RSIAwa0 | 16.5 | 91 |
| RSIInf1 | 18.2 | 66 |
| RSIPer2 | 18.2 | 67 |
| RSIMan3 | 16.2 | 60 |
| RSICon4 | 17.3 | 21 |
| RSIColl5 | 15.9 | 28 |
| RSIRef6 | 15.5 | 42 |

Prof Id = 2

| Descriptive Statistics | | |
|------------------------|----|-----|
| | N | Sum |
| RSIAwa0 | 35 | 577 |
| RSIInf1 | 35 | 630 |
| RSIPer2 | 35 | 576 |
| RSIMan3 | 35 | 690 |
| RSICon4 | 35 | 648 |
| RSIColl5 | 35 | 576 |
| RSIRef6 | 35 | 620 |
| Valid N (listwise) | 35 | |

| | Avg | Percentile |
|----------|------|------------|
| RSIAwa0 | 16.5 | 91 |
| RSIInf1 | 18.0 | 66 |
| RSIPer2 | 16.5 | 59 |
| RSIMan3 | 19.7 | 73 |
| RSICon4 | 18.5 | 24 |
| RSIColl5 | 16.5 | 31 |
| RSIRef6 | 17.7 | 52 |



Prof Id = 3

| Descriptive Statistics | | |
|------------------------|---|-----|
| | N | Sum |
| RSIAwa0 | 9 | 168 |
| RSIInf1 | 9 | 160 |
| RSIPer2 | 9 | 151 |
| RSIMan3 | 9 | 164 |
| RSICon4 | 9 | 174 |
| RSIColl5 | 9 | 163 |
| RSIRef6 | 9 | 137 |
| Valid N (listwise) | 9 | |

| | Avg | Percentile |
|----------|------|------------|
| RSIAwa0 | 18.7 | 96 |
| RSIInf1 | 17.8 | 63 |
| RSIPer2 | 16.8 | 59 |
| RSIMan3 | 18.2 | 69 |
| RSICon4 | 19.3 | 27 |
| RSIColl5 | 18.1 | 40 |
| RSIRef6 | 15.2 | 42 |

SoCQ1

School 2

Descriptive Statistics

| | N | Sum |
|-----------------------|----|-----|
| RSIAwa0 | 29 | 491 |
| RSIInf1 | 29 | 542 |
| RSIPer2 | 29 | 523 |
| RSIMan3 | 29 | 611 |
| RSICon4 | 29 | 552 |
| RSIColl5 | 29 | 473 |
| RSIRef6 | 29 | 508 |
| Valid N (listwise) | 29 | |

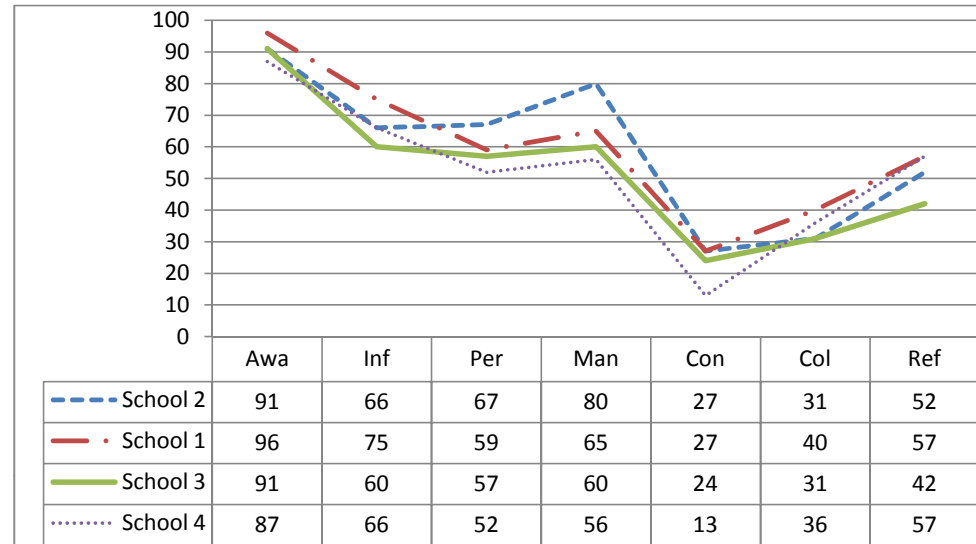
| Avg | Percentile |
|------|------------|
| 16.9 | 91 |
| 18.7 | 66 |
| 18.0 | 67 |
| 21.1 | 80 |
| 19.0 | 27 |
| 16.3 | 31 |
| 17.5 | 52 |

School 1

Descriptive Statistics

| | N | Sum |
|-----------------------|---|-----|
| RSIAwa0 | 3 | 54 |
| RSIInf1 | 3 | 64 |
| RSIPer2 | 3 | 50 |
| RSIMan3 | 3 | 53 |
| RSICon4 | 3 | 58 |
| RSIColl5 | 3 | 56 |
| RSIRef6 | 3 | 56 |
| Valid N (listwise) | 3 | |

| | |
|------|----|
| 18.0 | 96 |
| 21.3 | 75 |
| 16.7 | 59 |
| 17.7 | 65 |
| 19.3 | 27 |
| 18.7 | 40 |
| 18.7 | 57 |



School 3

Descriptive Statistics

| | N | Sum | | |
|-----------------------|----|-----|------|----|
| RSIAwa0 | 19 | 318 | 16.7 | 91 |
| RSIInf1 | 19 | 312 | 16.4 | 60 |
| RSIPer2 | 19 | 297 | 15.6 | 57 |
| RSIMan3 | 19 | 306 | 16.1 | 60 |
| RSICon4 | 19 | 343 | 18.1 | 24 |
| RSIColl5 | 19 | 317 | 16.7 | 31 |
| RSIRef6 | 19 | 293 | 15.4 | 42 |
| Valid N (listwise) | 19 | | | |

School 4

Descriptive Statistics

| | N | Sum | | |
|-----------------------|---|-----|------|----|
| RSIAwa0 | 3 | 47 | 15.7 | 87 |
| RSIInf1 | 3 | 54 | 18.0 | 66 |
| RSIPer2 | 3 | 39 | 13.0 | 52 |
| RSIMan3 | 3 | 46 | 15.3 | 56 |
| RSICon4 | 3 | 42 | 14.0 | 13 |
| RSIColl5 | 3 | 52 | 17.3 | 36 |
| RSIRef6 | 3 | 55 | 18.3 | 57 |
| Valid N (listwise) | 3 | | | |

| | |
|----------|-----------------|
| RSIAwa0 | Awareness Awa |
| RSIInf1 | Information Inf |
| RSIPer2 | Personal Per |
| RSIMan3 | Manageme Man |
| RSICon4 | Consequen Con |
| RSIColl5 | Collaborati Col |
| RSIRef6 | Refocusing Ref |

SoCQi Used old clickUP

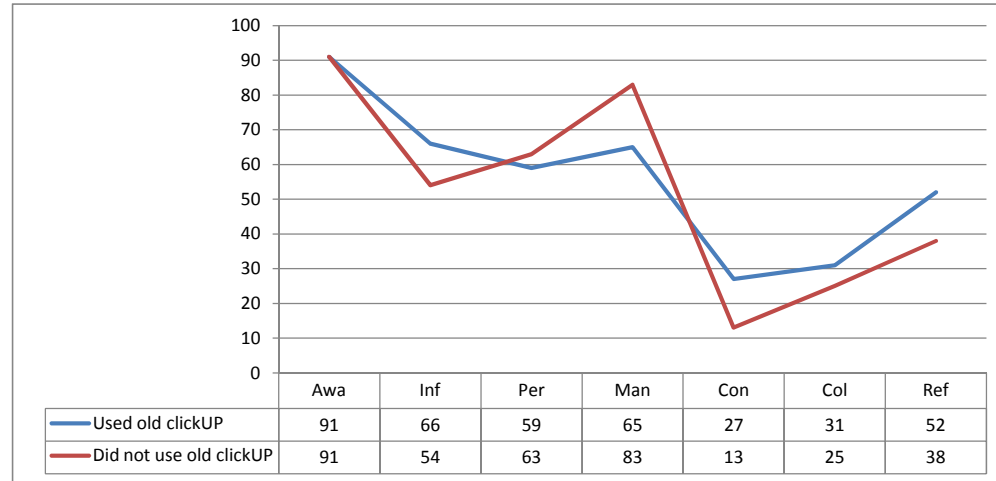
| Descriptive Statistics | | |
|------------------------|----|-----|
| | N | Sum |
| RSIAwa0 | 29 | 479 |
| RSIInf1 | 29 | 522 |
| RSIPer2 | 29 | 474 |
| RSIMan3 | 29 | 502 |
| RSICon4 | 29 | 562 |
| RSIColl5 | 29 | 486 |
| RSIRef6 | 29 | 511 |
| Valid N (listwise) | 29 | |

| | Avg | Percentile |
|----------|------|------------|
| RSIAwa0 | 16.5 | 91 |
| RSIInf1 | 18.0 | 66 |
| RSIPer2 | 16.3 | 59 |
| RSIMan3 | 17.3 | 65 |
| RSICon4 | 19.4 | 27 |
| RSIColl5 | 16.8 | 31 |
| RSIRef6 | 17.6 | 52 |

Did not use old clickUP

| Descriptive Statistics | | |
|------------------------|---|-----|
| | N | Sum |
| RSIAwa0 | 8 | 135 |
| RSIInf1 | 8 | 119 |
| RSIPer2 | 8 | 137 |
| RSIMan3 | 8 | 176 |
| RSICon4 | 8 | 117 |
| RSIColl5 | 8 | 114 |
| RSIRef6 | 8 | 113 |
| Valid N (listwise) | 8 | |

| | Avg | Percentile |
|----------|------|------------|
| RSIAwa0 | 16.9 | 91 |
| RSIInf1 | 14.9 | 54 |
| RSIPer2 | 17.1 | 63 |
| RSIMan3 | 22.0 | 83 |
| RSICon4 | 14.6 | 13 |
| RSIColl5 | 14.3 | 25 |
| RSIRef6 | 14.1 | 38 |



SoCQi Junior Lecturer

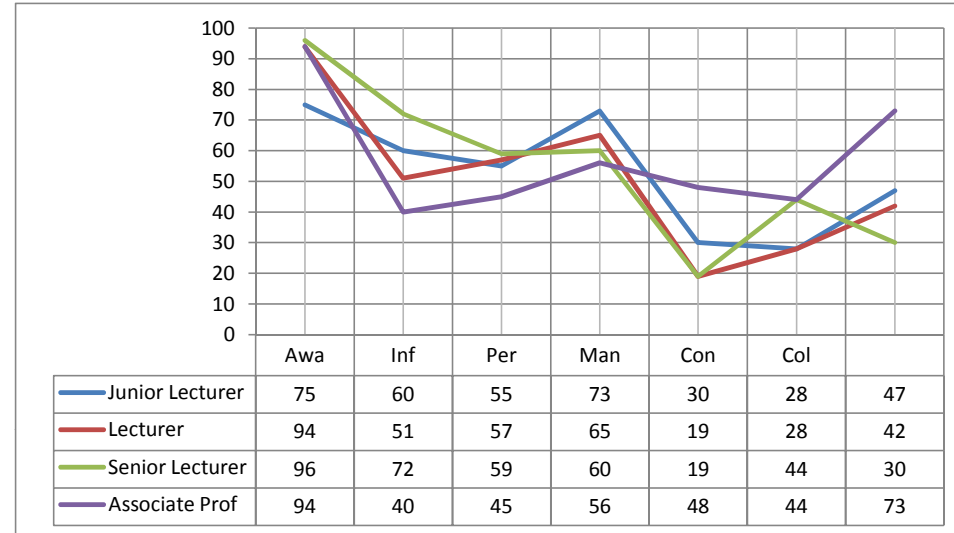
Descriptive Statistics

| | N | Sum | Avg | Percentile |
|--------------------|---|-----|------|------------|
| RSIIAwa0 | 8 | 107 | 13.4 | 75 |
| RSIIInf1 | 8 | 133 | 16.6 | 60 |
| RSIIPer2 | 8 | 115 | 14.4 | 55 |
| RSIIMan3 | 8 | 156 | 19.5 | 73 |
| RSIICon4 | 8 | 167 | 20.9 | 30 |
| RSIIColl5 | 8 | 123 | 15.4 | 28 |
| RSIIRef6 | 8 | 133 | 16.6 | 47 |
| Valid N (listwise) | 8 | | | |

Lecturer

Descriptive Statistics

| | N | Sum | Avg | Percentile |
|--------------------|----|-----|------|------------|
| RSIIAwa0 | 24 | 420 | 17.5 | 94 |
| RSIIInf1 | 24 | 331 | 13.8 | 51 |
| RSIIPer2 | 24 | 376 | 15.7 | 57 |
| RSIIMan3 | 24 | 415 | 17.3 | 65 |
| RSIICon4 | 24 | 397 | 16.5 | 19 |
| RSIIColl5 | 24 | 376 | 15.7 | 28 |
| RSIIRef6 | 24 | 365 | 15.2 | 42 |
| Valid N (listwise) | 24 | | | |



Senior Lecturer

Descriptive Statistics

| | N | Sum | Avg | Percentile |
|--------------------|---|-----|------|------------|
| RSIIAwa0 | 6 | 111 | 18.5 | 96 |
| RSIIInf1 | 6 | 125 | 20.8 | 72 |
| RSIIPer2 | 6 | 100 | 16.7 | 59 |
| RSIIMan3 | 6 | 96 | 16.0 | 60 |
| RSIICon4 | 6 | 99 | 16.5 | 19 |
| RSIIColl5 | 6 | 118 | 19.7 | 44 |
| RSIIRef6 | 6 | 75 | 12.5 | 30 |
| Valid N (listwise) | 6 | | | |

Associate Prof

Descriptive Statistics

| | N | Sum | Avg | Percentile |
|--------------------|---|-----|------|------------|
| RSIIAwa0 | 1 | 17 | 17.0 | 94 |
| RSIIInf1 | 1 | 9 | 9.0 | 40 |
| RSIIPer2 | 1 | 11 | 11.0 | 45 |
| RSIIMan3 | 1 | 15 | 15.0 | 56 |
| RSIICon4 | 1 | 24 | 24.0 | 48 |
| RSIIColl5 | 1 | 19 | 19.0 | 44 |
| RSIIRef6 | 1 | 22 | 22.0 | 73 |
| Valid N (listwise) | 1 | | | |

SoCQii Diploma

Descriptive Statistics

| | N | Sum | Avg | Percentile |
|--------------------|---|-----|------|------------|
| RSIIAwa0 | 3 | 43 | 14.3 | 81 |
| RSIIInf1 | 3 | 65 | 21.7 | 75 |
| RSIIPer2 | 3 | 65 | 21.7 | 76 |
| RSIIMan3 | 3 | 77 | 25.7 | 90 |
| RSIICon4 | 3 | 56 | 18.7 | 24 |
| RSIIColl5 | 3 | 52 | 17.3 | 36 |
| RSIIRef6 | 3 | 56 | 18.7 | 57 |
| Valid N (listwise) | 3 | | | |

Bachelor

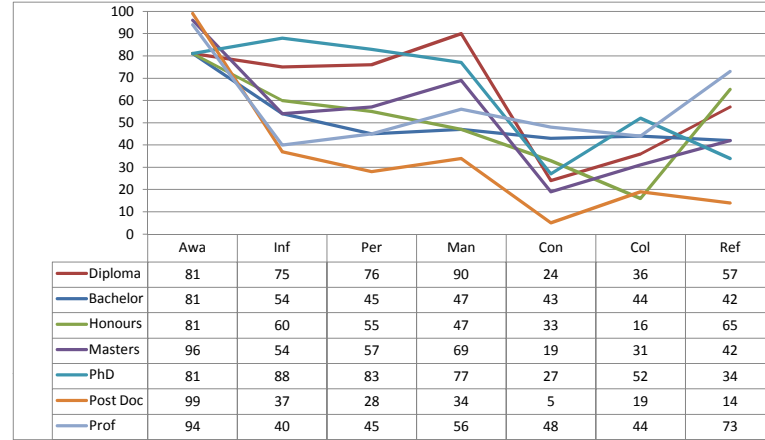
Descriptive Statistics

| | N | Sum | Avg | Percentile |
|--------------------|---|-----|------|------------|
| RSIIAwa0 | 4 | 56 | 14.0 | 81 |
| RSIIInf1 | 4 | 57 | 14.3 | 54 |
| RSIIPer2 | 4 | 47 | 11.8 | 45 |
| RSIIMan3 | 4 | 54 | 13.5 | 47 |
| RSIICon4 | 4 | 95 | 23.8 | 43 |
| RSIIColl5 | 4 | 77 | 19.3 | 44 |
| RSIIRef6 | 4 | 62 | 15.5 | 42 |
| Valid N (listwise) | 4 | | | |

Honours

Descriptive Statistics

| | N | Sum | Avg | Percentile |
|--------------------|---|-----|------|------------|
| RSIIAwa0 | 4 | 57 | 14.3 | 81 |
| RSIIInf1 | 4 | 64 | 16.0 | 60 |
| RSIIPer2 | 4 | 56 | 14.0 | 55 |
| RSIIMan3 | 4 | 54 | 13.5 | 47 |
| RSIICon4 | 4 | 87 | 21.8 | 33 |
| RSIIColl5 | 4 | 44 | 11.0 | 16 |
| RSIIRef6 | 4 | 82 | 20.5 | 65 |
| Valid N (listwise) | 4 | | | |



Masters

| Descriptive Statistics | | | | |
|------------------------|----|-----|------|------------|
| | N | Sum | Avg | Percentile |
| RSIIAwa0 | 21 | 379 | 18.0 | 96 |
| RSIIInf1 | 21 | 310 | 14.8 | 54 |
| RSIIPer2 | 21 | 332 | 15.8 | 57 |
| RSIIMan3 | 21 | 392 | 18.7 | 69 |
| RSIICon4 | 21 | 356 | 17.0 | 19 |
| RSIIColl5 | 21 | 338 | 16.1 | 31 |
| RSIIRef6 | 21 | 335 | 16.0 | 42 |
| Valid N (listwise) | 21 | | | |

PhD

| Descriptive Statistics | | | | |
|------------------------|---|-----|------|------------|
| | N | Sum | Avg | Percentile |
| RSIIAwa0 | 3 | 42 | 14.0 | 81 |
| RSIIInf1 | 3 | 72 | 24.0 | 88 |
| RSIIPer2 | 3 | 73 | 24.3 | 83 |
| RSIIMan3 | 3 | 60 | 20.0 | 77 |
| RSIICon4 | 3 | 58 | 19.3 | 27 |
| RSIIColl5 | 3 | 65 | 21.7 | 52 |
| RSIIRef6 | 3 | 40 | 13.3 | 34 |
| Valid N (listwise) | 3 | | | |

Post Doc

| Descriptive Statistics | | | | |
|------------------------|---|-----|------|------------|
| | N | Sum | Avg | Percentile |
| RSIIAwa0 | 3 | 64 | 21.3 | 99 |
| RSIIInf1 | 3 | 26 | 8.7 | 37 |
| RSIIPer2 | 3 | 18 | 6.0 | 28 |
| RSIIMan3 | 3 | 32 | 10.7 | 34 |
| RSIICon4 | 3 | 26 | 8.7 | 5 |
| RSIIColl5 | 3 | 37 | 12.3 | 19 |
| RSIIRef6 | 3 | 23 | 7.7 | 14 |
| Valid N (listwise) | 3 | | | |

Prof

| Descriptive Statistics | | | | |
|------------------------|---|-----|------|------------|
| | N | Sum | Avg | Percentile |
| RSIIAwa0 | 1 | 17 | 17.0 | 94 |
| RSIIInf1 | 1 | 9 | 9.0 | 40 |
| RSIIPer2 | 1 | 11 | 11.0 | 45 |
| RSIIMan3 | 1 | 15 | 15.0 | 56 |
| RSIICon4 | 1 | 24 | 24.0 | 48 |
| RSIIColl5 | 1 | 19 | 19.0 | 44 |
| RSIIRef6 | 1 | 22 | 22.0 | 73 |
| Valid N (listwise) | 1 | | | |

SoCQii 20-29

Descriptive Statistics

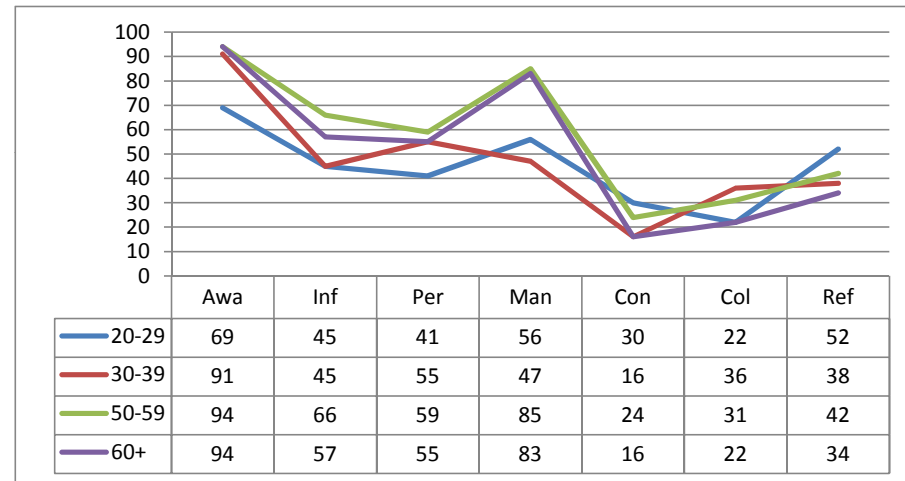
| | N | Sum | Avg | Percentile |
|--------------------|---|-----|------|------------|
| RSIIAwa0 | 5 | 64 | 12.8 | 69 |
| RSIIInf1 | 5 | 57 | 11.4 | 45 |
| RSIIPer2 | 5 | 52 | 10.4 | 41 |
| RSIIMan3 | 5 | 75 | 15.0 | 56 |
| RSIICon4 | 5 | 104 | 20.8 | 30 |
| RSIIColl5 | 5 | 66 | 13.2 | 22 |
| RSIIRef6 | 5 | 85 | 17.0 | 52 |
| Valid N (listwise) | 5 | | | |

30-39

Descriptive Statistics

| | N | Sum | Avg | Percentile |
|--------------------|---|-----|------|------------|
| RSIIAwa0 | 5 | 80 | 16.0 | 91 |
| RSIIInf1 | 5 | 56 | 11.2 | 45 |
| RSIIPer2 | 5 | 70 | 14.0 | 55 |
| RSIIMan3 | 5 | 68 | 13.6 | 47 |
| RSIICon4 | 5 | 77 | 15.4 | 16 |
| RSIIColl5 | 5 | 85 | 17.0 | 36 |
| RSIIRef6 | 5 | 73 | 14.6 | 38 |
| Valid N (listwise) | 5 | | | |

40-49



Descriptive Statistics

| | N | Sum | Avg | Percentile |
|-----------------------|----|-----|------|------------|
| RSIIAwa0 | 11 | 197 | 17.9 | 94 |
| RSIIInf1 | 11 | 177 | 16.1 | 60 |
| RSIIPer2 | 11 | 156 | 14.2 | 55 |
| RSIIMan3 | 11 | 193 | 17.5 | 65 |
| RSIIcon4 | 11 | 170 | 15.5 | 16 |
| RSIIColl5 | 11 | 179 | 16.3 | 31 |
| RSIISRef6 | 11 | 146 | 13.3 | 34 |
| Valid N (listwise) | 11 | | | |

50-59

Descriptive Statistics

| | N | Sum | Avg | Percentile |
|-----------------------|---|-----|------|------------|
| RSIIAwa0 | 5 | 88 | 17.6 | 94 |
| RSIIInf1 | 5 | 90 | 18.0 | 66 |
| RSIIPer2 | 5 | 83 | 16.6 | 59 |
| RSIIMan3 | 5 | 115 | 23.0 | 85 |
| RSIIcon4 | 5 | 90 | 18.0 | 24 |
| RSIIColl5 | 5 | 84 | 16.8 | 31 |
| RSIISRef6 | 5 | 76 | 15.2 | 42 |
| Valid N (listwise) | 5 | | | |

60+

Descriptive Statistics

| | N | Sum | Avg | Percentile |
|-----------------------|---|-----|------|------------|
| RSIAwa0 | 5 | 85 | 17.0 | 94 |
| RSIInf1 | 5 | 76 | 15.2 | 57 |
| RSIPer2 | 5 | 70 | 14.0 | 55 |
| RSIMan3 | 5 | 112 | 22.4 | 83 |
| RSIcon4 | 5 | 77 | 15.4 | 16 |
| RSIColl5 | 5 | 68 | 13.6 | 22 |
| RSISRef6 | 5 | 67 | 13.4 | 34 |
| Valid N (listwise) | 5 | | | |

SoCQ i Female

Descriptive Statistics

| | N | Sum |
|--------------------|----|-----|
| RSIIAwa0 | 33 | 561 |
| RSIIInf1 | 33 | 505 |
| RSIIPer2 | 33 | 494 |
| RSIIMan3 | 33 | 574 |
| RSIICon4 | 33 | 598 |
| RSIIColl5 | 33 | 537 |
| RSIIRef6 | 33 | 502 |
| Valid N (listwise) | 33 | |

Avg

Percentile

| | |
|------|----|
| 17.0 | 94 |
| 15.3 | 57 |
| 15.0 | 55 |
| 17.4 | 65 |
| 18.1 | 24 |
| 16.3 | 31 |
| 15.2 | 42 |

SoCQ i Male

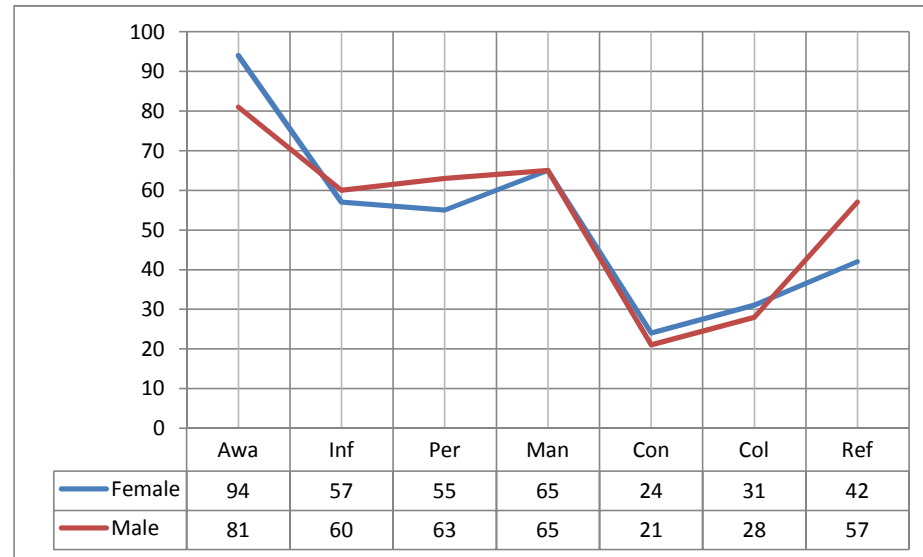
Descriptive Statistics

| | N | Sum |
|--------------------|---|-----|
| RSIIAwa0 | 7 | 102 |
| RSIIInf1 | 7 | 114 |
| RSIIPer2 | 7 | 120 |
| RSIIMan3 | 7 | 121 |
| RSIICon4 | 7 | 120 |
| RSIIColl5 | 7 | 109 |
| RSIIRef6 | 7 | 128 |
| Valid N (listwise) | 7 | |

Avg

Percentile

| | |
|------|----|
| 14.6 | 81 |
| 16.3 | 60 |
| 17.1 | 63 |
| 17.3 | 65 |
| 17.1 | 21 |
| 15.6 | 28 |
| 18.3 | 57 |



SoCQi LectExp ≤5

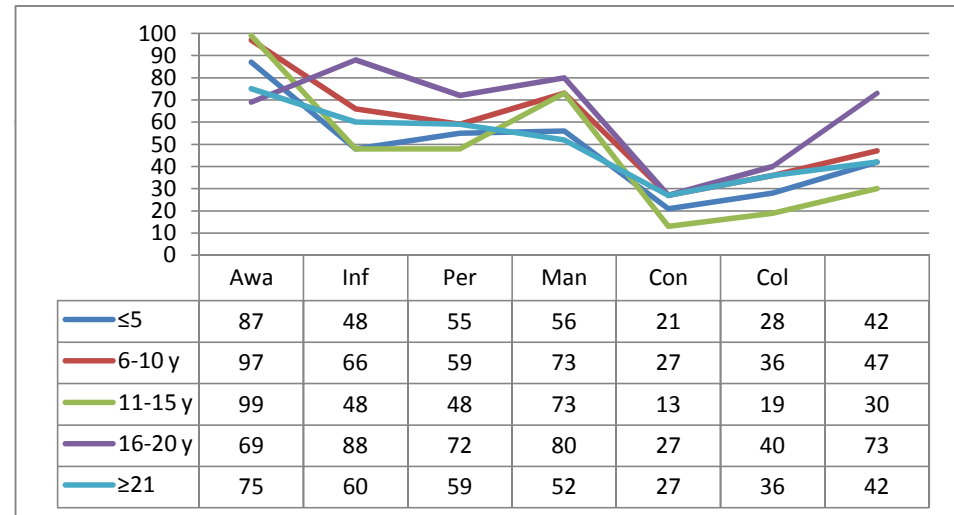
Descriptive Statistics

| | N | Sum | Avg | Percentile |
|-----------------------|----|-----|------|------------|
| RSIIAwa0 | 15 | 231 | 15.4 | 87 |
| RSIIInf1 | 15 | 190 | 12.7 | 48 |
| RSIIPer2 | 15 | 212 | 14.1 | 55 |
| RSIIMan3 | 15 | 237 | 15.8 | 56 |
| RSIICon4 | 15 | 266 | 17.7 | 21 |
| RSIIColl5 | 15 | 237 | 15.8 | 28 |
| RSIIRef6 | 15 | 236 | 15.7 | 42 |
| Valid N (listwise) | 15 | | | |

6-10 y

Descriptive Statistics

| | N | Sum | Avg | Percentile |
|-----------------------|---|-----|------|------------|
| RSIIAwa0 | 7 | 135 | 19.3 | 97 |
| RSIIInf1 | 7 | 127 | 18.1 | 66 |
| RSIIPer2 | 7 | 116 | 16.6 | 59 |
| RSIIMan3 | 7 | 134 | 19.1 | 73 |
| RSIICon4 | 7 | 135 | 19.3 | 27 |
| RSIIColl5 | 7 | 123 | 17.6 | 36 |
| RSIIRef6 | 7 | 113 | 16.1 | 47 |
| Valid N (listwise) | 7 | | | |



11-15 y

Descriptive Statistics

| | N | Sum | Avg | Percentile |
|-----------------------|---|-----|------|------------|
| RSIIAwa0 | 7 | 152 | 21.7 | 99 |
| RSIIInf1 | 7 | 89 | 12.7 | 48 |
| RSIIPer2 | 7 | 89 | 12.7 | 48 |
| RSIIMan3 | 7 | 133 | 19.0 | 73 |
| RSIIcon4 | 7 | 101 | 14.4 | 13 |
| RSIIColl5 | 7 | 89 | 12.7 | 19 |
| RSIIRef6 | 7 | 87 | 12.4 | 30 |
| Valid N (listwise) | 7 | | | |

16-20 y

Descriptive Statistics

| | N | Sum | Avg | Percentile |
|-----------------------|---|-----|------|------------|
| RSIIAwa0 | 4 | 48 | 12.0 | 69 |
| RSIIInf1 | 4 | 96 | 24.0 | 88 |
| RSIIPer2 | 4 | 82 | 20.5 | 72 |
| RSIIMan3 | 4 | 87 | 21.8 | 80 |
| RSIIcon4 | 4 | 79 | 19.8 | 27 |
| RSIIColl5 | 4 | 72 | 18.0 | 40 |
| RSIIRef6 | 4 | 89 | 22.3 | 73 |
| Valid N (listwise) | 4 | | | |

≥21

Descriptive Statistics

| | N | Sum | Avg | Percentile |
|-----------------------|---|-----|------|------------|
| RSIIAwa0 | 7 | 97 | 13.9 | 75 |
| RSIIInf1 | 7 | 117 | 16.7 | 60 |
| RSIIPer2 | 7 | 115 | 16.4 | 59 |
| RSIIMan3 | 7 | 104 | 14.9 | 52 |
| RSIICon4 | 7 | 137 | 19.6 | 27 |
| RSIIColl5 | 7 | 125 | 17.9 | 36 |
| RSIIRef6 | 7 | 105 | 15.0 | 42 |
| Valid N (listwise) | 7 | | | |

SoCQii No skill

| Descriptive Statistics | | | Avg | Percentile |
|------------------------|---|-----|------|------------|
| | N | Sum | | |
| RSIIAwa0 | 4 | 86 | 21.5 | 99 |
| RSIIInf1 | 4 | 54 | 13.5 | 51 |
| RSIIPer2 | 4 | 53 | 13.3 | 52 |
| RSIIMan3 | 4 | 76 | 19.0 | 73 |
| RSIICon4 | 4 | 40 | 10.0 | 7 |
| RSIIColl5 | 4 | 64 | 16.0 | 31 |
| RSIIRef6 | 4 | 56 | 14.0 | 38 |
| Valid N (listwise) | 4 | | | |

1

| Descriptive Statistics | | | Avg | Percentile |
|------------------------|----|-----|------|------------|
| | N | Sum | | |
| RSIIAwa0 | 17 | 280 | 16.5 | 91 |
| RSIIInf1 | 17 | 274 | 16.1 | 60 |
| RSIIPer2 | 17 | 288 | 16.9 | 59 |
| RSIIMan3 | 17 | 292 | 17.2 | 65 |
| RSIICon4 | 17 | 275 | 16.2 | 19 |
| RSIIColl5 | 17 | 264 | 15.5 | 28 |
| RSIIRef6 | 17 | 271 | 15.9 | 42 |
| Valid N (listwise) | 17 | | | |

2

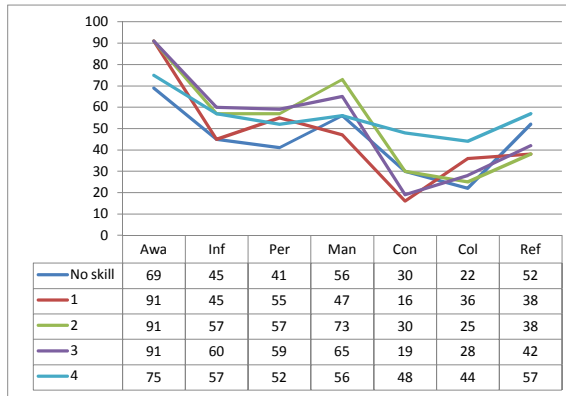
| Descriptive Statistics | | | Avg | Percentile |
|------------------------|---|-----|------|------------|
| | N | Sum | | |
| RSIIAwa0 | 8 | 134 | 16.8 | 91 |
| RSIIInf1 | 8 | 120 | 15.0 | 57 |
| RSIIPer2 | 8 | 126 | 15.8 | 57 |
| RSIIMan3 | 8 | 152 | 19.0 | 73 |
| RSIICon4 | 8 | 160 | 20.0 | 30 |
| RSIIColl5 | 8 | 119 | 14.9 | 25 |
| RSIIRef6 | 8 | 118 | 14.8 | 38 |
| Valid N (listwise) | 8 | | | |

3

| Descriptive Statistics | | | Avg | Percentile |
|------------------------|----|-----|------|------------|
| | N | Sum | | |
| RSIIAwa0 | 17 | 280 | 16.5 | 91 |
| RSIIInf1 | 17 | 274 | 16.1 | 60 |
| RSIIPer2 | 17 | 288 | 16.9 | 59 |
| RSIIMan3 | 17 | 292 | 17.2 | 65 |
| RSIICon4 | 17 | 275 | 16.2 | 19 |
| RSIIColl5 | 17 | 264 | 15.5 | 28 |
| RSIIRef6 | 17 | 271 | 15.9 | 42 |
| Valid N (listwise) | 17 | | | |

4

| Descriptive Statistics | | | Avg | Percentile |
|------------------------|---|-----|------|------------|
| | N | Sum | | |
| RSIIAwa0 | 8 | 106 | 13.3 | 75 |
| RSIIInf1 | 8 | 123 | 15.4 | 57 |
| RSIIPer2 | 8 | 109 | 13.6 | 52 |
| RSIIMan3 | 8 | 120 | 15.0 | 56 |
| RSIICon4 | 8 | 199 | 24.9 | 48 |
| RSIIColl5 | 8 | 154 | 19.3 | 44 |
| RSIIRef6 | 8 | 144 | 18.0 | 57 |
| Valid N (listwise) | 8 | | | |



SoCQii School 2

Descriptive Statistics

| | N | Sum |
|--------------------|----|-----|
| RSIIAwa0 | 18 | 312 |
| RSIIInf1 | 18 | 270 |
| RSIIPer2 | 18 | 260 |
| RSIIMan3 | 18 | 342 |
| RSIICon4 | 18 | 335 |
| RSIIColl5 | 18 | 254 |
| RSIIRef6 | 18 | 263 |
| Valid N (listwise) | 18 | |

Avg Percentile

| | |
|------|----|
| 17.3 | 94 |
| 15.0 | 57 |
| 14.4 | 55 |
| 19.0 | 73 |
| 18.6 | 24 |
| 14.1 | 25 |
| 14.6 | 38 |

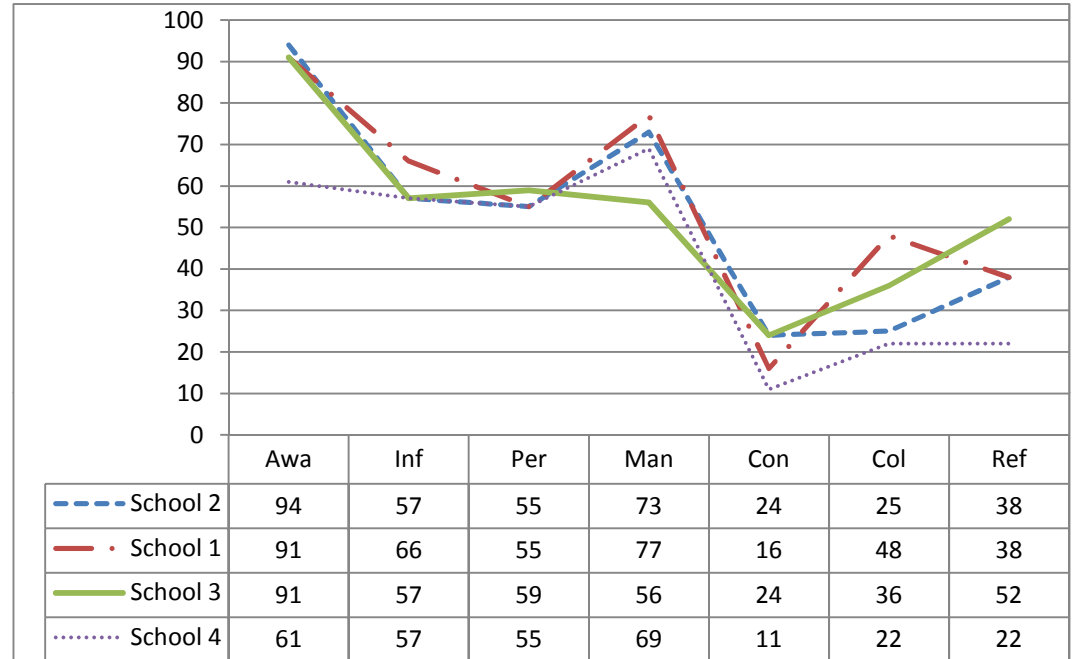
School 1

Descriptive Statistics

| | N | Sum |
|--------------------|---|-----|
| RSIIAwa0 | 3 | 50 |
| RSIIInf1 | 3 | 54 |
| RSIIPer2 | 3 | 44 |
| RSIIMan3 | 3 | 61 |
| RSIICon4 | 3 | 47 |
| RSIIColl5 | 3 | 60 |
| RSIIRef6 | 3 | 44 |
| Valid N (listwise) | 3 | |
| Valid N (listwise) | 3 | |

Avg Percentile

| | |
|------|----|
| 16.7 | 91 |
| 18.0 | 66 |
| 14.7 | 55 |
| 20.3 | 77 |
| 15.7 | 16 |
| 20.0 | 48 |
| 14.7 | 38 |



School 3

Descriptive Statistics

| | N | Sum | Avg | Percentile |
|-----------------------|----|-----|------|------------|
| RSIIAwa0 | 17 | 279 | 16.4 | 91 |
| RSIIInf1 | 17 | 265 | 15.6 | 57 |
| RSIIPer2 | 17 | 281 | 16.5 | 59 |
| RSIIMan3 | 17 | 256 | 15.1 | 56 |
| RSIICon4 | 17 | 309 | 18.2 | 24 |
| RSIIColl5 | 17 | 305 | 17.9 | 36 |
| RSIIRef6 | 17 | 302 | 17.8 | 52 |
| Valid N (listwise) | 17 | | | |

School 4

Descriptive Statistics

Descriptive Statistics

| | N | Sum | Avg | Percentile |
|-----------------------|---|-----|------|------------|
| RSIIAwa0 | 2 | 22 | 11.0 | 61 |
| RSIIInf1 | 2 | 30 | 15.0 | 57 |
| RSIIPer2 | 2 | 29 | 14.5 | 55 |
| RSIIMan3 | 2 | 36 | 18.0 | 69 |
| RSIICon4 | 2 | 27 | 13.5 | 11 |
| RSIIColl5 | 2 | 27 | 13.5 | 22 |
| RSIIRef6 | 2 | 21 | 10.5 | 22 |
| Valid N (listwise) | 2 | | | |

RSIAwa0 Awareness Awa
 RSIIInf1 Informatio Inf
 RSIIPer2 Personal Per
 RSIIMan3 Manageme Man
 RSIICon4 Consequen Con
 RSIIColl5 Collaborati Col
 RSIIRef6 Refocusing Ref

SoCQii Used old clickUP

| Descriptive Statistics | | |
|------------------------|----|-----|
| | N | Sum |
| RSIIAwa0 | 29 | 466 |
| RSIIInf1 | 29 | 491 |
| RSIIPer2 | 29 | 468 |
| RSIIMan3 | 29 | 499 |
| RSIICon4 | 29 | 573 |
| RSIICol5 | 29 | 484 |
| RSIIRef6 | 29 | 495 |
| Valid N (listwise) | 29 | |

| | Avg | Percentile |
|----------|------|------------|
| RSIIAwa0 | 16.1 | 91 |
| RSIIInf1 | 16.9 | 60 |
| RSIIPer2 | 16.1 | 59 |
| RSIIMan3 | 17.2 | 65 |
| RSIICon4 | 19.8 | 27 |
| RSIICol5 | 16.7 | 31 |
| RSIIRef6 | 17.1 | 52 |

Did not use old clickUP

| Descriptive Statistics | | |
|------------------------|---|-----|
| | N | Sum |
| RSIIAwa0 | 8 | 142 |
| RSIIInf1 | 8 | 94 |
| RSIIPer2 | 8 | 120 |
| RSIIMan3 | 8 | 160 |
| RSIICon4 | 8 | 131 |
| RSIICol5 | 8 | 144 |
| RSIIRef6 | 8 | 115 |
| Valid N (listwise) | 8 | |

| | Avg | Percentile |
|----------|------|------------|
| RSIIAwa0 | 17.8 | 94 |
| RSIIInf1 | 11.8 | 45 |
| RSIIPer2 | 15.0 | 57 |
| RSIIMan3 | 20.0 | 77 |
| RSIICon4 | 16.4 | 19 |
| RSIICol5 | 18.0 | 40 |
| RSIIRef6 | 14.4 | 38 |



LoU = II

| Descriptive Statistics | | |
|------------------------|---|-----|
| | N | Sum |
| RSIIAwa0 | 8 | 130 |
| RSIIInf1 | 8 | 148 |
| RSIIPer2 | 8 | 132 |
| RSIIMan3 | 8 | 175 |
| RSIICon4 | 8 | 153 |
| RSIIColl5 | 8 | 154 |
| RSIIRef6 | 8 | 116 |
| Valid N (listwise) | 8 | |

| Avg | Percentile |
|------|------------|
| 16.3 | 91 |
| 18.5 | 66 |
| 16.5 | 59 |
| 21.9 | 80 |
| 19.1 | 27 |
| 19.3 | 44 |
| 14.5 | 38 |

Non-Users

| | N | Sum | Avg | Percentile |
|-----------|----|-----|------|------------|
| RSIIAwa0 | 11 | 192 | 17.5 | 94 |
| RSIIInf1 | 11 | 210 | 19.1 | 69 |
| RSIIPer2 | 11 | 184 | 16.7 | 59 |
| RSIIMan3 | 11 | 249 | 22.6 | 83 |
| RSIICon4 | 11 | 205 | 18.6 | 24 |
| RSIIColl5 | 11 | 209 | 19.0 | 44 |
| RSIIRef6 | 11 | 175 | 15.9 | 42 |

LoU = 1

| Descriptive Statistics | | |
|------------------------|---|-----|
| | N | Sum |
| RSIIAwa0 | 2 | 42 |
| RSIIInf1 | 2 | 39 |
| RSIIPer2 | 2 | 33 |
| RSIIMan3 | 2 | 39 |
| RSIICon4 | 2 | 41 |
| RSIIColl5 | 2 | 43 |
| RSIIRef6 | 2 | 38 |
| Valid N (listwise) | 2 | |

| Avg | Percentile |
|------|------------|
| 21.0 | 99 |
| 19.5 | 69 |
| 16.5 | 59 |
| 19.5 | 73 |
| 20.5 | 30 |
| 21.5 | 52 |
| 19.0 | 60 |

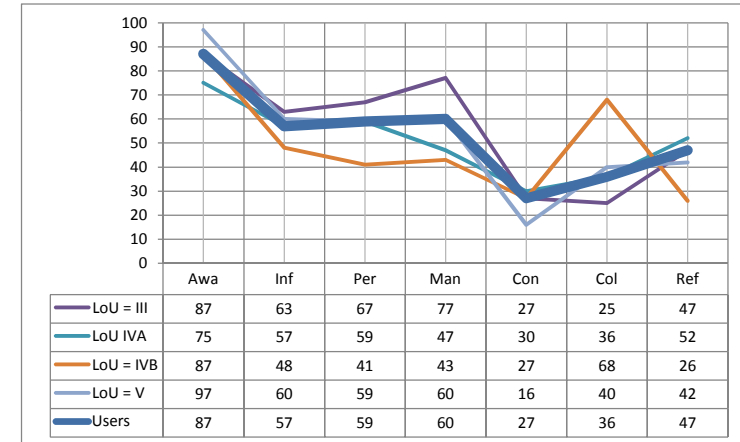
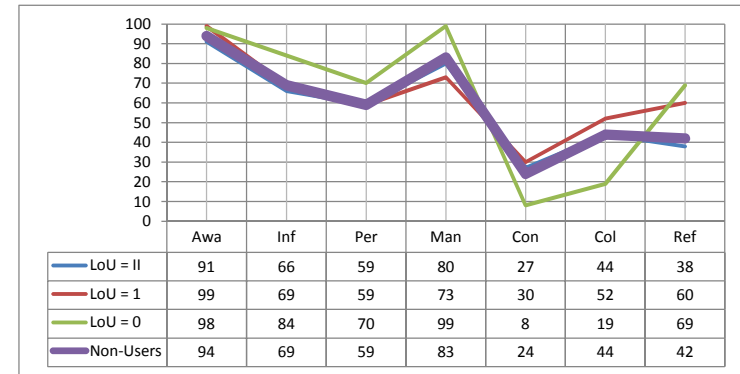
Users

| | N | Sum | Avg | Percentile |
|-----------|----|-----|------|------------|
| RSIIAwa0 | 21 | 321 | 15.3 | 87 |
| RSIIInf1 | 21 | 335 | 16.0 | 57 |
| RSIIPer2 | 21 | 352 | 16.8 | 59 |
| RSIIMan3 | 21 | 343 | 16.3 | 60 |
| RSIICon4 | 21 | 404 | 19.2 | 27 |
| RSIIColl5 | 21 | 359 | 17.1 | 36 |
| RSIIRef6 | 21 | 340 | 16.2 | 47 |

LoU = 0

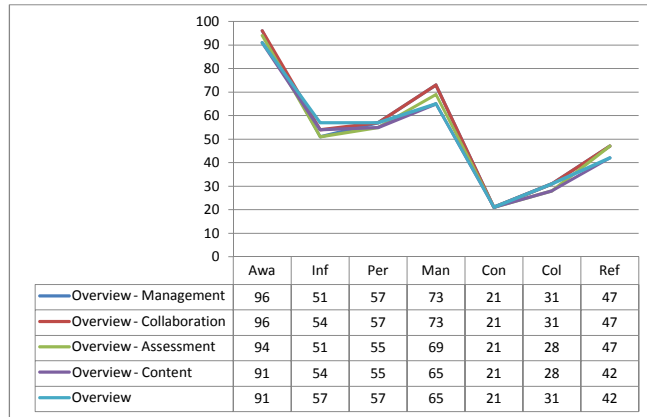
| Descriptive Statistics | | |
|------------------------|---|-----|
| | N | Sum |
| RSIIAwa0 | 1 | 20 |
| RSIIInf1 | 1 | 23 |
| RSIIPer2 | 1 | 19 |
| RSIIMan3 | 1 | 35 |
| RSIICon4 | 1 | 11 |
| RSIIColl5 | 1 | 12 |
| RSIIRef6 | 1 | 21 |

| Avg | Percentile |
|------|------------|
| 20.0 | 98 |
| 23.0 | 84 |
| 19.0 | 70 |
| 35.0 | 99 |
| 11.0 | 8 |
| 12.0 | 19 |
| 21.0 | 69 |



SoCQji Overview - Management

| Descriptive Statistics | | | Avg | Percentile |
|------------------------|----|-----|------|------------|
| | N | Sum | | |
| RSIIAwa0 | 16 | 292 | 18.3 | 96 |
| RSIIInf1 | 16 | 220 | 13.8 | 51 |
| RSIIPer2 | 16 | 244 | 15.3 | 57 |
| RSIIMan3 | 16 | 310 | 19.4 | 73 |
| RSIICon4 | 16 | 272 | 17.0 | 21 |
| RSIIColl5 | 16 | 269 | 16.8 | 31 |
| RSIIRef6 | 16 | 256 | 16.0 | 47 |
| Valid N (listwise) | 16 | | | |



Overview - Collaboration

| Descriptive Statistics | | | Avg | Percentile |
|------------------------|----|-----|------|------------|
| | N | Sum | | |
| RSIIAwa0 | 17 | 308 | 18.1 | 96 |
| RSIIInf1 | 17 | 241 | 14.2 | 54 |
| RSIIPer2 | 17 | 266 | 15.6 | 57 |
| RSIIMan3 | 17 | 332 | 19.5 | 73 |
| RSIICon4 | 17 | 293 | 17.2 | 21 |
| RSIIColl5 | 17 | 284 | 16.7 | 31 |
| RSIIRef6 | 17 | 273 | 16.1 | 47 |
| Valid N (listwise) | 17 | | | |

Overview - Assessment

| Descriptive Statistics | | | Avg | Percentile |
|------------------------|----|-----|------|------------|
| | N | Sum | | |
| RSIIAwa0 | 22 | 381 | 17.3 | 94 |
| RSIIInf1 | 22 | 306 | 13.9 | 51 |
| RSIIPer2 | 22 | 314 | 14.3 | 55 |
| RSIIMan3 | 22 | 398 | 18.1 | 69 |
| RSIICon4 | 22 | 390 | 17.7 | 21 |
| RSIIColl5 | 22 | 351 | 16.0 | 28 |
| RSIIRef6 | 22 | 356 | 16.2 | 47 |
| Valid N (listwise) | 22 | | | |

Overview - Content

| Descriptive Statistics | | | Avg | Percentile |
|------------------------|----|-----|------|------------|
| | N | Sum | | |
| RSIIAwa0 | 33 | 548 | 16.6 | 91 |
| RSIIInf1 | 33 | 469 | 14.2 | 54 |
| RSIIPer2 | 33 | 485 | 14.7 | 55 |
| RSIIMan3 | 33 | 575 | 17.4 | 65 |
| RSIICon4 | 33 | 574 | 17.4 | 21 |
| RSIIColl5 | 33 | 513 | 15.5 | 28 |
| RSIIRef6 | 33 | 518 | 15.7 | 42 |
| Valid N (listwise) | 33 | | | |

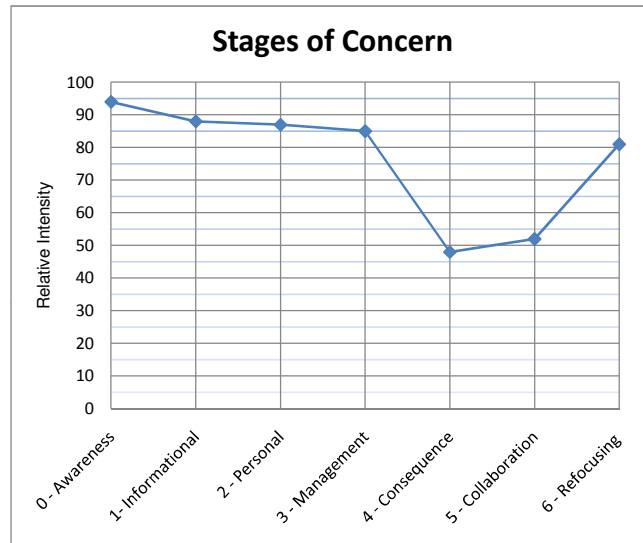
Overview

| Descriptive Statistics | | | Avg | Percentile |
|------------------------|----|-----|------|------------|
| | N | Sum | | |
| RSIIAwa0 | 40 | 663 | 16.6 | 91 |
| RSIIInf1 | 40 | 619 | 15.5 | 57 |
| RSIIPer2 | 40 | 614 | 15.4 | 57 |
| RSIIMan3 | 40 | 695 | 17.4 | 65 |
| RSIICon4 | 40 | 718 | 18.0 | 21 |
| RSIIColl5 | 40 | 646 | 16.2 | 31 |
| RSIIRef6 | 40 | 630 | 15.8 | 42 |
| Valid N (listwise) | 40 | | | |

ID001
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ID001
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| 0 - Awareness | 1- Informational | 2 - Personal | 3 - Management | 4 - Consequence | 5 - Collaboration | 6 - Refocusing |
|---------------|------------------|--------------|----------------|-----------------|-------------------|----------------|
| 0 | 1 | 2 | 3 | 4 | 5 | 6 |
| 17 | 24 | 26 | 23 | 24 | 21 | 24 |
| 94 | 88 | 87 | 85 | 48 | 52 | 81 |



| 0 - Awareness | 1- Informational | 2 - Personal | 3 - Management | 4 - Consequence | 5 - Collaboration | 6 - Refocusing |
|---------------|------------------|--------------|----------------|-----------------|-------------------|----------------|
| 0 | 1 | 2 | 3 | 4 | 5 | 6 |
| 2 | 7 | 5 | 6 | 4 | 0 | 6 |
| 5 | 6 | 6 | 6 | 3 | 5 | 3 |
| 4 | 6 | 5 | 4 | 6 | 5 | 6 |
| 2 | 5 | 5 | 4 | 6 | 6 | 5 |
| 4 | 0 | 5 | 3 | 5 | 5 | 4 |
| 17 | 24 | 26 | 23 | 24 | 21 | 24 |

ID 001:

Peak score: Stage 0: Awareness / Unconcerned stage (94)

Second highest score: Stage 1: Informational (88) and Personal concerns (87)

Analysis:

The **high awareness** (unconcerned) concern are an indication that the respondent are *not concerned about this innovation at this time*. The respondent are *occupied with other things and other priorities* at this stage and *spend little time thinking about this innovation*.

Informational concerns are indicated as the second highest score . With this score the respondent indicates that s/he have very limited knowledge about the innovation, but are interested in how to use the innovation and what resources are available to learn more about the innovation.

Personal concerns are very closely indicated / scored to the informational concerns. With the high personal concerns score the respondent indicates high level of concerns about what the influence of the innovation would be on professional status, time and energy commitments that the innovation requires and also concerns about changes needed in his/her role and in the teaching and administration that accompany the innovation. Most of all this respondent are concerned about who makes decisions in the new system.

Another high concern is about management of the innovation (Stage 3). The respondent are mainly concerned having *enough time* and the *conflict between interests and responsibilities*.

This repondents profile follow the pattern of a **nonuser** which resonates with the fact that this profile was taken after the first contact the respondent had with the new system.

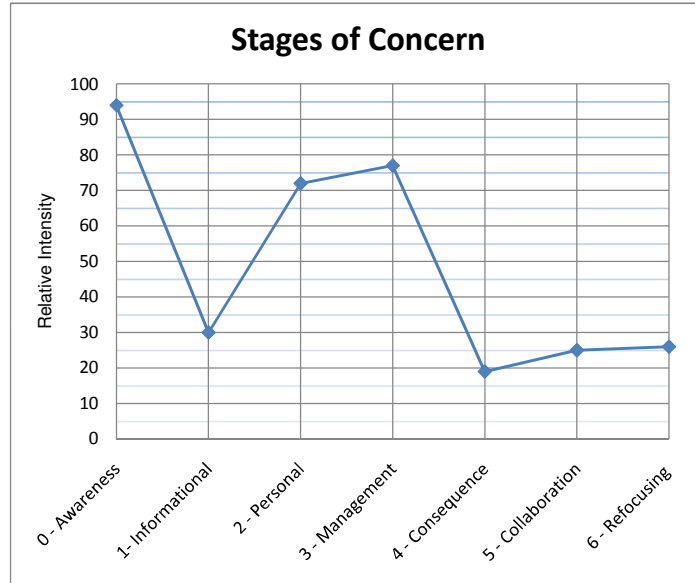
The refocusing concerns are higher then consequence and collaboration concerns at this stage. The respondent indicates *knowledge about anaother innovation that might work better and would also like to review the innovation's instructional*

ID002 ID002
Question Raw data

| | 0 - Awareness | 1 - Informational | 2 - Personal | 3 - Management | 4 - Consequence | 5 - Collaboration | 6 - Refocusing |
|---|---------------|-------------------|--------------|----------------|-----------------|-------------------|----------------|
| | 0 | 1 | 2 | 3 | 4 | 5 | 6 |
| 1 | 17 | 6 | 20 | 20 | 16 | 14 | 11 |
| 2 | 94 | 30 | 72 | 77 | 19 | 25 | 26 |

| | 0 - Awareness | 1 - Informational | 2 - Personal | 3 - Management | 4 - Consequence | 5 - Collaboration | 6 - Refocusing |
|---|---------------|-------------------|--------------|----------------|-----------------|-------------------|----------------|
| | 0 | 1 | 2 | 3 | 4 | 5 | 6 |
| 1 | 2 | 6 | 5 | 1 | 1 | 5 | |
| 2 | 6 | 0 | 4 | 6 | 1 | 5 | 1 |
| 3 | 0 | 0 | 3 | 0 | 3 | 0 | 0 |
| 4 | 4 | 3 | 2 | 4 | 6 | 3 | 5 |
| 5 | 6 | 1 | 5 | 5 | 5 | 5 | 0 |
| 6 | 17 | 6 | 20 | 20 | 16 | 14 | 11 |

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- 34
- 35



ID: 002

Peak score: Stage 0: Awareness / Unconcerned stage (94)

Second highest score: Stage 3: Management concerns (77)

Analysis:

The respondent indicates high awareness concerns. This means that the respondent are not concerned about this innovation at this stage. Other priorities prevents him/her to focus any attention on this innovation.

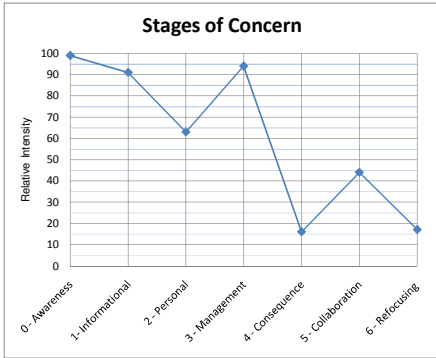
Management concerns are the second highest concern where the respondent indicates a concern about the conflict between interests and responsibilities and also not having enough time to organise him/herself everyday and also the time it will require to solve nonacademic problems in the new system .

Personal concerns are higher than the informational concerns for this nonuser which indicates that she is more concerned about the demands of the innovation on his/her professional status and how it will influence his/her role than getting more information about the innovation.

Consequence, collaboration and refocusing concerns are low at this stage. Their is also very little difference between collaboration and refocusing concern scores.

ID003 ID003
Question Raw data

| | 0 - Awareness | 1 - Informational | 2 - Personal | 3 - Management | 4 - Consequence | 5 - Collaboration | 6 - Refocusing |
|---|---------------|-------------------|--------------|----------------|-----------------|-------------------|----------------|
| 0 | 0 | 1 | 2 | 3 | 4 | 5 | 6 |
| 1 | 24 | 26 | 17 | 27 | 15 | 19 | 8 |
| 2 | 99 | 91 | 63 | 94 | 16 | 44 | 17 |



| | 0 - Awareness | 1 - Informational | 2 - Personal | 3 - Management | 4 - Consequence | 5 - Collaboration | 6 - Refocusing |
|---|---------------|-------------------|--------------|----------------|-----------------|-------------------|----------------|
| 0 | 1 | 2 | 3 | 4 | 5 | 6 | |
| 1 | 4 | 4 | 6 | 2 | 4 | 1 | |
| 2 | 6 | 6 | 1 | 6 | 1 | 5 | |
| 3 | 6 | 6 | 3 | 6 | 2 | 3 | |
| 4 | 6 | 6 | 5 | 5 | 5 | 6 | |
| 5 | 4 | 4 | 4 | 5 | 1 | 1 | |
| 6 | 24 | 26 | 17 | 27 | 15 | 19 | |
| 7 | | | | | | 8 | |

ID: 003

Peak score: Stage 0: Awareness / Unconcerned stage (99)
Second highest score: Stage 3: Management concerns (94)

Analysis:

The respondent indicates **extremely high awareness** / unconcerned concerns. This means that the respondent are not concerned about this innovation at this stage. The respondent indicates that he/she is pre-occupied with other things than the innovation and spend little time thinking about this innovation. Other priorities prevents him/her to focus any attention on this innovation.

Management concerns are the second highest concern where the respondent indicates a concern about the conflict between interests and responsibilities and also not having enough time to organise him/herself everyday as well as the ability to manage all that the innovation requires. The time it will require to solve nonacademic problems in the new system are also rated high.

This nonuser have **higher informational** than personal concerns . He/she indicates a need to discuss the possibility of using the innovation,are interested in what resources are available and would like to know what the use of the innovation would require in the immediate future.

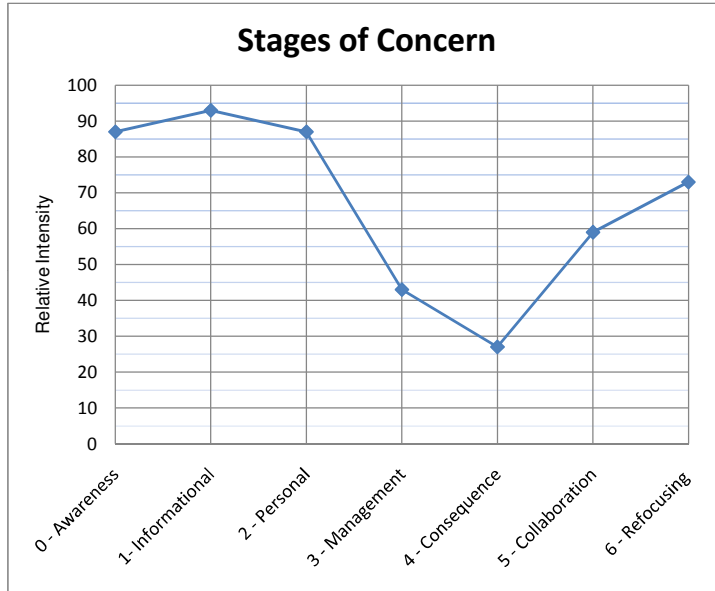
The lower concerns in the consequence, collaboration and refocusing stages resonates with the fact that the respondent is a nonuser in the new system whe she completed the questionnaire.

ID:004 ID004

Question Raw data

- 1 2
- 2 6
- 3 1
- 4 1
- 5 4
- 6 2
- 7 7
- 8 4
- 9 1
- 10 7
- 11 2
- 12 6
- 13 7
- 14 7
- 15 7
- 16 1
- 17 4
- 18 4
- 19 1
- 20 3
- 21 3
- 22 6
- 23 3
- 24 7
- 25 5
- 26 5
- 27 4
- 28 4
- 29 4
- 30 2
- 31 6
- 32 7
- 33 4
- 34 1
- 35 6

| | 0 - Awareness | 1- Informational | 2 - Personal | 3 - Management | 4 - Consequence | 5 - Collaboration | 6 - Refocusing |
|----|---------------|------------------|--------------|----------------|-----------------|-------------------|----------------|
| 0 | 0 | 1 | 2 | 3 | 4 | 5 | 6 |
| 15 | 15 | 27 | 26 | 12 | 19 | 23 | 22 |
| 87 | 87 | 93 | 87 | 43 | 27 | 59 | 73 |



| | 0 - Awareness | 1- Informational | 2 - Personal | 3 - Management | 4 - Consequence | 5 - Collaboration | 6 - Refocusing |
|----|---------------|------------------|--------------|----------------|-----------------|-------------------|----------------|
| 0 | 0 | 1 | 2 | 3 | 4 | 5 | 6 |
| 1 | 1 | 2 | 7 | 1 | 2 | 4 | 6 |
| 6 | 6 | 7 | 7 | 4 | 2 | 7 | 1 |
| 3 | 3 | 7 | 4 | 1 | 1 | 4 | 3 |
| 3 | 3 | 5 | 4 | 5 | 7 | 4 | 6 |
| 2 | 2 | 6 | 4 | 1 | 7 | 4 | 6 |
| 15 | 15 | 27 | 26 | 12 | 19 | 23 | 22 |

ID 004:

Peak score: Stage 1: Informational concerns (94)

Second highest score: Stage 3: Management concerns (77)

Analysis

The respondent's informational concerns is the highest concerns. He/she indicates a need to discuss the possibility of using the innovation and to know what resources are available.

Awareness and personal concerns are the second highest concerns indicated. The respondent indicates that he/she is not concerned about this innovation at this stage. His/ her self personal concerns about the effect of the innovation on professional status and decisions that are made in the new system are rated highly.

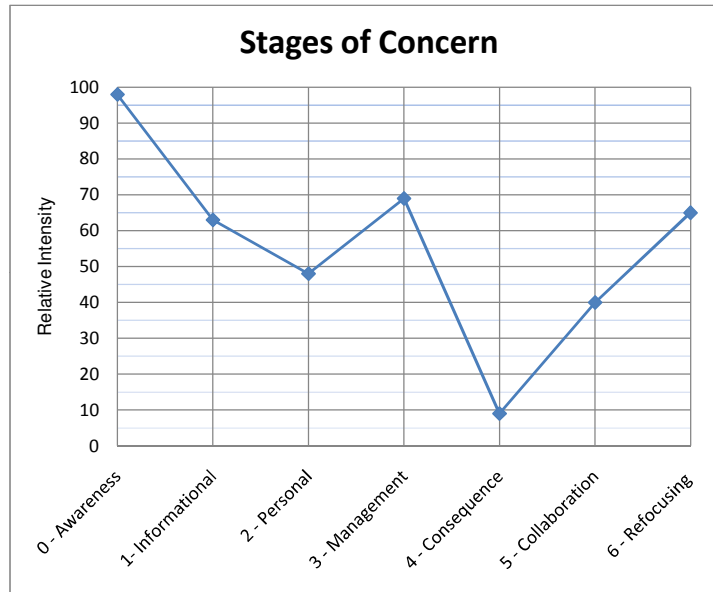
As non user management, consequence and collaboration concerns are low, but refocusing scored the third highest by which the respondent indicates that he/she knows now of some other approaches that might work better. He/ she also indicates a need to modify their use of the innovation based on experiences of their students and supplement, enhance or replace the innovation.

ID:005
Question

ID005
Raw data

- 1 2
- 2 2
- 3 4
- 4 4
- 5 2
- 6 4
- 7 0
- 8 3
- 9 3
- 10 6
- 11 2
- 12 4
- 13 5
- 14 6
- 15 2
- 16 3
- 17 2
- 18 0
- 19 2
- 20 3
- 21 6
- 22 7
- 23 2
- 24 6
- 25 4
- 26 4
- 27 5
- 28 3
- 29 5
- 30 4
- 31 5
- 32 0
- 33 2
- 34 4
- 35 1

| | 0 - Awareness | 1- Informational | 2 - Personal | 3 - Management | 4 - Consequence | 5 - Collaboration | 6 - Refocusing |
|--|---------------|------------------|--------------|----------------|-----------------|-------------------|----------------|
| | 0 | 1 | 2 | 3 | 4 | 5 | 6 |
| | 20 | 17 | 12 | 18 | 12 | 18 | 20 |
| | 98 | 63 | 48 | 69 | 9 | 40 | 65 |



| | 0 - Awareness | 1- Informational | 2 - Personal | 3 - Management | 4 - Consequence | 5 - Collaboration | 6 - Refocusing |
|--|---------------|------------------|--------------|----------------|-----------------|-------------------|----------------|
| | 0 | 1 | 2 | 3 | 4 | 5 | 6 |
| | 4 | 4 | 0 | 4 | 2 | 2 | 2 |
| | 4 | 6 | 5 | 3 | 2 | 6 | 3 |
| | 6 | 2 | 2 | 3 | 2 | 0 | 3 |
| | 2 | 4 | 3 | 4 | 6 | 5 | 7 |
| | 4 | 1 | 2 | 4 | 0 | 5 | 5 |
| | 20 | 17 | 12 | 18 | 12 | 18 | 20 |

ID 005:

Peak score: Stage 0: Awareness concerns (98)
Second highest score: Stage 3: Management concerns (69)

Analysis:

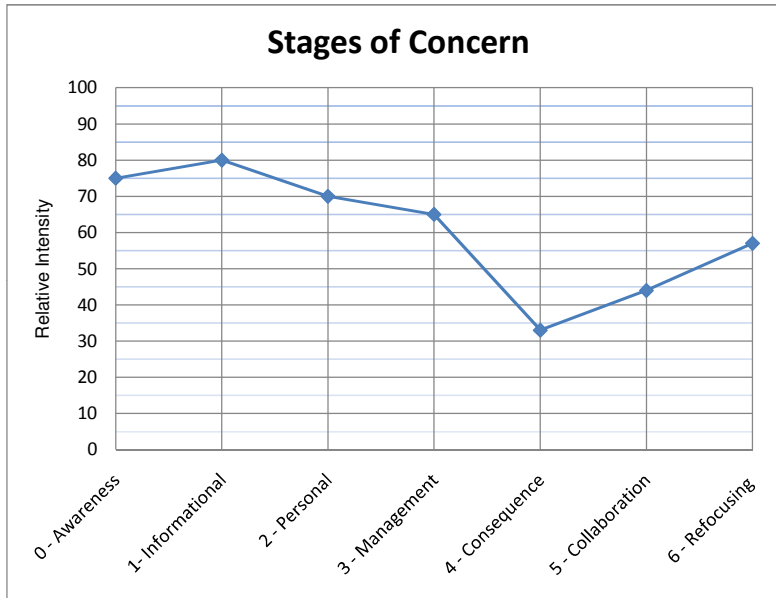
The respondent indicates **extremely high awareness / unconcerned** concerns. This means that the respondent are not concerned about this innovation at this stage and are concerned about another innovation. **The respondent indicates that he/she is pre-occupied with other things than the innovation.** Other priorities prevents him/her to focus any attention on this innovation.

The second highest score are **management** cocncerns. Concerns that the respondent have is not to have enough time , spending time solving non academic related problems in the system and time coordinating tasks and people .

For this non user the **refocusing** concerns are third highest. He/she indicates the desire to modify their use of the innovation based on the experiences of students.

| ID006 | ID006 |
|----------|----------|
| Question | Raw data |
| 1 | 3 |
| 2 | 3 |
| 3 | 0 |
| 4 | 3 |
| 5 | 2 |
| 6 | 7 |
| 7 | 2 |
| 8 | 3 |
| 9 | 4 |
| 10 | 6 |
| 11 | 4 |
| 12 | 2 |
| 13 | 5 |
| 14 | 2 |
| 15 | 5 |
| 16 | 6 |
| 17 | 4 |
| 18 | 2 |
| 19 | 6 |
| 20 | 3 |
| 21 | 5 |
| 22 | 4 |
| 23 | 2 |
| 24 | 4 |
| 25 | 3 |
| 26 | 5 |
| 27 | 5 |
| 28 | 4 |
| 29 | 4 |
| 30 | 4 |
| 31 | 4 |
| 32 | 4 |
| 33 | 4 |
| 34 | 2 |
| 35 | 3 |

| | 0 - Awareness | 1 - Informational | 2 - Personal | 3 - Management | 4 - Consequence | 5 - Collaboration | 6 - Refocusing |
|----|---------------|-------------------|--------------|----------------|-----------------|-------------------|----------------|
| 0 | 0 | 1 | 2 | 3 | 4 | 5 | 6 |
| 13 | 13 | 22 | 19 | 17 | 21 | 19 | 18 |
| 75 | 75 | 80 | 70 | 65 | 33 | 44 | 57 |



| | 0 - Awareness | 1 - Informational | 2 - Personal | 3 - Management | 4 - Consequence | 5 - Collaboration | 6 - Refocusing |
|----|---------------|-------------------|--------------|----------------|-----------------|-------------------|----------------|
| 0 | 0 | 1 | 2 | 3 | 4 | 5 | 6 |
| 7 | 0 | 7 | 2 | 3 | 3 | 2 | 3 |
| 2 | 2 | 2 | 5 | 3 | 4 | 6 | 4 |
| 5 | 5 | 5 | 4 | 6 | 6 | 2 | 3 |
| 2 | 2 | 5 | 4 | 3 | 4 | 5 | 4 |
| 4 | 4 | 3 | 4 | 2 | 4 | 4 | 4 |
| 13 | 13 | 22 | 19 | 17 | 21 | 19 | 18 |

ID 006:

Peak score: Stage 0: Informational concerns (99)

Second highest score: Stage 3: Awareness concerns (94)

Analysis

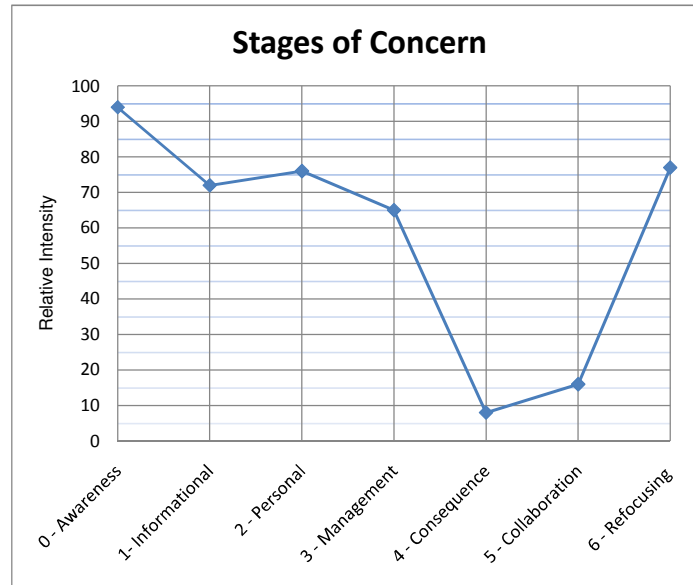
The respondent's **informational** concerns is the highest concerns. He/she indicates to have very little knowledge of the innovation and a desire to know what resources are available if they decide to adopt the innovation as well as to know what the use of the innovation will require in the immediate future.

The second highest score are the **awareness** concerns and the respondent indicates that he/she is pre-occupied with other things other than this innovation.

This nonuser also scores the consequence and collaboration concerns lower than the rest with a climb in the **refocusing** concerns. These concerns indicates that the user are concerned about revising his/her use of the innovation, would like to based modifications in use on the experiences of students and are interested in supplementing, enhancing or replacing the innovation.

| ID007 Question | ID007 Raw data |
|----------------|----------------|
| 1 | 1 |
| 2 | 5 |
| 3 | 2 |
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| 5 | 1 |
| 6 | 4 |
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| 8 | 0 |
| 9 | 4 |
| 10 | 2 |
| 11 | 2 |
| 12 | 2 |
| 13 | 2 |
| 14 | 1 |
| 15 | 6 |
| 16 | 5 |
| 17 | 5 |
| 18 | 0 |
| 19 | 0 |
| 20 | 6 |
| 21 | 4 |
| 22 | 4 |
| 23 | 4 |
| 24 | 4 |
| 25 | 6 |
| 26 | 4 |
| 27 | 4 |
| 28 | 4 |
| 29 | 4 |
| 30 | 5 |
| 31 | 4 |
| 32 | 4 |
| 33 | 4 |
| 34 | 3 |
| 35 | 5 |

| | 0 - Awareness | 1- Informational | 2 - Personal | 3 - Management | 4 - Consequence | 5 - Collaboration | 6 - Refocusing |
|---|---------------|------------------|--------------|----------------|-----------------|-------------------|----------------|
| 0 | 17 | 20 | 21 | 17 | 11 | 11 | 23 |
| 1 | 94 | 72 | 76 | 65 | 8 | 16 | 77 |



| | 0 - Awareness | 1- Informational | 2 - Personal | 3 - Management | 4 - Consequence | 5 - Collaboration | 6 - Refocusing |
|---|---------------|------------------|--------------|----------------|-----------------|-------------------|----------------|
| 0 | 17 | 20 | 21 | 17 | 11 | 11 | 23 |
| 1 | 94 | 72 | 76 | 65 | 8 | 16 | 77 |
| 2 | 4 | 6 | 3 | 1 | 1 | 5 | |
| 3 | 1 | 2 | 0 | 2 | 2 | 4 | |
| 4 | 6 | 5 | 5 | 0 | 0 | 6 | |
| 5 | 4 | 4 | 6 | 4 | 4 | 4 | |
| 6 | 5 | 5 | 4 | 3 | 4 | 4 | 4 |
| 7 | 17 | 20 | 21 | 17 | 11 | 11 | 23 |

ID 007:

Peak score: Stage 0: Awareness concerns (94)

Second highest score: Stage 6: Refocusing concerns (77) and personal concerns (76)

Analysis

The respondent's **awareness** concerns is the highest concerns followed by **refocusing and personal** concerns.

The respondent indicated that **other priorities** currently prevents him/her to focus any attention on this innovation.

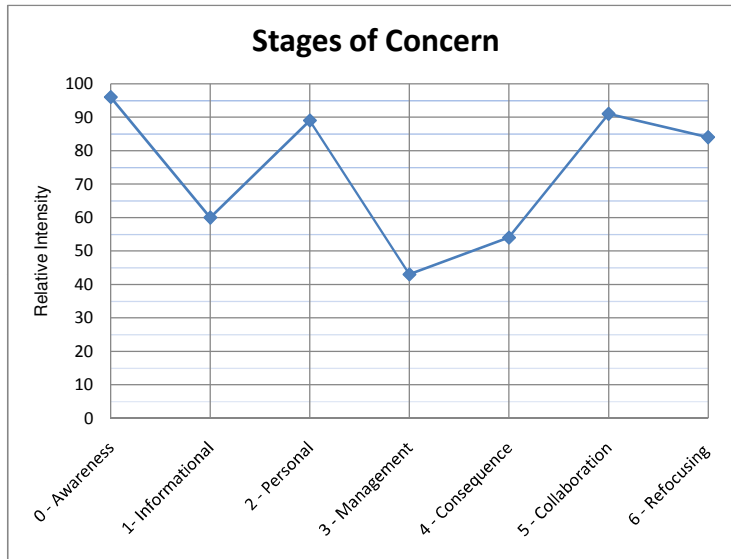
The respondent indicated the he/ she would like to revise (**refocusing**) the instructional approach of the innovation and also know now of other approaches that might work better.

The respondent indicated that his/her **personal** concerns are the limited knowledge about the innovation as well as a desire to know what resources are available if they decide to adopt.

Time spend on non academic related issues as well as an inability to manage the innovation are some of the management concerns.

As a nonuser the consequence and collaboration concerns are significantly lower than the first 3 stages of concerns.

| ID008 | ID008 | 0 - Awareness | 1 - Informational | 2 - Personal | 3 - Management | 4 - Consequence | 5 - Collaboration | 6 - Refocusing |
|----------|----------|---------------|-------------------|--------------|----------------|-----------------|-------------------|----------------|
| Question | Raw data | 0 | 1 | 2 | 3 | 4 | 5 | 6 |
| 1 | 4 | 18 | 16 | 27 | 12 | 25 | 31 | 25 |
| 2 | 5 | 96 | 60 | 89 | 43 | 54 | 91 | 84 |
| 3 | 1 | | | | | | | |
| 4 | 1 | | | | | | | |
| 5 | 6 | | | | | | | |
| 6 | 4 | | | | | | | |
| 7 | 7 | | | | | | | |
| 8 | 2 | | | | | | | |
| 9 | 1 | | | | | | | |
| 10 | 7 | | | | | | | |
| 11 | 6 | | | | | | | |
| 12 | 6 | | | | | | | |
| 13 | 1 | | | | | | | |
| 14 | 1 | | | | | | | |
| 15 | 1 | | | | | | | |
| 16 | 1 | | | | | | | |
| 17 | 6 | | | | | | | |
| 18 | 6 | | | | | | | |
| 19 | 1 | | | | | | | |
| 20 | 7 | | | | | | | |
| 21 | 6 | | | | | | | |
| 22 | 6 | | | | | | | |
| 23 | 4 | | | | | | | |
| 24 | 7 | | | | | | | |
| 25 | 4 | | | | | | | |
| 26 | 6 | | | | | | | |
| 27 | 6 | | | | | | | |
| 28 | 7 | | | | | | | |
| 29 | 6 | | | | | | | |
| 30 | 1 | | | | | | | |
| 31 | 6 | | | | | | | |
| 32 | 7 | | | | | | | |
| 33 | 6 | | | | | | | |
| 34 | 4 | | | | | | | |
| 35 | 4 | | | | | | | |



| 0 - Awareness | 1 - Informational | 2 - Personal | 3 - Management | 4 - Consequence | 5 - Collaboration | 6 - Refocusing |
|---------------|-------------------|--------------|----------------|-----------------|-------------------|----------------|
| 0 | 1 | 2 | 3 | 4 | 5 | 6 |
| 1 | 4 | 7 | 1 | 4 | 6 | 5 |
| 6 | 1 | 1 | 2 | 6 | 7 | 1 |
| 6 | 1 | 6 | 1 | 1 | 6 | 7 |
| 4 | 6 | 7 | 4 | 7 | 6 | 6 |
| 1 | 4 | 6 | 4 | 7 | 6 | 6 |
| 18 | 16 | 27 | 12 | 25 | 31 | 25 |

ID 008:

Peak score: Stage 0: Awareness concerns (96)

Second highest score: Stage 5: Collaboration concerns (91) and personal concerns (89)

Analysis

The peak score of this respondent is awareness concerns which indicates that he/she is not concerned about this innovation at this time and that she is preoccupied with other things than this innovation.

The second highest concerns about collaboration. This respondent indicates that he/she would like to develop working relationships with both our faculty and outside faculty using this innovation. Would like to familiarize other departments or people with the progress of this new approach, coordinate effort to maximize innovation's effect and would like to know what others are doing in this area.

Close to the second highest score is personal concerns that also scored highly. The respondent indicated concerns about the effect of the innovation on his/her personal status and also what energy and time commitments will be required by this innovation.

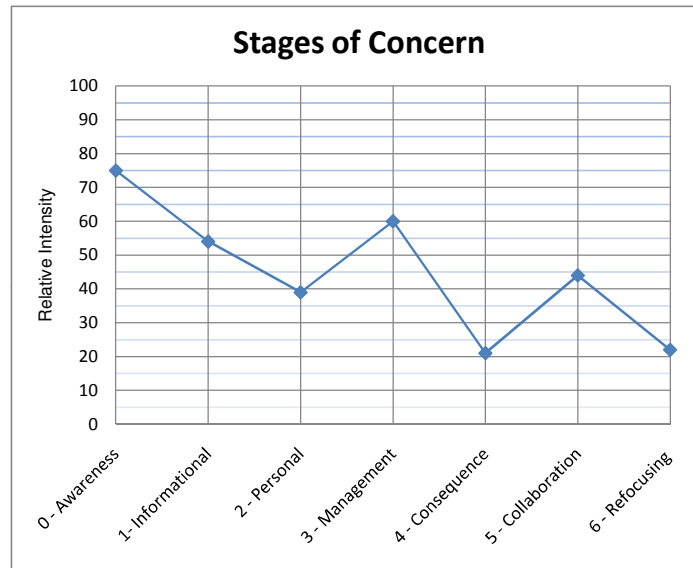
Nonuser

ID009
Question

ID009
Raw data

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- 12 7
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- 14 3
- 15 5
- 16 3
- 17 1
- 18 1
- 19 1
- 20 1
- 21 3
- 22 3
- 23 1
- 24 7
- 25 4
- 26 2
- 27 7
- 28 3
- 29 3
- 30 2
- 31 1
- 32 7
- 33 2
- 34 3
- 35 1

| | 0 - Awareness | 1- Informational | 2 - Personal | 3 - Management | 4 - Consequence | 5 - Collaboration | 6 - Refocusing |
|--|---------------|------------------|--------------|----------------|-----------------|-------------------|----------------|
| | 0 | 1 | 2 | 3 | 4 | 5 | 6 |
| | 13 | 14 | 9 | 16 | 17 | 19 | 10 |
| | 75 | 54 | 39 | 60 | 21 | 44 | 22 |



| 0 - Awareness | 1- Informational | 2 - Personal | 3 - Management | 4 - Consequence | 5 - Collaboration | 6 - Refocusing |
|---------------|------------------|--------------|----------------|-----------------|-------------------|----------------|
| 0 | 1 | 2 | 3 | 4 | 5 | 6 |
| 0 | 3 | 0 | 4 | 1 | 3 | 4 |
| 7 | 3 | 3 | 2 | 1 | 5 | 1 |
| 3 | 5 | 1 | 3 | 1 | 1 | 1 |
| 1 | 2 | 3 | 4 | 7 | 7 | 3 |
| 2 | 1 | 2 | 3 | 7 | 3 | 1 |
| 13 | 14 | 9 | 16 | 17 | 19 | 10 |

ID 009:

Peak score: Stage 0: Awareness concerns (75)

Second highest score: Stage 3: Management concerns (60)

Analysis

This respondent indicated that aware concerns are the highest at this stage. He/ she are not concerned about the innovation at this time.

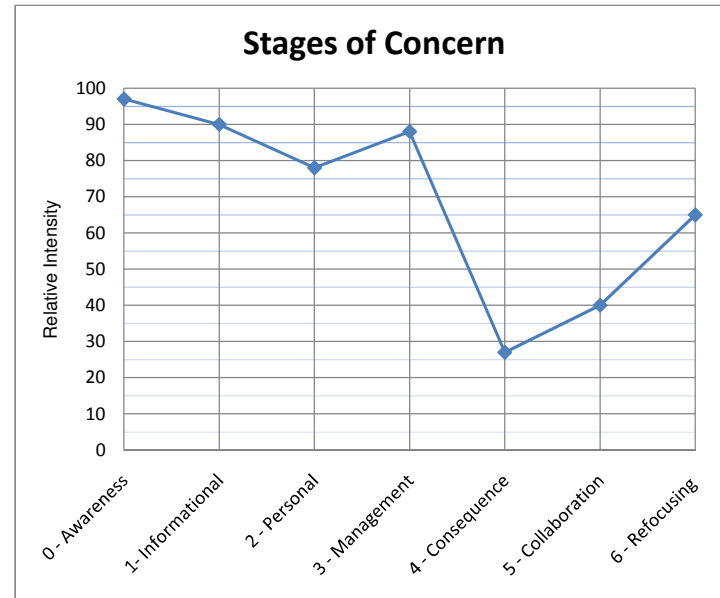
The second highest concern have to do with management. Enough time to organise him/herself and time spend on non adademic problems relating to the system are some of the major management concerns.

This nonuser have higher information coconcerns than personal related concerns. The repondent indicated a need to know what resources are available should they decide to adopt the innovation.

ID010 ID010
Question Raw data

| | 0 - Awareness | 1 - Informational | 2 - Personal | 3 - Management | 4 - Consequence | 5 - Collaboration | 6 - Refocusing |
|---|---------------|-------------------|--------------|----------------|-----------------|-------------------|----------------|
| 0 | 19 | 25 | 22 | 24 | 19 | 18 | 20 |
| 1 | 97 | 90 | 78 | 88 | 27 | 40 | 65 |

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31 5
32 5
33 5
34 4
35 4



| | 0 - Awareness | 1 - Informational | 2 - Personal | 3 - Management | 4 - Consequence | 5 - Collaboration | 6 - Refocusing |
|---|---------------|-------------------|--------------|----------------|-----------------|-------------------|----------------|
| 0 | 19 | 25 | 22 | 24 | 19 | 18 | 20 |
| 1 | 97 | 90 | 78 | 88 | 27 | 40 | 65 |

ID: 010

Peak score: Stage 0: Awareness concerns (97)

Second highest score: Stage 1: Informational concerns (90)

Analysis

The peak score belongs to the **awareness** concerns. This respondent indicated that currently other priorities prevents him/her from focusing attention on this innovation.

The second highest score belongs to the **informational** concerns. Here the respondent indicated that she/he has very limited knowledge about his innovation.

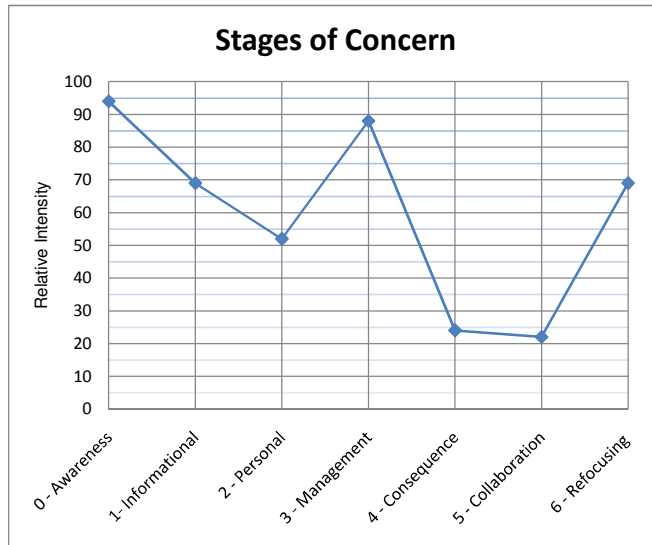
This non user's **management** concerns also have a relative high score in relation to the two top scores. Not having enough time to organise him/herself, conflict between interest and responsibilities, inability to manage what the innovation requires and time spend on non academic related problems in the system are the top scored management concerns indicated.

ID011
Question

ID011
Raw data

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35

| | 0 - Awareness | 1 - Informational | 2 - Personal | 3 - Management | 4 - Consequence | 5 - Collaboration | 6 - Refocusing |
|--|---------------|-------------------|--------------|----------------|-----------------|-------------------|----------------|
| | 0 | 1 | 2 | 3 | 4 | 5 | 6 |
| | 17 | 19 | 13 | 24 | 18 | 13 | 21 |
| | 94 | 69 | 52 | 88 | 24 | 22 | 69 |



| | 0 - Awareness | 1 - Informational | 2 - Personal | 3 - Management | 4 - Consequence | 5 - Collaboration | 6 - Refocusing |
|--|---------------|-------------------|--------------|----------------|-----------------|-------------------|----------------|
| | 0 | 1 | 2 | 3 | 4 | 5 | 6 |
| | 1 | 3 | 1 | 7 | 1 | 2 | 5 |
| | 4 | 6 | 1 | 1 | 1 | 6 | 2 |
| | 6 | 7 | 4 | 7 | 2 | 2 | 1 |
| | 1 | 2 | 1 | 6 | 7 | 2 | 6 |
| | 5 | 1 | 6 | 3 | 7 | 1 | 7 |
| | 17 | 19 | 13 | 24 | 18 | 13 | 21 |

ID 011:

Peak score: Stage 0: Awareness concerns (94)
Second highest score: Stage 3: Management concerns (88)

Analysis

This respondent indicated that **awareness** concerns are the highest at this stage. He/ she are preoccupied with things other than the innovation at this time.

The second highest cocncern have to do with **management**. Enough time to organise him/herself and inability to manage all that the innovation requires are some of the major management concerns.

This nonuser have higher information cocncerns than personal related concerns. The repondent indicated a need to know what resources are available should they decide to adopt the innovation.

Refocusing concerns scored the same as **informational** cocncerns. The respondent indicated the desire to determine how so supplement, enhance or replave this innovation.

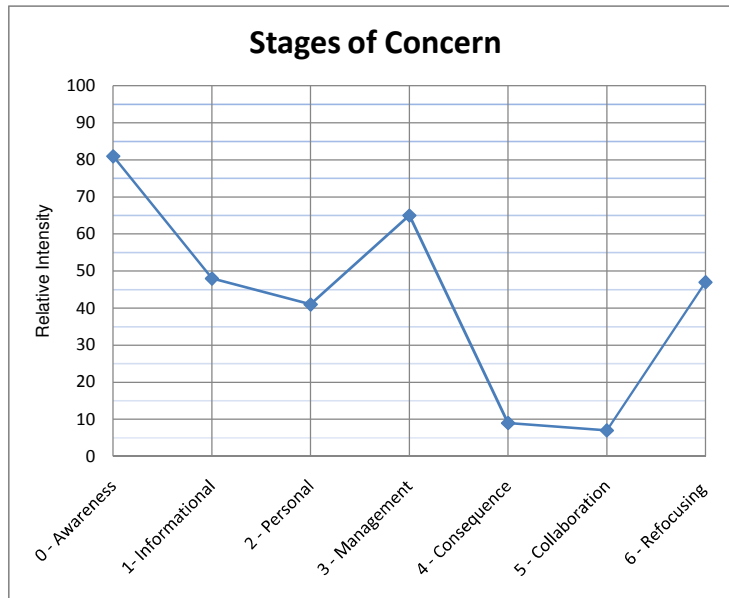
This non user scored consequence and collaboration concerns low.

ID012 ID012

Question Raw data

- 1 1
- 2 4
- 3 0
- 4 4
- 5 0
- 6 4
- 7 0
- 8 1
- 9 3
- 10 3
- 11 2
- 12 2
- 13 1
- 14 0
- 15 0
- 16 5
- 17 3
- 18 0
- 19 2
- 20 4
- 21 3
- 22 3
- 23 3
- 24 4
- 25 5
- 26 5
- 27 3
- 28 3
- 29 0
- 30 6
- 31 2
- 32 3
- 33 3
- 34 2
- 35 3

| | 0 - Awareness | 1 - Informational | 2 - Personal | 3 - Management | 4 - Consequence | 5 - Collaboration | 6 - Refocusing |
|--|---------------|-------------------|--------------|----------------|-----------------|-------------------|----------------|
| | 0 | 1 | 2 | 3 | 4 | 5 | 6 |
| | 14 | 12 | 10 | 17 | 12 | 6 | 16 |
| | 81 | 48 | 41 | 65 | 9 | 7 | 47 |



| 0 - Awareness | 1 - Informational | 2 - Personal | 3 - Management | 4 - Consequence | 5 - Collaboration | 6 - Refocusing |
|---------------|-------------------|--------------|----------------|-----------------|-------------------|----------------|
| 0 | 1 | 2 | 3 | 4 | 5 | 6 |
| 0 | 4 | 0 | 4 | 1 | 0 | 4 |
| 2 | 0 | 1 | 1 | 2 | 3 | 3 |
| 3 | 0 | 3 | 5 | 2 | 0 | 4 |
| 3 | 5 | 3 | 5 | 4 | 3 | 3 |
| 6 | 3 | 3 | 2 | 3 | 0 | 2 |
| 14 | 12 | 10 | 17 | 12 | 6 | 16 |

ID 012:

Peak score: Stage 0: Awareness concerns (81)

Second highest score: Stage 3: Management concerns (65)

Analysis

This respondent indicated that **awareness** concerns are the highest at this stage. currently other priorities prevent him/her from focusing attention on the innovation at this time.

The second highest cocncern have to do with **management**. The inability to manage all that the innovation requires and concerns about the time spend on nonacademic problems in the system are some of the major management concerns.

This nonuser have higher information concerns than personal related concerns. The repondent indicated a need to know what the use of the innovtion would require in the immediate future.

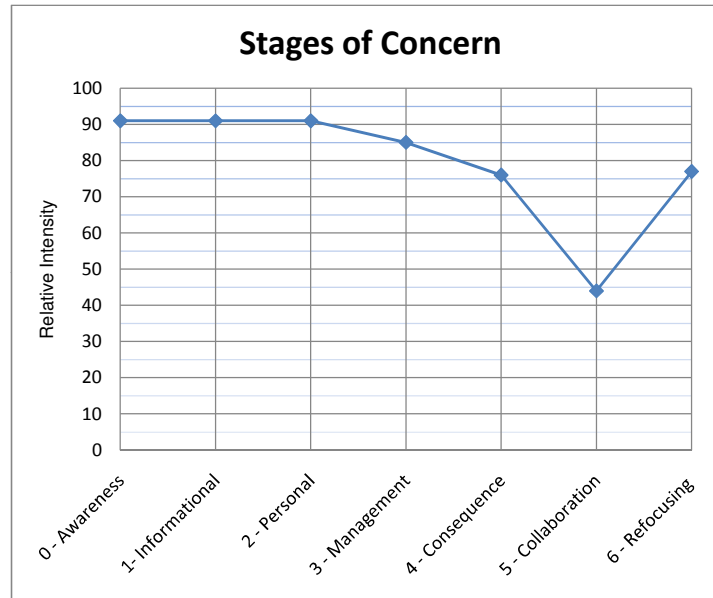
Refocusing concerns scored the same as **informational** concerns. The respondent indicated the desire to revise the innovation's instructional approach and inidcated the he/she now know of other approaches that might work better.

This non user scored consequence and collaboration concerns low.

ID013 ID013
Question Raw data

1 6
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14 4
15 7
16 5
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18 2
19 6
20 5
21 5
22 6
23 2
24 6
25 4
26 6
27 5
28 6
29 2
30 5
31 6
32 6
33 6
34 4
35 6

| 0 - Awareness | 1- Informational | 2 - Personal | 3 - Management | 4 - Consequence | 5 - Collaboration | 6 - Refocusing |
|---------------|------------------|--------------|----------------|-----------------|-------------------|----------------|
| 0 | 1 | 2 | 3 | 4 | 5 | 6 |
| 16 | 26 | 28 | 23 | 30 | 19 | 23 |
| 91 | 91 | 91 | 85 | 76 | 44 | 77 |



| 0 - Awareness | 1- Informational | 2 - Personal | 3 - Management | 4 - Consequence | 5 - Collaboration | 6 - Refocusing |
|---------------|------------------|--------------|----------------|-----------------|-------------------|----------------|
| 0 | 1 | 2 | 3 | 4 | 5 | 6 |
| 2 | 3 | 6 | 6 | 6 | 4 | 2 |
| 2 | 4 | 4 | 4 | 6 | 6 | 4 |
| 5 | 7 | 6 | 5 | 6 | 2 | 5 |
| 2 | 6 | 6 | 4 | 6 | 5 | 6 |
| 5 | 6 | 6 | 4 | 6 | 2 | 6 |
| 16 | 26 | 28 | 23 | 30 | 19 | 23 |

ID 013:

Peak scores: Stage 0, 1 and 2 Awareness, Informational and Personal concerns (91)

Second highest score: Stage 3: Management concerns (85)

Analysis

Three stages of concerns are equally highly scored : Awareness, infirmational and personal cocncerns.

Awareness concerns that are highly rated are tthat the respondent are preoccupaiped with other things and other priorities are preventing him/her from focusing attention on this innovation.

The respondent indicated the deire to know what resources will be available if they decide to adopt this innovation.

Highly rated personal concerns are:

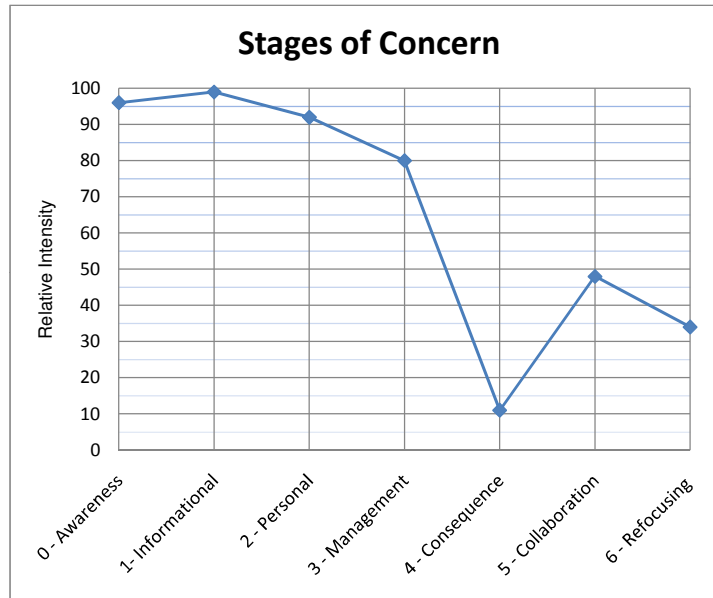
what the effect of reorganization on my professional status ; how my teaching or administration is supposed to change, time and energy commitments required by the new clickUP; and how my role will change when I am using the new clickUP.

The main management concern of this non user is not having enough time to organise him/her elf each day.

ID014 ID014
Question Raw data

| | 0 - Awareness | 1 - Informational | 2 - Personal | 3 - Management | 4 - Consequence | 5 - Collaboration | 6 - Refocusing |
|---|---------------|-------------------|--------------|----------------|-----------------|-------------------|----------------|
| 0 | 18 | 33 | 29 | 21 | 13 | 20 | 13 |
| 1 | 96 | 99 | 92 | 80 | 11 | 48 | 34 |

1 1
2 1
3 5
4 5
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6 6
7 4
8 5
9 6
10 4
11 1
12 4
13 7
14 7
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17 6
18 3
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21 0
22 4
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24 3
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26 6
27 5
28 6
29 5
30 6
31 0
32 6
33 6
34 0
35 7



| 0 - Awareness | 1 - Informational | 2 - Personal | 3 - Management | 4 - Consequence | 5 - Collaboration | 6 - Refocusing |
|---------------|-------------------|--------------|----------------|-----------------|-------------------|----------------|
| 0 | 1 | 2 | 3 | 4 | 5 | 6 |
| 5 | 6 | 4 | 5 | 1 | 3 | 1 |
| 4 | 7 | 7 | 5 | 1 | 4 | 6 |
| 0 | 7 | 6 | 5 | 2 | 3 | 2 |
| 3 | 6 | 6 | 6 | 3 | 5 | 4 |
| 6 | 7 | 6 | 0 | 6 | 5 | 0 |
| 18 | 33 | 29 | 21 | 13 | 20 | 13 |

ID 014:

Peak scores: Stage 1 - Informational concerns (99)
Second highest score: Stage 0: Awareness concerns (96)

Analysis

The respondent's informational concerns is the highest concerns. He/she indicates a need to discuss the possibility of using the innovation and to know what resources are available if they decide to adopt. He/ she also indicated a need to know how this innovation is better than what we have.

Awareness concerns are the second highest concerns indicated. The respondent indicates that he/she other priorities currently prevents him/her to focus attention on the innovation at this stage.

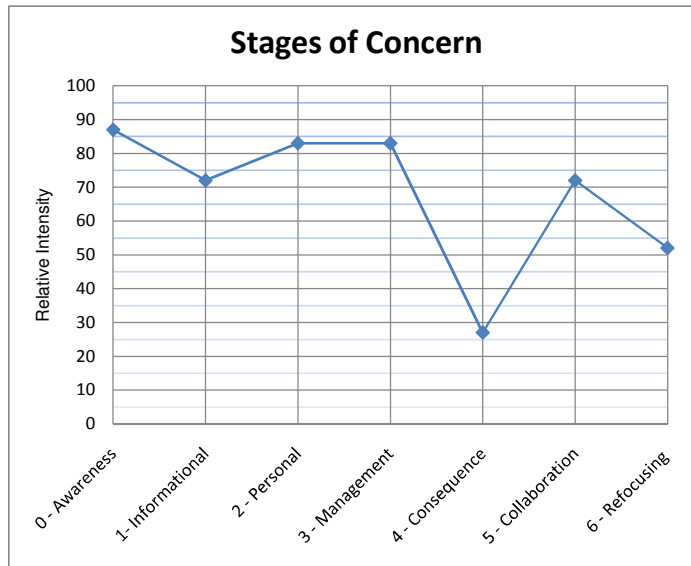
A personal concerns that the respondent rated high was the desire to know who is making decisions in the system. Other personal concerns that were indicated had to do with how teaching or administration is supposed to change, time and energy commitments required by the new clickUP; and how my role will change when I am using the new clickUP.

ID015 ID015

Question Raw data

- 1 1
- 2 2
- 3 2
- 4 5
- 5 6
- 6 7
- 7 4
- 8 4
- 9 5
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- 11 4
- 12 2
- 13 5
- 14 0
- 15 7
- 16 7
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- 21 3
- 22 4
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- 24 5
- 25 4
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- 27 5
- 28 5
- 29 4
- 30 5
- 31 5
- 32 5
- 33 5
- 34 2
- 35 1

| | 0 - Awareness | 1- Informational | 2 - Personal | 3 - Management | 4 - Consequence | 5 - Collaboration | 6 - Refocusing |
|--|---------------|------------------|--------------|----------------|-----------------|-------------------|----------------|
| | 0 | 1 | 2 | 3 | 4 | 5 | 6 |
| | 15 | 20 | 24 | 22 | 19 | 26 | 17 |
| | 87 | 72 | 83 | 83 | 27 | 72 | 52 |



| | 0 - Awareness | 1- Informational | 2 - Personal | 3 - Management | 4 - Consequence | 5 - Collaboration | 6 - Refocusing |
|--|---------------|------------------|--------------|----------------|-----------------|-------------------|----------------|
| | 0 | 1 | 2 | 3 | 4 | 5 | 6 |
| | 2 | 7 | 4 | 5 | 1 | 6 | 2 |
| | 2 | 0 | 5 | 4 | 4 | 6 | 5 |
| | 3 | 7 | 5 | 7 | 4 | 5 | 1 |
| | 3 | 5 | 5 | 4 | 5 | 5 | 4 |
| | 5 | 1 | 5 | 2 | 5 | 4 | 5 |
| | 15 | 20 | 24 | 22 | 19 | 26 | 17 |

ID 015:

Peak scores : Stage 0: Awareness concerns (87)

Second highest score: Stage 2 and 3 - Personal and Management concerns (83)

Analysis:

The **high awareness** (unconcerned) concern are an indication that other priorities prevents this respondent from focusing attention on this innovation.

Personal concerns are driven by the desire to know who will make decisions in the new clickUP, how my teaching or administration is supposed to change, time and energy commitments required by the new clickUP; and how my role will change when I am using the new clickUP.

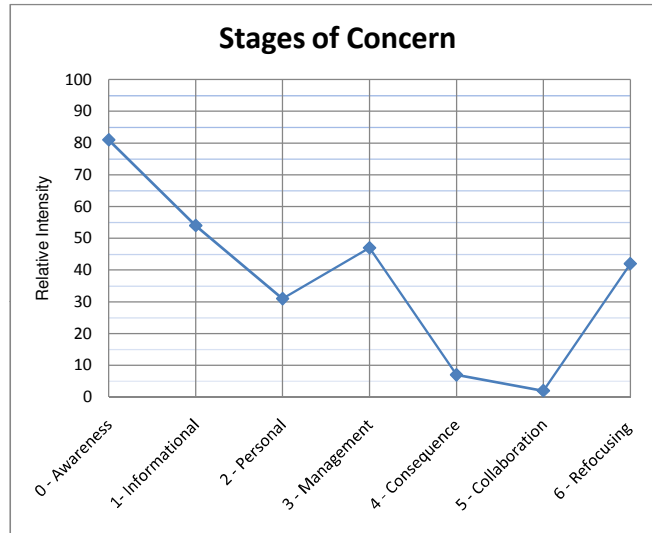
The respondent's main management concern is the inability to manage all that the innovation requires.

Informational concerns are the limited knowledge of the respondent and availability of resources if they decide to adopt.

The respondent are also concerned about helping other faculty in their use and developing working relationships with both faculty and outside faculty using the innovation.

| ID016 | ID016 | 0 - Awareness | 1- Informational | 2 - Personal | 3 - Management | 4 - Consequence | 5 - Collaboration | 6 - Refocusing |
|----------|----------|---------------|------------------|--------------|----------------|-----------------|-------------------|----------------|
| Question | Raw data | 0 | 1 | 2 | 3 | 4 | 5 | 6 |
| 1 | 2 | 14 | 14 | 7 | 13 | 10 | 1 | 15 |
| 2 | 0 | 81 | 54 | 31 | 47 | 7 | 2 | 42 |

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| 0 - Awareness | 1- Informational | 2 - Personal | 3 - Management | 4 - Consequence | 5 - Collaboration | 6 - Refocusing |
|---------------|------------------|--------------|----------------|-----------------|-------------------|----------------|
| 0 | 1 | 2 | 3 | 4 | 5 | 6 |
| 0 | 3 | 3 | 3 | 2 | 1 | 0 |
| 4 | 6 | 0 | 1 | 2 | 0 | 5 |
| 3 | 5 | 4 | 5 | 2 | 0 | 5 |
| 3 | 0 | 0 | 2 | 1 | 0 | 0 |
| 4 | 0 | 0 | 2 | 3 | 0 | 5 |
| 14 | 14 | 7 | 13 | 10 | 1 | 15 |

ID 016:

Peak score: Stage 0: Awareness concerns (81)
Second highest score: Stage 1: Informational concerns (60)

Analysis

This respondent indicated that **awares** concerns are the highest at this stage. He/she are not concerned about the innovation at this time. and other priorities prevents focusing on this innovation now.

This nonuser have higher **information** concerns than personal related concerns. The repondent indicated a need discuss the possibility of using the innovation.

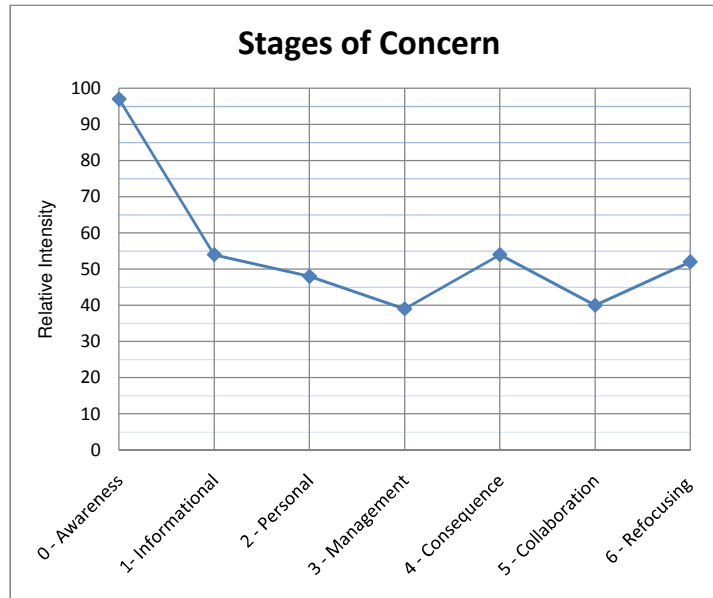
The **management** concerns the inability to manage all that the innovation requires.

ID017 ID017

Question Raw data

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| 0 - Awareness | 1 - Informational | 2 - Personal | 3 - Management | 4 - Consequence | 5 - Collaboration | 6 - Refocusing |
|---------------|-------------------|--------------|----------------|-----------------|-------------------|----------------|
| 0 | 1 | 2 | 3 | 4 | 5 | 6 |
| 19 | 14 | 12 | 11 | 25 | 18 | 17 |
| 97 | 54 | 48 | 39 | 54 | 40 | 52 |



| 0 - Awareness | 1 - Informational | 2 - Personal | 3 - Management | 4 - Consequence | 5 - Collaboration | 6 - Refocusing |
|---------------|-------------------|--------------|----------------|-----------------|-------------------|----------------|
| 0 | 1 | 2 | 3 | 4 | 5 | 6 |
| 2 | 3 | 1 | 4 | 5 | 1 | 2 |
| 5 | 3 | 3 | 1 | 3 | 4 | 1 |
| 5 | 4 | 3 | 1 | 6 | 4 | 5 |
| 3 | 2 | 3 | 2 | 5 | 5 | 6 |
| 4 | 2 | 2 | 3 | 6 | 4 | 3 |
| 19 | 14 | 12 | 11 | 25 | 18 | 17 |

ID 017

Peak score: Stage 0: Awareness / Unconcerned stage (97)
Second highest score: Stage 1: Informational (54) and consequence concerns (54)

Analysis:
 The **high awareness** (unconcerned) concern are an indication that the respondent are *not concerned about this innovation at this time*. The respondent are *occupied with other things and other priorities* at this stage.

Informational concerns are indicated as the second highest score . With this score the respondent indicates that a desire to know what resources are available if they decide to adopt the innovation

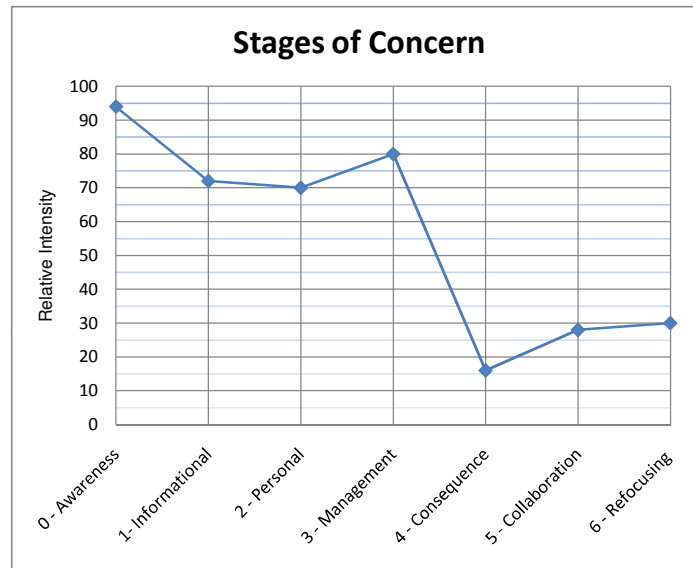
The respondent also indicated consequence concerns about evaluation his/her impact on students and the desire to use feedback from students to change the program.

The need to modify use of the innovation based on experience of students. are also indicated as a refocusing concern.

ID018 ID018
Question Raw data

| | 0 - Awareness | 1 - Informational | 2 - Personal | 3 - Management | 4 - Consequence | 5 - Collaboration | 6 - Refocusing |
|---|---------------|-------------------|--------------|----------------|-----------------|-------------------|----------------|
| | 0 | 1 | 2 | 3 | 4 | 5 | 6 |
| 1 | 17 | 20 | 19 | 21 | 15 | 15 | 12 |
| 2 | 94 | 72 | 70 | 80 | 16 | 28 | 30 |

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| | 0 - Awareness | 1 - Informational | 2 - Personal | 3 - Management | 4 - Consequence | 5 - Collaboration | 6 - Refocusing |
|----|---------------|-------------------|--------------|----------------|-----------------|-------------------|----------------|
| | 0 | 1 | 2 | 3 | 4 | 5 | 6 |
| 1 | 7 | 1 | 7 | 1 | 0 | 1 | |
| 1 | 1 | 1 | 1 | 1 | 1 | 3 | 1 |
| 7 | 6 | 5 | 7 | 1 | 0 | 6 | |
| 1 | 6 | 6 | 5 | 7 | 6 | 4 | |
| 7 | 0 | 6 | 1 | 5 | 6 | 0 | |
| 17 | 20 | 19 | 21 | 15 | 15 | 12 | |

ID:018

Peak score: Stage 0: Awareness / Unconcerned stage (94)
Second highest score: Stage 3: Management concerns (80)

Analysis:

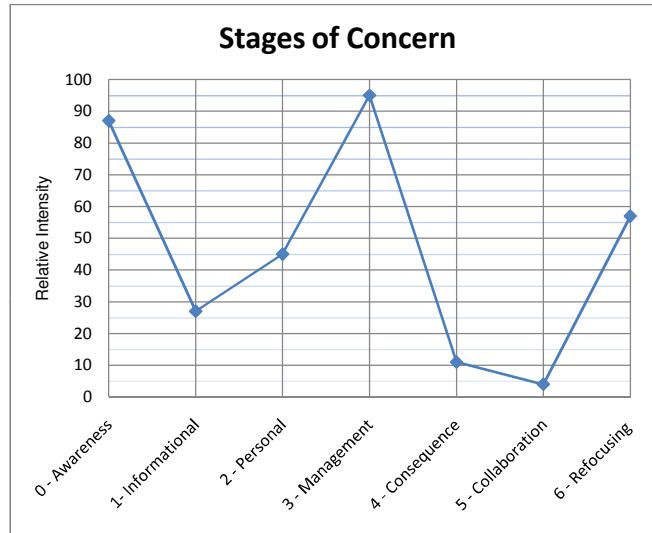
The respondent indicates high **awareness** concerns. This means that the respondent are preoccupied with thing other than the innovation. Other priorities prevents him/her to focus any attention on this innovation.

Management concerns are the second highest concern where the respondent indicates a concern about having enough time to organise him/herself everyday and also the inability to manage all that the innovation requires.

The respondent indicates very little knowledge of the innovation as the biggest informational concern.

ID019 ID019
Question Raw data

| | 0 - Awareness | 1- Informational | 2 - Personal | 3 - Management | 4 - Consequence | 5 - Collaboration | 6 - Refocusing |
|---|---------------|------------------|--------------|----------------|-----------------|-------------------|----------------|
| 1 | 0 | 1 | 2 | 3 | 4 | 5 | 6 |
| 2 | 15 | 5 | 11 | 28 | 13 | 4 | 18 |
| 3 | 87 | 27 | 45 | 95 | 11 | 4 | 57 |



| 0 - Awareness | 1- Informational | 2 - Personal | 3 - Management | 4 - Consequence | 5 - Collaboration | 6 - Refocusing |
|---------------|------------------|--------------|----------------|-----------------|-------------------|----------------|
| 0 | 1 | 2 | 3 | 4 | 5 | 6 |
| 1 | 3 | 0 | 7 | 1 | 0 | 6 |
| 0 | 0 | 0 | 4 | 0 | 0 | 6 |
| 4 | 0 | 2 | 6 | 3 | 0 | 2 |
| 4 | 2 | 6 | 6 | 5 | 4 | 4 |
| 6 | 0 | 3 | 5 | 4 | 0 | 0 |
| 15 | 5 | 11 | 28 | 13 | 4 | 18 |

ID 019:

Peak score: Stage 3: Management concerns (95)
Second highest score: Stage 0: Awareness concerns (87)

Analysis

The highest concern have to do with management. Enough time to organise him/herself and time spend on non academic problems relating to the system are some of the major management concerns. but also the inability to manage all that the innovation requires.

This respondent indicated that aware concerns are the highest at this stage. Currently, other priorities prevent him/her from focusing attention on the new clickUP.

Refocusing concerns has to do with revising the use of the innovation. The respondent indicates that he/she now knows of some other approaches that might work better.

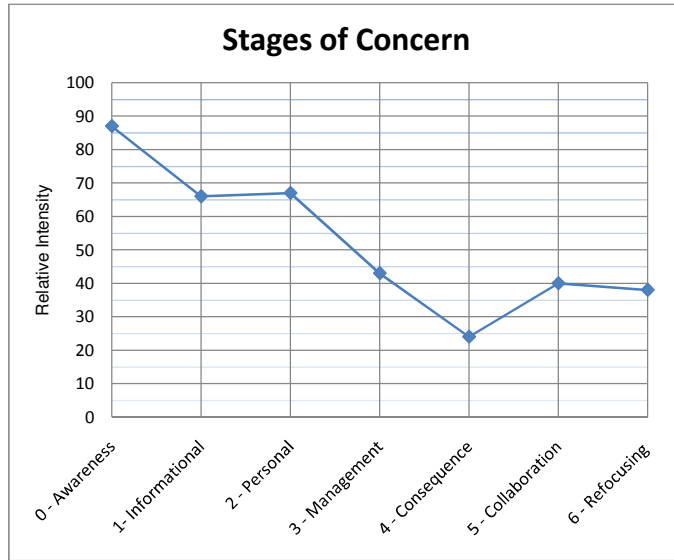
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ID020 ID020
Question Raw data

1 4
2 1
3 1
4 5
5 3
6 5
7 4
8 2
9 2
10 5
11 3
12 5
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14 6
15 4
16 3
17 3
18 1
19 1
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22 4
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24 5
25 1
26 2
27 6
28 4
29 3
30 1
31 4
32 5
33 4
34 1
35 1

| | 0 - Awareness | 1- Informational | 2 - Personal | 3 - Management | 4 - Consequence | 5 - Collaboration | 6 - Refocusing |
|---|---------------|------------------|--------------|----------------|-----------------|-------------------|----------------|
| 0 | 15 | 18 | 18 | 12 | 18 | 18 | 14 |
| 1 | 87 | 66 | 67 | 43 | 24 | 40 | 38 |



| | 0 - Awareness | 1- Informational | 2 - Personal | 3 - Management | 4 - Consequence | 5 - Collaboration | 6 - Refocusing |
|---|---------------|------------------|--------------|----------------|-----------------|-------------------|----------------|
| 0 | 1 | 5 | 4 | 5 | 4 | 3 | 1 |
| 1 | 5 | 6 | 3 | 2 | 3 | 5 | 2 |
| 2 | 4 | 3 | 3 | 3 | 1 | 1 | 3 |
| 3 | 6 | 2 | 4 | 1 | 5 | 6 | 4 |
| 4 | 1 | 1 | 4 | 1 | 5 | 3 | 4 |
| 5 | 15 | 18 | 18 | 12 | 18 | 18 | 14 |

ID 020:

Peak scores: : Stage 0: Awareness concerns (87)

Second highest score: Stage 2 and 1 - Personal (67) and Informational concerns (66)

Analysis:

The **high awareness** (unconcerned) concern are an indication that this respondent spend little time thinking about the innovation and are not concerned about it.

Personal concerns are driven by the desire to know what the effect will be on his/her professional status, time and energy commitments required by the new clickUP; and how my role will change when I am using the new clickUP.

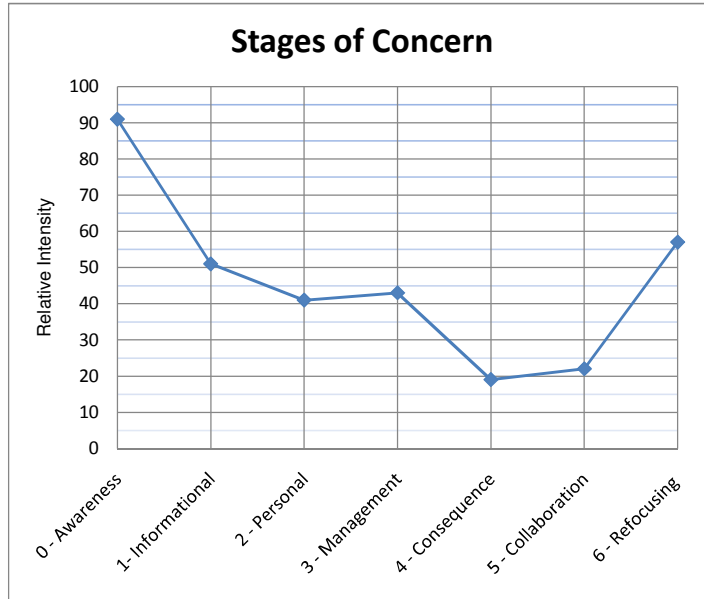
Informational concerns are the limited knowledge of the respondent and the desire to discuss the possibility of using the innovation.

The respondent's main management concern is having enough time to organise him/herself each day.

ID021 ID021
Question Raw data

| | 0 - Awareness | 1 - Informational | 2 - Personal | 3 - Management | 4 - Consequence | 5 - Collaboration | 6 - Refocusing |
|---|---------------|-------------------|--------------|----------------|-----------------|-------------------|----------------|
| 0 | 16 | 13 | 10 | 12 | 16 | 13 | 18 |
| 1 | 91 | 51 | 41 | 43 | 19 | 22 | 57 |

- 1 1
- 2 6
- 3 1
- 4 4
- 5 1
- 6 5
- 7 2
- 8 2
- 9 2
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- 11 2
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- 13 2
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- 18 6
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- 24 6
- 25 2
- 26 2
- 27 2
- 28 2
- 29 2
- 30 5
- 31 2
- 32 3
- 33 3
- 34 2
- 35 2



| 0 - Awareness | 1 - Informational | 2 - Personal | 3 - Management | 4 - Consequence | 5 - Collaboration | 6 - Refocusing |
|---------------|-------------------|--------------|----------------|-----------------|-------------------|----------------|
| 0 | 1 | 2 | 3 | 4 | 5 | 6 |
| 1 | 5 | 2 | 4 | 1 | 1 | 6 |
| 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| 3 | 2 | 1 | 2 | 4 | 6 | 2 |
| 4 | 2 | 2 | 2 | 6 | 2 | 6 |
| 5 | 2 | 3 | 2 | 3 | 2 | 2 |
| 16 | 13 | 10 | 12 | 16 | 13 | 18 |

ID 020:

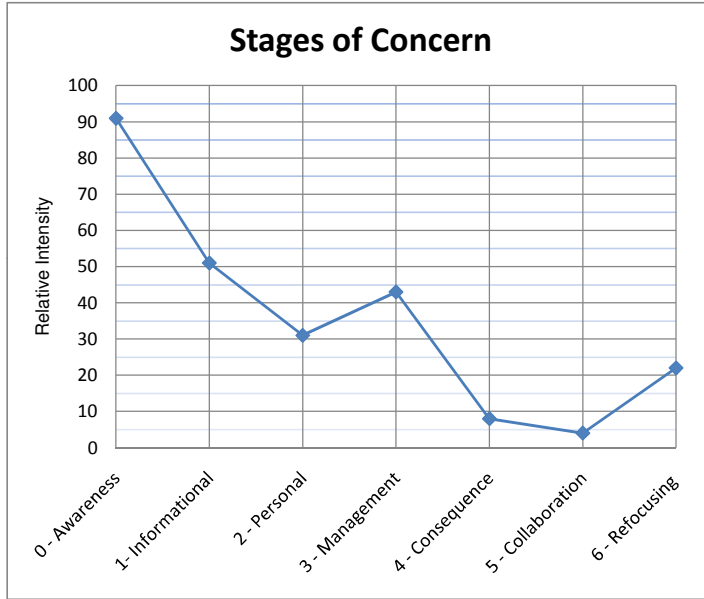
Peak scores: : Stage 0: Awareness concerns (91)
Second highest score: Stage 6 - Refocusing concerns (57)

Analysis:
The **high awareness** (unconcerned) concern are an indication that this respondent spend little time thinking about the innovation and are not concerned about it.

ID022 **ID022**
Question Raw data

1 1
2 4
3 1
4 6
5 0
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7 3
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11 1
12 7
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19 5
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22 1
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24 3
25 3
26 2
27 1
28 1
29 1
30 4
31 3
32 1
33 1
34 2
35 4

| | 0 - Awareness | 1 - Informational | 2 - Personal | 3 - Management | 4 - Consequence | 5 - Collaboration | 6 - Refocusing |
|--|---------------|-------------------|--------------|----------------|-----------------|-------------------|----------------|
| | 0 | 1 | 2 | 3 | 4 | 5 | 6 |
| | 16 | 13 | 7 | 12 | 11 | 4 | 10 |
| | 91 | 51 | 31 | 43 | 8 | 4 | 22 |



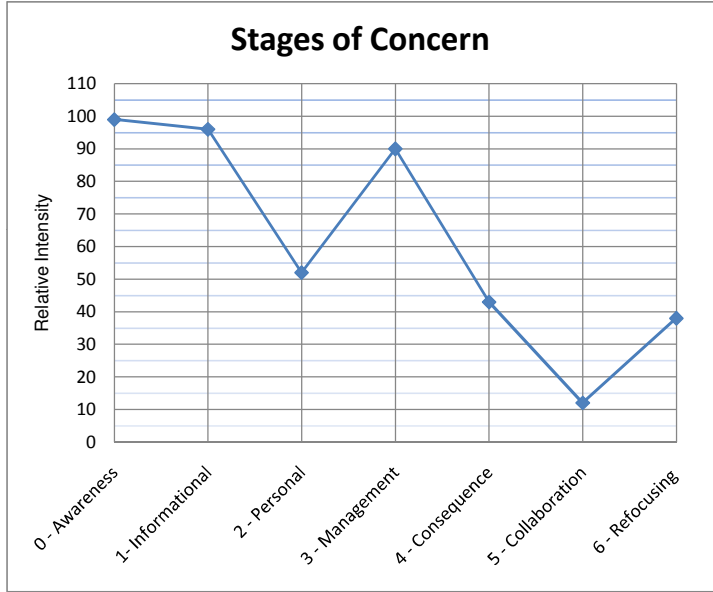
| | 0 - Awareness | 1 - Informational | 2 - Personal | 3 - Management | 4 - Consequence | 5 - Collaboration | 6 - Refocusing |
|--|---------------|-------------------|--------------|----------------|-----------------|-------------------|----------------|
| | 0 | 1 | 2 | 3 | 4 | 5 | 6 |
| | 1 | 5 | 3 | 6 | 1 | 0 | 4 |
| | 7 | 1 | 1 | 0 | 1 | 1 | 0 |
| | 1 | 1 | 1 | 1 | 5 | 1 | 2 |
| | 3 | 2 | 1 | 3 | 3 | 1 | 1 |
| | 4 | 4 | 1 | 2 | 1 | 1 | 3 |
| | 16 | 13 | 7 | 12 | 11 | 4 | 10 |

ID023 ID023
Question Raw data

| | 0 - Awareness | 1 - Informational | 2 - Personal | 3 - Management | 4 - Consequence | 5 - Collaboration | 6 - Refocusing |
|----|---------------|-------------------|--------------|----------------|-----------------|-------------------|----------------|
| 0 | 0 | 1 | 2 | 3 | 4 | 5 | 6 |
| 24 | 24 | 29 | 13 | 25 | 23 | 9 | 14 |
| 99 | 99 | 96 | 52 | 90 | 43 | 12 | 38 |

| | 0 - Awareness | 1 - Informational | 2 - Personal | 3 - Management | 4 - Consequence | 5 - Collaboration | 6 - Refocusing |
|----|---------------|-------------------|--------------|----------------|-----------------|-------------------|----------------|
| 0 | 0 | 1 | 2 | 3 | 4 | 5 | 6 |
| 4 | 4 | 7 | 0 | 6 | 5 | 1 | 0 |
| 1 | 1 | 6 | 0 | 0 | 5 | 0 | 0 |
| 7 | 7 | 6 | 4 | 6 | 4 | 0 | 7 |
| 5 | 5 | 6 | 5 | 7 | 5 | 4 | 3 |
| 7 | 7 | 4 | 4 | 6 | 4 | 4 | 4 |
| 24 | 24 | 29 | 13 | 25 | 23 | 9 | 14 |

- 1 5
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- 3 4
- 4 6
- 5 1
- 6 7
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- 8 0
- 9 0
- 10 0
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- 13 0
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- 34 6
- 35 4

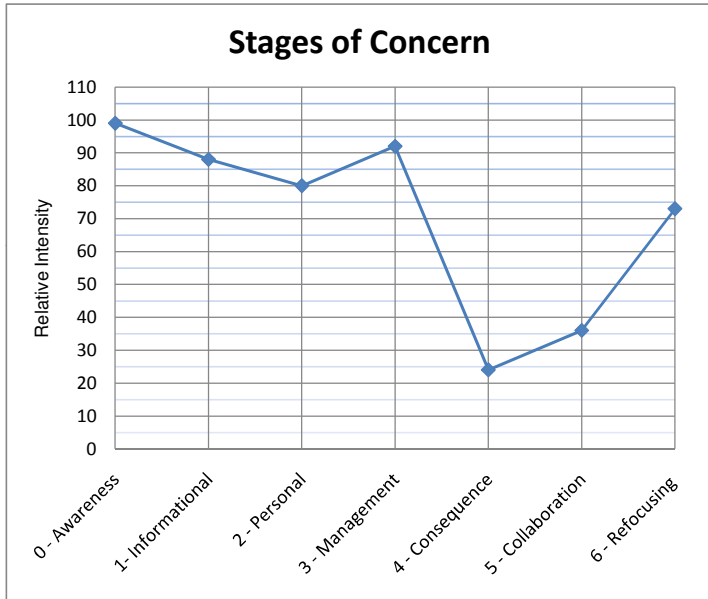


ID024 ID024
Question Raw data

| | 0 - Awareness | 1 - Informational | 2 - Personal | 3 - Management | 4 - Consequence | 5 - Collaboration | 6 - Refocusing |
|----|---------------|-------------------|--------------|----------------|-----------------|-------------------|----------------|
| 0 | 0 | 1 | 2 | 3 | 4 | 5 | 6 |
| 21 | 21 | 24 | 23 | 26 | 18 | 17 | 22 |
| 99 | 99 | 88 | 80 | 92 | 24 | 36 | 73 |

| | 0 - Awareness | 1 - Informational | 2 - Personal | 3 - Management | 4 - Consequence | 5 - Collaboration | 6 - Refocusing |
|----|---------------|-------------------|--------------|----------------|-----------------|-------------------|----------------|
| 0 | 0 | 1 | 2 | 3 | 4 | 5 | 6 |
| 5 | 5 | 3 | 2 | 6 | 2 | 2 | 4 |
| 6 | 6 | 6 | 4 | 2 | 5 | 5 | 2 |
| 3 | 3 | 6 | 6 | 6 | 2 | 4 | 4 |
| 3 | 3 | 5 | 6 | 6 | 4 | 4 | 6 |
| 4 | 4 | 4 | 5 | 6 | 5 | 2 | 6 |
| 21 | 21 | 24 | 23 | 26 | 18 | 17 | 22 |

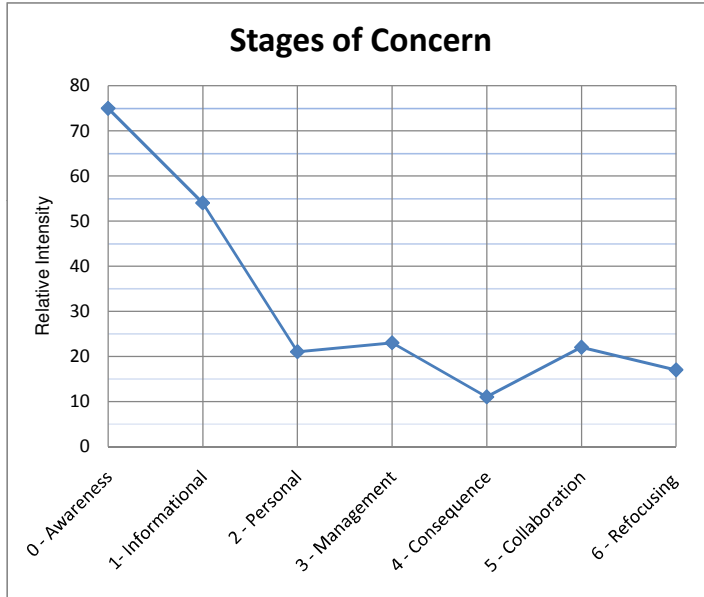
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- 34 6
- 35 4



ID025 ID025
Question Raw data
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23 4
24 6
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26 2
27 2
28 1
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30 3
31 0
32 0
33 2
34 1
35 1

| | 0 - Awareness | 1 - Informational | 2 - Personal | 3 - Management | 4 - Consequence | 5 - Collaboration | 6 - Refocusing |
|----|---------------|-------------------|--------------|----------------|-----------------|-------------------|----------------|
| 0 | 0 | 1 | 2 | 3 | 4 | 5 | 6 |
| 13 | 13 | 14 | 4 | 7 | 13 | 13 | 8 |
| 75 | 75 | 54 | 21 | 23 | 11 | 22 | 17 |

| | 0 - Awareness | 1 - Informational | 2 - Personal | 3 - Management | 4 - Consequence | 5 - Collaboration | 6 - Refocusing |
|----|---------------|-------------------|--------------|----------------|-----------------|-------------------|----------------|
| 0 | 0 | 1 | 2 | 3 | 4 | 5 | 6 |
| 0 | 0 | 7 | 0 | 4 | 1 | 7 | 6 |
| 5 | 5 | 2 | 0 | 0 | 1 | 3 | 0 |
| 1 | 1 | 2 | 1 | 1 | 5 | 1 | 1 |
| 4 | 4 | 2 | 1 | 1 | 6 | 2 | 1 |
| 3 | 3 | 1 | 2 | 1 | 0 | 0 | 0 |
| 13 | 13 | 14 | 4 | 7 | 13 | 13 | 8 |

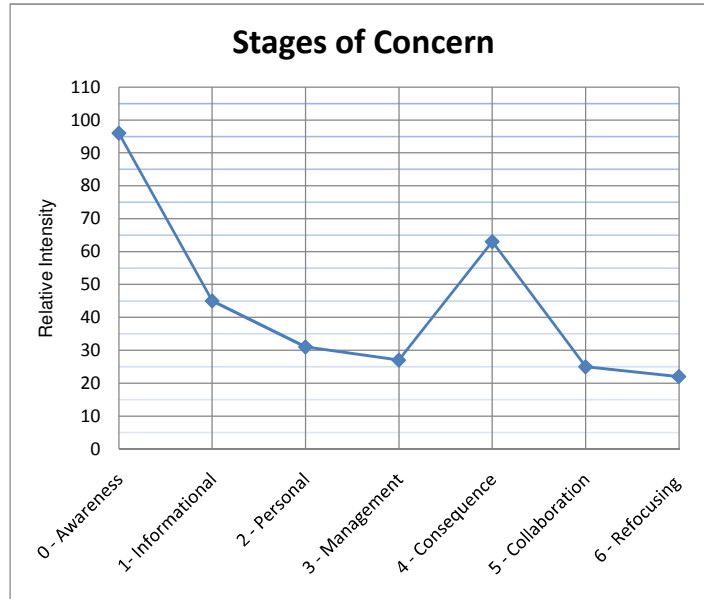


ID026 ID026
Question Raw data

| | 0 - Awareness | 1 - Informational | 2 - Personal | 3 - Management | 4 - Consequence | 5 - Collaboration | 6 - Refocusing |
|---|---------------|-------------------|--------------|----------------|-----------------|-------------------|----------------|
| 0 | 18 | 11 | 7 | 8 | 27 | 14 | 10 |
| 1 | 96 | 45 | 31 | 27 | 63 | 25 | 22 |

| | 0 - Awareness | 1 - Informational | 2 - Personal | 3 - Management | 4 - Consequence | 5 - Collaboration | 6 - Refocusing |
|---|---------------|-------------------|--------------|----------------|-----------------|-------------------|----------------|
| 0 | 1 | 3 | 0 | 2 | 6 | 3 | 1 |
| 1 | 6 | 1 | 1 | 1 | 5 | 2 | 1 |
| 2 | 4 | 3 | 2 | 1 | 5 | 2 | 2 |
| 3 | 4 | 2 | 2 | 2 | 6 | 4 | 4 |
| 4 | 3 | 2 | 2 | 2 | 5 | 3 | 2 |
| 5 | 18 | 11 | 7 | 8 | 27 | 14 | 10 |

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- 3 1
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- 11 5
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- 14 1
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- 32 5
- 33 2
- 34 2
- 35 2

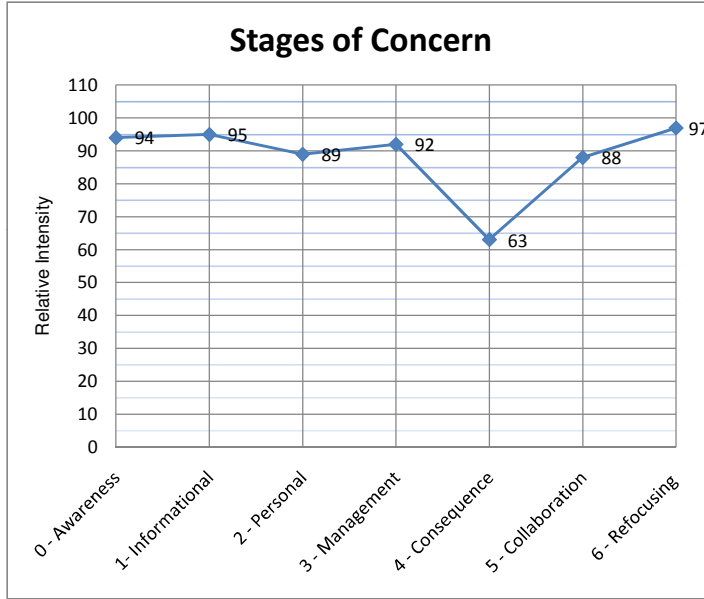


ID027 ID027
Question Raw data

| | 0 - Awareness | 1 - Informational | 2 - Personal | 3 - Management | 4 - Consequence | 5 - Collaboration | 6 - Refocusing |
|---|---------------|-------------------|--------------|----------------|-----------------|-------------------|----------------|
| 0 | 17 | 28 | 27 | 26 | 27 | 30 | 31 |
| 1 | 94 | 95 | 89 | 92 | 63 | 88 | 97 |

| | 0 - Awareness | 1 - Informational | 2 - Personal | 3 - Management | 4 - Consequence | 5 - Collaboration | 6 - Refocusing |
|---|---------------|-------------------|--------------|----------------|-----------------|-------------------|----------------|
| 0 | 5 | 7 | 5 | 7 | 3 | 4 | 6 |
| 1 | 3 | 4 | 5 | 4 | 7 | 7 | 7 |
| 2 | 2 | 6 | 5 | 7 | 6 | 7 | 6 |
| 3 | 3 | 7 | 5 | 4 | 6 | 6 | 6 |
| 4 | 4 | 4 | 7 | 4 | 5 | 6 | 6 |
| 5 | 17 | 28 | 27 | 26 | 27 | 30 | 31 |

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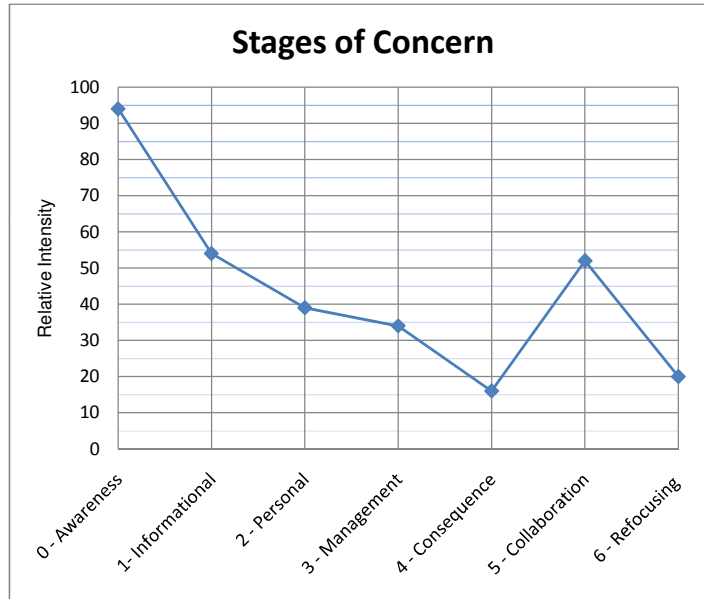


ID028 ID028
Question Raw data

| | 0 - Awareness | 1 - Informational | 2 - Personal | 3 - Management | 4 - Consequence | 5 - Collaboration | 6 - Refocusing |
|----|---------------|-------------------|--------------|----------------|-----------------|-------------------|----------------|
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| 17 | 17 | 14 | 9 | 10 | 15 | 21 | 9 |
| 94 | 94 | 54 | 39 | 34 | 16 | 52 | 20 |

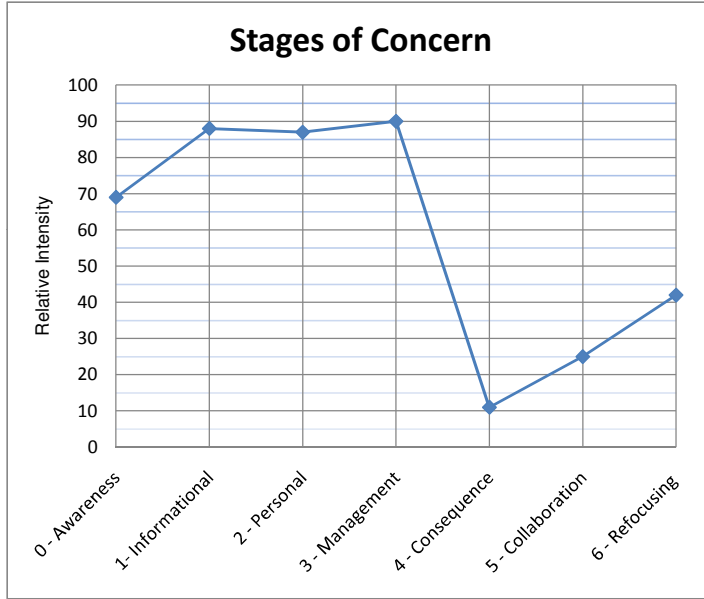
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|----|---------------|-------------------|--------------|----------------|-----------------|-------------------|----------------|
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| 2 | 2 | 4 | 1 | 2 | 2 | 2 | 1 |
| 6 | 6 | 2 | 2 | 2 | 2 | 7 | 2 |
| 3 | 3 | 3 | 2 | 2 | 3 | 3 | 2 |
| 3 | 3 | 3 | 2 | 2 | 6 | 7 | 2 |
| 3 | 3 | 2 | 2 | 2 | 2 | 2 | 2 |
| 17 | 17 | 14 | 9 | 10 | 15 | 21 | 9 |

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- 34 2
- 35 2



- ID029** **ID029**
- Question Raw data
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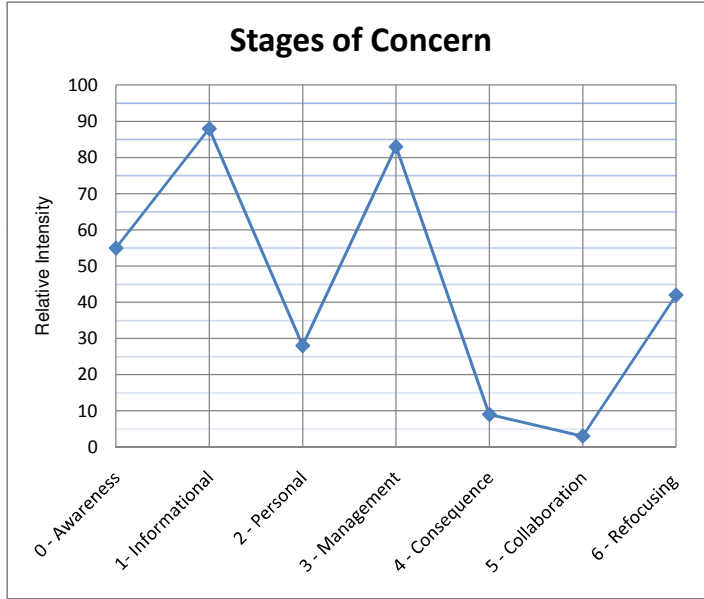
| | 0 - Awareness | 1 - Informational | 2 - Personal | 3 - Management | 4 - Consequence | 5 - Collaboration | 6 - Refocusing |
|----|---------------|-------------------|--------------|----------------|-----------------|-------------------|----------------|
| 0 | 12 | 24 | 26 | 25 | 13 | 14 | 15 |
| 69 | 88 | 87 | 90 | 11 | 25 | 42 | |



| | 0 - Awareness | 1 - Informational | 2 - Personal | 3 - Management | 4 - Consequence | 5 - Collaboration | 6 - Refocusing |
|----|---------------|-------------------|--------------|----------------|-----------------|-------------------|----------------|
| 0 | 1 | 2 | 3 | 4 | 5 | 6 | |
| 1 | 7 | 7 | 4 | 1 | 1 | 1 | |
| 1 | 4 | 1 | 4 | 1 | 4 | 4 | |
| 4 | 4 | 7 | 7 | 4 | 4 | 4 | |
| 3 | 7 | 4 | 5 | 4 | 3 | 4 | |
| 3 | 2 | 7 | 5 | 3 | 2 | 2 | |
| 12 | 24 | 26 | 25 | 13 | 14 | 15 | |

ID030 ID030
Question Raw data
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3 3
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17 1
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19 2
20 7
21 0
22 0
23 3
24 3
25 4
26 4
27 3
28 2
29 0
30 1
31 0
32 3
33 3
34 4
35 7

| | 0 - Awareness | 1 - Informational | 2 - Personal | 3 - Management | 4 - Consequence | 5 - Collaboration | 6 - Refocusing |
|----|---------------|-------------------|--------------|----------------|-----------------|-------------------|----------------|
| 0 | 10 | 24 | 6 | 22 | 12 | 3 | 15 |
| 55 | 88 | 28 | 83 | 9 | 3 | 42 | |

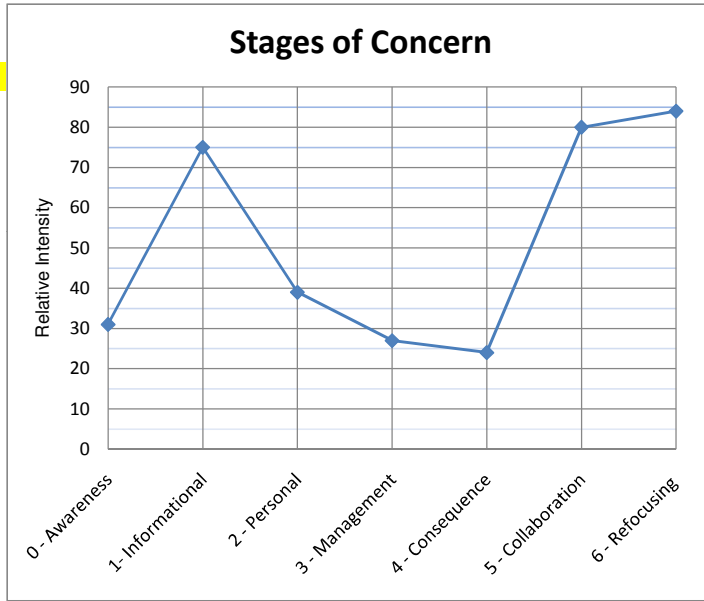


| | 0 - Awareness | 1 - Informational | 2 - Personal | 3 - Management | 4 - Consequence | 5 - Collaboration | 6 - Refocusing |
|----|---------------|-------------------|--------------|----------------|-----------------|-------------------|----------------|
| 0 | 3 | 2 | 0 | 6 | 3 | 0 | 6 |
| 3 | 6 | 0 | 1 | 1 | 0 | 2 | |
| 0 | 5 | 1 | 7 | 2 | 0 | 7 | |
| 3 | 4 | 2 | 4 | 3 | 3 | 0 | |
| 1 | 7 | 3 | 4 | 3 | 0 | 0 | |
| 10 | 24 | 6 | 22 | 12 | 3 | 15 | |

ID031 **ID031**
Question Raw data
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14 6
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16 2
17 4
18 7
19 1
20 5
21 0
22 7
23 7
24 1
25 7
26 7
27 0
28 7
29 6
30 7
31 7
32 7
33 7
34 1
35 2

| | 0 - Awareness | 1 - Informational | 2 - Personal | 3 - Management | 4 - Consequence | 5 - Collaboration | 6 - Refocusing |
|----|---------------|-------------------|--------------|----------------|-----------------|-------------------|----------------|
| 0 | 1 | 2 | 3 | 4 | 5 | 6 | |
| 7 | 21 | 9 | 8 | 18 | 28 | 25 | |
| 31 | 75 | 39 | 27 | 24 | 80 | 84 | |

| | 0 - Awareness | 1 - Informational | 2 - Personal | 3 - Management | 4 - Consequence | 5 - Collaboration | 6 - Refocusing |
|---|---------------|-------------------|--------------|----------------|-----------------|-------------------|----------------|
| 0 | 1 | 2 | 3 | 4 | 5 | 6 | |
| 0 | 0 | 0 | 5 | 0 | 5 | 5 | |
| 0 | 6 | 0 | 0 | 0 | 7 | 1 | |
| 1 | 6 | 2 | 1 | 4 | 2 | 7 | |
| 0 | 7 | 0 | 1 | 7 | 7 | 5 | |
| 6 | 2 | 7 | 1 | 7 | 7 | 7 | |
| 7 | 21 | 9 | 8 | 18 | 28 | 25 | |

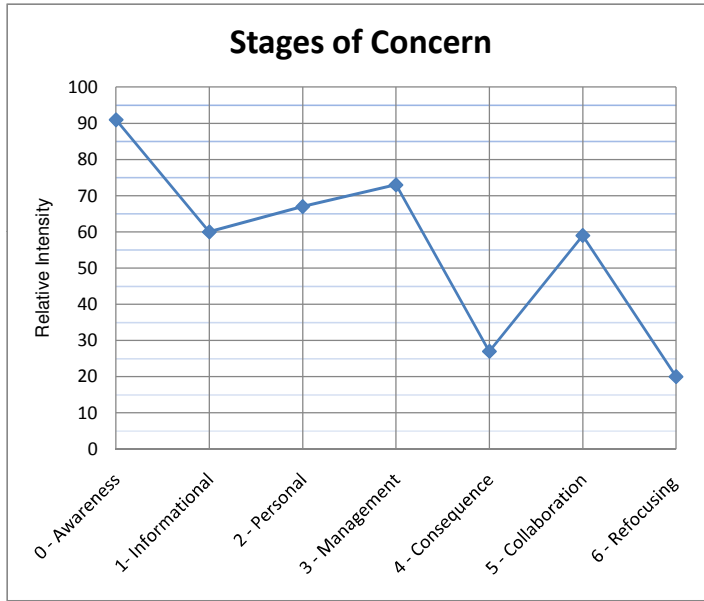


ID032 ID032
Question Raw data

| | 0 - Awareness | 1 - Informational | 2 - Personal | 3 - Management | 4 - Consequence | 5 - Collaboration | 6 - Refocusing |
|----|---------------|-------------------|--------------|----------------|-----------------|-------------------|----------------|
| 0 | 16 | 16 | 18 | 19 | 19 | 23 | 9 |
| 91 | 60 | 67 | 73 | 27 | 59 | 20 | |

| | 0 - Awareness | 1 - Informational | 2 - Personal | 3 - Management | 4 - Consequence | 5 - Collaboration | 6 - Refocusing |
|----|---------------|-------------------|--------------|----------------|-----------------|-------------------|----------------|
| 0 | 7 | 1 | 4 | 1 | 1 | 7 | 1 |
| 4 | 6 | 1 | 6 | 5 | 1 | 1 | 1 |
| 3 | 1 | 7 | 6 | 6 | 7 | 6 | 6 |
| 2 | 1 | 5 | 1 | 5 | 7 | 1 | 1 |
| 16 | 16 | 18 | 19 | 19 | 23 | 9 | 9 |

- 1 2
- 2 0
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- 4 5
- 5 1
- 6 7
- 7 1
- 8 1
- 9 1
- 10 7
- 11 1
- 12 7
- 13 4
- 14 1
- 15 6
- 16 6
- 17 1
- 18 1
- 19 5
- 20 1
- 21 4
- 22 6
- 23 3
- 24 6
- 25 6
- 26 1
- 27 7
- 28 7
- 29 7
- 30 2
- 31 1
- 32 5
- 33 5
- 34 1
- 35 1



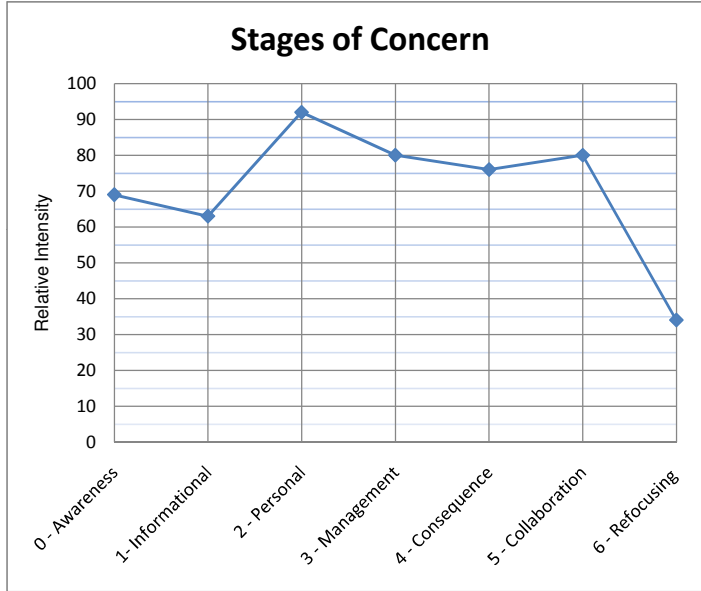
ID033 ID033

Question Raw data

- 1 4
- 2 1
- 3 1
- 4 7
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- 6 2
- 7 6
- 8 4
- 9 2
- 10 6
- 11 6
- 12 0
- 13 7
- 14 6
- 15 6
- 16 0
- 17 6
- 18 5
- 19 6
- 20 6
- 21 4
- 22 2
- 23 0
- 24 7
- 25 4
- 26 0
- 27 7
- 28 6
- 29 4
- 30 7
- 31 2
- 32 7
- 33 4
- 34 6
- 35 3

| | 0 - Awareness | 1- Informational | 2 - Personal | 3 - Management | 4 - Consequence | 5 - Collaboration | 6 - Refocusing |
|--|---------------|------------------|--------------|----------------|-----------------|-------------------|----------------|
| | 0 | 1 | 2 | 3 | 4 | 5 | 6 |
| | 12 | 17 | 29 | 21 | 30 | 28 | 13 |
| | 69 | 63 | 92 | 80 | 76 | 80 | 34 |

| | 0 - Awareness | 1- Informational | 2 - Personal | 3 - Management | 4 - Consequence | 5 - Collaboration | 6 - Refocusing |
|--|---------------|------------------|--------------|----------------|-----------------|-------------------|----------------|
| | 0 | 1 | 2 | 3 | 4 | 5 | 6 |
| | 1 | 2 | 6 | 7 | 4 | 6 | 1 |
| | 0 | 6 | 7 | 4 | 6 | 6 | 2 |
| | 4 | 6 | 6 | 0 | 6 | 5 | 6 |
| | 0 | 0 | 6 | 4 | 7 | 7 | 2 |
| | 7 | 3 | 4 | 6 | 7 | 4 | 2 |
| | 12 | 17 | 29 | 21 | 30 | 28 | 13 |

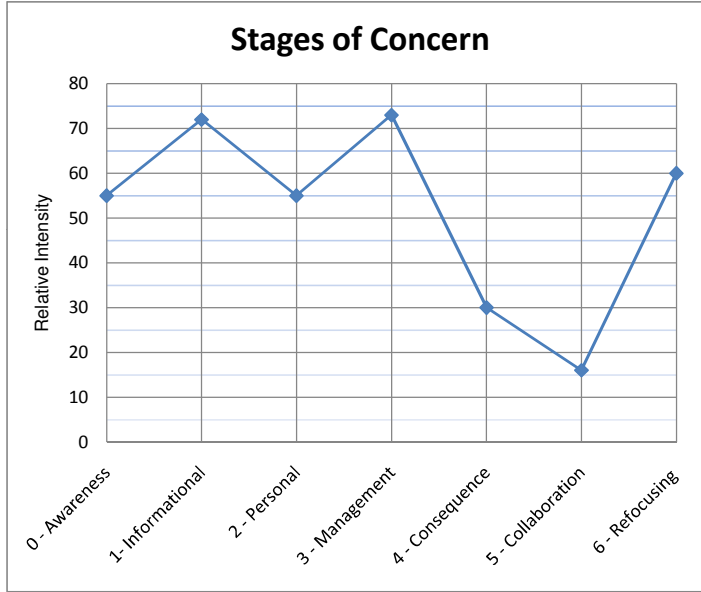


ID034 ID034

Question Raw data

- 1 4
- 2 7
- 3 0
- 4 6
- 5 6
- 6 6
- 7 1
- 8 1
- 9 1
- 10 5
- 11 3
- 12 0
- 13 0
- 14 7
- 15 7
- 16 4
- 17 6
- 18 0
- 19 6
- 20 6
- 21 3
- 22 2
- 23 2
- 24 7
- 25 5
- 26 0
- 27 0
- 28 7
- 29 0
- 30 5
- 31 3
- 32 0
- 33 0
- 34 3
- 35 0

| | 0 - Awareness | 1- Informational | 2 - Personal | 3 - Management | 4 - Consequence | 5 - Collaboration | 6 - Refocusing |
|----|---------------|------------------|--------------|----------------|-----------------|-------------------|----------------|
| 0 | 0 | 1 | 2 | 3 | 4 | 5 | 6 |
| 10 | 10 | 20 | 14 | 19 | 20 | 11 | 19 |
| 55 | 55 | 72 | 55 | 73 | 30 | 16 | 60 |

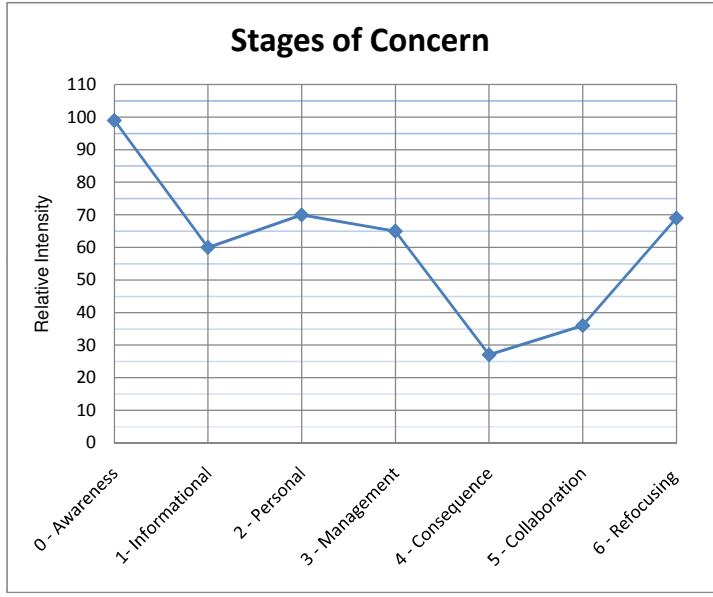


| | 0 - Awareness | 1- Informational | 2 - Personal | 3 - Management | 4 - Consequence | 5 - Collaboration | 6 - Refocusing |
|----|---------------|------------------|--------------|----------------|-----------------|-------------------|----------------|
| 0 | 0 | 1 | 2 | 3 | 4 | 5 | 6 |
| 0 | 0 | 6 | 1 | 6 | 4 | 6 | 7 |
| 0 | 0 | 7 | 0 | 1 | 3 | 5 | 1 |
| 3 | 3 | 7 | 6 | 4 | 6 | 0 | 6 |
| 2 | 2 | 0 | 7 | 5 | 7 | 0 | 2 |
| 5 | 5 | 0 | 0 | 3 | 0 | 0 | 3 |
| 10 | 10 | 20 | 14 | 19 | 20 | 11 | 19 |

ID035 ID035

| Question | Raw data | 0 - Awareness | 1 - Informational | 2 - Personal | 3 - Management | 4 - Consequence | 5 - Collaboration | 6 - Refocusing |
|----------|----------|---------------|-------------------|--------------|----------------|-----------------|-------------------|----------------|
| 1 | 3 | 23 | 16 | 19 | 17 | 19 | 17 | 21 |
| 2 | 5 | 99 | 60 | 70 | 65 | 27 | 36 | 69 |

- 3
- 2
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- 6
- 3
- 3
- 4
- 4
- 3



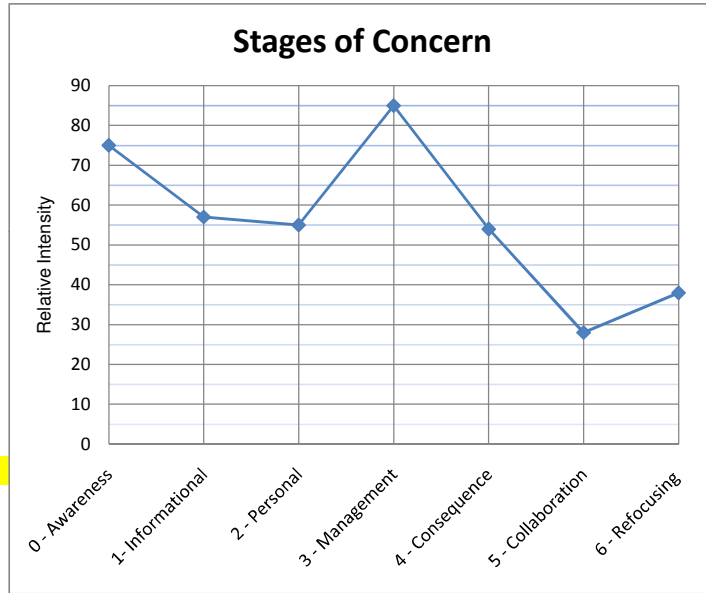
| 0 - Awareness | 1 - Informational | 2 - Personal | 3 - Management | 4 - Consequence | 5 - Collaboration | 6 - Refocusing |
|---------------|-------------------|--------------|----------------|-----------------|-------------------|----------------|
| 0 | 1 | 2 | 3 | 4 | 5 | 6 |
| 2 | 2 | 5 | 5 | 3 | 3 | 5 |
| 4 | 3 | 3 | 4 | 4 | 3 | 4 |
| 6 | 5 | 4 | 2 | 4 | 4 | 5 |
| 5 | 3 | 3 | 2 | 5 | 4 | 4 |
| 6 | 3 | 4 | 4 | 3 | 3 | 3 |
| 23 | 16 | 19 | 17 | 19 | 17 | 21 |

ID036 ID036

Question Raw data

- 1 6
- 2 0
- 3 0
- 4 6
- 5 1
- 6 3
- 7 2
- 8 5
- 9 4
- 10 2
- 11 5
- 12 1
- 13 2
- 14 2
- 15 4
- 16 6
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- 21 3
- 22 6
- 23 4
- 24 6
- 25 3
- 26 3
- 27 3
- 28 1
- 29 7
- 30 5
- 31 3
- 32 4
- 33 4
- 34 3

| 0 - Awareness | 1- Informational | 2 - Personal | 3 - Management | 4 - Consequence | 5 - Collaboration | 6 - Refocusing |
|---------------|------------------|--------------|----------------|-----------------|-------------------|----------------|
| 0 | 1 | 2 | 3 | 4 | 5 | 6 |
| 13 | 15 | 14 | 23 | 25 | 15 | 14 |
| 75 | 57 | 55 | 85 | 54 | 28 | 38 |

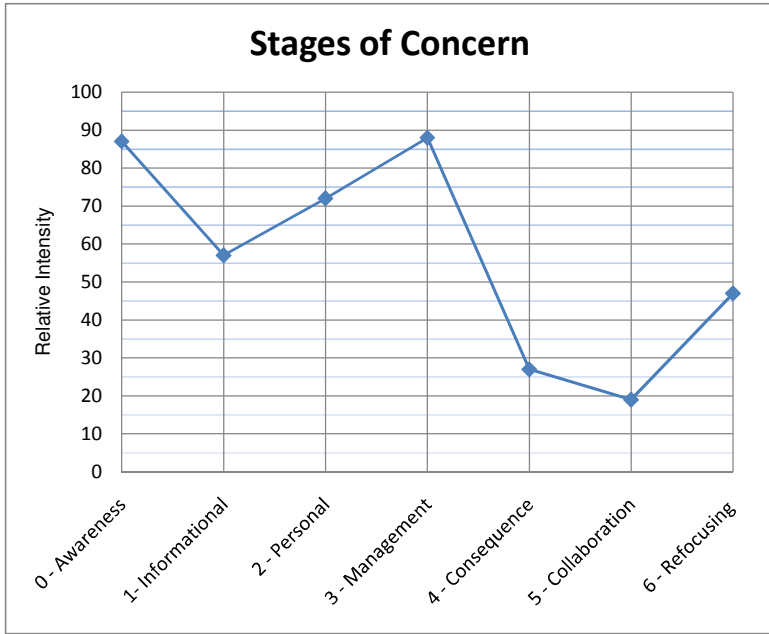


| 0 - Awareness | 1- Informational | 2 - Personal | 3 - Management | 4 - Consequence | 5 - Collaboration | 6 - Refocusing |
|---------------|------------------|--------------|----------------|-----------------|-------------------|----------------|
| 0 | 1 | 2 | 3 | 4 | 5 | 6 |
| 0 | 3 | 2 | 6 | 6 | 1 | 0 |
| 1 | 2 | 2 | 5 | 5 | 2 | 4 |
| 0 | 4 | 5 | 6 | 4 | 2 | 1 |
| 6 | 3 | 3 | 6 | 4 | 3 | 3 |
| 7 | 3 | 4 | 4 | 3 | 1 | 5 |
| 14 | 15 | 16 | 27 | 22 | 9 | 13 |

ID037 **ID037**
Question Raw data
1 1
2 0
3 0
4 5
5 0
6 1
7 4
8 4
9 4
10 5
11 3
12 0
13 3
14 3
15 4
16 6
17 4
18 1
19 5
20 4
21 5
22 4
23 4
24 6
25 4
26 5
27 5
28 6
29 1
30 6
31 4
32 4
33 3
34 5
35 2

| | 0 - Awareness | 1 - Informational | 2 - Personal | 3 - Management | 4 - Consequence | 5 - Collaboration | 6 - Refocusing |
|----|---------------|-------------------|--------------|----------------|-----------------|-------------------|----------------|
| 0 | 0 | 1 | 2 | 3 | 4 | 5 | 6 |
| 15 | 15 | 15 | 20 | 24 | 19 | 12 | 16 |
| 87 | 87 | 57 | 72 | 88 | 27 | 19 | 47 |

| 0 - Awareness | 1 - Informational | 2 - Personal | 3 - Management | 4 - Consequence | 5 - Collaboration | 6 - Refocusing |
|---------------|-------------------|--------------|----------------|-----------------|-------------------|----------------|
| 0 | 1 | 2 | 3 | 4 | 5 | 6 |
| 0 | 1 | 4 | 5 | 1 | 0 | 0 |
| 0 | 3 | 3 | 4 | 3 | 5 | 4 |
| 5 | 4 | 4 | 6 | 5 | 1 | 4 |
| 4 | 5 | 6 | 4 | 6 | 5 | 4 |
| 6 | 2 | 3 | 5 | 4 | 1 | 4 |
| 15 | 15 | 20 | 24 | 19 | 12 | 16 |

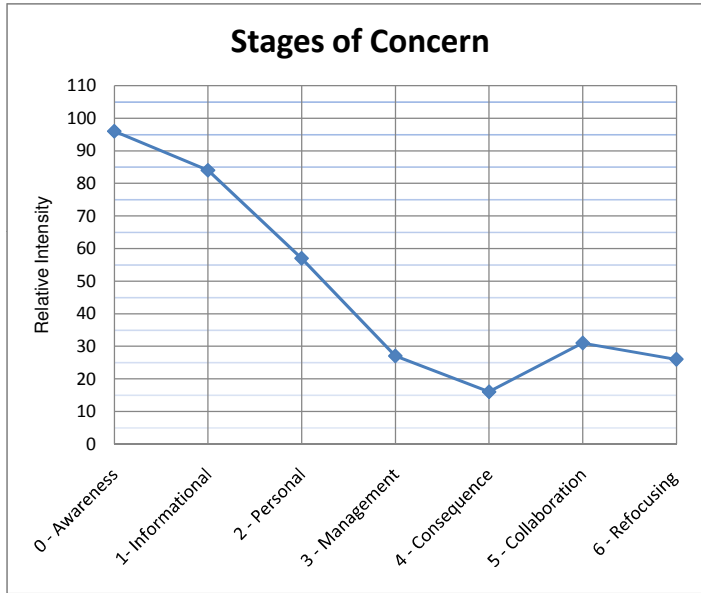


ID038 ID038

Question Raw data

- 1 2
- 2 1
- 3 1
- 4 1
- 5 1
- 6 4
- 7 3
- 8 0
- 9 3
- 10 4
- 11 2
- 12 1
- 13 3
- 14 3
- 15 3
- 16 4
- 17 4
- 18 1
- 19 1
- 20 1
- 21 7
- 22 1
- 23 4
- 24 4
- 25 3
- 26 7
- 27 3
- 28 5
- 29 7
- 30 5
- 31 5
- 32 6
- 33 0
- 34 0
- 35 6

| | 0 - Awareness | 1- Informational | 2 - Personal | 3 - Management | 4 - Consequence | 5 - Collaboration | 6 - Refocusing |
|---|---------------|------------------|--------------|----------------|-----------------|-------------------|----------------|
| 0 | 18 | 23 | 15 | 8 | 15 | 16 | 11 |
| 1 | 96 | 84 | 57 | 27 | 16 | 31 | 26 |



| | 0 - Awareness | 1- Informational | 2 - Personal | 3 - Management | 4 - Consequence | 5 - Collaboration | 6 - Refocusing |
|---|---------------|------------------|--------------|----------------|-----------------|-------------------|----------------|
| 0 | 1 | 4 | 3 | 1 | 2 | 1 | 1 |
| 1 | 3 | 3 | 0 | 2 | 4 | 3 | |
| 2 | 7 | 3 | 4 | 4 | 1 | 1 | 1 |
| 3 | 4 | 7 | 5 | 3 | 4 | 3 | 1 |
| 4 | 5 | 6 | 0 | 0 | 6 | 7 | 5 |
| 5 | 18 | 23 | 15 | 8 | 15 | 16 | 11 |

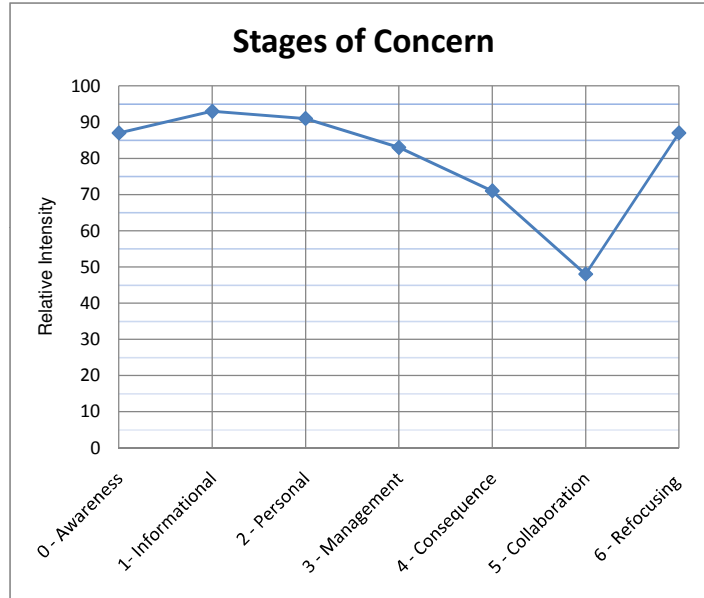
ID039 ID039

Question Raw data

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- 2 6
- 3 2
- 4 4
- 5 2
- 6 5
- 7 5
- 8 5
- 9 5
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- 15 6
- 16 5
- 17 5
- 18 4
- 19 5
- 20 4
- 21 3
- 22 5
- 23 4
- 24 6
- 25 3
- 26 5
- 27 5
- 28 6
- 29 4
- 30 4
- 31 6
- 32 6
- 33 6
- 34 5
- 35 6

| | 0 - Awareness | 1- Informational | 2 - Personal | 3 - Management | 4 - Consequence | 5 - Collaboration | 6 - Refocusing |
|----|---------------|------------------|--------------|----------------|-----------------|-------------------|----------------|
| 0 | 0 | 1 | 2 | 3 | 4 | 5 | 6 |
| 15 | 15 | 27 | 28 | 22 | 29 | 20 | 26 |
| 87 | 87 | 93 | 91 | 83 | 71 | 48 | 87 |

| | 0 - Awareness | 1- Informational | 2 - Personal | 3 - Management | 4 - Consequence | 5 - Collaboration | 6 - Refocusing |
|----|---------------|------------------|--------------|----------------|-----------------|-------------------|----------------|
| 0 | 0 | 1 | 2 | 3 | 4 | 5 | 6 |
| 2 | 2 | 5 | 5 | 4 | 6 | 2 | 6 |
| 2 | 2 | 5 | 6 | 5 | 6 | 5 | 5 |
| 3 | 3 | 6 | 5 | 5 | 5 | 4 | 4 |
| 4 | 4 | 5 | 6 | 3 | 6 | 5 | 5 |
| 4 | 4 | 6 | 6 | 5 | 6 | 4 | 6 |
| 15 | 15 | 27 | 28 | 22 | 29 | 20 | 26 |



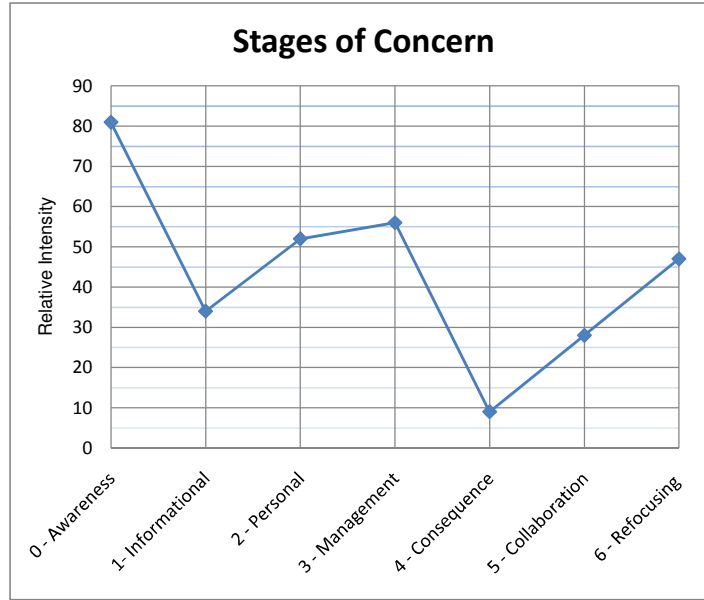
ID040 ID040

Question Raw data

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- 4 4
- 5 6
- 6 2
- 7 6
- 8 1
- 9 1
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- 17 1
- 18 1
- 19 2
- 20 2
- 21 5
- 22 6
- 23 1
- 24 7
- 25 6
- 26 2
- 27 2
- 28 3
- 29 0
- 30 1
- 31 1
- 32 1
- 33 2
- 34 2
- 35 1

| 0 - Awareness | 1 - Informational | 2 - Personal | 3 - Management | 4 - Consequence | 5 - Collaboration | 6 - Refocusing |
|---------------|-------------------|--------------|----------------|-----------------|-------------------|----------------|
| 0 | 1 | 2 | 3 | 4 | 5 | 6 |
| 14 | 7 | 13 | 15 | 12 | 15 | 16 |
| 81 | 34 | 52 | 56 | 9 | 28 | 47 |

| 0 - Awareness | 1 - Informational | 2 - Personal | 3 - Management | 4 - Consequence | 5 - Collaboration | 6 - Refocusing |
|---------------|-------------------|--------------|----------------|-----------------|-------------------|----------------|
| 0 | 1 | 2 | 3 | 4 | 5 | 6 |
| 0 | 2 | 6 | 4 | 1 | 6 | 6 |
| 7 | 1 | 1 | 1 | 1 | 6 | 1 |
| 5 | 1 | 1 | 2 | 2 | 1 | 2 |
| 1 | 2 | 3 | 6 | 7 | 2 | 6 |
| 1 | 1 | 2 | 2 | 1 | 0 | 1 |
| 14 | 7 | 13 | 15 | 12 | 15 | 16 |

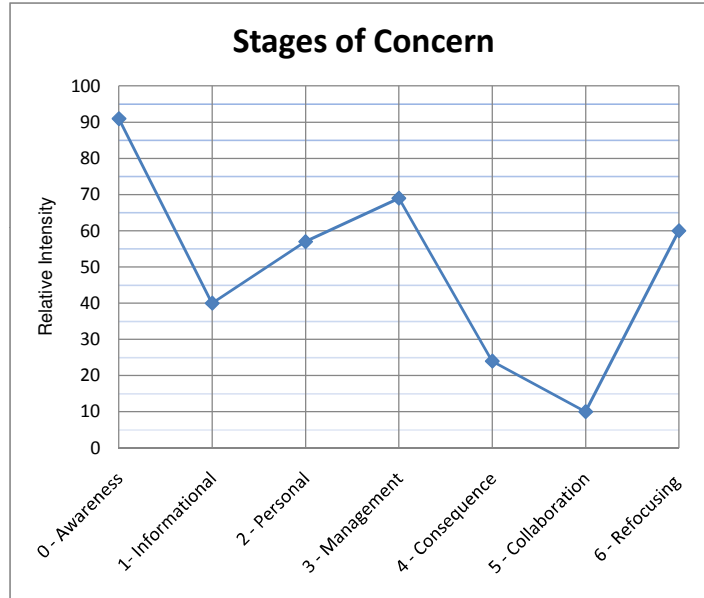


ID041 ID041

Question Raw data

- 1 2
- 2 5
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- 4 5
- 5 1
- 6 3
- 7 1
- 8 2
- 9 7
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- 13 7
- 14 1
- 15 1
- 16 3
- 17 4
- 18 1
- 19 7
- 20 5
- 21 7
- 22 1
- 23 5
- 24 4
- 25 6
- 26 3
- 27 4
- 28 3
- 29 1
- 30 3
- 31 1
- 32 0
- 33 0
- 34 2
- 35 1

| | 0 - Awareness | 1- Informational | 2 - Personal | 3 - Management | 4 - Consequence | 5 - Collaboration | 6 - Refocusing |
|----|---------------|------------------|--------------|----------------|-----------------|-------------------|----------------|
| 0 | 16 | 9 | 15 | 18 | 18 | 8 | 19 |
| 91 | 40 | 57 | 69 | 24 | 10 | 60 | |



| | 0 - Awareness | 1- Informational | 2 - Personal | 3 - Management | 4 - Consequence | 5 - Collaboration | 6 - Refocusing |
|----|---------------|------------------|--------------|----------------|-----------------|-------------------|----------------|
| 0 | 3 | 1 | 5 | 2 | 1 | 5 | |
| 1 | 1 | 7 | 2 | 5 | 1 | 7 | |
| 7 | 1 | 4 | 3 | 7 | 1 | 5 | |
| 5 | 3 | 3 | 6 | 4 | 4 | 1 | |
| 3 | 1 | 0 | 2 | 0 | 1 | 1 | |
| 16 | 9 | 15 | 18 | 18 | 8 | 19 | |

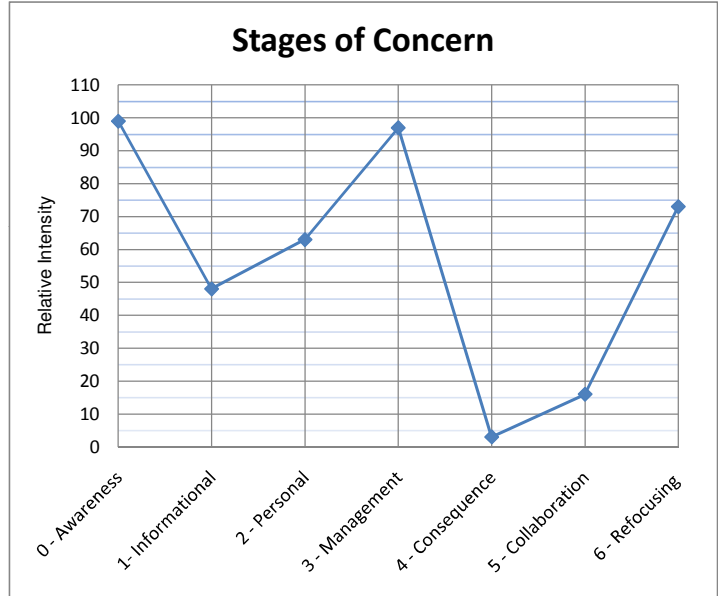
ID042

ID042

Question Raw data

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- 10 3
- 11 1
- 12 7
- 13 3
- 14 3
- 15 3
- 16 7
- 17 7
- 18 0
- 19 3
- 20 0
- 21 3
- 22 3
- 23 7
- 24 0
- 25 5
- 26 4
- 27 7
- 28 5
- 29 1
- 30 7
- 31 5
- 32 1
- 33 2
- 34 7
- 35 2

| | 0 - Awareness | 1- Informational | 2 - Personal | 3 - Management | 4 - Consequence | 5 - Collaboration | 6 - Refocusing |
|---|---------------|------------------|--------------|----------------|-----------------|-------------------|----------------|
| 0 | 0 | 1 | 2 | 3 | 4 | 5 | 6 |
| 1 | 29 | 12 | 17 | 29 | 6 | 11 | 22 |
| 2 | 99 | 48 | 63 | 97 | 3 | 16 | 73 |



| 0 - Awareness | 1- Informational | 2 - Personal | 3 - Management | 4 - Consequence | 5 - Collaboration | 6 - Refocusing |
|---------------|------------------|--------------|----------------|-----------------|-------------------|----------------|
| 0 | 1 | 2 | 3 | 4 | 5 | 6 |
| 5 | 0 | 0 | 7 | 1 | 0 | 7 |
| 7 | 3 | 3 | 3 | 1 | 3 | 7 |
| 3 | 3 | 7 | 7 | 3 | 0 | 0 |
| 7 | 4 | 5 | 5 | 0 | 7 | 3 |
| 7 | 2 | 2 | 7 | 1 | 1 | 5 |
| 29 | 12 | 17 | 29 | 6 | 11 | 22 |

5.8

1.2

Missing data calculation

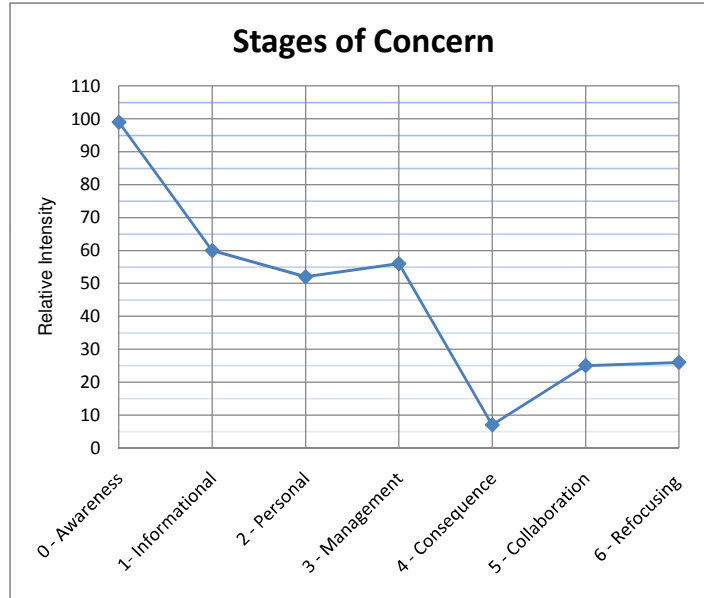
ID043 ID043

Question Raw data

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- 2 1
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- 5 1
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- 9 2
- 10 4
- 11 1
- 12 6
- 13 1
- 14 5
- 15 5
- 16 4
- 17 4
- 18 1
- 19 4
- 20 4
- 21 7
- 22 1
- 23 4
- 24 3
- 25 2
- 26 2
- 27 4
- 28 4
- 29 4
- 30 5
- 31 3
- 32 1
- 33 1
- 34 3
- 35 1

| | 0 - Awareness | 1- Informational | 2 - Personal | 3 - Management | 4 - Consequence | 5 - Collaboration | 6 - Refocusing |
|----|---------------|------------------|--------------|----------------|-----------------|-------------------|----------------|
| 0 | 23 | 16 | 13 | 15 | 10 | 14 | 11 |
| 99 | 60 | 52 | 56 | 7 | 25 | 26 | |

| 0 - Awareness | 1- Informational | 2 - Personal | 3 - Management | 4 - Consequence | 5 - Collaboration | 6 - Refocusing |
|---------------|------------------|--------------|----------------|-----------------|-------------------|----------------|
| 0 | 1 | 3 | 3 | 3 | 1 | 1 |
| 1 | 3 | 3 | 3 | 1 | 1 | 1 |
| 6 | 5 | 1 | 3 | 1 | 4 | 2 |
| 7 | 5 | 4 | 4 | 4 | 1 | 4 |
| 4 | 2 | 4 | 2 | 3 | 4 | 1 |
| 5 | 1 | 1 | 3 | 1 | 4 | 3 |
| 23 | 16 | 13 | 15 | 10 | 14 | 11 |



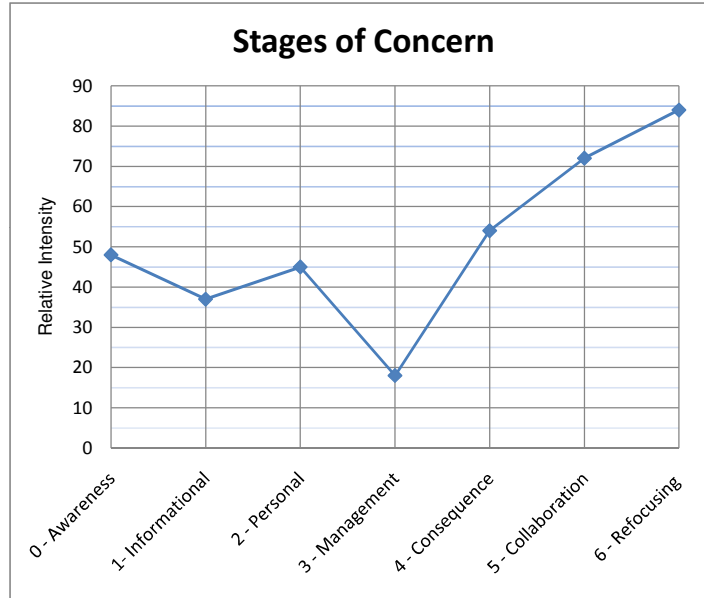
ID044 ID044

Question Raw data

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- 16 0
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- 18 7
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- 20 7
- 21 0
- 22 7
- 23 4
- 24 7
- 25 0
- 26 3
- 27 7
- 28 4
- 29 2
- 30 0
- 31 4
- 32 7
- 33 0
- 34 0
- 35 0

| | 0 - Awareness | 1- Informational | 2 - Personal | 3 - Management | 4 - Consequence | 5 - Collaboration | 6 - Refocusing |
|--|---------------|------------------|--------------|----------------|-----------------|-------------------|----------------|
| | 0 | 1 | 2 | 3 | 4 | 5 | 6 |
| | 9 | 8 | 11 | 6 | 25 | 26 | 25 |
| | 48 | 37 | 45 | 18 | 54 | 72 | 84 |

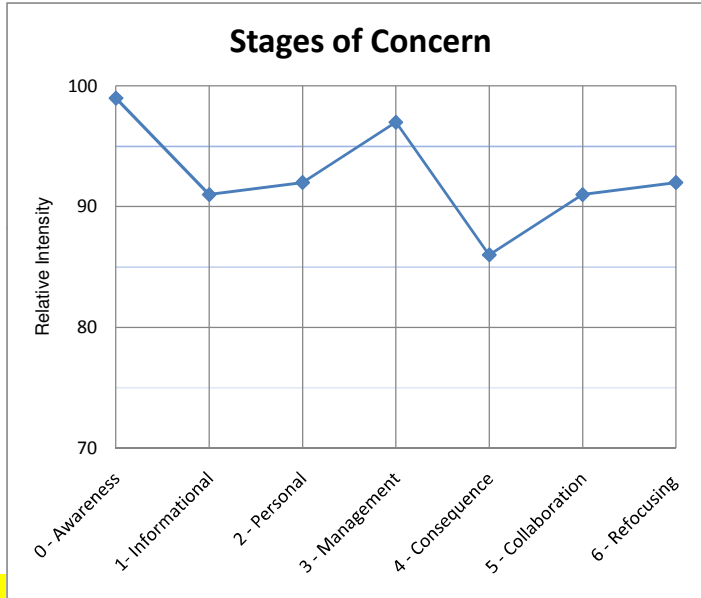
| 0 - Awareness | 1- Informational | 2 - Personal | 3 - Management | 4 - Consequence | 5 - Collaboration | 6 - Refocusing |
|---------------|------------------|--------------|----------------|-----------------|-------------------|----------------|
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| 3 | 5 | 7 | 2 | 7 | 3 | 7 |
| 2 | 0 | 0 | 4 | 4 | 7 | 0 |
| 0 | 0 | 0 | 0 | 0 | 7 | 7 |
| 4 | 3 | 4 | 0 | 7 | 7 | 7 |
| 0 | 0 | 0 | 0 | 7 | 2 | 4 |
| 9 | 8 | 11 | 6 | 25 | 26 | 25 |



ID045 ID045
Question Raw data

| | 0 - Awareness | 1- Informational | 2 - Personal | 3 - Management | 4 - Consequence | 5 - Collaboration | 6 - Refocusing |
|---|---------------|------------------|--------------|----------------|-----------------|-------------------|----------------|
| | 0 | 1 | 2 | 3 | 4 | 5 | 6 |
| 1 | 25 | 26 | 29 | 29 | 32 | 31 | 28 |
| 2 | 99 | 91 | 92 | 97 | 86 | 91 | 92 |

- 3
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- 26
- 27
- 28
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- 30
- 31
- 32
- 33
- 34
- 35



| 0 - Awareness | 1- Informational | 2 - Personal | 3 - Management | 4 - Consequence | 5 - Collaboration | 6 - Refocusing |
|---------------|------------------|--------------|----------------|-----------------|-------------------|----------------|
| 0 | 1 | 2 | 3 | 4 | 5 | 6 |
| 7 | 4 | 4 | 6 | 7 | 6 | 5 |
| 2 | 7 | 6 | 4 | 7 | 7 | 7 |
| 7 | 7 | 5 | 7 | 7 | 6 | 7 |
| 2 | 4 | 7 | 5 | 7 | 7 | 7 |
| 7 | 4 | 7 | 7 | 4 | 5 | 2 |
| 25 | 26 | 29 | 29 | 32 | 31 | 28 |

5.2

5.8

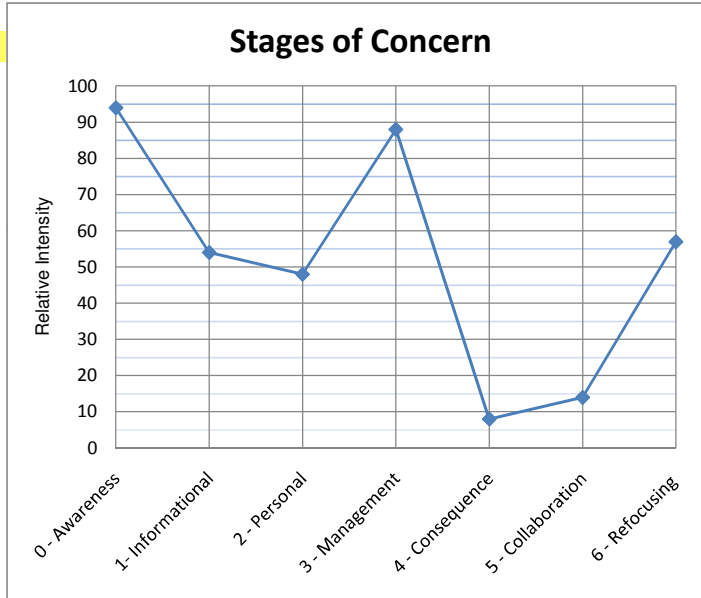
Missing data calculation

ID046 ID046

Question Raw data

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- 15 2
- 16 5
- 17 3
- 18 1
- 19 3
- 20 5
- 21 4
- 22 4
- 23 2
- 24 4
- 25 4
- 26 5
- 27 5
- 28 2
- 29 0
- 30 6
- 31 0
- 32 0
- 33 0
- 34 4
- 35 0

| | 0 - Awareness | 1 - Informational | 2 - Personal | 3 - Management | 4 - Consequence | 5 - Collaboration | 6 - Refocusing |
|--|---------------|-------------------|--------------|----------------|-----------------|-------------------|----------------|
| | 0 | 1 | 2 | 3 | 4 | 5 | 6 |
| | 17 | 14 | 12 | 24 | 11 | 10 | 18 |
| | 94 | 54 | 48 | 88 | 8 | 14 | 57 |



| | 0 - Awareness | 1 - Informational | 2 - Personal | 3 - Management | 4 - Consequence | 5 - Collaboration | 6 - Refocusing |
|--|---------------|-------------------|--------------|----------------|-----------------|-------------------|----------------|
| | 0 | 1 | 2 | 3 | 4 | 5 | 6 |
| | 1 | 2 | 7 | 6 | 2 | 0 | 5 |
| | 4 | 5 | 0 | 5 | 2 | 4 | 4 |
| | 4 | 2 | 3 | 5 | 3 | 1 | 5 |
| | 2 | 5 | 2 | 4 | 4 | 5 | 4 |
| | 6 | 0 | 0 | 4 | 0 | 0 | 0 |
| | 17 | 14 | 12 | 24 | 11 | 10 | 18 |

2.8

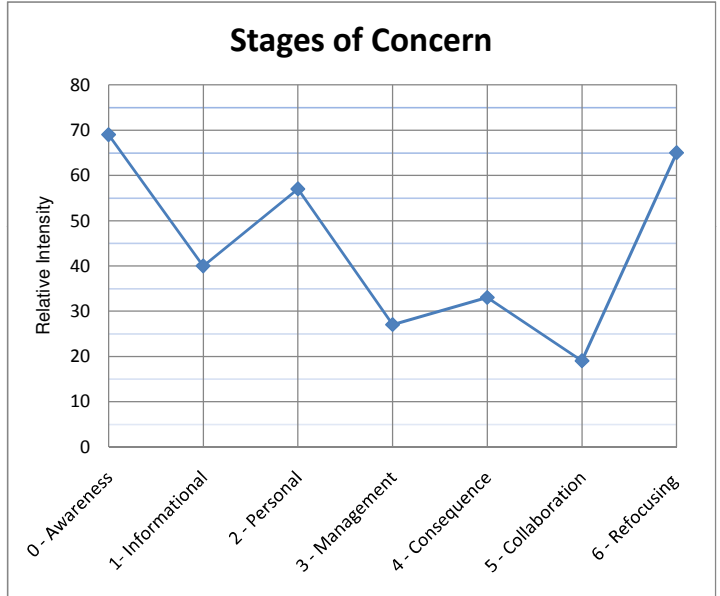
Missing data calculation

ID047 ID047

Question Raw data

| | 0 - Awareness | 1 - Informational | 2 - Personal | 3 - Management | 4 - Consequence | 5 - Collaboration | 6 - Refocusing |
|---|---------------|-------------------|--------------|----------------|-----------------|-------------------|----------------|
| | 0 | 1 | 2 | 3 | 4 | 5 | 6 |
| 1 | 12 | 9 | 15 | 8 | 21 | 12 | 20 |
| 2 | 69 | 40 | 57 | 27 | 33 | 19 | 65 |

- 3
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- 0



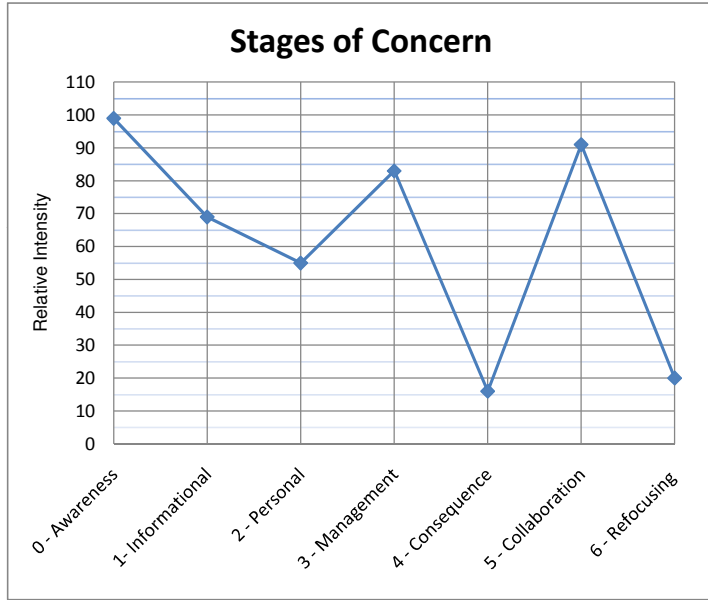
| 0 - Awareness | 1 - Informational | 2 - Personal | 3 - Management | 4 - Consequence | 5 - Collaboration | 6 - Refocusing |
|---------------|-------------------|--------------|----------------|-----------------|-------------------|----------------|
| 0 | 1 | 2 | 3 | 4 | 5 | 6 |
| 1 | 1 | 1 | 3 | 3 | 1 | 1 |
| 1 | 4 | 1 | 1 | 1 | 1 | 3 |
| 5 | 4 | 5 | 2 | 6 | 2 | 5 |
| 2 | 0 | 2 | 2 | 5 | 6 | 7 |
| 3 | 0 | 6 | 0 | 6 | 2 | 4 |
| 12 | 9 | 15 | 8 | 21 | 12 | 20 |

0 Missing data calculation

ID048 ID048

Question Raw data

| | 0 - Awareness | 1 - Informational | 2 - Personal | 3 - Management | 4 - Consequence | 5 - Collaboration | 6 - Refocusing |
|---|---------------|-------------------|--------------|----------------|-----------------|-------------------|----------------|
| | 0 | 1 | 2 | 3 | 4 | 5 | 6 |
| 1 | 23 | 19 | 14 | 22 | 15 | 31 | 9 |
| 2 | 99 | 69 | 55 | 83 | 16 | 91 | 20 |



| 0 - Awareness | 1 - Informational | 2 - Personal | 3 - Management | 4 - Consequence | 5 - Collaboration | 6 - Refocusing |
|---------------|-------------------|--------------|----------------|-----------------|-------------------|----------------|
| 0 | 1 | 2 | 3 | 4 | 5 | 6 |
| 1 | 5 | 1 | 5 | 1 | 6 | 1 |
| 6 | 0 | 0 | 1 | 2 | 7 | 1 |
| 6 | 7 | 5 | 5 | 0 | 5 | 0 |
| 5 | 6 | 2 | 6 | 6 | 7 | 7 |
| 5 | 1 | 6 | 5 | 6 | 6 | 0 |
| 23 | 19 | 14 | 22 | 15 | 31 | 9 |

0

Missing data calculation

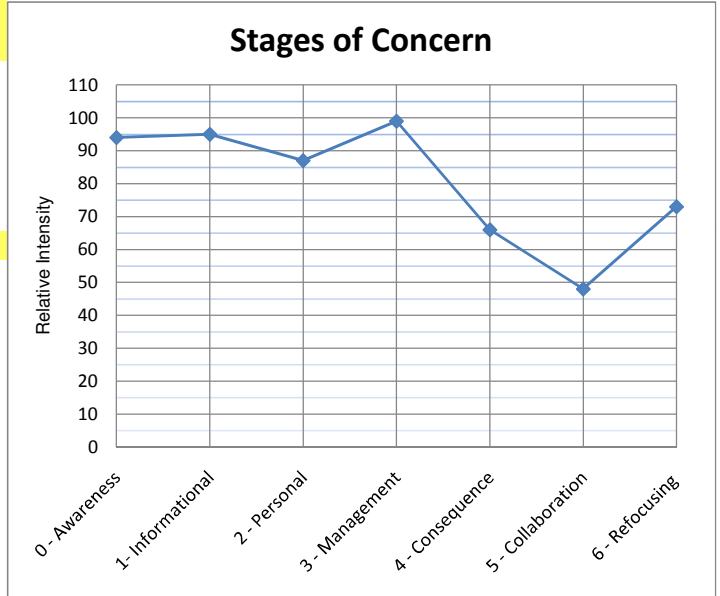
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- 30
- 31
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- 34
- 35

ID049 ID049

Question Raw data

| | 0 - Awareness | 1 - Informational | 2 - Personal | 3 - Management | 4 - Consequence | 5 - Collaboration | 6 - Refocusing |
|---|---------------|-------------------|--------------|----------------|-----------------|-------------------|----------------|
| | 0 | 1 | 2 | 3 | 4 | 5 | 6 |
| 1 | 17 | 28 | 26 | 34 | 28 | 20 | 22 |
| 2 | 94 | 95 | 87 | 99 | 66 | 48 | 73 |

- 1
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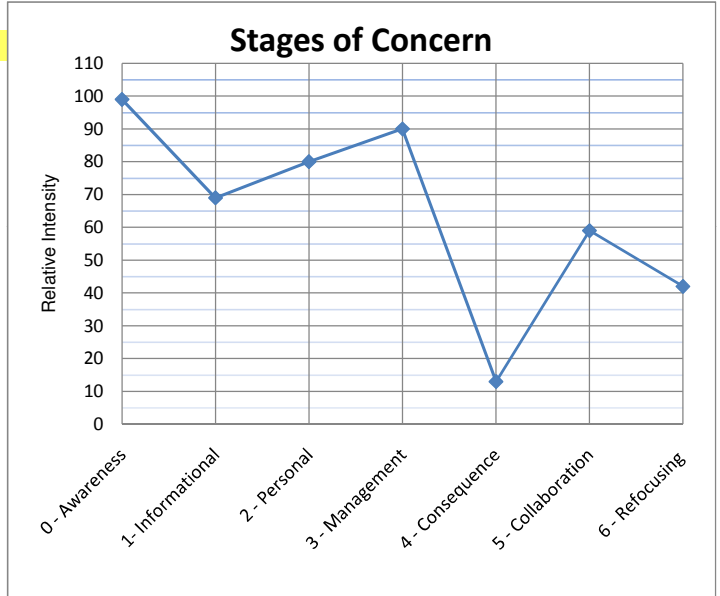


| 0 - Awareness | 1 - Informational | 2 - Personal | 3 - Management | 4 - Consequence | 5 - Collaboration | 6 - Refocusing |
|---------------|-------------------|--------------|----------------|-----------------|-------------------|----------------|
| 0 | 1 | 2 | 3 | 4 | 5 | 6 |
| 0 | 6 | 6 | 7 | 5 | 4 | 1 |
| 0 | 5 | 4 | 7 | 5 | 3 | 7 |
| 7 | 5 | 5 | 7 | 5 | 0 | 6 |
| 3 | 7 | 6 | 7 | 7 | 6 | 6 |
| 7 | 5 | 5 | 6 | 6 | 7 | 2 |
| 17 | 28 | 26 | 34 | 28 | 20 | 22 |

5.6 5.2 4 Missing data calculation

- ID050** **ID050**
- Question Raw data
- 1 2
 - 2 2
 - 3 2
 - 4 5
 - 5 3
 - 6 3
 - 7 5
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 - 15 5
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 - 19 0
 - 20 6
 - 21 6
 - 22 2
 - 23 6
 - 24 6
 - 25 6
 - 26 6
 - 27 6
 - 28 6
 - 29 3
 - 30 7
 - 31 2
 - 32 4
 - 33 4
 - 34 5
 - 35 0

| | 0 - Awareness | 1 - Informational | 2 - Personal | 3 - Management | 4 - Consequence | 5 - Collaboration | 6 - Refocusing |
|--|---------------|-------------------|--------------|----------------|-----------------|-------------------|----------------|
| | 0 | 1 | 2 | 3 | 4 | 5 | 6 |
| | 26 | 19 | 23 | 25 | 14 | 23 | 15 |
| | 99 | 69 | 80 | 90 | 13 | 59 | 42 |



| 0 - Awareness | 1 - Informational | 2 - Personal | 3 - Management | 4 - Consequence | 5 - Collaboration | 6 - Refocusing |
|---------------|-------------------|--------------|----------------|-----------------|-------------------|----------------|
| 0 | 1 | 2 | 3 | 4 | 5 | 6 |
| 2 | 3 | 5 | 5 | 2 | 3 | 2 |
| 5 | 5 | 2 | 3 | 2 | 5 | 3 |
| 6 | 5 | 6 | 6 | 0 | 6 | 6 |
| 6 | 6 | 6 | 6 | 6 | 6 | 2 |
| 7 | 0 | 4 | 5 | 4 | 3 | 2 |
| 26 | 19 | 23 | 25 | 14 | 23 | 15 |

3.8

Missing data calculation

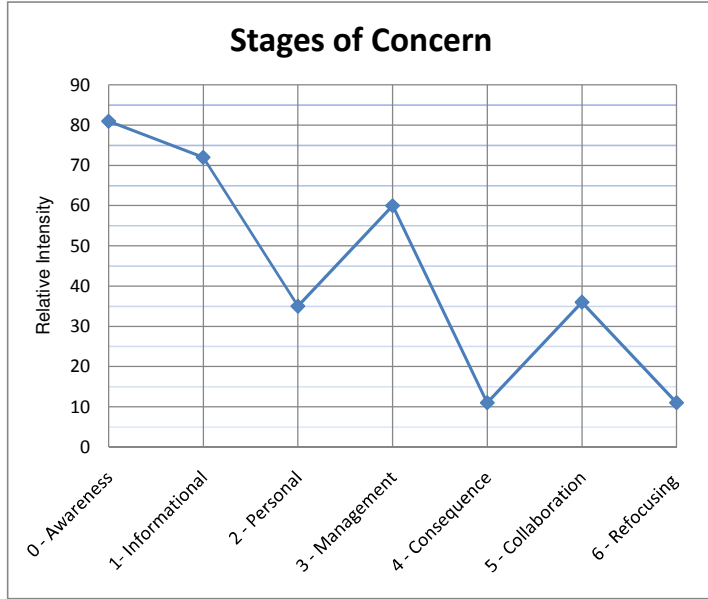
ID051 ID051

Question Raw data

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|---|---------------|-------------------|--------------|----------------|-----------------|-------------------|----------------|
| | 0 | 1 | 2 | 3 | 4 | 5 | 6 |
| 1 | 14 | 20 | 8 | 16 | 13 | 17 | 6 |
| 2 | 81 | 72 | 35 | 60 | 11 | 36 | 11 |

| 0 - Awareness | 1 - Informational | 2 - Personal | 3 - Management | 4 - Consequence | 5 - Collaboration | 6 - Refocusing |
|---------------|-------------------|--------------|----------------|-----------------|-------------------|----------------|
| 0 | 1 | 2 | 3 | 4 | 5 | 6 |
| 0 | 7 | 1 | 5 | 0 | 0 | 0 |
| 0 | 1 | 5 | 2 | 0 | 7 | 0 |
| 2 | 6 | 1 | 7 | 6 | 0 | 0 |
| 6 | 6 | 1 | 0 | 6 | 6 | 0 |
| 6 | 0 | 0 | 2 | 1 | 4 | 6 |
| 14 | 20 | 8 | 16 | 13 | 17 | 6 |

- 1 0
- 2 0
- 3 0
- 4 5
- 5 0
- 6 7
- 7 1
- 8 2
- 9 0
- 10 7
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- 21 2
- 22 0
- 23 6
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- 33 0
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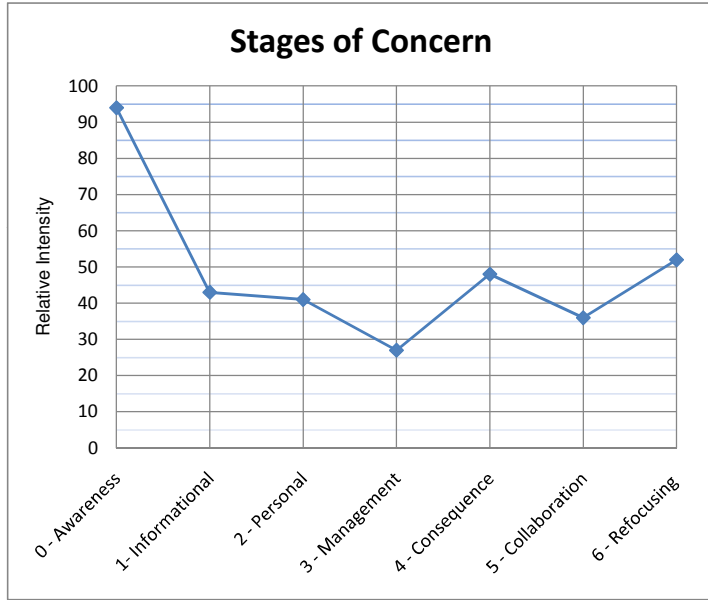
ID052 ID052

Question Raw data

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|---|---------------|-------------------|--------------|----------------|-----------------|-------------------|----------------|
| | 0 | 1 | 2 | 3 | 4 | 5 | 6 |
| 1 | 17 | 10 | 10 | 5 | 24 | 17 | 17 |
| 2 | 94 | 43 | 41 | 27 | 48 | 36 | 52 |

| 0 - Awareness | 1 - Informational | 2 - Personal | 3 - Management | 4 - Consequence | 5 - Collaboration | 6 - Refocusing |
|---------------|-------------------|--------------|----------------|-----------------|-------------------|----------------|
| 0 | 1 | 2 | 3 | 4 | 5 | 6 |
| 1 | 1 | 6 | 1 | 7 | 5 | 1 |
| 1 | 6 | 1 | 1 | 6 | 2 | 1 |
| 1 | 1 | 1 | 1 | 7 | 2 | 7 |
| 7 | 1 | 1 | 1 | 3 | 7 | 7 |
| 7 | 1 | 1 | 1 | 1 | 1 | 1 |
| 17 | 10 | 10 | 5 | 24 | 17 | 17 |

- 1 7
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- 4 1
- 5 5
- 6 1
- 7 6
- 8 1
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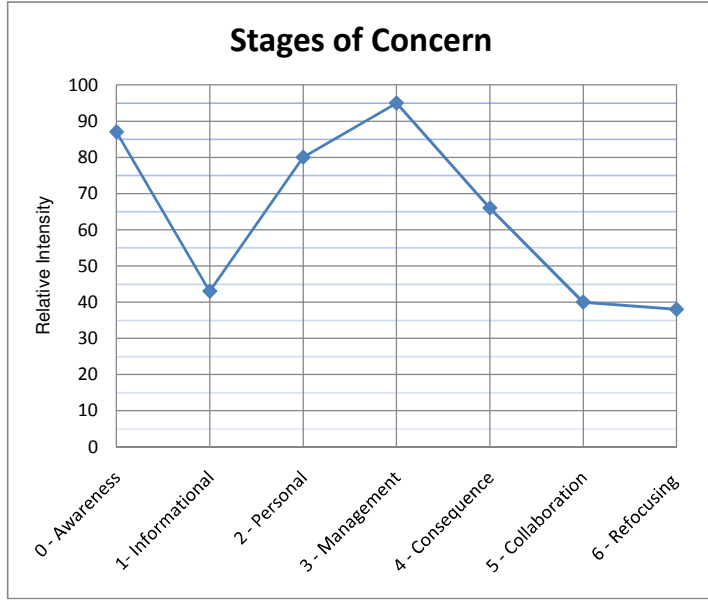
ID053 ID053

Question Raw data

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|---|---------------|-------------------|--------------|----------------|-----------------|-------------------|----------------|
| | 0 | 1 | 2 | 3 | 4 | 5 | 6 |
| 1 | 15 | 10 | 23 | 28 | 28 | 18 | 14 |
| 2 | 87 | 43 | 80 | 95 | 66 | 40 | 38 |

| 0 - Awareness | 1 - Informational | 2 - Personal | 3 - Management | 4 - Consequence | 5 - Collaboration | 6 - Refocusing |
|---------------|-------------------|--------------|----------------|-----------------|-------------------|----------------|
| 0 | 1 | 2 | 3 | 4 | 5 | 6 |
| 1 | 3 | 6 | 7 | 6 | 3 | 4 |
| 0 | 1 | 1 | 5 | 6 | 2 | 0 |
| 7 | 2 | 5 | 5 | 6 | 3 | 3 |
| 0 | 4 | 6 | 4 | 5 | 4 | 5 |
| 7 | 0 | 5 | 7 | 5 | 6 | 2 |
| 15 | 10 | 23 | 28 | 28 | 18 | 14 |

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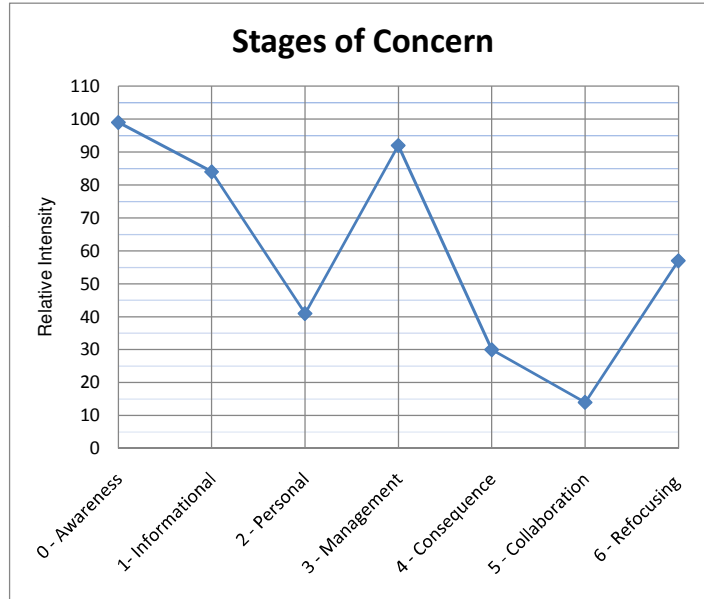
ID054 ID054

Question Raw data

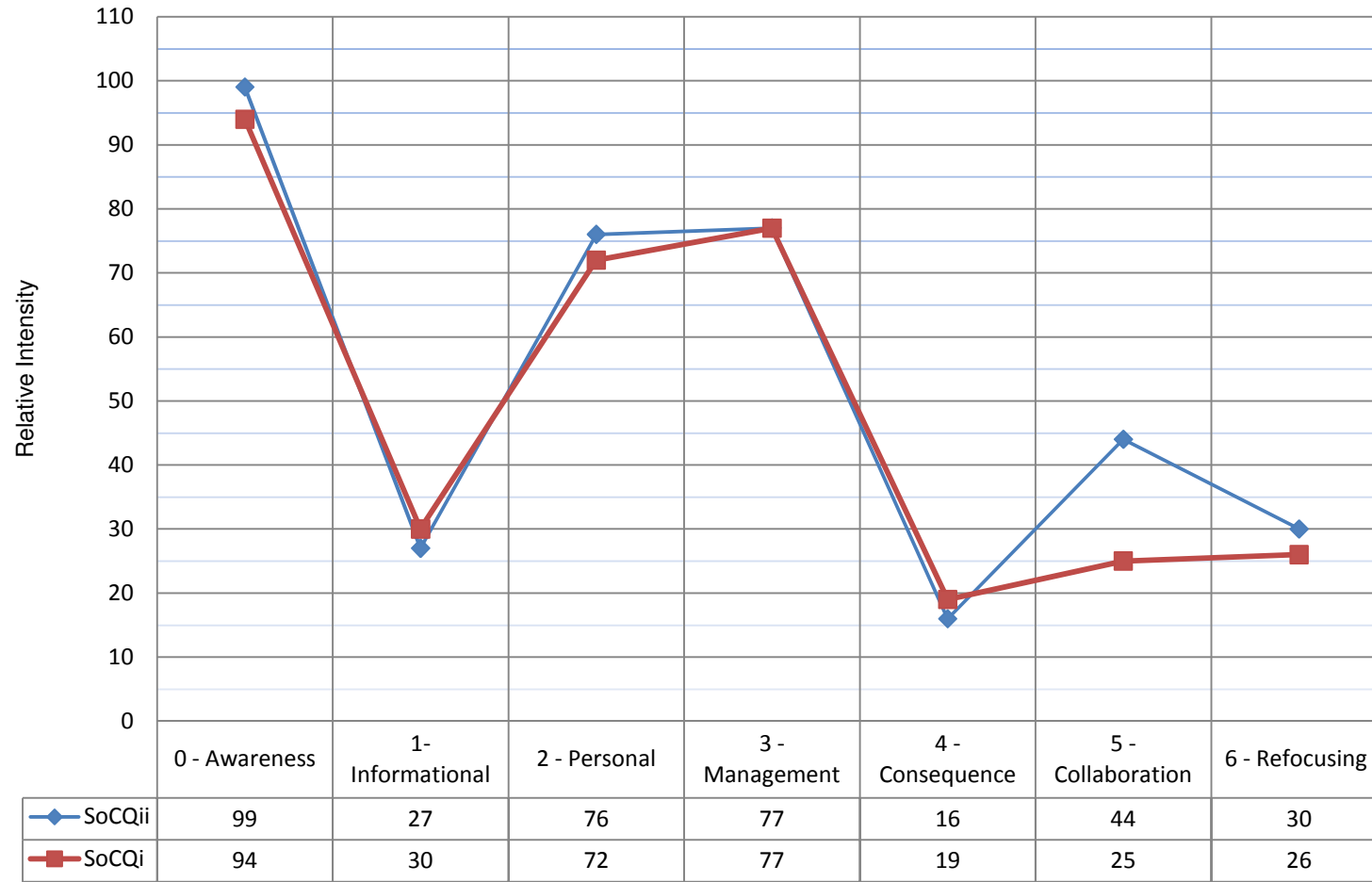
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|---|---------------|-------------------|--------------|----------------|-----------------|-------------------|----------------|
| | 0 | 1 | 2 | 3 | 4 | 5 | 6 |
| 1 | 27 | 23 | 10 | 26 | 20 | 10 | 18 |
| 2 | 99 | 84 | 41 | 92 | 30 | 14 | 57 |

| 0 - Awareness | 1 - Informational | 2 - Personal | 3 - Management | 4 - Consequence | 5 - Collaboration | 6 - Refocusing |
|---------------|-------------------|--------------|----------------|-----------------|-------------------|----------------|
| 0 | 1 | 2 | 3 | 4 | 5 | 6 |
| 2 | 6 | 2 | 6 | 4 | 2 | 6 |
| 5 | 2 | 2 | 6 | 5 | 2 | 6 |
| 7 | 5 | 2 | 7 | 3 | 2 | 2 |
| 7 | 5 | 2 | 2 | 4 | 2 | 2 |
| 6 | 5 | 2 | 5 | 4 | 2 | 2 |
| 27 | 23 | 10 | 26 | 20 | 10 | 18 |

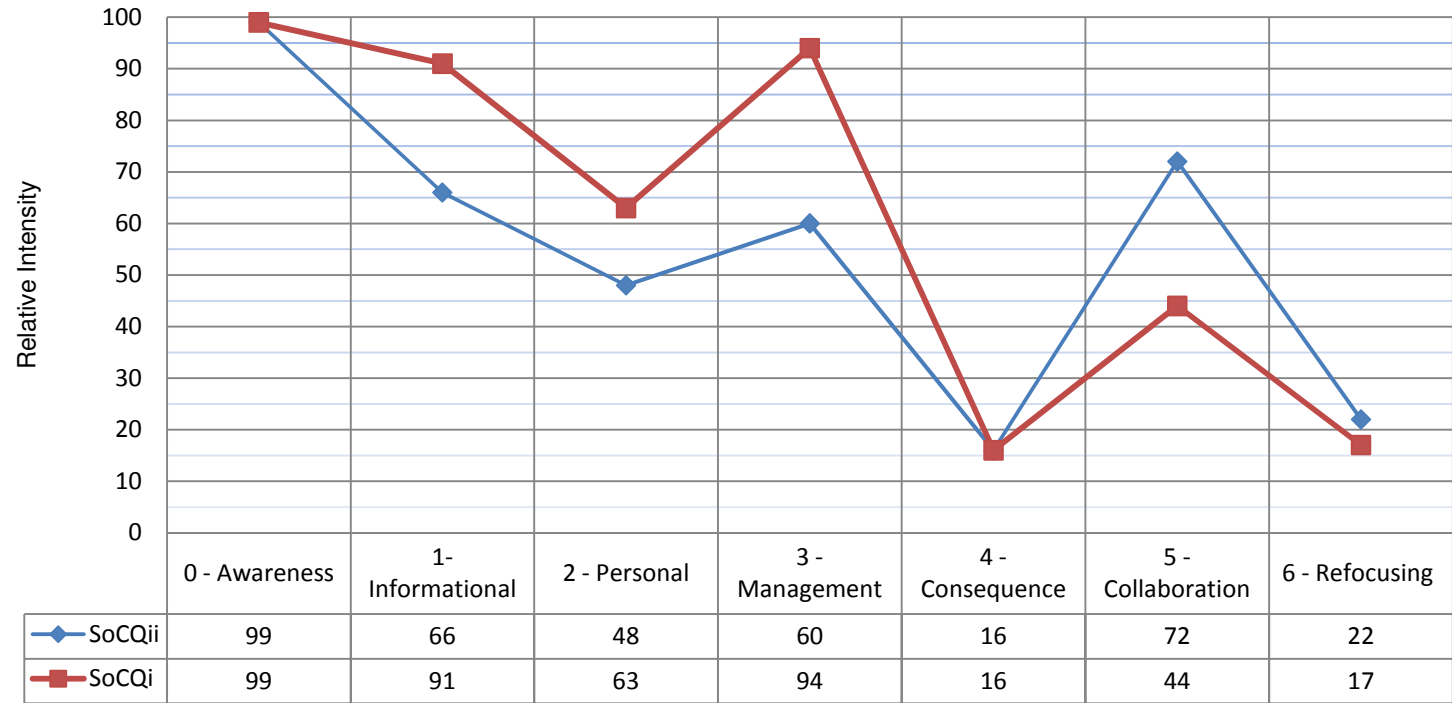
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- 34 5
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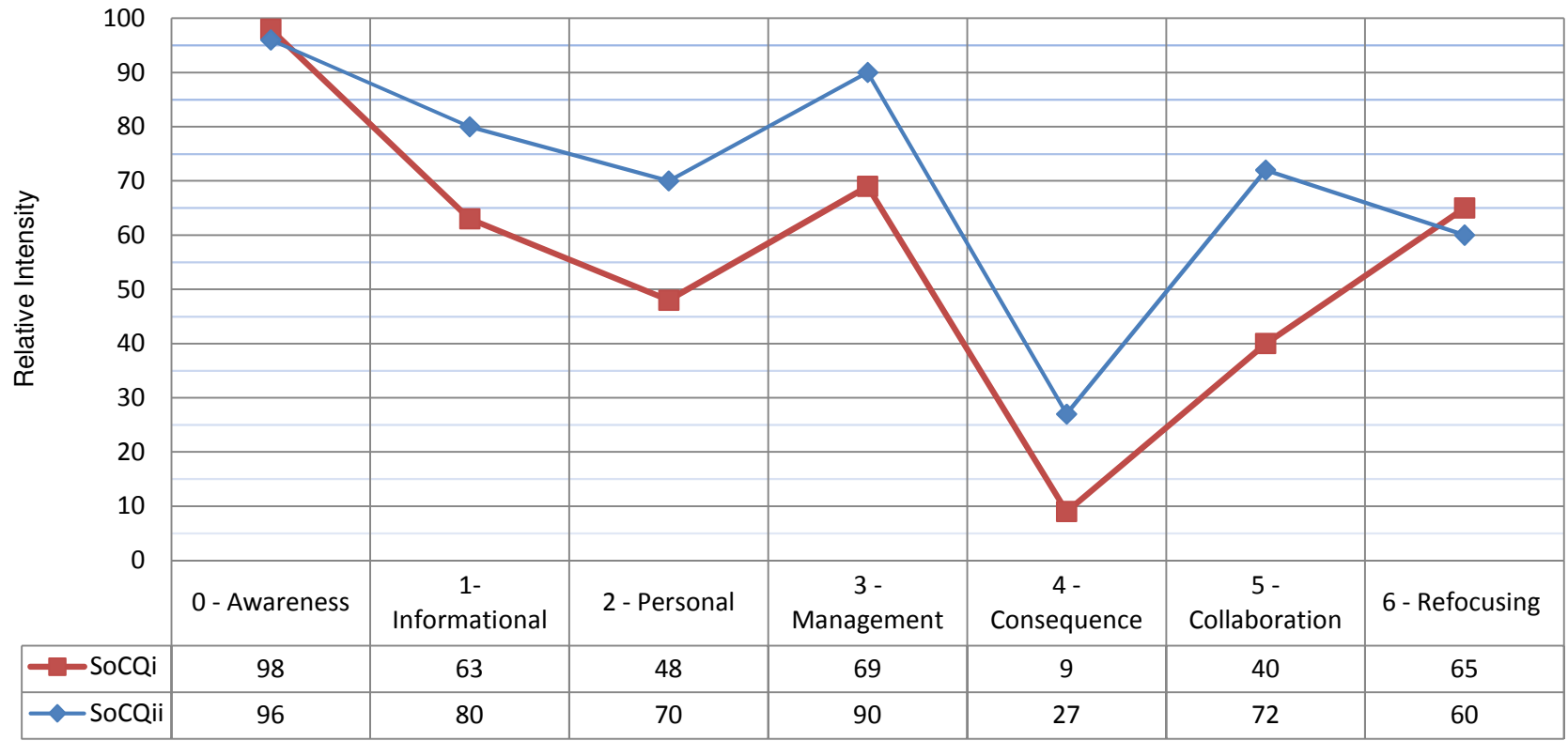
Stages of Concern _002



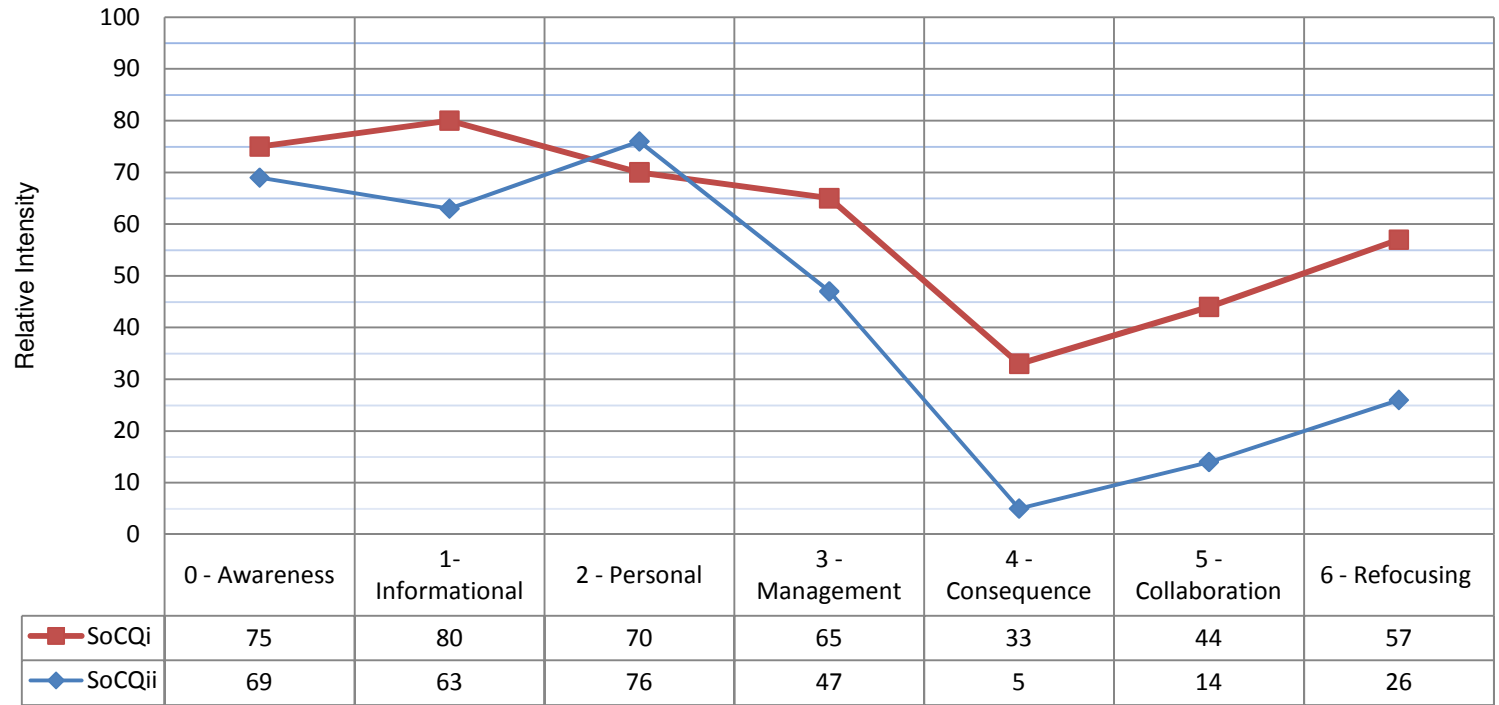
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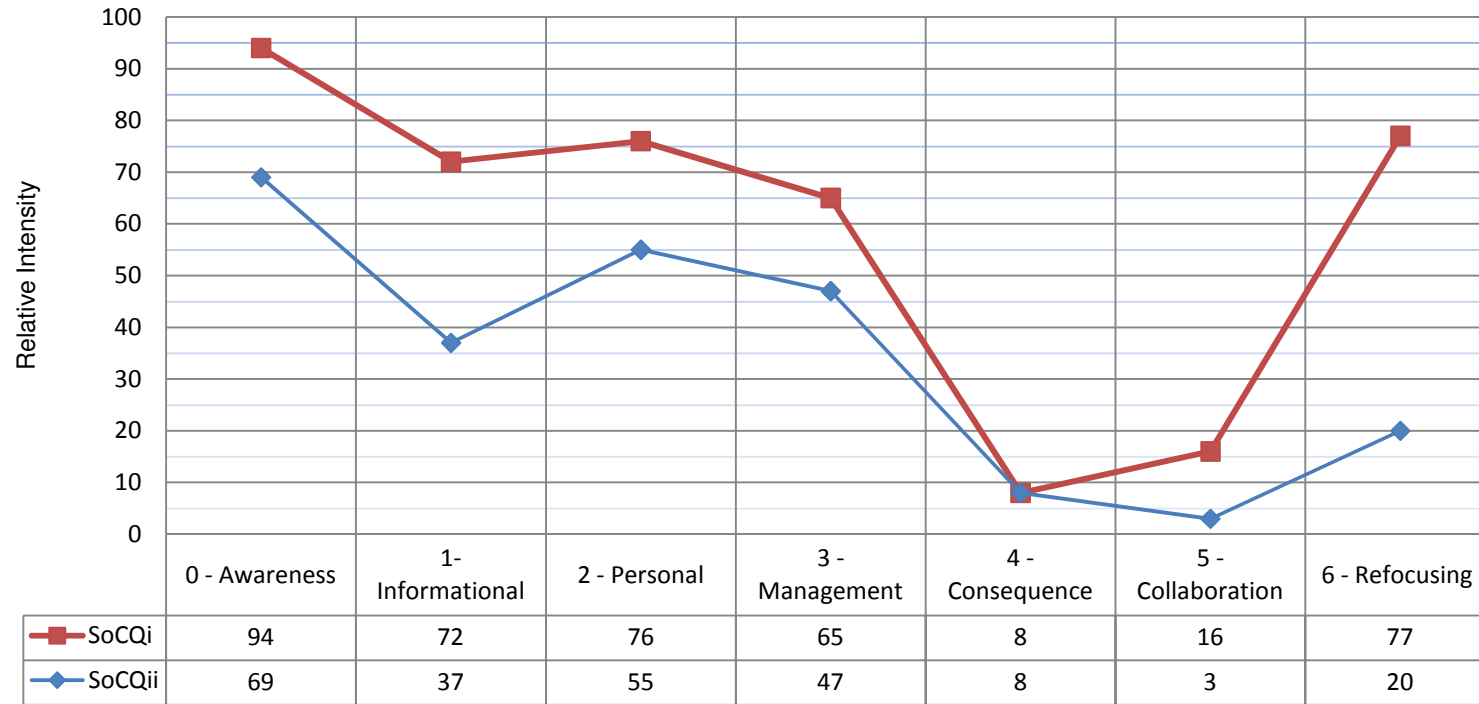
Stages of Concern_005



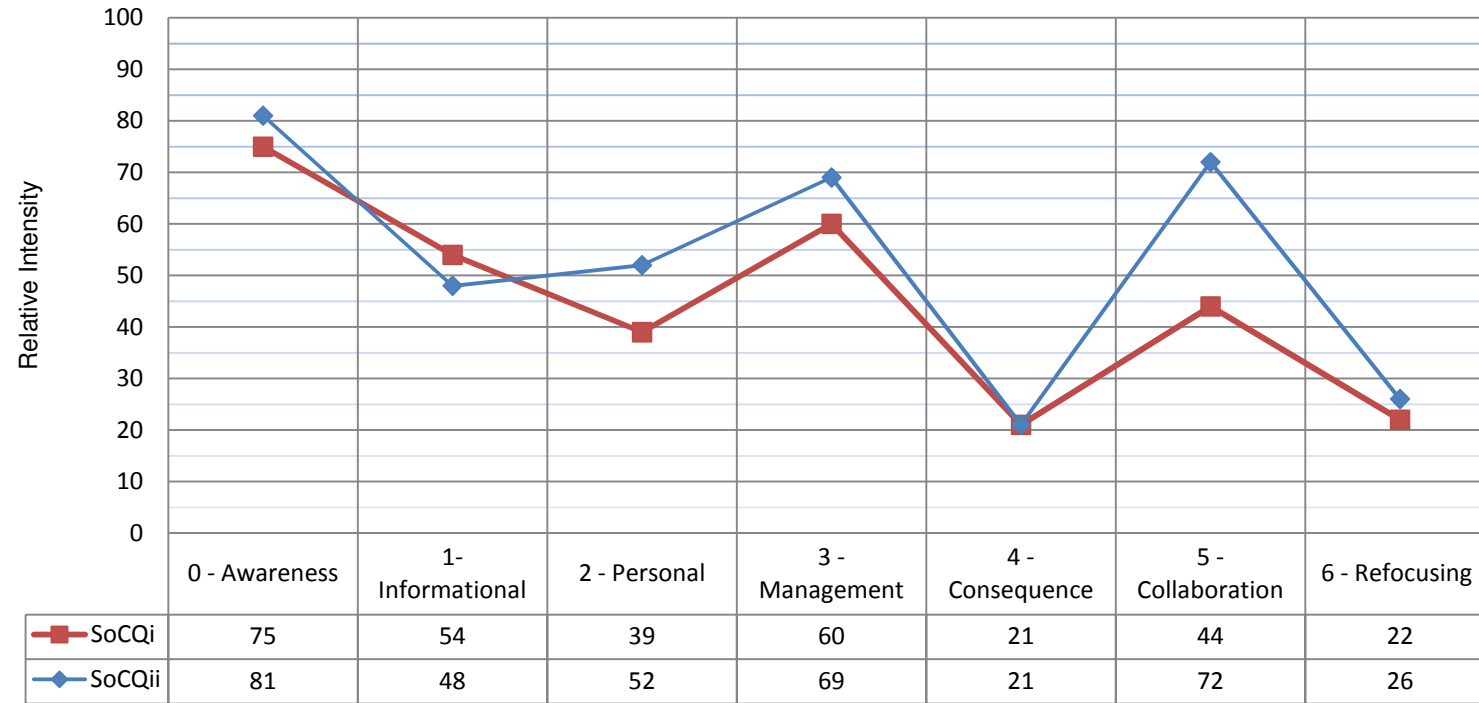
Stages of Concern_006



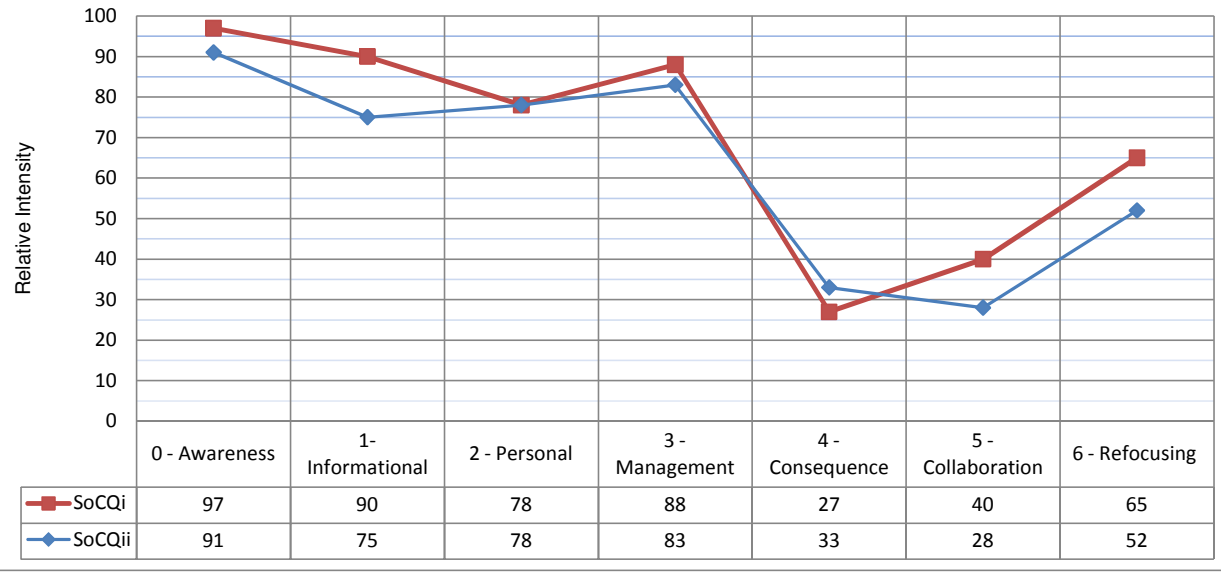
Stages of Concern_007



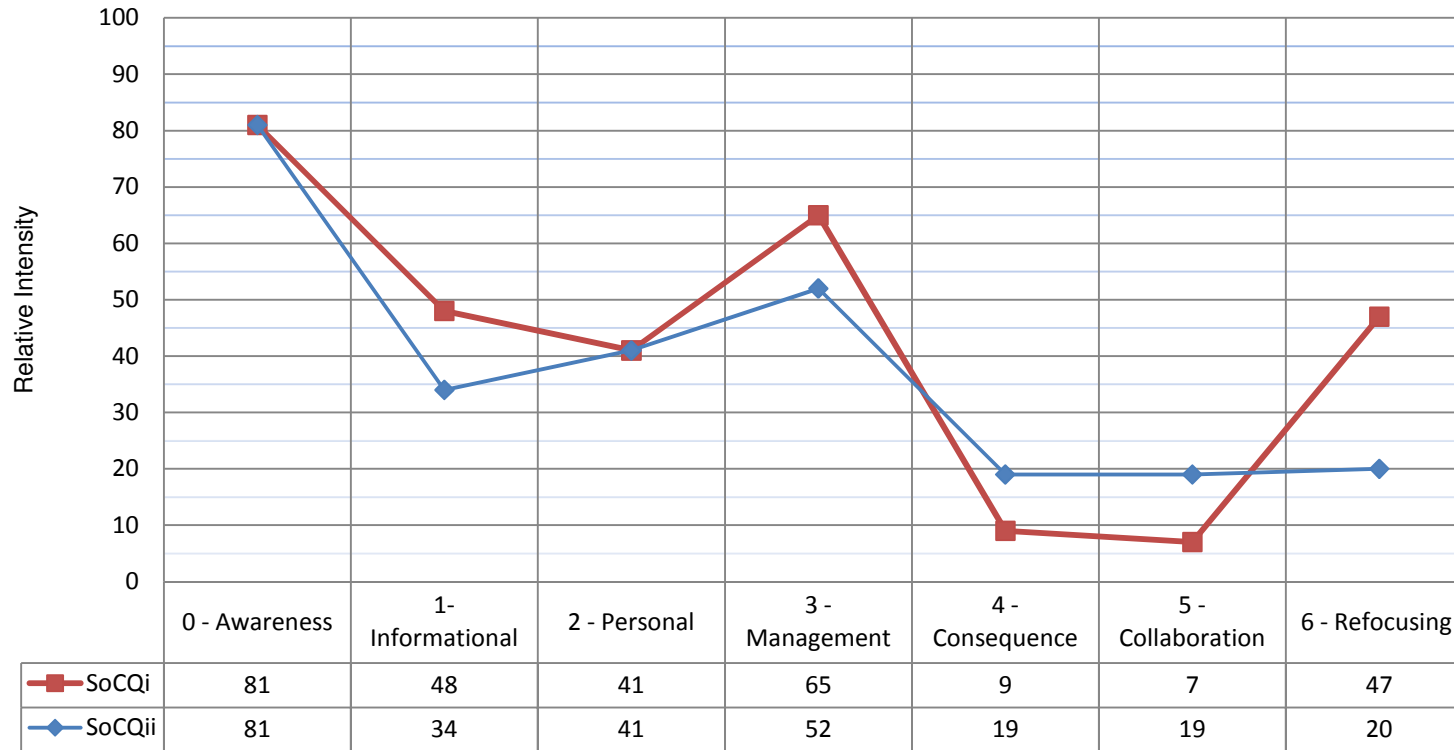
Stages of Concern_009



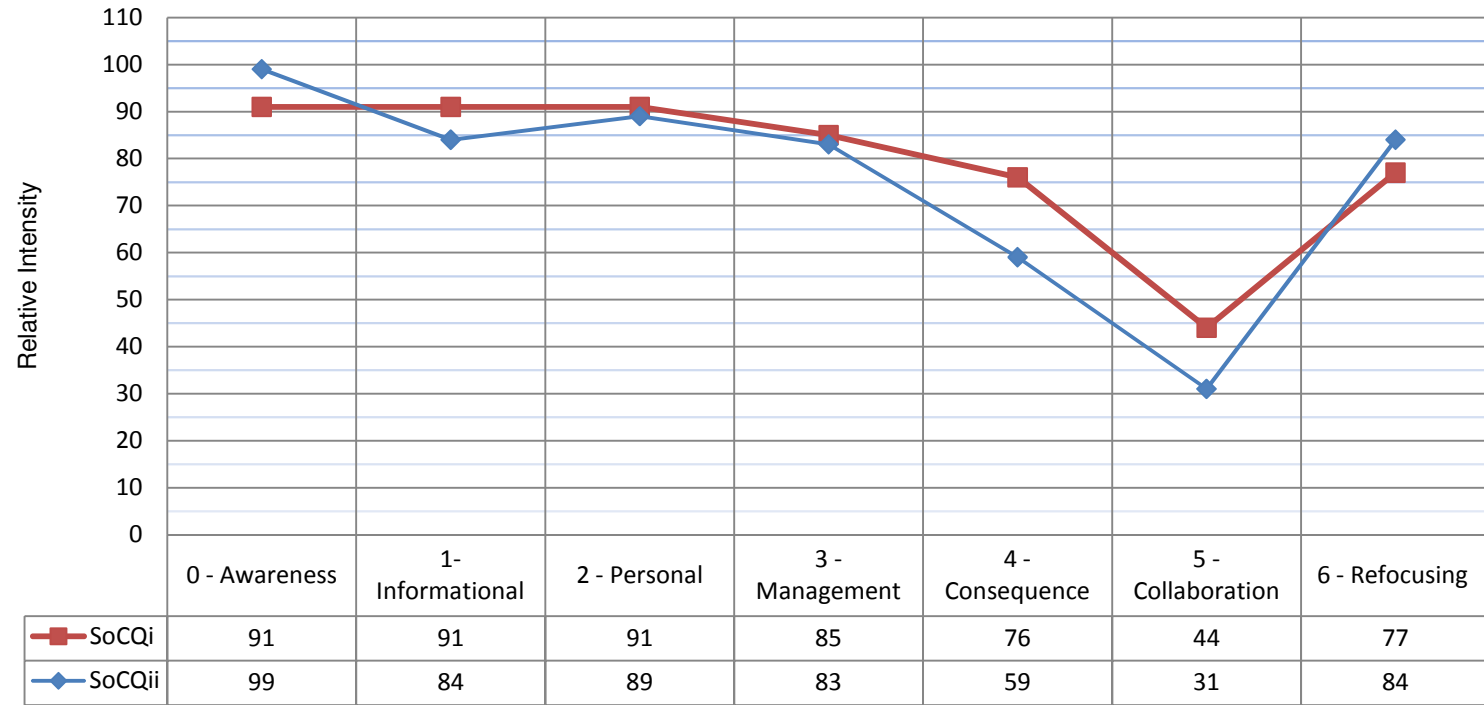
Stages of Concern_010



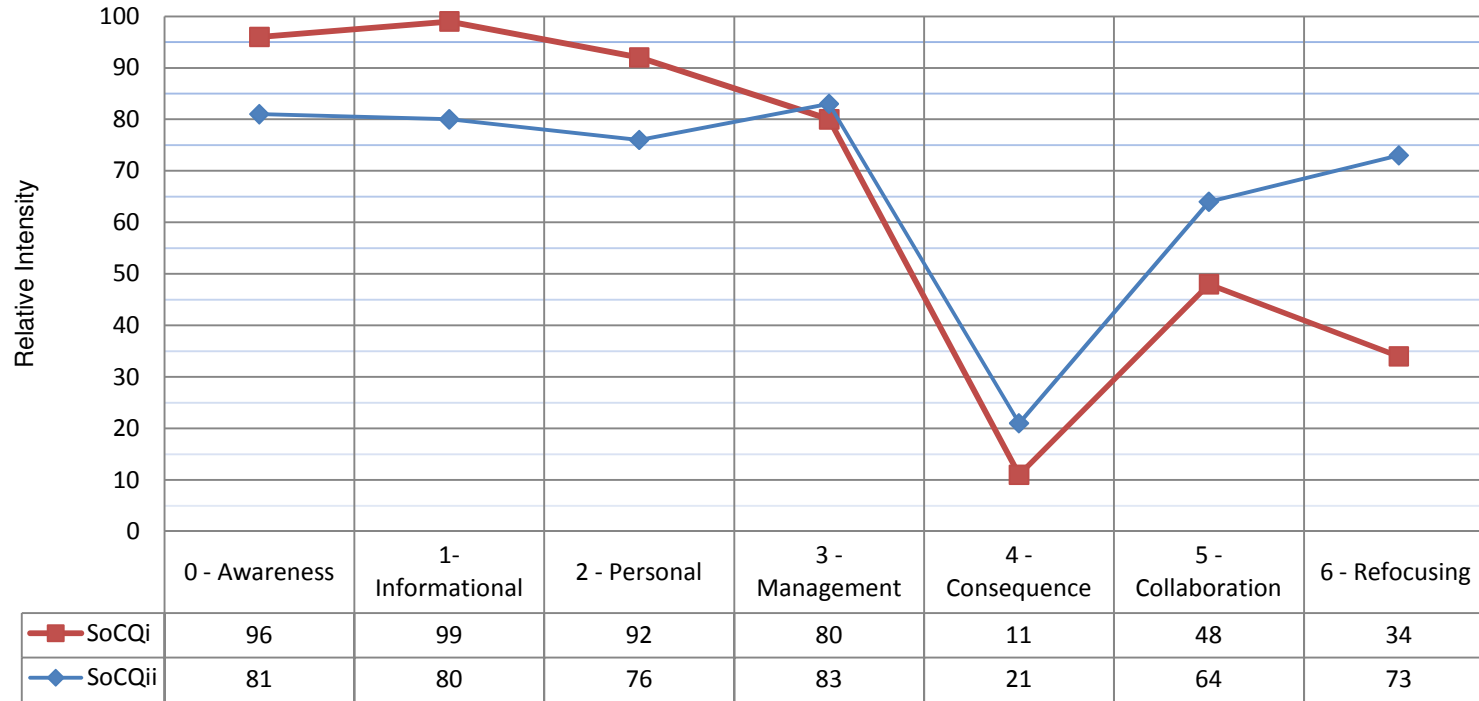
Stages of Concern_012



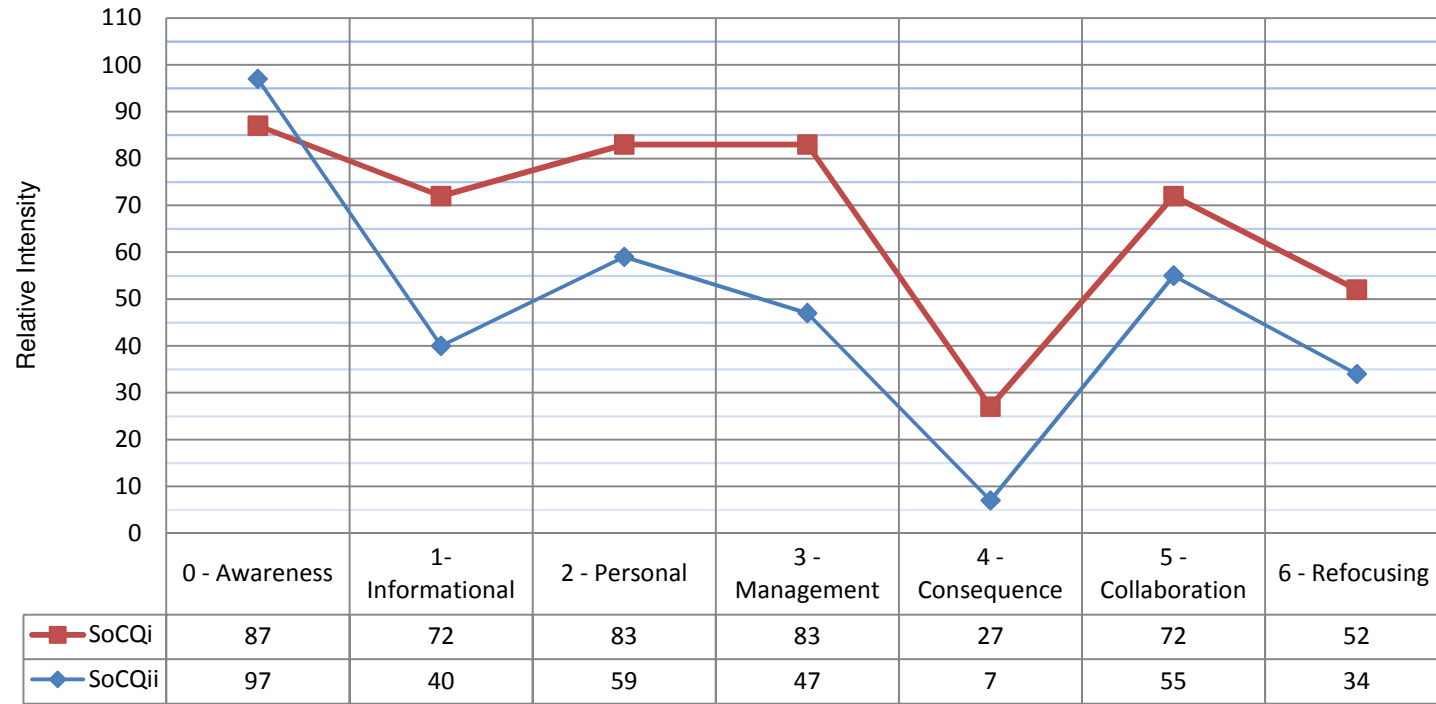
Stages of Concern_013



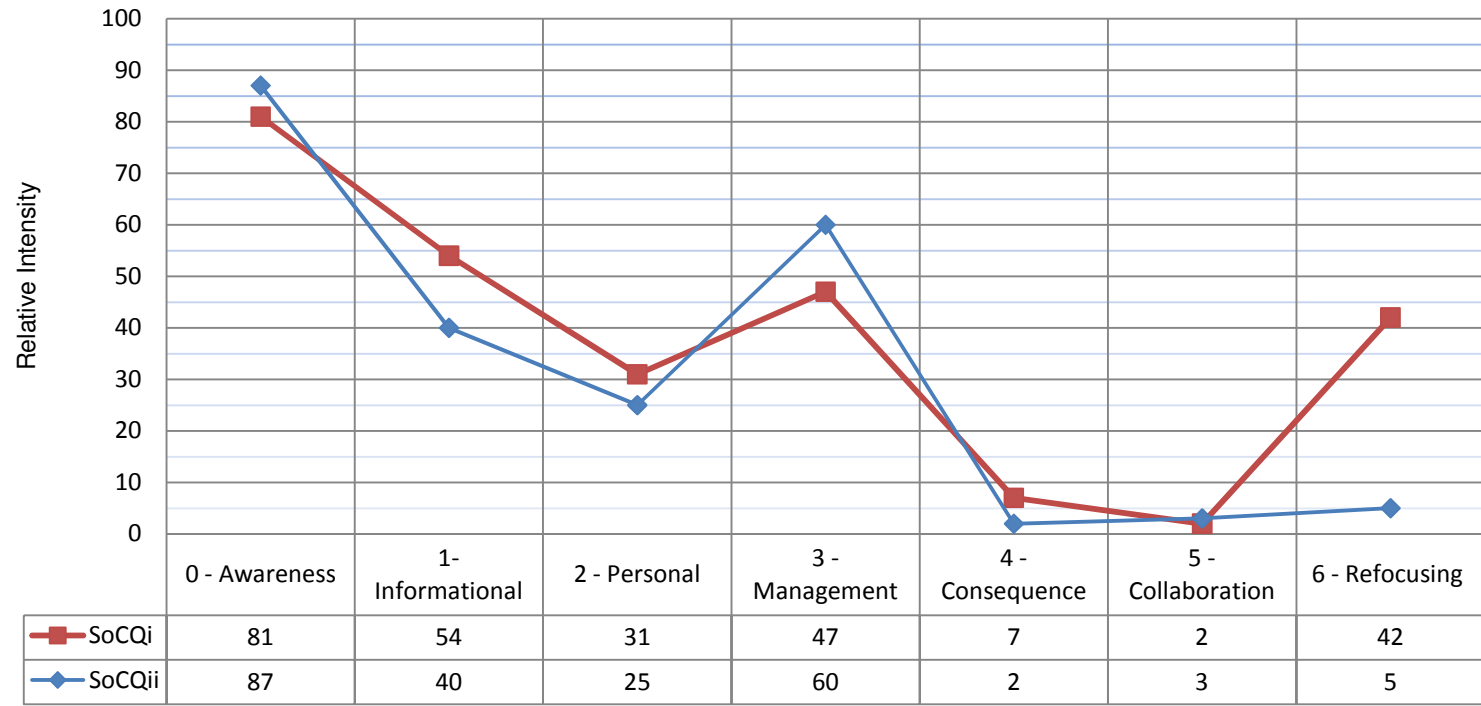
Stages of Concern_014



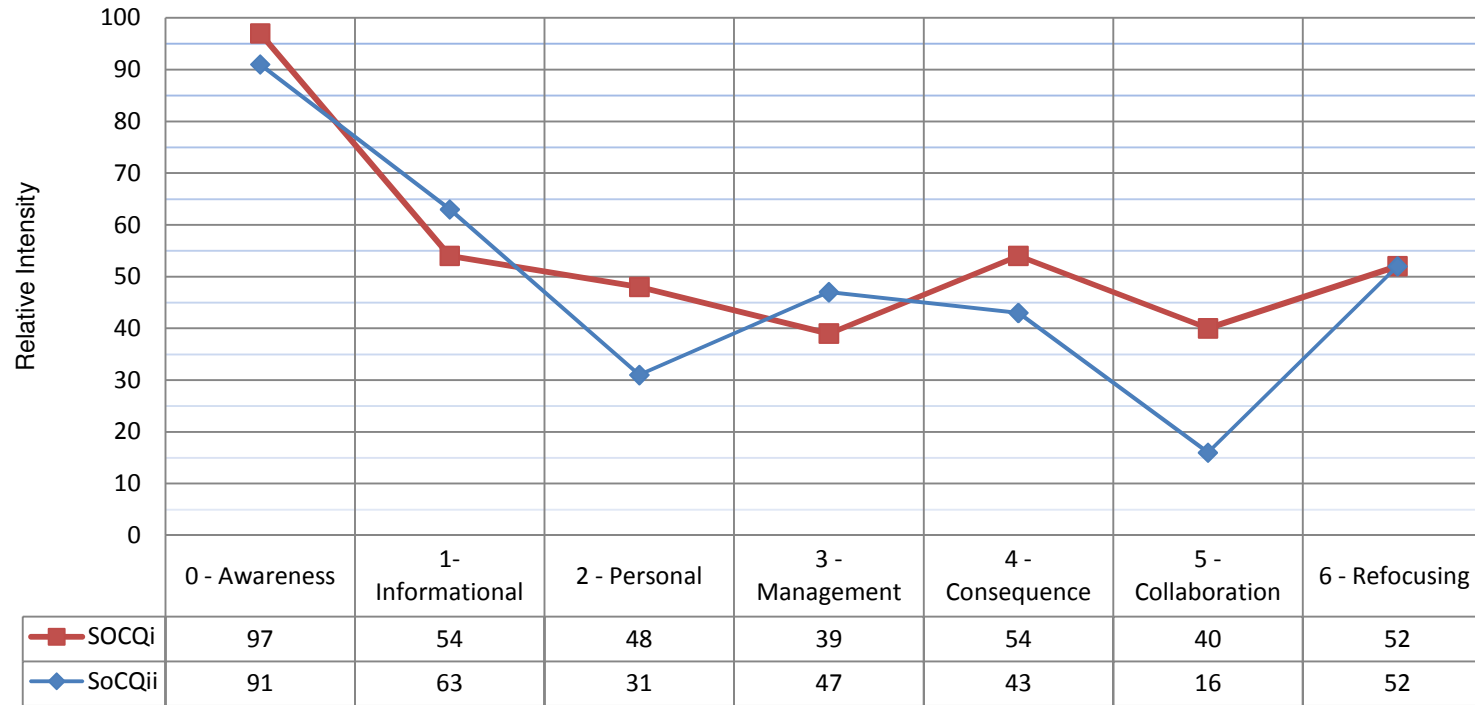
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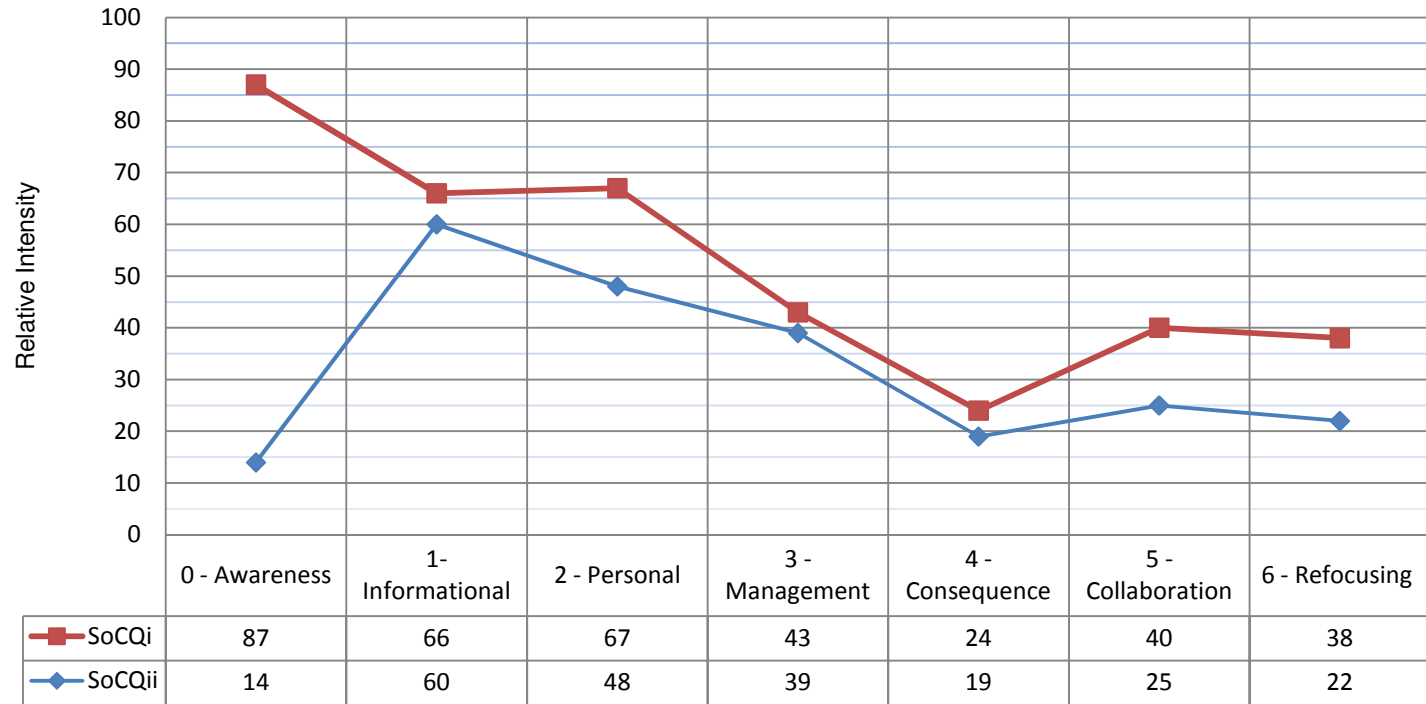
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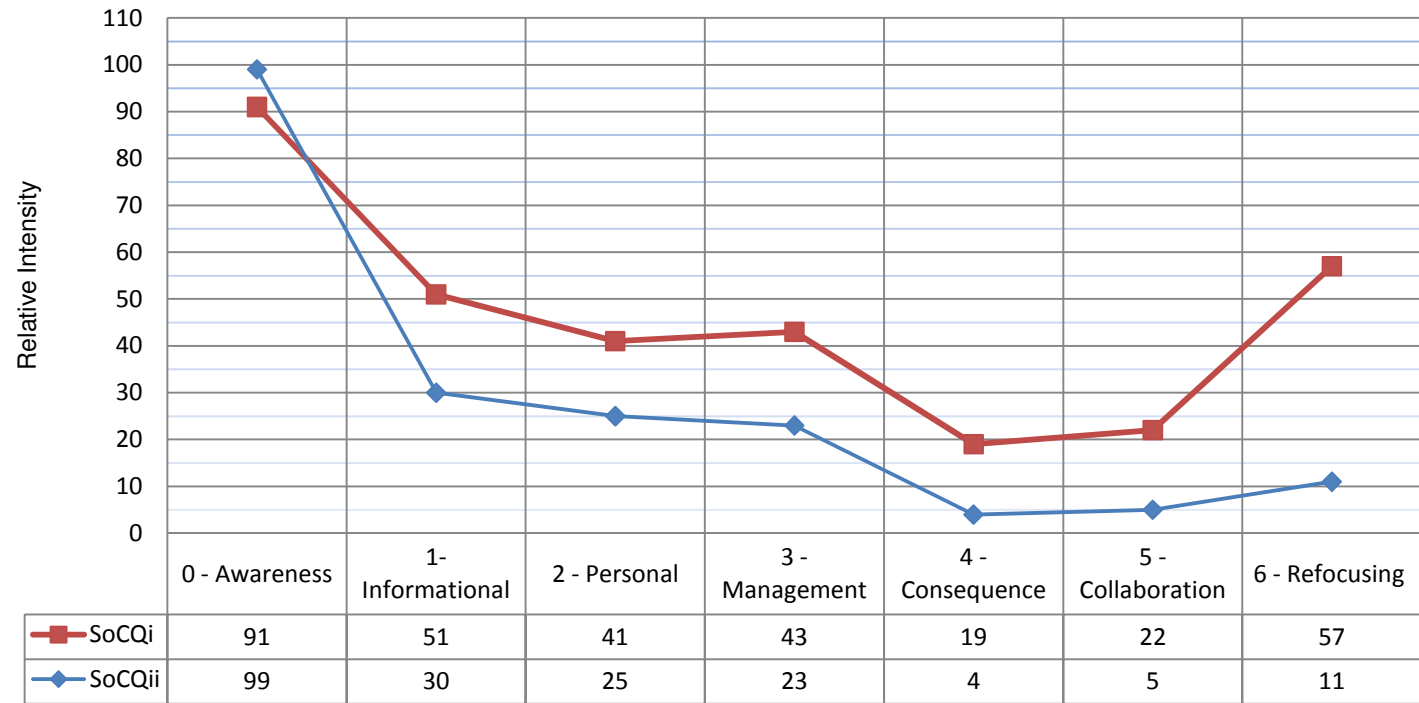
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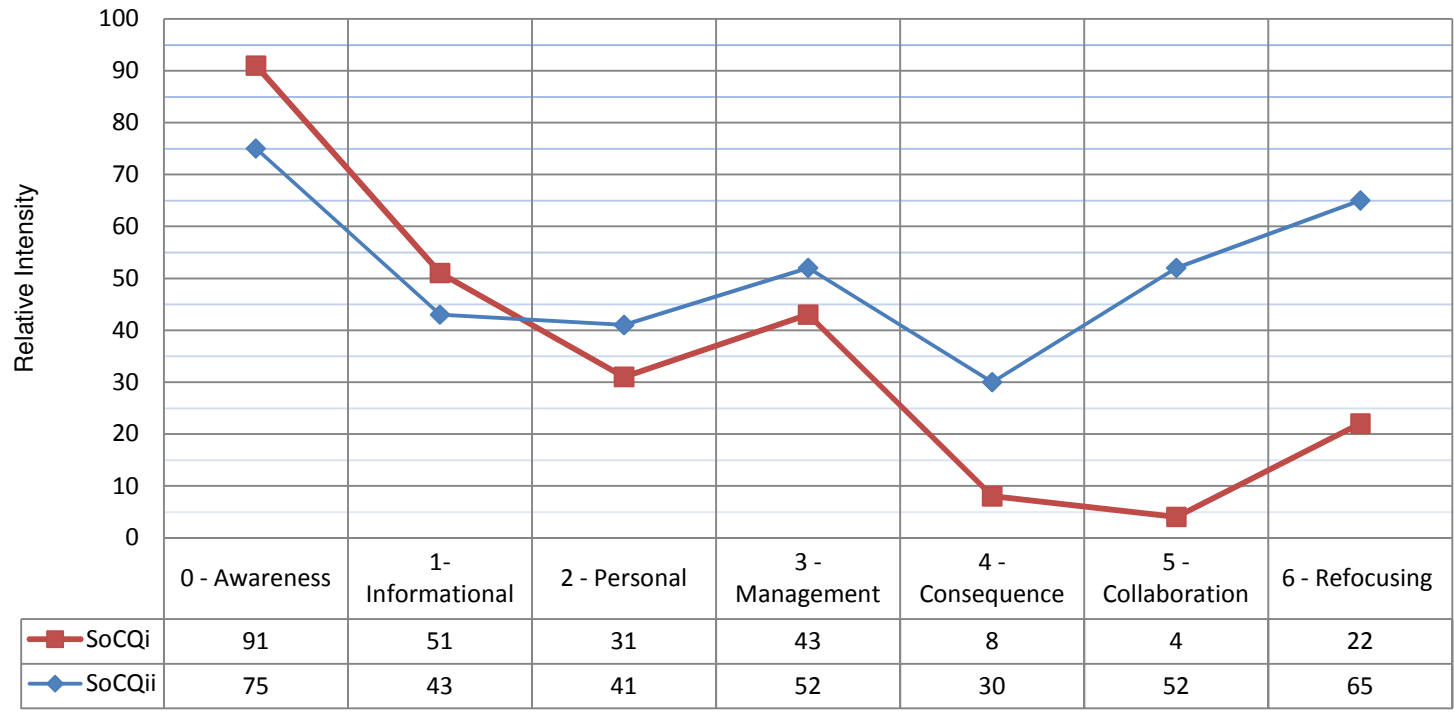
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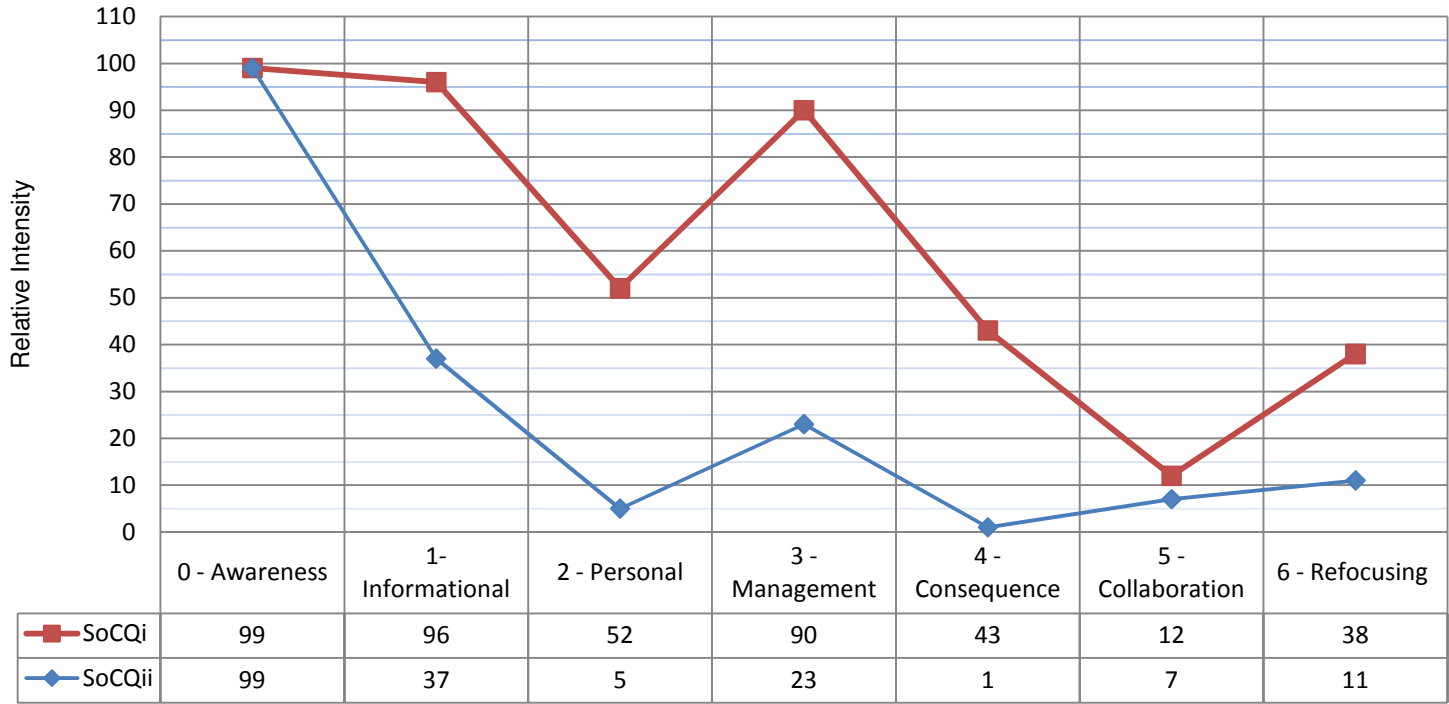
Stages of Concern



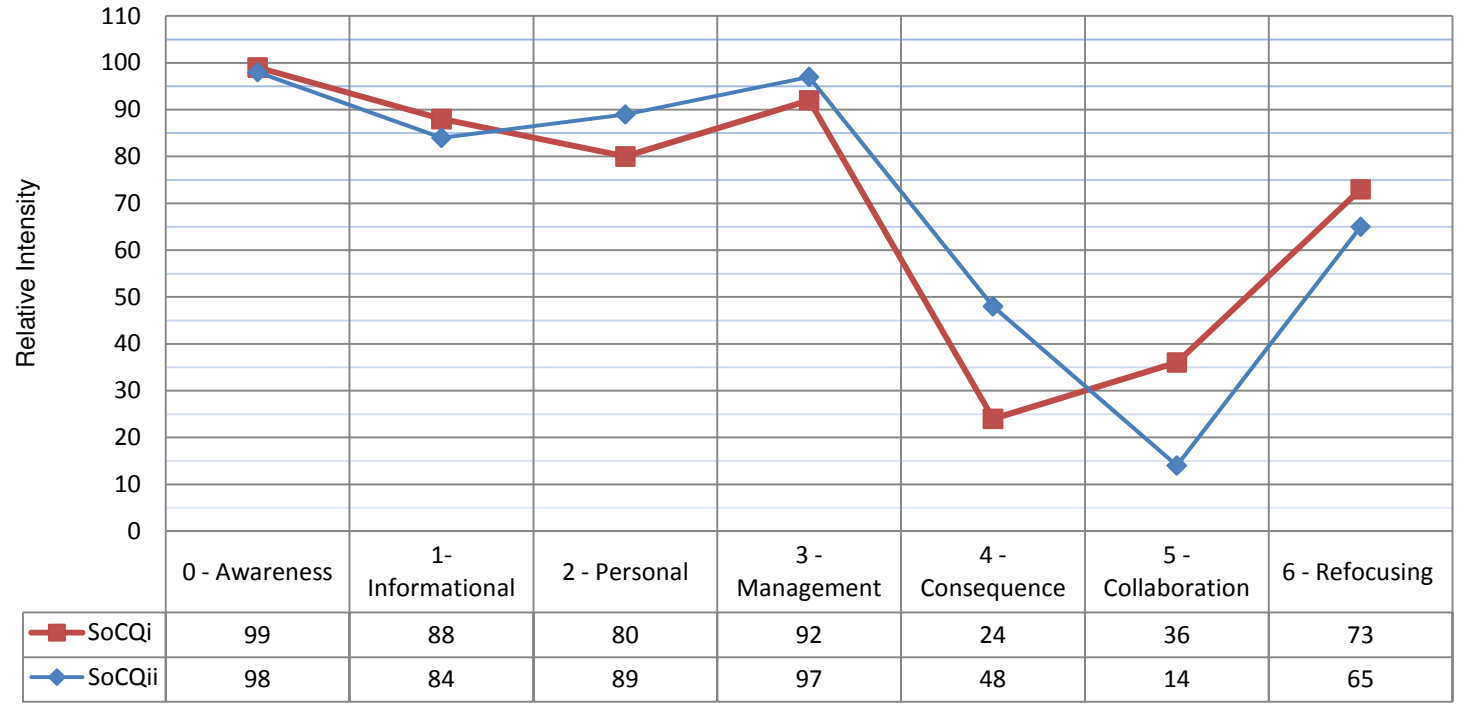
Stages of Concern_022



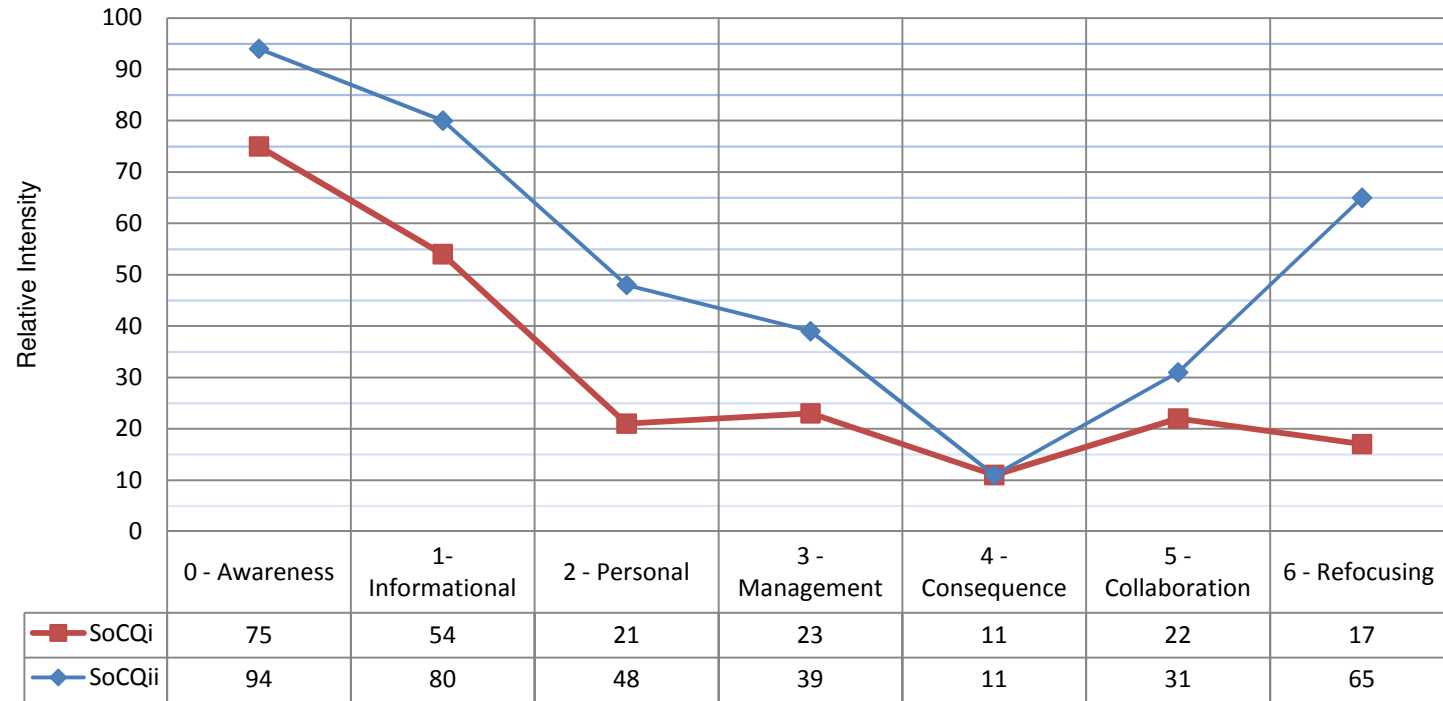
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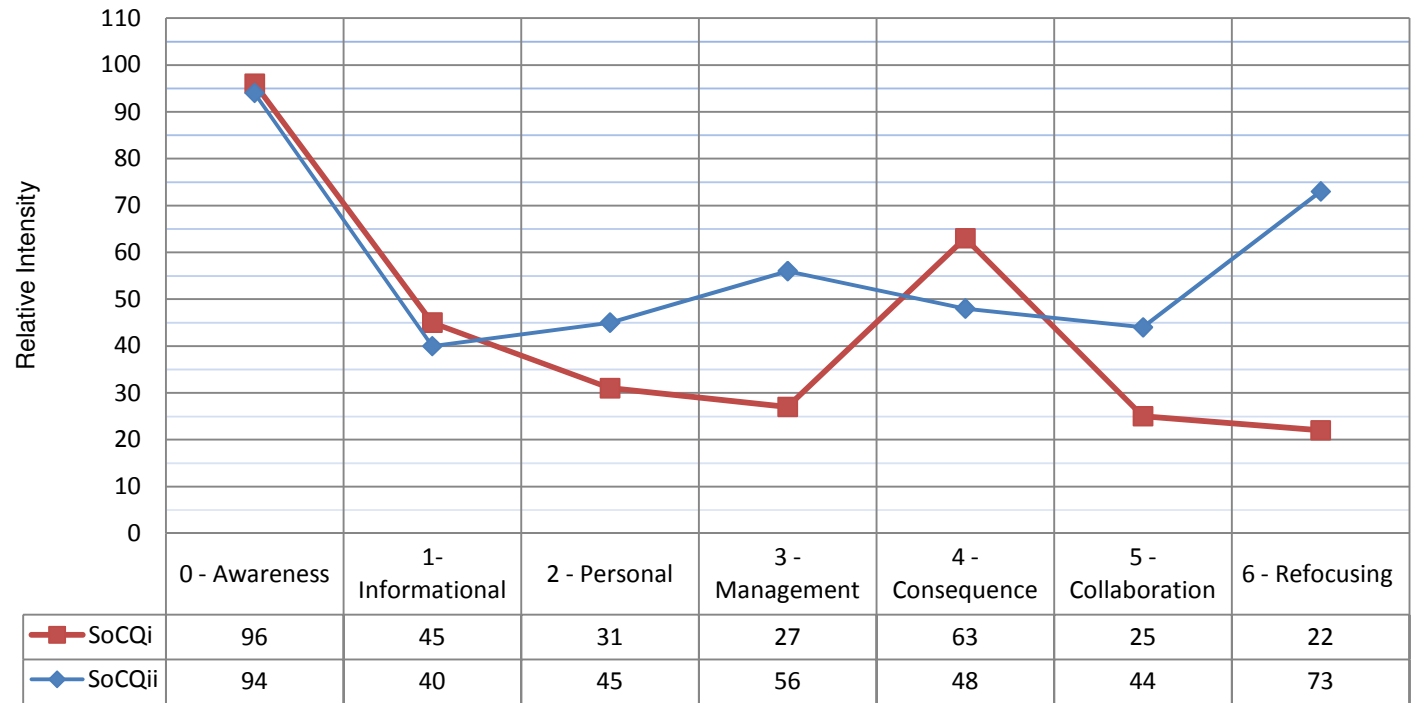
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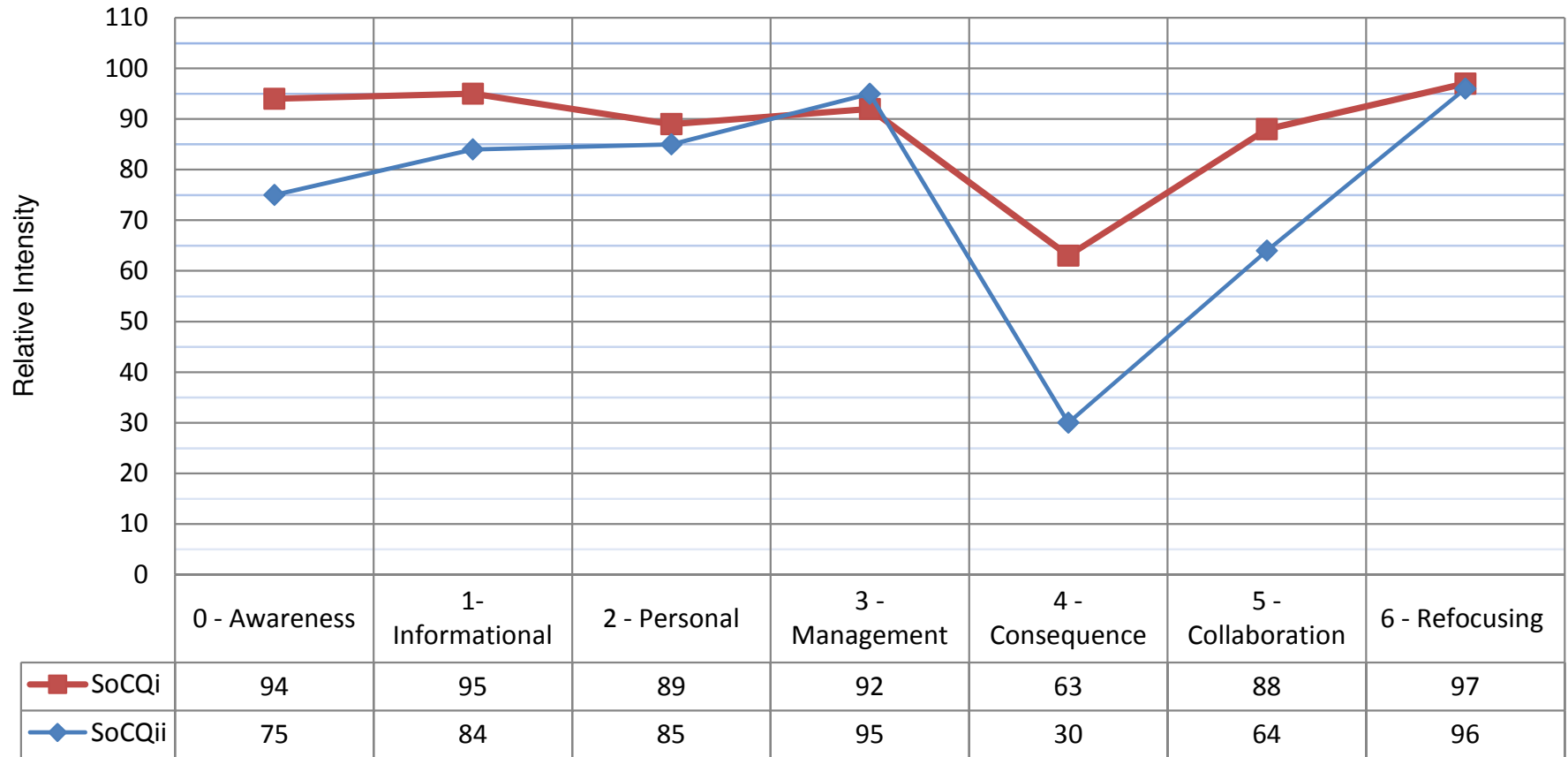
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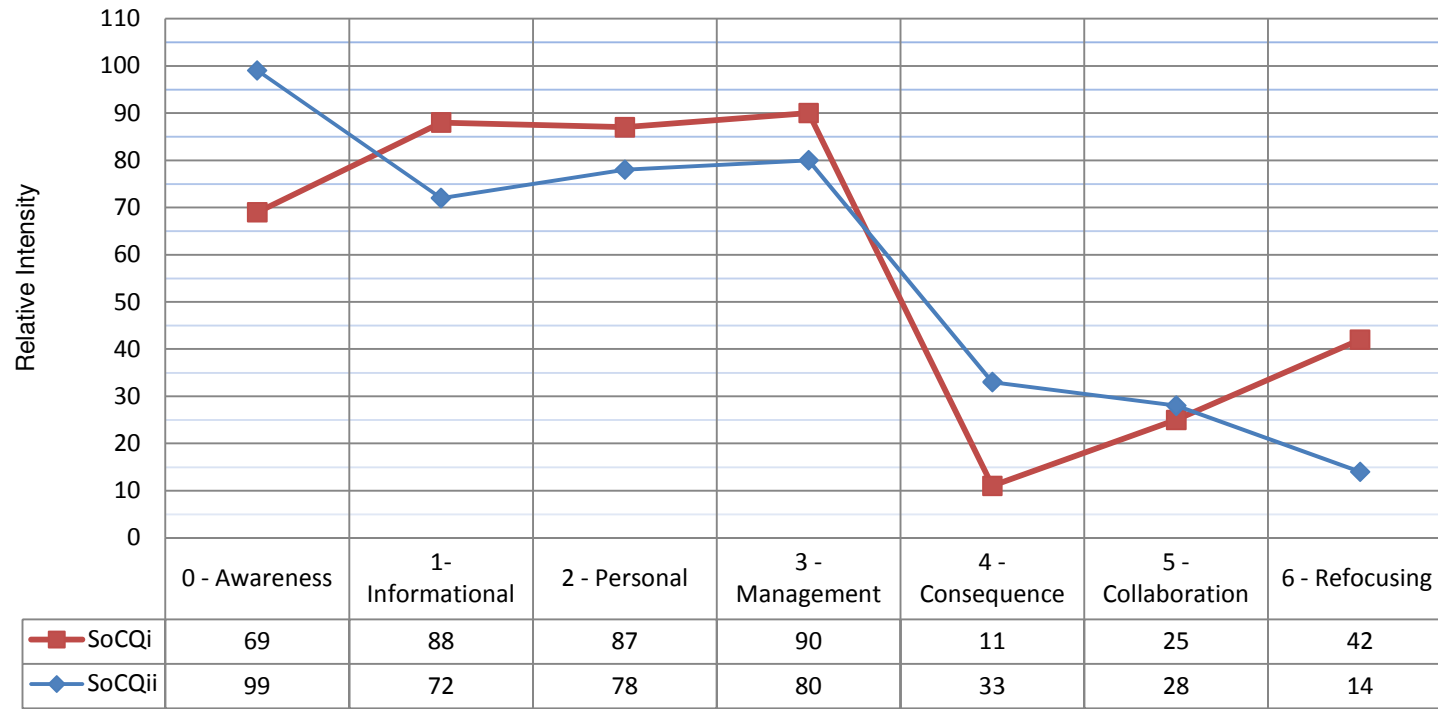
Stages of Concern_026



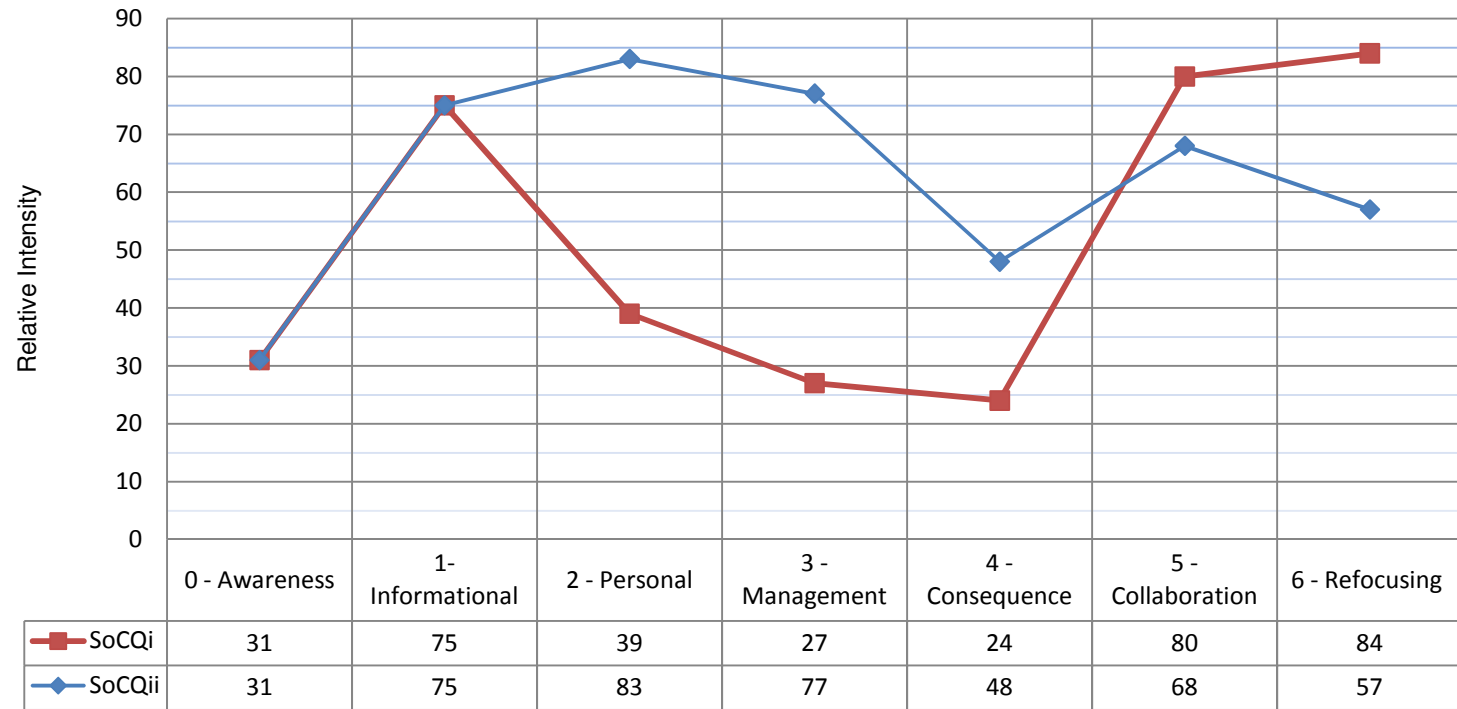
Stages of Concern_027



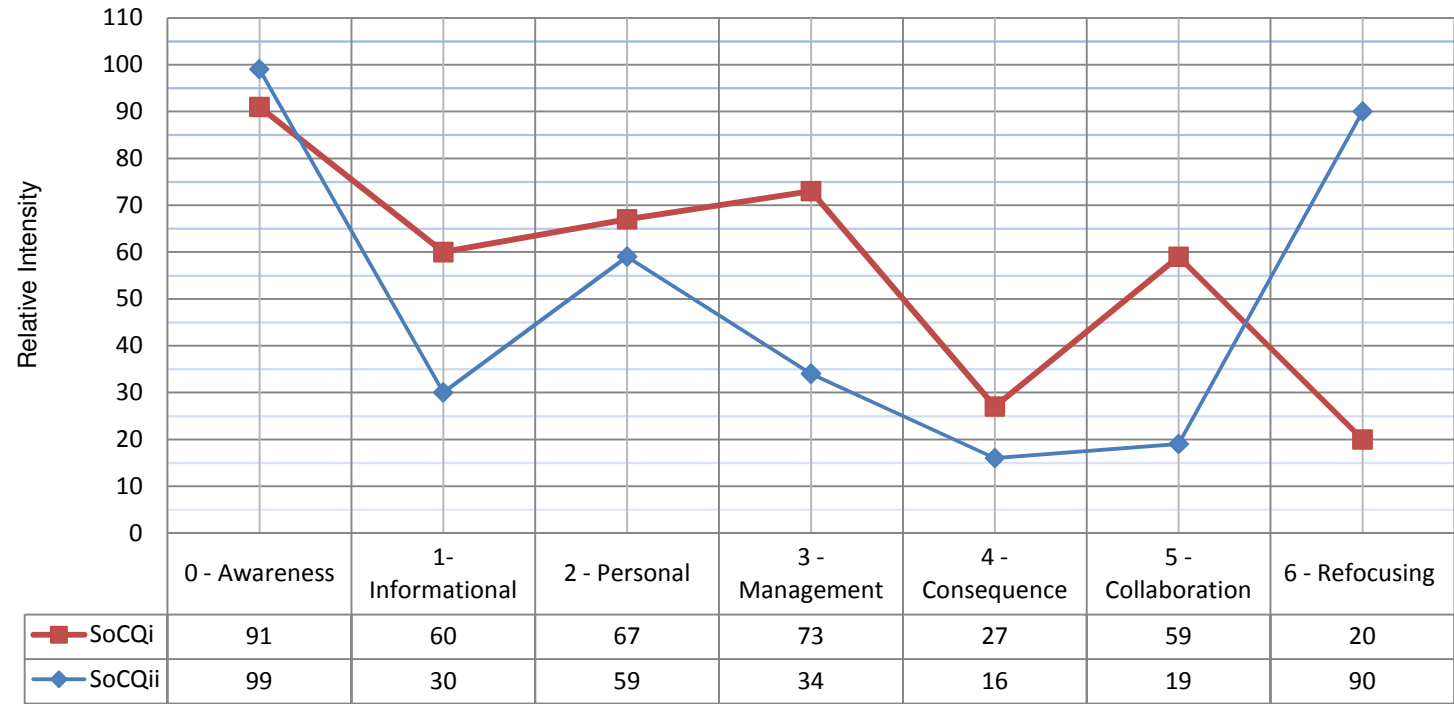
Stages of Concern_029



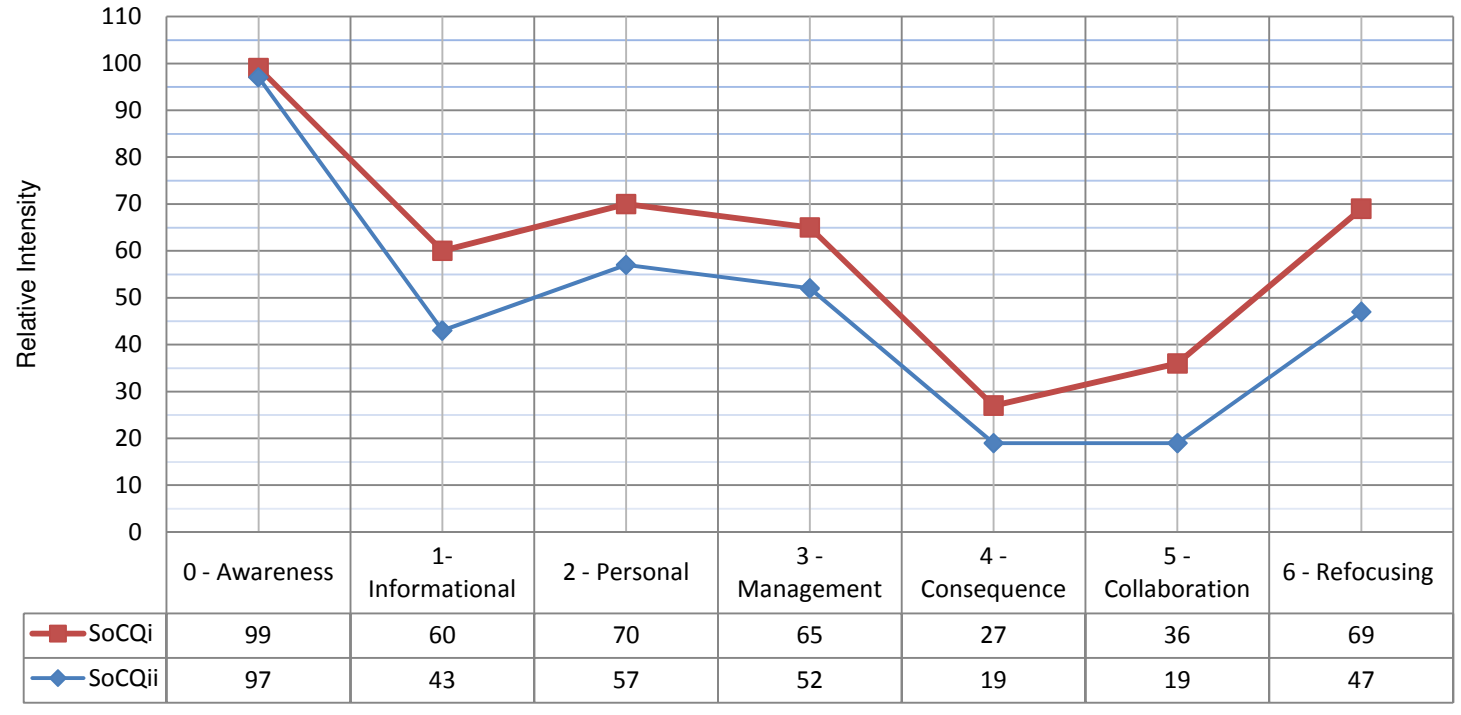
Stages of Concern_031



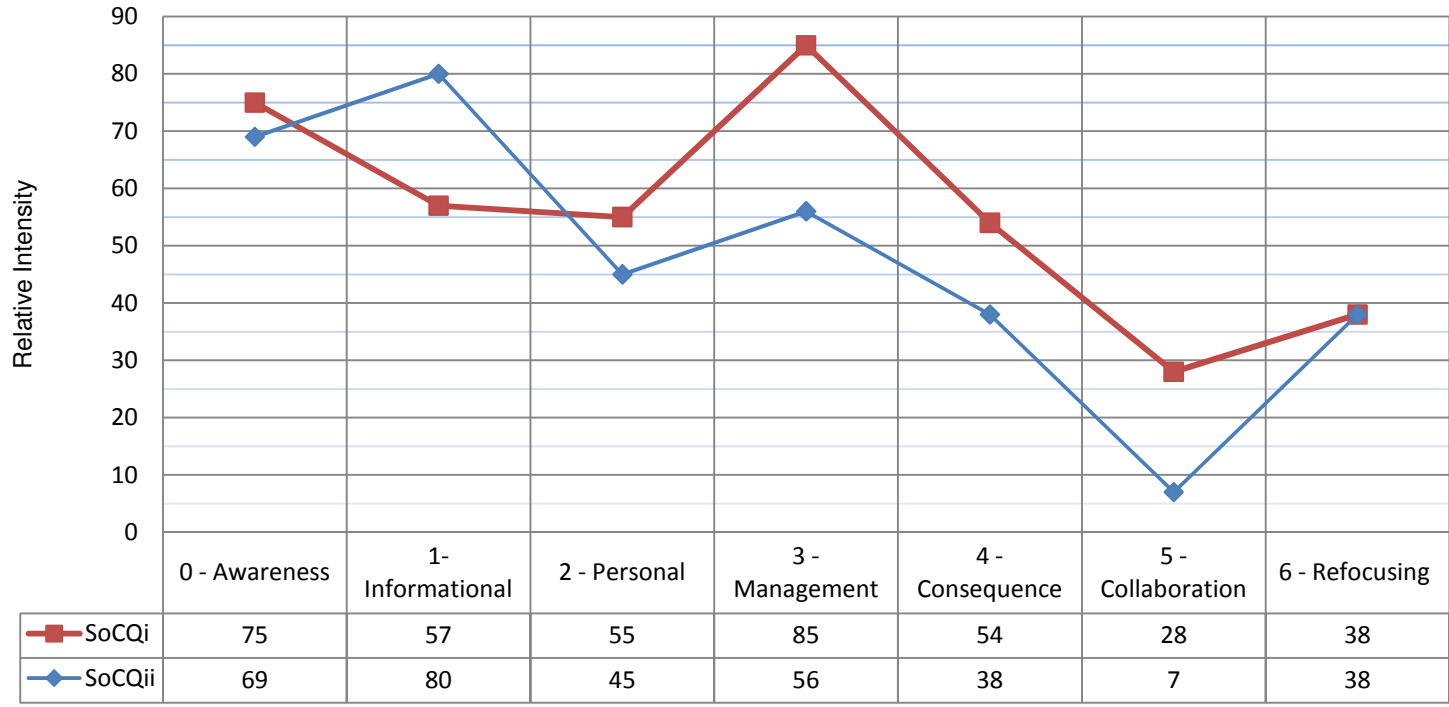
Stages of Concern_032



Stages of Concern_035



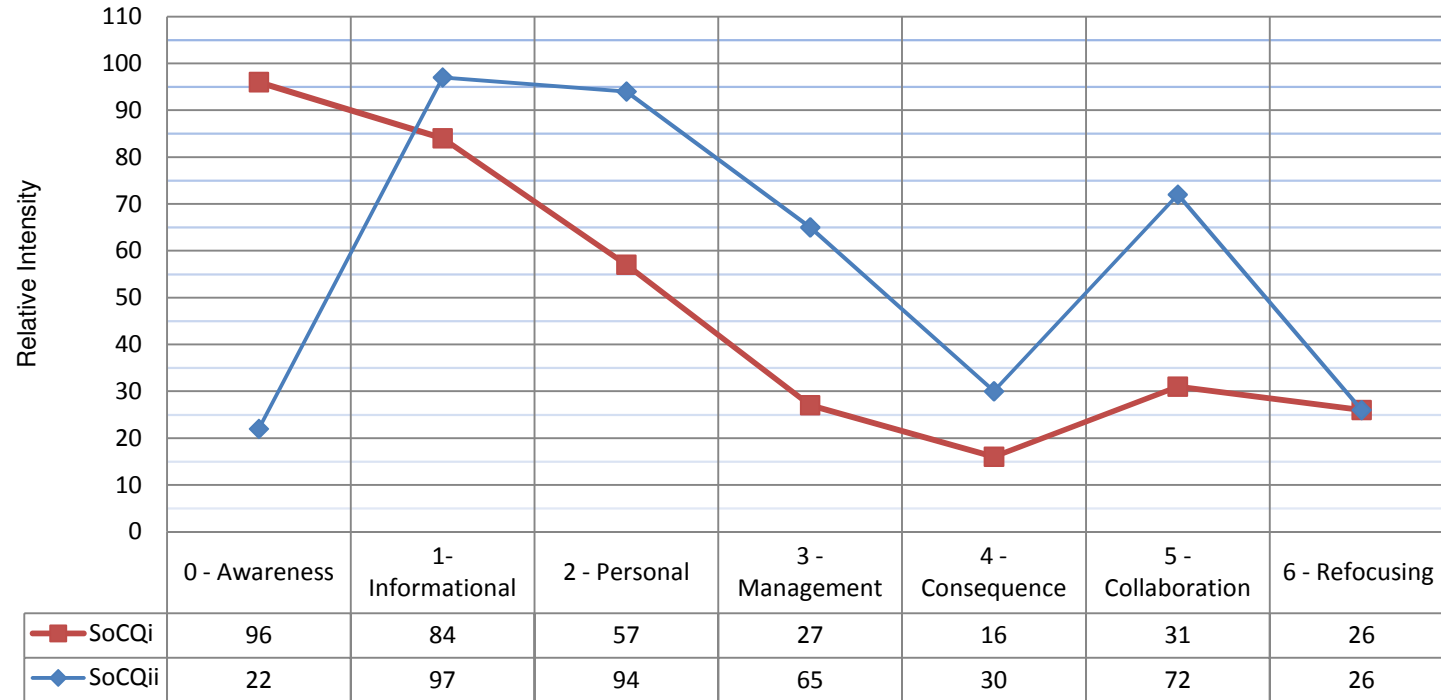
Stages of Concern_036



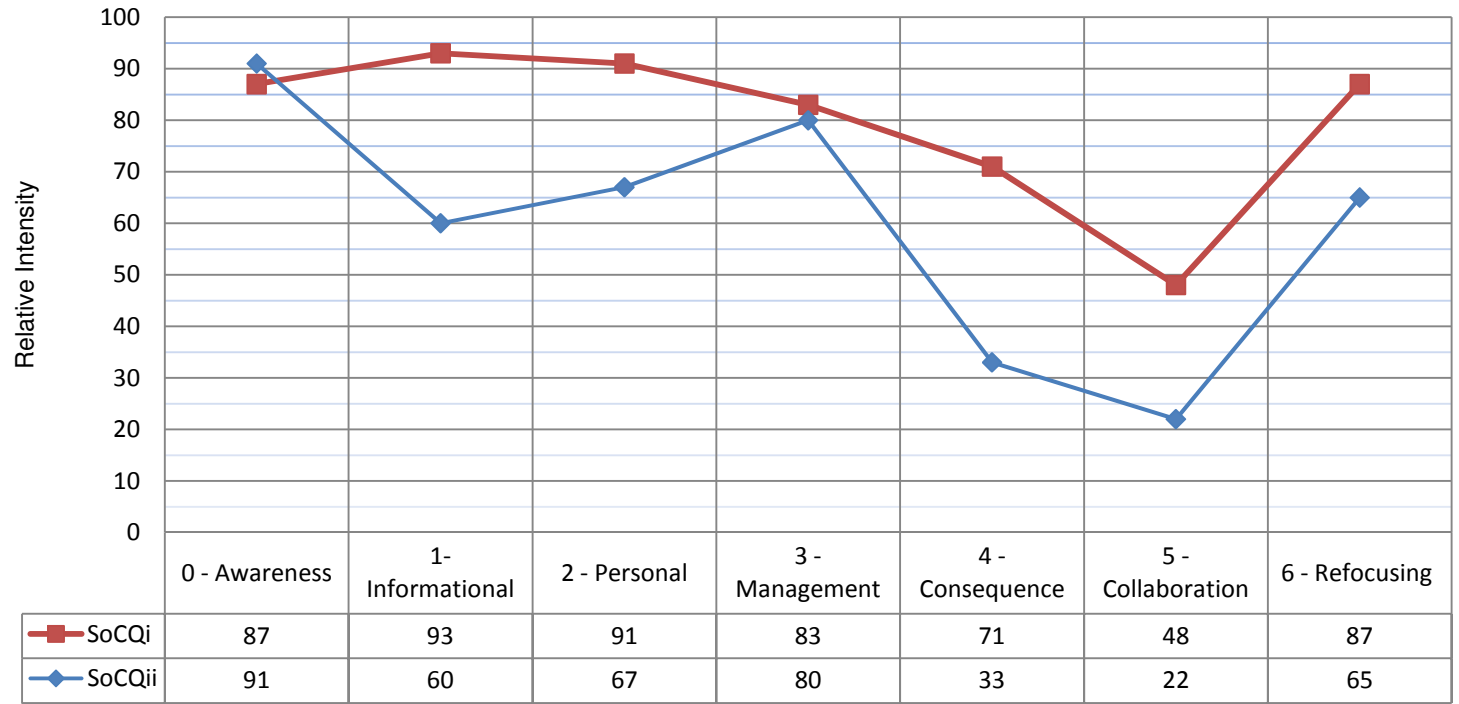
Stages of Concern_037



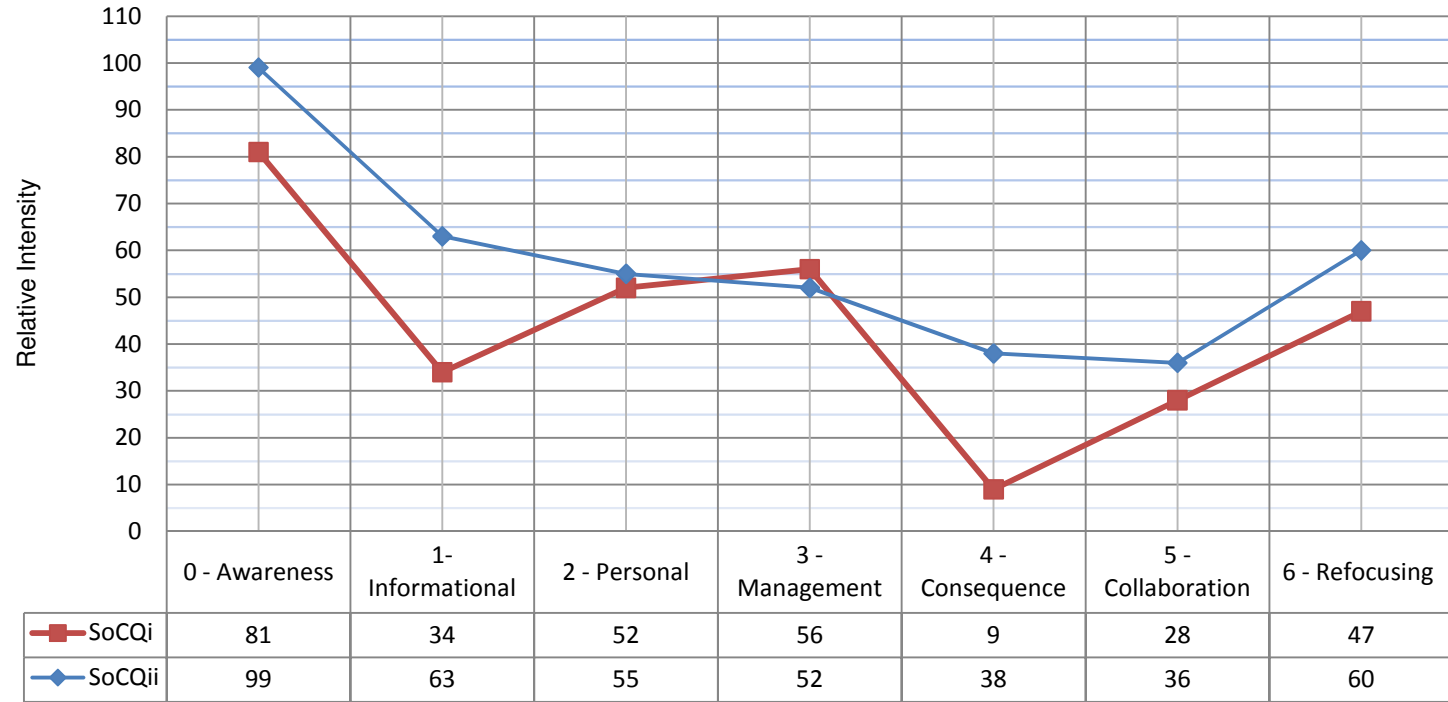
Stages of Concern_038



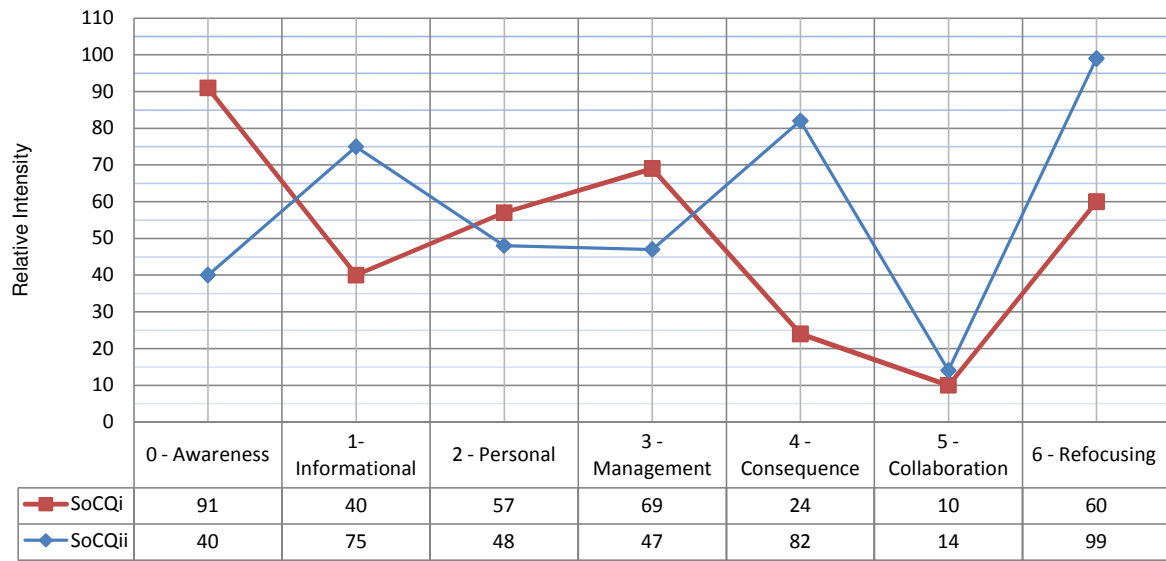
Stages of Concern_039



Stages of Concern_40



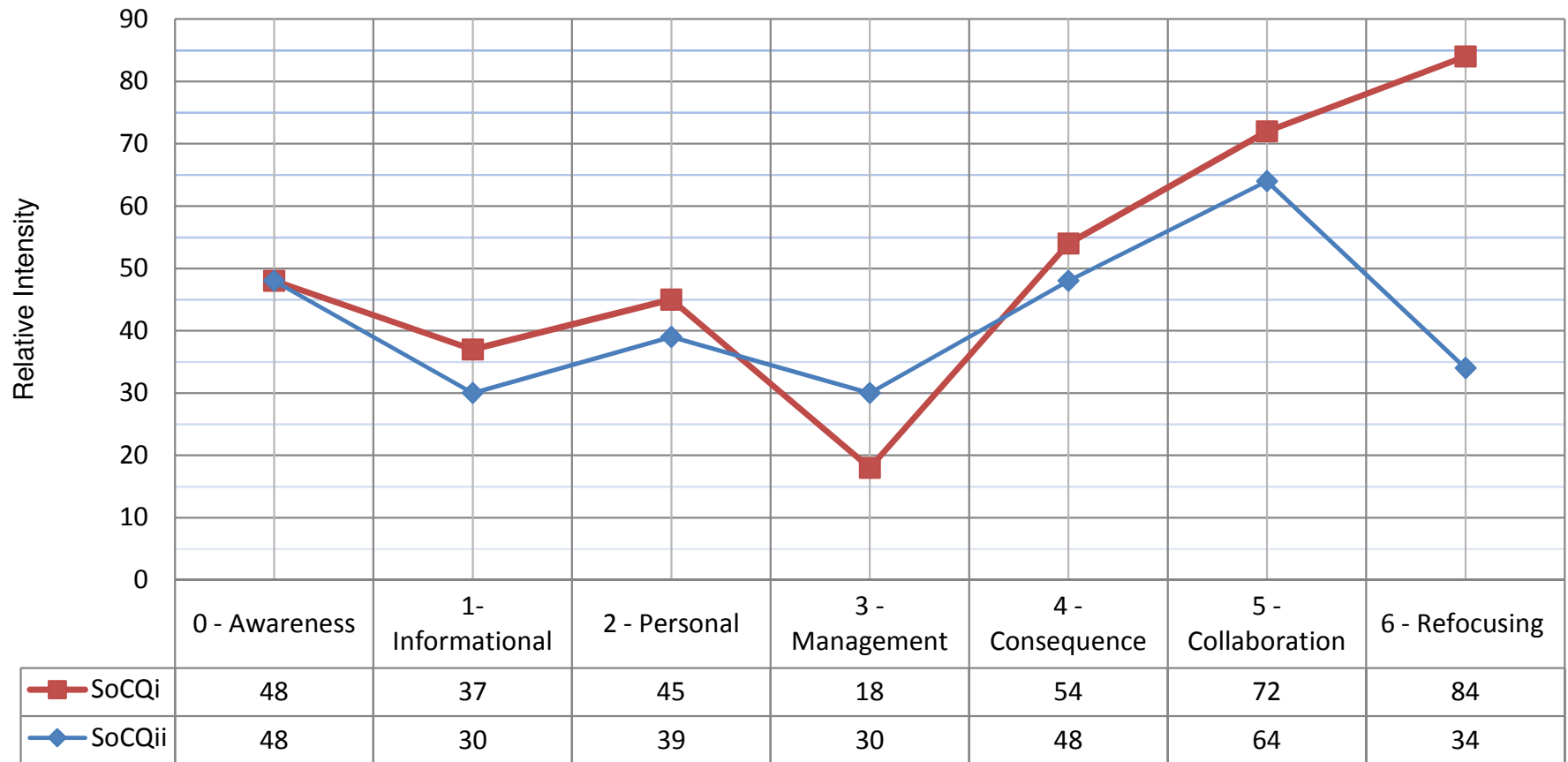
Stages of Concern_041



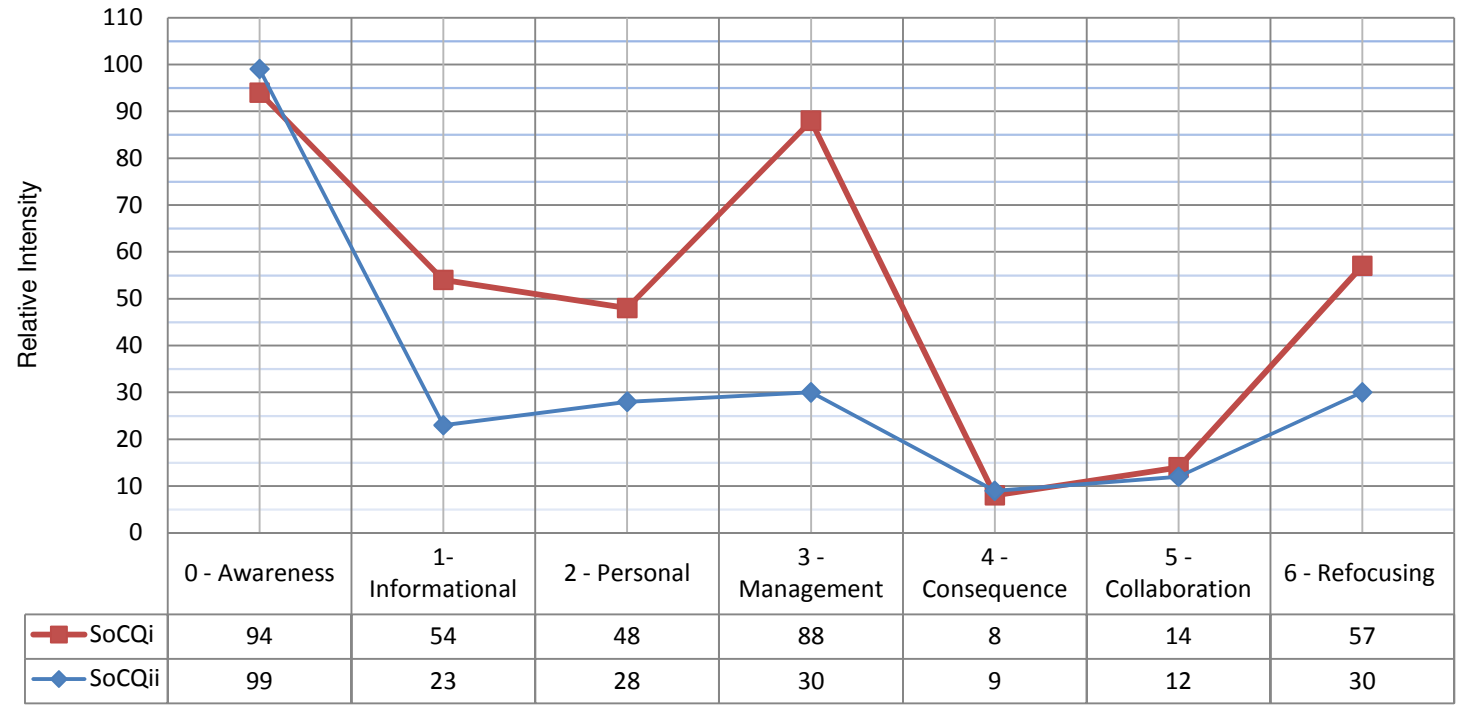
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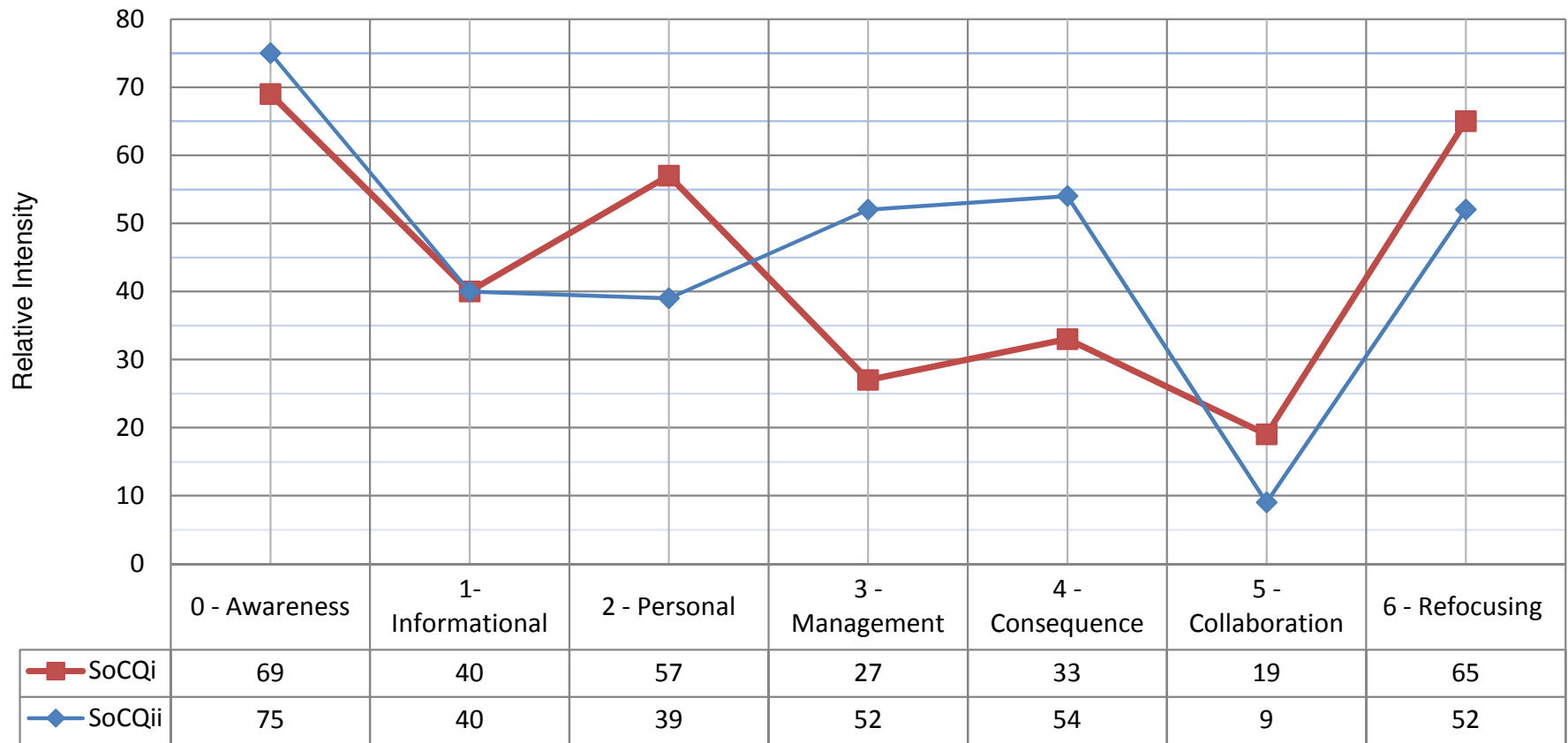
Stages of Concern_044



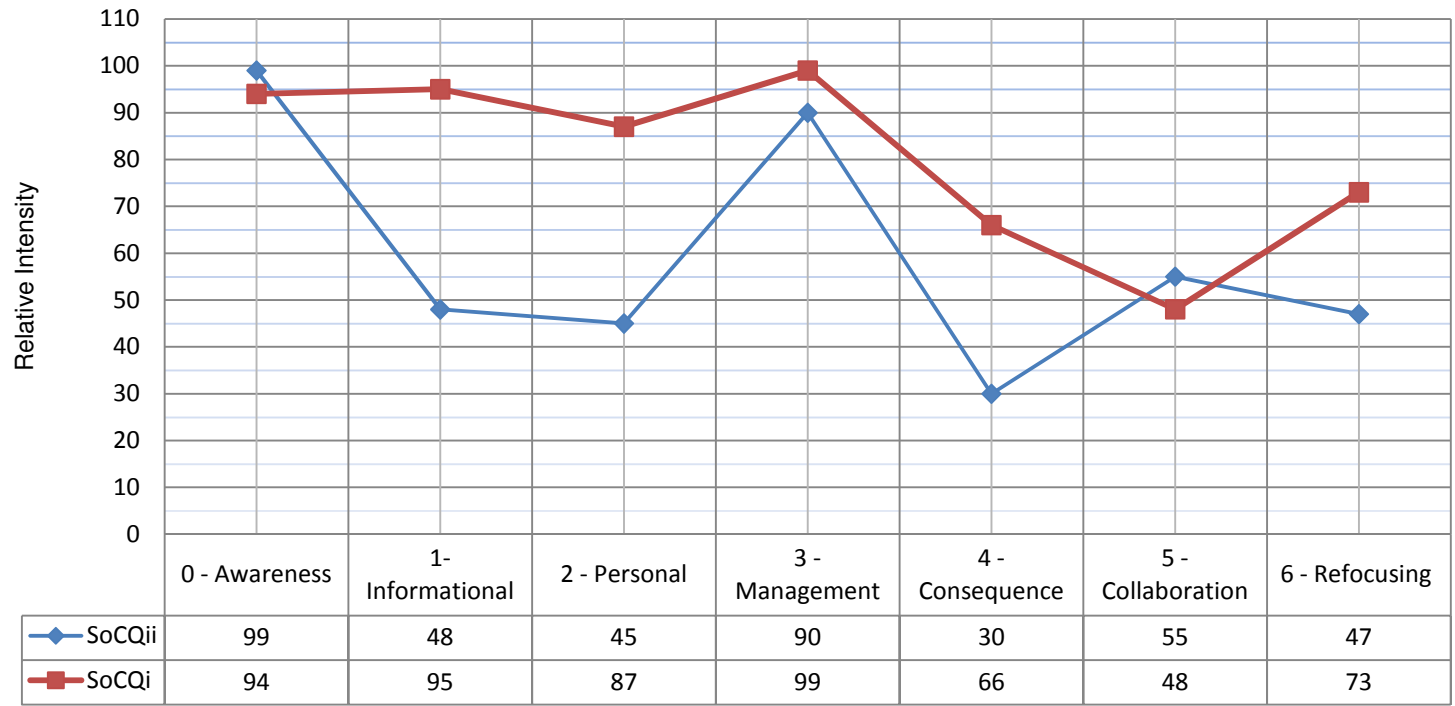
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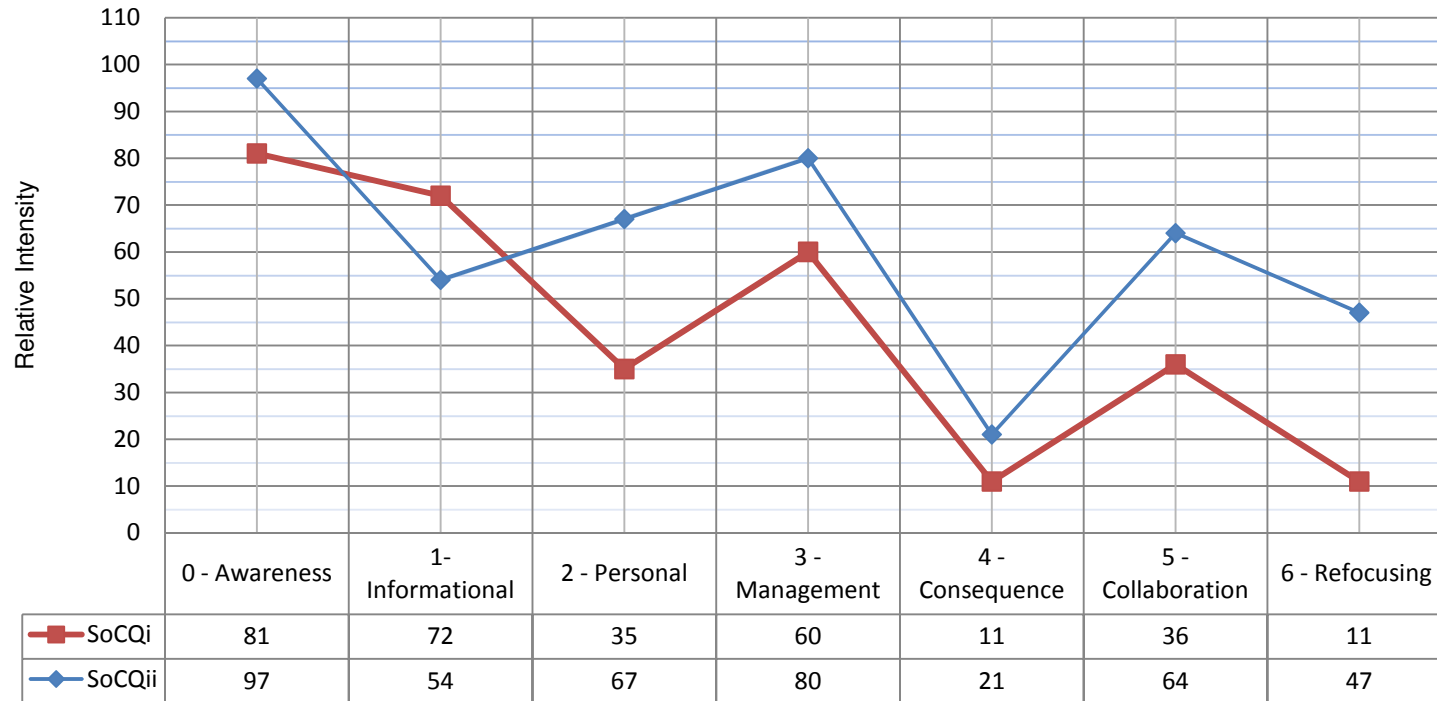
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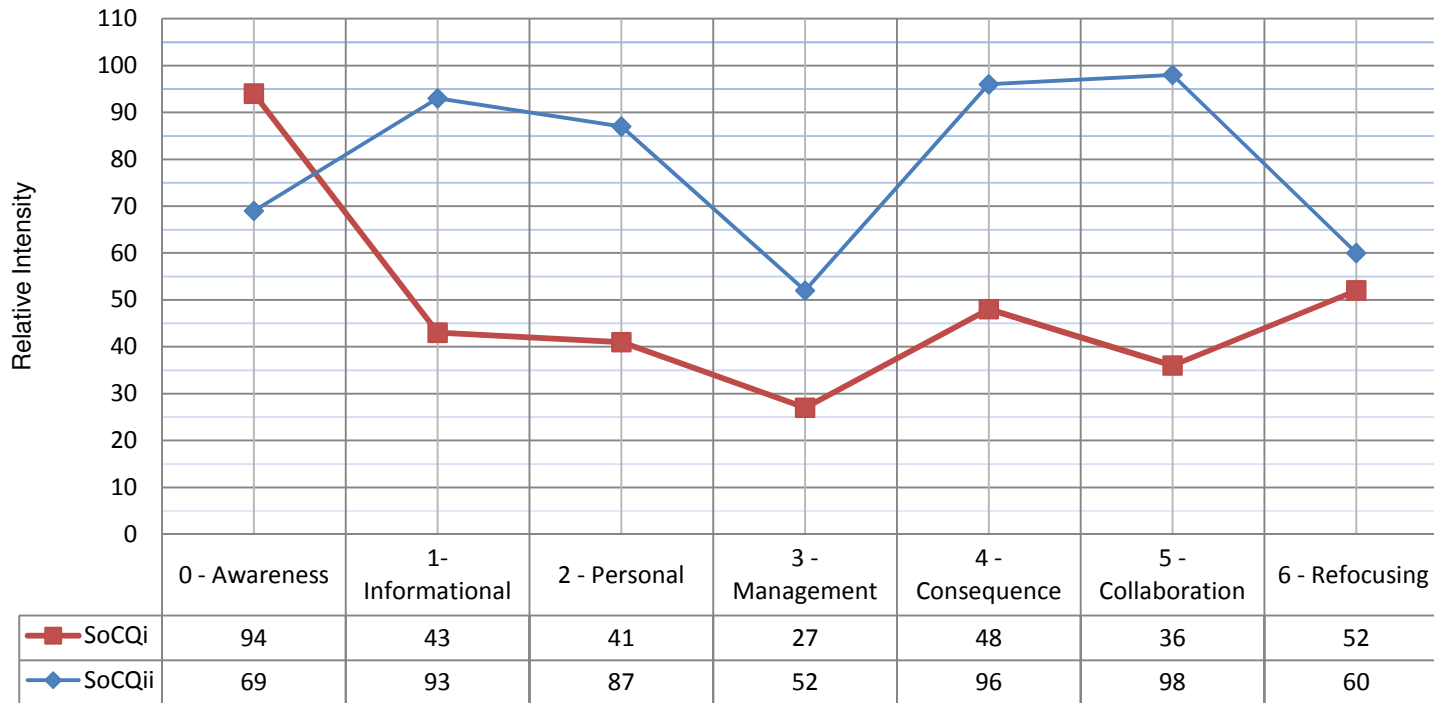
Stages of Concern_049



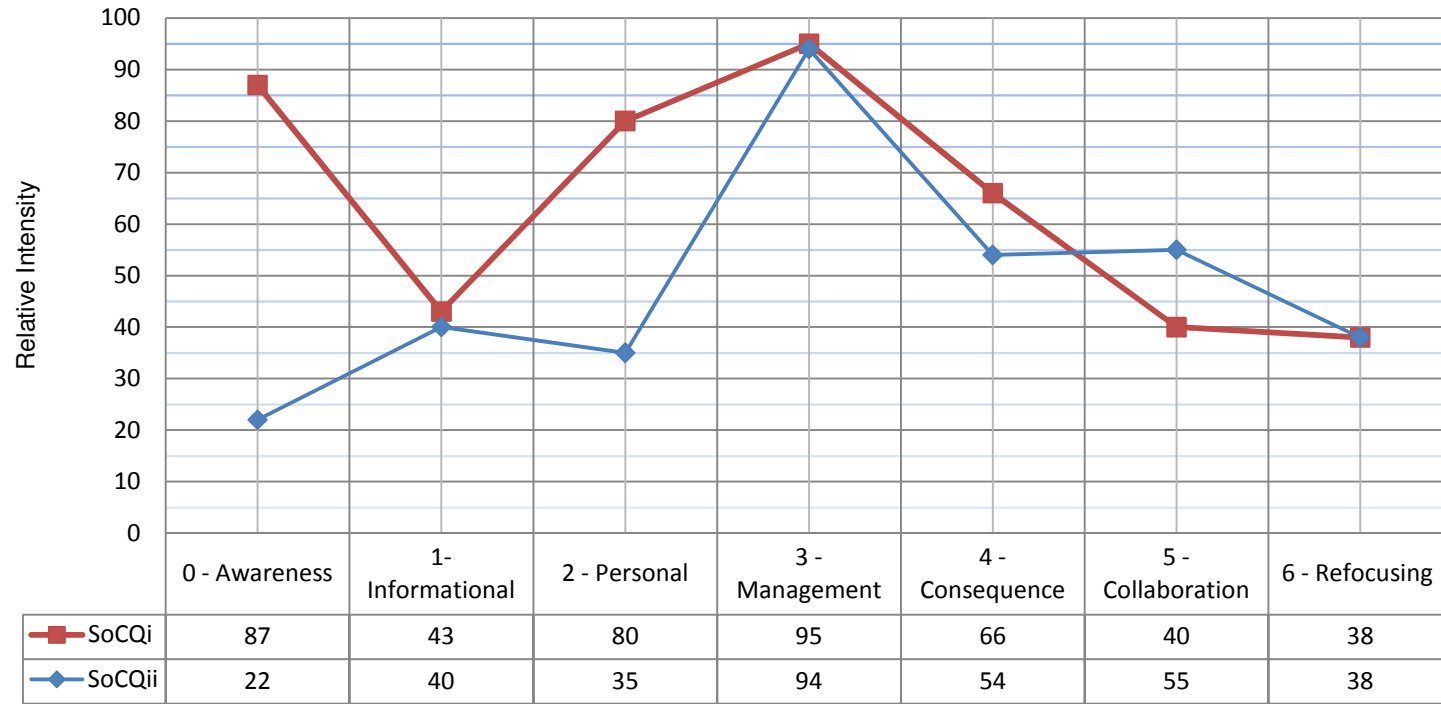
Stages of Concern_051



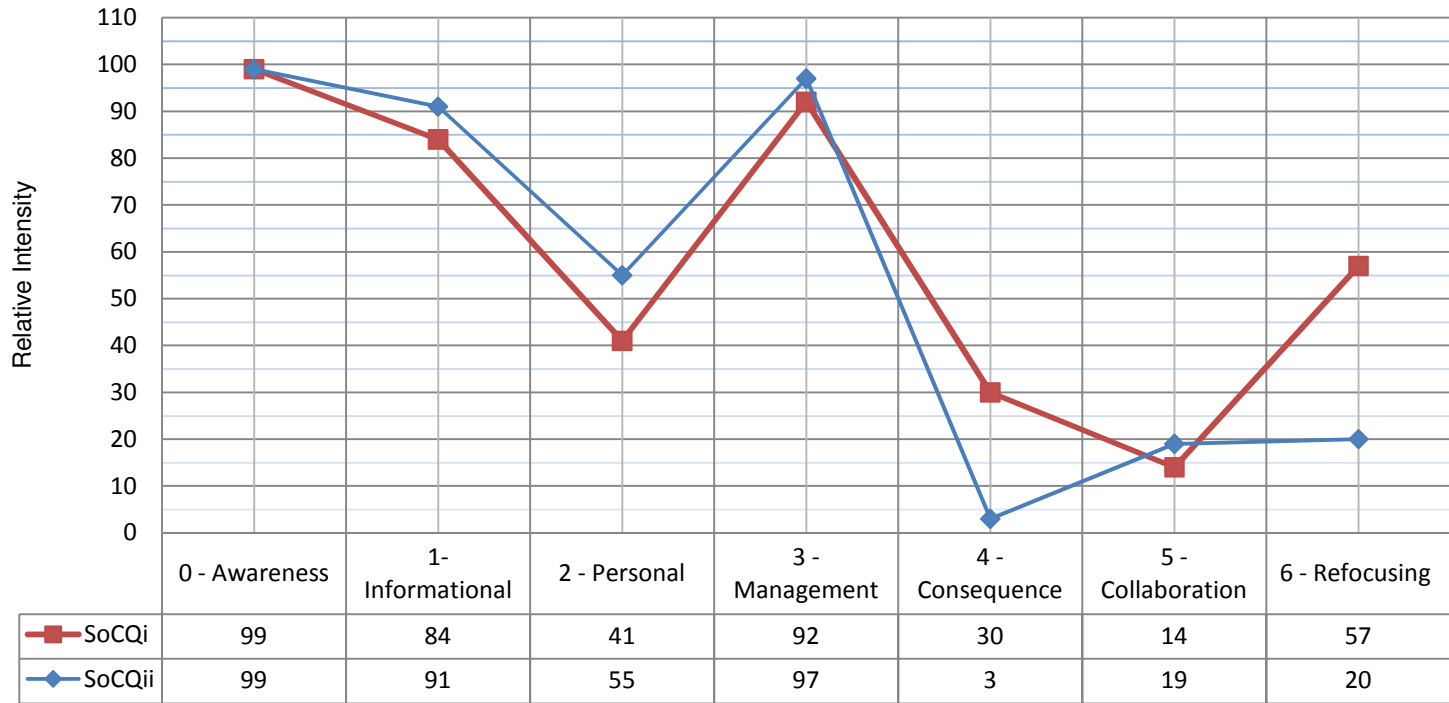
Stages of Concern_052



Stages of Concern_053



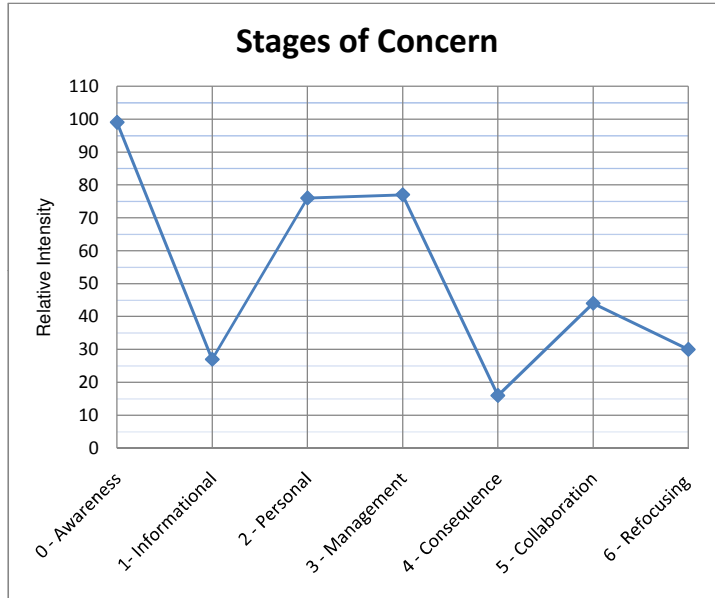
Stages of Concern_054



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- 20 0
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- 25 1
- 26 1
- 27 5
- 28 6
- 29 6
- 30 4
- 31 3
- 32 4
- 33 5
- 34 6
- 35 0

| | 0 - Awareness | 1- Informational | 2 - Personal | 3 - Management | 4 - Consequence | 5 - Collaboration | 6 - Refocusing |
|--|---------------|------------------|--------------|----------------|-----------------|-------------------|----------------|
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| | 99 | 27 | 76 | 77 | 16 | 44 | 30 |



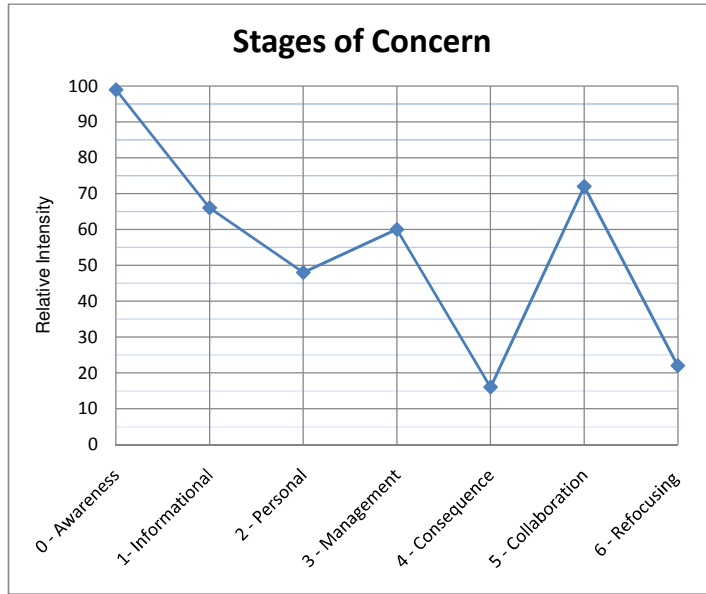
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|---------------|------------------|--------------|----------------|-----------------|-------------------|----------------|
| 0 | 1 | 2 | 3 | 4 | 5 | 6 |
| 1 | 4 | 6 | 5 | 1 | 4 | 1 |
| 6 | 0 | 0 | 5 | 1 | 3 | 2 |
| 6 | 0 | 4 | 3 | 3 | 1 | 0 |
| 4 | 1 | 6 | 1 | 6 | 5 | 6 |
| 4 | 0 | 5 | 6 | 4 | 6 | 3 |
| 21 | 5 | 21 | 20 | 15 | 19 | 12 |

ID003 ID003

Question Raw data

- 1
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- 31
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- 33
- 34
- 35

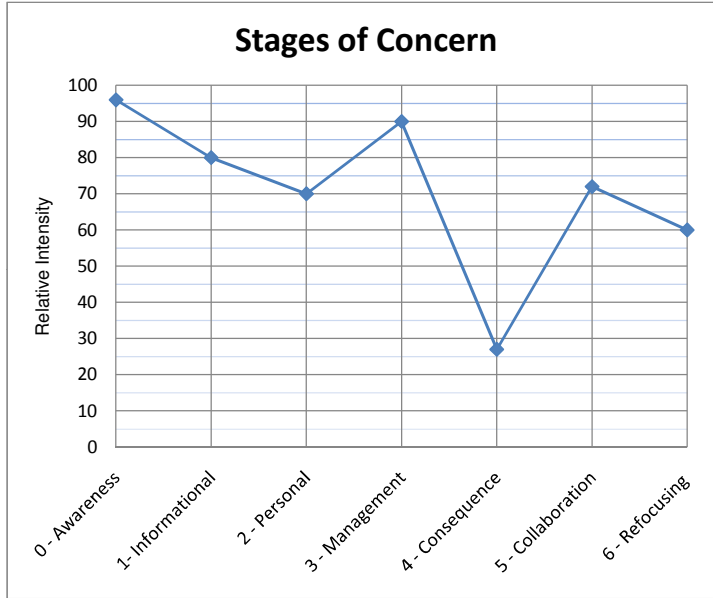
| | 0 - Awareness | 1- Informational | 2 - Personal | 3 - Management | 4 - Consequence | 5 - Collaboration | 6 - Refocusing |
|---|---------------|------------------|--------------|----------------|-----------------|-------------------|----------------|
| 0 | 22 | 18 | 12 | 16 | 15 | 26 | 10 |
| 1 | 99 | 66 | 48 | 60 | 16 | 72 | 22 |



| | 0 - Awareness | 1- Informational | 2 - Personal | 3 - Management | 4 - Consequence | 5 - Collaboration | 6 - Refocusing |
|---|---------------|------------------|--------------|----------------|-----------------|-------------------|----------------|
| 0 | 1 | 2 | 2 | 6 | 1 | 6 | 4 |
| 1 | 7 | 6 | 1 | 1 | 1 | 6 | 1 |
| 2 | 7 | 4 | 3 | 3 | 1 | 5 | 1 |
| 3 | 5 | 4 | 2 | 2 | 6 | 7 | 2 |
| 4 | 2 | 2 | 4 | 4 | 6 | 2 | 2 |
| 5 | 22 | 18 | 12 | 16 | 15 | 26 | 10 |

| ID005 Question | ID005 Raw data |
|-------------------|-------------------|
| 1 | 1 |
| 2 | 4 |
| 3 | 2 |
| 4 | 6 |
| 5 | 4 |
| 6 | 3 |
| 7 | 3 |
| 8 | 4 |
| 9 | 2 |
| 10 | 6 |
| 11 | 3 |
| 12 | 3 |
| 13 | 4 |
| 14 | 6 |
| 15 | 4 |
| 16 | 6 |
| 17 | 4 |
| 18 | 6 |
| 19 | 3 |
| 20 | 2 |
| 21 | 6 |
| 22 | 6 |
| 23 | 1 |
| 24 | 6 |
| 25 | 5 |
| 26 | 6 |
| 27 | 6 |
| 28 | 4 |
| 29 | 4 |
| 30 | 6 |
| 31 | 5 |
| 32 | 6 |
| 33 | 4 |
| 34 | 4 |
| 35 | 3 |

| 0 - Awareness | 1 - Informational | 2 - Personal | 3 - Management | 4 - Consequence | 5 - Collaboration | 6 - Refocusing |
|---------------|-------------------|--------------|----------------|-----------------|-------------------|----------------|
| 0 | 1 | 2 | 3 | 4 | 5 | 6 |
| 18 | 22 | 19 | 25 | 19 | 26 | 19 |
| 96 | 80 | 70 | 90 | 27 | 72 | 60 |

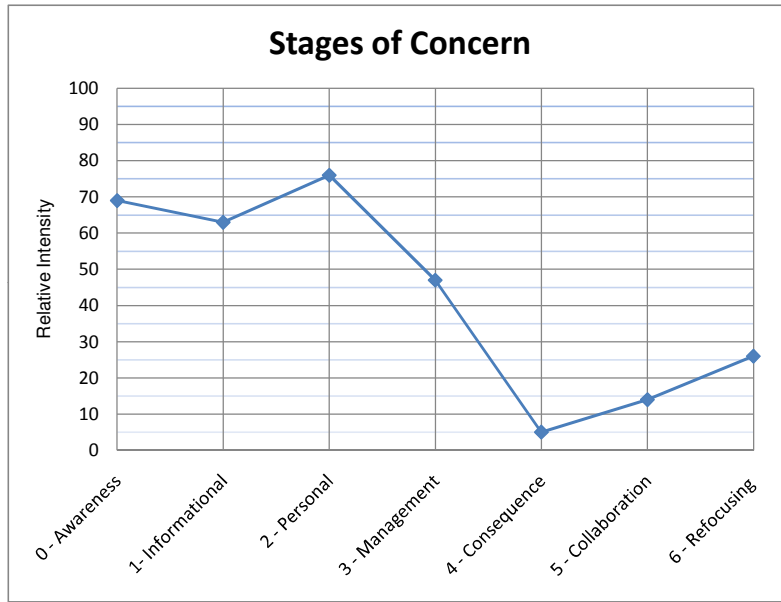


| 0 - Awareness | 1 - Informational | 2 - Personal | 3 - Management | 4 - Consequence | 5 - Collaboration | 6 - Refocusing |
|---------------|-------------------|--------------|----------------|-----------------|-------------------|----------------|
| 0 | 1 | 2 | 3 | 4 | 5 | 6 |
| 2 | 3 | 3 | 6 | 1 | 4 | 4 |
| 3 | 6 | 4 | 4 | 3 | 6 | 2 |
| 6 | 4 | 4 | 6 | 3 | 6 | 2 |
| 1 | 6 | 4 | 5 | 6 | 6 | 6 |
| 6 | 3 | 4 | 4 | 6 | 4 | 5 |
| 18 | 22 | 19 | 25 | 19 | 26 | 19 |

ID006 ID006

| Question | Raw data | 0 - Awareness | 1- Informational | 2 - Personal | 3 - Management | 4 - Consequence | 5 - Collaboration | 6 - Refocusing |
|----------|----------|---------------|------------------|--------------|----------------|-----------------|-------------------|----------------|
| 1 | 1 | 12 | 17 | 21 | 13 | 9 | 10 | 11 |
| 2 | 1 | 69 | 63 | 76 | 47 | 5 | 14 | 26 |

| | |
|----|---|
| 3 | 1 |
| 4 | 3 |
| 5 | 1 |
| 6 | 2 |
| 7 | 5 |
| 8 | 2 |
| 9 | 4 |
| 10 | 1 |
| 11 | 1 |
| 12 | 1 |
| 13 | 3 |
| 14 | 0 |
| 15 | 7 |
| 16 | 4 |
| 17 | 6 |
| 18 | 1 |
| 19 | 3 |
| 20 | 1 |
| 21 | 2 |
| 22 | 1 |
| 23 | 3 |
| 24 | 3 |
| 25 | 4 |
| 26 | 3 |
| 27 | 3 |
| 28 | 4 |
| 29 | 4 |
| 30 | 5 |
| 31 | 4 |
| 32 | 1 |
| 33 | 3 |
| 34 | 0 |
| 35 | 5 |

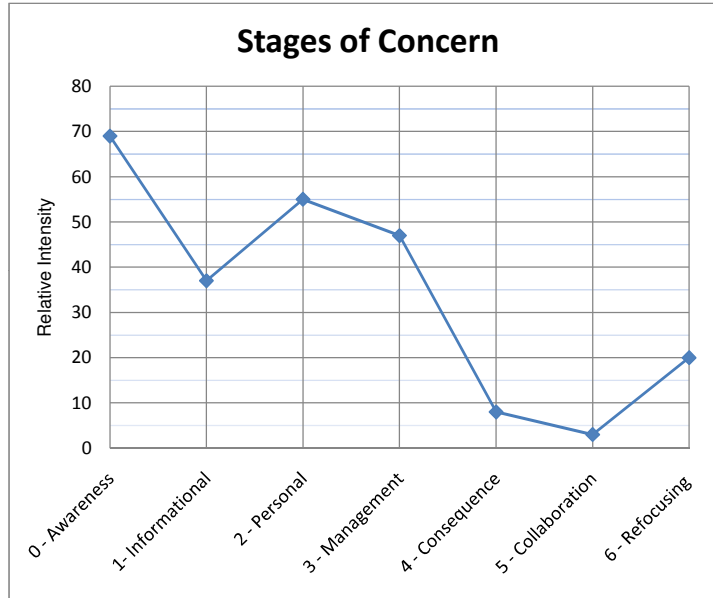


| 0 - Awareness | 1- Informational | 2 - Personal | 3 - Management | 4 - Consequence | 5 - Collaboration | 6 - Refocusing |
|---------------|------------------|--------------|----------------|-----------------|-------------------|----------------|
| 0 | 1 | 2 | 3 | 4 | 5 | 6 |
| 1 | 2 | 5 | 3 | 1 | 1 | 1 |
| 1 | 0 | 3 | 2 | 1 | 1 | 4 |
| 2 | 7 | 6 | 4 | 3 | 1 | 1 |
| 3 | 3 | 4 | 4 | 3 | 3 | 1 |
| 5 | 5 | 3 | 0 | 1 | 4 | 4 |
| 12 | 17 | 21 | 13 | 9 | 10 | 11 |

ID007
Question

| ID007 | Raw data |
|-------|----------|
| 1 | 1 |
| 2 | 1 |
| 3 | 1 |
| 4 | 3 |
| 5 | 0 |
| 6 | 4 |
| 7 | 5 |
| 8 | 4 |
| 9 | 4 |
| 10 | 0 |
| 11 | 4 |
| 12 | 5 |
| 13 | 5 |
| 14 | 3 |
| 15 | 0 |
| 16 | 3 |
| 17 | 3 |
| 18 | 0 |
| 19 | 2 |
| 20 | 2 |
| 21 | 4 |
| 22 | 1 |
| 23 | 1 |
| 24 | 3 |
| 25 | 2 |
| 26 | 0 |
| 27 | 0 |
| 28 | 0 |
| 29 | 3 |
| 30 | 1 |
| 31 | 1 |
| 32 | 1 |
| 33 | 1 |
| 34 | 1 |
| 35 | 1 |

| | 0 - Awareness | 1 - Informational | 2 - Personal | 3 - Management | 4 - Consequence | 5 - Collaboration | 6 - Refocusing |
|---|---------------|-------------------|--------------|----------------|-----------------|-------------------|----------------|
| 0 | 0 | 1 | 2 | 3 | 4 | 5 | 6 |
| 1 | 12 | 8 | 14 | 13 | 11 | 3 | 9 |
| 2 | 69 | 37 | 55 | 47 | 8 | 3 | 20 |



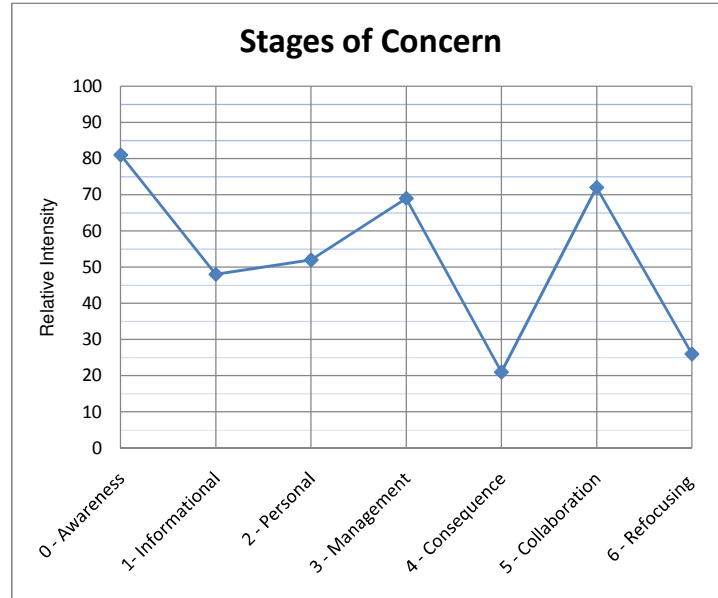
| | 0 - Awareness | 1 - Informational | 2 - Personal | 3 - Management | 4 - Consequence | 5 - Collaboration | 6 - Refocusing |
|----|---------------|-------------------|--------------|----------------|-----------------|-------------------|----------------|
| 0 | 0 | 1 | 2 | 3 | 4 | 5 | 6 |
| 1 | 4 | 5 | 3 | 1 | 0 | 1 | |
| 5 | 3 | 5 | 4 | 4 | 0 | 4 | |
| 4 | 0 | 3 | 3 | 2 | 0 | 2 | |
| 1 | 0 | 0 | 2 | 3 | 0 | 1 | |
| 1 | 1 | 1 | 1 | 1 | 3 | 1 | |
| 12 | 8 | 14 | 13 | 11 | 3 | 9 | |

ID009
Question

ID009
Raw data

- 1 1
- 2 1
- 3 1
- 4 6
- 5 5
- 6 4
- 7 1
- 8 1
- 9 1
- 10 6
- 11 1
- 12 7
- 13 2
- 14 1
- 15 5
- 16 6
- 17 4
- 18 3
- 19 1
- 20 1
- 21 1
- 22 7
- 23 1
- 24 7
- 25 4
- 26 1
- 27 7
- 28 5
- 29 5
- 30 4
- 31 1
- 32 7
- 33 1
- 34 1
- 35 1

| | 0 - Awareness | 1 - Informational | 2 - Personal | 3 - Management | 4 - Consequence | 5 - Collaboration | 6 - Refocusing |
|--|---------------|-------------------|--------------|----------------|-----------------|-------------------|----------------|
| | 0 | 1 | 2 | 3 | 4 | 5 | 6 |
| | 14 | 12 | 13 | 18 | 17 | 26 | 11 |
| | 81 | 48 | 52 | 69 | 21 | 72 | 26 |

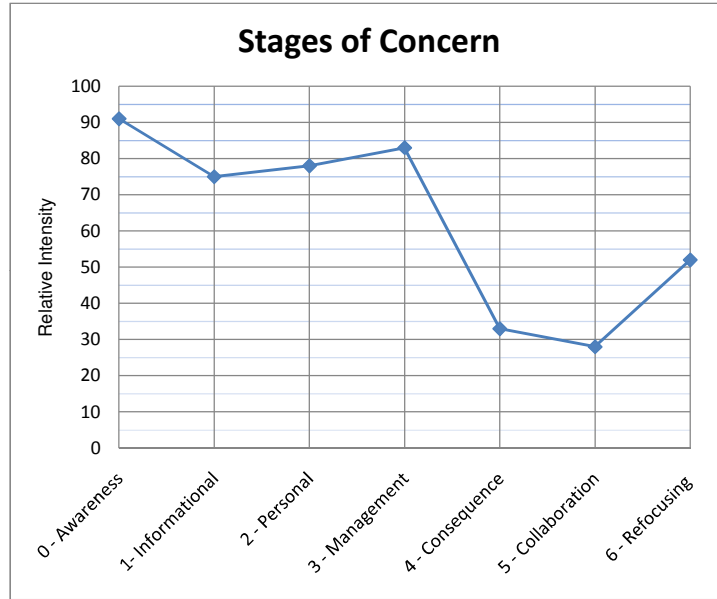


| | 0 - Awareness | 1 - Informational | 2 - Personal | 3 - Management | 4 - Consequence | 5 - Collaboration | 6 - Refocusing |
|--|---------------|-------------------|--------------|----------------|-----------------|-------------------|----------------|
| | 0 | 1 | 2 | 3 | 4 | 5 | 6 |
| | 1 | 4 | 1 | 6 | 1 | 5 | 1 |
| | 7 | 1 | 2 | 1 | 1 | 6 | 1 |
| | 1 | 5 | 4 | 6 | 1 | 3 | 1 |
| | 1 | 1 | 5 | 4 | 7 | 7 | 7 |
| | 4 | 1 | 1 | 1 | 7 | 5 | 1 |
| | 14 | 12 | 13 | 18 | 17 | 26 | 11 |

ID010 ID010
Question Raw data

1 4
2 1
3 0
4 4
5 1
6 4
7 3
8 4
9 4
10 3
11 3
12 2
13 5
14 5
15 5
16 5
17 5
18 2
19 5
20 4
21 5
22 4
23 4
24 5
25 5
26 4
27 5
28 5
29 4
30 5
31 4
32 4
33 4
34 4
35 3

| 0 - Awareness | 1 - Informational | 2 - Personal | 3 - Management | 4 - Consequence | 5 - Collaboration | 6 - Refocusing |
|---------------|-------------------|--------------|----------------|-----------------|-------------------|----------------|
| 0 | 1 | 2 | 3 | 4 | 5 | 6 |
| 16 | 21 | 22 | 22 | 21 | 15 | 17 |
| 91 | 75 | 78 | 83 | 33 | 28 | 52 |

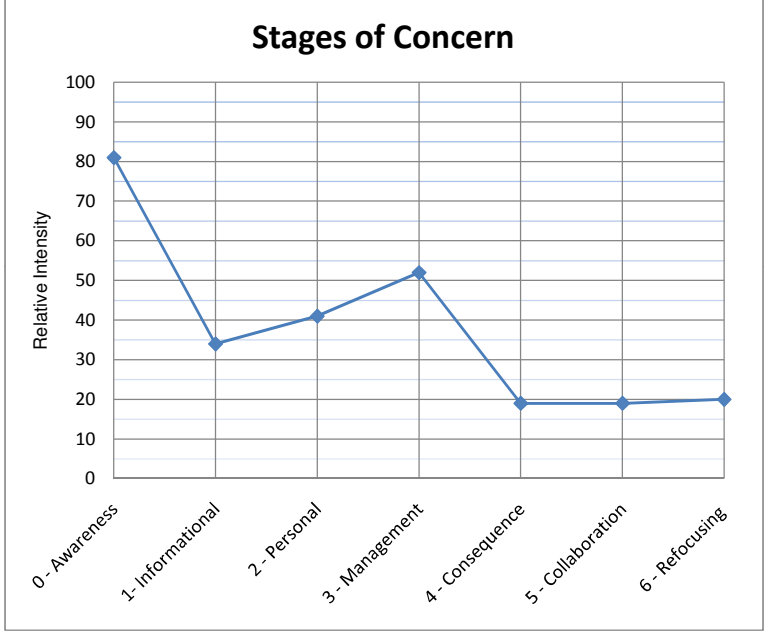


| 0 - Awareness | 1 - Informational | 2 - Personal | 3 - Management | 4 - Consequence | 5 - Collaboration | 6 - Refocusing |
|---------------|-------------------|--------------|----------------|-----------------|-------------------|----------------|
| 0 | 1 | 2 | 3 | 4 | 5 | 6 |
| 0 | 4 | 3 | 4 | 4 | 1 | 1 |
| 2 | 5 | 5 | 4 | 3 | 3 | 4 |
| 5 | 5 | 5 | 5 | 5 | 2 | 4 |
| 4 | 4 | 5 | 5 | 5 | 5 | 4 |
| 5 | 3 | 4 | 4 | 4 | 4 | 4 |
| 16 | 21 | 22 | 22 | 21 | 15 | 17 |

ID012 ID012
Question Raw data

1 5
2 0
3 0
4 3
5 1
6 3
7 2
8 2
9 3
10 3
11 3
12 1
13 1
14 0
15 0
16 3
17 3
18 3
19 3
20 3
21 4
22 1
23 3
24 3
25 2
26 3
27 3
28 2
29 2
30 6
31 2
32 2
33 2
34 4
35 1

| 0 - Awareness | 1 - Informational | 2 - Personal | 3 - Management | 4 - Consequence | 5 - Collaboration | 6 - Refocusing |
|---------------|-------------------|--------------|----------------|-----------------|-------------------|----------------|
| 0 | 1 | 2 | 3 | 4 | 5 | 6 |
| 14 | 7 | 10 | 14 | 16 | 12 | 9 |
| 81 | 34 | 41 | 52 | 19 | 19 | 20 |

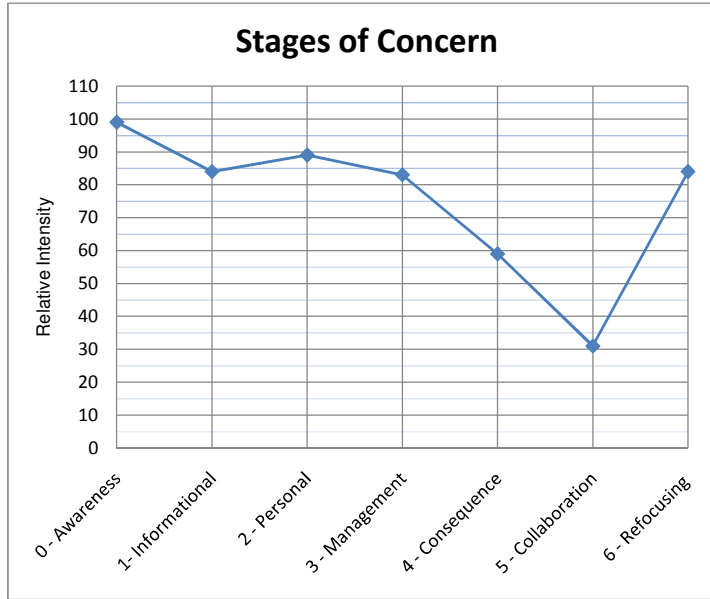


| 0 - Awareness | 1 - Informational | 2 - Personal | 3 - Management | 4 - Consequence | 5 - Collaboration | 6 - Refocusing |
|---------------|-------------------|--------------|----------------|-----------------|-------------------|----------------|
| 0 | 1 | 2 | 3 | 4 | 5 | 6 |
| 0 | 3 | 2 | 3 | 5 | 1 | 0 |
| 1 | 0 | 1 | 2 | 3 | 3 | 3 |
| 4 | 0 | 3 | 3 | 3 | 3 | 3 |
| 3 | 3 | 2 | 2 | 3 | 3 | 1 |
| 6 | 1 | 2 | 4 | 2 | 2 | 2 |
| 14 | 7 | 10 | 14 | 16 | 12 | 9 |

ID013 ID013
Question Raw data

1 5
2 7
3 5
4 7
5 2
6 2
7 6
8 4
9 4
10 6
11 5
12 2
13 4
14 4
15 6
16 4
17 6
18 2
19 5
20 2
21 4
22 6
23 5
24 6
25 5
26 7
27 5
28 5
29 1
30 5
31 6
32 5
33 6
34 2
35 4

| 0 - Awareness | 1 - Informational | 2 - Personal | 3 - Management | 4 - Consequence | 5 - Collaboration | 6 - Refocusing |
|---------------|-------------------|--------------|----------------|-----------------|-------------------|----------------|
| 0 | 1 | 2 | 3 | 4 | 5 | 6 |
| 21 | 23 | 27 | 22 | 26 | 16 | 25 |
| 99 | 84 | 89 | 83 | 59 | 31 | 84 |

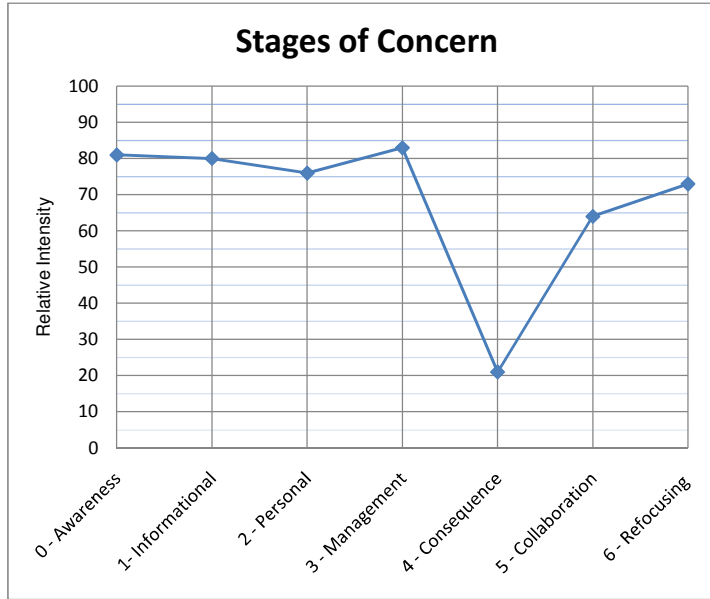


| 0 - Awareness | 1 - Informational | 2 - Personal | 3 - Management | 4 - Consequence | 5 - Collaboration | 6 - Refocusing |
|---------------|-------------------|--------------|----------------|-----------------|-------------------|----------------|
| 0 | 1 | 2 | 3 | 4 | 5 | 6 |
| 5 | 2 | 6 | 7 | 5 | 2 | 7 |
| 2 | 4 | 4 | 4 | 5 | 6 | 4 |
| 4 | 6 | 6 | 4 | 5 | 2 | 2 |
| 5 | 7 | 5 | 5 | 6 | 5 | 6 |
| 5 | 4 | 6 | 2 | 5 | 1 | 6 |
| 21 | 23 | 27 | 22 | 26 | 16 | 25 |

ID014 ID014
Question Raw data

| | | 0 - Awareness | 1 - Informational | 2 - Personal | 3 - Management | 4 - Consequence | 5 - Collaboration | 6 - Refocusing |
|---|---|---------------|-------------------|--------------|----------------|-----------------|-------------------|----------------|
| 1 | 2 | 14 | 22 | 21 | 22 | 17 | 24 | 22 |
| 2 | 6 | 81 | 80 | 76 | 83 | 21 | 64 | 73 |

| | |
|----|---|
| 3 | 0 |
| 4 | 7 |
| 5 | 5 |
| 6 | 2 |
| 7 | 0 |
| 8 | 0 |
| 9 | 5 |
| 10 | 5 |
| 11 | 4 |
| 12 | 3 |
| 13 | 7 |
| 14 | 3 |
| 15 | 7 |
| 16 | 4 |
| 17 | 4 |
| 18 | 3 |
| 19 | 2 |
| 20 | 2 |
| 21 | 4 |
| 22 | 4 |
| 23 | 2 |
| 24 | 4 |
| 25 | 7 |
| 26 | 7 |
| 27 | 4 |
| 28 | 5 |
| 29 | 7 |
| 30 | 5 |
| 31 | 5 |
| 32 | 5 |
| 33 | 5 |
| 34 | 4 |
| 35 | 3 |

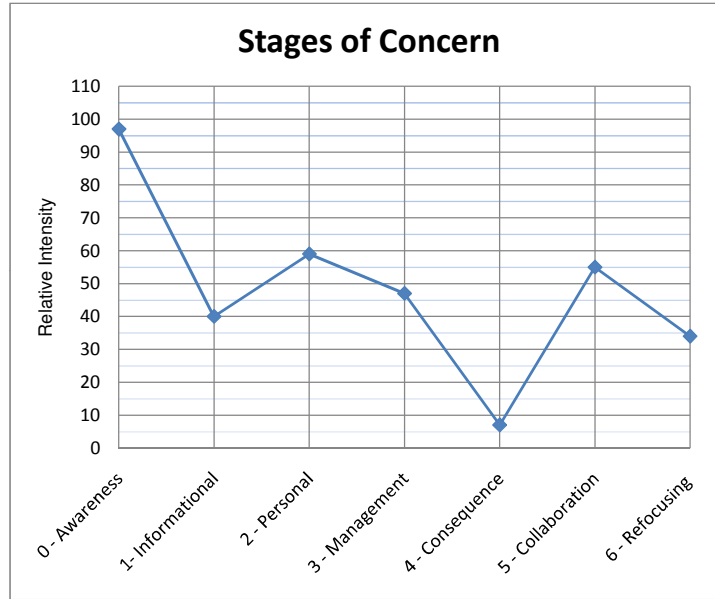


| 0 - Awareness | 1 - Informational | 2 - Personal | 3 - Management | 4 - Consequence | 5 - Collaboration | 6 - Refocusing |
|---------------|-------------------|--------------|----------------|-----------------|-------------------|----------------|
| 0 | 1 | 2 | 3 | 4 | 5 | 6 |
| 0 | 2 | 0 | 7 | 2 | 5 | 6 |
| 3 | 3 | 7 | 0 | 4 | 5 | 5 |
| 4 | 7 | 4 | 4 | 2 | 3 | 2 |
| 2 | 7 | 5 | 7 | 4 | 4 | 4 |
| 5 | 3 | 5 | 4 | 5 | 7 | 5 |
| 14 | 22 | 21 | 22 | 17 | 24 | 22 |

ID015 ID015
Question Raw data

1 1
2 1
3 1
4 1
5 7
6 3
7 3
8 3
9 2
10 4
11 2
12 7
13 3
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15 2
16 3
17 3
18 6
19 2
20 2
21 4
22 3
23 2
24 2
25 2
26 2
27 2
28 3
29 3
30 5
31 5
32 3
33 4
34 4
35 0

| 0 - Awareness | 1 - Informational | 2 - Personal | 3 - Management | 4 - Consequence | 5 - Collaboration | 6 - Refocusing |
|---------------|-------------------|--------------|----------------|-----------------|-------------------|----------------|
| 0 | 1 | 2 | 3 | 4 | 5 | 6 |
| 19 | 9 | 16 | 13 | 10 | 22 | 13 |
| 97 | 40 | 59 | 47 | 7 | 55 | 34 |

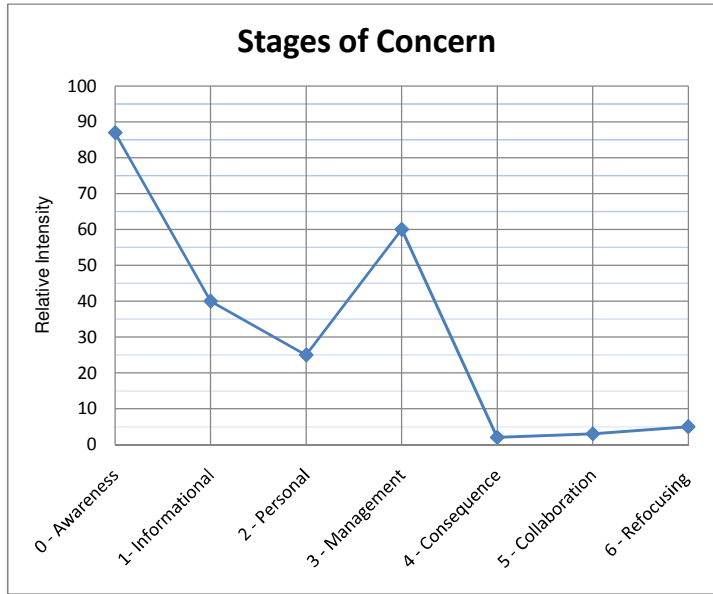


| 0 - Awareness | 1 - Informational | 2 - Personal | 3 - Management | 4 - Consequence | 5 - Collaboration | 6 - Refocusing |
|---------------|-------------------|--------------|----------------|-----------------|-------------------|----------------|
| 0 | 1 | 2 | 3 | 4 | 5 | 6 |
| 1 | 3 | 3 | 1 | 1 | 7 | 1 |
| 7 | 2 | 3 | 3 | 2 | 4 | 2 |
| 4 | 2 | 3 | 3 | 2 | 6 | 2 |
| 2 | 2 | 3 | 2 | 2 | 2 | 3 |
| 5 | 0 | 4 | 4 | 3 | 3 | 5 |
| 19 | 9 | 16 | 13 | 10 | 22 | 13 |

ID016 ID016
Question Raw data

| | |
|----|---|
| 1 | 1 |
| 2 | 0 |
| 3 | 1 |
| 4 | 7 |
| 5 | 0 |
| 6 | 3 |
| 7 | 0 |
| 8 | 1 |
| 9 | 3 |
| 10 | 0 |
| 11 | 1 |
| 12 | 1 |
| 13 | 0 |
| 14 | 5 |
| 15 | 1 |
| 16 | 6 |
| 17 | 3 |
| 18 | 0 |
| 19 | 1 |
| 20 | 0 |
| 21 | 6 |
| 22 | 0 |
| 23 | 1 |
| 24 | 0 |
| 25 | 2 |
| 26 | 0 |
| 27 | 2 |
| 28 | 2 |
| 29 | 0 |
| 30 | 6 |
| 31 | 0 |
| 32 | 0 |
| 33 | 0 |
| 34 | 0 |
| 35 | 0 |

| | 0 - Awareness | 1 - Informational | 2 - Personal | 3 - Management | 4 - Consequence | 5 - Collaboration | 6 - Refocusing |
|---|---------------|-------------------|--------------|----------------|-----------------|-------------------|----------------|
| 0 | 0 | 1 | 2 | 3 | 4 | 5 | 6 |
| 1 | 15 | 9 | 5 | 16 | 3 | 2 | 3 |
| 2 | 87 | 40 | 25 | 60 | 2 | 3 | 5 |



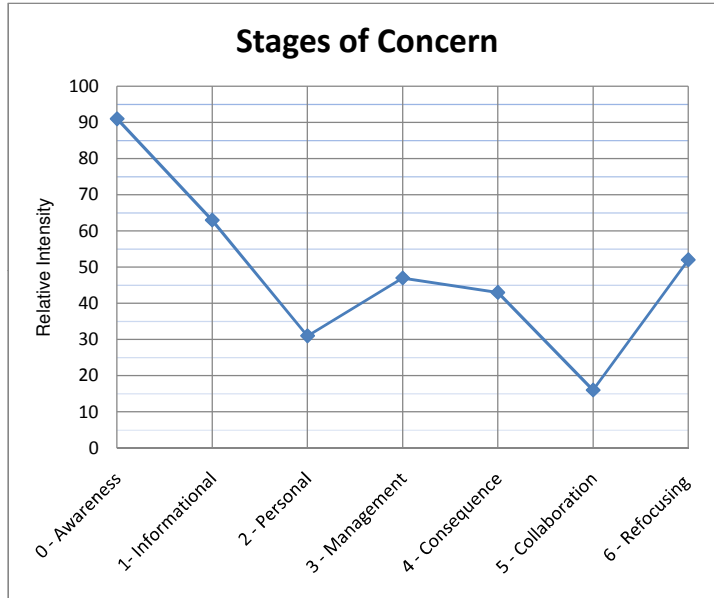
| 0 - Awareness | 1 - Informational | 2 - Personal | 3 - Management | 4 - Consequence | 5 - Collaboration | 6 - Refocusing |
|---------------|-------------------|--------------|----------------|-----------------|-------------------|----------------|
| 0 | 1 | 2 | 3 | 4 | 5 | 6 |
| 1 | 3 | 0 | 7 | 1 | 0 | 0 |
| 1 | 5 | 0 | 1 | 1 | 0 | 3 |
| 6 | 1 | 3 | 6 | 1 | 0 | 0 |
| 1 | 0 | 2 | 2 | 0 | 2 | 0 |
| 6 | 0 | 0 | 0 | 0 | 0 | 0 |
| 15 | 9 | 5 | 16 | 3 | 2 | 3 |

ID017 ID017

Question Raw data

- 1
- 2
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10
- 11
- 12
- 13
- 14
- 15
- 16
- 17
- 18
- 19
- 20
- 21
- 22
- 23
- 24
- 25
- 26
- 27
- 28
- 29
- 30
- 31
- 32
- 33
- 34
- 35

| 0 - Awareness | 1 - Informational | 2 - Personal | 3 - Management | 4 - Consequence | 5 - Collaboration | 6 - Refocusing |
|---------------|-------------------|--------------|----------------|-----------------|-------------------|----------------|
| 0 | 1 | 2 | 3 | 4 | 5 | 6 |
| 16 | 17 | 7 | 13 | 23 | 11 | 17 |
| 91 | 63 | 31 | 47 | 43 | 16 | 52 |

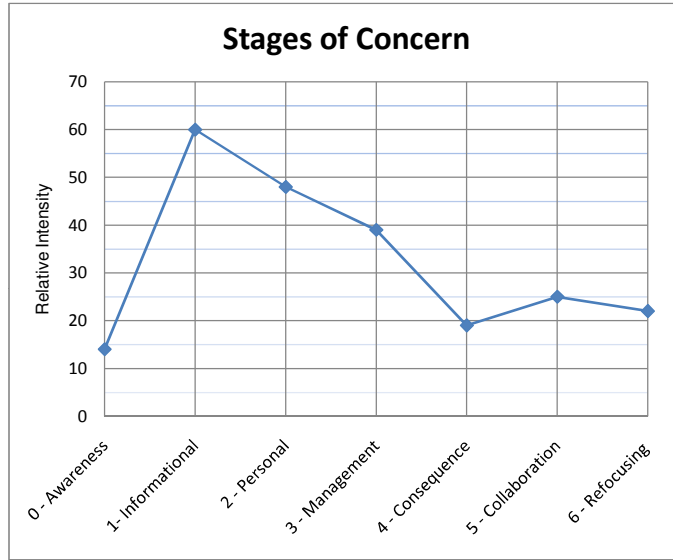


| 0 - Awareness | 1 - Informational | 2 - Personal | 3 - Management | 4 - Consequence | 5 - Collaboration | 6 - Refocusing |
|---------------|-------------------|--------------|----------------|-----------------|-------------------|----------------|
| 0 | 1 | 2 | 3 | 4 | 5 | 6 |
| 1 | 3 | 1 | 3 | 2 | 2 | 2 |
| 3 | 5 | 1 | 1 | 5 | 2 | 4 |
| 4 | 5 | 2 | 2 | 5 | 2 | 2 |
| 4 | 2 | 1 | 3 | 5 | 2 | 6 |
| 4 | 2 | 2 | 4 | 6 | 3 | 3 |
| 16 | 17 | 7 | 13 | 23 | 11 | 17 |

ID020 ID020
Question Raw data

- 1 4
- 2 1
- 3 1
- 4 2
- 5 2
- 6 1
- 7 1
- 8 1
- 9 1
- 10 5
- 11 1
- 12 1
- 13 1
- 14 5
- 15 5
- 16 3
- 17 2
- 18 1
- 19 3
- 20 3
- 21 1
- 22 1
- 23 1
- 24 4
- 25 4
- 26 4
- 27 4
- 28 4
- 29 2
- 30 1
- 31 4
- 32 4
- 33 4
- 34 1
- 35 1

| | 0 - Awareness | 1 - Informational | 2 - Personal | 3 - Management | 4 - Consequence | 5 - Collaboration | 6 - Refocusing |
|--|---------------|-------------------|--------------|----------------|-----------------|-------------------|----------------|
| | 0 | 1 | 2 | 3 | 4 | 5 | 6 |
| | 5 | 16 | 12 | 11 | 16 | 14 | 10 |
| | 14 | 60 | 48 | 39 | 19 | 25 | 22 |

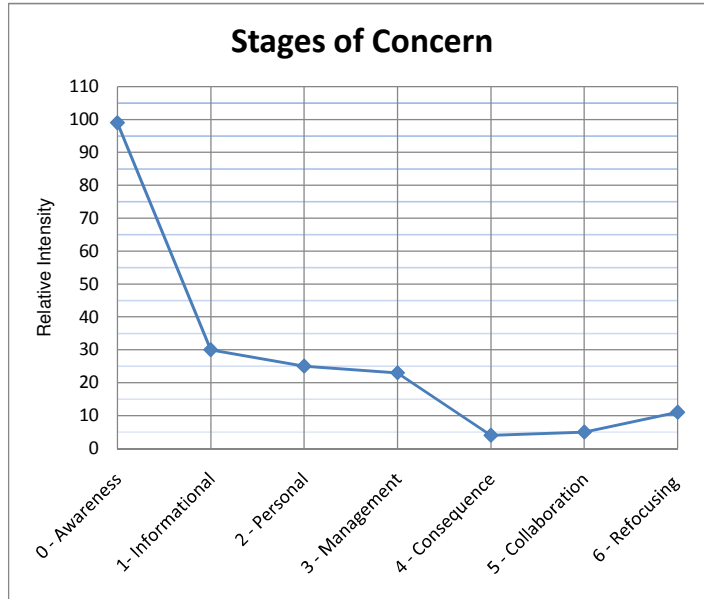


| | 0 - Awareness | 1 - Informational | 2 - Personal | 3 - Management | 4 - Consequence | 5 - Collaboration | 6 - Refocusing |
|--|---------------|-------------------|--------------|----------------|-----------------|-------------------|----------------|
| | 0 | 1 | 2 | 3 | 4 | 5 | 6 |
| | 1 | 1 | 1 | 2 | 4 | 2 | 1 |
| | 1 | 5 | 1 | 1 | 1 | 5 | 1 |
| | 1 | 5 | 2 | 3 | 3 | 1 | 3 |
| | 1 | 4 | 4 | 4 | 4 | 4 | 1 |
| | 1 | 1 | 4 | 1 | 4 | 2 | 4 |
| | 5 | 16 | 12 | 11 | 16 | 14 | 10 |

ID021 ID021
Question Raw data
1 1
2 1
3 1
4 2
5 1
6 3
7 1
8 2
9 1
10 1
11 1
12 7
13 1
14 0
15 1
16 1
17 1
18 1
19 1
20 1
21 6
22 2
23 3
24 3
25 1
26 1
27 1
28 1
29 1
30 5
31 1
32 1
33 1
34 1
35 1

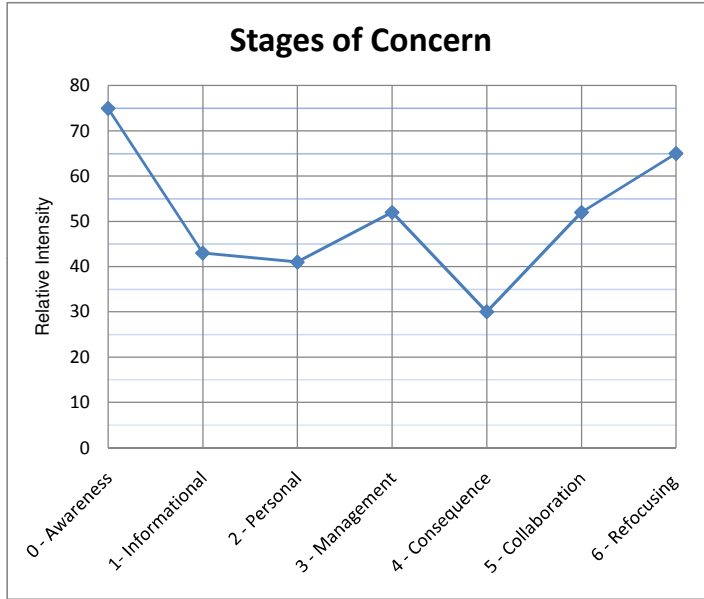
| | 0 - Awareness | 1- Informational | 2 - Personal | 3 - Management | 4 - Consequence | 5 - Collaboration | 6 - Refocusing |
|--|---------------|------------------|--------------|----------------|-----------------|-------------------|----------------|
| | 0 | 1 | 2 | 3 | 4 | 5 | 6 |
| | 22 | 6 | 5 | 7 | 7 | 5 | 6 |
| | 99 | 30 | 25 | 23 | 4 | 5 | 11 |

| | 0 - Awareness | 1- Informational | 2 - Personal | 3 - Management | 4 - Consequence | 5 - Collaboration | 6 - Refocusing |
|--|---------------|------------------|--------------|----------------|-----------------|-------------------|----------------|
| | 0 | 1 | 2 | 3 | 4 | 5 | 6 |
| | 1 | 3 | 1 | 2 | 1 | 1 | 1 |
| | 7 | 0 | 1 | 2 | 1 | 1 | 1 |
| | 6 | 1 | 1 | 1 | 1 | 1 | 1 |
| | 3 | 1 | 1 | 1 | 3 | 1 | 2 |
| | 5 | 1 | 1 | 1 | 1 | 1 | 1 |
| | 22 | 6 | 5 | 7 | 7 | 5 | 6 |



ID022 ID022
Question Raw data

| | 0 - Awareness | 1 - Informational | 2 - Personal | 3 - Management | 4 - Consequence | 5 - Collaboration | 6 - Refocusing |
|---|---------------|-------------------|--------------|----------------|-----------------|-------------------|----------------|
| 0 | 13 | 10 | 10 | 14 | 20 | 21 | 20 |
| 1 | 75 | 43 | 41 | 52 | 30 | 52 | 65 |



| 0 - Awareness | 1 - Informational | 2 - Personal | 3 - Management | 4 - Consequence | 5 - Collaboration | 6 - Refocusing |
|---------------|-------------------|--------------|----------------|-----------------|-------------------|----------------|
| 0 | 1 | 2 | 3 | 4 | 5 | 6 |
| 1 | 2 | 2 | 4 | 2 | 3 | 1 |
| 2 | 2 | 3 | 2 | 4 | 6 | 6 |
| 3 | 2 | 1 | 1 | 4 | 3 | 3 |
| 4 | 2 | 2 | 4 | 6 | 3 | 6 |
| 5 | 2 | 2 | 3 | 4 | 6 | 4 |
| 13 | 10 | 10 | 14 | 20 | 21 | 20 |

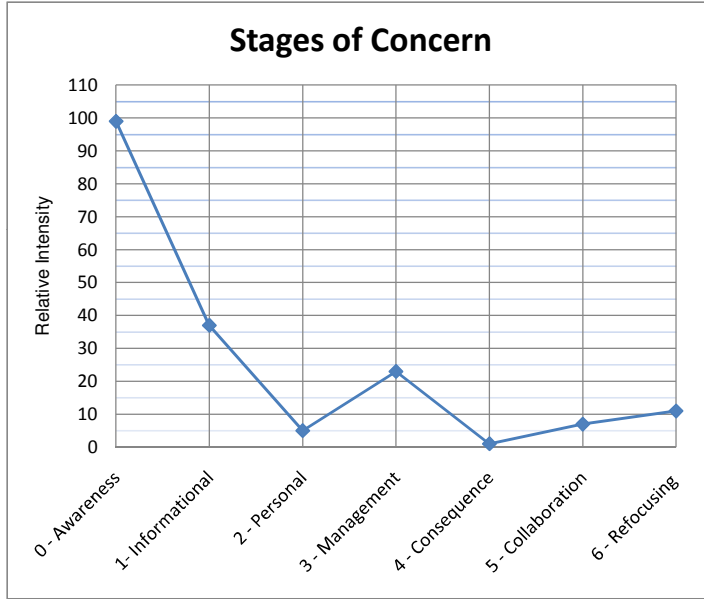
- 1 2
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- 3 1
- 4 4
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- 6 2
- 7 2
- 8 2
- 9 6
- 10 6
- 11 4
- 12 2
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- 15 2
- 16 1
- 17 1
- 18 3
- 19 4
- 20 3
- 21 3
- 22 6
- 23 2
- 24 6
- 25 4
- 26 2
- 27 3
- 28 2
- 29 6
- 30 5
- 31 4
- 32 4
- 33 2
- 34 3
- 35 2

ID023 ID023
Question Raw data

| | 0 - Awareness | 1 - Informational | 2 - Personal | 3 - Management | 4 - Consequence | 5 - Collaboration | 6 - Refocusing |
|----|---------------|-------------------|--------------|----------------|-----------------|-------------------|----------------|
| 0 | 0 | 1 | 2 | 3 | 4 | 5 | 6 |
| 28 | 28 | 8 | 0 | 7 | 2 | 6 | 6 |
| 99 | 99 | 37 | 5 | 23 | 1 | 7 | 11 |

| | 0 - Awareness | 1 - Informational | 2 - Personal | 3 - Management | 4 - Consequence | 5 - Collaboration | 6 - Refocusing |
|----|---------------|-------------------|--------------|----------------|-----------------|-------------------|----------------|
| 0 | 0 | 1 | 2 | 3 | 4 | 5 | 6 |
| 2 | 2 | 6 | 0 | 6 | 1 | 1 | 1 |
| 5 | 5 | 1 | 0 | 0 | 1 | 2 | 5 |
| 7 | 7 | 1 | 0 | 0 | 0 | 0 | 0 |
| 7 | 7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 7 | 7 | 0 | 0 | 1 | 0 | 3 | 0 |
| 28 | 28 | 8 | 0 | 7 | 2 | 6 | 6 |

- 1 1
- 2 1
- 3 2
- 4 6
- 5 1
- 6 6
- 7 0
- 8 0
- 9 5
- 10 2
- 11 1
- 12 5
- 13 0
- 14 1
- 15 1
- 16 0
- 17 0
- 18 0
- 19 0
- 20 0
- 21 7
- 22 0
- 23 7
- 24 0
- 25 0
- 26 0
- 27 0
- 28 0
- 29 3
- 30 7
- 31 0
- 32 0
- 33 0
- 34 1
- 35 0

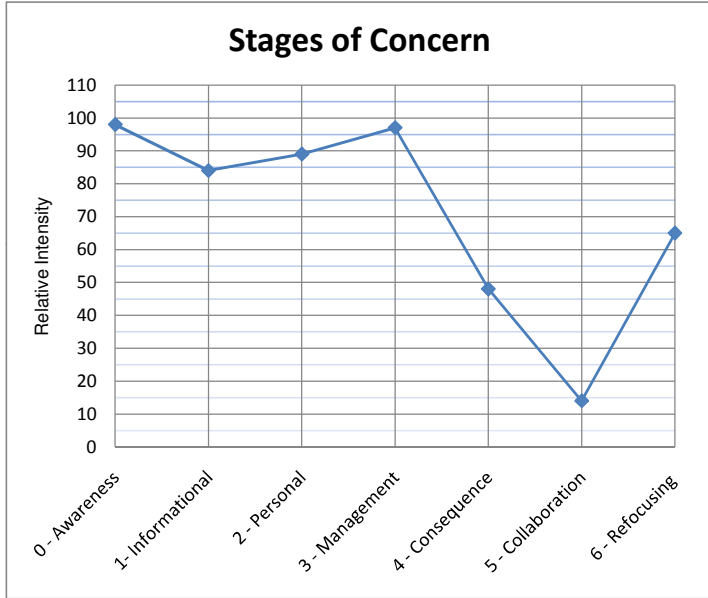


ID024 ID024
Question Raw data

| | 0 - Awareness | 1 - Informational | 2 - Personal | 3 - Management | 4 - Consequence | 5 - Collaboration | 6 - Refocusing |
|----|---------------|-------------------|--------------|----------------|-----------------|-------------------|----------------|
| 0 | 0 | 1 | 2 | 3 | 4 | 5 | 6 |
| 20 | 20 | 23 | 27 | 29 | 24 | 10 | 20 |
| 98 | 98 | 84 | 89 | 97 | 48 | 14 | 65 |

| | 0 - Awareness | 1 - Informational | 2 - Personal | 3 - Management | 4 - Consequence | 5 - Collaboration | 6 - Refocusing |
|----|---------------|-------------------|--------------|----------------|-----------------|-------------------|----------------|
| 0 | 0 | 1 | 2 | 3 | 4 | 5 | 6 |
| 6 | 6 | 1 | 6 | 6 | 3 | 1 | 4 |
| 2 | 2 | 5 | 3 | 5 | 6 | 3 | 4 |
| 1 | 1 | 6 | 7 | 6 | 3 | 3 | 3 |
| 6 | 6 | 5 | 5 | 5 | 6 | 3 | 6 |
| 5 | 5 | 6 | 6 | 7 | 6 | 0 | 3 |
| 20 | 20 | 23 | 27 | 29 | 24 | 10 | 20 |

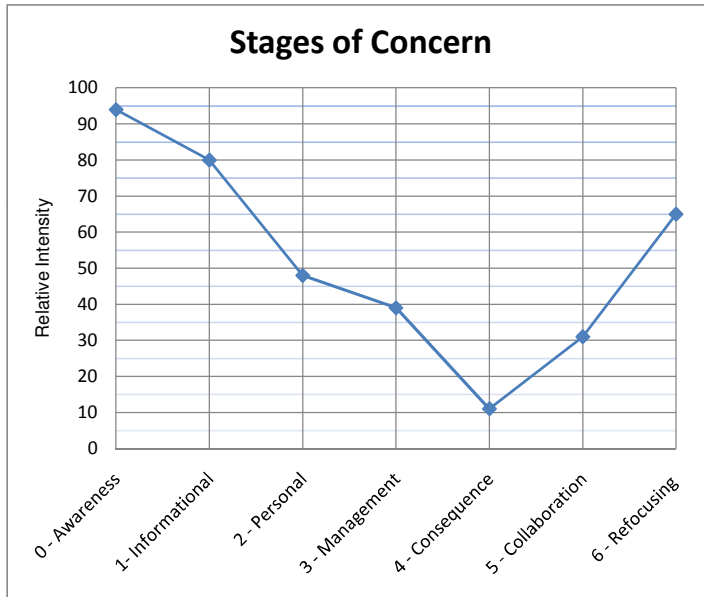
- 1 3
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- 3 6
- 4 6
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- 6 1
- 7 6
- 8 5
- 9 4
- 10 3
- 11 6
- 12 2
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- 15 6
- 16 6
- 17 7
- 18 3
- 19 3
- 20 3
- 21 1
- 22 6
- 23 6
- 24 6
- 25 5
- 26 5
- 27 3
- 28 5
- 29 0
- 30 5
- 31 3
- 32 6
- 33 6
- 34 7
- 35 6



ID025 ID025
Question Raw data
1 1
2 6
3 1
4 1
5 3
6 4
7 1
8 1
9 7
10 5
11 1
12 4
13 2
14 6
15 6
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17 4
18 2
19 2
20 2
21 3
22 2
23 5
24 6
25 2
26 1
27 1
28 2
29 5
30 4
31 3
32 3
33 3
34 5
35 5

| | 0 - Awareness | 1 - Informational | 2 - Personal | 3 - Management | 4 - Consequence | 5 - Collaboration | 6 - Refocusing |
|----|---------------|-------------------|--------------|----------------|-----------------|-------------------|----------------|
| 0 | 0 | 1 | 2 | 3 | 4 | 5 | 6 |
| 17 | 17 | 22 | 12 | 11 | 13 | 16 | 20 |
| 94 | 94 | 80 | 48 | 39 | 11 | 31 | 65 |

| | 0 - Awareness | 1 - Informational | 2 - Personal | 3 - Management | 4 - Consequence | 5 - Collaboration | 6 - Refocusing |
|----|---------------|-------------------|--------------|----------------|-----------------|-------------------|----------------|
| 0 | 0 | 1 | 2 | 3 | 4 | 5 | 6 |
| 1 | 4 | 1 | 1 | 1 | 3 | 6 | |
| 4 | 6 | 2 | 1 | 1 | 5 | 7 | |
| 3 | 6 | 4 | 2 | 2 | 2 | 2 | |
| 5 | 1 | 2 | 2 | 6 | 1 | 2 | |
| 4 | 5 | 3 | 5 | 3 | 5 | 3 | |
| 17 | 17 | 22 | 12 | 11 | 13 | 16 | 20 |

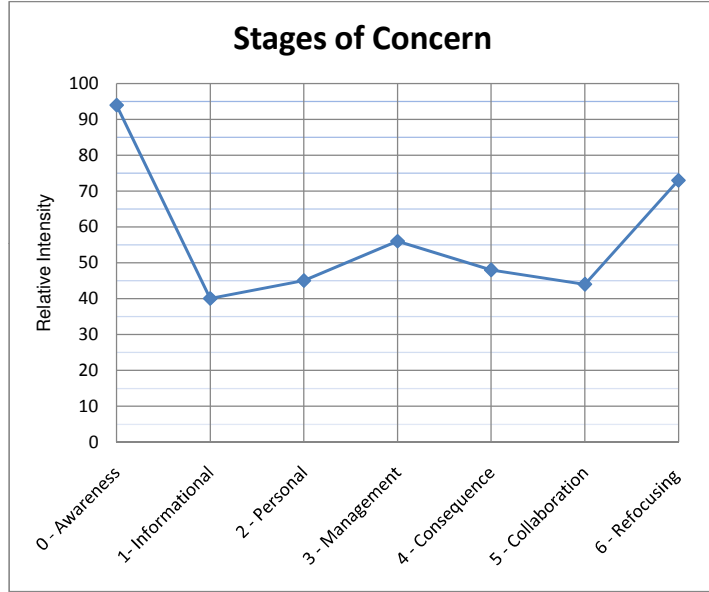


ID026 ID026

Question Raw data

- 1 6
- 2 4
- 3 1
- 4 2
- 5 5
- 6 2
- 7 0
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- 10 3
- 11 3
- 12 2
- 13 2
- 14 5
- 15 0
- 16 1
- 17 3
- 18 3
- 19 5
- 20 5
- 21 4
- 22 7
- 23 5
- 24 6
- 25 5
- 26 1
- 27 3
- 28 3
- 29 5
- 30 5
- 31 1
- 32 4
- 33 3
- 34 2
- 35 1

| | 0 - Awareness | 1- Informational | 2 - Personal | 3 - Management | 4 - Consequence | 5 - Collaboration | 6 - Refocusing |
|---|---------------|------------------|--------------|----------------|-----------------|-------------------|----------------|
| 0 | 17 | 9 | 11 | 15 | 24 | 19 | 22 |
| | 94 | 40 | 45 | 56 | 48 | 44 | 73 |

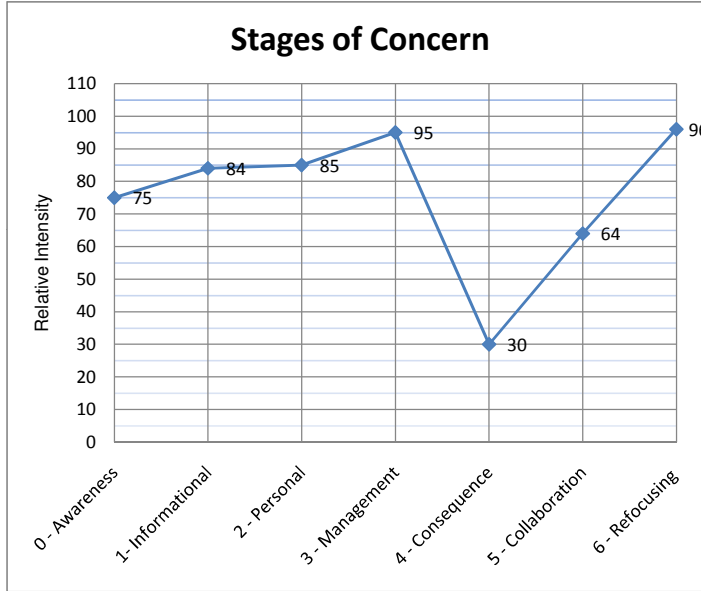


| 0 - Awareness | 1- Informational | 2 - Personal | 3 - Management | 4 - Consequence | 5 - Collaboration | 6 - Refocusing |
|---------------|------------------|--------------|----------------|-----------------|-------------------|----------------|
| 0 | 1 | 2 | 0 | 2 | 6 | 5 |
| 1 | 2 | 0 | 2 | 6 | 5 | 4 |
| 2 | 5 | 2 | 5 | 3 | 3 | 5 |
| 4 | 0 | 3 | 1 | 5 | 3 | 5 |
| 5 | 3 | 5 | 3 | 1 | 5 | 7 |
| 4 | 1 | 1 | 2 | 2 | 1 | 3 |
| 16 | 11 | 11 | 13 | 17 | 17 | 24 |

ID027 ID027
Question Raw data

- 1 0
- 2 7
- 3 4
- 4 7
- 5 4
- 6 4
- 7 7
- 8 4
- 9 7
- 10 7
- 11 4
- 12 0
- 13 4
- 14 4
- 15 4
- 16 7
- 17 4
- 18 4
- 19 7
- 20 7
- 21 0
- 22 7
- 23 4
- 24 7
- 25 4
- 26 7
- 27 7
- 28 5
- 29 2
- 30 5
- 31 2
- 32 2
- 33 5
- 34 6
- 35 4

| | 0 - Awareness | 1- Informational | 2 - Personal | 3 - Management | 4 - Consequence | 5 - Collaboration | 6 - Refocusing |
|---|---------------|------------------|--------------|----------------|-----------------|-------------------|----------------|
| 0 | 13 | 23 | 25 | 28 | 20 | 24 | 30 |
| 1 | 75 | 84 | 85 | 95 | 30 | 64 | 96 |

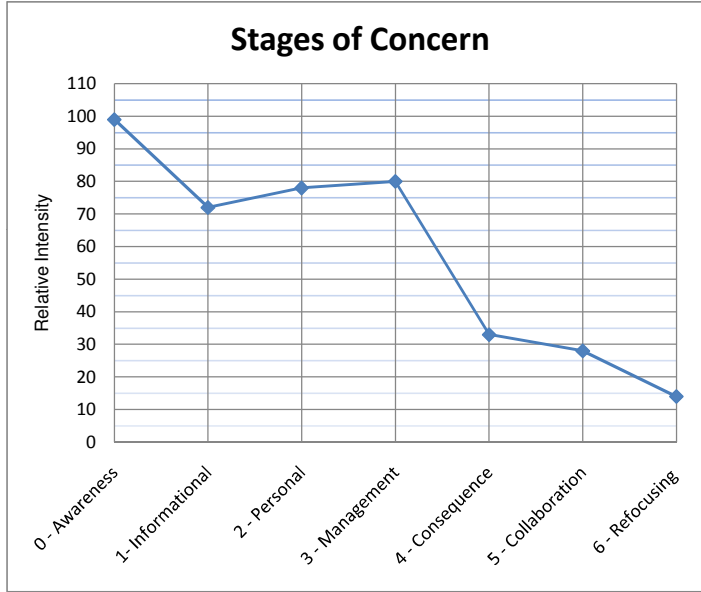


| 0 - Awareness | 1- Informational | 2 - Personal | 3 - Management | 4 - Consequence | 5 - Collaboration | 6 - Refocusing |
|---------------|------------------|--------------|----------------|-----------------|-------------------|----------------|
| 0 | 4 | 4 | 7 | 7 | 0 | 4 |
| 1 | 4 | 4 | 4 | 4 | 4 | 7 |
| 2 | 4 | 4 | 4 | 7 | 7 | 4 |
| 3 | 4 | 7 | 5 | 4 | 7 | 7 |
| 4 | 5 | 4 | 5 | 6 | 2 | 2 |
| 5 | 13 | 23 | 25 | 28 | 20 | 24 |
| 6 | 30 | | | | | |

ID029 ID029
Question Raw data

| | 0 - Awareness | 1- Informational | 2 - Personal | 3 - Management | 4 - Consequence | 5 - Collaboration | 6 - Refocusing |
|---|---------------|------------------|--------------|----------------|-----------------|-------------------|----------------|
| 0 | 22 | 20 | 22 | 21 | 21 | 15 | 7 |
| 1 | 99 | 72 | 78 | 80 | 33 | 28 | 14 |

- 1 1
- 2 1
- 3 1
- 4 7
- 5 1
- 6 2
- 7 7
- 8 1
- 9 1
- 10 5
- 11 1
- 12 1
- 13 1
- 14 6
- 15 6
- 16 5
- 17 7
- 18 2
- 19 7
- 20 2
- 21 7
- 22 2
- 23 6
- 24 6
- 25 2
- 26 5
- 27 5
- 28 5
- 29 2
- 30 7
- 31 1
- 32 6
- 33 2
- 34 6
- 35 1



| 0 - Awareness | 1- Informational | 2 - Personal | 3 - Management | 4 - Consequence | 5 - Collaboration | 6 - Refocusing |
|---------------|------------------|--------------|----------------|-----------------|-------------------|----------------|
| 0 | 1 | 2 | 3 | 4 | 5 | 6 |
| 1 | 2 | 7 | 7 | 1 | 1 | 1 |
| 1 | 6 | 1 | 1 | 1 | 5 | 1 |
| 7 | 6 | 7 | 5 | 7 | 2 | 2 |
| 6 | 5 | 5 | 2 | 6 | 5 | 2 |
| 7 | 1 | 2 | 6 | 6 | 2 | 1 |
| 22 | 20 | 22 | 21 | 21 | 15 | 7 |

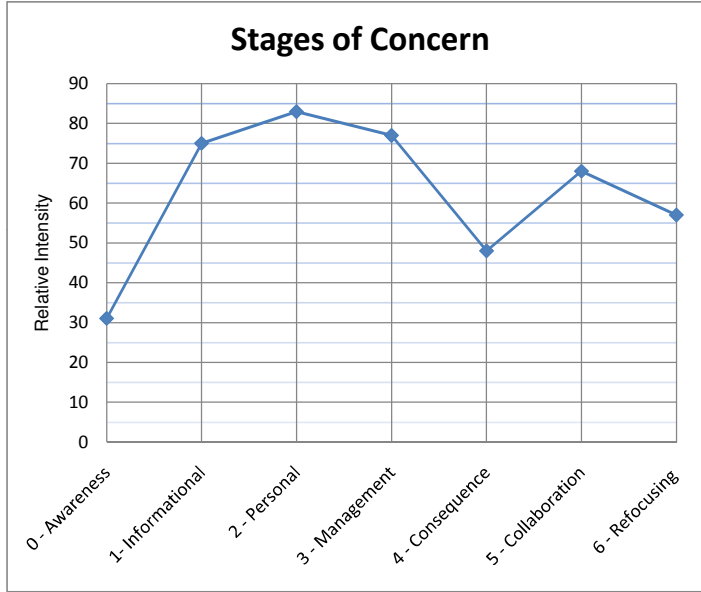
ID031 ID031

Question Raw data

- 1 2
- 2 5
- 3 2
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- 6 1
- 7 5
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- 11 6
- 12 0
- 13 5
- 14 6
- 15 6
- 16 5
- 17 5
- 18 4
- 19 6
- 20 4
- 21 2
- 22 2
- 23 1
- 24 5
- 25 2
- 26 5
- 27 4
- 28 4
- 29 6
- 30 2
- 31 2
- 32 5
- 33 5
- 34 3
- 35 3

| | 0 - Awareness | 1- Informational | 2 - Personal | 3 - Management | 4 - Consequence | 5 - Collaboration | 6 - Refocusing |
|--|---------------|------------------|--------------|----------------|-----------------|-------------------|----------------|
| | 0 | 1 | 2 | 3 | 4 | 5 | 6 |
| | 7 | 21 | 24 | 20 | 24 | 25 | 18 |
| | 31 | 75 | 83 | 77 | 48 | 68 | 57 |

| 0 - Awareness | 1- Informational | 2 - Personal | 3 - Management | 4 - Consequence | 5 - Collaboration | 6 - Refocusing |
|---------------|------------------|--------------|----------------|-----------------|-------------------|----------------|
| 0 | 1 | 2 | 3 | 4 | 5 | 6 |
| 2 | 1 | 5 | 5 | 2 | 5 | 5 |
| 0 | 6 | 5 | 5 | 6 | 6 | 5 |
| 2 | 6 | 5 | 5 | 6 | 4 | 4 |
| 1 | 5 | 4 | 2 | 5 | 4 | 2 |
| 2 | 3 | 5 | 3 | 5 | 6 | 2 |
| 7 | 21 | 24 | 20 | 24 | 25 | 18 |

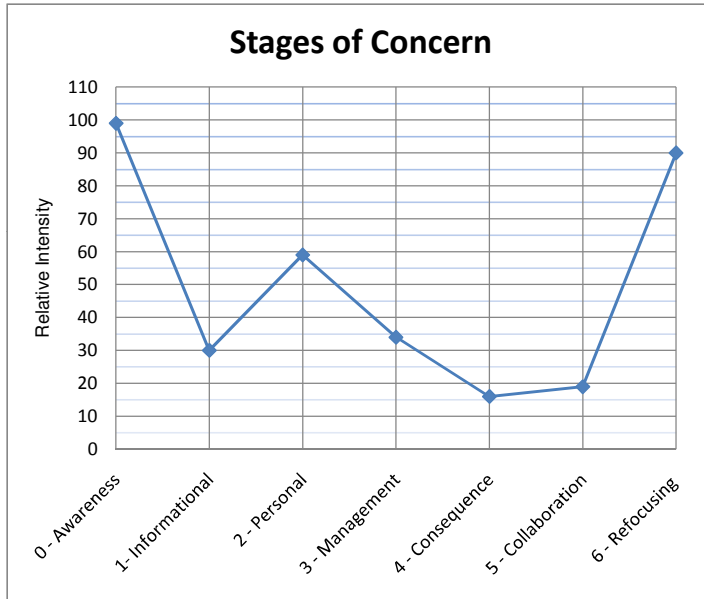


ID032 ID032
Question Raw data

| | 0 - Awareness | 1- Informational | 2 - Personal | 3 - Management | 4 - Consequence | 5 - Collaboration | 6 - Refocusing |
|--|---------------|------------------|--------------|----------------|-----------------|-------------------|----------------|
| | 0 | 1 | 2 | 3 | 4 | 5 | 6 |
| | 24 | 6 | 16 | 10 | 15 | 12 | 27 |
| | 99 | 30 | 59 | 34 | 16 | 19 | 90 |

| 0 - Awareness | 1- Informational | 2 - Personal | 3 - Management | 4 - Consequence | 5 - Collaboration | 6 - Refocusing |
|---------------|------------------|--------------|----------------|-----------------|-------------------|----------------|
| 0 | 1 | 2 | 3 | 4 | 5 | 6 |
| 1 | 1 | 6 | 6 | 3 | 1 | 6 |
| 6 | 1 | 3 | 1 | 1 | 4 | 3 |
| 6 | 2 | 1 | 1 | 1 | 1 | 6 |
| 5 | 1 | 5 | 1 | 4 | 1 | 6 |
| 6 | 1 | 1 | 1 | 6 | 5 | 6 |
| 24 | 6 | 16 | 10 | 15 | 12 | 27 |

- 1 3
- 2 6
- 3 1
- 4 6
- 5 1
- 6 1
- 7 6
- 8 1
- 9 3
- 10 4
- 11 1
- 12 6
- 13 3
- 14 1
- 15 2
- 16 1
- 17 1
- 18 1
- 19 1
- 20 6
- 21 6
- 22 6
- 23 5
- 24 4
- 25 1
- 26 1
- 27 1
- 28 5
- 29 5
- 30 6
- 31 6
- 32 6
- 33 1
- 34 1
- 35 1

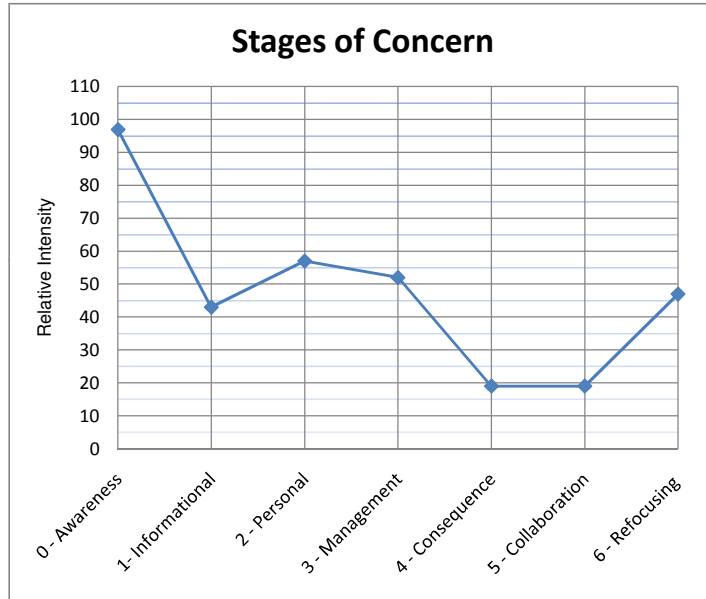


ID035 ID035

Question Raw data

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- 2 6
- 3 2
- 4 3
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- 6 1
- 7 4
- 8 2
- 9 2
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- 17 4
- 18 2
- 19 3
- 20 2
- 21 5
- 22 4
- 23 5
- 24 4
- 25 4
- 26 3
- 27 3
- 28 2
- 29 2
- 30 5
- 31 2
- 32 2
- 33 3
- 34 2
- 35 2

| | 0 - Awareness | 1 - Informational | 2 - Personal | 3 - Management | 4 - Consequence | 5 - Collaboration | 6 - Refocusing |
|----|---------------|-------------------|--------------|----------------|-----------------|-------------------|----------------|
| 0 | 0 | 1 | 2 | 3 | 4 | 5 | 6 |
| 19 | 19 | 10 | 15 | 14 | 16 | 12 | 16 |
| 97 | 97 | 43 | 57 | 52 | 19 | 19 | 47 |



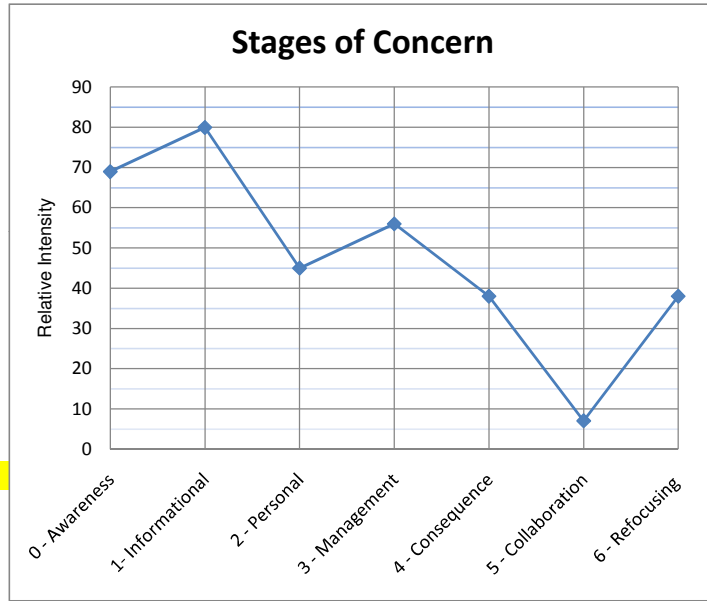
| 0 - Awareness | 1 - Informational | 2 - Personal | 3 - Management | 4 - Consequence | 5 - Collaboration | 6 - Refocusing |
|---------------|-------------------|--------------|----------------|-----------------|-------------------|----------------|
| 0 | 1 | 2 | 3 | 4 | 5 | 6 |
| 2 | 1 | 4 | 3 | 3 | 2 | 6 |
| 2 | 1 | 2 | 2 | 4 | 3 | 2 |
| 5 | 3 | 4 | 3 | 3 | 2 | 2 |
| 5 | 3 | 2 | 4 | 4 | 3 | 4 |
| 5 | 2 | 3 | 2 | 2 | 2 | 2 |
| 19 | 10 | 15 | 14 | 16 | 12 | 16 |

ID036 ID036

Question Raw data

- 1 5
- 2 0
- 3 1
- 4 3
- 5 0
- 6 3
- 7 0
- 8 1
- 9 6
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- 11 5
- 12 2
- 13 0
- 14 6
- 15 6
- 16 5
- 17 5
- 18 0
- 19 1
- 20 0
- 21 3
- 22 3
- 23 3
- 24 6
- 25 3
- 26 5
- 27 3
- 28 3
- 29 0
- 30 3
- 31 5
- 32 5
- 33 3
- 34 3
- 35 2

| | 0 - Awareness | 1- Informational | 2 - Personal | 3 - Management | 4 - Consequence | 5 - Collaboration | 6 - Refocusing |
|---|---------------|------------------|--------------|----------------|-----------------|-------------------|----------------|
| 0 | 12 | 22 | 11 | 15 | 22 | 6 | 14 |
| 1 | 69 | 80 | 45 | 56 | 38 | 7 | 38 |



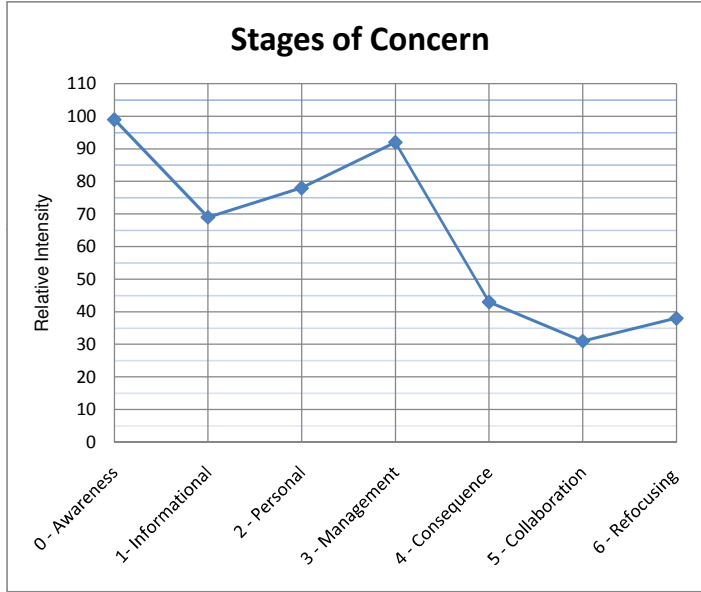
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|---------------|------------------|--------------|----------------|-----------------|-------------------|----------------|
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| 1 | 3 | 0 | 3 | 5 | 0 | 0 |
| 2 | 6 | 0 | 1 | 5 | 3 | 6 |
| 3 | 6 | 5 | 5 | 1 | 0 | 0 |
| 3 | 5 | 3 | 3 | 6 | 3 | 3 |
| 3 | 2 | 3 | 3 | 5 | 0 | 5 |
| 12 | 22 | 11 | 15 | 22 | 6 | 14 |

ID037 ID037

Question Raw data

- 1 3
- 2 1
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- 5 3
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- 7 4
- 8 4
- 9 5
- 10 4
- 11 3
- 12 1
- 13 4
- 14 3
- 15 2
- 16 6
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- 21 7
- 22 2
- 23 7
- 24 7
- 25 2
- 26 6
- 27 5
- 28 5
- 29 3
- 30 7
- 31 5
- 32 4
- 33 5
- 34 7
- 35 3

| | 0 - Awareness | 1- Informational | 2 - Personal | 3 - Management | 4 - Consequence | 5 - Collaboration | 6 - Refocusing |
|--|---------------|------------------|--------------|----------------|-----------------|-------------------|----------------|
| | 0 | 1 | 2 | 3 | 4 | 5 | 6 |
| | 23 | 19 | 22 | 26 | 23 | 16 | 14 |
| | 99 | 69 | 78 | 92 | 43 | 31 | 38 |



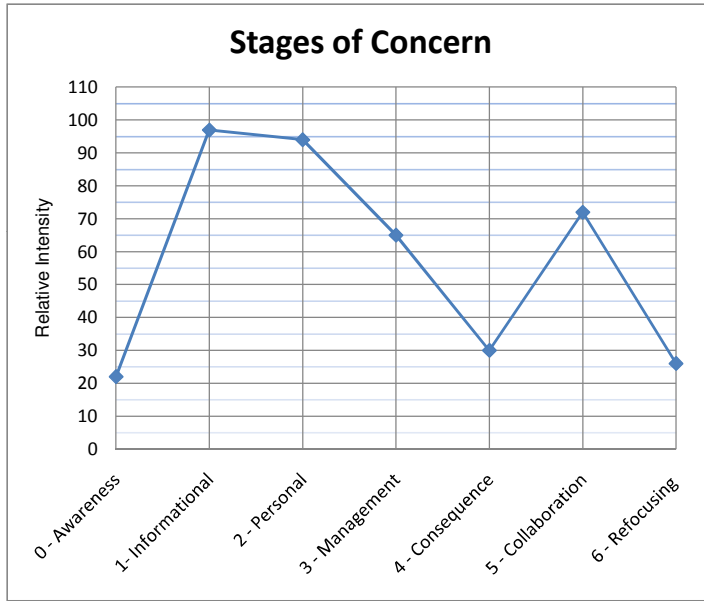
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|---------------|------------------|--------------|----------------|-----------------|-------------------|----------------|
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| 1 | 5 | 4 | 7 | 3 | 3 | 1 |
| 1 | 3 | 4 | 4 | 3 | 4 | 5 |
| 7 | 2 | 4 | 6 | 6 | 1 | 1 |
| 7 | 6 | 5 | 2 | 7 | 5 | 2 |
| 7 | 3 | 5 | 7 | 4 | 3 | 5 |
| 23 | 19 | 22 | 26 | 23 | 16 | 14 |

ID038 ID038
Question Raw data

| | 0 - Awareness | 1 - Informational | 2 - Personal | 3 - Management | 4 - Consequence | 5 - Collaboration | 6 - Refocusing |
|--|---------------|-------------------|--------------|----------------|-----------------|-------------------|----------------|
| | 0 | 1 | 2 | 3 | 4 | 5 | 6 |
| | 6 | 30 | 30 | 17 | 20 | 26 | 11 |
| | 22 | 97 | 94 | 65 | 30 | 72 | 26 |

| 0 - Awareness | 1 - Informational | 2 - Personal | 3 - Management | 4 - Consequence | 5 - Collaboration | 6 - Refocusing |
|---------------|-------------------|--------------|----------------|-----------------|-------------------|----------------|
| 0 | 1 | 2 | 3 | 4 | 5 | 6 |
| 0 | 2 | 6 | 7 | 3 | 0 | 5 |
| 1 | 7 | 7 | 4 | 3 | 7 | 0 |
| 2 | 7 | 3 | 3 | 2 | 5 | 0 |
| 1 | 7 | 7 | 3 | 6 | 7 | 0 |
| 2 | 7 | 7 | 0 | 6 | 7 | 6 |
| 6 | 30 | 30 | 17 | 20 | 26 | 11 |

- 1 3
- 2 5
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- 4 7
- 5 0
- 6 2
- 7 6
- 8 4
- 9 0
- 10 7
- 11 3
- 12 1
- 13 7
- 14 7
- 15 7
- 16 3
- 17 3
- 18 5
- 19 2
- 20 0
- 21 2
- 22 0
- 23 1
- 24 6
- 25 3
- 26 7
- 27 7
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- 29 7
- 30 2
- 31 6
- 32 6
- 33 7
- 34 0
- 35 7

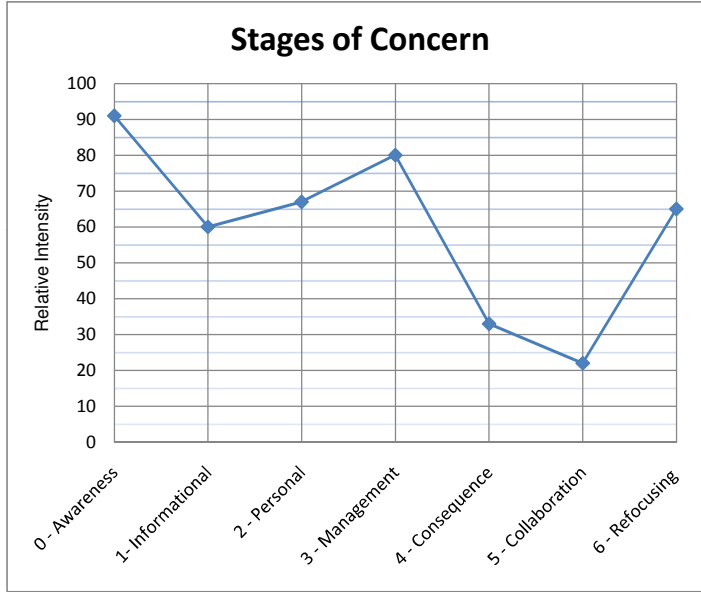


ID039 ID039
Question Raw data

| | 0 - Awareness | 1- Informational | 2 - Personal | 3 - Management | 4 - Consequence | 5 - Collaboration | 6 - Refocusing |
|---|---------------|------------------|--------------|----------------|-----------------|-------------------|----------------|
| 0 | 16 | 16 | 18 | 21 | 21 | 13 | 20 |
| 6 | 91 | 60 | 67 | 80 | 33 | 22 | 65 |

- 1 3
- 2 5
- 3 1
- 4 3
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- 6 1
- 7 5
- 8 5
- 9 5
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- 22 4
- 23 4
- 24 4
- 25 5
- 26 5
- 27 4
- 28 2
- 29 4
- 30 4
- 31 4
- 32 4
- 33 4
- 34 4
- 35 4

| 0 - Awareness | 1- Informational | 2 - Personal | 3 - Management | 4 - Consequence | 5 - Collaboration | 6 - Refocusing |
|---------------|------------------|--------------|----------------|-----------------|-------------------|----------------|
| 0 | 1 | 2 | 3 | 4 | 5 | 6 |
| 1 | 1 | 5 | 3 | 3 | 0 | 5 |
| 2 | 1 | 5 | 5 | 5 | 3 | 5 |
| 5 | 5 | 2 | 4 | 5 | 2 | 2 |
| 4 | 5 | 2 | 5 | 4 | 4 | 4 |
| 4 | 4 | 4 | 4 | 4 | 4 | 4 |
| 16 | 16 | 18 | 21 | 21 | 13 | 20 |

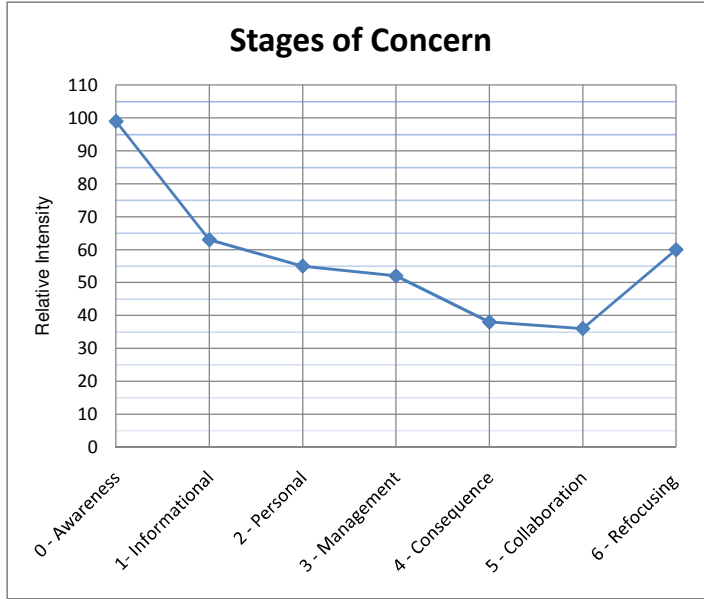


ID040 **ID040**
Question Raw data

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18 2
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20 6
21 7
22 4
23 5
24 5
25 2
26 3
27 5
28 5
29 4
30 6
31 3
32 4
33 3
34 2
35 2

| | 0 - Awareness | 1 - Informational | 2 - Personal | 3 - Management | 4 - Consequence | 5 - Collaboration | 6 - Refocusing |
|--|---------------|-------------------|--------------|----------------|-----------------|-------------------|----------------|
| | 0 | 1 | 2 | 3 | 4 | 5 | 6 |
| | 24 | 17 | 14 | 14 | 22 | 17 | 19 |
| | 99 | 63 | 55 | 52 | 38 | 36 | 60 |

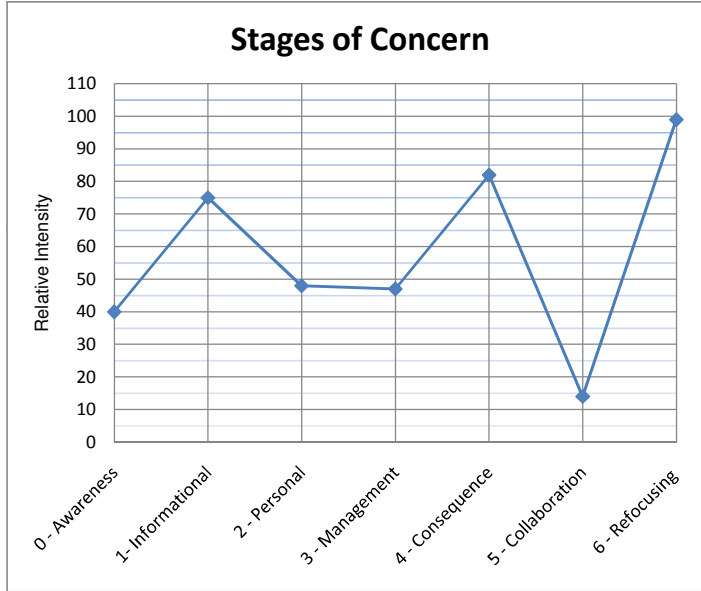
| 0 - Awareness | 1 - Informational | 2 - Personal | 3 - Management | 4 - Consequence | 5 - Collaboration | 6 - Refocusing |
|---------------|-------------------|--------------|----------------|-----------------|-------------------|----------------|
| 0 | 1 | 2 | 3 | 4 | 5 | 6 |
| 1 | 4 | 2 | 5 | 2 | 2 | 1 |
| 5 | 4 | 2 | 1 | 6 | 4 | 5 |
| 7 | 4 | 2 | 4 | 5 | 2 | 6 |
| 5 | 3 | 5 | 2 | 5 | 5 | 4 |
| 6 | 2 | 3 | 2 | 4 | 4 | 3 |
| 24 | 17 | 14 | 14 | 22 | 17 | 19 |



ID041 ID041
Question Raw data

| | 0 - Awareness | 1- Informational | 2 - Personal | 3 - Management | 4 - Consequence | 5 - Collaboration | 6 - Refocusing |
|----|---------------|------------------|--------------|----------------|-----------------|-------------------|----------------|
| 0 | 8 | 21 | 12 | 13 | 31 | 10 | 35 |
| 40 | 75 | 48 | 47 | 82 | 14 | 99 | |

- 1 5
- 2 7
- 3 0
- 4 1
- 5 1
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- 10 1
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- 29 5
- 30 1
- 31 7
- 32 6
- 33 1
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- 35 7



| 0 - Awareness | 1- Informational | 2 - Personal | 3 - Management | 4 - Consequence | 5 - Collaboration | 6 - Refocusing |
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| 1 | 6 | 0 | 0 | 7 | 1 | 7 |
| 4 | 0 | 6 | 5 | 7 | 1 | 7 |
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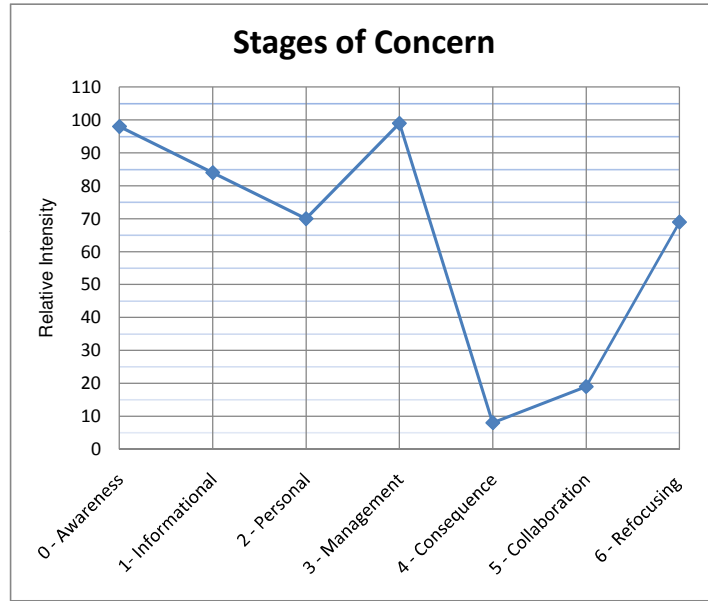
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ID042

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- 16 7
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- 23 1
- 24 7
- 25 7
- 26 7
- 27 1
- 28 7
- 29 7
- 30 7
- 31 3
- 32 3
- 33 1
- 34 7
- 35 1

| | 0 - Awareness | 1- Informational | 2 - Personal | 3 - Management | 4 - Consequence | 5 - Collaboration | 6 - Refocusing |
|---|---------------|------------------|--------------|----------------|-----------------|-------------------|----------------|
| 0 | 20 | 23 | 19 | 35 | 11 | 12 | 21 |
| 1 | 98 | 84 | 70 | 99 | 8 | 19 | 69 |



| 0 - Awareness | 1- Informational | 2 - Personal | 3 - Management | 4 - Consequence | 5 - Collaboration | 6 - Refocusing |
|---------------|------------------|--------------|----------------|-----------------|-------------------|----------------|
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| 4 | 7 | 2 | 7 | 0 | 0 | 2 |
| 1 | 7 | 2 | 7 | 0 | 4 | 7 |
| 7 | 1 | 7 | 7 | 1 | 0 | 7 |
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| 20 | 23 | 19 | 35 | 11 | 12 | 21 |

4

2.2

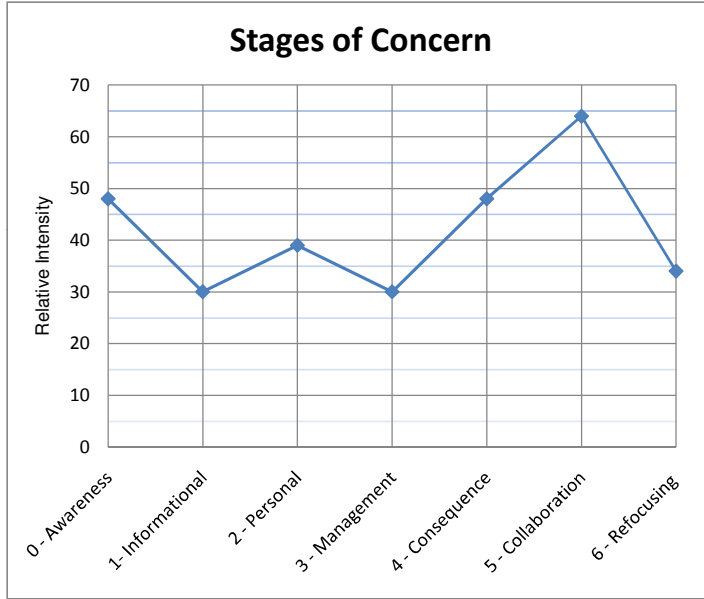
Missing data calculation

ID044 ID044
Question Raw data

| | 0 - Awareness | 1 - Informational | 2 - Personal | 3 - Management | 4 - Consequence | 5 - Collaboration | 6 - Refocusing |
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| | 0 | 1 | 2 | 3 | 4 | 5 | 6 |
| | 9 | 6 | 9 | 9 | 24 | 24 | 13 |
| | 48 | 30 | 39 | 30 | 48 | 64 | 34 |

| 0 - Awareness | 1 - Informational | 2 - Personal | 3 - Management | 4 - Consequence | 5 - Collaboration | 6 - Refocusing |
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| 0 | 1 | 2 | 3 | 4 | 5 | 6 |
| 1 | 2 | 4 | 2 | 4 | 4 | 1 |
| 4 | 1 | 1 | 1 | 4 | 6 | 3 |
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| 1 | 1 | 1 | 2 | 5 | 4 | 2 |
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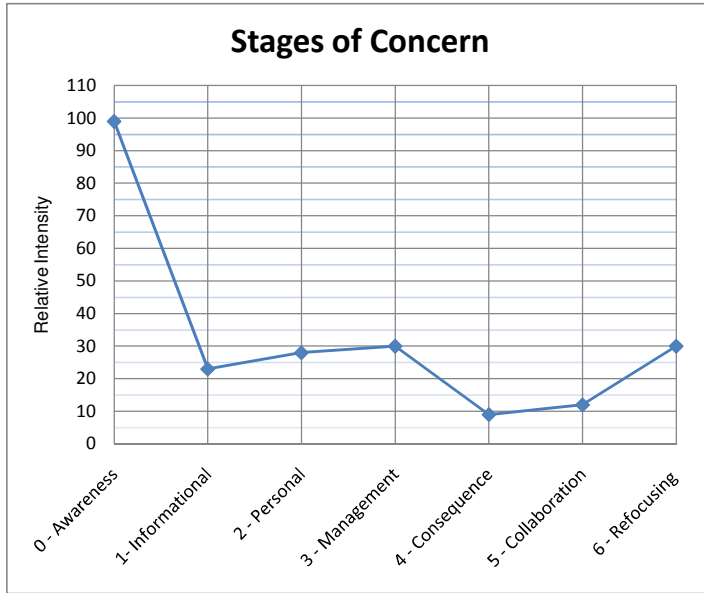
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- 21 6
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- 24 3
- 25 1
- 26 1
- 27 3
- 28 1
- 29 3
- 30 5
- 31 2
- 32 4
- 33 0
- 34 0
- 35 0

| | 0 - Awareness | 1- Informational | 2 - Personal | 3 - Management | 4 - Consequence | 5 - Collaboration | 6 - Refocusing |
|--|---------------|------------------|--------------|----------------|-----------------|-------------------|----------------|
| | 0 | 1 | 2 | 3 | 4 | 5 | 6 |
| | 22 | 4 | 6 | 9 | 12 | 9 | 12 |
| | 99 | 23 | 28 | 30 | 9 | 12 | 30 |

| 0 - Awareness | 1- Informational | 2 - Personal | 3 - Management | 4 - Consequence | 5 - Collaboration | 6 - Refocusing |
|---------------|------------------|--------------|----------------|-----------------|-------------------|----------------|
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| 2 | 3 | 2 | 3 | 2 | 0 | 5 |
| 6 | 0 | 1 | 2 | 1 | 3 | 2 |
| 6 | 0 | 2 | 3 | 2 | 0 | 3 |
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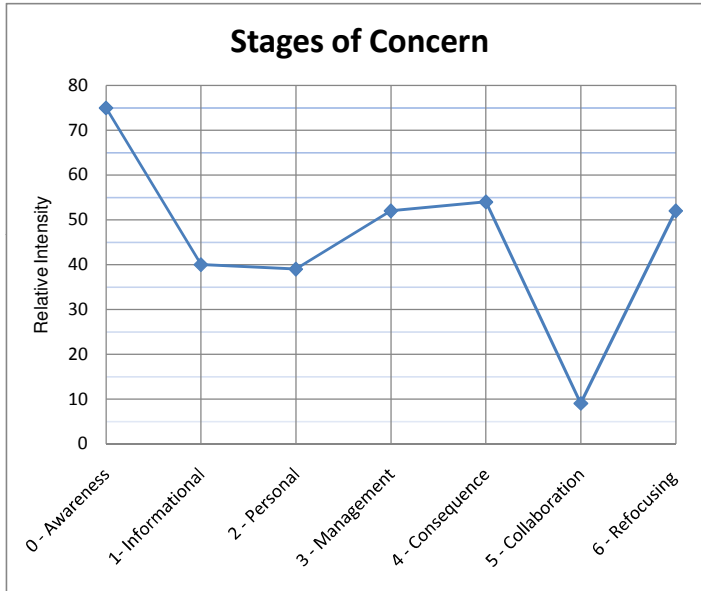
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- 35 2

| | 0 - Awareness | 1- Informational | 2 - Personal | 3 - Management | 4 - Consequence | 5 - Collaboration | 6 - Refocusing |
|--|---------------|------------------|--------------|----------------|-----------------|-------------------|----------------|
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| | 13 | 9 | 9 | 14 | 25 | 7 | 17 |
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| 0 - Awareness | 1- Informational | 2 - Personal | 3 - Management | 4 - Consequence | 5 - Collaboration | 6 - Refocusing |
|---------------|------------------|--------------|----------------|-----------------|-------------------|----------------|
| 0 | 1 | 2 | 3 | 4 | 5 | 6 |
| 1 | 1 | 0 | 4 | 5 | 1 | 3 |
| 1 | 1 | 1 | 4 | 4 | 1 | 3 |
| 2 | 3 | 3 | 3 | 4 | 1 | 1 |
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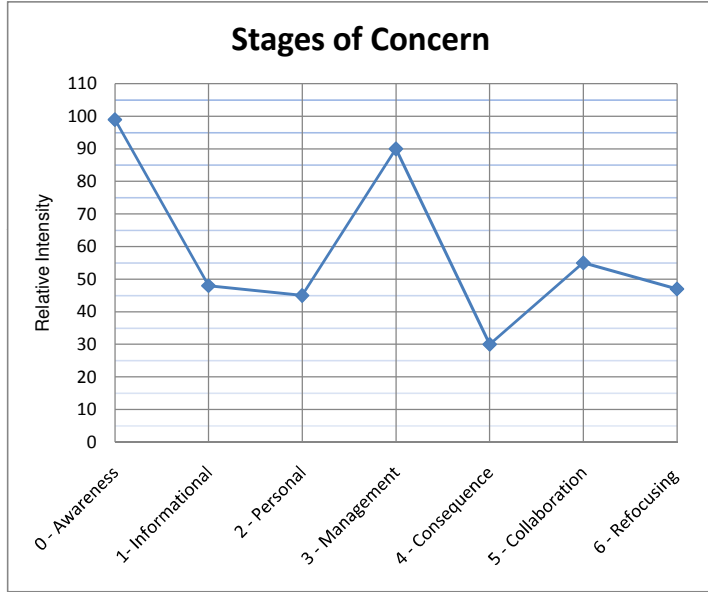


ID049 ID049

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- 19 3
- 20 7
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- 23 2
- 24 7
- 25 3
- 26 1
- 27 6
- 28 1
- 29 6
- 30 7
- 31 1
- 32 6
- 33 1
- 34 1
- 35 1

| | 0 - Awareness | 1- Informational | 2 - Personal | 3 - Management | 4 - Consequence | 5 - Collaboration | 6 - Refocusing |
|--|---------------|------------------|--------------|----------------|-----------------|-------------------|----------------|
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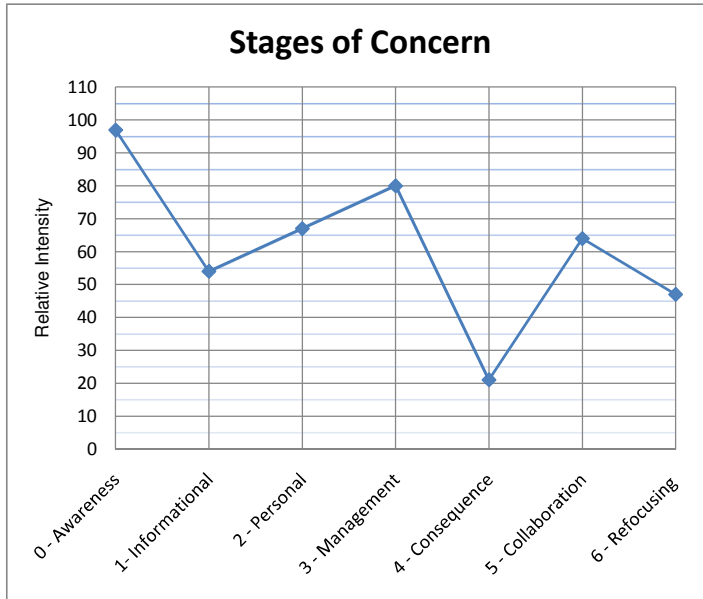
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| 2 | 4 | 0 | 7 | 3 | 4 | 1 |
| 7 | 6 | 7 | 7 | 1 | 5 | 6 |
| 7 | 0 | 2 | 7 | 3 | 1 | 7 |
| 2 | 1 | 1 | 3 | 7 | 6 | 1 |
| 7 | 1 | 1 | 1 | 6 | 6 | 1 |
| 25 | 12 | 11 | 25 | 20 | 22 | 16 |

ID051 ID051
Question Raw data

| | 0 - Awareness | 1- Informational | 2 - Personal | 3 - Management | 4 - Consequence | 5 - Collaboration | 6 - Refocusing |
|---|---------------|------------------|--------------|----------------|-----------------|-------------------|----------------|
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| 1 | 19 | 14 | 18 | 21 | 17 | 24 | 16 |
| 2 | 97 | 54 | 67 | 80 | 21 | 64 | 47 |

| 0 - Awareness | 1- Informational | 2 - Personal | 3 - Management | 4 - Consequence | 5 - Collaboration | 6 - Refocusing |
|---------------|------------------|--------------|----------------|-----------------|-------------------|----------------|
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| 1 | 6 | 1 | 5 | 2 | 2 | 1 |
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| 6 | 1 | 6 | 7 | 6 | 5 | 6 |
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| 19 | 14 | 18 | 21 | 17 | 24 | 16 |

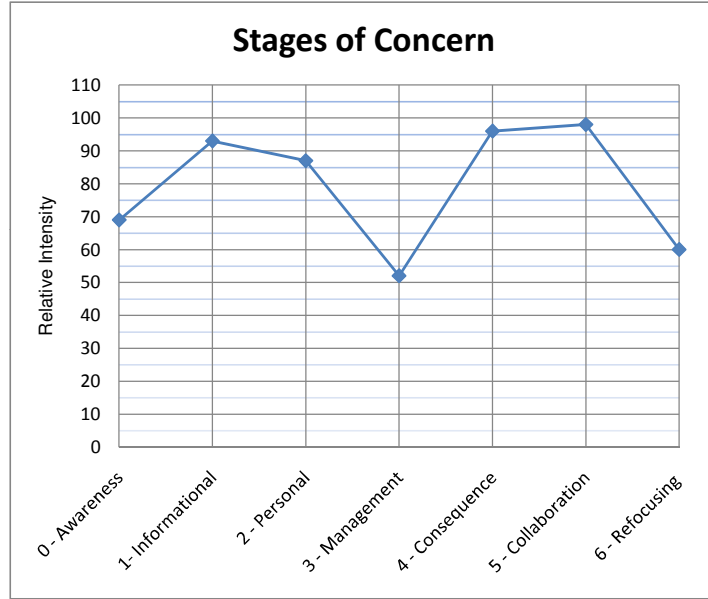
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ID052 ID052
Question Raw data

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- 15 7
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- 23 5
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- 28 7
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- 30 1
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- 32 7
- 33 7
- 34 1
- 35 5

| | 0 - Awareness | 1- Informational | 2 - Personal | 3 - Management | 4 - Consequence | 5 - Collaboration | 6 - Refocusing |
|---|---------------|------------------|--------------|----------------|-----------------|-------------------|----------------|
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| 6 | 69 | 93 | 87 | 52 | 96 | 98 | 60 |



| 0 - Awareness | 1- Informational | 2 - Personal | 3 - Management | 4 - Consequence | 5 - Collaboration | 6 - Refocusing |
|---------------|------------------|--------------|----------------|-----------------|-------------------|----------------|
| 0 | 1 | 4 | 1 | 7 | 7 | 7 |
| 1 | 7 | 1 | 1 | 7 | 7 | 1 |
| 5 | 7 | 7 | 1 | 7 | 7 | 3 |
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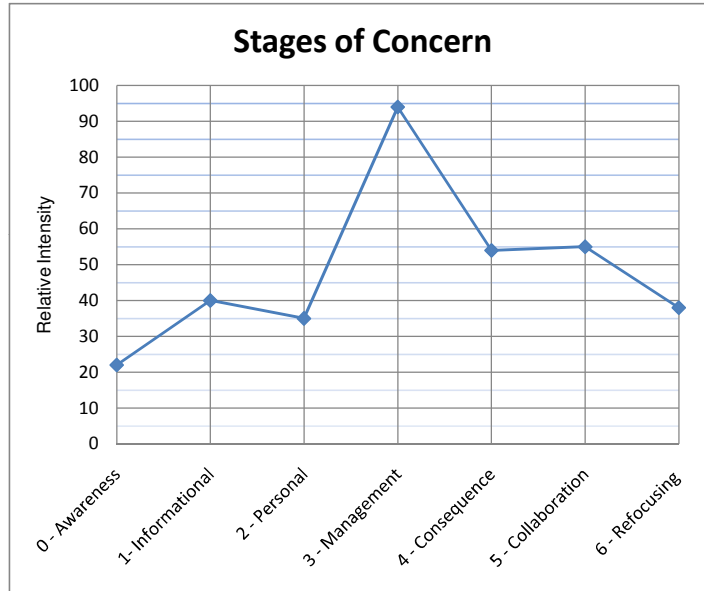
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- 21 1
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- 23 0
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- 25 6
- 26 6
- 27 6
- 28 1
- 29 7
- 30 4
- 31 5
- 32 5
- 33 1
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| | 0 - Awareness | 1- Informational | 2 - Personal | 3 - Management | 4 - Consequence | 5 - Collaboration | 6 - Refocusing |
|--|---------------|------------------|--------------|----------------|-----------------|-------------------|----------------|
| | 0 | 1 | 2 | 3 | 4 | 5 | 6 |
| | 6 | 9 | 8 | 27 | 25 | 22 | 14 |
| | 22 | 40 | 35 | 94 | 54 | 55 | 38 |

| 0 - Awareness | 1- Informational | 2 - Personal | 3 - Management | 4 - Consequence | 5 - Collaboration | 6 - Refocusing |
|---------------|------------------|--------------|----------------|-----------------|-------------------|----------------|
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| 0 | 1 | 1 | 5 | 2 | 5 | 0 |
| 1 | 1 | 5 | 5 | 7 | 2 | 1 |
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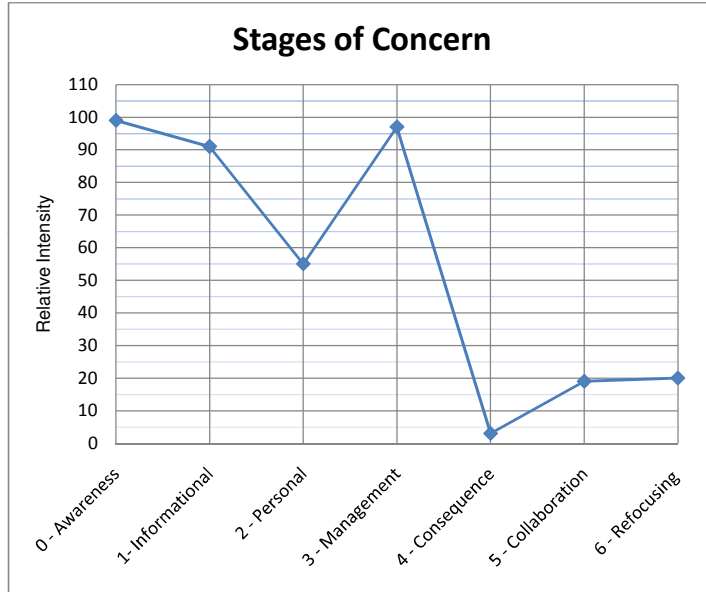
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- 26 6
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- 28 6
- 29 6
- 30 7
- 31 2
- 32 1
- 33 5
- 34 6
- 35 6

| | 0 - Awareness | 1- Informational | 2 - Personal | 3 - Management | 4 - Consequence | 5 - Collaboration | 6 - Refocusing |
|--|---------------|------------------|--------------|----------------|-----------------|-------------------|----------------|
| | 0 | 1 | 2 | 3 | 4 | 5 | 6 |
| | 27 | 26 | 14 | 30 | 6 | 12 | 9 |
| | 99 | 91 | 55 | 97 | 3 | 19 | 20 |

| 0 - Awareness | 1- Informational | 2 - Personal | 3 - Management | 4 - Consequence | 5 - Collaboration | 6 - Refocusing |
|---------------|------------------|--------------|----------------|-----------------|-------------------|----------------|
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| 6 | 6 | 1 | 6 | 1 | 2 | 2 |
| 7 | 6 | 1 | 6 | 1 | 1 | 1 |
| 6 | 6 | 6 | 6 | 2 | 2 | 3 |
| 7 | 6 | 5 | 6 | 1 | 6 | 2 |
| 27 | 26 | 14 | 30 | 6 | 12 | 9 |



| O | R | V | | | | | | | | | | | | | | | | | | | | | | | | | | | | Q | N | U | M | B | | | | |
|-----|----|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|----|----|
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| 112 | 29 | 1 | 1 | 1 | 4 | 1 | 7 | 7 | 4 | 4 | 4 | 1 | 1 | 1 | 4 | 4 | 7 | 7 | 4 | 4 | 4 | 4 | 4 | 3 | 4 | 5 | 7 | 3 | 4 | 2 | 3 | 2 | 3 | 7 | 5 | 2 | 7 | 33 |
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| 125 | 32 | 2 | . | . | 5 | 1 | 7 | 1 | 1 | 7 | 1 | 7 | 4 | 1 | 6 | 6 | 1 | 1 | 5 | 1 | 4 | 6 | 3 | 6 | 6 | 1 | 7 | 7 | 7 | 7 | 2 | 1 | 5 | 5 | 1 | 1 | 7 | 6 |
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| 130 | 32 | 2 | . | . | 5 | 1 | 7 | 1 | 1 | 1 | 7 | 1 | 7 | 4 | 1 | 6 | 6 | 1 | 1 | 5 | 1 | 4 | 6 | 3 | 6 | 6 | 1 | 7 | 7 | 7 | 2 | 1 | 5 | 5 | 1 | 1 | 7 | 29 |
| 131 | 33 | 4 | 1 | 1 | 7 | 6 | 2 | 6 | 4 | 2 | 6 | 6 | . | 7 | 6 | 6 | . | 6 | 5 | 6 | 6 | 4 | 2 | . | 7 | 4 | . | 7 | 6 | 4 | 7 | 2 | 7 | 4 | 6 | 3 | 7 | 4 |
| 132 | 33 | 4 | 1 | 1 | 7 | 6 | 2 | 6 | 4 | 2 | 6 | 6 | . | 7 | 6 | 6 | . | 6 | 5 | 6 | 6 | 4 | 2 | . | 7 | 4 | . | 7 | 6 | 4 | 7 | 2 | 7 | 4 | 6 | 3 | 7 | 13 |
| 133 | 33 | 4 | 1 | 1 | 7 | 6 | 2 | 6 | 4 | 2 | 6 | 6 | . | 7 | 6 | 6 | . | 6 | 5 | 6 | 6 | 4 | 2 | . | 7 | 4 | . | 7 | 6 | 4 | 7 | 2 | 7 | 4 | 6 | 3 | 7 | 24 |
| 134 | 33 | 4 | 1 | 1 | 7 | 6 | 2 | 6 | 4 | 2 | 6 | 6 | . | 7 | 6 | 6 | . | 6 | 5 | 6 | 6 | 4 | 2 | . | 7 | 4 | . | 7 | 6 | 4 | 7 | 2 | 7 | 4 | 6 | 3 | 7 | 27 |
| 135 | 33 | 4 | 1 | 1 | 7 | 6 | 2 | 6 | 4 | 2 | 6 | 6 | . | 7 | 6 | 6 | . | 6 | 5 | 6 | 6 | 4 | 2 | . | 7 | 4 | . | 7 | 6 | 4 | 7 | 2 | 7 | 4 | 6 | 3 | 7 | 30 |
| 136 | 33 | 4 | 1 | 1 | 7 | 6 | 2 | 6 | 4 | 2 | 6 | 6 | . | 7 | 6 | 6 | . | 6 | 5 | 6 | 6 | 4 | 2 | . | 7 | 4 | . | 7 | 6 | 4 | 7 | 2 | 7 | 4 | 6 | 3 | 7 | 32 |
| 137 | 34 | 4 | 7 | . | 6 | 6 | 6 | 1 | 1 | 1 | 5 | 3 | . | . | 7 | 7 | 4 | 6 | . | 6 | 6 | 3 | 2 | 2 | 7 | 5 | . | 7 | . | 5 | 3 | . | . | 3 | . | 7 | 2 | |
| 138 | 34 | 4 | 7 | . | 6 | 6 | 6 | 1 | 1 | 1 | 5 | 3 | . | . | 7 | 7 | 4 | 6 | . | 6 | 6 | 3 | 2 | 2 | 7 | 5 | . | . | 7 | . | 5 | 3 | . | . | 3 | . | 7 | 14 |
| 139 | 34 | 4 | 7 | . | 6 | 6 | 6 | 1 | 1 | 1 | 5 | 3 | . | . | 7 | 7 | 4 | 6 | . | 6 | 6 | 3 | 2 | 2 | 7 | 5 | . | . | 7 | . | 5 | 3 | . | . | 3 | . | 7 | 15 |
| 140 | 34 | 4 | 7 | . | 6 | 6 | 6 | 1 | 1 | 1 | 5 | 3 | . | . | 7 | 7 | 4 | 6 | . | 6 | 6 | 3 | 2 | 2 | 7 | 5 | . | . | 7 | . | 5 | 3 | . | . | 3 | . | 7 | 24 |
| 141 | 34 | 4 | 7 | . | 6 | 6 | 6 | 1 | 1 | 1 | 5 | 3 | . | . | 7 | 7 | 4 | 6 | . | 6 | 6 | 3 | 2 | 2 | 7 | 5 | . | . | 7 | . | 5 | 3 | . | . | 3 | . | 7 | 28 |
| 142 | 35 | 3 | 5 | 2 | 5 | 3 | 2 | 5 | 4 | 4 | 3 | 4 | 4 | 3 | 3 | 5 | 2 | 4 | 4 | 4 | 5 | 6 | 4 | 5 | 5 | 2 | 3 | 4 | 3 | 3 | 6 | 3 | 3 | 4 | 4 | 3 | 6 | 21 |
| 143 | 35 | 3 | 5 | 2 | 5 | 3 | 2 | 5 | 4 | 4 | 3 | 4 | 4 | 3 | 3 | 5 | 2 | 4 | 4 | 4 | 5 | 6 | 4 | 5 | 5 | 2 | 3 | 4 | 3 | 3 | 6 | 3 | 3 | 4 | 4 | 3 | 6 | 30 |
| 144 | 36 | 6 | . | . | 6 | 1 | 3 | 2 | 5 | 4 | 2 | 5 | 1 | 2 | 2 | 4 | 6 | 5 | 2 | 4 | 1 | . | 3 | 6 | 4 | 6 | 3 | 3 | 3 | 1 | 7 | 5 | 3 | 4 | 4 | 3 | 7 | 30 |
| 145 | 37 | 1 | . | . | 5 | . | 1 | 4 | 4 | 4 | 5 | 3 | . | 3 | 3 | 4 | 6 | 4 | 1 | 5 | 4 | 5 | 4 | 4 | 6 | 4 | 5 | 5 | 6 | 1 | 6 | 4 | 4 | 3 | 5 | 2 | 6 | 16 |
| 146 | 37 | 1 | . | . | 5 | . | 1 | 4 | 4 | 4 | 5 | 3 | . | 3 | 3 | 4 | 6 | 4 | 1 | 5 | 4 | 5 | 4 | 4 | 6 | 4 | 5 | 5 | 6 | 1 | 6 | 4 | 4 | 3 | 5 | 2 | 6 | 24 |
| 147 | 37 | 1 | . | . | 5 | . | 1 | 4 | 4 | 4 | 5 | 3 | . | 3 | 3 | 4 | 6 | 4 | 1 | 5 | 4 | 5 | 4 | 4 | 6 | 4 | 5 | 5 | 6 | 1 | 6 | 4 | 4 | 3 | 5 | 2 | 6 | 28 |

| O | R | V | V | V | V | V | V | V | V | V | V | V | V | V | V | V | V | V | V | V | V | V | V | V | V | V | V | V | V | V | V | V | V | V | V | V | V | V | V | Q |
|-----|----|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|----|----|----|---|
| b | S | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | 1 | 2 | 3 | 4 | 5 | M | | | |
| s | P | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | 1 | 2 | 3 | 4 | 5 | X | | | |
| 197 | 45 | 7 | 5 | 7 | 6 | 6 | 4 | 4 | 4 | 7 | 7 | 7 | 2 | 6 | 7 | 7 | 7 | 5 | 6 | 7 | 7 | 7 | 2 | 7 | 5 | 4 | 7 | 7 | 5 | 7 | 2 | 4 | 7 | 7 | 4 | 7 | 16 | | | |
| 198 | 45 | 7 | 5 | 7 | 6 | 6 | 4 | 4 | 4 | 7 | 7 | 7 | 2 | 6 | 7 | 7 | 7 | 5 | 6 | 7 | 7 | 7 | 2 | 7 | 5 | 4 | 7 | 7 | 5 | 7 | 2 | 4 | 7 | 7 | 4 | 7 | 19 | | | |
| 199 | 45 | 7 | 5 | 7 | 6 | 6 | 4 | 4 | 4 | 7 | 7 | 7 | 2 | 6 | 7 | 7 | 7 | 5 | 6 | 7 | 7 | 7 | 2 | 7 | 5 | 4 | 7 | 7 | 5 | 7 | 2 | 4 | 7 | 7 | 4 | 7 | 20 | | | |
| 200 | 45 | 7 | 5 | 7 | 6 | 6 | 4 | 4 | 4 | 7 | 7 | 7 | 2 | 6 | 7 | 7 | 7 | 5 | 6 | 7 | 7 | 7 | 2 | 7 | 5 | 4 | 7 | 7 | 5 | 7 | 2 | 4 | 7 | 7 | 4 | 7 | 21 | | | |
| 201 | 45 | 7 | 5 | 7 | 6 | 6 | 4 | 4 | 4 | 7 | 7 | 7 | 2 | 6 | 7 | 7 | 7 | 5 | 6 | 7 | 7 | 7 | 2 | 7 | 5 | 4 | 7 | 7 | 5 | 7 | 2 | 4 | 7 | 7 | 4 | 7 | 22 | | | |
| 202 | 45 | 7 | 5 | 7 | 6 | 6 | 4 | 4 | 4 | 7 | 7 | 7 | 2 | 6 | 7 | 7 | 7 | 5 | 6 | 7 | 7 | 7 | 2 | 7 | 5 | 4 | 7 | 7 | 5 | 7 | 2 | 4 | 7 | 7 | 4 | 7 | 24 | | | |
| 203 | 45 | 7 | 5 | 7 | 6 | 6 | 4 | 4 | 4 | 7 | 7 | 7 | 2 | 6 | 7 | 7 | 7 | 5 | 6 | 7 | 7 | 7 | 2 | 7 | 5 | 4 | 7 | 7 | 5 | 7 | 2 | 4 | 7 | 7 | 4 | 7 | 27 | | | |
| 204 | 45 | 7 | 5 | 7 | 6 | 6 | 4 | 4 | 4 | 7 | 7 | 7 | 2 | 6 | 7 | 7 | 7 | 5 | 6 | 7 | 7 | 7 | 2 | 7 | 5 | 4 | 7 | 7 | 5 | 7 | 2 | 4 | 7 | 7 | 4 | 7 | 28 | | | |
| 205 | 45 | 7 | 5 | 7 | 6 | 6 | 4 | 4 | 4 | 7 | 7 | 7 | 2 | 6 | 7 | 7 | 7 | 5 | 6 | 7 | 7 | 7 | 2 | 7 | 5 | 4 | 7 | 7 | 5 | 7 | 2 | 4 | 7 | 7 | 4 | 7 | 30 | | | |
| 206 | 45 | 7 | 5 | 7 | 6 | 6 | 4 | 4 | 4 | 7 | 7 | 7 | 2 | 6 | 7 | 7 | 7 | 5 | 6 | 7 | 7 | 7 | 2 | 7 | 5 | 4 | 7 | 7 | 5 | 7 | 2 | 4 | 7 | 7 | 4 | 7 | 33 | | | |
| 207 | 45 | 7 | 5 | 7 | 6 | 6 | 4 | 4 | 4 | 7 | 7 | 7 | 2 | 6 | 7 | 7 | 7 | 5 | 6 | 7 | 7 | 7 | 2 | 7 | 5 | 4 | 7 | 7 | 5 | 7 | 2 | 4 | 7 | 7 | 4 | 7 | 34 | | | |
| 208 | 46 | 2 | 5 | 1 | 6 | . | 2 | 7 | 5 | 4 | 4 | 2 | 4 | . | 5 | 2 | 5 | 3 | 1 | 3 | 5 | 4 | 4 | 2 | 4 | 4 | 5 | 5 | 2 | . | 6 | . | . | . | 4 | . | 7 | 7 | | |
| 209 | 47 | 3 | 1 | 1 | 3 | 1 | 1 | 1 | 1 | 3 | 1 | 1 | 1 | 1 | 4 | 4 | 2 | 5 | 2 | 6 | 5 | 5 | 7 | 2 | 5 | 2 | . | 6 | 2 | 2 | 3 | 4 | 6 | 6 | . | 7 | 22 | | | |
| 210 | 48 | 1 | 1 | 1 | 5 | 6 | 5 | 1 | 1 | 1 | 7 | 2 | 6 | . | . | 7 | 5 | 5 | 5 | . | . | 6 | 7 | 5 | 6 | 6 | 6 | 7 | 2 | 6 | 5 | . | 6 | 6 | 5 | 1 | 7 | 10 | | |
| 211 | 48 | 1 | 1 | 1 | 5 | 6 | 5 | 1 | 1 | 1 | 7 | 2 | 6 | . | . | 7 | 5 | 5 | 5 | . | . | 6 | 7 | 5 | 6 | 6 | 6 | 7 | 2 | 6 | 5 | . | 6 | 6 | 5 | 1 | 7 | 15 | | |
| 212 | 48 | 1 | 1 | 1 | 5 | 6 | 5 | 1 | 1 | 1 | 7 | 2 | 6 | . | . | 7 | 5 | 5 | 5 | . | . | 6 | 7 | 5 | 6 | 6 | 6 | 7 | 2 | 6 | 5 | . | 6 | 6 | 5 | 1 | 7 | 22 | | |
| 213 | 48 | 1 | 1 | 1 | 5 | 6 | 5 | 1 | 1 | 1 | 7 | 2 | 6 | . | . | 7 | 5 | 5 | 5 | . | . | 6 | 7 | 5 | 6 | 6 | 6 | 7 | 2 | 6 | 5 | . | 6 | 6 | 5 | 1 | 7 | 27 | | |
| 214 | 49 | 5 | 1 | . | 7 | 4 | 6 | 6 | 7 | 7 | 3 | 5 | . | 4 | 5 | 5 | 7 | 5 | . | 5 | 6 | 7 | 6 | 3 | 7 | 7 | 7 | 6 | 6 | 7 | 7 | 2 | 6 | 5 | 6 | 5 | 7 | 4 | | |
| 215 | 49 | 5 | 1 | . | 7 | 4 | 6 | 6 | 7 | 7 | 3 | 5 | . | 4 | 5 | 5 | 7 | 5 | . | 5 | 6 | 7 | 6 | 3 | 7 | 7 | 7 | 6 | 6 | 7 | 7 | 2 | 6 | 5 | 6 | 5 | 7 | 8 | | |
| 216 | 49 | 5 | 1 | . | 7 | 4 | 6 | 6 | 7 | 7 | 3 | 5 | . | 4 | 5 | 5 | 7 | 5 | . | 5 | 6 | 7 | 6 | 3 | 7 | 7 | 7 | 6 | 6 | 7 | 7 | 2 | 6 | 5 | 6 | 5 | 7 | 9 | | |
| 217 | 49 | 5 | 1 | . | 7 | 4 | 6 | 6 | 7 | 7 | 3 | 5 | . | 4 | 5 | 5 | 7 | 5 | . | 5 | 6 | 7 | 6 | 3 | 7 | 7 | 7 | 6 | 6 | 7 | 7 | 2 | 6 | 5 | 6 | 5 | 7 | 16 | | |
| 218 | 49 | 5 | 1 | . | 7 | 4 | 6 | 6 | 7 | 7 | 3 | 5 | . | 4 | 5 | 5 | 7 | 5 | . | 5 | 6 | 7 | 6 | 3 | 7 | 7 | 7 | 6 | 6 | 7 | 7 | 2 | 6 | 5 | 6 | 5 | 7 | 21 | | |
| 219 | 49 | 5 | 1 | . | 7 | 4 | 6 | 6 | 7 | 7 | 3 | 5 | . | 4 | 5 | 5 | 7 | 5 | . | 5 | 6 | 7 | 6 | 3 | 7 | 7 | 7 | 6 | 6 | 7 | 7 | 2 | 6 | 5 | 6 | 5 | 7 | 24 | | |
| 220 | 49 | 5 | 1 | . | 7 | 4 | 6 | 6 | 7 | 7 | 3 | 5 | . | 4 | 5 | 5 | 7 | 5 | . | 5 | 6 | 7 | 6 | 3 | 7 | 7 | 7 | 6 | 6 | 7 | 7 | 2 | 6 | 5 | 6 | 5 | 7 | 25 | | |
| 221 | 49 | 5 | 1 | . | 7 | 4 | 6 | 6 | 7 | 7 | 3 | 5 | . | 4 | 5 | 5 | 7 | 5 | . | 5 | 6 | 7 | 6 | 3 | 7 | 7 | 7 | 6 | 6 | 7 | 7 | 2 | 6 | 5 | 6 | 5 | 7 | 26 | | |
| 222 | 49 | 5 | 1 | . | 7 | 4 | 6 | 6 | 7 | 7 | 3 | 5 | . | 4 | 5 | 5 | 7 | 5 | . | 5 | 6 | 7 | 6 | 3 | 7 | 7 | 7 | 6 | 6 | 7 | 7 | 2 | 6 | 5 | 6 | 5 | 7 | 29 | | |
| 223 | 49 | 5 | 1 | . | 7 | 4 | 6 | 6 | 7 | 7 | 3 | 5 | . | 4 | 5 | 5 | 7 | 5 | . | 5 | 6 | 7 | 6 | 3 | 7 | 7 | 7 | 6 | 6 | 7 | 7 | 2 | 6 | 5 | 6 | 5 | 7 | 30 | | |
| 224 | 50 | 2 | 2 | 2 | 5 | 3 | 3 | 5 | 3 | 3 | 5 | 2 | 5 | 2 | 5 | 5 | 6 | 6 | 6 | . | 6 | 6 | 2 | 6 | 6 | 6 | 6 | 6 | 6 | 3 | 7 | 2 | 4 | 4 | 5 | . | 7 | 30 | | |
| 225 | 51 | . | . | . | 5 | . | 7 | 1 | 2 | . | 7 | . | . | 5 | 1 | 6 | 7 | 1 | . | 6 | . | 2 | . | 6 | 6 | . | 6 | 6 | 1 | 4 | 6 | 6 | 1 | . | 2 | . | 7 | 6 | | |
| 226 | 51 | . | . | . | 5 | . | 7 | 1 | 2 | . | 7 | . | . | 5 | 1 | 6 | 7 | 1 | . | 6 | . | 2 | . | 6 | 6 | . | 6 | 6 | 1 | 4 | 6 | 6 | 1 | . | 2 | . | 7 | 10 | | |
| 227 | 51 | . | . | . | 5 | . | 7 | 1 | 2 | . | 7 | . | . | 5 | 1 | 6 | 7 | 1 | . | 6 | . | 2 | . | 6 | 6 | . | 6 | 6 | 1 | 4 | 6 | 6 | 1 | . | 2 | . | 7 | 16 | | |
| 228 | 52 | 7 | 1 | 1 | 1 | 5 | 1 | 6 | 1 | 1 | 2 | 6 | 1 | 1 | 6 | 1 | 1 | 1 | 2 | 7 | 7 | 1 | 7 | 7 | 3 | 1 | 1 | 7 | 1 | 1 | 7 | 1 | 1 | 1 | 1 | 1 | 1 | 7 | 1 | |
| 229 | 52 | 7 | 1 | 1 | 1 | 5 | 1 | 6 | 1 | 1 | 2 | 6 | 1 | 1 | 6 | 1 | 1 | 1 | 2 | 7 | 7 | 1 | 7 | 7 | 3 | 1 | 1 | 7 | 1 | 1 | 7 | 1 | 1 | 1 | 1 | 1 | 1 | 7 | 19 | |
| 230 | 52 | 7 | 1 | 1 | 1 | 5 | 1 | 6 | 1 | 1 | 2 | 6 | 1 | 1 | 6 | 1 | 1 | 1 | 2 | 7 | 7 | 1 | 7 | 7 | 3 | 1 | 1 | 7 | 1 | 1 | 7 | 1 | 1 | 1 | 1 | 1 | 1 | 7 | 20 | |
| 231 | 52 | 7 | 1 | 1 | 1 | 5 | 1 | 6 | 1 | 1 | 2 | 6 | 1 | 1 | 6 | 1 | 1 | 1 | 2 | 7 | 7 | 1 | 7 | 7 | 3 | 1 | 1 | 7 | 1 | 1 | 7 | 1 | 1 | 1 | 1 | 1 | 1 | 7 | 22 | |
| 232 | 52 | 7 | 1 | 1 | 1 | 5 | 1 | 6 | 1 | 1 | 2 | 6 | 1 | 1 | 6 | 1 | 1 | 1 | 2 | 7 | 7 | 1 | 7 | 7 | 3 | 1 | 1 | 7 | 1 | 1 | 7 | 1 | 1 | 1 | 1 | 1 | 1 | 7 | 23 | |
| 233 | 52 | 7 | 1 | 1 | 1 | 5 | 1 | 6 | 1 | 1 | 2 | 6 | 1 | 1 | 6 | 1 | 1 | 1 | 2 | 7 | 7 | 1 | 7 | 7 | 3 | 1 | 1 | 7 | 1 | 1 | 7 | 1 | 1 | 1 | 1 | 1 | 1 | 7 | 27 | |
| 234 | 52 | 7 | 1 | 1 | 1 | 5 | 1 | 6 | 1 | 1 | 2 | 6 | 1 | 1 | 6 | 1 | 1 | 1 | 2 | 7 | 7 | 1 | 7 | 7 | 3 | 1 | 1 | 7 | 1 | 1 | 7 | 1 | 1 | 1 | 1 | 1 | 1 | 7 | 30 | |
| 235 | 53 | 6 | 4 | 1 | 7 | 3 | 3 | 6 | 5 | . | 2 | 6 | . | 1 | 1 | 2 | 5 | 5 | 3 | 6 | 3 | 7 | 5 | . | 5 | 4 | 4 | 4 | 6 | 6 | 7 | 2 | 5 | 5 | 7 | . | 7 | 4 | | |
| 236 | 53 | 6 | 4 | 1 | 7 | 3 | 3 | 6 | 5 | . | 2 | 6 | . | 1 | 1 | 2 | 5 | 5 | 3 | 6 | 3 | 7 | 5 | . | 5 | 4 | 4 | 4 | 6 | 6 | 7 | 2 | 5 | 5 | 7 | . | 7 | 21 | | |
| 237 | 53 | 6 | 4 | 1 | 7 | 3 | 3 | 6 | 5 | . | 2 | 6 | . | 1 | 1 | 2 | 5 | 5 | 3 | 6 | 3 | 7 | 5 | . | 5 | 4 | 4 | 4 | 6 | 6 | 7 | 2 | 5 | 5 | 7 | . | 7 | 30 | | |
| 238 | 53 | 6 | 4 | 1 | 7 | 3 | 3 | 6 | 5 | . | 2 | 6 | . | 1 | 1 | 2 | 5 | 5 | 3 | 6 | 3 | 7 | 5 | . | 5 | 4 | 4 | 4 | 6 | 6 | 7 | 2 | 5 | 5 | 7 | . | 7 | 34 | | |
| 239 | 54 | 4 | 6 | 2 | 6 | 2 | 6 | 2 | 6 | 2 | 5 | 5 | 2 | 5 | 5 | 2 | 5 | 2 | 2 | 3 | 2 | 7 | 2 | 7 | 4 | 2 | 5 | 2 | 2 | 6 | 2 | 2 | 2 | 5 | 5 | 7 | 16 | | | |
| 240 | 54 | 4 | 6 | 2 | 6 | 2 | 6 | 2 | 6 | 2 | 5 | 5 | 2 | 2 | 5 | 7 | 2 | 2 | 3 | 2 | 7 | 2 | 7 | 4 | 2 | 5 | 2 | 2 | 2 | 6 | 2 | 4 | 2 | 5 | 5 | 7 | 21 | | | |
| 241 | 54 | 4 | 6 | 2 | 6 | 2 | 6 | 2 | 6 | 2 | 5 | 5 | 2 | 2 | 5 | 7 | 2 | 2 | 3 | 2 | 7 | 2 | 7 | 4 | 2 | 5 | 2 | 2 | 2 | 6 | 2 | 4 | 2 | 5 | 5 | 7 | 23 | | | |

The FREQ Procedure

| QNUMBER | Frequency | Percent | Cumulative Frequency | Cumulative Percent |
|---------|-----------|---------|-------------------------|-----------------------|
| 24 | 17 | 7.05 | 17 | 7.05 |
| 16 | 14 | 5.81 | 31 | 12.86 |
| 30 | 14 | 5.81 | 45 | 18.67 |
| 15 | 12 | 4.98 | 57 | 23.65 |
| 27 | 12 | 4.98 | 69 | 28.63 |
| 6 | 11 | 4.56 | 80 | 33.20 |
| 21 | 11 | 4.56 | 91 | 37.76 |
| 4 | 10 | 4.15 | 101 | 41.91 |
| 10 | 10 | 4.15 | 111 | 46.06 |
| 12 | 9 | 3.73 | 120 | 49.79 |
| 22 | 9 | 3.73 | 129 | 53.53 |
| 32 | 9 | 3.73 | 138 | 57.26 |
| 14 | 8 | 3.32 | 146 | 60.58 |
| 20 | 8 | 3.32 | 154 | 63.90 |
| 7 | 7 | 2.90 | 161 | 66.80 |
| 28 | 7 | 2.90 | 168 | 69.71 |
| 26 | 6 | 2.49 | 174 | 72.20 |
| 1 | 5 | 2.07 | 179 | 74.27 |
| 2 | 5 | 2.07 | 184 | 76.35 |
| 9 | 5 | 2.07 | 189 | 78.42 |
| 13 | 5 | 2.07 | 194 | 80.50 |
| 23 | 5 | 2.07 | 199 | 82.57 |
| 33 | 5 | 2.07 | 204 | 84.65 |
| 19 | 4 | 1.66 | 208 | 86.31 |
| 25 | 4 | 1.66 | 212 | 87.97 |
| 29 | 4 | 1.66 | 216 | 89.63 |
| 31 | 4 | 1.66 | 220 | 91.29 |
| 34 | 4 | 1.66 | 224 | 92.95 |
| 8 | 3 | 1.24 | 227 | 94.19 |
| 11 | 3 | 1.24 | 230 | 95.44 |
| 17 | 3 | 1.24 | 233 | 96.68 |
| 18 | 3 | 1.24 | 236 | 97.93 |
| 35 | 3 | 1.24 | 239 | 99.17 |
| 3 | 1 | 0.41 | 240 | 99.59 |
| 5 | 1 | 0.41 | 241 | 100.00 |

| O b s | R E S P O N S E S | | | | | | | | | | | | | | | | | | | | Q M I N | N u m b e r | | | | | | | | | | | | | | | | | | |
|-------------|---|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|------------------|----------------------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|----|----|----|
| | V 1 | V 2 | V 3 | V 4 | V 5 | V 6 | V 7 | V 8 | V 9 | V 0 | V 1 | V 2 | V 3 | V 4 | V 5 | V 6 | V 7 | V 8 | V 9 | V 0 | | | V 1 | V 2 | V 3 | V 4 | V 5 | V 6 | V 7 | V 8 | V 9 | V 0 | V 1 | V 2 | V 3 | V 4 | V 5 | | | |
| 1 | 1 | 4 | 6 | 2 | 6 | . | 7 | 5 | 6 | 3 | 5 | 3 | 5 | 6 | 6 | 6 | 4 | 5 | 5 | 6 | 6 | 4 | 5 | 2 | 6 | 4 | 5 | 6 | 5 | 5 | 4 | 4 | 5 | 5 | 3 | . | 2 | 3 | | |
| 2 | 1 | 4 | 6 | 2 | 6 | . | 7 | 5 | 6 | 3 | 5 | 3 | 5 | 6 | 6 | 6 | 4 | 5 | 5 | 6 | 6 | 4 | 5 | 2 | 6 | 4 | 5 | 6 | 5 | 5 | 4 | 4 | 5 | 5 | 3 | . | 2 | 23 | | |
| 3 | 2 | 1 | 5 | 1 | 5 | 1 | 2 | 6 | 6 | 1 | 5 | 1 | 6 | 4 | . | . | . | 3 | . | 3 | . | . | 5 | 4 | 6 | 4 | 3 | 3 | 2 | 5 | 6 | . | 5 | 5 | 5 | 1 | 1 | 1 | | |
| 4 | 2 | 1 | 5 | 1 | 5 | 1 | 2 | 6 | 6 | 1 | 5 | 1 | 6 | 4 | . | . | . | 3 | . | 3 | . | . | 5 | 4 | 6 | 4 | 3 | 3 | 2 | 5 | 6 | . | 5 | 5 | 5 | 1 | 1 | 3 | | |
| 5 | 2 | 1 | 5 | 1 | 5 | 1 | 2 | 6 | 6 | 1 | 5 | 1 | 6 | 4 | . | . | . | 3 | . | 3 | . | . | 5 | 4 | 6 | 4 | 3 | 3 | 2 | 5 | 6 | . | 5 | 5 | 5 | 1 | 1 | 5 | | |
| 6 | 2 | 1 | 5 | 1 | 5 | 1 | 2 | 6 | 6 | 1 | 5 | 1 | 6 | 4 | . | . | . | 3 | . | 3 | . | . | 5 | 4 | 6 | 4 | 3 | 3 | 2 | 5 | 6 | . | 5 | 5 | 5 | 1 | 1 | 9 | | |
| 7 | 2 | 1 | 5 | 1 | 5 | 1 | 2 | 6 | 6 | 1 | 5 | 1 | 6 | 4 | . | . | . | 3 | . | 3 | . | . | 5 | 4 | 6 | 4 | 3 | 3 | 2 | 5 | 6 | . | 5 | 5 | 5 | 1 | 1 | 11 | | |
| 8 | 2 | 1 | 5 | 1 | 5 | 1 | 2 | 6 | 6 | 1 | 5 | 1 | 6 | 4 | . | . | . | 3 | . | 3 | . | . | 5 | 4 | 6 | 4 | 3 | 3 | 2 | 5 | 6 | . | 5 | 5 | 5 | 1 | 1 | 35 | | |
| 9 | 3 | 2 | 1 | 1 | 6 | 4 | 4 | 4 | 6 | 2 | 5 | 1 | 6 | 1 | 6 | 6 | 6 | 3 | 3 | 2 | 2 | 6 | 2 | 6 | 5 | 5 | 6 | 6 | 5 | 1 | 5 | 1 | 5 | 4 | 4 | 4 | 1 | 2 | | |
| 10 | 3 | 2 | 1 | 1 | 6 | 4 | 4 | 4 | 6 | 2 | 5 | 1 | 6 | 1 | 6 | 6 | 6 | 3 | 3 | 2 | 2 | 6 | 2 | 6 | 5 | 5 | 6 | 6 | 5 | 1 | 5 | 1 | 5 | 4 | 4 | 4 | 1 | 3 | | |
| 11 | 3 | 2 | 1 | 1 | 6 | 4 | 4 | 4 | 6 | 2 | 5 | 1 | 6 | 1 | 6 | 6 | 6 | 3 | 3 | 2 | 2 | 6 | 2 | 6 | 5 | 5 | 6 | 6 | 5 | 1 | 5 | 1 | 5 | 4 | 4 | 4 | 1 | 11 | | |
| 12 | 3 | 2 | 1 | 1 | 6 | 4 | 4 | 4 | 6 | 2 | 5 | 1 | 6 | 1 | 6 | 6 | 6 | 3 | 3 | 2 | 2 | 6 | 2 | 6 | 5 | 5 | 6 | 6 | 5 | 1 | 5 | 1 | 5 | 4 | 4 | 4 | 1 | 13 | | |
| 13 | 3 | 2 | 1 | 1 | 6 | 4 | 4 | 4 | 6 | 2 | 5 | 1 | 6 | 1 | 6 | 6 | 6 | 3 | 3 | 2 | 2 | 6 | 2 | 6 | 5 | 5 | 6 | 6 | 5 | 1 | 5 | 1 | 5 | 4 | 4 | 4 | 1 | 29 | | |
| 14 | 3 | 2 | 1 | 1 | 6 | 4 | 4 | 4 | 6 | 2 | 5 | 1 | 6 | 1 | 6 | 6 | 6 | 3 | 3 | 2 | 2 | 6 | 2 | 6 | 5 | 5 | 6 | 6 | 5 | 1 | 5 | 1 | 5 | 4 | 4 | 4 | 1 | 31 | | |
| 15 | 4 | 2 | 6 | 1 | 1 | 4 | 2 | 7 | 4 | 1 | 7 | 2 | 6 | 7 | 7 | 7 | 1 | 4 | 4 | 1 | 3 | 3 | 6 | 3 | 7 | 5 | 5 | 4 | 4 | 2 | 6 | 7 | 4 | 1 | 6 | 1 | 3 | | | |
| 16 | 4 | 2 | 6 | 1 | 1 | 4 | 2 | 7 | 4 | 1 | 7 | 2 | 6 | 7 | 7 | 7 | 1 | 4 | 4 | 1 | 3 | 3 | 6 | 3 | 7 | 5 | 5 | 4 | 4 | 4 | 2 | 6 | 7 | 4 | 1 | 6 | 1 | 4 | | |
| 17 | 4 | 2 | 6 | 1 | 1 | 4 | 2 | 7 | 4 | 1 | 7 | 2 | 6 | 7 | 7 | 7 | 1 | 4 | 4 | 1 | 3 | 3 | 6 | 3 | 7 | 5 | 5 | 4 | 4 | 4 | 2 | 6 | 7 | 4 | 1 | 6 | 1 | 9 | | |
| 18 | 4 | 2 | 6 | 1 | 1 | 4 | 2 | 7 | 4 | 1 | 7 | 2 | 6 | 7 | 7 | 7 | 1 | 4 | 4 | 1 | 3 | 3 | 6 | 3 | 7 | 5 | 5 | 4 | 4 | 4 | 2 | 6 | 7 | 4 | 1 | 6 | 1 | 16 | | |
| 19 | 4 | 2 | 6 | 1 | 1 | 4 | 2 | 7 | 4 | 1 | 7 | 2 | 6 | 7 | 7 | 7 | 1 | 4 | 4 | 1 | 3 | 3 | 6 | 3 | 7 | 5 | 5 | 4 | 4 | 4 | 2 | 6 | 7 | 4 | 1 | 6 | 1 | 19 | | |
| 20 | 4 | 2 | 6 | 1 | 1 | 4 | 2 | 7 | 4 | 1 | 7 | 2 | 6 | 7 | 7 | 7 | 1 | 4 | 4 | 1 | 3 | 3 | 6 | 3 | 7 | 5 | 5 | 4 | 4 | 4 | 2 | 6 | 7 | 4 | 1 | 6 | 1 | 34 | | |
| 21 | 5 | 2 | 2 | 4 | 4 | 2 | 4 | . | 3 | 3 | 6 | 2 | 4 | 5 | 6 | 2 | 3 | 2 | . | 2 | 3 | 6 | 7 | 2 | 6 | 4 | 4 | 5 | 3 | 5 | 4 | 5 | . | 2 | 4 | 1 | 1 | 35 | | |
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| 23 | 6 | 3 | 3 | . | 3 | 2 | 7 | 2 | 3 | 4 | 6 | 4 | 2 | 5 | 2 | 5 | 6 | 4 | 2 | 6 | 3 | 5 | 4 | 2 | 4 | 2 | 4 | 3 | 5 | 5 | 4 | 4 | 4 | 4 | 4 | 2 | 3 | 2 | 7 | |
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| 26 | 6 | 3 | 3 | . | 3 | 2 | 7 | 2 | 3 | 4 | 6 | 4 | 2 | 5 | 2 | 5 | 6 | 4 | 2 | 6 | 3 | 5 | 4 | 2 | 4 | 3 | 5 | 5 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 2 | 3 | 2 | 18 |
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| 29 | 7 | 1 | 5 | 2 | 3 | 1 | 4 | 6 | . | 4 | 2 | 2 | 2 | 2 | 1 | 6 | 5 | 5 | . | . | 6 | 4 | 4 | 4 | 4 | 6 | 4 | 4 | 4 | 4 | 5 | 4 | 4 | 4 | 4 | 3 | 5 | 1 | 1 | |
| 30 | 7 | 1 | 5 | 2 | 3 | 1 | 4 | 6 | . | 4 | 2 | 2 | 2 | 2 | 1 | 6 | 5 | 5 | . | . | 6 | 4 | 4 | 4 | 4 | 6 | 4 | 4 | 4 | 4 | 5 | 4 | 4 | 4 | 4 | 3 | 5 | 1 | 5 | |
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| 33 | 8 | 4 | 5 | 1 | 1 | 6 | 4 | 7 | 2 | 1 | 7 | 6 | 6 | 1 | 1 | 1 | 6 | 6 | 1 | 7 | 6 | 6 | 4 | 7 | 4 | 6 | 6 | 7 | 6 | 1 | 6 | 7 | 6 | 4 | 4 | 1 | 4 | | | |
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| 39 | 8 | 4 | 5 | 1 | 1 | 6 | 4 | 7 | 2 | 1 | 7 | 6 | 6 | 1 | 1 | 1 | 6 | 6 | 1 | 7 | 6 | 6 | 4 | 7 | 4 | 6 | 6 | 7 | 6 | 1 | 6 | 7 | 6 | 4 | 4 | 1 | 19 | | | |
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| 42 | 9 | 1 | 4 | . | 4 | 3 | 3 | . | 2 | 1 | 5 | 1 | 7 | 3 | 3 | 5 | 3 | 1 | 1 | 1 | 1 | 1 | 3 | 3 | 1 | 7 | 4 | 2 | 7 | 3 | 3 | 2 | 1 | 7 | 2 | 3 | 1 | 1 | 9 | |
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| 44 | 9 | 1 | 4 | . | 4 | 3 | 3 | . | 2 | 1 | 5 | 1 | 7 | 3 | 3 | 5 | 3 | 1 | 1 | 1 | 1 | 1 | 3 | 3 | 1 | 7 | 4 | 2 | 7 | 3 | 3 | 2 | 1 | 7 | 2 | 3 | 1 | 1 | 17 | |
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| 47 | 9 | 1 | 4 | . | 4 | 3 | 3 | . | 2 | 1 | 5 | 1 | 7 | 3 | 3 | 5 | 3 | 1 | 1 | 1 | 1 | 1 | 3 | 3 | 1 | 7 | 4 | 2 | 7 | 3 | 3 | 2 | 1 | 7 | 2 | 3 | 1 | 1 | 20 | |
| 48 | 9 | 1 | 4 | . | 4 | 3 | 3 | . | 2 | 1 | 5 | 1 | 7 | 3 | 3 | 5 | 3 | 1 | 1 | 1 | 1 | 1 | 3 | 3 | 1 | 7 | 4 | 2 | 7 | 3 | 3 | 2 | 1 | 7 | 2 | 3 | 1 | 1 | 23 | |
| 49 | 9 | 1 | 4 | . | 4 | 3 | 3 | . | 2 | 1 | 5 | 1 | 7 | 3 | 3 | 5 | 3 | 1 | 1 | 1 | 1 | 1 | 3 | 3 | 1 | 7 | 4 | 2 | | | | | | | | | | | | |

| O | R | V | | | | | | | | | | | | | | | | | | | | | | | | | | | Q | N | | | | | | | | | |
|-----|----|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|----|----|---|
| b | s | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | M | B | | | | | | | |
| s | P | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | E | R | | | | | | | |
| 99 | 18 | 1 | 1 | 1 | 7 | . | 7 | 1 | 1 | 1 | 3 | 1 | 1 | 1 | 1 | 6 | 7 | 5 | . | 1 | 6 | 7 | 4 | 1 | 7 | 5 | 6 | 6 | 6 | 7 | . | 5 | 6 | 1 | . | 1 | 23 | | |
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| 104 | 20 | 4 | 1 | 1 | 5 | 3 | 5 | 4 | 2 | 2 | 5 | 3 | 5 | 3 | 6 | 4 | 3 | 3 | 1 | 1 | 3 | 2 | 4 | 6 | 5 | 1 | 2 | 6 | 4 | 3 | 1 | 4 | 5 | 4 | 1 | 1 | 1 | 3 | |
| 105 | 20 | 4 | 1 | 1 | 5 | 3 | 5 | 4 | 2 | 2 | 5 | 3 | 5 | 3 | 6 | 4 | 3 | 3 | 1 | 1 | 3 | 2 | 4 | 6 | 5 | 1 | 2 | 6 | 4 | 3 | 1 | 4 | 5 | 4 | 1 | 1 | 1 | 18 | |
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| 110 | 20 | 4 | 1 | 1 | 5 | 3 | 5 | 4 | 2 | 2 | 5 | 3 | 5 | 3 | 6 | 4 | 3 | 3 | 1 | 1 | 3 | 2 | 4 | 6 | 5 | 1 | 2 | 6 | 4 | 3 | 1 | 4 | 5 | 4 | 1 | 1 | 1 | 35 | |
| 111 | 21 | 1 | 6 | 1 | 4 | 1 | 5 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 1 | 6 | 4 | 2 | 5 | 6 | 3 | 6 | 2 | 2 | 2 | 2 | 2 | 5 | 2 | 3 | 3 | 2 | 2 | 1 | 1 |
| 112 | 21 | 1 | 6 | 1 | 4 | 1 | 5 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 1 | 6 | 4 | 2 | 5 | 6 | 3 | 6 | 2 | 2 | 2 | 2 | 5 | 2 | 3 | 3 | 2 | 2 | 1 | 3 | |
| 113 | 21 | 1 | 6 | 1 | 4 | 1 | 5 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 1 | 6 | 4 | 2 | 5 | 6 | 3 | 6 | 2 | 2 | 2 | 2 | 5 | 2 | 3 | 3 | 2 | 2 | 1 | 5 | |
| 114 | 21 | 1 | 6 | 1 | 4 | 1 | 5 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 1 | 6 | 4 | 2 | 5 | 6 | 3 | 6 | 2 | 2 | 2 | 2 | 2 | 5 | 2 | 3 | 3 | 2 | 2 | 1 | 17 | |
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| 116 | 22 | 1 | 4 | 1 | 6 | . | 5 | 3 | . | . | 1 | 1 | 7 | 1 | 1 | 1 | 1 | 1 | 5 | 2 | 1 | 1 | 3 | 3 | 3 | 2 | 1 | 1 | 1 | 4 | 3 | 1 | 1 | 2 | 4 | 1 | 3 | | |
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| 118 | 22 | 1 | 4 | 1 | 6 | . | 5 | 3 | . | . | 1 | 1 | 7 | 1 | 1 | 1 | 1 | 1 | 5 | 2 | 1 | 1 | 3 | 3 | 3 | 2 | 1 | 1 | 1 | 4 | 3 | 1 | 1 | 2 | 4 | 1 | 11 | | |
| 119 | 22 | 1 | 4 | 1 | 6 | . | 5 | 3 | . | . | 1 | 1 | 7 | 1 | 1 | 1 | 1 | 1 | 5 | 2 | 1 | 1 | 3 | 3 | 3 | 2 | 1 | 1 | 1 | 4 | 3 | 1 | 1 | 2 | 4 | 1 | 13 | | |
| 120 | 22 | 1 | 4 | 1 | 6 | . | 5 | 3 | . | . | 1 | 1 | 7 | 1 | 1 | 1 | 1 | 1 | 5 | 2 | 1 | 1 | 3 | 3 | 3 | 2 | 1 | 1 | 1 | 4 | 3 | 1 | 1 | 2 | 4 | 1 | 14 | | |
| 121 | 22 | 1 | 4 | 1 | 6 | . | 5 | 3 | . | . | 1 | 1 | 7 | 1 | 1 | 1 | 1 | 1 | 5 | 2 | 1 | 1 | 3 | 3 | 3 | 2 | 1 | 1 | 1 | 4 | 3 | 1 | 1 | 2 | 4 | 1 | 15 | | |
| 122 | 22 | 1 | 4 | 1 | 6 | . | 5 | 3 | . | . | 1 | 1 | 7 | 1 | 1 | 1 | 1 | 1 | 5 | 2 | 1 | 1 | 3 | 3 | 3 | 2 | 1 | 1 | 1 | 4 | 3 | 1 | 1 | 2 | 4 | 1 | 16 | | |
| 123 | 22 | 1 | 4 | 1 | 6 | . | 5 | 3 | . | . | 1 | 1 | 7 | 1 | 1 | 1 | 1 | 1 | 5 | 2 | 1 | 1 | 3 | 3 | 3 | 2 | 1 | 1 | 1 | 4 | 3 | 1 | 1 | 2 | 4 | 1 | 17 | | |
| 124 | 22 | 1 | 4 | 1 | 6 | . | 5 | 3 | . | . | 1 | 1 | 7 | 1 | 1 | 1 | 1 | 1 | 5 | 2 | 1 | 1 | 3 | 3 | 3 | 2 | 1 | 1 | 1 | 4 | 3 | 1 | 1 | 2 | 4 | 1 | 18 | | |
| 125 | 22 | 1 | 4 | 1 | 6 | . | 5 | 3 | . | . | 1 | 1 | 7 | 1 | 1 | 1 | 1 | 1 | 5 | 2 | 1 | 1 | 3 | 3 | 3 | 2 | 1 | 1 | 1 | 4 | 3 | 1 | 1 | 2 | 4 | 1 | 21 | | |
| 126 | 22 | 1 | 4 | 1 | 6 | . | 5 | 3 | . | . | 1 | 1 | 7 | 1 | 1 | 1 | 1 | 1 | 5 | 2 | 1 | 1 | 3 | 3 | 3 | 2 | 1 | 1 | 1 | 4 | 3 | 1 | 1 | 2 | 4 | 1 | 22 | | |
| 127 | 22 | 1 | 4 | 1 | 6 | . | 5 | 3 | . | . | 1 | 1 | 7 | 1 | 1 | 1 | 1 | 1 | 5 | 2 | 1 | 1 | 3 | 3 | 3 | 2 | 1 | 1 | 1 | 4 | 3 | 1 | 1 | 2 | 4 | 1 | 27 | | |
| 128 | 22 | 1 | 4 | 1 | 6 | . | 5 | 3 | . | . | 1 | 1 | 7 | 1 | 1 | 1 | 1 | 1 | 5 | 2 | 1 | 1 | 3 | 3 | 3 | 2 | 1 | 1 | 1 | 4 | 3 | 1 | 1 | 2 | 4 | 1 | 28 | | |
| 129 | 22 | 1 | 4 | 1 | 6 | . | 5 | 3 | . | . | 1 | 1 | 7 | 1 | 1 | 1 | 1 | 1 | 5 | 2 | 1 | 1 | 3 | 3 | 3 | 2 | 1 | 1 | 1 | 4 | 3 | 1 | 1 | 2 | 4 | 1 | 29 | | |
| 130 | 22 | 1 | 4 | 1 | 6 | . | 5 | 3 | . | . | 1 | 1 | 7 | 1 | 1 | 1 | 1 | 1 | 5 | 2 | 1 | 1 | 3 | 3 | 3 | 2 | 1 | 1 | 1 | 4 | 3 | 1 | 1 | 2 | 4 | 1 | 32 | | |
| 131 | 22 | 1 | 4 | 1 | 6 | . | 5 | 3 | . | . | 1 | 1 | 7 | 1 | 1 | 1 | 1 | 1 | 5 | 2 | 1 | 1 | 3 | 3 | 3 | 2 | 1 | 1 | 1 | 4 | 3 | 1 | 1 | 2 | 4 | 1 | 33 | | |
| 132 | 23 | 5 | . | 4 | 6 | 1 | 7 | . | . | . | . | 5 | 1 | . | 6 | 6 | 6 | 4 | . | 4 | 7 | 7 | 3 | 5 | 5 | 7 | 6 | 4 | 5 | 4 | 7 | 4 | 4 | 4 | 6 | 4 | 1 | 5 | |
| 133 | 23 | 5 | . | 4 | 6 | 1 | 7 | . | . | . | . | 5 | 1 | . | 6 | 6 | 6 | 4 | . | 4 | 7 | 7 | 3 | 5 | 5 | 7 | 6 | 4 | 5 | 4 | 7 | 4 | 4 | 4 | 6 | 4 | 1 | 12 | |
| 134 | 24 | 2 | 4 | 5 | 6 | 2 | 3 | 2 | 2 | 2 | 5 | 5 | 6 | 4 | 6 | 6 | 6 | 6 | 4 | 2 | 4 | 3 | 6 | 3 | 4 | 6 | 5 | 4 | 6 | 2 | 4 | 6 | 5 | 5 | 6 | 4 | 2 | 1 | |
| 135 | 24 | 2 | 4 | 5 | 6 | 2 | 3 | 2 | 2 | 2 | 5 | 5 | 6 | 4 | 6 | 6 | 6 | 6 | 4 | 2 | 4 | 3 | 6 | 3 | 4 | 6 | 5 | 4 | 6 | 2 | 4 | 6 | 5 | 5 | 6 | 4 | 2 | 5 | |
| 136 | 24 | 2 | 4 | 5 | 6 | 2 | 3 | 2 | 2 | 2 | 5 | 5 | 6 | 4 | 6 | 6 | 6 | 6 | 4 | 2 | 4 | 3 | 6 | 3 | 4 | 6 | 5 | 4 | 6 | 2 | 4 | 6 | 5 | 5 | 6 | 4 | 2 | 7 | |
| 137 | 24 | 2 | 4 | 5 | 6 | 2 | 3 | 2 | 2 | 2 | 5 | 5 | 6 | 4 | 6 | 6 | 6 | 6 | 4 | 2 | 4 | 3 | 6 | 3 | 4 | 6 | 5 | 4 | 6 | 2 | 4 | 6 | 5 | 5 | 6 | 4 | 2 | 8 | |
| 138 | 24 | 2 | 4 | 5 | 6 | 2 | 3 | 2 | 2 | 2 | 5 | 5 | 6 | 4 | 6 | 6 | 6 | 6 | 4 | 2 | 4 | 3 | 6 | 3 | 4 | 6 | 5 | 4 | 6 | 2 | 4 | 6 | 5 | 5 | 6 | 4 | 2 | 9 | |
| 139 | 24 | 2 | 4 | 5 | 6 | 2 | 3 | 2 | 2 | 2 | 5 | 5 | 6 | 4 | 6 | 6 | 6 | 6 | 4 | 2 | 4 | 3 | 6 | 3 | 4 | 6 | 5 | 4 | 6 | 2 | 4 | 6 | 5 | 5 | 6 | 4 | 2 | 19 | |
| 140 | 24 | 2 | 4 | 5 | 6 | 2 | 3 | 2 | 2 | 2 | 5 | 5 | 6 | 4 | 6 | 6 | 6 | 6 | 4 | 2 | 4 | 3 | 6 | 3 | 4 | 6 | 5 | 4 | 6 | 2 | 4 | 6 | 5 | 5 | 6 | 4 | 2 | 29 | |
| 141 | 25 | 1 | 6 | . | 4 | 7 | 7 | . | . | . | 3 | 1 | 5 | . | 2 | 2 | 1 | 1 | 5 | 1 | 1 | 1 | 4 | 6 | 1 | 2 | 2 | 1 | . | 3 | . | . | 2 | 1 | 1 | 1 | 1 | | |
| 142 | 25 | 1 | 6 | . | 4 | 7 | 7 | . | . | . | 3 | 1 | 5 | . | 2 | 2 | 1 | 1 | 5 | 1 | 1 | 1 | 4 | 6 | 1 | 2 | 2 | 1 | . | 3 | . | . | 2 | 1 | 1 | 1 | 11 | | |
| 143 | 25 | 1 | 6 | . | 4 | 7 | 7 | . | . | . | 3 | 1 | 5 | . | 2 | 2 | 1 | 1 | 5 | 1 | 1 | 1 | 4 | 6 | 1 | 2 | 2 | 1 | . | 3 | . | . | 2 | 1 | 1 | 1 | 16 | | |
| 144 | 25 | 1 | 6 | . | 4 | 7 | 7 | . | . | . | 3 | 1 | 5 | . | 2 | 2 | 1 | 1 | 5 | 1 | 1 | 1 | 4 | 6 | 1 | 2 | 2 | 1 | . | 3 | . | . | 2 | 1 | 1 | 1 | 17 | | |
| 145 | 25 | 1 | 6 | . | 4 | 7 | 7 | . | . | . | 3 | 1 | 5 | . | 2 | 2 | 1 | 1 | 5 | 1 | 1 | 1 | 4 | 6 | 1 | 2 | 2 | 1 | . | 3 | . | . | 2 | 1 | 1 | 1 | 18 | | |
| 146 | 25 | 1 | 6 | . | 4 | 7 | 7 | . | . | . | 3 | 1 | 5 | . | 2 | 2 | 1 | 1 | 5 | 1 | 1 | 1 | 4 | 6 | 1 | 2 | 2 | 1 | . | 3 | . | . | 2 | 1 | 1 | 1 | 20 | | |
| 147 | 25 | 1 | 6 | . | 4 | 7 | 7 | . | . | . | 3 | 1 | 5 | . | 2 | 2 | 1 | 1 | 5 | 1 | 1 | 1 | 4 | 6 | 1 | 2 | 2 | 1 | . | 3 | . | . | 2 | 1 | 1 | 1 | 21 | | |

| Q | N | U | M | B | R | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|-----|----|----|----|----|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|----|----|
| Q | M | B | I | E | V | V | V | V | V | V | V | V | V | V | V | V | V | V | V | V | V | V | V | V | V | V | V | V | V | V | V | V | V | V | | | | |
| N | B | E | R | R | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | | | |
| R | R | E | M | B | V | V | V | V | V | V | V | V | V | V | V | V | V | V | V | V | V | V | V | V | V | V | V | V | V | V | V | V | V | V | V | | | |
| 22 | 25 | 28 | 34 | 35 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 148 | 25 | 1 | 6 | . | 4 | 7 | 7 | . | . | 3 | 1 | 5 | . | 2 | 2 | 1 | 1 | 1 | 5 | 1 | 1 | 1 | 4 | 6 | 1 | 2 | 2 | 1 | . | 3 | . | . | 2 | 1 | 1 | 1 | 22 | |
| 149 | 25 | 1 | 6 | . | 4 | 7 | 7 | . | . | 3 | 1 | 5 | . | 2 | 2 | 1 | 1 | 1 | 5 | 1 | 1 | 1 | 4 | 6 | 1 | 2 | 2 | 1 | . | 3 | . | . | 2 | 1 | 1 | 1 | 25 | |
| 150 | 25 | 1 | 6 | . | 4 | 7 | 7 | . | . | 3 | 1 | 5 | . | 2 | 2 | 1 | 1 | 1 | 5 | 1 | 1 | 1 | 4 | 6 | 1 | 2 | 2 | 1 | . | 3 | . | . | 2 | 1 | 1 | 1 | 28 | |
| 151 | 25 | 1 | 6 | . | 4 | 7 | 7 | . | . | 3 | 1 | 5 | . | 2 | 2 | 1 | 1 | 1 | 5 | 1 | 1 | 1 | 4 | 6 | 1 | 2 | 2 | 1 | . | 3 | . | . | 2 | 1 | 1 | 1 | 34 | |
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| 153 | 26 | 6 | 1 | 1 | 2 | 3 | 3 | . | 1 | 1 | 2 | 5 | 6 | 1 | 1 | 3 | 1 | 2 | 2 | 5 | 2 | 4 | 4 | 4 | 6 | 2 | 2 | 4 | 2 | 3 | 3 | 2 | 5 | 2 | 2 | 2 | 1 | 2 |
| 154 | 26 | 6 | 1 | 1 | 2 | 3 | 3 | . | 1 | 1 | 2 | 5 | 6 | 1 | 1 | 3 | 1 | 2 | 2 | 5 | 2 | 4 | 4 | 4 | 6 | 2 | 2 | 4 | 2 | 3 | 3 | 2 | 5 | 2 | 2 | 2 | 1 | 3 |
| 155 | 26 | 6 | 1 | 1 | 2 | 3 | 3 | . | 1 | 1 | 2 | 5 | 6 | 1 | 1 | 3 | 1 | 2 | 2 | 5 | 2 | 4 | 4 | 4 | 6 | 2 | 2 | 4 | 2 | 3 | 3 | 2 | 5 | 2 | 2 | 2 | 1 | 8 |
| 156 | 26 | 6 | 1 | 1 | 2 | 3 | 3 | . | 1 | 1 | 2 | 5 | 6 | 1 | 1 | 3 | 1 | 2 | 2 | 5 | 2 | 4 | 4 | 4 | 6 | 2 | 2 | 4 | 2 | 3 | 3 | 2 | 5 | 2 | 2 | 2 | 1 | 9 |
| 157 | 26 | 6 | 1 | 1 | 2 | 3 | 3 | . | 1 | 1 | 2 | 5 | 6 | 1 | 1 | 3 | 1 | 2 | 2 | 5 | 2 | 4 | 4 | 4 | 6 | 2 | 2 | 4 | 2 | 3 | 3 | 2 | 5 | 2 | 2 | 2 | 1 | 13 |
| 158 | 26 | 6 | 1 | 1 | 2 | 3 | 3 | . | 1 | 1 | 2 | 5 | 6 | 1 | 1 | 3 | 1 | 2 | 2 | 5 | 2 | 4 | 4 | 4 | 6 | 2 | 2 | 4 | 2 | 3 | 3 | 2 | 5 | 2 | 2 | 2 | 1 | 14 |
| 159 | 26 | 6 | 1 | 1 | 2 | 3 | 3 | . | 1 | 1 | 2 | 5 | 6 | 1 | 1 | 3 | 1 | 2 | 2 | 5 | 2 | 4 | 4 | 4 | 6 | 2 | 2 | 4 | 2 | 3 | 3 | 2 | 5 | 2 | 2 | 2 | 1 | 16 |
| 160 | 27 | 3 | 6 | 5 | 7 | 4 | 7 | 5 | 4 | 7 | 7 | 7 | 3 | 5 | 4 | 6 | 7 | 5 | 7 | 6 | 6 | 2 | 6 | 3 | 6 | 4 | 7 | 6 | 5 | 6 | 4 | 6 | 5 | 7 | 4 | 4 | 2 | 21 |
| 161 | 28 | 2 | 1 | 2 | 2 | 2 | 4 | 1 | 2 | 2 | 2 | 7 | 2 | 6 | 2 | 2 | 3 | 2 | 2 | 3 | 2 | 3 | 2 | 3 | 6 | 2 | 3 | 7 | 2 | 2 | 3 | 2 | 2 | 2 | 2 | 2 | 1 | 2 |
| 162 | 28 | 2 | 1 | 2 | 2 | 2 | 4 | 1 | 2 | 2 | 2 | 7 | 2 | 6 | 2 | 2 | 3 | 2 | 2 | 3 | 2 | 3 | 2 | 3 | 6 | 2 | 3 | 7 | 2 | 2 | 3 | 2 | 2 | 2 | 2 | 1 | 7 | |
| 163 | 29 | 1 | 1 | 1 | 4 | 1 | 7 | 7 | 4 | 4 | 4 | 1 | 1 | 1 | 4 | 4 | 7 | 7 | 4 | 4 | 4 | 4 | 3 | 4 | 5 | 7 | 3 | 4 | 2 | 3 | 2 | 3 | 7 | 5 | 2 | 1 | 1 | |
| 164 | 29 | 1 | 1 | 1 | 4 | 1 | 7 | 7 | 4 | 4 | 4 | 1 | 1 | 1 | 4 | 4 | 7 | 7 | 4 | 4 | 4 | 4 | 3 | 4 | 5 | 7 | 3 | 4 | 2 | 3 | 2 | 3 | 7 | 5 | 2 | 1 | 2 | |
| 165 | 29 | 1 | 1 | 1 | 4 | 1 | 7 | 7 | 4 | 4 | 4 | 1 | 1 | 1 | 4 | 4 | 7 | 7 | 4 | 4 | 4 | 4 | 3 | 4 | 5 | 7 | 3 | 4 | 2 | 3 | 2 | 3 | 7 | 5 | 2 | 1 | 3 | |
| 166 | 29 | 1 | 1 | 1 | 4 | 1 | 7 | 7 | 4 | 4 | 4 | 1 | 1 | 1 | 4 | 4 | 7 | 7 | 4 | 4 | 4 | 4 | 3 | 4 | 5 | 7 | 3 | 4 | 2 | 3 | 2 | 3 | 7 | 5 | 2 | 1 | 5 | |
| 167 | 29 | 1 | 1 | 1 | 4 | 1 | 7 | 7 | 4 | 4 | 4 | 1 | 1 | 1 | 4 | 4 | 7 | 7 | 4 | 4 | 4 | 4 | 3 | 4 | 5 | 7 | 3 | 4 | 2 | 3 | 2 | 3 | 7 | 5 | 2 | 1 | 11 | |
| 168 | 29 | 1 | 1 | 1 | 4 | 1 | 7 | 7 | 4 | 4 | 4 | 1 | 1 | 1 | 4 | 4 | 7 | 7 | 4 | 4 | 4 | 4 | 3 | 4 | 5 | 7 | 3 | 4 | 2 | 3 | 2 | 3 | 7 | 5 | 2 | 1 | 12 | |
| 169 | 29 | 1 | 1 | 1 | 4 | 1 | 7 | 7 | 4 | 4 | 4 | 1 | 1 | 1 | 4 | 4 | 7 | 7 | 4 | 4 | 4 | 4 | 3 | 4 | 5 | 7 | 3 | 4 | 2 | 3 | 2 | 3 | 7 | 5 | 2 | 1 | 13 | |
| 170 | 30 | 3 | 6 | 3 | 6 | . | 2 | . | 1 | 2 | . | 1 | 3 | . | 6 | 5 | 7 | 1 | . | 2 | 7 | . | . | 3 | 3 | 4 | 4 | 3 | 2 | . | 1 | . | 3 | 3 | 4 | 7 | 1 | 8 |
| 171 | 30 | 3 | 6 | 3 | 6 | . | 2 | . | 1 | 2 | . | 1 | 3 | . | 6 | 5 | 7 | 1 | . | 2 | 7 | . | . | 3 | 3 | 4 | 4 | 3 | 2 | . | 1 | . | 3 | 3 | 4 | 7 | 1 | 11 |
| 172 | 30 | 3 | 6 | 3 | 6 | . | 2 | . | 1 | 2 | . | 1 | 3 | . | 6 | 5 | 7 | 1 | . | 2 | 7 | . | . | 3 | 3 | 4 | 4 | 3 | 2 | . | 1 | . | 3 | 3 | 4 | 7 | 1 | 17 |
| 173 | 30 | 3 | 6 | 3 | 6 | . | 2 | . | 1 | 2 | . | 1 | 3 | . | 6 | 5 | 7 | 1 | . | 2 | 7 | . | . | 3 | 3 | 4 | 4 | 3 | 2 | . | 1 | . | 3 | 3 | 4 | 7 | 1 | 30 |
| 174 | 31 | . | 5 | . | 5 | 5 | . | . | . | 1 | 7 | . | . | . | 6 | 6 | 1 | 2 | 2 | 4 | 7 | 1 | 5 | . | 7 | 1 | 7 | 7 | . | 7 | 6 | 7 | 7 | 1 | 2 | 1 | 9 | |
| 175 | 31 | . | 5 | . | 5 | 5 | . | . | . | 1 | 7 | . | . | . | 6 | 6 | 1 | 2 | 2 | 4 | 7 | 1 | 5 | . | 7 | 1 | 7 | 7 | . | 7 | 6 | 7 | 7 | 7 | 1 | 2 | 1 | 16 |
| 176 | 31 | . | 5 | . | 5 | 5 | . | . | . | 1 | 7 | . | . | . | 6 | 6 | 1 | 2 | 2 | 4 | 7 | 1 | 5 | . | 7 | 1 | 7 | 7 | . | 7 | 6 | 7 | 7 | 7 | 1 | 2 | 1 | 21 |
| 177 | 31 | . | 5 | . | 5 | 5 | . | . | . | 1 | 7 | . | . | . | 6 | 6 | 1 | 2 | 2 | 4 | 7 | 1 | 5 | . | 7 | 1 | 7 | 7 | . | 7 | 6 | 7 | 7 | 7 | 1 | 2 | 1 | 25 |
| 178 | 31 | . | 5 | . | 5 | 5 | . | . | . | 1 | 7 | . | . | . | 6 | 6 | 1 | 2 | 2 | 4 | 7 | 1 | 5 | . | 7 | 1 | 7 | 7 | . | 7 | 6 | 7 | 7 | 7 | 1 | 2 | 1 | 34 |
| 179 | 32 | 2 | . | . | 5 | 1 | 7 | 1 | 1 | 1 | 7 | 1 | 7 | 4 | 1 | 6 | 6 | 1 | 1 | 5 | 1 | 4 | 6 | 3 | 6 | 6 | 1 | 7 | 7 | 7 | 2 | 1 | 5 | 5 | 1 | 1 | 1 | 5 |
| 180 | 32 | 2 | . | . | 5 | 1 | 7 | 1 | 1 | 1 | 7 | 1 | 7 | 4 | 1 | 6 | 6 | 1 | 1 | 5 | 1 | 4 | 6 | 3 | 6 | 6 | 1 | 7 | 7 | 7 | 2 | 1 | 5 | 5 | 1 | 1 | 1 | 7 |
| 181 | 32 | 2 | . | . | 5 | 1 | 7 | 1 | 1 | 1 | 7 | 1 | 7 | 4 | 1 | 6 | 6 | 1 | 1 | 5 | 1 | 4 | 6 | 3 | 6 | 6 | 1 | 7 | 7 | 7 | 2 | 1 | 5 | 5 | 1 | 1 | 1 | 8 |
| 182 | 32 | 2 | . | . | 5 | 1 | 7 | 1 | 1 | 1 | 7 | 1 | 7 | 4 | 1 | 6 | 6 | 1 | 1 | 5 | 1 | 4 | 6 | 3 | 6 | 6 | 1 | 7 | 7 | 7 | 2 | 1 | 5 | 5 | 1 | 1 | 1 | 9 |
| 183 | 32 | 2 | . | . | 5 | 1 | 7 | 1 | 1 | 1 | 7 | 1 | 7 | 4 | 1 | 6 | 6 | 1 | 1 | 5 | 1 | 4 | 6 | 3 | 6 | 6 | 1 | 7 | 7 | 7 | 2 | 1 | 5 | 5 | 1 | 1 | 1 | 11 |
| 184 | 32 | 2 | . | . | 5 | 1 | 7 | 1 | 1 | 1 | 7 | 1 | 7 | 4 | 1 | 6 | 6 | 1 | 1 | 5 | 1 | 4 | 6 | 3 | 6 | 6 | 1 | 7 | 7 | 7 | 2 | 1 | 5 | 5 | 1 | 1 | 1 | 14 |
| 185 | 32 | 2 | . | . | 5 | 1 | 7 | 1 | 1 | 1 | 7 | 1 | 7 | 4 | 1 | 6 | 6 | 1 | 1 | 5 | 1 | 4 | 6 | 3 | 6 | 6 | 1 | 7 | 7 | 7 | 2 | 1 | 5 | 5 | 1 | 1 | 1 | 17 |
| 186 | 32 | 2 | . | . | 5 | 1 | 7 | 1 | 1 | 1 | 7 | 1 | 7 | 4 | 1 | 6 | 6 | 1 | 1 | 5 | 1 | 4 | 6 | 3 | 6 | 6 | 1 | 7 | 7 | 7 | 2 | 1 | 5 | 5 | 1 | 1 | 1 | 18 |
| 187 | 32 | 2 | . | . | 5 | 1 | 7 | 1 | 1 | 1 | 7 | 1 | 7 | 4 | 1 | 6 | 6 | 1 | 1 | 5 | 1 | 4 | 6 | 3 | 6 | 6 | 1 | 7 | 7 | 7 | 2 | 1 | 5 | 5 | 1 | 1 | 1 | 20 |
| 188 | 32 | 2 | . | . | 5 | 1 | 7 | 1 | 1 | 1 | 7 | 1 | 7 | 4 | 1 | 6 | 6 | 1 | 1 | 5 | 1 | 4 | 6 | 3 | 6 | 6 | 1 | 7 | 7 | 7 | 2 | 1 | 5 | 5 | 1 | 1 | 1 | 26 |
| 189 | 32 | 2 | . | . | 5 | 1 | 7 | 1 | 1 | 1 | 7 | 1 | 7 | 4 | 1 | 6 | 6 | 1 | 1 | 5 | 1 | 4 | 6 | 3 | 6 | 6 | 1 | 7 | 7 | 7 | 2 | 1 | 5 | 5 | 1 | 1 | 1 | 31 |
| 190 | 32 | 2 | . | . | 5 | 1 | 7 | 1 | 1 | 1 | 7 | 1 | 7 | 4 | 1 | 6 | 6 | 1 | 1 | 5 | 1 | 4 | 6 | 3 | 6 | 6 | 1 | 7 | 7 | 7 | 2 | 1 | 5 | 5 | 1 | 1 | 1 | 34 |
| 191 | 32 | 2 | . | . | 5 | 1 | 7 | 1 | 1 | 1 | 7 | 1 | 7 | 4 | 1 | 6 | 6 | 1 | 1 | 5 | 1 | 4 | 6 | 3 | 6 | 6 | 1 | 7 | 7 | 7 | 2 | 1 | 5 | 5 | 1 | 1 | 1 | 35 |
| 192 | 33 | 4 | 1 | 1 | 7 | 6 | 2 | 6 | 4 | 2 | 6 | 6 | . | 7 | 6 | 6 | . | 6 | 5 | 6 | 6 | 4 | 2 | . | 7 | 4 | . | 7 | 6 | 4 | 7 | 2 | 7 | 4 | 6 | 3 | 1 | 2 |
| 193 | 33 | 4 | 1 | 1 | 7 | 6 | 2 | 6 | 4 | 2 | 6 | 6 | . | 7 | 6 | 6 | . | 6 | 5 | 6 | 6 | 4 | 2 | . | 7 | 4 | . | 7 | 6 | 4 | 7 | 2 | 7 | 4 | 6 | 3 | 1 | 3 |
| 194 | 34 | 4 | 7 | . | 6 | 6 | 6 | 1 | 1 | 5 | 3 | . | . | 7 | 7 | 4 | 6 | . | 6 | 6 | 3 | 2 | 2 | 7 | 5 | . | . | 7 | . | 5 | 3 | . | . | 3 | . | 1 | 7 | |
| 195 | 34 | 4 | 7 | . | 6 | 6 | 6 | 1 | 1 | 1 | 5 | 3 | . | . | 7 | 7 | 4 | 6 | . | 6 | 6 | 3 | 2 | 2 | 7 | 5 | . | . | 7 | | | | | | | | | |

The FREQ Procedure

| QNUMBER | Frequency | Percent | Cumulative Frequency | Cumulative Percent |
|---------|-----------|---------|-------------------------|-----------------------|
| 3 | 27 | 7.99 | 27 | 7.99 |
| 1 | 20 | 5.92 | 47 | 13.91 |
| 5 | 17 | 5.03 | 64 | 18.93 |
| 2 | 16 | 4.73 | 80 | 23.67 |
| 11 | 16 | 4.73 | 96 | 28.40 |
| 13 | 15 | 4.44 | 111 | 32.84 |
| 8 | 14 | 4.14 | 125 | 36.98 |
| 9 | 14 | 4.14 | 139 | 41.12 |
| 18 | 14 | 4.14 | 153 | 45.27 |
| 7 | 13 | 3.85 | 166 | 49.11 |
| 12 | 13 | 3.85 | 179 | 52.96 |
| 35 | 13 | 3.85 | 192 | 56.80 |
| 14 | 12 | 3.55 | 204 | 60.36 |
| 29 | 12 | 3.55 | 216 | 63.91 |
| 17 | 10 | 2.96 | 226 | 66.86 |
| 16 | 9 | 2.66 | 235 | 69.53 |
| 20 | 9 | 2.66 | 244 | 72.19 |
| 31 | 9 | 2.66 | 253 | 74.85 |
| 19 | 8 | 2.37 | 261 | 77.22 |
| 23 | 8 | 2.37 | 269 | 79.59 |
| 34 | 8 | 2.37 | 277 | 81.95 |
| 22 | 7 | 2.07 | 284 | 84.02 |
| 25 | 6 | 1.78 | 290 | 85.80 |
| 28 | 6 | 1.78 | 296 | 87.57 |
| 32 | 6 | 1.78 | 302 | 89.35 |
| 4 | 5 | 1.48 | 307 | 90.83 |
| 15 | 5 | 1.48 | 312 | 92.31 |
| 21 | 5 | 1.48 | 317 | 93.79 |
| 6 | 4 | 1.18 | 321 | 94.97 |
| 10 | 4 | 1.18 | 325 | 96.15 |
| 30 | 4 | 1.18 | 329 | 97.34 |
| 33 | 4 | 1.18 | 333 | 98.52 |
| 26 | 2 | 0.59 | 335 | 99.11 |
| 27 | 2 | 0.59 | 337 | 99.70 |
| 24 | 1 | 0.30 | 338 | 100.00 |

The FREQ Procedure

| SECMAXQNUMBER | Frequency | Percent | Cumulative Frequency | Cumulative Percent |
|---------------|-----------|---------|-------------------------|-----------------------|
| 4 | 15 | 4.90 | 15 | 4.90 |
| 24 | 15 | 4.90 | 30 | 9.80 |
| 10 | 14 | 4.58 | 44 | 14.38 |
| 25 | 14 | 4.58 | 58 | 18.95 |
| 26 | 13 | 4.25 | 71 | 23.20 |
| 2 | 12 | 3.92 | 83 | 27.12 |
| 15 | 12 | 3.92 | 95 | 31.05 |
| 19 | 12 | 3.92 | 107 | 34.97 |
| 27 | 12 | 3.92 | 119 | 38.89 |
| 32 | 12 | 3.92 | 131 | 42.81 |
| 16 | 11 | 3.59 | 142 | 46.41 |
| 28 | 11 | 3.59 | 153 | 50.00 |
| 14 | 10 | 3.27 | 163 | 53.27 |
| 20 | 10 | 3.27 | 173 | 56.54 |
| 22 | 10 | 3.27 | 183 | 59.80 |
| 30 | 10 | 3.27 | 193 | 63.07 |
| 33 | 10 | 3.27 | 203 | 66.34 |
| 17 | 9 | 2.94 | 212 | 69.28 |
| 6 | 8 | 2.61 | 220 | 71.90 |
| 7 | 8 | 2.61 | 228 | 74.51 |
| 21 | 8 | 2.61 | 236 | 77.12 |
| 31 | 8 | 2.61 | 244 | 79.74 |
| 5 | 7 | 2.29 | 251 | 82.03 |
| 11 | 7 | 2.29 | 258 | 84.31 |
| 12 | 7 | 2.29 | 265 | 86.60 |
| 34 | 7 | 2.29 | 272 | 88.89 |
| 29 | 6 | 1.96 | 278 | 90.85 |
| 9 | 5 | 1.63 | 283 | 92.48 |
| 1 | 4 | 1.31 | 287 | 93.79 |
| 8 | 4 | 1.31 | 291 | 95.10 |
| 23 | 4 | 1.31 | 295 | 96.41 |
| 35 | 4 | 1.31 | 299 | 97.71 |
| 18 | 3 | 0.98 | 302 | 98.69 |
| 3 | 2 | 0.65 | 304 | 99.35 |
| 13 | 2 | 0.65 | 306 | 100.00 |

Participant number: 002

Date: June 2012

Background :

This user attended an overview course of the new clickUP system during the 2nd sem of 2011. User had the opportunity during first semester of 2012 to start using the system. This interview took place at the end of the first semester 2012.
 (Semester = 6 months)

| | Category | Level | Comments |
|---|---|-------|--|
| I | So are you currently using clickUP? | | |
| P | Yes. | | User |
| I | Please describe for me how you use clickUP? | | |
| P | Knowledge | IVA | <p>She describes a number of functionalities they are making good use of in these modules.</p> <p><i>Knows short and long term requirements of use and using with minimum effort and stress.</i></p> |

| | | | |
|---|--|--------------------------------|---|
| | <p>on the blog. Every group needs certain time to do that. So we are using that to just to get a bit of patient information out to the students and they can comment on it.</p> | | |
| I | <p><i>OK. Is that a patient they have seen? Write about the case?</i></p> | | |
| P | <p><i>Yes, they have to put a case - each group get a responsibility and the other group has to comment. But it is only within the module – notyet so they see a patient in the clinic or where ever they worked. And then they ...</i></p> | | |
| I | <p><i>It is a wonderful learning opportunity actually for everyone to share that.</i></p> | | |
| P | <p>Yes, it saves time because you could also have a feedback or a type of a session where students give feedback and students present a case and then everybody learns from that but we do not really have timeslots to do that. So now we do the formal blog, and it is working marvellous, students really give their comments. Ja</p> | <p>Status reporting</p> | <p>IVB Describe how students participate.</p> |
| I | <p><i>OK Wonderful. It is always there, always available. So if someone / one of them you know come across that case again they will be able to go back to that and go revisit - other than where you present it in class. That is a very good advantage I think. Wonderful.</i></p> | | |
| P | <p>Yes</p> | | |
| I | <p><i>Are you, or do you think you are an independent user or do you have a lot of administrative help in the department, people that can help to help put up things?</i></p> | | |
| P | <p>Not really other people. I usually come to you guys. (Laughter) and Marietjie also does it and work together putting things up. But I usually put things up myself. Ja. I am not aware of anybody that can help me more than I already</p> | | <p>Independent user – present with colleague this module.</p> |

Levels of use Interview

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3/22/2014

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|---|--|---------------------------|------------|---|
| | | | | know. So ... |
| I | | | | OK. How many modules do you currently use, have on clickUP? |
| P | | | | For the "LCAS" we have got 4. And then there is the 5 th years is Block 16. So it is 5. And then – I think that is the ones that I use. Ja. Then there are others for the different BLOCKS that I am not involved in those. |
| I | | | | OK currently those ones. OK |
| I | | | | <i>What do you see as the strengths and weaknesses of clickUP?</i> |
| P | | Knowledge | IVA | OK. The strengths, like I already mentioned that you can do things that people can go online in their own time and bring it together and let them discuss something and then also the advantage of you know not having to if you want feedback with evaluation not only the dish out forms and waiting for them to come back and so on everybody can go on their own time and do the evaluation and I think it saves time and saves the resources. And you can also immediately see what a student did, when he did it follow and monitor them. Especially for our modules we do not have exams which have marks so we just judge it by activities and attendances obviously. So those are the main advantages. |
| I | | | | And the weakness maybe? |
| P | | Status reporting - | IVA | The weakness I think sometimes the medical students have a deadline and they obviously they realise too late they have to do it and that the system went down or the internet (always get that with electronic things) doesn't work maybe that is one thing. That you don't have the student contact that you would have had if you had a session. It is not really personal contact. It is more somewhere up |

| | | |
|---|---|---|
| | <p>there. I think that is something that maybe that you to do something and get stuck and it takes time to figure out how it is done again. Because we are not always on top of how it works. So it can be a bit complicated sometimes and if you are not sure and do it often enough you get a bit lost and then it takes some a bit of time and I think once you have done it, it can save you time. I think that is mainly ...</p> | |
| I | <p><i>OK. Have you made any attempts to do anything about the weaknesses maybe to overcome that battle?</i></p> | |
| P | <p>Oh, ja, well sometimes this is going to take met a while if I struggle then I go and ask people, I ask you, at Education Innovation or Erika or also ask Marietjie, people who know. Or I do go back to the notes, or I know that something I do not work with every day it does take time or the first thing is to just to accept it. Ja, then ja we do have feedback sessions with the students to overcome that personal contacts problem. We do see the students sometimes. But it is not for everything. So, Ja, I think that is the main things. We have got mentors in the programme as well. They have lots of student contact including myself. There are people helping the students not only electronic type of module. Ja.</p> | <p>Status reporting IVB</p> <p>Know how to overcome struggles to do something.</p> <p>Building student contact . Varying use ...</p> |
| I | <p><i>Can you maybe give me an example of the things you struggled with doing yourself?</i></p> | <p>Prompt</p> |
| P | <p>Uhm - It is very <i>small things like</i> you not do it for a while. Then you think how am I uploading this document again? Very basic small things. And then Marietjie set up a blog so I was not really – but the groups everything actually went quite well that it is just if you didn't do it for a while it is like you have to just figure it out again. Ja. Isn't big things. Really to put document on</p> | <p>Small things she struggled with – remembering how to do some of the steps – to be expected because it is a total new system.</p> |

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| | | | | |
|---|---|------------------------------|------------|---|
| | and to make to make announcements things that I didn't struggle with. | | | |
| I | <i>OK. OK. Ja. Just to get to do it, you know, get used to do it.</i> | | | |
| P | Yes. It's just a bit different from the old we just need to get used to it. I find I find the new one, I think there are much more things available. | | | |
| I | <i>Available, OK, Alright. Are you currently maybe looking for any information about new the clickUP?</i> | | | |
| P | Not at the moment. No. No. Most of our stuff is on it's settled for the year. So it's not – at the moment I don't, we haven't thought about anything to add for now. Ja. Maybe by the end of the year to see what we can do for the next year. Ja. Not at the moment. Nothing. | Acquiring Information | IVA | Not at the moment looking for information. |
| I | <i>OK. You may plan to to rethink what you are doing. Right.</i> | | | |
| P | Yes. Yes. And then obviously to see how it work this year. Ja. | Assessing | IVA | Planning to assess how things worked this year. |
| I | <i>OK. Do you work with others in your use of the new clickUP?</i> | | | |
| P | Uhm other lecturers? | | | |
| I | Yes. | | | |
| P | Well actually just with Marietjie. Ja. Just because and within our department. | | | They are both presenting (co-presenting) in the same module (s) |
| I | <i>How do you work together?</i> | | | |
| P | <i>Uhm. Well when we want to do something we just sit together and decide what we want to do. And then we plan and just do it. Just put it on the clickUP.</i> | | | Collaborating – more to divide and share tasks |
| I | Do you two meet on a regular basis | | | |

Levels of use Interview

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3/22/2014

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|---|--|----------------|--------------|--|
| | discussing what you want to do with clickUP? | | | |
| P | No. No. | | | |
| I | OK | | | |
| P | No. Unfortunately not. | | | |
| I | <i>OK. OK. Have you made any changes in your use of clickUP based what you two discussed?</i> | | Not V | |
| P | No not really. | | | |
| I | Not really. | | | |
| P | No | | | |
| I | <i>OK. Do you ever talk with others about clickUP? Other colleagues?</i> | | | |
| P | Uhm – yes sometimes. Depends on what we are talking about. But yes I I tell them what we use it for. So, so, ja, ja, because I really find it very useful. So, so if people if we talk about it, I will ja, I will tell them what we do with it. | Sharing | IVA | Sharing – with little or no reference to ways of changing it |
| I | What is the great things you tell them? | | | |
| P | I tell them, that I think it is, like the things I mentioned before. The positive things. Ja about using it with, it saves time, it saves paper. And there are so many more things we would actually like to do. But, then I just tell them what other things. Like your assessments options With your rubrics. Things you can use. We are not using those at the moment. But, there are so many possibilities. That I am really excited about, because it's just because you don't have time, you can't do all of that. | | | |
| I | All of that now. | | | |
| P | Yes, but I usually tell them about what clickUP can do. So, what you can do with it. I mean, for instance having an electronic portfolio will be nice . | | | This planned for activity will address logistical issues... |

| | | | | |
|---|--|------------------|-----|---------------------|
| | Because we had a situation last year when we had to take in portfolios, we had about 1000 portfolios lying around in our department. So, it is just one of those things, we, we needed to check all of them but if had it electronically it would be much easier. Ja, and then just tick it off and see it when it comes in. Doesn't have to lie in a pile and waits to be seen. So, that is also something I would like to do and so that I tell people about. | | | |
| I | Wonderful. | | | |
| P | Uhm. | | | |
| I | <i>Have you ever maybe considered alternatives or different ways of maybe doing things in new clickUP?</i> | III-V/VI | | |
| P | No. Not at the moment. I mean we, we are happy what we are doing now. So, so I haven't. We would like to for instance go on electronic portfolio things like that. It's lots of planning and it does have disadvantages because students go out and get call signs and not that easy to, maybe you could ask them to scan and submit in that way but it is not always that easy because it, it is not really assignment based. Their portfolios are information they gather themselves and then then the forms we need to see which have to be signed and so on, but things like reflection and so on, we could actually do on clickUP as well which we are not doing at the moment. | Status reporting | IVA | Satisfactory in use |
| I | <i>Think of adding that in future?</i> | | | |
| P | Yes | | | |
| I | OK | | | |
| P | Yes. Do More on clickUP and less hand writing. | | | |
| I | <i>Ja, you have been using clickUP for one semester? Right?</i> | | | |
| P | Ja the new one. We have been using the old one. | | | |

Levels of use Interview

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| I | <i>The old one, alright. When did these modules start?</i> | | |
| P | 2008 we started with the first years and then from 2009 we started with the modules. I think we started using clickUP, I think 2 years ago. I think it is the third year we were using it. | | |
| I | <i>And this semester, when did the modules start?</i> | | Running the module since Jan. 2012. |
| P | In January | | |
| I | <i>In January? OK Great. Have you made any changes recently on how you use the new clickUP?</i> | | |
| P | No changes made. | Not IVB | |
| I | <i>OK. Are you considering making changes?</i> | | |
| P | Maybe for, a for next year. I will save it for planning phase for next year, because a lack of time. At the moment I will just keep it the way it is. | | Planning to add a functionality |
| I | <i>Keep it the way it is, for the second semester as well?</i> | | |
| P | Yes, It is actually continuously, a year model. | | |
| I | <i>Ja, OK. Great. As you look ahead to later in the year what plans do you have in relation to your use of clickUP?</i> | | |
| P | OK, maybe making use of an electronic portfolio I think that is one thing I would like to explore more. And then including all the paper work that the students do in that. Just revising the blogs. Uhm and then just revise the information we have on clickUP whether it is useful to do it in that way. I think we have to see what the students give us on the feedback. To see how we can change it. | Planning VI | Planning – revising |
| I | <i>OK and if you are now talking of the</i> | | |

Commented [JSH1]: IVB

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3/22/2014

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| | <i>portfolios maybe adding that in the second semester or adding that in 2013?</i> | | |
| P | O, I think only next year. | | |
| I | <i>Only next year. OK</i> | | |
| P | Because we evaluate the portfolios only once a year, the end of the year. So that will not really make sense that is just still a small part of the year that they still have to do it. I think we will do it from the beginning of next year. | | |
| I | <i>Of next year. OK. That sounds good. Are you considering or planning making major modifications or maybe replace clickUP in total at this time?</i> | | |
| P | With another programme? | | |
| I | Yes | | |
| P | No. No. Because, I am just thinking, clickUp with clickUp you have lots of support. If you use something else who is going to help you. I am not aware of anything else at the moment. So, I am sure there are other programmes. But I am, I am happy to stick with something that I know and that does work for me. | Not VI | |
| I | <i>That does work for you. Good. Can you summarise for me where you see yourself, right now, in relation to your use of clickUP?</i> | | |
| P | Uhm. Where do I see myself? I think I am, am, am using it but I would like to do more, I would like know more, it is just because I had really a lack of time. But at the moment what I am doing is working for me. It is not that I am not using it but I would like to see how I can improve so that makes more sense to the students and it's more value to the students. At the moment I think it works perfectly. Ja | Performing – IVA | Satisfactory in use Plan to improve for student use. |
| I | <i>OK. Thank you very much for our time together.</i> | | |
| P | Thank you. | | |

Levels of use Interview

Untiedt

3/22/2014

Summary:

Overall rating – Level IVA: Routine user

This is a routine user that would like to do more for the student's benefit (IVB).

Things are already organised so that students benefit from it not just the lecturer(s).

Because this module is only one semester old there were no recent changes (DP D-2).

NPART TESTS

```

/CHISQUARE=Knowledge AcquiringInformation Sharing Assessing Planning Sta
tusReporting Performing OVERALL_LoU
/EXPECTED=EQUAL
/STATISTICS DESCRIPTIVES
/MISSING ANALYSIS.

```

NPar Tests

[DataSet1] E:\Statomet_2013\Hannelie_SPSS\SoCland2_demo_LoU_new_13April_Hi_low_23Edited.sav

Descriptive Statistics

| | N | Mean | Std. Deviation | Minimum | Maximum |
|----------------------|----|------|----------------|---------|---------|
| Knowledge | 32 | 3.13 | 1.338 | 1 | 6 |
| AcquiringInformation | 32 | 2.78 | 1.313 | 0 | 5 |
| Sharing | 27 | 2.70 | 1.325 | 1 | 6 |
| Assessing | 31 | 2.68 | 1.222 | 0 | 6 |
| Planning | 32 | 3.50 | 1.459 | 1 | 6 |
| StatusReporting | 32 | 2.94 | 1.134 | 0 | 5 |
| Performing | 32 | 2.94 | 1.190 | 1 | 6 |
| OVERALL_LoU | 32 | 3.19 | 1.469 | 0 | 6 |

Chi-Square Test

Frequencies

Knowledge

| | Observed N | Expected N | Residual |
|-------|------------|------------|----------|
| 1 | 4 | 5.3 | -1.3 |
| 2 | 7 | 5.3 | 1.7 |
| 3 | 8 | 5.3 | 2.7 |
| 4 | 8 | 5.3 | 2.7 |
| 5 | 4 | 5.3 | -1.3 |
| 6 | 1 | 5.3 | -4.3 |
| Total | 32 | | |

AcquiringInformation

| | Observed N | Expected N | Residual |
|-------|------------|------------|----------|
| 0 | 3 | 5.3 | -2.3 |
| 1 | 2 | 5.3 | -3.3 |
| 2 | 6 | 5.3 | .7 |
| 3 | 10 | 5.3 | 4.7 |
| 4 | 10 | 5.3 | 4.7 |
| 5 | 1 | 5.3 | -4.3 |
| Total | 32 | | |

Sharing

| | Observed N | Expected N | Residual |
|-------|------------|------------|----------|
| 1 | 7 | 5.4 | 1.6 |
| 2 | 1 | 5.4 | -4.4 |
| 3 | 16 | 5.4 | 10.6 |
| 4 | 1 | 5.4 | -4.4 |
| 6 | 2 | 5.4 | -3.4 |
| Total | 27 | | |

Assessing

| | Observed N | Expected N | Residual |
|-------|------------|------------|----------|
| 0 | 1 | 5.2 | -4.2 |
| 1 | 4 | 5.2 | -1.2 |
| 2 | 6 | 5.2 | .8 |
| 3 | 17 | 5.2 | 11.8 |
| 5 | 2 | 5.2 | -3.2 |
| 6 | 1 | 5.2 | -4.2 |
| Total | 31 | | |

Planning

| | Observed N | Expected N | Residual |
|-------|------------|------------|----------|
| 1 | 2 | 5.3 | -3.3 |
| 2 | 8 | 5.3 | 2.7 |
| 3 | 7 | 5.3 | 1.7 |
| 4 | 4 | 5.3 | -1.3 |
| 5 | 9 | 5.3 | 3.7 |
| 6 | 2 | 5.3 | -3.3 |
| Total | 32 | | |

StatusReporting

| | Observed N | Expected N | Residual |
|-------|------------|------------|----------|
| 0 | 1 | 5.3 | -4.3 |
| 1 | 2 | 5.3 | -3.3 |
| 2 | 8 | 5.3 | 2.7 |
| 3 | 9 | 5.3 | 3.7 |
| 4 | 11 | 5.3 | 5.7 |
| 5 | 1 | 5.3 | -4.3 |
| Total | 32 | | |

Performing

| | Observed N | Expected N | Residual |
|-------|------------|------------|----------|
| 1 | 4 | 5.3 | -1.3 |
| 2 | 7 | 5.3 | 1.7 |
| 3 | 11 | 5.3 | 5.7 |
| 4 | 8 | 5.3 | 2.7 |
| 5 | 1 | 5.3 | -4.3 |
| 6 | 1 | 5.3 | -4.3 |
| Total | 32 | | |

OVERALL_LoU

| | Observed N | Expected N | Residual |
|-------|------------|------------|----------|
| 0 | 1 | 4.6 | -3.6 |
| 1 | 2 | 4.6 | -2.6 |
| 2 | 8 | 4.6 | 3.4 |
| 3 | 8 | 4.6 | 3.4 |
| 4 | 8 | 4.6 | 3.4 |
| 5 | 2 | 4.6 | -2.6 |
| 6 | 3 | 4.6 | -1.6 |
| Total | 32 | | |

Test Statistics

| | Knowledge | Acquiring Information | Sharing | Assessing | Planning | Status Reporting |
|-------------|--------------------|-----------------------|---------------------|---------------------|--------------------|---------------------|
| Chi-Square | 7.375 ^a | 14.875 ^a | 30.593 ^b | 36.161 ^c | 8.875 ^a | 19.000 ^a |
| df | 5 | 5 | 4 | 5 | 5 | 5 |
| Asymp. Sig. | .194 | .011 | .000 | .000 | .114 | .002 |

Test Statistics

| | Performing | OVERALL_LoU |
|-------------|---------------------|---------------------|
| Chi-Square | 15.250 ^a | 13.938 ^d |
| df | 5 | 6 |
| Asymp. Sig. | .009 | .030 |

a. 0 cells (.0%) have expected frequencies less than 5. The minimum expected cell frequency is 5.3.

b. 0 cells (.0%) have expected frequencies less than 5. The minimum expected cell frequency is 5.4.

c. 0 cells (.0%) have expected frequencies less than 5. The minimum expected cell frequency is 5.2.

d. 7 cells (100.0%) have expected frequencies less than 5. The minimum expected cell frequency is 4.6.

NPAR TESTS

/CHISQUARE=OVERALL_LoU

/EXPECTED=EQUAL

/STATISTICS DESCRIPTIVES

/MISSING ANALYSIS

/METHOD=EXACT TIMER(5).

NPar Tests

[DataSet1] E:\Statomet_2013\Hannelie_SPSS\SoC1and2_demo_LoU_new_13April_Hi_low_23Edited.sav

Descriptive Statistics

| | N | Mean | Std. Deviation | Minimum | Maximum |
|-------------|----|------|----------------|---------|---------|
| OVERALL_LoU | 32 | 3.19 | 1.469 | 0 | 6 |

Chi-Square Test

Frequencies

OVERALL_LoU

| | Observed N | Expected N | Residual |
|-------|------------|------------|----------|
| 0 | 1 | 4.6 | -3.6 |
| 1 | 2 | 4.6 | -2.6 |
| 2 | 8 | 4.6 | 3.4 |
| 3 | 8 | 4.6 | 3.4 |
| 4 | 8 | 4.6 | 3.4 |
| 5 | 2 | 4.6 | -2.6 |
| 6 | 3 | 4.6 | -1.6 |
| Total | 32 | | |

Test Statistics

| | OVERALL_LoU |
|-------------------|---------------------|
| Chi-Square | 13.938 ^a |
| df | 6 |
| Asymp. Sig. | .030 |
| Exact Sig. | .031 |
| Point Probability | .004 |

a. 7 cells (100.0%) have expected frequencies less than 5. The minimum expected cell frequency is 4.6.

```
GET DATA /TYPE=TXT
  /FILE="E:\Statomet_2013\RQ2\LoU_Statomet_v1_reliability_tp.txt"
  /ENCODING='Locale'
  /DELCASE=LINE
  /DELIMITERS="\t"
  /ARRANGEMENT=DELIMITED
  /FIRSTCASE=2
  /IMPORTCASE=ALL
  /VARIABLES=
  ID A6
  Knowledge F1.0
  AcquiringInformation F1.0
  Sharing F1.0
  Assessing F1.0
  Planning F1.0
  StatusReporting F1.0
  Performing F1.0
  OVERALL_LoU F1.0.
CACHE.
EXECUTE.
DATASET NAME DataSet1 WINDOW=FRONT.
FLIP VARIABLES=ID Knowledge AcquiringInformation Sharing Assessing Plannin
g StatusReporting Performing OVERALL_LoU.
```

The values of ID are strings and will be converted to SYSMIS.

FLIP performed on 6 cases and 9 variables, creating 9 cases and 7 variables. The working file has been replaced.

A new variable has been created called CASE_LBL. Its contents are the old variable names.

New variable names:

CASE_LBL var001 var002 var003 var004 var005 var006

```
DATASET NAME DataSet2 WINDOW=FRONT.
```

```
SAVE OUTFILE='E:\Statomet_2013\RQ2\LoU_reliability.sav'
/COMPRESSED.
RELIABILITY
/VARIABLES=HU_002 GH_002
/SCALE('002') ALL
/MODEL=ALPHA
/STATISTICS=DESCRIPTIVE CORR
/SUMMARY=TOTAL.
```

Reliability

[DataSet2] E:\Statomet_2013\RQ2\LoU_reliability.sav

Scale: 002

Case Processing Summary

| | | N | % |
|-------|-----------------------|---|-------|
| Cases | Valid | 8 | 88.9 |
| | Excluded ^a | 1 | 11.1 |
| | Total | 9 | 100.0 |

a. Listwise deletion based on all variables in the procedure.

Reliability Statistics

| Cronbach's Alpha | Cronbach's Alpha Based on Standardized Items | N of Items |
|------------------|--|------------|
| .851 | .854 | 2 |

Item Statistics

| | Mean | Std. Deviation | N |
|--------|--------|----------------|---|
| HU_002 | 4.2500 | .46291 | 8 |
| GH_002 | 4.3750 | .51755 | 8 |

Inter-Item Correlation Matrix

| | HU_002 | GH_002 |
|--------|--------|--------|
| HU_002 | 1.000 | .745 |
| GH_002 | .745 | 1.000 |

Item-Total Statistics

| | Scale Mean if Item Deleted | Scale Variance if Item Deleted | Corrected Item-Total Correlation | Squared Multiple Correlation | Cronbach's Alpha if Item Deleted |
|--------|----------------------------|--------------------------------|----------------------------------|------------------------------|----------------------------------|
| HU_002 | 4.3750 | .268 | .745 | .556 | . |
| GH_002 | 4.2500 | .214 | .745 | .556 | . |

```
RELIABILITY
/VARIABLES=HU_010 GH_010
/SCALE('010') ALL
/MODEL=ALPHA
/STATISTICS=DESCRIPTIVE CORR
/SUMMARY=TOTAL.
```

Reliability

[DataSet2] E:\Statomet_2013\RQ2\LoU_reliability.sav

Warnings

Each of the following component variables has zero variance and is removed from the scale: HU_010, GH_010
Too many items are deleted from the scale.
Execution of this command stops.

```
RELIABILITY
/VARIABLES=HU_037 GH_037
/SCALE('037') ALL
/MODEL=ALPHA
/STATISTICS=DESCRIPTIVE CORR
/SUMMARY=TOTAL.
```

Reliability

[DataSet2] E:\Statomet_2013\RQ2\LoU_reliability.sav

Scale: 037

Case Processing Summary

| | | N | % |
|-------|-----------------------|---|-------|
| Cases | Valid | 8 | 88.9 |
| | Excluded ^a | 1 | 11.1 |
| | Total | 9 | 100.0 |

a. Listwise deletion based on all variables in the procedure.

Reliability Statistics

| Cronbach's Alpha | Cronbach's Alpha Based on Standardized Items | N of Items |
|------------------|--|------------|
| .980 | .982 | 2 |

Item Statistics

| | Mean | Std. Deviation | N |
|--------|--------|----------------|---|
| HU_037 | 5.3750 | 1.18773 | 8 |
| GH_037 | 5.5000 | 1.30931 | 8 |

Inter-Item Correlation Matrix

| | HU_037 | GH_037 |
|--------|--------|--------|
| HU_037 | 1.000 | .965 |
| GH_037 | .965 | 1.000 |

Item-Total Statistics

| | Scale Mean if Item Deleted | Scale Variance if Item Deleted | Corrected Item-Total Correlation | Squared Multiple Correlation | Cronbach's Alpha if Item Deleted |
|--------|----------------------------|--------------------------------|----------------------------------|------------------------------|----------------------------------|
| HU_037 | 5.5000 | 1.714 | .965 | .930 | . |
| GH_037 | 5.3750 | 1.411 | .965 | .930 | . |

GET

FILE='E:\Statomet_2013\Hannelie_SPSS\SoCland2_demo_LoU_new_13April_Hi_low_23Edited.sav'.

DATASET NAME DataSet1 WINDOW=FRONT.

DATASET ACTIVATE DataSet1.

SAVE OUTFILE='E:\Statomet_2013\Hannelie_SPSS\SoCland2_demo_LoU_new_13April_Hi_low_23Edited.sav'

/COMPRESSED.

CROSTABS

/TABLES=School Gender vv37 Acadpos V45 V97 V111 V112 BY AcquiringInformation

/FORMAT=AVALUE TABLES

/STATISTICS=CHISQ CORR

/CELLS=COUNT

/COUNT ROUND CELL

/BARCHART.

Crosstabs

[DataSet1] E:\Statomet_2013\Hannelie_SPSS\SoCland2_demo_LoU_new_13April_Hi_low_23Edited.sav

Case Processing Summary

| | Cases | | | | | |
|--|-------|---------|---------|---------|-------|---------|
| | Valid | | Missing | | Total | |
| | N | Percent | N | Percent | N | Percent |
| School * AcquiringInformation | 32 | 59.3% | 22 | 40.7% | 54 | 100.0% |
| Gender * AcquiringInformation | 32 | 59.3% | 22 | 40.7% | 54 | 100.0% |
| Lecturing experience * AcquiringInformation | 32 | 59.3% | 22 | 40.7% | 54 | 100.0% |
| AcadPos * AcquiringInformation | 32 | 59.3% | 22 | 40.7% | 54 | 100.0% |
| V45 * AcquiringInformation | 32 | 59.3% | 22 | 40.7% | 54 | 100.0% |
| Professional identity / qualification * AcquiringInformation | 32 | 59.3% | 22 | 40.7% | 54 | 100.0% |
| Age * AcquiringInformation | 32 | 59.3% | 22 | 40.7% | 54 | 100.0% |
| Academic qualification * AcquiringInformation | 31 | 57.4% | 23 | 42.6% | 54 | 100.0% |

School * AcquiringInformation

Crosstab

Count

| | | AcquiringInformation | | | | | Total | |
|--------|---|----------------------|---|---|----|----|-------|----|
| | | 0 | 1 | 2 | 3 | 4 | | 5 |
| School | 1 | 0 | 0 | 1 | 1 | 0 | 1 | 3 |
| | 2 | 2 | 0 | 4 | 5 | 4 | 0 | 15 |
| | 3 | 1 | 2 | 1 | 3 | 6 | 0 | 13 |
| | 4 | 0 | 0 | 0 | 1 | 0 | 0 | 1 |
| Total | | 3 | 2 | 6 | 10 | 10 | 1 | 32 |

Chi-Square Tests

| | Value | df | Asymp. Sig. (2-sided) |
|------------------------------|---------------------|----|-----------------------|
| Pearson Chi-Square | 19.222 ^a | 15 | .204 |
| Likelihood Ratio | 16.230 | 15 | .367 |
| Linear-by-Linear Association | .005 | 1 | .942 |
| N of Valid Cases | 32 | | |

a. 24 cells (100.0%) have expected count less than 5. The minimum expected count is .03.

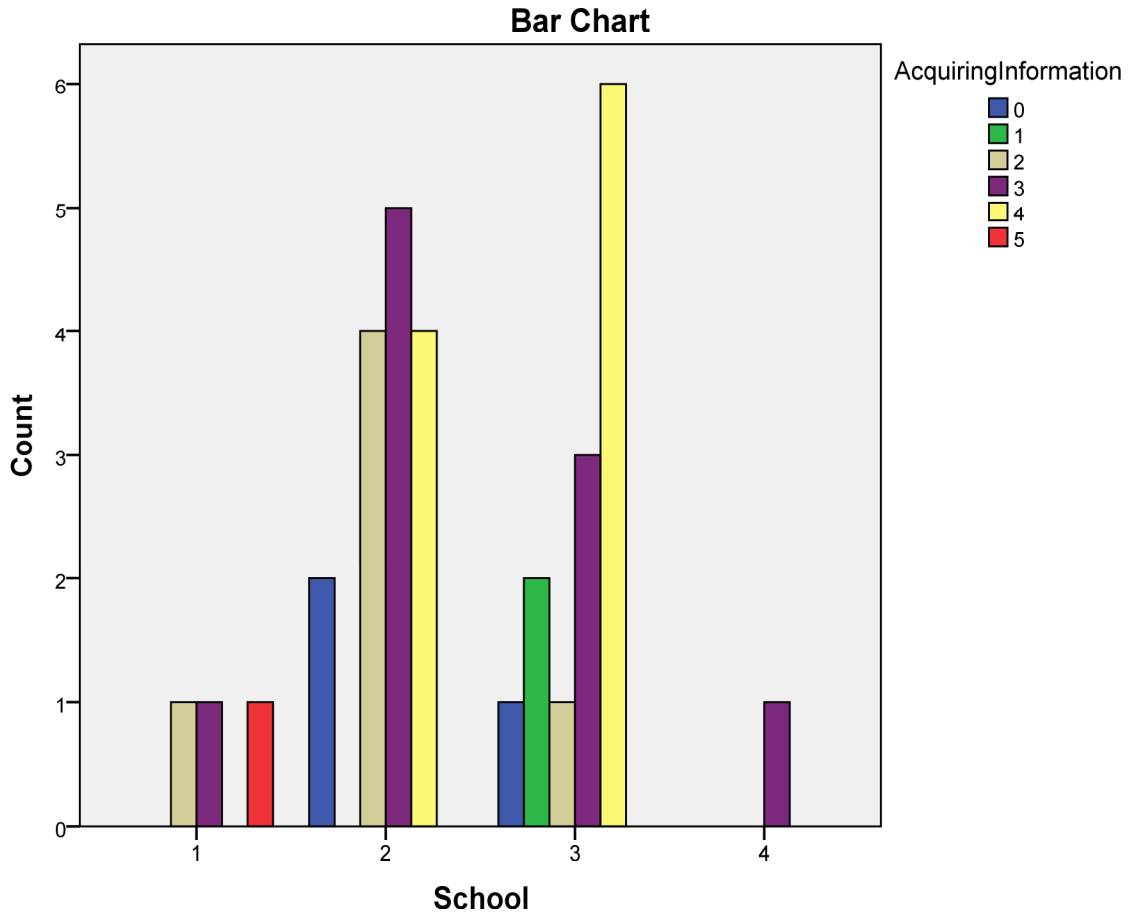
Symmetric Measures

| | | Value | Asymp. Std. Error ^a | Approx. T ^b | Approx. Sig. |
|----------------------|----------------------|-------|--------------------------------|------------------------|-------------------|
| Interval by Interval | Pearson's R | -.013 | .167 | -.071 | .944 ^c |
| Ordinal by Ordinal | Spearman Correlation | .051 | .181 | .278 | .783 ^c |
| N of Valid Cases | | 32 | | | |

a. Not assuming the null hypothesis.

b. Using the asymptotic standard error assuming the null hypothesis.

c. Based on normal approximation.



Gender * AcquiringInformation

Crosstab

| Count | | AcquiringInformation | | | | | | Total |
|--------|--------|----------------------|---|---|----|----|---|-------|
| | | 0 | 1 | 2 | 3 | 4 | 5 | |
| Gender | Female | 2 | 2 | 5 | 9 | 7 | 1 | 26 |
| | Male | 1 | 0 | 1 | 1 | 3 | 0 | 6 |
| Total | | 3 | 2 | 6 | 10 | 10 | 1 | 32 |

Chi-Square Tests

| | Value | df | Asymp. Sig. (2-sided) |
|------------------------------|--------------------|----|-----------------------|
| Pearson Chi-Square | 2.462 ^a | 5 | .782 |
| Likelihood Ratio | 2.940 | 5 | .709 |
| Linear-by-Linear Association | .012 | 1 | .914 |
| N of Valid Cases | 32 | | |

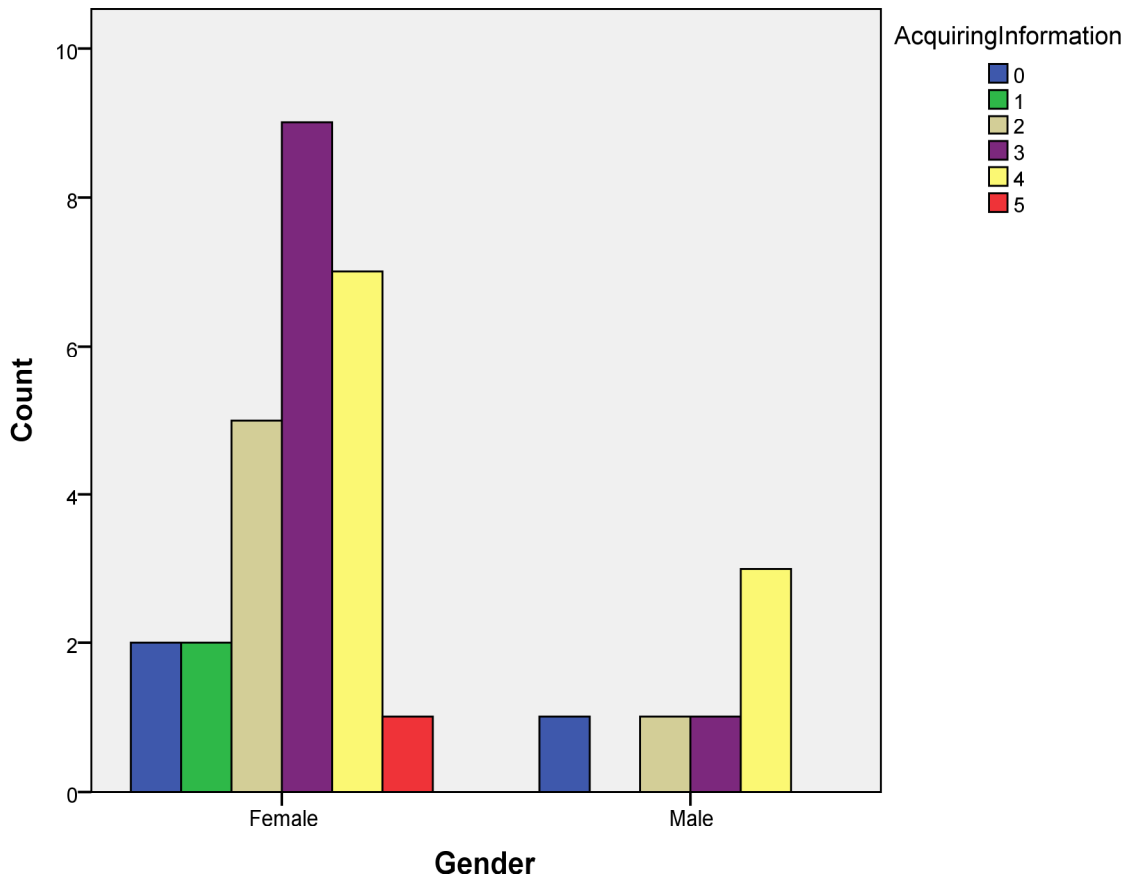
a. 10 cells (83.3%) have expected count less than 5. The minimum expected count is .19.

Symmetric Measures

| | | Value | Asymp. Std. Error ^a | Approx. T ^b | Approx. Sig. ^c |
|----------------------|----------------------|-------|--------------------------------|------------------------|---------------------------|
| Interval by Interval | Pearson's R | .019 | .195 | .106 | .916 ^c |
| Ordinal by Ordinal | Spearman Correlation | .067 | .191 | .370 | .714 ^c |
| N of Valid Cases | | 32 | | | |

- a. Not assuming the null hypothesis.
- b. Using the asymptotic standard error assuming the null hypothesis.
- c. Based on normal approximation.

Bar Chart



Lecturing experience * AcquiringInformation

Crosstab

Count

| | | AcquiringInformation | | | | |
|----------------------|-------------|----------------------|---|---|----|----|
| | | 0 | 1 | 2 | 3 | 4 |
| Lecturing experience | ≤5 years | 0 | 0 | 1 | 5 | 4 |
| | 6-10 years | 0 | 1 | 2 | 2 | 0 |
| | 11-15 years | 0 | 0 | 2 | 1 | 2 |
| | 16-20 years | 1 | 1 | 0 | 1 | 1 |
| | ≥ 21 years | 2 | 0 | 1 | 1 | 3 |
| Total | | 3 | 2 | 6 | 10 | 10 |

Crosstab

Count

| | | AcquiringI... | Total |
|----------------------|-------------|---------------|-------|
| | | 5 | |
| Lecturing experience | ≤5 years | 0 | 10 |
| | 6-10 years | 1 | 6 |
| | 11-15 years | 0 | 5 |
| | 16-20 years | 0 | 4 |
| | ≥ 21 years | 0 | 7 |
| Total | | 1 | 32 |

Chi-Square Tests

| | Value | df | Asymp. Sig. (2-sided) |
|------------------------------|---------------------|----|-----------------------|
| Pearson Chi-Square | 22.504 ^a | 20 | .314 |
| Likelihood Ratio | 24.497 | 20 | .221 |
| Linear-by-Linear Association | 2.588 | 1 | .108 |
| N of Valid Cases | 32 | | |

a. 30 cells (100.0%) have expected count less than 5. The minimum expected count is .13.

Symmetric Measures

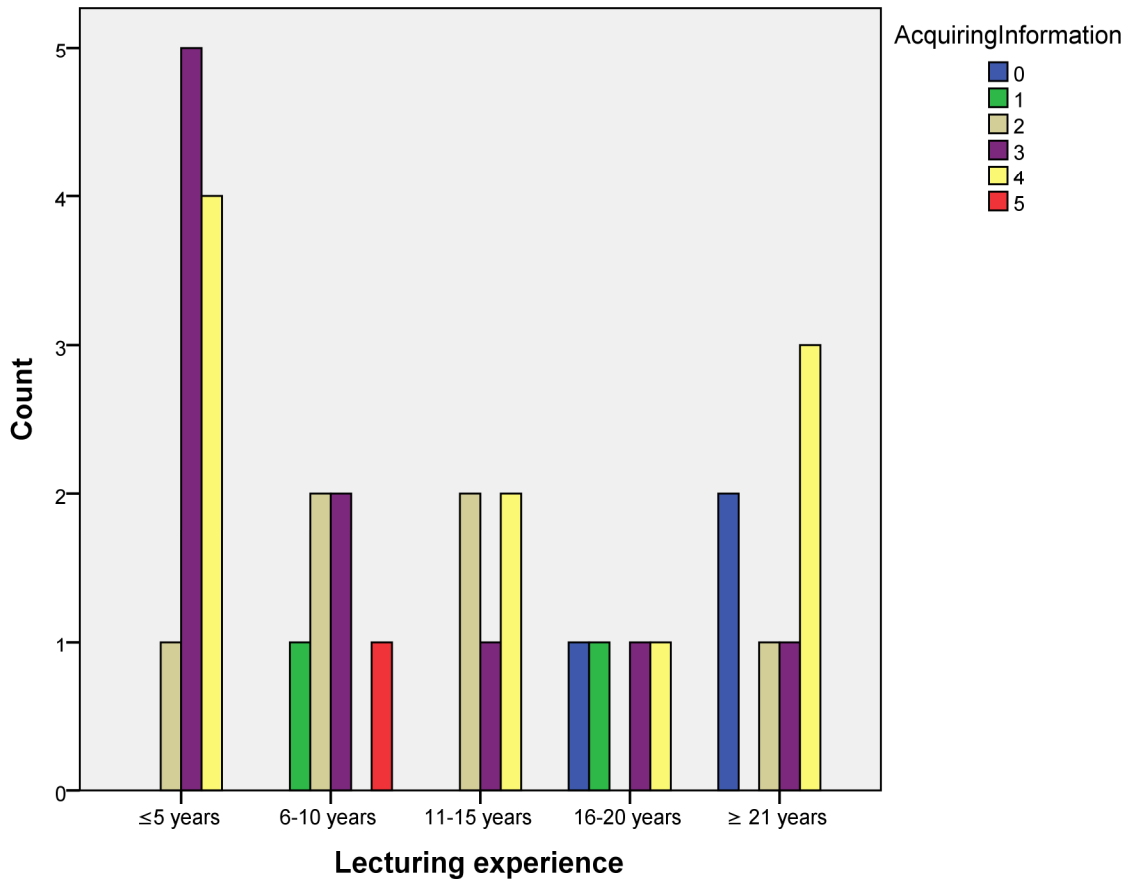
| | | Value | Asymp. Std. Error ^a | Approx. T ^b | Approx. Sig. ^c |
|----------------------|----------------------|-------|--------------------------------|------------------------|---------------------------|
| Interval by Interval | Pearson's R | -.289 | .151 | -1.653 | .109 ^c |
| Ordinal by Ordinal | Spearman Correlation | -.198 | .177 | -1.106 | .277 ^c |
| N of Valid Cases | | 32 | | | |

a. Not assuming the null hypothesis.

b. Using the asymptotic standard error assuming the null hypothesis.

c. Based on normal approximation.

Bar Chart



AcadPos * AcquiringInformation

Crosstab

| Count | | AcquiringInformation | | | | | |
|--------------|---------------------|----------------------|----------|----------|-----------|-----------|----------|
| | | 0 | 1 | 2 | 3 | 4 | 5 |
| AcadPos | Junior lecturer | 1 | 1 | 1 | 2 | 2 | 0 |
| | Lecturer | 2 | 0 | 4 | 6 | 6 | 1 |
| | Senior lecturer | 0 | 1 | 1 | 1 | 1 | 0 |
| | Associate Professor | 0 | 0 | 0 | 1 | 0 | 0 |
| | Other | 0 | 0 | 0 | 0 | 1 | 0 |
| Total | | 3 | 2 | 6 | 10 | 10 | 1 |

Crosstab

Count

| | | Total |
|---------|---------------------|-------|
| AcadPos | Junior lecturer | 7 |
| | Lecturer | 19 |
| | Senior lecturer | 4 |
| | Associate Professor | 1 |
| | Other | 1 |
| Total | | 32 |

Chi-Square Tests

| | Value | df | Asymp. Sig. (2-sided) |
|------------------------------|---------------------|----|-----------------------|
| Pearson Chi-Square | 10.109 ^a | 20 | .966 |
| Likelihood Ratio | 11.027 | 20 | .946 |
| Linear-by-Linear Association | .910 | 1 | .340 |
| N of Valid Cases | 32 | | |

a. 28 cells (93.3%) have expected count less than 5. The minimum expected count is .03.

Symmetric Measures

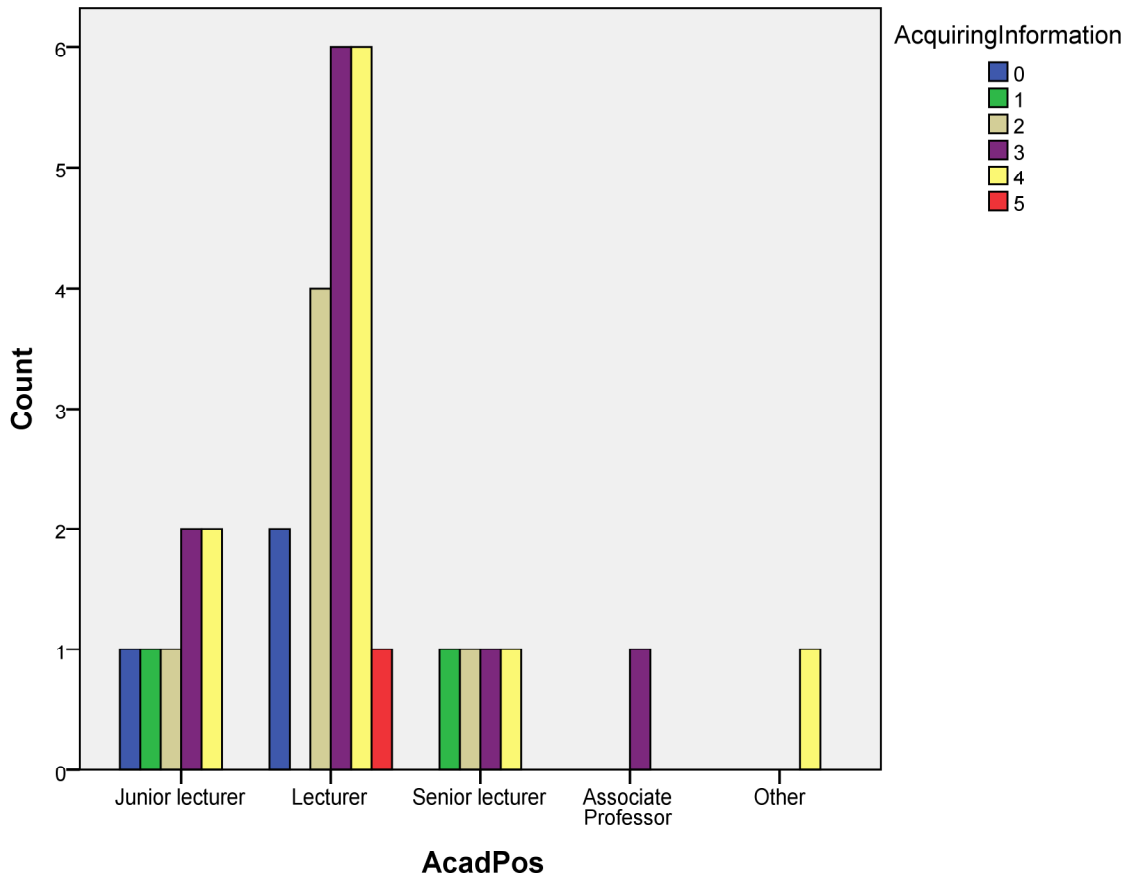
| | | Value | Asymp. Std. Error ^a | Approx. T ^b | Approx. Sig. |
|----------------------|----------------------|-------|--------------------------------|------------------------|-------------------|
| Interval by Interval | Pearson's R | .171 | .124 | .953 | .348 ^c |
| Ordinal by Ordinal | Spearman Correlation | .096 | .173 | .529 | .601 ^c |
| N of Valid Cases | | 32 | | | |

a. Not assuming the null hypothesis.

b. Using the asymptotic standard error assuming the null hypothesis.

c. Based on normal approximation.

Bar Chart



V45 * AcquiringInformation

Crosstab

| Count | | AcquiringInformation | | | | | |
|-------|-----------------|----------------------|---|---|----|----|---|
| | | 0 | 1 | 2 | 3 | 4 | 5 |
| V45 | Permanent UP | 2 | 1 | 4 | 4 | 6 | 1 |
| | Extraordinary | 0 | 0 | 1 | 0 | 0 | 0 |
| | Temporary | 0 | 1 | 1 | 4 | 3 | 0 |
| | Dual (Gov & UP) | 1 | 0 | 0 | 2 | 1 | 0 |
| Total | | 3 | 2 | 6 | 10 | 10 | 1 |

Crosstab

| Count | | Total |
|-------|-----------------|-------|
| V45 | Permanent UP | 18 |
| | Extraordinary | 1 |
| | Temporary | 9 |
| | Dual (Gov & UP) | 4 |
| Total | | 32 |

Chi-Square Tests

| | Value | df | Asymp. Sig. (2-sided) |
|------------------------------|---------------------|----|-----------------------|
| Pearson Chi-Square | 10.281 ^a | 15 | .802 |
| Likelihood Ratio | 11.054 | 15 | .749 |
| Linear-by-Linear Association | .000 | 1 | .990 |
| N of Valid Cases | 32 | | |

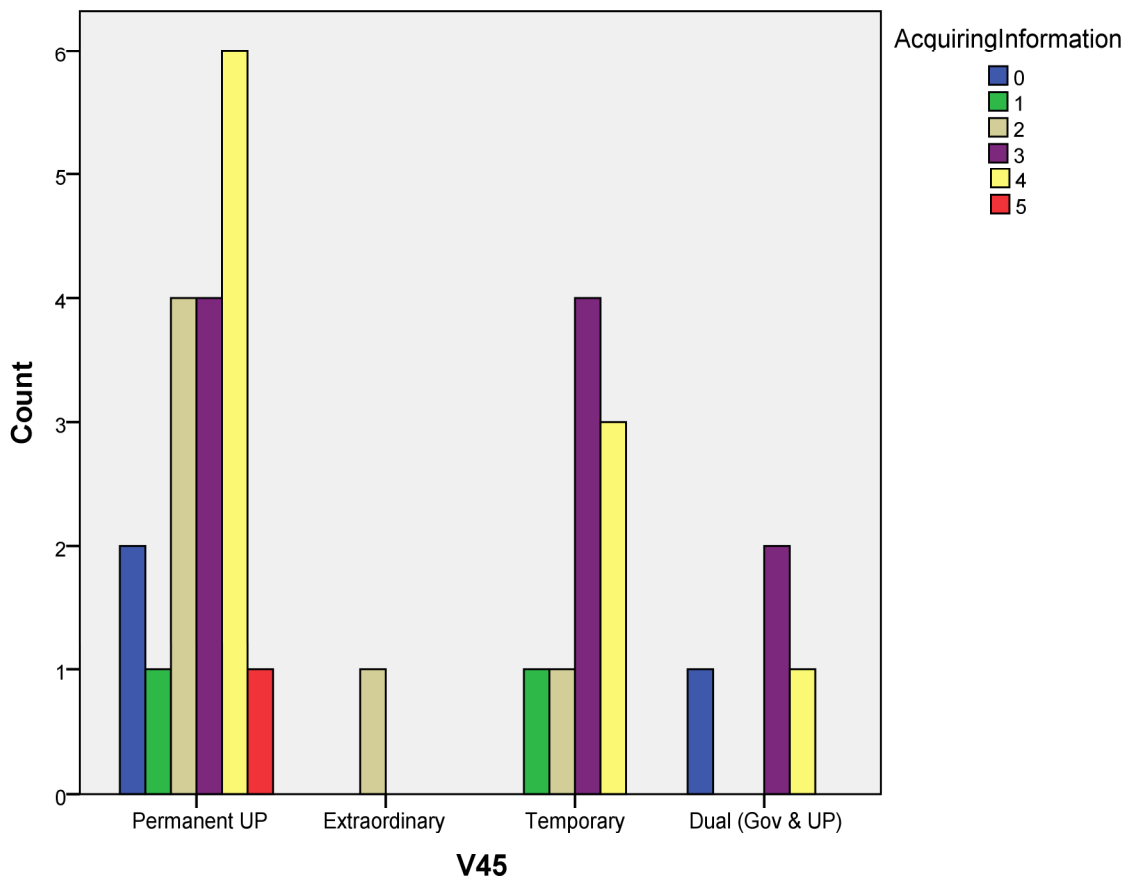
a. 22 cells (91.7%) have expected count less than 5. The minimum expected count is .03.

Symmetric Measures

| | | Value | Asymp. Std. Error ^a | Approx. T ^b | Approx. Sig. ^c |
|----------------------|----------------------|-------|--------------------------------|------------------------|---------------------------|
| Interval by Interval | Pearson's R | -.002 | .183 | -.013 | .990 ^c |
| Ordinal by Ordinal | Spearman Correlation | -.011 | .179 | -.059 | .953 ^c |
| N of Valid Cases | | 32 | | | |

- a. Not assuming the null hypothesis.
- b. Using the asymptotic standard error assuming the null hypothesis.
- c. Based on normal approximation.

Bar Chart



Professional identity / qualification * AcquiringInformation

Crosstab

| Count | | AcquiringInformation | | | | |
|---------------------------------------|---|----------------------|---|---|----|----|
| | | 0 | 1 | 2 | 3 | 4 |
| Professional identity / qualification | 1 | 0 | 1 | 0 | 1 | 3 |
| | 2 | 2 | 1 | 5 | 7 | 5 |
| | 3 | 1 | 0 | 1 | 2 | 2 |
| Total | | 3 | 2 | 6 | 10 | 10 |

Crosstab

| Count | | AcquiringI... | Total |
|---------------------------------------|---|---------------|-------|
| | | 5 | |
| Professional identity / qualification | 1 | 0 | 5 |
| | 2 | 1 | 21 |
| | 3 | 0 | 6 |
| Total | | 1 | 32 |

Chi-Square Tests

| | Value | df | Asymp. Sig. (2-sided) |
|------------------------------|--------------------|----|-----------------------|
| Pearson Chi-Square | 6.476 ^a | 10 | .774 |
| Likelihood Ratio | 7.714 | 10 | .657 |
| Linear-by-Linear Association | .409 | 1 | .523 |
| N of Valid Cases | 32 | | |

a. 16 cells (88.9%) have expected count less than 5. The minimum expected count is .16.

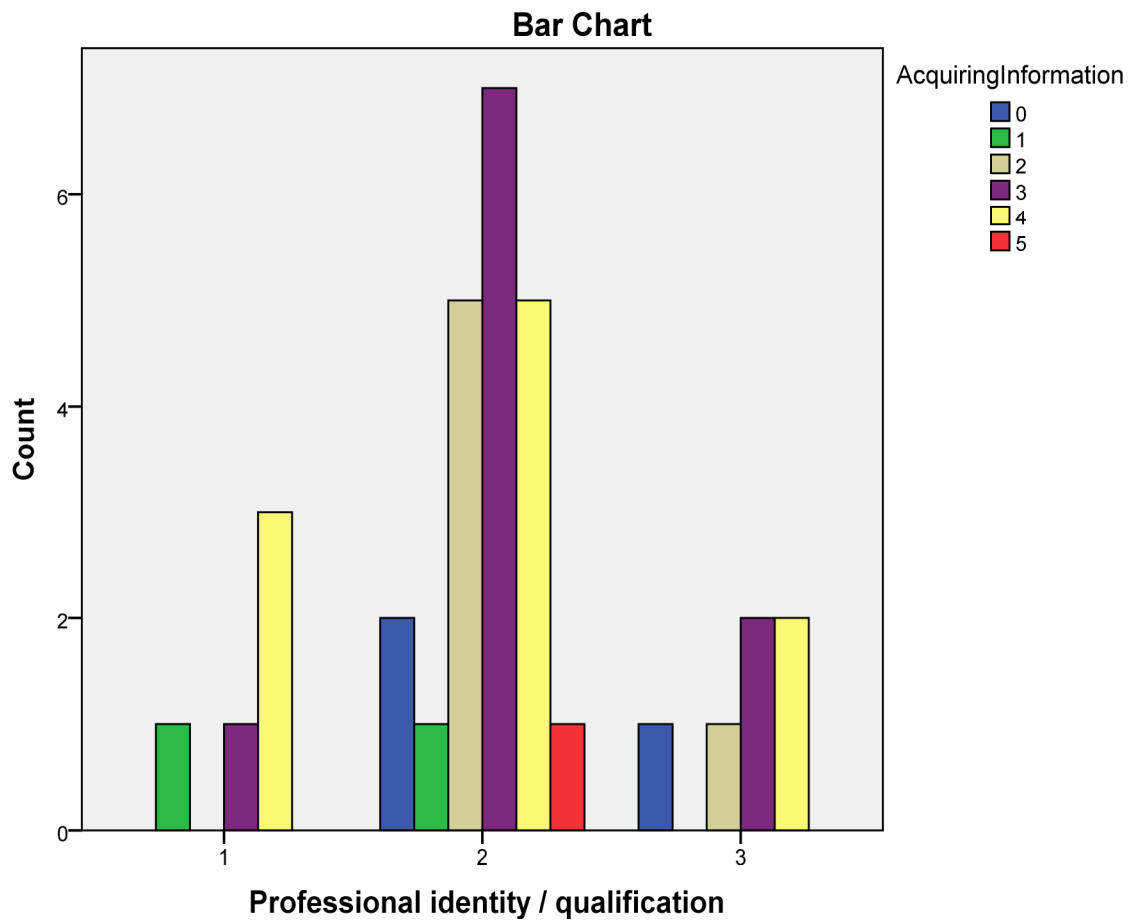
Symmetric Measures

| | | Value | Asymp. Std. Error ^a | Approx. T ^b | Approx. Sig. |
|----------------------|----------------------|-------|--------------------------------|------------------------|-------------------|
| Interval by Interval | Pearson's R | -.115 | .174 | -.633 | .531 ^c |
| Ordinal by Ordinal | Spearman Correlation | -.121 | .179 | -.667 | .510 ^c |
| N of Valid Cases | | 32 | | | |

a. Not assuming the null hypothesis.

b. Using the asymptotic standard error assuming the null hypothesis.

c. Based on normal approximation.



Age * AcquiringInformation

Crosstab

| Count | | AcquiringInformation | | | | | | Total |
|-------|-------|----------------------|---|---|----|----|---|-------|
| | | 0 | 1 | 2 | 3 | 4 | 5 | |
| Age | 20-29 | 0 | 0 | 1 | 0 | 2 | 0 | 3 |
| | 30-39 | 0 | 0 | 0 | 2 | 0 | 0 | 2 |
| | 40-49 | 0 | 0 | 1 | 6 | 6 | 0 | 13 |
| | 50-59 | 1 | 2 | 2 | 2 | 1 | 1 | 9 |
| | 60 + | 2 | 0 | 2 | 0 | 1 | 0 | 5 |
| Total | | 3 | 2 | 6 | 10 | 10 | 1 | 32 |

Chi-Square Tests

| | Value | df | Asymp. Sig. (2-sided) |
|------------------------------|---------------------|----|-----------------------|
| Pearson Chi-Square | 28.018 ^a | 20 | .109 |
| Likelihood Ratio | 29.551 | 20 | .077 |
| Linear-by-Linear Association | 5.675 | 1 | .017 |
| N of Valid Cases | 32 | | |

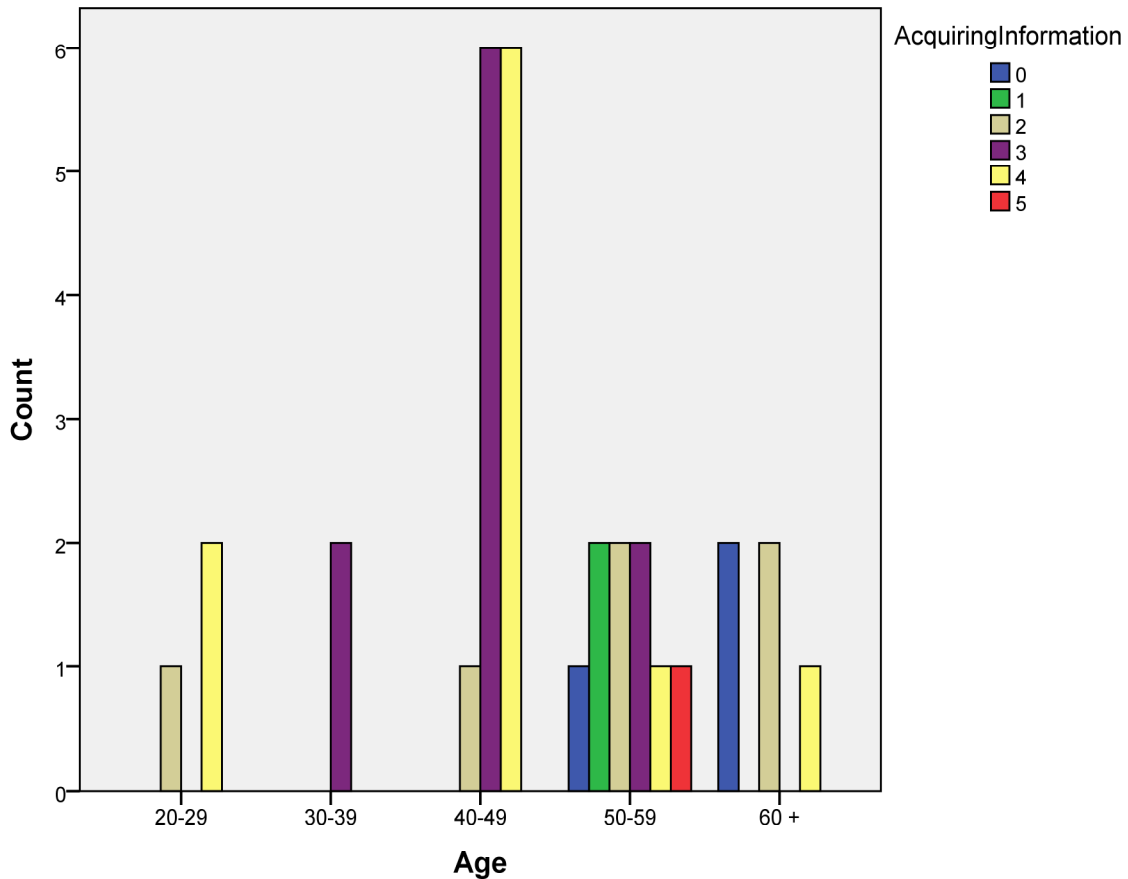
a. 30 cells (100.0%) have expected count less than 5. The minimum expected count is .06.

Symmetric Measures

| | | Value | Asymp. Std. Error ^a | Approx. T ^b | Approx. Sig. ^c |
|----------------------|----------------------|-------|--------------------------------|------------------------|---------------------------|
| Interval by Interval | Pearson's R | -.428 | .146 | -2.593 | .015 ^c |
| Ordinal by Ordinal | Spearman Correlation | -.426 | .168 | -2.581 | .015 ^c |
| N of Valid Cases | | 32 | | | |

- a. Not assuming the null hypothesis.
- b. Using the asymptotic standard error assuming the null hypothesis.
- c. Based on normal approximation.

Bar Chart



Academic qualification * AcquiringInformation

Crosstab

Count

| | | AcquiringInformation | | | | |
|------------------------|--------------|----------------------|---|---|----|---|
| | | 0 | 1 | 2 | 3 | 4 |
| Academic qualification | Diploma | 1 | 0 | 0 | 2 | 0 |
| | Bachelor | 0 | 0 | 1 | 0 | 3 |
| | Honours | 0 | 1 | 0 | 0 | 2 |
| | Masters | 1 | 0 | 5 | 5 | 4 |
| | PhD/Doctoral | 0 | 1 | 0 | 2 | 0 |
| | Post Doc | 1 | 0 | 0 | 0 | 0 |
| | Professor | 0 | 0 | 0 | 1 | 0 |
| Total | | 3 | 2 | 6 | 10 | 9 |

Crosstab

Count

| | | AcquiringI... | Total |
|------------------------|--------------|---------------|-------|
| | | 5 | |
| Academic qualification | Diploma | 0 | 3 |
| | Bachelor | 0 | 4 |
| | Honours | 0 | 3 |
| | Masters | 1 | 16 |
| | PhD/Doctoral | 0 | 3 |
| | Post Doc | 0 | 1 |
| | Professor | 0 | 1 |
| Total | | 1 | 31 |

Chi-Square Tests

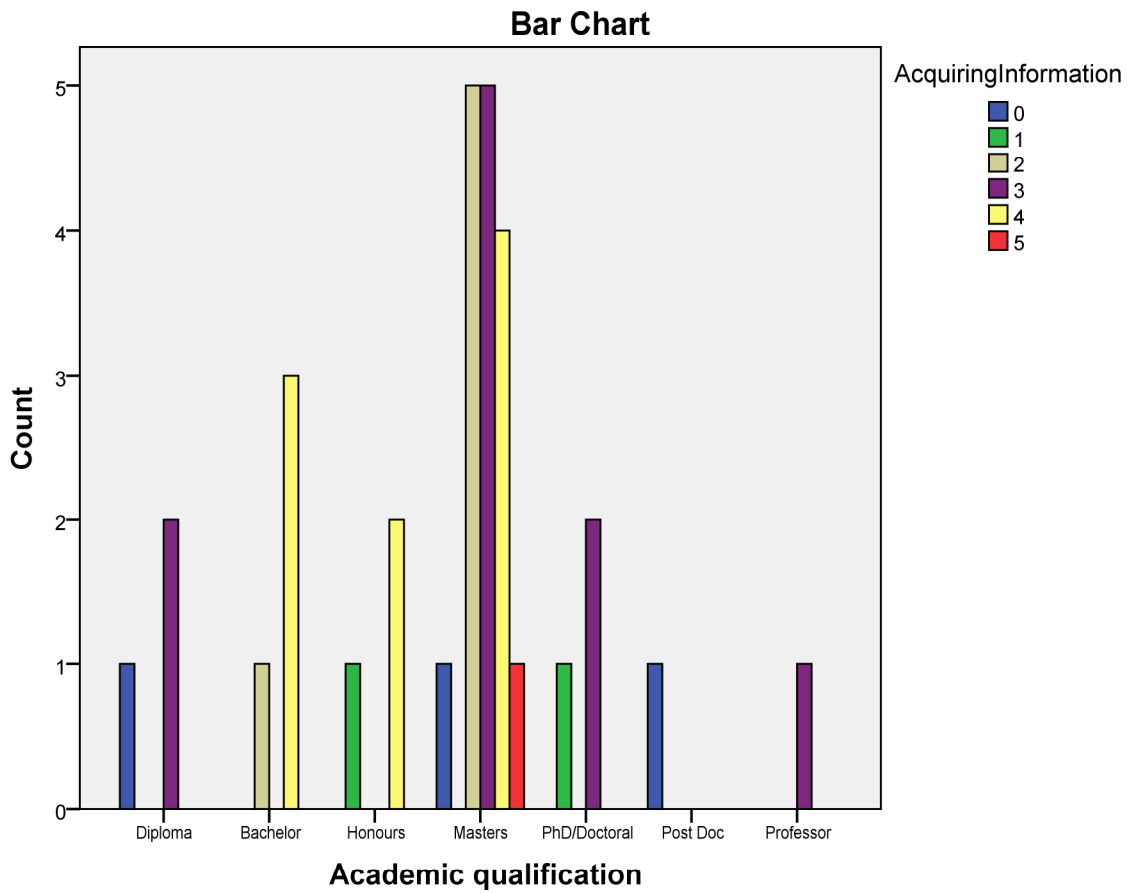
| | Value | df | Asymp. Sig. (2-sided) |
|------------------------------|---------------------|----|-----------------------|
| Pearson Chi-Square | 37.056 ^a | 30 | .176 |
| Likelihood Ratio | 35.040 | 30 | .241 |
| Linear-by-Linear Association | .374 | 1 | .541 |
| N of Valid Cases | 31 | | |

a. 41 cells (97.6%) have expected count less than 5. The minimum expected count is .03.

Symmetric Measures

| | | Value | Asymp. Std. Error ^a | Approx. T ^b | Approx. Sig. ^c |
|----------------------|----------------------|-------|--------------------------------|------------------------|---------------------------|
| Interval by Interval | Pearson's R | -.112 | .202 | -.605 | .550 ^c |
| Ordinal by Ordinal | Spearman Correlation | -.186 | .178 | -1.020 | .316 ^c |
| N of Valid Cases | | 31 | | | |

- a. Not assuming the null hypothesis.
- b. Using the asymptotic standard error assuming the null hypothesis.
- c. Based on normal approximation.



CROSSTABS

```

/TABLES=School Gender vv37 Acadpos V45 V97 V111 V112 BY Assessing
/FORMAT=AVALUE TABLES
/STATISTICS=CHISQ CORR
/CELLS=COUNT
/COUNT ROUND CELL
/BARCHART.

```

Crosstabs

[DataSet1] E:\Statomet_2013\Hannelie_SPSS\SoC1and2_demo_LoU_new_13April_Hi_low_23Edited.sav

Case Processing Summary

| | Cases | | | | | |
|---|-------|---------|---------|---------|-------|---------|
| | Valid | | Missing | | Total | |
| | N | Percent | N | Percent | N | Percent |
| School * Assessing | 31 | 57.4% | 23 | 42.6% | 54 | 100.0% |
| Gender * Assessing | 31 | 57.4% | 23 | 42.6% | 54 | 100.0% |
| Lecturing experience * Assessing | 31 | 57.4% | 23 | 42.6% | 54 | 100.0% |
| AcadPos * Assessing | 31 | 57.4% | 23 | 42.6% | 54 | 100.0% |
| V45 * Assessing | 31 | 57.4% | 23 | 42.6% | 54 | 100.0% |
| Professional identity / qualification * Assessing | 31 | 57.4% | 23 | 42.6% | 54 | 100.0% |
| Age * Assessing | 31 | 57.4% | 23 | 42.6% | 54 | 100.0% |
| Academic qualification * Assessing | 30 | 55.6% | 24 | 44.4% | 54 | 100.0% |

School * Assessing

Crosstab

Count

| | | Assessing | | | | | | Total |
|--------|---|-----------|---|---|----|---|---|-------|
| | | 0 | 1 | 2 | 3 | 5 | 6 | |
| School | 1 | 0 | 0 | 1 | 2 | 0 | 0 | 3 |
| | 2 | 1 | 2 | 3 | 8 | 0 | 1 | 15 |
| | 3 | 0 | 2 | 2 | 6 | 2 | 0 | 12 |
| | 4 | 0 | 0 | 0 | 1 | 0 | 0 | 1 |
| Total | | 1 | 4 | 6 | 17 | 2 | 1 | 31 |

Chi-Square Tests

| | Value | df | Asymp. Sig. (2-sided) |
|------------------------------|--------------------|----|-----------------------|
| Pearson Chi-Square | 7.000 ^a | 15 | .958 |
| Likelihood Ratio | 8.970 | 15 | .879 |
| Linear-by-Linear Association | .288 | 1 | .591 |
| N of Valid Cases | 31 | | |

a. 22 cells (91.7%) have expected count less than 5. The minimum expected count is .03.

Symmetric Measures

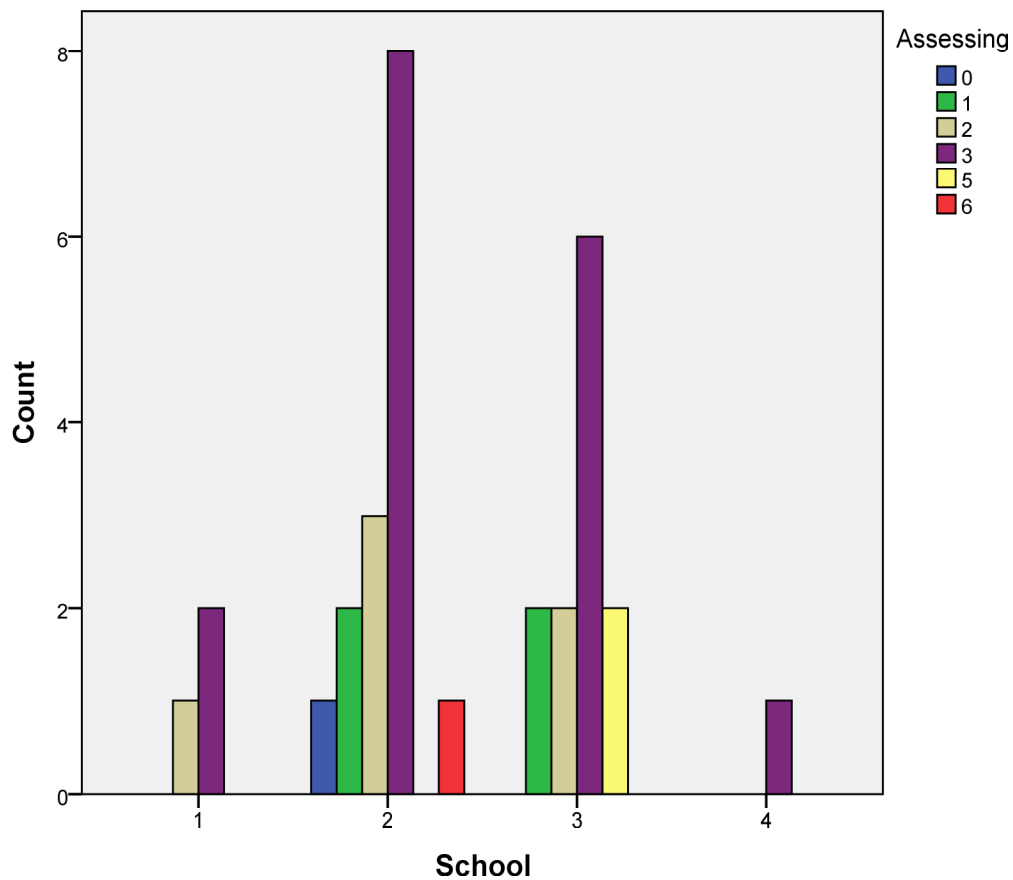
| | | Value | Asymp. Std. Error ^a | Approx. T ^b | Approx. Sig. ^c |
|----------------------|----------------------|-------|--------------------------------|------------------------|---------------------------|
| Interval by Interval | Pearson's R | .098 | .133 | .530 | .600 ^c |
| Ordinal by Ordinal | Spearman Correlation | .109 | .161 | .591 | .559 ^c |
| N of Valid Cases | | 31 | | | |

a. Not assuming the null hypothesis.

b. Using the asymptotic standard error assuming the null hypothesis.

c. Based on normal approximation.

Bar Chart



Gender * Assessing

Crosstab

Count

| | | Assessing | | | | | | Total |
|--------|--------|-----------|---|---|----|---|---|-------|
| | | 0 | 1 | 2 | 3 | 5 | 6 | |
| Gender | Female | 1 | 3 | 5 | 14 | 2 | 1 | 26 |
| | Male | 0 | 1 | 1 | 3 | 0 | 0 | 5 |
| Total | | 1 | 4 | 6 | 17 | 2 | 1 | 31 |

Chi-Square Tests

| | Value | df | Asymp. Sig. (2-sided) |
|------------------------------|--------------------|----|-----------------------|
| Pearson Chi-Square | 1.032 ^a | 5 | .960 |
| Likelihood Ratio | 1.642 | 5 | .896 |
| Linear-by-Linear Association | .307 | 1 | .579 |
| N of Valid Cases | 31 | | |

a. 10 cells (83.3%) have expected count less than 5. The minimum expected count is .16.

Symmetric Measures

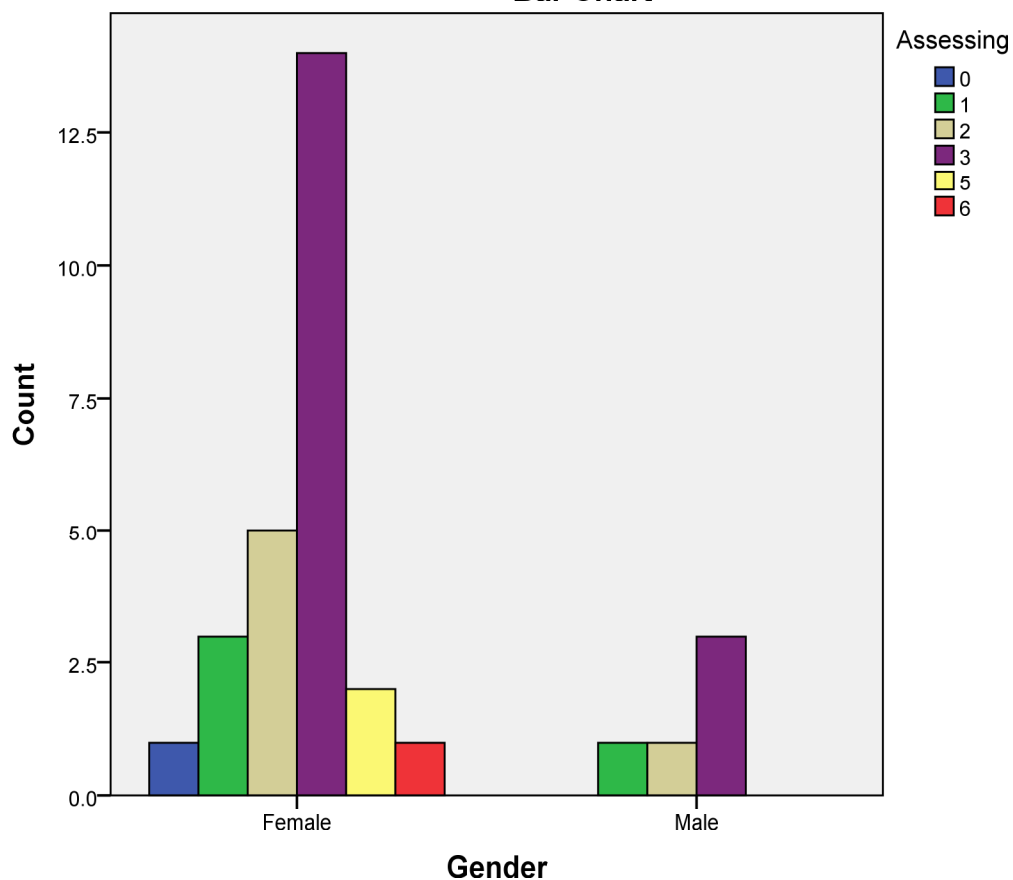
| | | Value | Asymp. Std. Error ^a | Approx. T ^b | Approx. Sig. ^c |
|----------------------|----------------------|-------|--------------------------------|------------------------|---------------------------|
| Interval by Interval | Pearson's R | -.101 | .131 | -.548 | .588 ^c |
| Ordinal by Ordinal | Spearman Correlation | -.086 | .160 | -.466 | .644 ^c |
| N of Valid Cases | | 31 | | | |

a. Not assuming the null hypothesis.

b. Using the asymptotic standard error assuming the null hypothesis.

c. Based on normal approximation.

Bar Chart



Lecturing experience * Assessing

Crosstab

| Count | | Assessing | | | | |
|----------------------|-------------|-----------|---|---|----|---|
| | | 0 | 1 | 2 | 3 | 5 |
| Lecturing experience | ≤5 years | 0 | 0 | 1 | 8 | 1 |
| | 6-10 years | 0 | 2 | 1 | 3 | 0 |
| | 11-15 years | 0 | 0 | 2 | 2 | 0 |
| | 16-20 years | 0 | 1 | 1 | 2 | 0 |
| | ≥ 21 years | 1 | 1 | 1 | 2 | 1 |
| Total | | 1 | 4 | 6 | 17 | 2 |

Crosstab

Count

| | | Assessing | Total |
|----------------------|-------------|-----------|-------|
| | | 6 | |
| Lecturing experience | ≤5 years | 0 | 10 |
| | 6-10 years | 0 | 6 |
| | 11-15 years | 1 | 5 |
| | 16-20 years | 0 | 4 |
| | ≥ 21 years | 0 | 6 |
| Total | | 1 | 31 |

Chi-Square Tests

| | Value | df | Asymp. Sig. (2-sided) |
|------------------------------|---------------------|----|-----------------------|
| Pearson Chi-Square | 19.464 ^a | 20 | .492 |
| Likelihood Ratio | 18.701 | 20 | .541 |
| Linear-by-Linear Association | 1.440 | 1 | .230 |
| N of Valid Cases | 31 | | |

a. 29 cells (96.7%) have expected count less than 5. The minimum expected count is .13.

Symmetric Measures

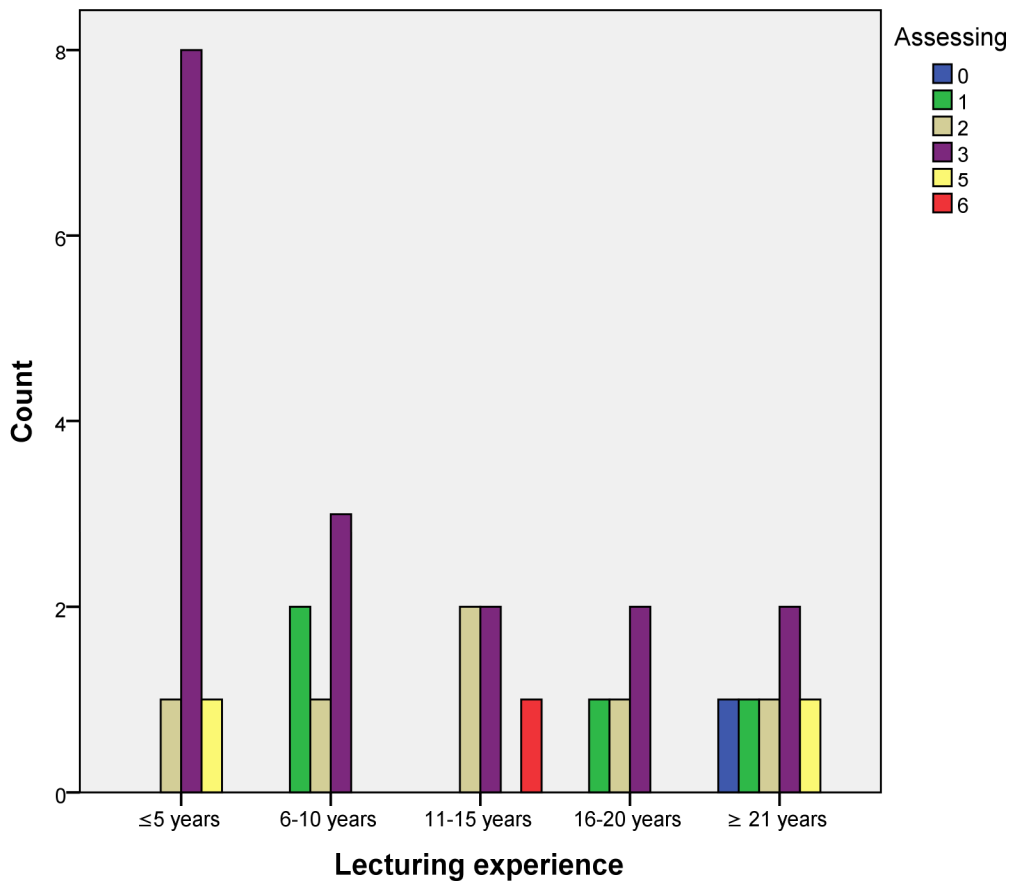
| | | Value | Asymp. Std. Error ^a | Approx. T ^b | Approx. Sig. ^c |
|----------------------|----------------------|-------|--------------------------------|------------------------|---------------------------|
| Interval by Interval | Pearson's R | -.219 | .174 | -1.209 | .236 ^c |
| Ordinal by Ordinal | Spearman Correlation | -.266 | .178 | -1.484 | .149 ^c |
| N of Valid Cases | | 31 | | | |

a. Not assuming the null hypothesis.

b. Using the asymptotic standard error assuming the null hypothesis.

c. Based on normal approximation.

Bar Chart



AcadPos * Assessing

Crosstab

| Count | | Assessing | | | | | |
|---------|---------------------|-----------|---|---|----|---|---|
| | | 0 | 1 | 2 | 3 | 5 | 6 |
| AcadPos | Junior lecturer | 0 | 2 | 1 | 4 | 0 | 0 |
| | Lecturer | 1 | 2 | 3 | 10 | 1 | 1 |
| | Senior lecturer | 0 | 0 | 2 | 2 | 0 | 0 |
| | Associate Professor | 0 | 0 | 0 | 0 | 1 | 0 |
| | Other | 0 | 0 | 0 | 1 | 0 | 0 |
| Total | | 1 | 4 | 6 | 17 | 2 | 1 |

Crosstab

Count

| | | Total |
|---------|---------------------|-------|
| AcadPos | Junior lecturer | 7 |
| | Lecturer | 18 |
| | Senior lecturer | 4 |
| | Associate Professor | 1 |
| | Other | 1 |
| Total | | 31 |

Chi-Square Tests

| | Value | df | Asymp. Sig. (2-sided) |
|------------------------------|---------------------|----|-----------------------|
| Pearson Chi-Square | 21.390 ^a | 20 | .374 |
| Likelihood Ratio | 13.652 | 20 | .848 |
| Linear-by-Linear Association | 1.166 | 1 | .280 |
| N of Valid Cases | 31 | | |

a. 29 cells (96.7%) have expected count less than 5. The minimum expected count is .03.

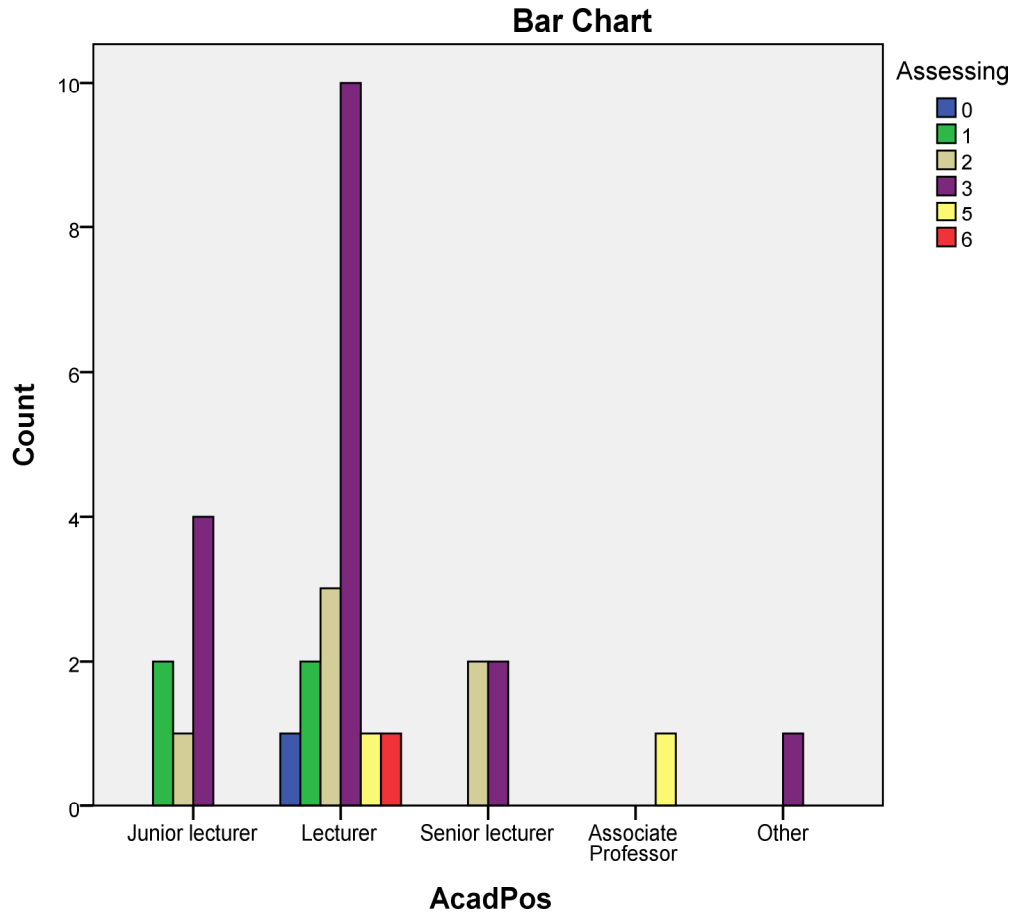
Symmetric Measures

| | | Value | Asymp. Std. Error ^a | Approx. T ^b | Approx. Sig. |
|----------------------|----------------------|-------|--------------------------------|------------------------|-------------------|
| Interval by Interval | Pearson's R | .197 | .114 | 1.083 | .288 ^c |
| Ordinal by Ordinal | Spearman Correlation | .184 | .162 | 1.010 | .321 ^c |
| N of Valid Cases | | 31 | | | |

a. Not assuming the null hypothesis.

b. Using the asymptotic standard error assuming the null hypothesis.

c. Based on normal approximation.



V45 * Assessing

Crosstab

| Count | | Assessing | | | | | |
|-------|-----------------|-----------|---|---|----|---|---|
| | | 0 | 1 | 2 | 3 | 5 | 6 |
| V45 | Permanent UP | 1 | 1 | 5 | 9 | 0 | 1 |
| | Extraordinary | 0 | 0 | 1 | 0 | 0 | 0 |
| | Temporary | 0 | 2 | 0 | 6 | 1 | 0 |
| | Dual (Gov & UP) | 0 | 1 | 0 | 2 | 1 | 0 |
| Total | | 1 | 4 | 6 | 17 | 2 | 1 |

Crosstab

| Count | | Total |
|-------|-----------------|-------|
| V45 | Permanent UP | 17 |
| | Extraordinary | 1 |
| | Temporary | 9 |
| | Dual (Gov & UP) | 4 |
| Total | | 31 |

Chi-Square Tests

| | Value | df | Asymp. Sig. (2-sided) |
|------------------------------|---------------------|----|-----------------------|
| Pearson Chi-Square | 14.653 ^a | 15 | .477 |
| Likelihood Ratio | 16.935 | 15 | .323 |
| Linear-by-Linear Association | .340 | 1 | .560 |
| N of Valid Cases | 31 | | |

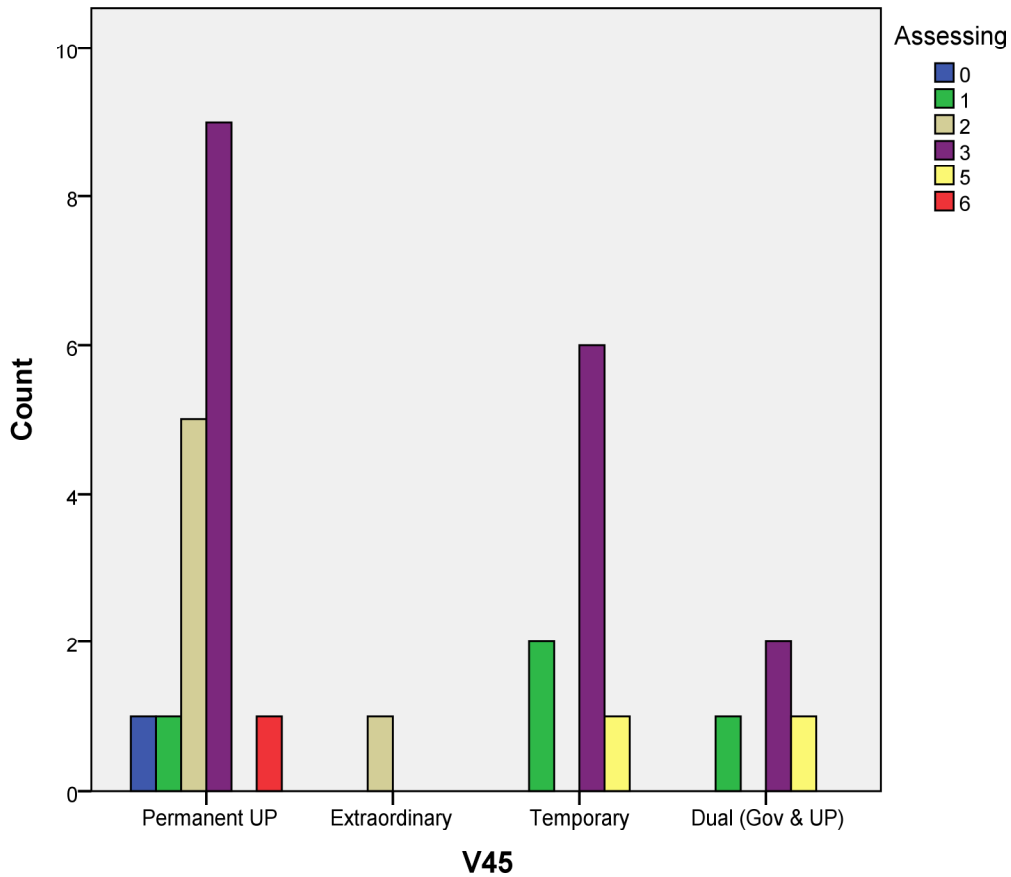
a. 23 cells (95.8%) have expected count less than 5. The minimum expected count is .03.

Symmetric Measures

| | | Value | Asymp. Std. Error ^a | ^b Approx. T | Approx. Sig. |
|----------------------|----------------------|-------|--------------------------------|------------------------|-------------------|
| Interval by Interval | Pearson's R | .106 | .188 | .577 | .569 ^c |
| Ordinal by Ordinal | Spearman Correlation | .144 | .189 | .784 | .440 ^c |
| N of Valid Cases | | 31 | | | |

- a. Not assuming the null hypothesis.
- b. Using the asymptotic standard error assuming the null hypothesis.
- c. Based on normal approximation.

Bar Chart



Professional identity / qualification * Assessing

Crosstab

| Count | | Assessing | | | | |
|---------------------------------------|---|-----------|---|---|----|---|
| | | 0 | 1 | 2 | 3 | 5 |
| Professional identity / qualification | 1 | 0 | 0 | 1 | 3 | 0 |
| | 2 | 1 | 3 | 4 | 12 | 0 |
| | 3 | 0 | 1 | 1 | 2 | 2 |
| Total | | 1 | 4 | 6 | 17 | 2 |

Crosstab

| Count | | Assessing | Total |
|---------------------------------------|---|-----------|-------|
| | | 6 | |
| Professional identity / qualification | 1 | 0 | 4 |
| | 2 | 1 | 21 |
| | 3 | 0 | 6 |
| Total | | 1 | 31 |

Chi-Square Tests

| | Value | df | Asymp. Sig. (2-sided) |
|------------------------------|---------------------|----|-----------------------|
| Pearson Chi-Square | 10.811 ^a | 10 | .372 |
| Likelihood Ratio | 10.209 | 10 | .422 |
| Linear-by-Linear Association | .475 | 1 | .491 |
| N of Valid Cases | 31 | | |

a. 17 cells (94.4%) have expected count less than 5. The minimum expected count is .13.

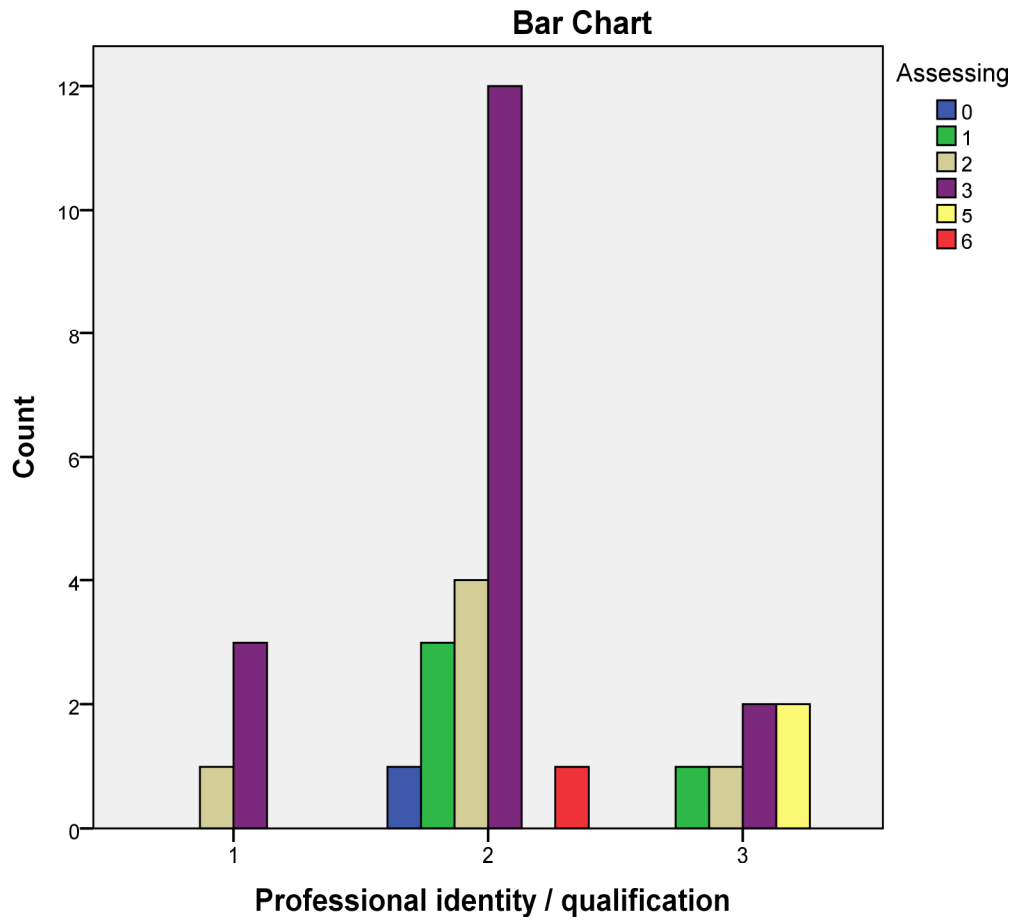
Symmetric Measures

| | | Value | Asymp. Std. Error ^a | Approx. T ^b | Approx. Sig. |
|----------------------|----------------------|-------|--------------------------------|------------------------|-------------------|
| Interval by Interval | Pearson's R | .126 | .167 | .683 | .500 ^c |
| Ordinal by Ordinal | Spearman Correlation | .079 | .188 | .425 | .674 ^c |
| N of Valid Cases | | 31 | | | |

a. Not assuming the null hypothesis.

b. Using the asymptotic standard error assuming the null hypothesis.

c. Based on normal approximation.



Age * Assessing

Crosstab

| Count | | Assessing | | | | | | Total |
|-------|-------|-----------|---|---|----|---|---|-------|
| | | 0 | 1 | 2 | 3 | 5 | 6 | |
| Age | 20-29 | 0 | 0 | 1 | 2 | 0 | 0 | 3 |
| | 30-39 | 0 | 0 | 0 | 2 | 0 | 0 | 2 |
| | 40-49 | 0 | 1 | 0 | 11 | 1 | 0 | 13 |
| | 50-59 | 0 | 2 | 3 | 2 | 1 | 0 | 8 |
| | 60 + | 1 | 1 | 2 | 0 | 0 | 1 | 5 |
| Total | | 1 | 4 | 6 | 17 | 2 | 1 | 31 |

Chi-Square Tests

| | Value | df | Asymp. Sig. (2-sided) |
|------------------------------|---------------------|----|-----------------------|
| Pearson Chi-Square | 26.182 ^a | 20 | .160 |
| Likelihood Ratio | 29.004 | 20 | .088 |
| Linear-by-Linear Association | 1.044 | 1 | .307 |
| N of Valid Cases | 31 | | |

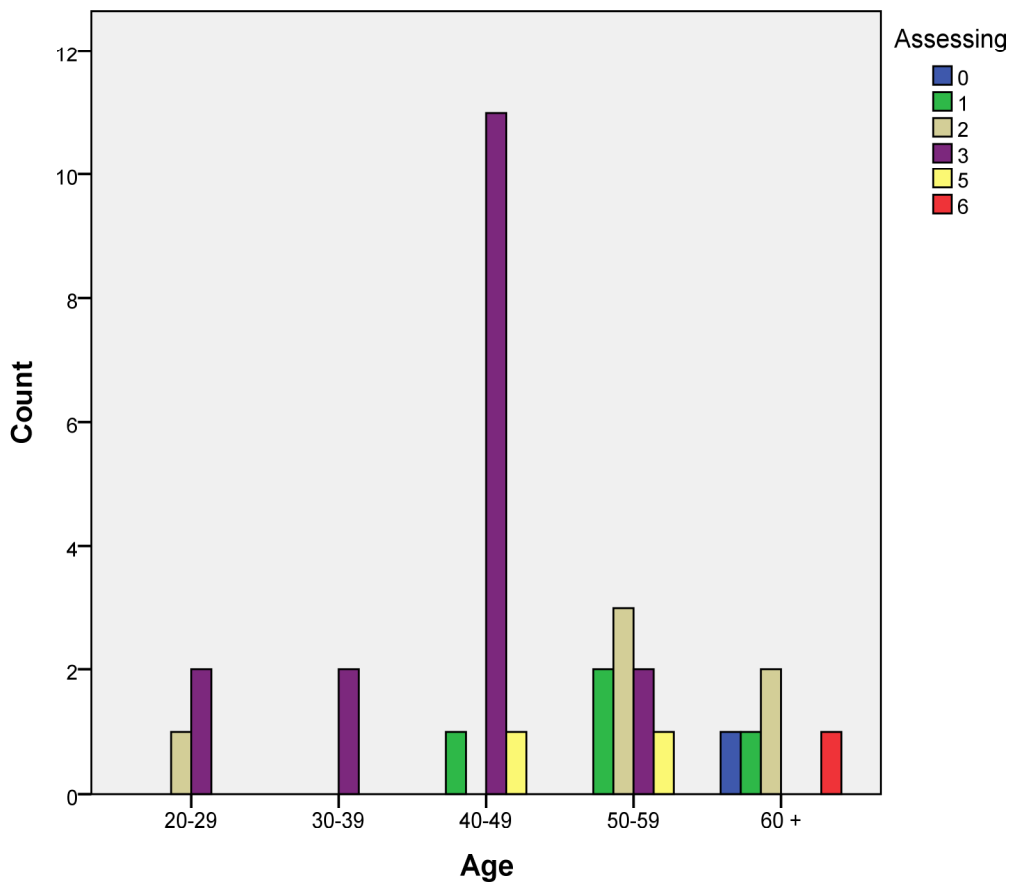
a. 29 cells (96.7%) have expected count less than 5. The minimum expected count is .06.

Symmetric Measures

| | | Value | Asymp. Std. Error ^a | Approx. T ^b | Approx. Sig. ^c |
|----------------------|----------------------|-------|--------------------------------|------------------------|---------------------------|
| Interval by Interval | Pearson's R | -.187 | .212 | -1.023 | .315 ^c |
| Ordinal by Ordinal | Spearman Correlation | -.376 | .199 | -2.183 | .037 ^c |
| N of Valid Cases | | 31 | | | |

- a. Not assuming the null hypothesis.
- b. Using the asymptotic standard error assuming the null hypothesis.
- c. Based on normal approximation.

Bar Chart



Academic qualification * Assessing

Crosstab

Count

| | | Assessing | | | | |
|------------------------|--------------|-----------|---|---|----|---|
| | | 0 | 1 | 2 | 3 | 5 |
| Academic qualification | Diploma | 0 | 1 | 0 | 2 | 0 |
| | Bachelor | 0 | 0 | 1 | 3 | 0 |
| | Honours | 0 | 1 | 0 | 1 | 0 |
| | Masters | 0 | 2 | 4 | 8 | 1 |
| | PhD/Doctoral | 0 | 0 | 1 | 2 | 0 |
| | Post Doc | 1 | 0 | 0 | 0 | 0 |
| | Professor | 0 | 0 | 0 | 0 | 1 |
| Total | | 1 | 4 | 6 | 16 | 2 |

Crosstab

Count

| | | Assessing | Total |
|------------------------|--------------|-----------|-------|
| | | 6 | |
| Academic qualification | Diploma | 0 | 3 |
| | Bachelor | 0 | 4 |
| | Honours | 0 | 2 |
| | Masters | 1 | 16 |
| | PhD/Doctoral | 0 | 3 |
| | Post Doc | 0 | 1 |
| | Professor | 0 | 1 |
| Total | | 1 | 30 |

Chi-Square Tests

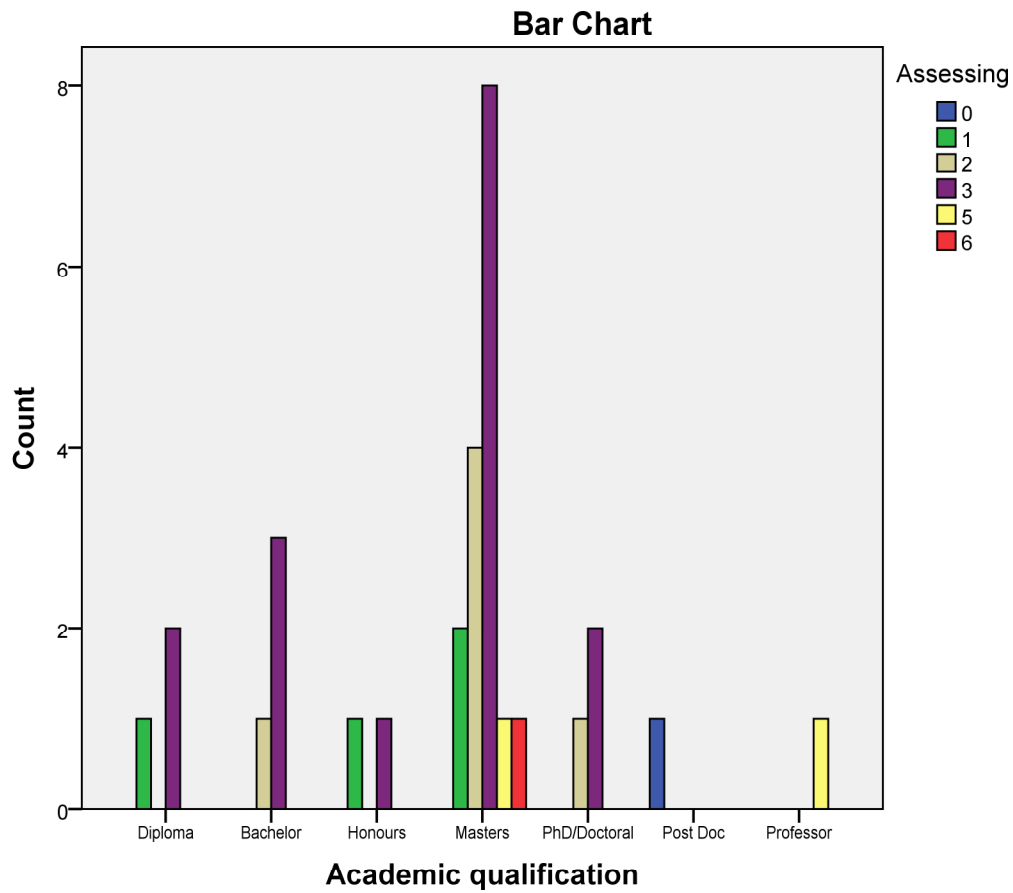
| | Value | df | Asymp. Sig. (2-sided) |
|------------------------------|---------------------|----|-----------------------|
| Pearson Chi-Square | 51.510 ^a | 30 | .009 |
| Likelihood Ratio | 23.487 | 30 | .795 |
| Linear-by-Linear Association | .324 | 1 | .569 |
| N of Valid Cases | 30 | | |

a. 41 cells (97.6%) have expected count less than 5. The minimum expected count is .03.

Symmetric Measures

| | | Value | Asymp. Std. Error ^a | ^b Approx. T | Approx. Sig. |
|----------------------|----------------------|-------|--------------------------------|------------------------|-------------------|
| Interval by Interval | Pearson's R | .106 | .220 | .563 | .578 ^c |
| Ordinal by Ordinal | Spearman Correlation | .042 | .199 | .222 | .826 ^c |
| N of Valid Cases | | 30 | | | |

- a. Not assuming the null hypothesis.
- b. Using the asymptotic standard error assuming the null hypothesis.
- c. Based on normal approximation.



CROSSTABS

```

/TABLES=School Gender vv37 Acadpos V45 V97 V111 V112 BY Knowledge
/FORMAT=AVALUE TABLES
/STATISTICS=CHISQ CORR
/CELLS=COUNT
/COUNT ROUND CELL
/BARCHART.

```

Crosstabs

[DataSet1] E:\Statomet_2013\Hannelie_SPSS\SoC1and2_demo_LoU_new_13April_Hi_low_23Edited.sav

Case Processing Summary

| | Cases | | | | | |
|---|-------|---------|---------|---------|-------|---------|
| | Valid | | Missing | | Total | |
| | N | Percent | N | Percent | N | Percent |
| School * Knowledge | 32 | 59.3% | 22 | 40.7% | 54 | 100.0% |
| Gender * Knowledge | 32 | 59.3% | 22 | 40.7% | 54 | 100.0% |
| Lecturing experience * Knowledge | 32 | 59.3% | 22 | 40.7% | 54 | 100.0% |
| AcadPos * Knowledge | 32 | 59.3% | 22 | 40.7% | 54 | 100.0% |
| V45 * Knowledge | 32 | 59.3% | 22 | 40.7% | 54 | 100.0% |
| Professional identity / qualification * Knowledge | 32 | 59.3% | 22 | 40.7% | 54 | 100.0% |
| Age * Knowledge | 32 | 59.3% | 22 | 40.7% | 54 | 100.0% |
| Academic qualification * Knowledge | 31 | 57.4% | 23 | 42.6% | 54 | 100.0% |

School * Knowledge

Crosstab

Count

| | | Knowledge | | | | | | Total |
|--------|---|-----------|---|---|---|---|---|-------|
| | | 1 | 2 | 3 | 4 | 5 | 6 | |
| School | 1 | 0 | 1 | 0 | 1 | 1 | 0 | 3 |
| | 2 | 1 | 5 | 6 | 1 | 1 | 1 | 15 |
| | 3 | 3 | 1 | 2 | 5 | 2 | 0 | 13 |
| | 4 | 0 | 0 | 0 | 1 | 0 | 0 | 1 |
| Total | | 4 | 7 | 8 | 8 | 4 | 1 | 32 |

Chi-Square Tests

| | Value | df | Asymp. Sig. (2-sided) |
|------------------------------|---------------------|----|-----------------------|
| Pearson Chi-Square | 15.484 ^a | 15 | .417 |
| Likelihood Ratio | 17.146 | 15 | .310 |
| Linear-by-Linear Association | .009 | 1 | .924 |
| N of Valid Cases | 32 | | |

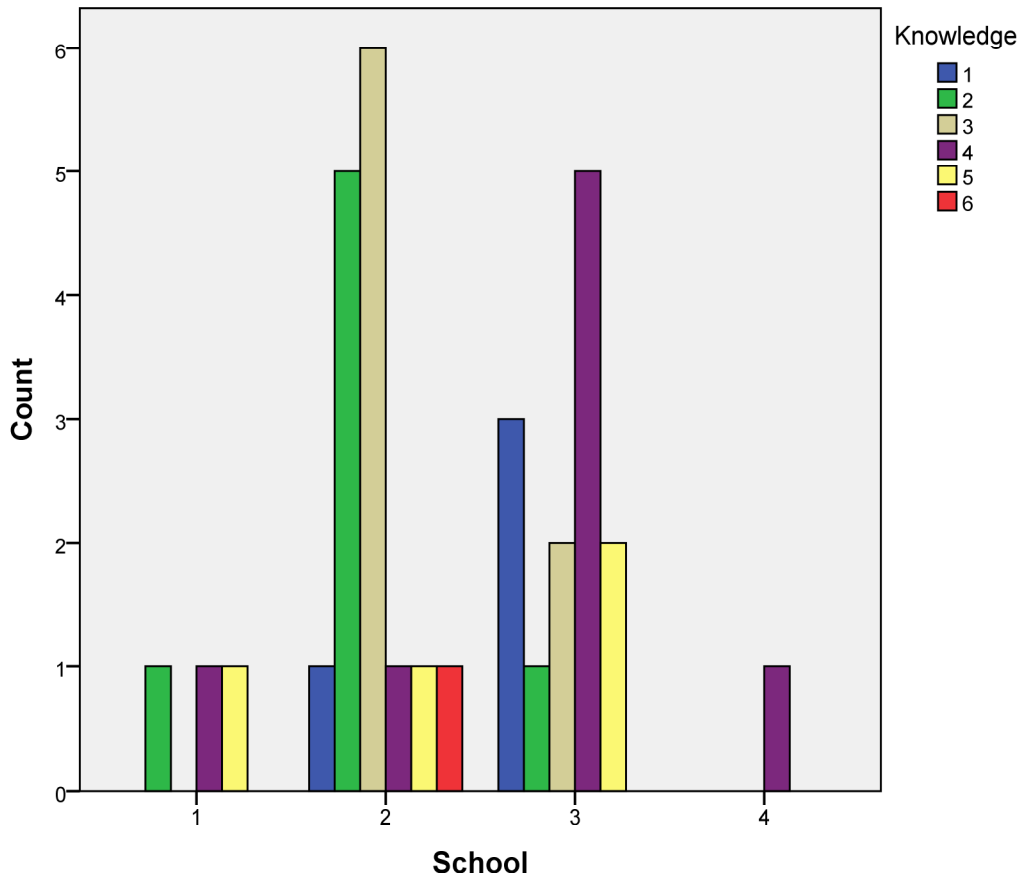
a. 24 cells (100.0%) have expected count less than 5. The minimum expected count is .03.

Symmetric Measures

| | | Value | Asymp. Std. Error ^a | ^b Approx. T | Approx. Sig. |
|----------------------|----------------------|-------|--------------------------------|------------------------|-------------------|
| Interval by Interval | Pearson's R | .017 | .174 | .093 | .926 ^c |
| Ordinal by Ordinal | Spearman Correlation | .067 | .189 | .367 | .716 ^c |
| N of Valid Cases | | 32 | | | |

- a. Not assuming the null hypothesis.
- b. Using the asymptotic standard error assuming the null hypothesis.
- c. Based on normal approximation.

Bar Chart



Gender * Knowledge

Crosstab

Count

| | | Knowledge | | | | | | Total |
|--------|--------|-----------|---|---|---|---|---|-------|
| | | 1 | 2 | 3 | 4 | 5 | 6 | |
| Gender | Female | 3 | 6 | 7 | 6 | 3 | 1 | 26 |
| | Male | 1 | 1 | 1 | 2 | 1 | 0 | 6 |
| Total | | 4 | 7 | 8 | 8 | 4 | 1 | 32 |

Chi-Square Tests

| | Value | df | Asymp. Sig. (2-sided) |
|------------------------------|-------------------|----|-----------------------|
| Pearson Chi-Square | .938 ^a | 5 | .967 |
| Likelihood Ratio | 1.120 | 5 | .952 |
| Linear-by-Linear Association | .007 | 1 | .933 |
| N of Valid Cases | 32 | | |

a. 9 cells (75.0%) have expected count less than 5. The minimum expected count is .19.

Symmetric Measures

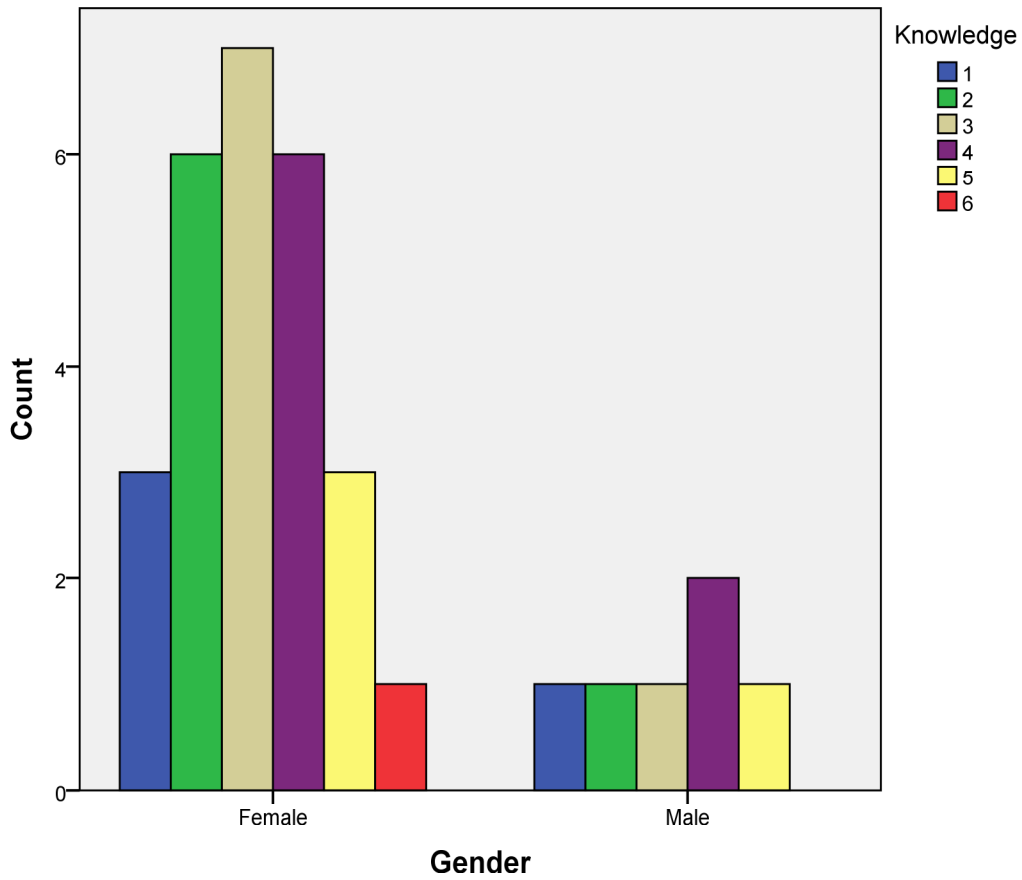
| | | Value | Asymp. Std. Error ^a | Approx. T ^b | Approx. Sig. ^c |
|----------------------|----------------------|-------|--------------------------------|------------------------|---------------------------|
| Interval by Interval | Pearson's R | .015 | .180 | .083 | .934 ^c |
| Ordinal by Ordinal | Spearman Correlation | .031 | .184 | .170 | .866 ^c |
| N of Valid Cases | | 32 | | | |

a. Not assuming the null hypothesis.

b. Using the asymptotic standard error assuming the null hypothesis.

c. Based on normal approximation.

Bar Chart



Lecturing experience * Knowledge

Crosstab

| Count | | Knowledge | | | | |
|----------------------|-------------|-----------|---|---|---|---|
| | | 1 | 2 | 3 | 4 | 5 |
| Lecturing experience | ≤5 years | 0 | 1 | 5 | 1 | 3 |
| | 6-10 years | 1 | 2 | 1 | 2 | 0 |
| | 11-15 years | 0 | 2 | 1 | 1 | 0 |
| | 16-20 years | 2 | 0 | 0 | 1 | 1 |
| | ≥ 21 years | 1 | 2 | 1 | 3 | 0 |
| Total | | 4 | 7 | 8 | 8 | 4 |

Crosstab

Count

| | | Knowledg... | Total |
|----------------------|-------------|-------------|-------|
| | | 6 | |
| Lecturing experience | ≤5 years | 0 | 10 |
| | 6-10 years | 0 | 6 |
| | 11-15 years | 1 | 5 |
| | 16-20 years | 0 | 4 |
| | ≥ 21 years | 0 | 7 |
| Total | | 1 | 32 |

Chi-Square Tests

| | Value | df | Asymp. Sig. (2-sided) |
|------------------------------|---------------------|----|-----------------------|
| Pearson Chi-Square | 25.898 ^a | 20 | .169 |
| Likelihood Ratio | 27.002 | 20 | .135 |
| Linear-by-Linear Association | 1.329 | 1 | .249 |
| N of Valid Cases | 32 | | |

a. 30 cells (100.0%) have expected count less than 5. The minimum expected count is .13.

Symmetric Measures

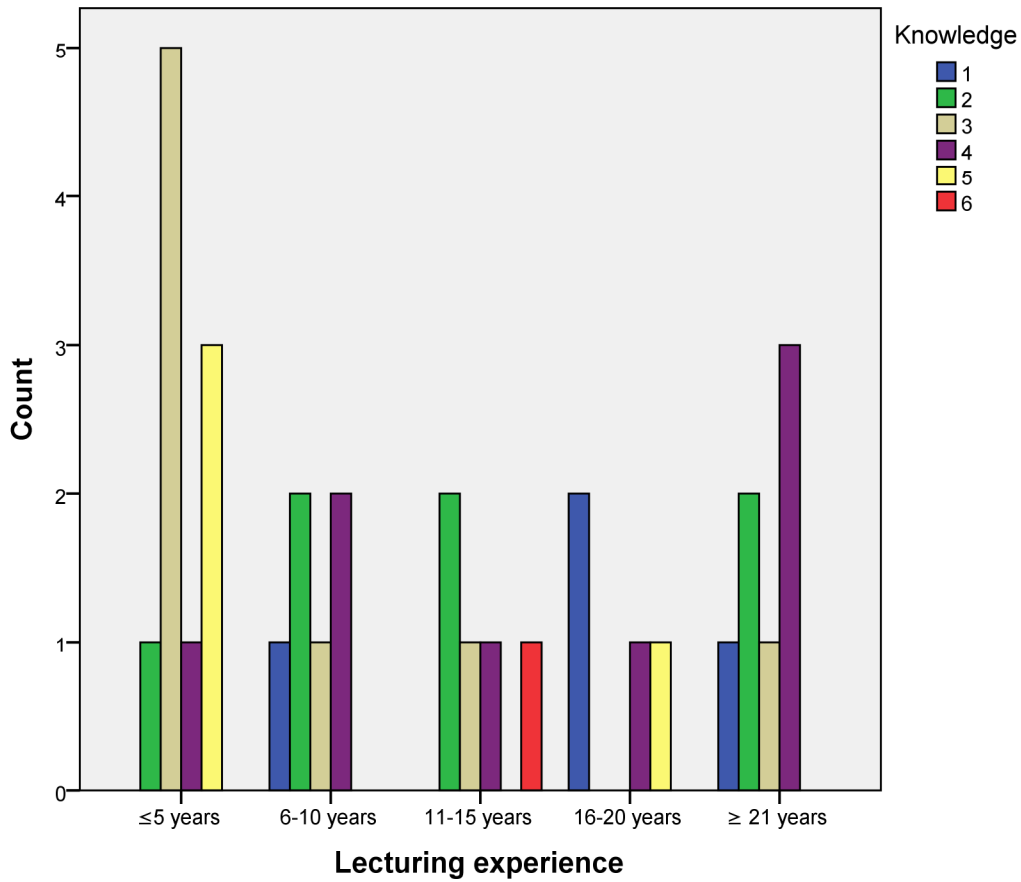
| | | Value | Asymp. Std. Error ^a | Approx. T ^b | Approx. Sig. |
|----------------------|----------------------|-------|--------------------------------|------------------------|-------------------|
| Interval by Interval | Pearson's R | -.207 | .151 | -1.159 | .255 ^c |
| Ordinal by Ordinal | Spearman Correlation | -.187 | .165 | -1.044 | .305 ^c |
| N of Valid Cases | | 32 | | | |

a. Not assuming the null hypothesis.

b. Using the asymptotic standard error assuming the null hypothesis.

c. Based on normal approximation.

Bar Chart



AcadPos * Knowledge

Crosstab

| Count | | Knowledge | | | | | |
|--------------|---------------------|-----------|----------|----------|----------|----------|----------|
| | | 1 | 2 | 3 | 4 | 5 | 6 |
| AcadPos | Junior lecturer | 2 | 1 | 2 | 1 | 1 | 0 |
| | Lecturer | 1 | 5 | 6 | 3 | 3 | 1 |
| | Senior lecturer | 1 | 1 | 0 | 2 | 0 | 0 |
| | Associate Professor | 0 | 0 | 0 | 1 | 0 | 0 |
| | Other | 0 | 0 | 0 | 1 | 0 | 0 |
| Total | | 4 | 7 | 8 | 8 | 4 | 1 |

Crosstab

Count

| | | Total |
|---------|---------------------|-------|
| AcadPos | Junior lecturer | 7 |
| | Lecturer | 19 |
| | Senior lecturer | 4 |
| | Associate Professor | 1 |
| | Other | 1 |
| Total | | 32 |

Chi-Square Tests

| | Value | df | Asymp. Sig. (2-sided) |
|------------------------------|---------------------|----|-----------------------|
| Pearson Chi-Square | 13.751 ^a | 20 | .843 |
| Likelihood Ratio | 14.716 | 20 | .792 |
| Linear-by-Linear Association | .795 | 1 | .372 |
| N of Valid Cases | 32 | | |

a. 30 cells (100.0%) have expected count less than 5. The minimum expected count is .03.

Symmetric Measures

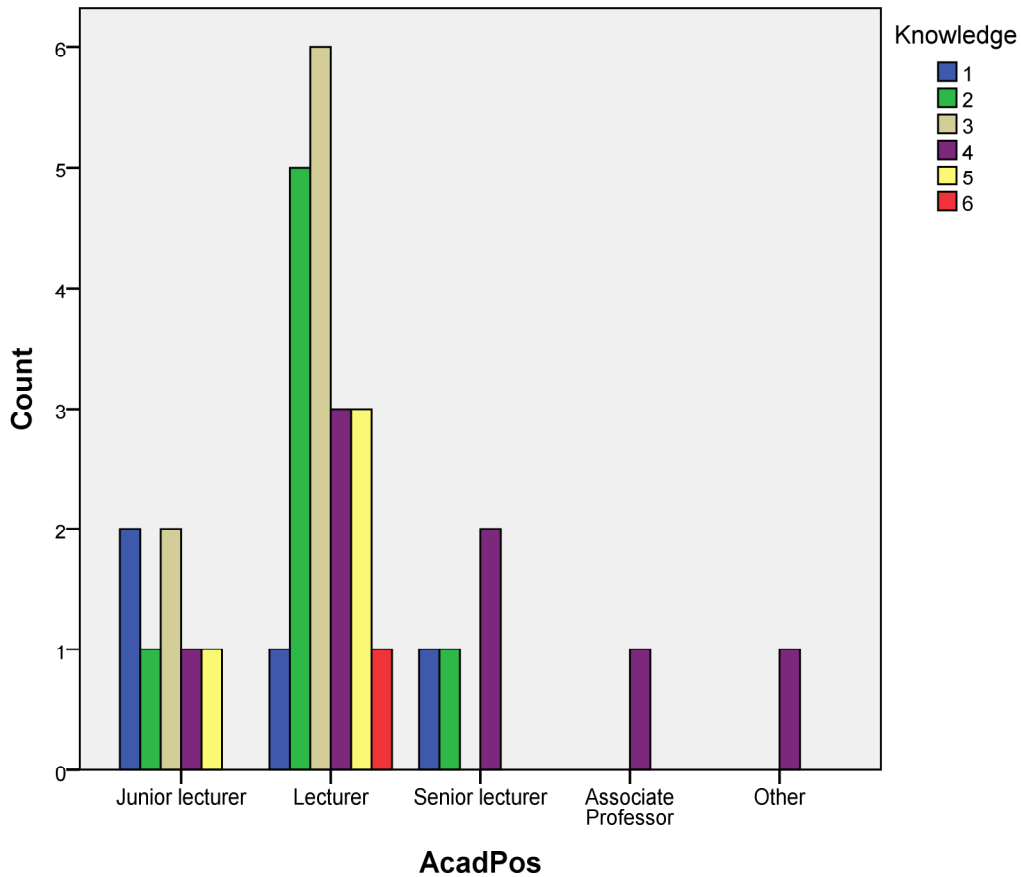
| | | Value | Asymp. Std. Error ^a | Approx. T ^b | Approx. Sig. |
|----------------------|----------------------|-------|--------------------------------|------------------------|-------------------|
| Interval by Interval | Pearson's R | .160 | .118 | .889 | .381 ^c |
| Ordinal by Ordinal | Spearman Correlation | .147 | .180 | .814 | .422 ^c |
| N of Valid Cases | | 32 | | | |

a. Not assuming the null hypothesis.

b. Using the asymptotic standard error assuming the null hypothesis.

c. Based on normal approximation.

Bar Chart



V45 * Knowledge

Crosstab

| Count | | Knowledge | | | | | |
|-------|-----------------|-----------|---|---|---|---|---|
| | | 1 | 2 | 3 | 4 | 5 | 6 |
| V45 | Permanent UP | 2 | 5 | 3 | 6 | 1 | 1 |
| | Extraordinary | 0 | 1 | 0 | 0 | 0 | 0 |
| | Temporary | 1 | 1 | 4 | 1 | 2 | 0 |
| | Dual (Gov & UP) | 1 | 0 | 1 | 1 | 1 | 0 |
| Total | | 4 | 7 | 8 | 8 | 4 | 1 |

Crosstab

| Count | | Total |
|-------|-----------------|-------|
| V45 | Permanent UP | 18 |
| | Extraordinary | 1 |
| | Temporary | 9 |
| | Dual (Gov & UP) | 4 |
| Total | | 32 |

Chi-Square Tests

| | Value | df | Asymp. Sig. (2-sided) |
|------------------------------|---------------------|----|-----------------------|
| Pearson Chi-Square | 11.429 ^a | 15 | .722 |
| Likelihood Ratio | 11.970 | 15 | .681 |
| Linear-by-Linear Association | .037 | 1 | .848 |
| N of Valid Cases | 32 | | |

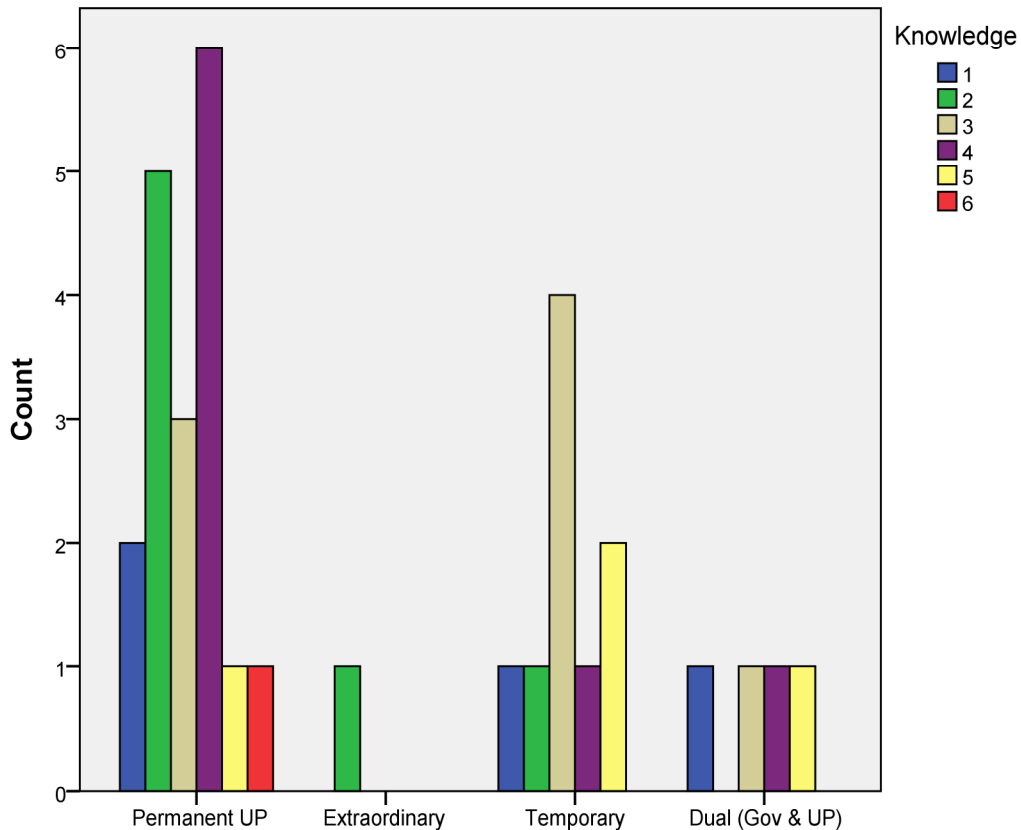
a. 24 cells (100.0%) have expected count less than 5. The minimum expected count is .03.

Symmetric Measures

| | | Value | Asymp. Std. Error ^a | Approx. T ^b | Approx. Sig. ^c |
|----------------------|----------------------|-------|--------------------------------|------------------------|---------------------------|
| Interval by Interval | Pearson's R | .034 | .182 | .189 | .852 ^c |
| Ordinal by Ordinal | Spearman Correlation | .050 | .185 | .273 | .787 ^c |
| N of Valid Cases | | 32 | | | |

- a. Not assuming the null hypothesis.
- b. Using the asymptotic standard error assuming the null hypothesis.
- c. Based on normal approximation.

Bar Chart



V45

Professional identity / qualification * Knowledge

Crosstab

Count

| | | Knowledge | | | | |
|---------------------------------------|---|-----------|---|---|---|---|
| | | 1 | 2 | 3 | 4 | 5 |
| Professional identity / qualification | 1 | 1 | 0 | 1 | 2 | 1 |
| | 2 | 2 | 6 | 7 | 3 | 2 |
| | 3 | 1 | 1 | 0 | 3 | 1 |
| Total | | 4 | 7 | 8 | 8 | 4 |

Crosstab

Count

| | | Knowledg... | Total |
|---------------------------------------|---|-------------|-------|
| | | 6 | |
| Professional identity / qualification | 1 | 0 | 5 |
| | 2 | 1 | 21 |
| | 3 | 0 | 6 |
| Total | | 1 | 32 |

Chi-Square Tests

| | Value | df | Asymp. Sig. (2-sided) |
|------------------------------|--------------------|----|-----------------------|
| Pearson Chi-Square | 8.084 ^a | 10 | .621 |
| Likelihood Ratio | 10.621 | 10 | .388 |
| Linear-by-Linear Association | .001 | 1 | .977 |
| N of Valid Cases | 32 | | |

a. 16 cells (88.9%) have expected count less than 5. The minimum expected count is .16.

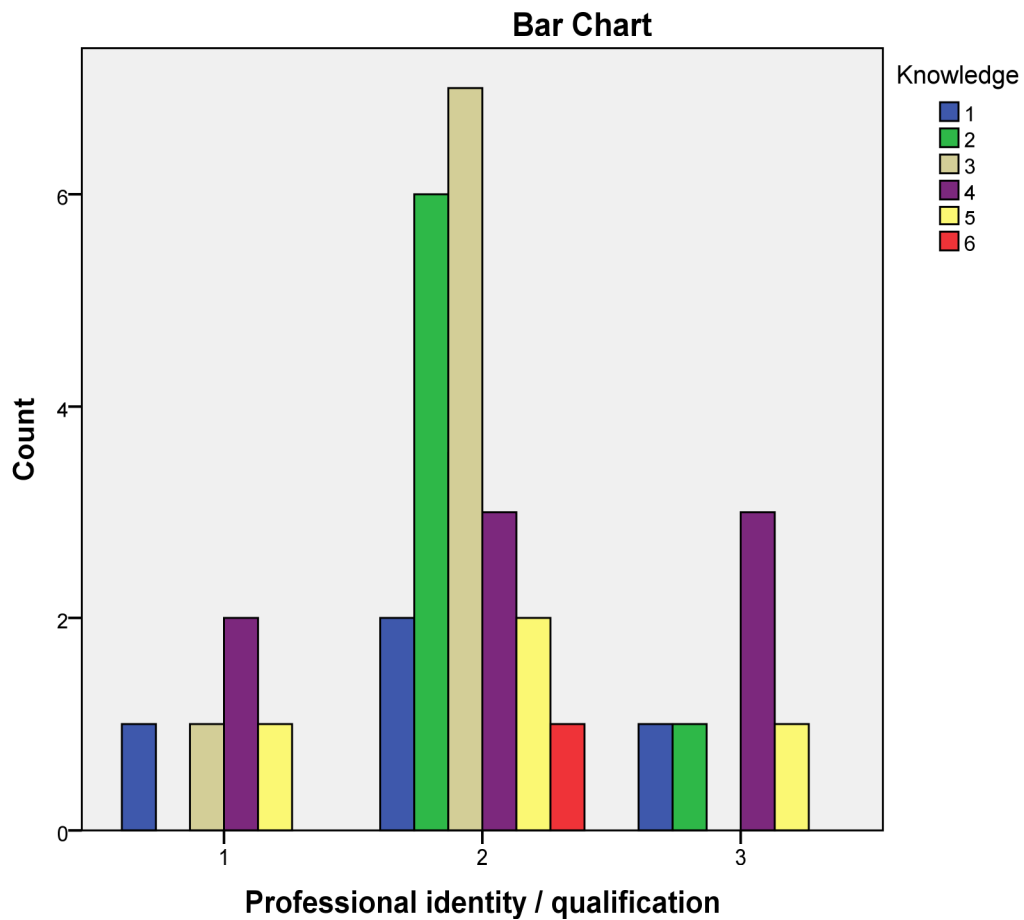
Symmetric Measures

| | | Value | Asymp. Std. Error ^a | Approx. T ^b | Approx. Sig. |
|----------------------|----------------------|-------|--------------------------------|------------------------|-------------------|
| Interval by Interval | Pearson's R | -.005 | .186 | -.028 | .978 ^c |
| Ordinal by Ordinal | Spearman Correlation | .000 | .194 | -.002 | .999 ^c |
| N of Valid Cases | | 32 | | | |

a. Not assuming the null hypothesis.

b. Using the asymptotic standard error assuming the null hypothesis.

c. Based on normal approximation.



Age * Knowledge

Crosstab

| Count | | Knowledge | | | | | | Total |
|-------|-------|-----------|---|---|---|---|---|-------|
| | | 1 | 2 | 3 | 4 | 5 | 6 | |
| Age | 20-29 | 0 | 1 | 1 | 0 | 1 | 0 | 3 |
| | 30-39 | 0 | 0 | 1 | 1 | 0 | 0 | 2 |
| | 40-49 | 0 | 1 | 5 | 4 | 3 | 0 | 13 |
| | 50-59 | 3 | 2 | 1 | 3 | 0 | 0 | 9 |
| | 60 + | 1 | 3 | 0 | 0 | 0 | 1 | 5 |
| Total | | 4 | 7 | 8 | 8 | 4 | 1 | 32 |

Chi-Square Tests

| | Value | df | Asymp. Sig. (2-sided) |
|------------------------------|---------------------|----|-----------------------|
| Pearson Chi-Square | 26.734 ^a | 20 | .143 |
| Likelihood Ratio | 30.468 | 20 | .063 |
| Linear-by-Linear Association | 2.548 | 1 | .110 |
| N of Valid Cases | 32 | | |

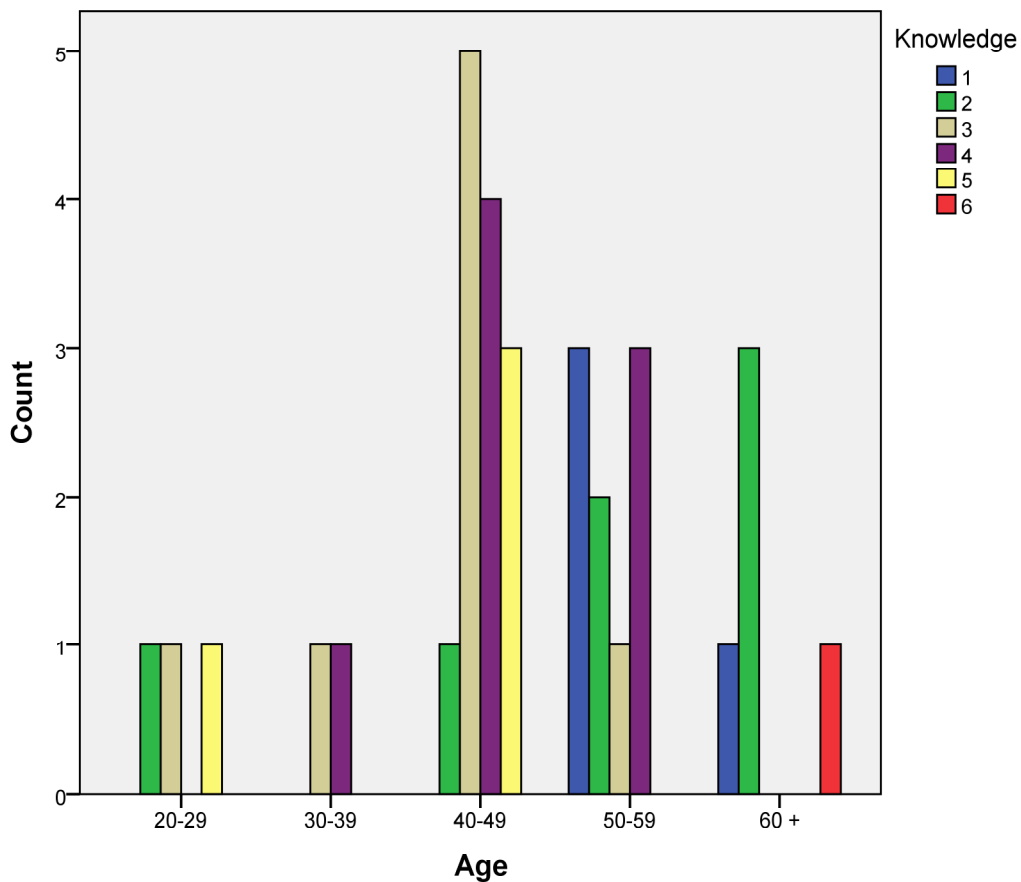
a. 30 cells (100.0%) have expected count less than 5. The minimum expected count is .06.

Symmetric Measures

| | | Value | Asymp. Std. Error ^a | Approx. T ^b | Approx. Sig. ^c |
|----------------------|----------------------|-------|--------------------------------|------------------------|---------------------------|
| Interval by Interval | Pearson's R | -.287 | .191 | -1.639 | .112 ^c |
| Ordinal by Ordinal | Spearman Correlation | -.371 | .178 | -2.186 | .037 ^c |
| N of Valid Cases | | 32 | | | |

- a. Not assuming the null hypothesis.
- b. Using the asymptotic standard error assuming the null hypothesis.
- c. Based on normal approximation.

Bar Chart



Academic qualification * Knowledge

Crosstab

Count

| | | Knowledge | | | | |
|------------------------|--------------|-----------|---|---|---|---|
| | | 1 | 2 | 3 | 4 | 5 |
| Academic qualification | Diploma | 1 | 0 | 1 | 1 | 0 |
| | Bachelor | 0 | 1 | 1 | 2 | 0 |
| | Honours | 1 | 0 | 0 | 2 | 0 |
| | Masters | 1 | 5 | 5 | 2 | 2 |
| | PhD/Doctoral | 1 | 0 | 1 | 0 | 1 |
| | Post Doc | 0 | 1 | 0 | 0 | 0 |
| | Professor | 0 | 0 | 0 | 1 | 0 |
| Total | | 4 | 7 | 8 | 8 | 3 |

Crosstab

Count

| | | Knowledg... | Total |
|------------------------|--------------|-------------|-------|
| | | 6 | |
| Academic qualification | Diploma | 0 | 3 |
| | Bachelor | 0 | 4 |
| | Honours | 0 | 3 |
| | Masters | 1 | 16 |
| | PhD/Doctoral | 0 | 3 |
| | Post Doc | 0 | 1 |
| | Professor | 0 | 1 |
| Total | | 1 | 31 |

Chi-Square Tests

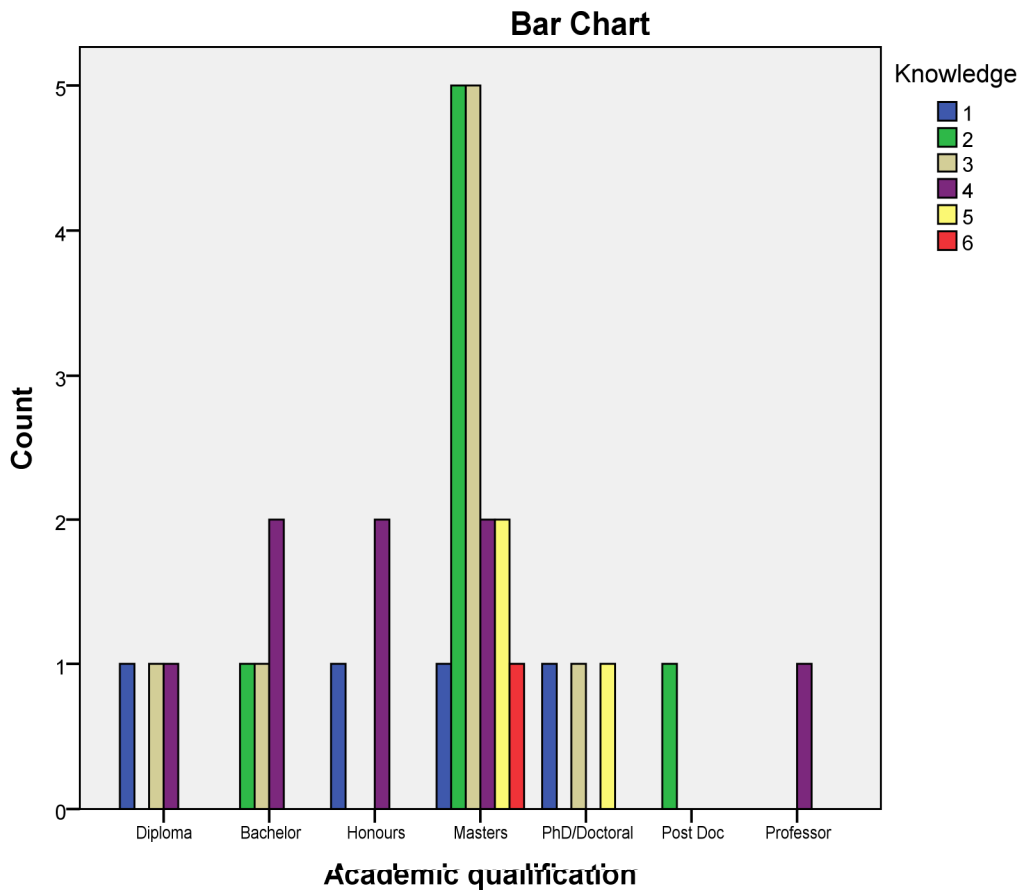
| | Value | df | Asymp. Sig. (2-sided) |
|------------------------------|---------------------|----|-----------------------|
| Pearson Chi-Square | 22.439 ^a | 30 | .838 |
| Likelihood Ratio | 25.131 | 30 | .719 |
| Linear-by-Linear Association | .078 | 1 | .781 |
| N of Valid Cases | 31 | | |

a. 42 cells (100.0%) have expected count less than 5. The minimum expected count is .03.

Symmetric Measures

| | | Value | Asymp. Std. Error ^a | ^b Approx. T | Approx. Sig. |
|----------------------|----------------------|-------|--------------------------------|------------------------|-------------------|
| Interval by Interval | Pearson's R | .051 | .162 | .274 | .786 ^c |
| Ordinal by Ordinal | Spearman Correlation | .000 | .184 | .002 | .999 ^c |
| N of Valid Cases | | 31 | | | |

- a. Not assuming the null hypothesis.
- b. Using the asymptotic standard error assuming the null hypothesis.
- c. Based on normal approximation.



CROSSTABS

```

/TABLES=School Gender vv37 Acadpos V45 V97 V111 V112 BY Performing
/FORMAT=AVALUE TABLES
/STATISTICS=CHISQ CORR
/CELLS=COUNT
/COUNT ROUND CELL
/BARCHART.

```

Crosstabs

[DataSet1] E:\Statomet_2013\Hannelie_SPSS\SoC1and2_demo_LoU_new_13April_Hi_low_23Edited.sav

Case Processing Summary

| | Cases | | | | | |
|--|-------|---------|---------|---------|-------|---------|
| | Valid | | Missing | | Total | |
| | N | Percent | N | Percent | N | Percent |
| School * Performing | 32 | 59.3% | 22 | 40.7% | 54 | 100.0% |
| Gender * Performing | 32 | 59.3% | 22 | 40.7% | 54 | 100.0% |
| Lecturing experience * Performing | 32 | 59.3% | 22 | 40.7% | 54 | 100.0% |
| AcadPos * Performing | 32 | 59.3% | 22 | 40.7% | 54 | 100.0% |
| V45 * Performing | 32 | 59.3% | 22 | 40.7% | 54 | 100.0% |
| Professional identity / qualification * Performing | 32 | 59.3% | 22 | 40.7% | 54 | 100.0% |
| Age * Performing | 32 | 59.3% | 22 | 40.7% | 54 | 100.0% |
| Academic qualification * Performing | 31 | 57.4% | 23 | 42.6% | 54 | 100.0% |

School * Performing

Crosstab

Count

| | | Performing | | | | | | Total |
|--------|---|------------|---|----|---|---|---|-------|
| | | 1 | 2 | 3 | 4 | 5 | 6 | |
| School | 1 | 0 | 1 | 1 | 0 | 1 | 0 | 3 |
| | 2 | 2 | 4 | 5 | 3 | 0 | 1 | 15 |
| | 3 | 2 | 2 | 4 | 5 | 0 | 0 | 13 |
| | 4 | 0 | 0 | 1 | 0 | 0 | 0 | 1 |
| Total | | 4 | 7 | 11 | 8 | 1 | 1 | 32 |

Chi-Square Tests

| | Value | df | Asymp. Sig. (2-sided) |
|------------------------------|---------------------|----|-----------------------|
| Pearson Chi-Square | 15.601 ^a | 15 | .409 |
| Likelihood Ratio | 12.206 | 15 | .663 |
| Linear-by-Linear Association | .071 | 1 | .790 |
| N of Valid Cases | 32 | | |

a. 23 cells (95.8%) have expected count less than 5. The minimum expected count is .03.

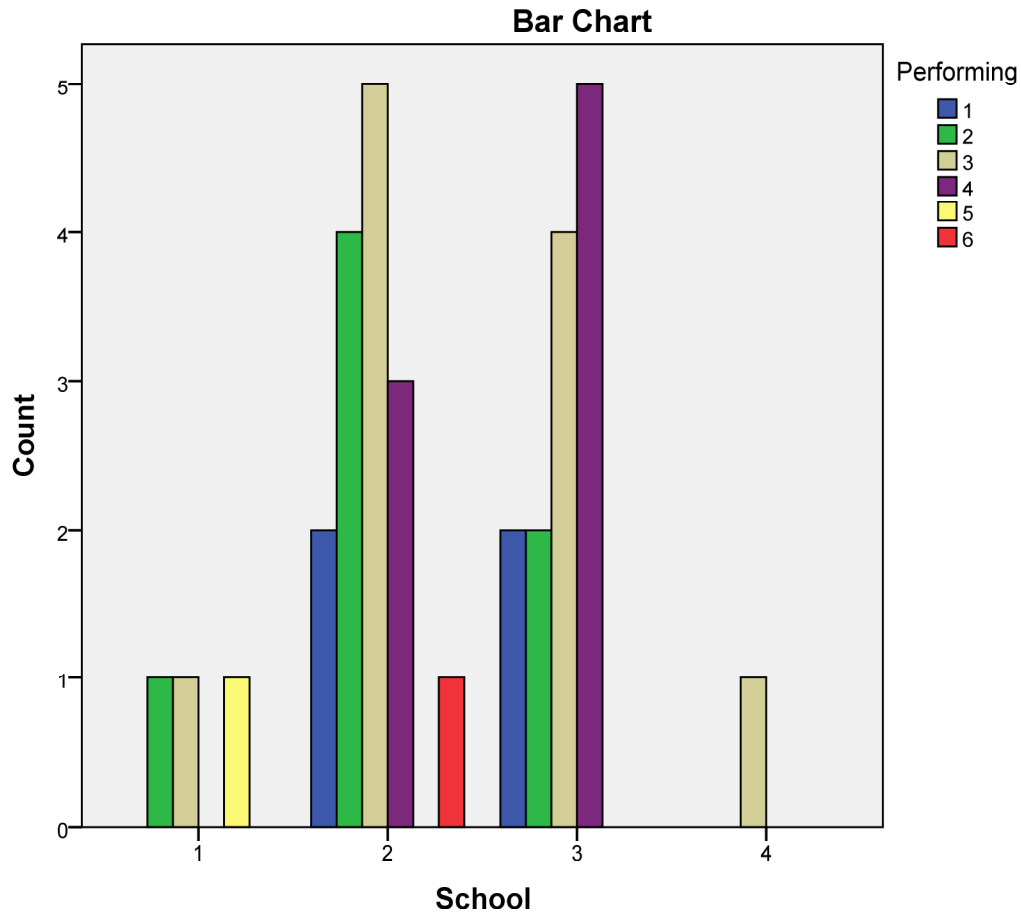
Symmetric Measures

| | | Value | Asymp. Std. Error ^a | Approx. T ^b | Approx. Sig. ^c |
|----------------------|----------------------|-------|--------------------------------|------------------------|---------------------------|
| Interval by Interval | Pearson's R | -.048 | .163 | -.263 | .794 ^c |
| Ordinal by Ordinal | Spearman Correlation | .021 | .176 | .114 | .910 ^c |
| N of Valid Cases | | 32 | | | |

a. Not assuming the null hypothesis.

b. Using the asymptotic standard error assuming the null hypothesis.

c. Based on normal approximation.



Gender * Performing

Crosstab

Count

| | | Performing | | | | | | Total |
|--------|--------|------------|---|----|---|---|---|-------|
| | | 1 | 2 | 3 | 4 | 5 | 6 | |
| Gender | Female | 3 | 6 | 9 | 6 | 1 | 1 | 26 |
| | Male | 1 | 1 | 2 | 2 | 0 | 0 | 6 |
| Total | | 4 | 7 | 11 | 8 | 1 | 1 | 32 |

Chi-Square Tests

| | Value | df | Asymp. Sig. (2-sided) |
|------------------------------|-------------------|----|-----------------------|
| Pearson Chi-Square | .863 ^a | 5 | .973 |
| Likelihood Ratio | 1.216 | 5 | .943 |
| Linear-by-Linear Association | .057 | 1 | .812 |
| N of Valid Cases | 32 | | |

a. 9 cells (75.0%) have expected count less than 5. The minimum expected count is .19.

Symmetric Measures

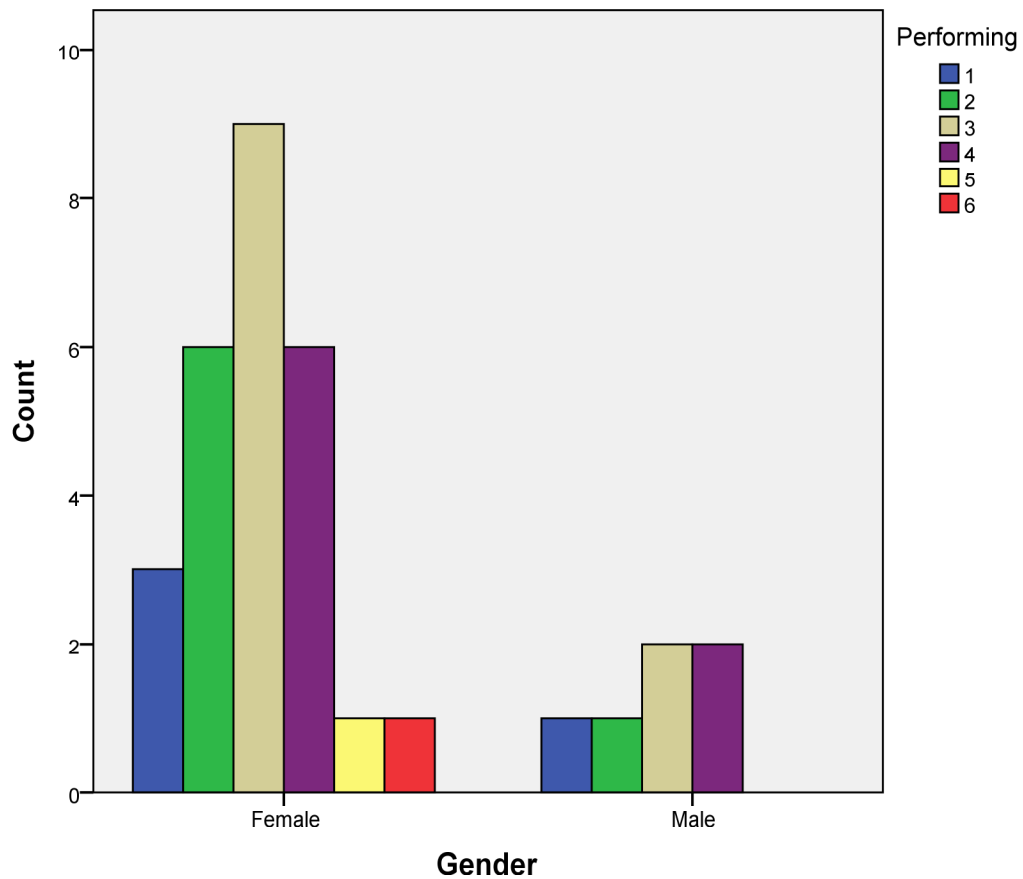
| | | Value | Asymp. Std. Error ^a | Approx. T ^b | Approx. Sig. |
|----------------------|----------------------|-------|--------------------------------|------------------------|-------------------|
| Interval by Interval | Pearson's R | -.043 | .164 | -.234 | .816 ^c |
| Ordinal by Ordinal | Spearman Correlation | -.013 | .176 | -.074 | .942 ^c |
| N of Valid Cases | | 32 | | | |

a. Not assuming the null hypothesis.

b. Using the asymptotic standard error assuming the null hypothesis.

c. Based on normal approximation.

Bar Chart



Lecturing experience * Performing

Crosstab

| Count | | Performing | | | | |
|----------------------|-------------|------------|----------|-----------|----------|----------|
| | | 1 | 2 | 3 | 4 | 5 |
| Lecturing experience | ≤5 years | 0 | 1 | 5 | 4 | 0 |
| | 6-10 years | 2 | 1 | 2 | 0 | 1 |
| | 11-15 years | 0 | 2 | 1 | 1 | 0 |
| | 16-20 years | 1 | 1 | 1 | 1 | 0 |
| | ≥ 21 years | 1 | 2 | 2 | 2 | 0 |
| Total | | 4 | 7 | 11 | 8 | 1 |

Crosstab

Count

| | | Performin... | Total |
|----------------------|-------------|--------------|-------|
| | | 6 | |
| Lecturing experience | ≤5 years | 0 | 10 |
| | 6-10 years | 0 | 6 |
| | 11-15 years | 1 | 5 |
| | 16-20 years | 0 | 4 |
| | ≥ 21 years | 0 | 7 |
| Total | | 1 | 32 |

Chi-Square Tests

| | Value | df | Asymp. Sig. (2-sided) |
|------------------------------|---------------------|----|-----------------------|
| Pearson Chi-Square | 19.510 ^a | 20 | .489 |
| Likelihood Ratio | 19.289 | 20 | .503 |
| Linear-by-Linear Association | 1.033 | 1 | .310 |
| N of Valid Cases | 32 | | |

a. 30 cells (100.0%) have expected count less than 5. The minimum expected count is .13.

Symmetric Measures

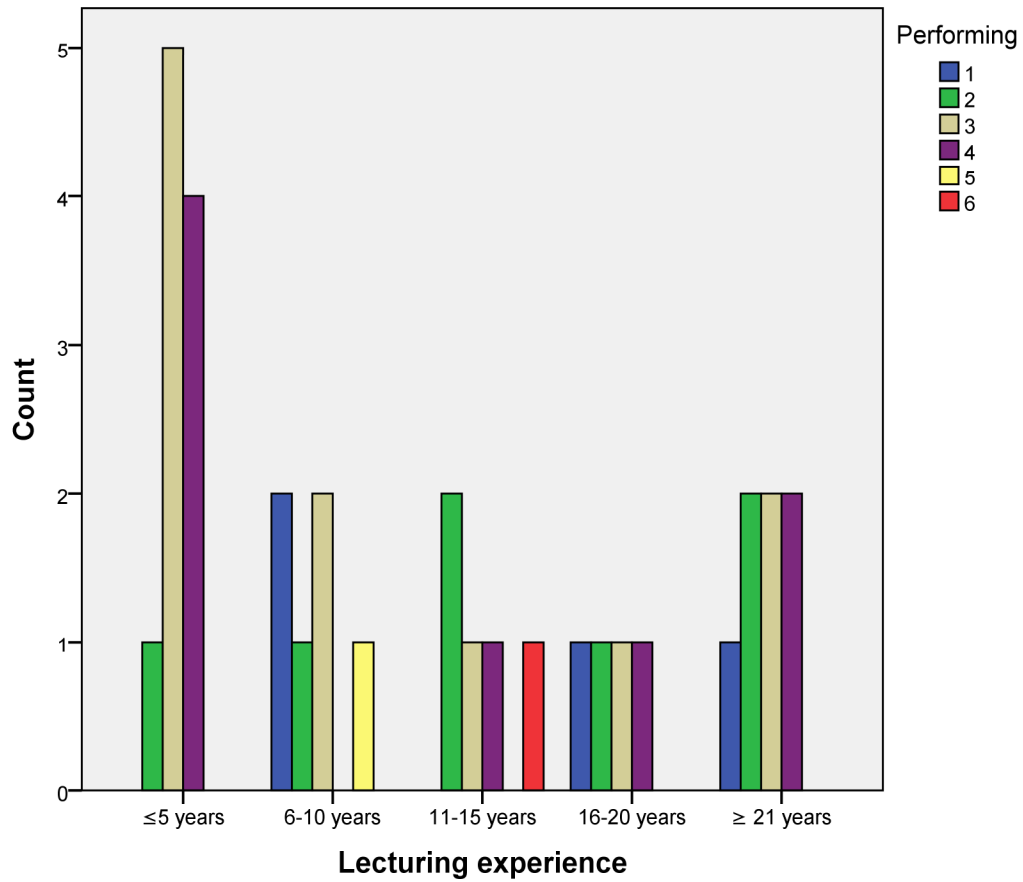
| | | Value | Asymp. Std. Error ^a | Approx. T ^b | Approx. Sig. |
|----------------------|----------------------|-------|--------------------------------|------------------------|-------------------|
| Interval by Interval | Pearson's R | -.183 | .137 | -1.017 | .317 ^c |
| Ordinal by Ordinal | Spearman Correlation | -.194 | .157 | -1.083 | .287 ^c |
| N of Valid Cases | | 32 | | | |

a. Not assuming the null hypothesis.

b. Using the asymptotic standard error assuming the null hypothesis.

c. Based on normal approximation.

Bar Chart



AcadPos * Performing

Crosstab

| Count | | Performing | | | | | |
|--------------|---------------------|------------|----------|-----------|----------|----------|----------|
| | | 1 | 2 | 3 | 4 | 5 | 6 |
| AcadPos | Junior lecturer | 2 | 1 | 3 | 1 | 0 | 0 |
| | Lecturer | 2 | 4 | 6 | 5 | 1 | 1 |
| | Senior lecturer | 0 | 2 | 1 | 1 | 0 | 0 |
| | Associate Professor | 0 | 0 | 1 | 0 | 0 | 0 |
| | Other | 0 | 0 | 0 | 1 | 0 | 0 |
| Total | | 4 | 7 | 11 | 8 | 1 | 1 |

Crosstab

Count

| | | Total |
|---------|---------------------|-------|
| AcadPos | Junior lecturer | 7 |
| | Lecturer | 19 |
| | Senior lecturer | 4 |
| | Associate Professor | 1 |
| | Other | 1 |
| Total | | 32 |

Chi-Square Tests

| | Value | df | Asymp. Sig. (2-sided) |
|------------------------------|---------------------|----|-----------------------|
| Pearson Chi-Square | 10.421 ^a | 20 | .960 |
| Likelihood Ratio | 10.823 | 20 | .951 |
| Linear-by-Linear Association | 1.217 | 1 | .270 |
| N of Valid Cases | 32 | | |

a. 29 cells (96.7%) have expected count less than 5. The minimum expected count is .03.

Symmetric Measures

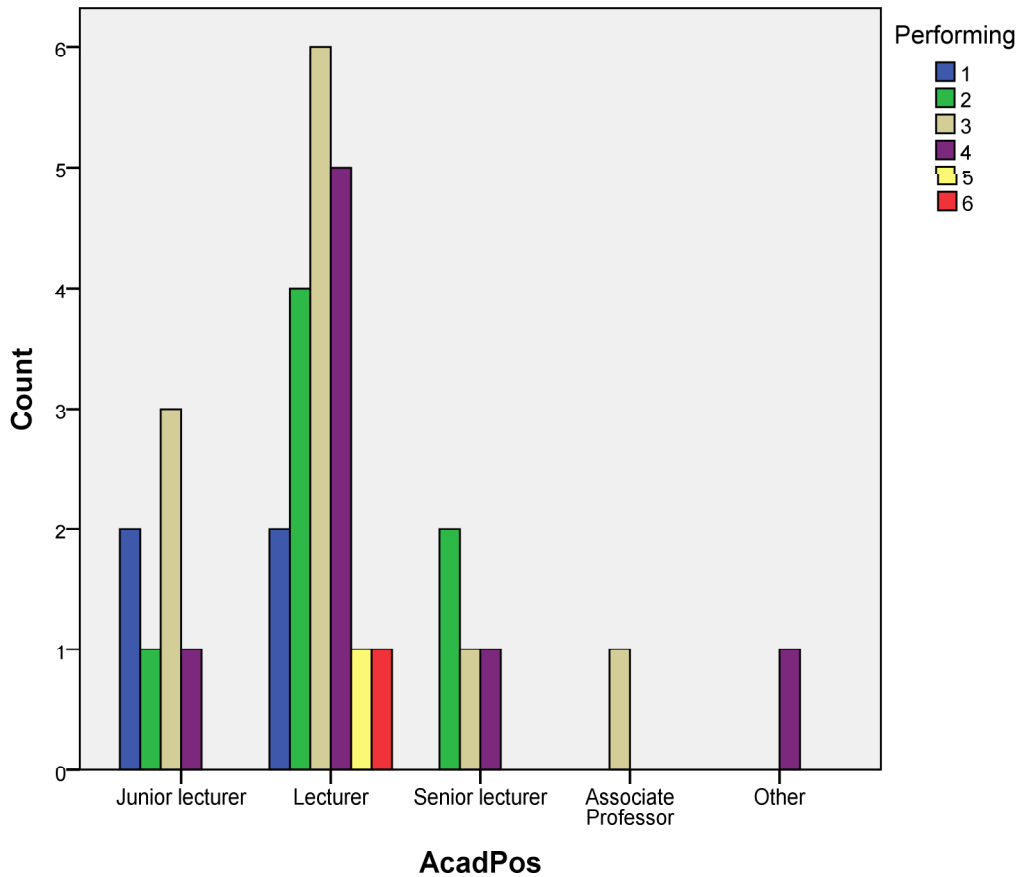
| | | Value | Asymp. Std. Error ^a | Approx. T ^b | Approx. Sig. |
|----------------------|----------------------|-------|--------------------------------|------------------------|-------------------|
| Interval by Interval | Pearson's R | .198 | .108 | 1.107 | .277 ^c |
| Ordinal by Ordinal | Spearman Correlation | .175 | .158 | .975 | .338 ^c |
| N of Valid Cases | | 32 | | | |

a. Not assuming the null hypothesis.

b. Using the asymptotic standard error assuming the null hypothesis.

c. Based on normal approximation.

Bar Chart



V45 * Performing

Crosstab

| Count | | Performing | | | | | |
|-------|-----------------|------------|---|----|---|---|---|
| | | 1 | 2 | 3 | 4 | 5 | 6 |
| V45 | Permanent UP | 1 | 6 | 5 | 4 | 1 | 1 |
| | Extraordinary | 0 | 1 | 0 | 0 | 0 | 0 |
| | Temporary | 2 | 0 | 5 | 2 | 0 | 0 |
| | Dual (Gov & UP) | 1 | 0 | 1 | 2 | 0 | 0 |
| Total | | 4 | 7 | 11 | 8 | 1 | 1 |

Crosstab

| Count | | Total |
|-------|-----------------|-------|
| V45 | Permanent UP | 18 |
| | Extraordinary | 1 |
| | Temporary | 9 |
| | Dual (Gov & UP) | 4 |
| Total | | 32 |

Chi-Square Tests

| | Value | df | Asymp. Sig. (2-sided) |
|------------------------------|---------------------|----|-----------------------|
| Pearson Chi-Square | 13.452 ^a | 15 | .567 |
| Likelihood Ratio | 15.853 | 15 | .392 |
| Linear-by-Linear Association | .222 | 1 | .638 |
| N of Valid Cases | 32 | | |

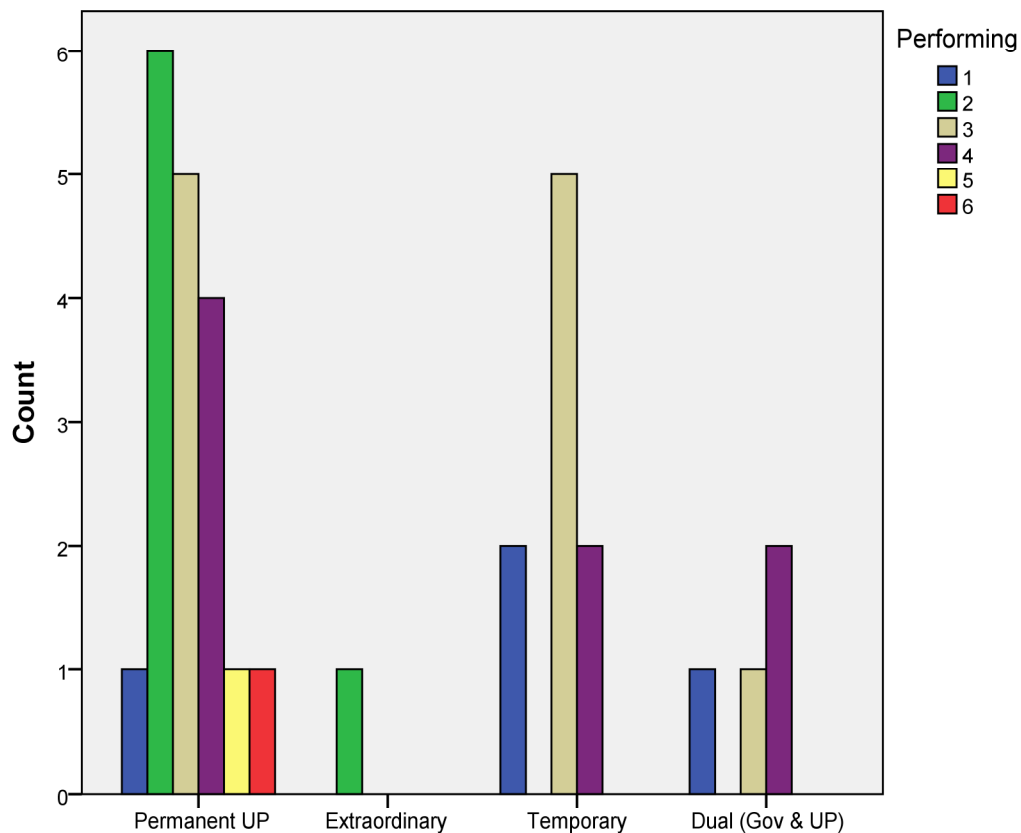
a. 23 cells (95.8%) have expected count less than 5. The minimum expected count is .03.

Symmetric Measures

| | | Value | Asymp. Std. Error ^a | Approx. T ^b | Approx. Sig. ^c |
|----------------------|----------------------|-------|--------------------------------|------------------------|---------------------------|
| Interval by Interval | Pearson's R | -.085 | .172 | -.465 | .645 ^c |
| Ordinal by Ordinal | Spearman Correlation | -.010 | .187 | -.056 | .956 ^c |
| N of Valid Cases | | 32 | | | |

- a. Not assuming the null hypothesis.
- b. Using the asymptotic standard error assuming the null hypothesis.
- c. Based on normal approximation.

Bar Chart



V45

Professional identity / qualification * Performing

Crosstab

Count

| | | Performing | | | | |
|---------------------------------------|---|------------|---|----|---|---|
| | | 1 | 2 | 3 | 4 | 5 |
| Professional identity / qualification | 1 | 0 | 1 | 2 | 2 | 0 |
| | 2 | 3 | 5 | 7 | 4 | 1 |
| | 3 | 1 | 1 | 2 | 2 | 0 |
| Total | | 4 | 7 | 11 | 8 | 1 |

Crosstab

Count

| | | Performin... | Total |
|---------------------------------------|---|--------------|-------|
| | | 6 | |
| Professional identity / qualification | 1 | 0 | 5 |
| | 2 | 1 | 21 |
| | 3 | 0 | 6 |
| Total | | 1 | 32 |

Chi-Square Tests

| | Value | df | Asymp. Sig. (2-sided) |
|------------------------------|--------------------|----|-----------------------|
| Pearson Chi-Square | 2.897 ^a | 10 | .984 |
| Likelihood Ratio | 4.093 | 10 | .943 |
| Linear-by-Linear Association | .242 | 1 | .623 |
| N of Valid Cases | 32 | | |

a. 16 cells (88.9%) have expected count less than 5. The minimum expected count is .16.

Symmetric Measures

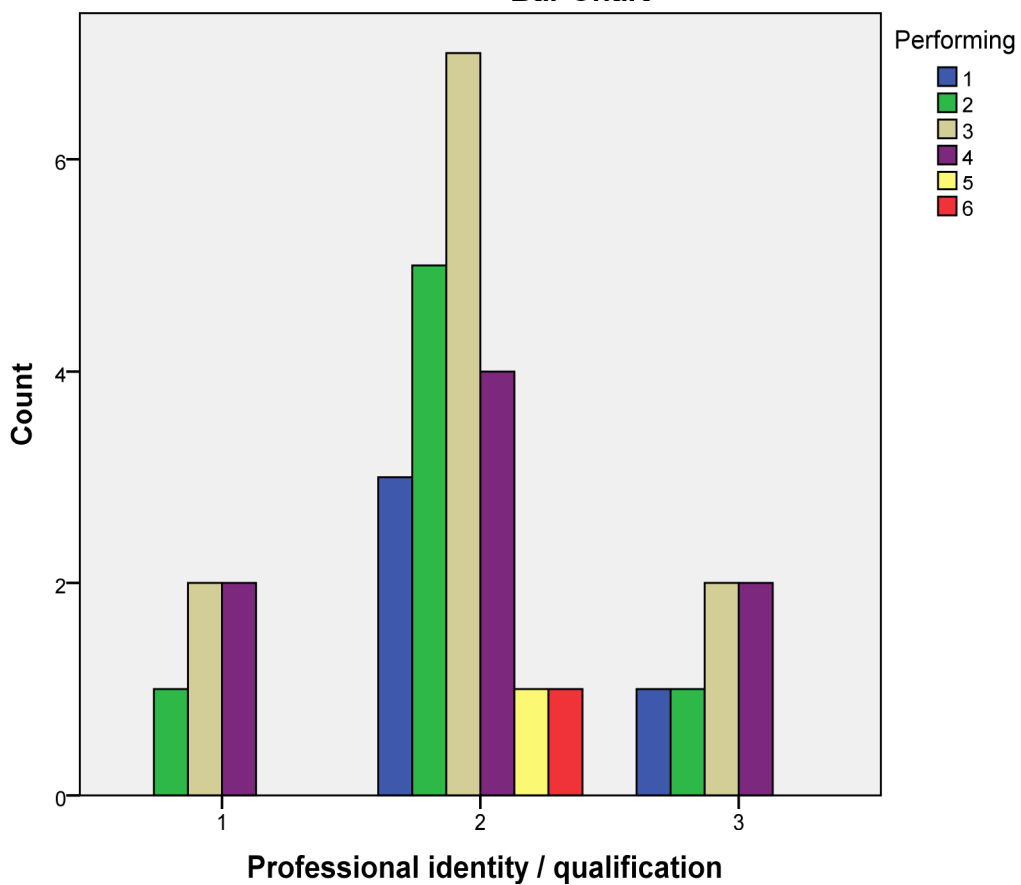
| | | Value | Asymp. Std. Error ^a | Approx. T ^b | Approx. Sig. |
|----------------------|----------------------|-------|--------------------------------|------------------------|-------------------|
| Interval by Interval | Pearson's R | -.088 | .140 | -.486 | .631 ^c |
| Ordinal by Ordinal | Spearman Correlation | -.082 | .161 | -.453 | .654 ^c |
| N of Valid Cases | | 32 | | | |

a. Not assuming the null hypothesis.

b. Using the asymptotic standard error assuming the null hypothesis.

c. Based on normal approximation.

Bar Chart



Age * Performing

Crosstab

| Count | | Performing | | | | | | Total |
|-------|-------|------------|---|----|---|---|---|-------|
| | | 1 | 2 | 3 | 4 | 5 | 6 | |
| Age | 20-29 | 0 | 1 | 1 | 1 | 0 | 0 | 3 |
| | 30-39 | 0 | 0 | 2 | 0 | 0 | 0 | 2 |
| | 40-49 | 1 | 0 | 6 | 6 | 0 | 0 | 13 |
| | 50-59 | 2 | 3 | 2 | 1 | 1 | 0 | 9 |
| | 60 + | 1 | 3 | 0 | 0 | 0 | 1 | 5 |
| Total | | 4 | 7 | 11 | 8 | 1 | 1 | 32 |

Chi-Square Tests

| | Value | df | Asymp. Sig. (2-sided) |
|------------------------------|---------------------|----|-----------------------|
| Pearson Chi-Square | 27.042 ^a | 20 | .134 |
| Likelihood Ratio | 30.255 | 20 | .066 |
| Linear-by-Linear Association | .963 | 1 | .326 |
| N of Valid Cases | 32 | | |

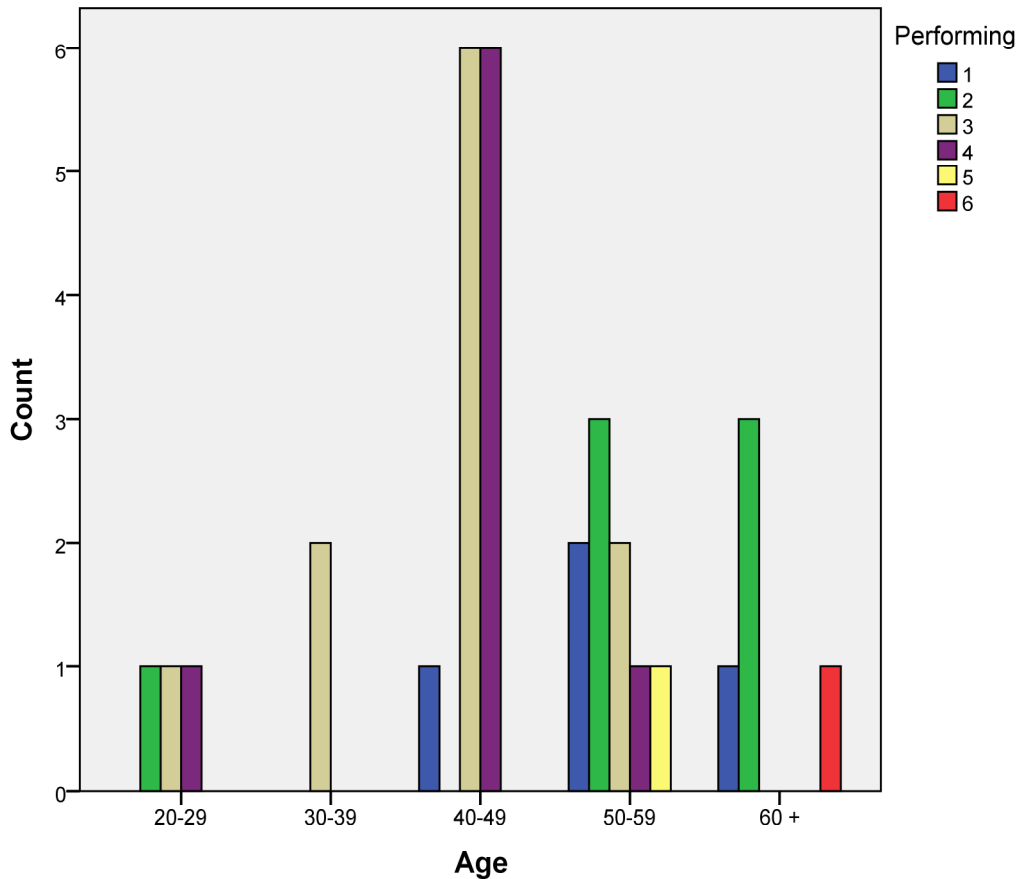
a. 30 cells (100.0%) have expected count less than 5. The minimum expected count is .06.

Symmetric Measures

| | | Value | Asymp. Std. Error ^a | Approx. T ^b | Approx. Sig. ^c |
|----------------------|----------------------|-------|--------------------------------|------------------------|---------------------------|
| Interval by Interval | Pearson's R | -.176 | .199 | -.981 | .334 ^c |
| Ordinal by Ordinal | Spearman Correlation | -.306 | .186 | -1.761 | .088 ^c |
| N of Valid Cases | | 32 | | | |

- a. Not assuming the null hypothesis.
- b. Using the asymptotic standard error assuming the null hypothesis.
- c. Based on normal approximation.

Bar Chart



Academic qualification * Performing

Crosstab

Count

| | | Performing | | | | |
|------------------------|--------------|------------|---|----|---|---|
| | | 1 | 2 | 3 | 4 | 5 |
| Academic qualification | Diploma | 1 | 0 | 2 | 0 | 0 |
| | Bachelor | 0 | 1 | 1 | 2 | 0 |
| | Honours | 1 | 0 | 0 | 2 | 0 |
| | Masters | 2 | 4 | 6 | 2 | 1 |
| | PhD/Doctoral | 0 | 1 | 1 | 1 | 0 |
| | Post Doc | 0 | 1 | 0 | 0 | 0 |
| | Professor | 0 | 0 | 1 | 0 | 0 |
| Total | | 4 | 7 | 11 | 7 | 1 |

Crosstab

Count

| | | Performin... | Total |
|------------------------|--------------|--------------|-------|
| | | 6 | |
| Academic qualification | Diploma | 0 | 3 |
| | Bachelor | 0 | 4 |
| | Honours | 0 | 3 |
| | Masters | 1 | 16 |
| | PhD/Doctoral | 0 | 3 |
| | Post Doc | 0 | 1 |
| | Professor | 0 | 1 |
| Total | | 1 | 31 |

Chi-Square Tests

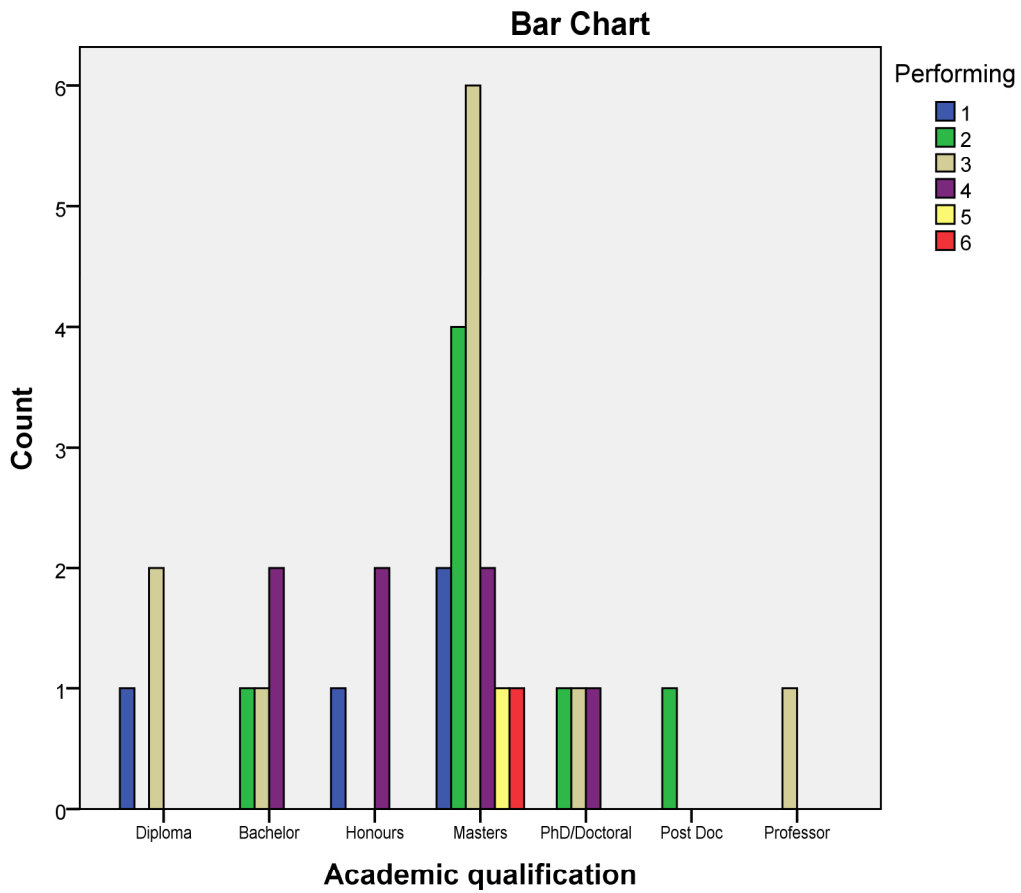
| | Value | df | Asymp. Sig. (2-sided) |
|------------------------------|---------------------|----|-----------------------|
| Pearson Chi-Square | 18.897 ^a | 30 | .942 |
| Likelihood Ratio | 21.444 | 30 | .873 |
| Linear-by-Linear Association | .009 | 1 | .926 |
| N of Valid Cases | 31 | | |

a. 41 cells (97.6%) have expected count less than 5. The minimum expected count is .03.

Symmetric Measures

| | | Value | Asymp. Std. Error ^a | ^b Approx. T | Approx. Sig. |
|----------------------|----------------------|-------|--------------------------------|------------------------|-------------------|
| Interval by Interval | Pearson's R | .017 | .139 | .091 | .928 ^c |
| Ordinal by Ordinal | Spearman Correlation | -.041 | .165 | -.224 | .825 ^c |
| N of Valid Cases | | 31 | | | |

- a. Not assuming the null hypothesis.
- b. Using the asymptotic standard error assuming the null hypothesis.
- c. Based on normal approximation.



CROSSTABS

```

/TABLES=School Gender vv37 Acadpos V45 V97 V111 V112 BY Planning
/FORMAT=AVALUE TABLES
/STATISTICS=CHISQ CORR
/CELLS=COUNT
/COUNT ROUND CELL
/BARCHART.

```

Crosstabs

[DataSet1] E:\Statomet_2013\Hannelie_SPSS\SoC1and2_demo_LoU_new_13April_Hi_low_23Edited.sav

Case Processing Summary

| | Cases | | | | | |
|--|-------|---------|---------|---------|-------|---------|
| | Valid | | Missing | | Total | |
| | N | Percent | N | Percent | N | Percent |
| School * Planning | 32 | 59.3% | 22 | 40.7% | 54 | 100.0% |
| Gender * Planning | 32 | 59.3% | 22 | 40.7% | 54 | 100.0% |
| Lecturing experience * Planning | 32 | 59.3% | 22 | 40.7% | 54 | 100.0% |
| AcadPos * Planning | 32 | 59.3% | 22 | 40.7% | 54 | 100.0% |
| V45 * Planning | 32 | 59.3% | 22 | 40.7% | 54 | 100.0% |
| Professional identity / qualification * Planning | 32 | 59.3% | 22 | 40.7% | 54 | 100.0% |
| Age * Planning | 32 | 59.3% | 22 | 40.7% | 54 | 100.0% |
| Academic qualification * Planning | 31 | 57.4% | 23 | 42.6% | 54 | 100.0% |

School * Planning

Crosstab

Count

| | | Planning | | | | | | Total |
|--------|---|----------|---|---|---|---|---|-------|
| | | 1 | 2 | 3 | 4 | 5 | 6 | |
| School | 1 | 0 | 1 | 0 | 0 | 2 | 0 | 3 |
| | 2 | 1 | 4 | 5 | 0 | 4 | 1 | 15 |
| | 3 | 1 | 3 | 2 | 3 | 3 | 1 | 13 |
| | 4 | 0 | 0 | 0 | 1 | 0 | 0 | 1 |
| Total | | 2 | 8 | 7 | 4 | 9 | 2 | 32 |

Chi-Square Tests

| | Value | df | Asymp. Sig. (2-sided) |
|------------------------------|---------------------|----|-----------------------|
| Pearson Chi-Square | 14.523 ^a | 15 | .486 |
| Likelihood Ratio | 14.181 | 15 | .512 |
| Linear-by-Linear Association | .000 | 1 | 1.000 |
| N of Valid Cases | 32 | | |

a. 24 cells (100.0%) have expected count less than 5. The minimum expected count is .06.

Symmetric Measures

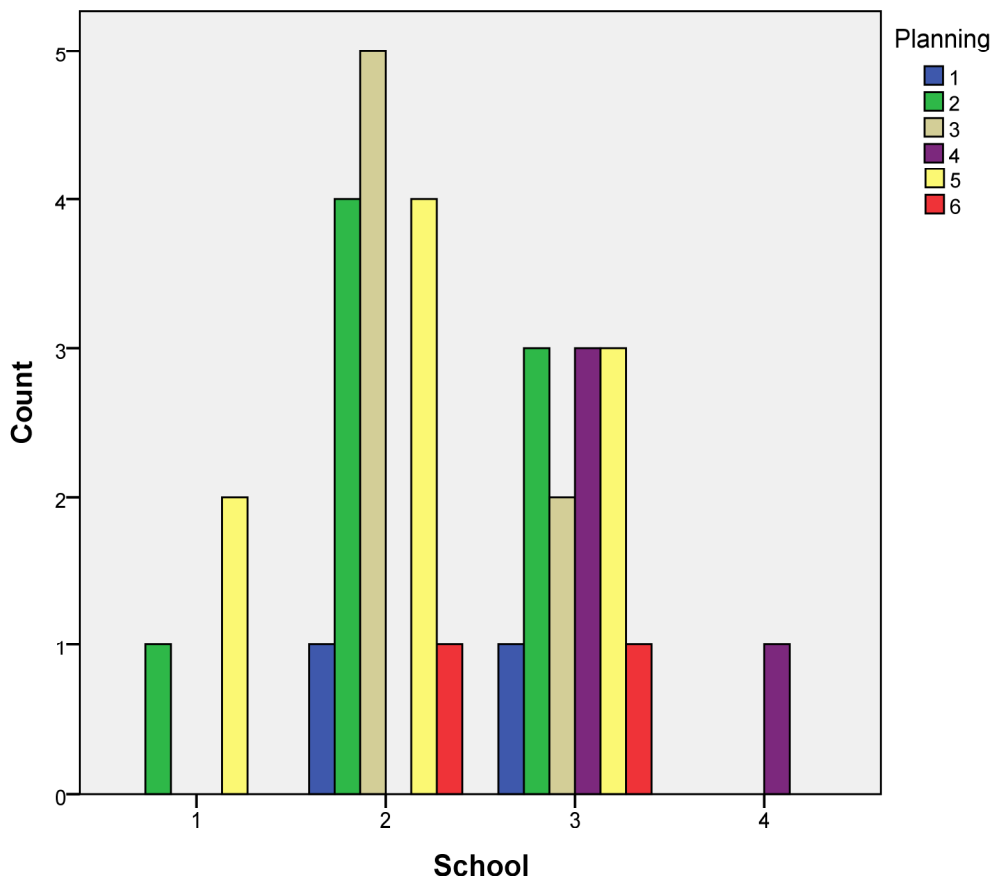
| | | Value | Asymp. Std. Error ^a | Approx. T ^b | Approx. Sig. ^c |
|----------------------|----------------------|-------|--------------------------------|------------------------|---------------------------|
| Interval by Interval | Pearson's R | .000 | .167 | .000 | 1.000 ^c |
| Ordinal by Ordinal | Spearman Correlation | .007 | .177 | .038 | .970 ^c |
| N of Valid Cases | | 32 | | | |

a. Not assuming the null hypothesis.

b. Using the asymptotic standard error assuming the null hypothesis.

c. Based on normal approximation.

Bar Chart



Gender * Planning

Crosstab

Count

| | | Planning | | | | | | Total |
|--------|--------|----------|---|---|---|---|---|-------|
| | | 1 | 2 | 3 | 4 | 5 | 6 | |
| Gender | Female | 1 | 7 | 6 | 2 | 8 | 2 | 26 |
| | Male | 1 | 1 | 1 | 2 | 1 | 0 | 6 |
| Total | | 2 | 8 | 7 | 4 | 9 | 2 | 32 |

Chi-Square Tests

| | Value | df | Asymp. Sig. (2-sided) |
|------------------------------|--------------------|----|-----------------------|
| Pearson Chi-Square | 4.949 ^a | 5 | .422 |
| Likelihood Ratio | 4.518 | 5 | .477 |
| Linear-by-Linear Association | .385 | 1 | .535 |
| N of Valid Cases | 32 | | |

a. 9 cells (75.0%) have expected count less than 5. The minimum expected count is .38.

Symmetric Measures

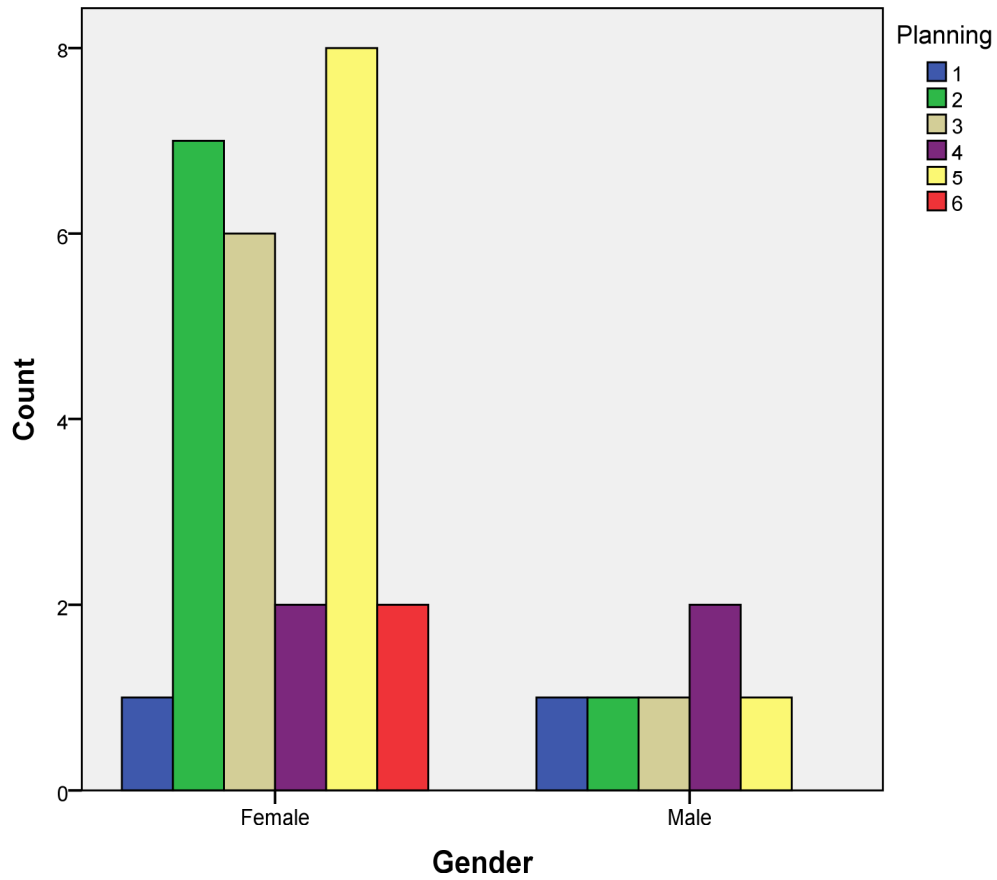
| | | Value | Asymp. Std. Error ^a | Approx. T ^b | Approx. Sig. ^c |
|----------------------|----------------------|-------|--------------------------------|------------------------|---------------------------|
| Interval by Interval | Pearson's R | -.111 | .165 | -.615 | .543 ^c |
| Ordinal by Ordinal | Spearman Correlation | -.107 | .168 | -.588 | .561 ^c |
| N of Valid Cases | | 32 | | | |

a. Not assuming the null hypothesis.

b. Using the asymptotic standard error assuming the null hypothesis.

c. Based on normal approximation.

Bar Chart



Lecturing experience * Planning

Crosstab

| Count | | Planning | | | | |
|----------------------|-------------|----------|---|---|---|---|
| | | 1 | 2 | 3 | 4 | 5 |
| Lecturing experience | ≤5 years | 0 | 1 | 5 | 1 | 2 |
| | 6-10 years | 0 | 3 | 1 | 0 | 2 |
| | 11-15 years | 0 | 2 | 0 | 0 | 2 |
| | 16-20 years | 1 | 1 | 0 | 1 | 1 |
| | ≥ 21 years | 1 | 1 | 1 | 2 | 2 |
| Total | | 2 | 8 | 7 | 4 | 9 |

Crosstab

Count

| | | Planning | Total |
|----------------------|-------------|----------|-------|
| | | 6 | |
| Lecturing experience | ≤5 years | 1 | 10 |
| | 6-10 years | 0 | 6 |
| | 11-15 years | 1 | 5 |
| | 16-20 years | 0 | 4 |
| | ≥ 21 years | 0 | 7 |
| Total | | 2 | 32 |

Chi-Square Tests

| | Value | df | Asymp. Sig. (2-sided) |
|------------------------------|---------------------|----|-----------------------|
| Pearson Chi-Square | 20.030 ^a | 20 | .456 |
| Likelihood Ratio | 22.449 | 20 | .317 |
| Linear-by-Linear Association | .195 | 1 | .659 |
| N of Valid Cases | 32 | | |

a. 30 cells (100.0%) have expected count less than 5. The minimum expected count is .25.

Symmetric Measures

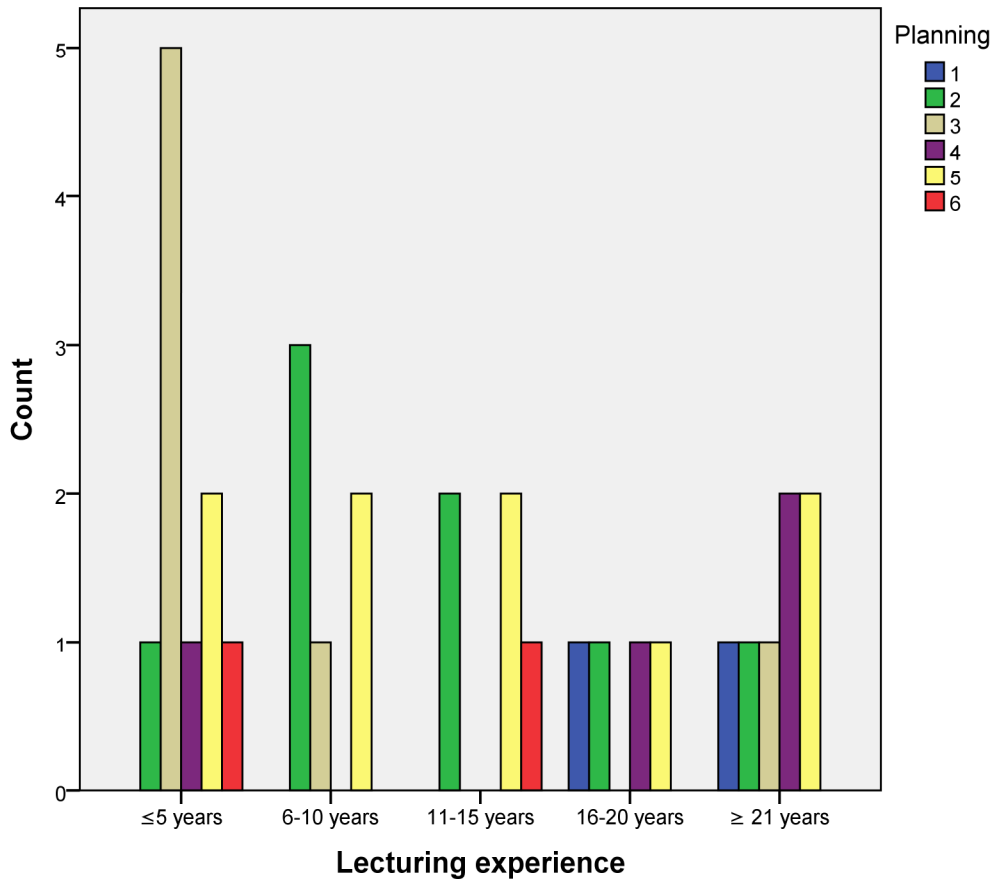
| | | Value | Asymp. Std. Error ^a | Approx. T ^b | Approx. Sig. ^c |
|----------------------|----------------------|-------|--------------------------------|------------------------|---------------------------|
| Interval by Interval | Pearson's R | -.079 | .160 | -.436 | .666 ^c |
| Ordinal by Ordinal | Spearman Correlation | -.078 | .167 | -.430 | .670 ^c |
| N of Valid Cases | | 32 | | | |

a. Not assuming the null hypothesis.

b. Using the asymptotic standard error assuming the null hypothesis.

c. Based on normal approximation.

Bar Chart



AcadPos * Planning

Crosstab

| Count | | Planning | | | | | |
|--------------|---------------------|----------|----------|----------|----------|----------|----------|
| | | 1 | 2 | 3 | 4 | 5 | 6 |
| AcadPos | Junior lecturer | 1 | 2 | 2 | 1 | 1 | 0 |
| | Lecturer | 1 | 4 | 5 | 1 | 6 | 2 |
| | Senior lecturer | 0 | 2 | 0 | 1 | 1 | 0 |
| | Associate Professor | 0 | 0 | 0 | 0 | 1 | 0 |
| | Other | 0 | 0 | 0 | 1 | 0 | 0 |
| Total | | 2 | 8 | 7 | 4 | 9 | 2 |

Crosstab

Count

| | | Total |
|---------|---------------------|-------|
| AcadPos | Junior lecturer | 7 |
| | Lecturer | 19 |
| | Senior lecturer | 4 |
| | Associate Professor | 1 |
| | Other | 1 |
| Total | | 32 |

Chi-Square Tests

| | Value | df | Asymp. Sig. (2-sided) |
|------------------------------|---------------------|----|-----------------------|
| Pearson Chi-Square | 16.031 ^a | 20 | .715 |
| Likelihood Ratio | 14.662 | 20 | .795 |
| Linear-by-Linear Association | .963 | 1 | .326 |
| N of Valid Cases | 32 | | |

a. 29 cells (96.7%) have expected count less than 5. The minimum expected count is .06.

Symmetric Measures

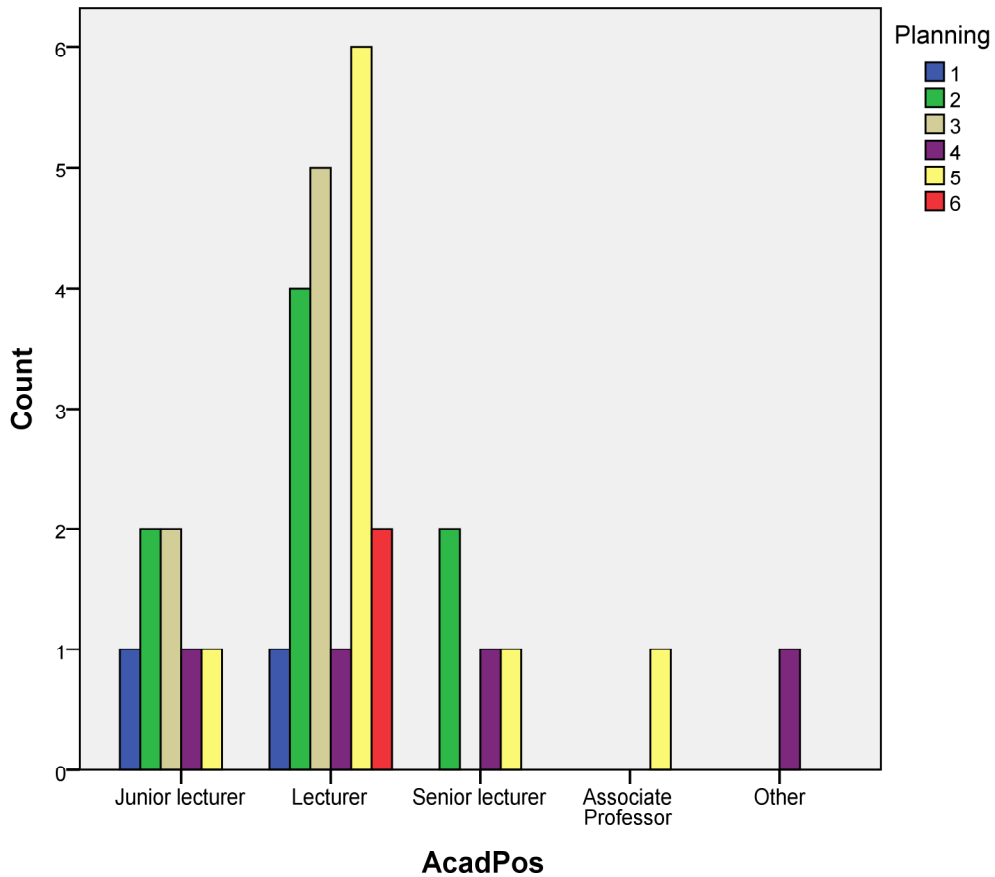
| | | Value | Asymp. Std. Error ^a | Approx. T ^b | Approx. Sig. |
|----------------------|----------------------|-------|--------------------------------|------------------------|-------------------|
| Interval by Interval | Pearson's R | .176 | .101 | .981 | .335 ^c |
| Ordinal by Ordinal | Spearman Correlation | .191 | .157 | 1.068 | .294 ^c |
| N of Valid Cases | | 32 | | | |

a. Not assuming the null hypothesis.

b. Using the asymptotic standard error assuming the null hypothesis.

c. Based on normal approximation.

Bar Chart



V45 * Planning

Crosstab

| Count | | Planning | | | | | |
|-------|-----------------|----------|---|---|---|---|---|
| | | 1 | 2 | 3 | 4 | 5 | 6 |
| V45 | Permanent UP | 1 | 5 | 2 | 4 | 5 | 1 |
| | Extraordinary | 0 | 1 | 0 | 0 | 0 | 0 |
| | Temporary | 0 | 2 | 4 | 0 | 3 | 0 |
| | Dual (Gov & UP) | 1 | 0 | 1 | 0 | 1 | 1 |
| Total | | 2 | 8 | 7 | 4 | 9 | 2 |

Crosstab

| Count | | Total |
|-------|-----------------|-------|
| V45 | Permanent UP | 18 |
| | Extraordinary | 1 |
| | Temporary | 9 |
| | Dual (Gov & UP) | 4 |
| Total | | 32 |

Chi-Square Tests

| | Value | df | Asymp. Sig. (2-sided) |
|------------------------------|---------------------|----|-----------------------|
| Pearson Chi-Square | 15.891 ^a | 15 | .389 |
| Likelihood Ratio | 16.920 | 15 | .324 |
| Linear-by-Linear Association | .001 | 1 | .970 |
| N of Valid Cases | 32 | | |

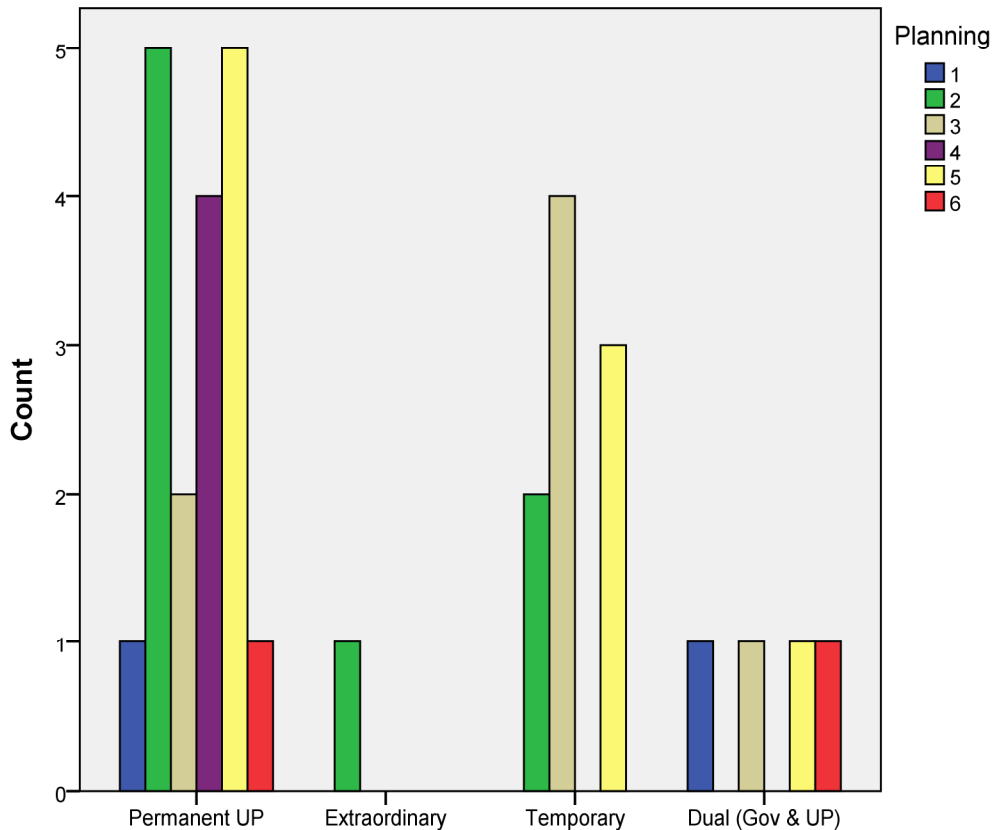
a. 23 cells (95.8%) have expected count less than 5. The minimum expected count is .06.

Symmetric Measures

| | | Value | Asymp. Std. Error ^a | Approx. T ^b | Approx. Sig. ^c |
|----------------------|----------------------|-------|--------------------------------|------------------------|---------------------------|
| Interval by Interval | Pearson's R | -.007 | .190 | -.036 | .971 ^c |
| Ordinal by Ordinal | Spearman Correlation | .013 | .194 | .070 | .945 ^c |
| N of Valid Cases | | 32 | | | |

- a. Not assuming the null hypothesis.
- b. Using the asymptotic standard error assuming the null hypothesis.
- c. Based on normal approximation.

Bar Chart



V45

Professional identity / qualification * Planning

Crosstab

Count

| | | Planning | | | | |
|---------------------------------------|---|----------|---|---|---|---|
| | | 1 | 2 | 3 | 4 | 5 |
| Professional identity / qualification | 1 | 0 | 1 | 1 | 2 | 1 |
| | 2 | 1 | 6 | 6 | 1 | 5 |
| | 3 | 1 | 1 | 0 | 1 | 3 |
| Total | | 2 | 8 | 7 | 4 | 9 |

Crosstab

Count

| | | Planning | Total |
|---------------------------------------|---|----------|-------|
| | | 6 | |
| Professional identity / qualification | 1 | 0 | 5 |
| | 2 | 2 | 21 |
| | 3 | 0 | 6 |
| Total | | 2 | 32 |

Chi-Square Tests

| | Value | df | Asymp. Sig. (2-sided) |
|------------------------------|--------------------|----|-----------------------|
| Pearson Chi-Square | 9.943 ^a | 10 | .446 |
| Likelihood Ratio | 10.876 | 10 | .367 |
| Linear-by-Linear Association | .011 | 1 | .918 |
| N of Valid Cases | 32 | | |

a. 16 cells (88.9%) have expected count less than 5. The minimum expected count is .31.

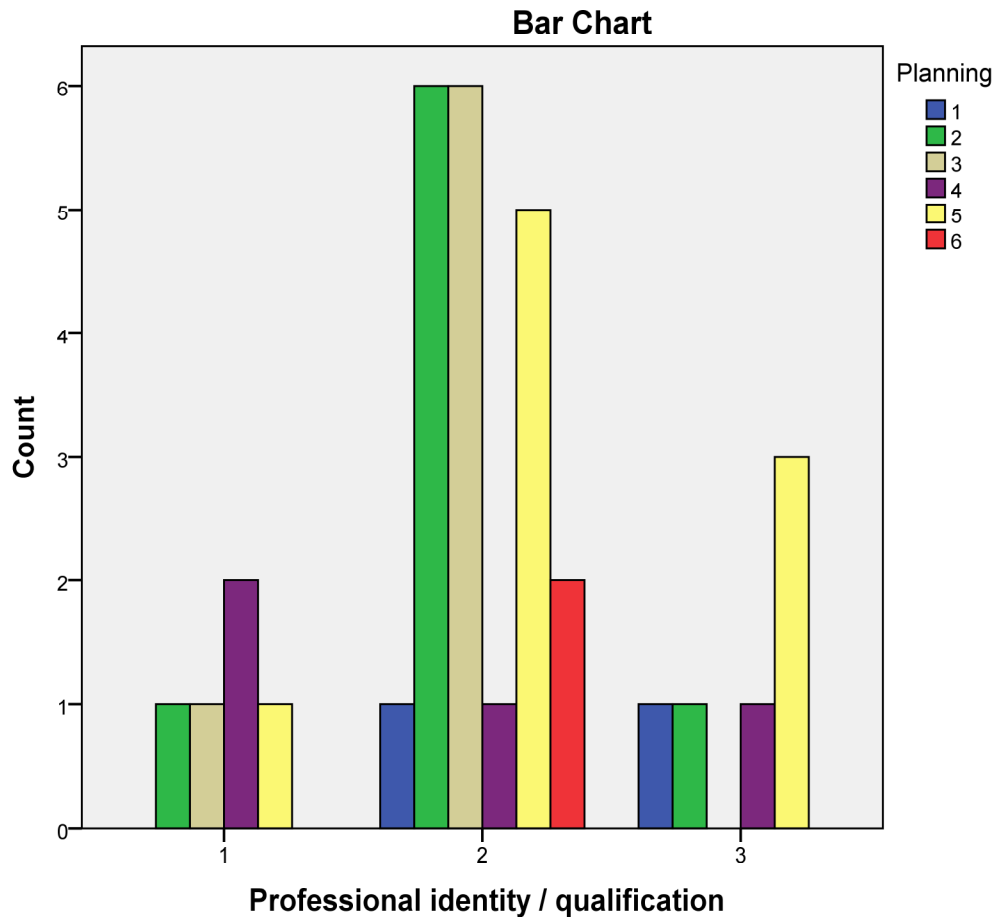
Symmetric Measures

| | | Value | Asymp. Std. Error ^a | Approx. T ^b | Approx. Sig. |
|----------------------|----------------------|-------|--------------------------------|------------------------|-------------------|
| Interval by Interval | Pearson's R | .019 | .167 | .102 | .920 ^c |
| Ordinal by Ordinal | Spearman Correlation | .022 | .173 | .119 | .906 ^c |
| N of Valid Cases | | 32 | | | |

a. Not assuming the null hypothesis.

b. Using the asymptotic standard error assuming the null hypothesis.

c. Based on normal approximation.



Age * Planning

Crosstab

| Count | | Planning | | | | | | Total |
|-------|-------|----------|---|---|---|---|---|-------|
| | | 1 | 2 | 3 | 4 | 5 | 6 | |
| Age | 20-29 | 0 | 1 | 1 | 0 | 1 | 0 | 3 |
| | 30-39 | 0 | 0 | 1 | 1 | 0 | 0 | 2 |
| | 40-49 | 0 | 1 | 4 | 2 | 5 | 1 | 13 |
| | 50-59 | 1 | 4 | 1 | 1 | 2 | 0 | 9 |
| | 60 + | 1 | 2 | 0 | 0 | 1 | 1 | 5 |
| Total | | 2 | 8 | 7 | 4 | 9 | 2 | 32 |

Chi-Square Tests

| | Value | df | Asymp. Sig. (2-sided) |
|------------------------------|---------------------|----|-----------------------|
| Pearson Chi-Square | 16.969 ^a | 20 | .655 |
| Likelihood Ratio | 20.003 | 20 | .458 |
| Linear-by-Linear Association | .674 | 1 | .412 |
| N of Valid Cases | 32 | | |

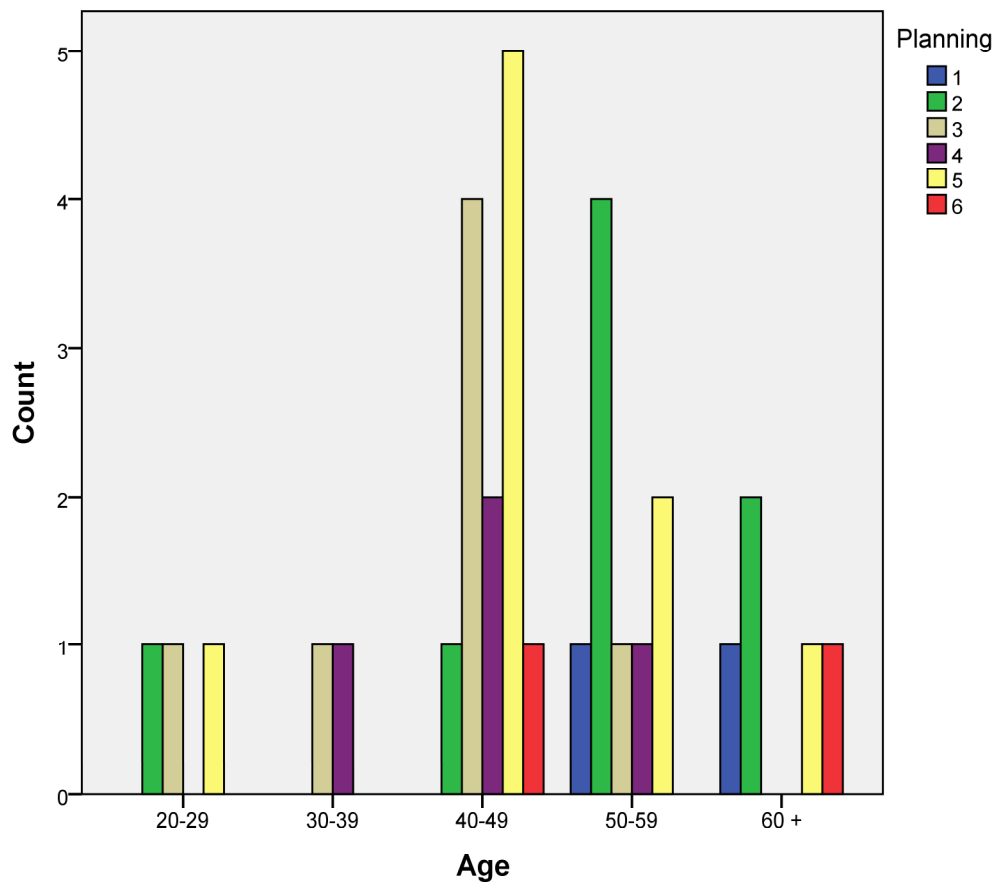
a. 30 cells (100.0%) have expected count less than 5. The minimum expected count is .13.

Symmetric Measures

| | | Value | Asymp. Std. Error ^a | Approx. T ^b | Approx. Sig. ^c |
|----------------------|----------------------|-------|--------------------------------|------------------------|---------------------------|
| Interval by Interval | Pearson's R | -.147 | .187 | -.816 | .421 ^c |
| Ordinal by Ordinal | Spearman Correlation | -.218 | .196 | -1.226 | .230 ^c |
| N of Valid Cases | | 32 | | | |

- a. Not assuming the null hypothesis.
- b. Using the asymptotic standard error assuming the null hypothesis.
- c. Based on normal approximation.

Bar Chart



Academic qualification * Planning

Crosstab

Count

| | | Planning | | | | |
|------------------------|--------------|----------|---|---|---|---|
| | | 1 | 2 | 3 | 4 | 5 |
| Academic qualification | Diploma | 1 | 0 | 1 | 1 | 0 |
| | Bachelor | 0 | 1 | 1 | 1 | 1 |
| | Honours | 0 | 1 | 0 | 2 | 0 |
| | Masters | 1 | 4 | 4 | 0 | 5 |
| | PhD/Doctoral | 0 | 1 | 1 | 0 | 1 |
| | Post Doc | 0 | 1 | 0 | 0 | 0 |
| | Professor | 0 | 0 | 0 | 0 | 1 |
| Total | | 2 | 8 | 7 | 4 | 8 |

Crosstab

Count

| | | Planning | Total |
|------------------------|--------------|----------|-------|
| | | 6 | |
| Academic qualification | Diploma | 0 | 3 |
| | Bachelor | 0 | 4 |
| | Honours | 0 | 3 |
| | Masters | 2 | 16 |
| | PhD/Doctoral | 0 | 3 |
| | Post Doc | 0 | 1 |
| | Professor | 0 | 1 |
| Total | | 2 | 31 |

Chi-Square Tests

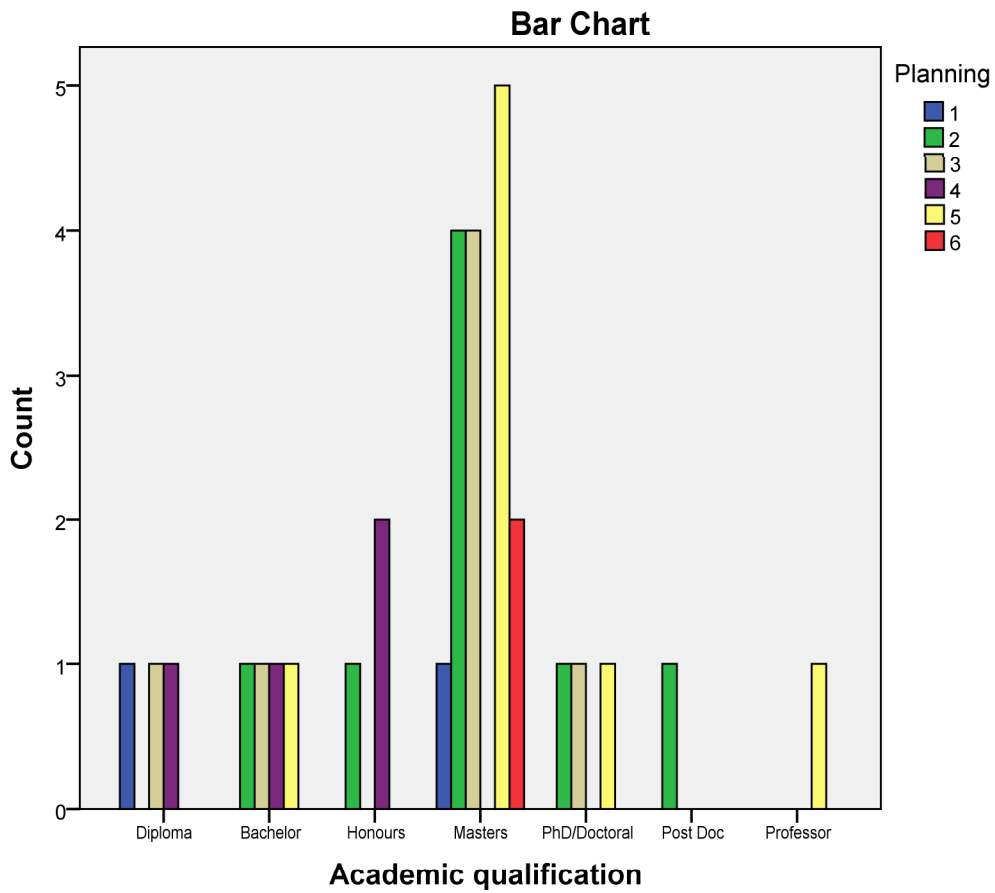
| | Value | df | Asymp. Sig. (2-sided) |
|------------------------------|---------------------|----|-----------------------|
| Pearson Chi-Square | 25.845 ^a | 30 | .683 |
| Likelihood Ratio | 26.719 | 30 | .638 |
| Linear-by-Linear Association | .582 | 1 | .445 |
| N of Valid Cases | 31 | | |

a. 42 cells (100.0%) have expected count less than 5. The minimum expected count is .06.

Symmetric Measures

| | | Value | Asymp. Std. Error ^a | ^b Approx. T | Approx. Sig. |
|----------------------|----------------------|-------|--------------------------------|------------------------|-------------------|
| Interval by Interval | Pearson's R | .139 | .164 | .758 | .455 ^c |
| Ordinal by Ordinal | Spearman Correlation | .093 | .174 | .505 | .618 ^c |
| N of Valid Cases | | 31 | | | |

- a. Not assuming the null hypothesis.
- b. Using the asymptotic standard error assuming the null hypothesis.
- c. Based on normal approximation.



CROSSTABS

```

/TABLES=School Gender vv37 Acadpos V45 V97 V111 V112 BY Sharing
/FORMAT=AVALUE TABLES
/STATISTICS=CHISQ CORR
/CELLS=COUNT
/COUNT ROUND CELL
/BARCHART.

```

Crosstabs

[DataSet1] E:\Statomet_2013\Hannelie_SPSS\SoC1and2_demo_LoU_new_13April_Hi_low_23Edited.sav

Case Processing Summary

| | Cases | | | | | |
|---|-------|---------|---------|---------|-------|---------|
| | Valid | | Missing | | Total | |
| | N | Percent | N | Percent | N | Percent |
| School * Sharing | 27 | 50.0% | 27 | 50.0% | 54 | 100.0% |
| Gender * Sharing | 27 | 50.0% | 27 | 50.0% | 54 | 100.0% |
| Lecturing experience * Sharing | 27 | 50.0% | 27 | 50.0% | 54 | 100.0% |
| AcadPos * Sharing | 27 | 50.0% | 27 | 50.0% | 54 | 100.0% |
| V45 * Sharing | 27 | 50.0% | 27 | 50.0% | 54 | 100.0% |
| Professional identity / qualification * Sharing | 27 | 50.0% | 27 | 50.0% | 54 | 100.0% |
| Age * Sharing | 27 | 50.0% | 27 | 50.0% | 54 | 100.0% |
| Academic qualification * Sharing | 26 | 48.1% | 28 | 51.9% | 54 | 100.0% |

School * Sharing

Crosstab

Count

| | | Sharing | | | | | Total |
|--------|---|---------|---|----|---|---|-------|
| | | 1 | 2 | 3 | 4 | 6 | |
| School | 1 | 1 | 0 | 2 | 0 | 0 | 3 |
| | 2 | 4 | 0 | 7 | 0 | 2 | 13 |
| | 3 | 2 | 1 | 6 | 1 | 0 | 10 |
| | 4 | 0 | 0 | 1 | 0 | 0 | 1 |
| Total | | 7 | 1 | 16 | 1 | 2 | 27 |

Chi-Square Tests

| | Value | df | Asymp. Sig. (2-sided) |
|------------------------------|--------------------|----|-----------------------|
| Pearson Chi-Square | 6.503 ^a | 12 | .889 |
| Likelihood Ratio | 8.057 | 12 | .781 |
| Linear-by-Linear Association | .018 | 1 | .893 |
| N of Valid Cases | 27 | | |

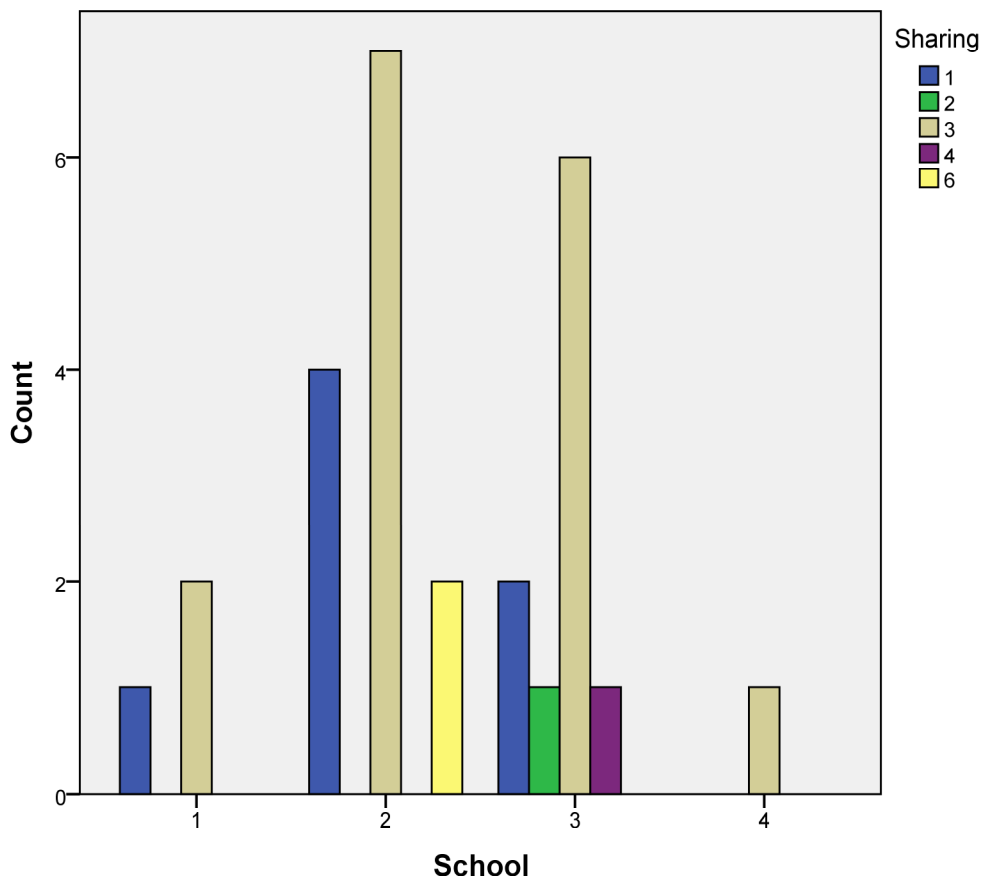
a. 18 cells (90.0%) have expected count less than 5. The minimum expected count is .04.

Symmetric Measures

| | | Value | Asymp. Std. Error ^a | Approx. T ^b | Approx. Sig. ^c |
|----------------------|----------------------|-------|--------------------------------|------------------------|---------------------------|
| Interval by Interval | Pearson's R | .026 | .145 | .132 | .896 ^c |
| Ordinal by Ordinal | Spearman Correlation | .063 | .172 | .313 | .757 ^c |
| N of Valid Cases | | 27 | | | |

- a. Not assuming the null hypothesis.
- b. Using the asymptotic standard error assuming the null hypothesis.
- c. Based on normal approximation.

Bar Chart



Gender * Sharing

Crosstab

Count

| | | Sharing | | | | | Total |
|--------|--------|---------|---|----|---|---|-------|
| | | 1 | 2 | 3 | 4 | 6 | |
| Gender | Female | 6 | 1 | 14 | 1 | 2 | 24 |
| | Male | 1 | 0 | 2 | 0 | 0 | 3 |
| Total | | 7 | 1 | 16 | 1 | 2 | 27 |

Chi-Square Tests

| | Value | df | Asymp. Sig. (2-sided) |
|------------------------------|-------------------|----|-----------------------|
| Pearson Chi-Square | .603 ^a | 4 | .963 |
| Likelihood Ratio | 1.039 | 4 | .904 |
| Linear-by-Linear Association | .264 | 1 | .608 |
| N of Valid Cases | 27 | | |

a. 8 cells (80.0%) have expected count less than 5. The minimum expected count is .11.

Symmetric Measures

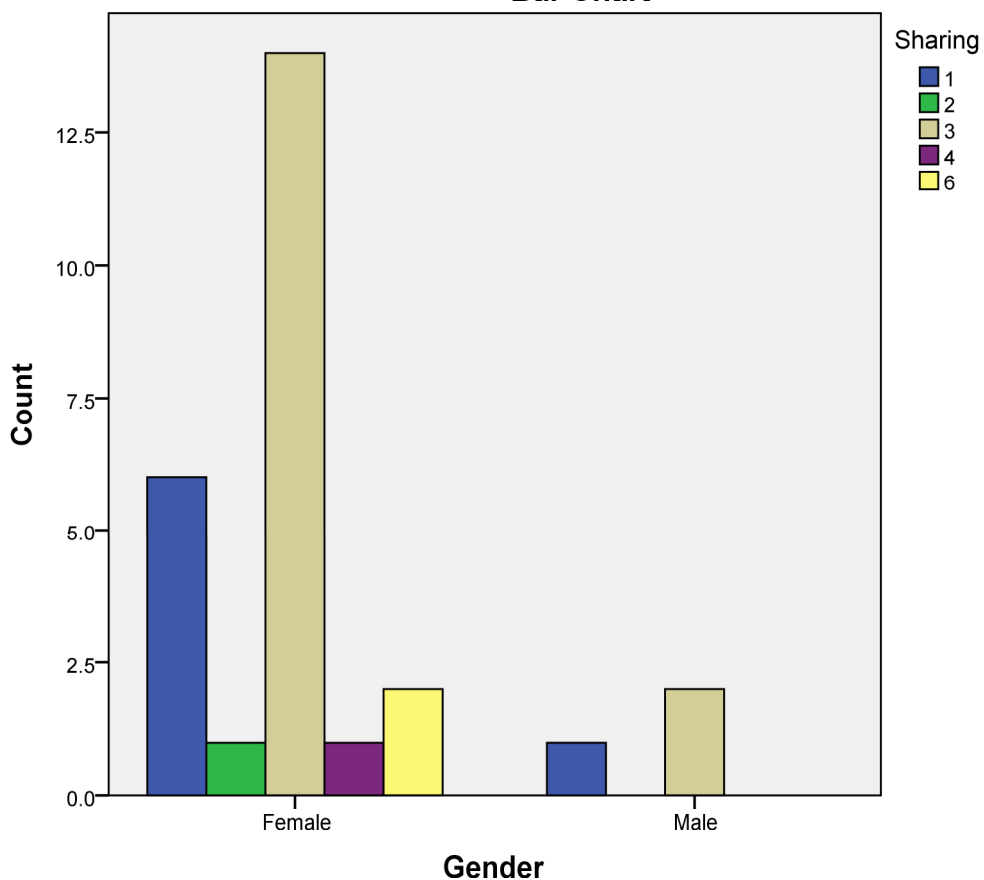
| | | Value | Asymp. Std. Error ^a | Approx. T ^b | Approx. Sig. ^c |
|----------------------|----------------------|-------|--------------------------------|------------------------|---------------------------|
| Interval by Interval | Pearson's R | -.101 | .145 | -.506 | .617 ^c |
| Ordinal by Ordinal | Spearman Correlation | -.086 | .169 | -.431 | .670 ^c |
| N of Valid Cases | | 27 | | | |

a. Not assuming the null hypothesis.

b. Using the asymptotic standard error assuming the null hypothesis.

c. Based on normal approximation.

Bar Chart



Lecturing experience * Sharing

Crosstab

| Count | | Sharing | | | | |
|----------------------|-------------|---------|---|----|---|---|
| | | 1 | 2 | 3 | 4 | 6 |
| Lecturing experience | ≤5 years | 0 | 0 | 7 | 1 | 1 |
| | 6-10 years | 2 | 0 | 4 | 0 | 0 |
| | 11-15 years | 1 | 0 | 1 | 0 | 1 |
| | 16-20 years | 1 | 1 | 2 | 0 | 0 |
| | ≥ 21 years | 3 | 0 | 2 | 0 | 0 |
| Total | | 7 | 1 | 16 | 1 | 2 |

Crosstab

Count

| | | Total |
|----------------------|-------------|-------|
| Lecturing experience | ≤5 years | 9 |
| | 6-10 years | 6 |
| | 11-15 years | 3 |
| | 16-20 years | 4 |
| | ≥ 21 years | 5 |
| Total | | 27 |

Chi-Square Tests

| | Value | df | Asymp. Sig. (2-sided) |
|------------------------------|---------------------|----|-----------------------|
| Pearson Chi-Square | 17.802 ^a | 16 | .336 |
| Likelihood Ratio | 17.652 | 16 | .345 |
| Linear-by-Linear Association | 4.784 | 1 | .029 |
| N of Valid Cases | 27 | | |

a. 24 cells (96.0%) have expected count less than 5. The minimum expected count is .11.

Symmetric Measures

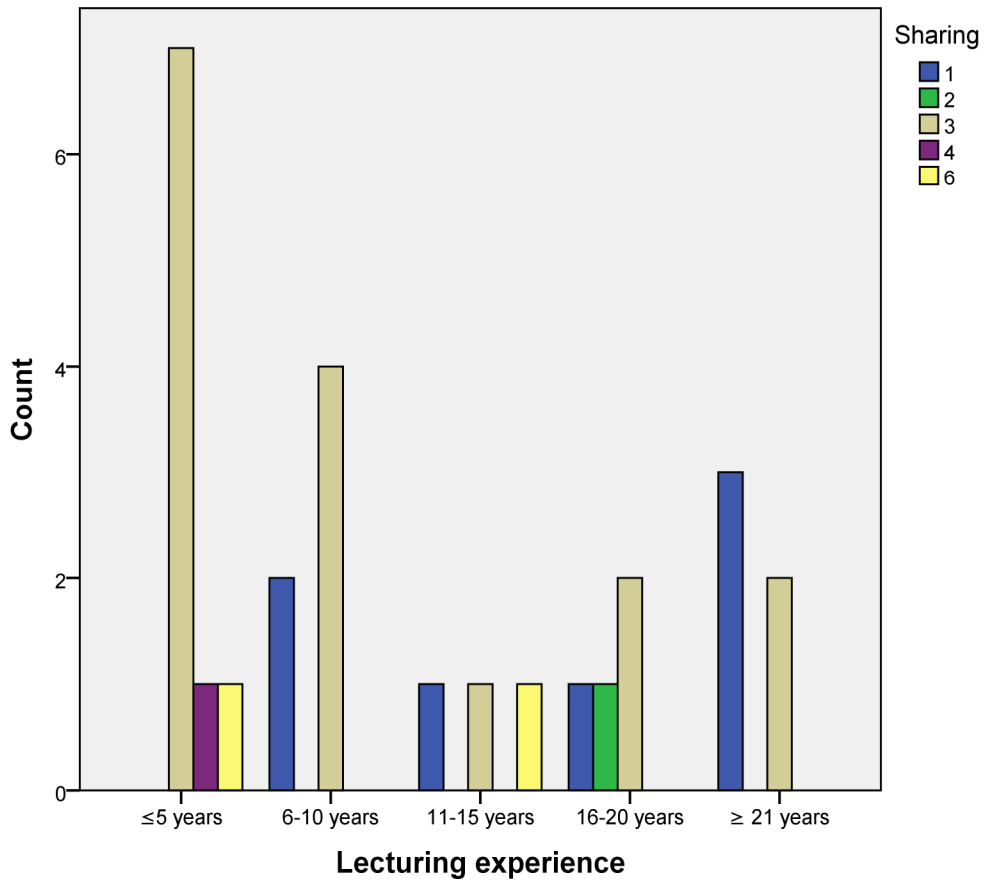
| | | Value | Asymp. Std. Error ^a | Approx. T ^b | Approx. Sig. ^c |
|----------------------|----------------------|-------|--------------------------------|------------------------|---------------------------|
| Interval by Interval | Pearson's R | -.429 | .138 | -2.374 | .026 ^c |
| Ordinal by Ordinal | Spearman Correlation | -.490 | .135 | -2.808 | .010 ^c |
| N of Valid Cases | | 27 | | | |

a. Not assuming the null hypothesis.

b. Using the asymptotic standard error assuming the null hypothesis.

c. Based on normal approximation.

Bar Chart



AcadPos * Sharing

Crosstab

| Count | | Sharing | | | | | Total |
|--------------|---------------------|----------|----------|-----------|----------|----------|-----------|
| | | 1 | 2 | 3 | 4 | 6 | |
| AcadPos | Junior lecturer | 2 | 0 | 4 | 0 | 0 | 6 |
| | Lecturer | 4 | 0 | 8 | 1 | 2 | 15 |
| | Senior lecturer | 1 | 1 | 2 | 0 | 0 | 4 |
| | Associate Professor | 0 | 0 | 1 | 0 | 0 | 1 |
| | Other | 0 | 0 | 1 | 0 | 0 | 1 |
| Total | | 7 | 1 | 16 | 1 | 2 | 27 |

Chi-Square Tests

| | Value | df | Asymp. Sig. (2-sided) |
|------------------------------|--------------------|----|-----------------------|
| Pearson Chi-Square | 9.563 ^a | 16 | .888 |
| Likelihood Ratio | 9.174 | 16 | .906 |
| Linear-by-Linear Association | .092 | 1 | .761 |
| N of Valid Cases | 27 | | |

a. 24 cells (96.0%) have expected count less than 5. The minimum expected count is .04.

Symmetric Measures

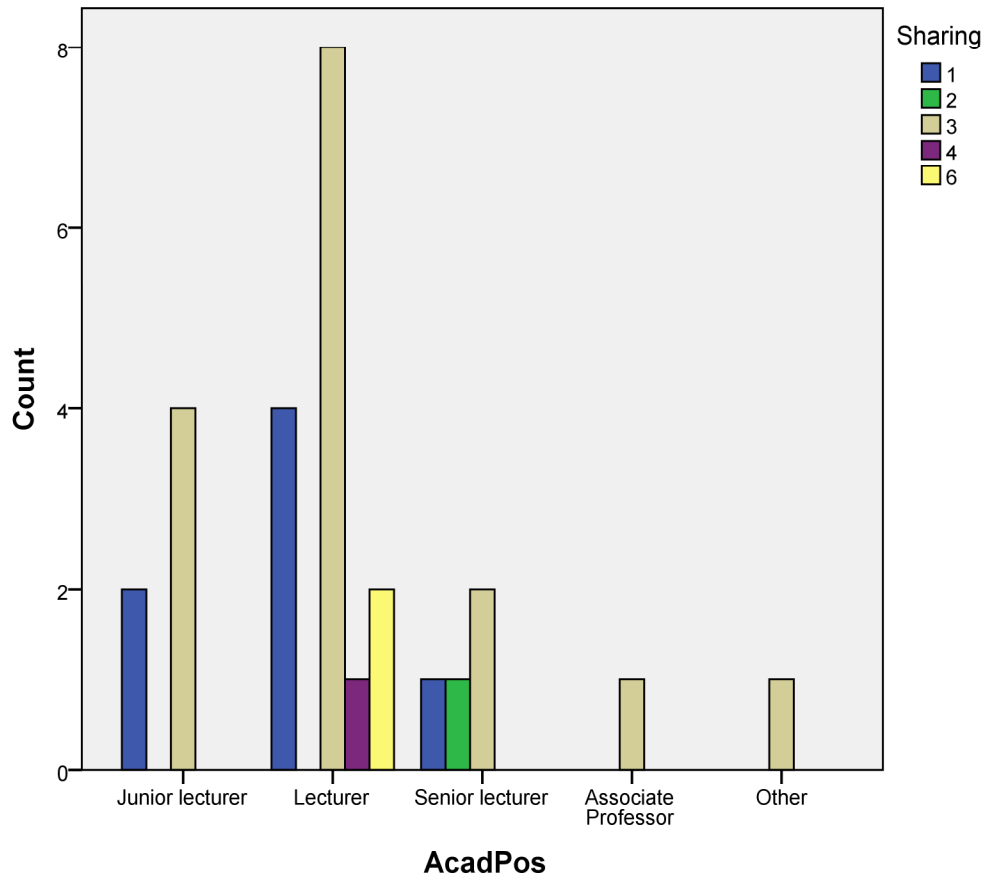
| | | Value | Asymp. Std. Error ^a | Approx. T ^b | Approx. Sig. ^c |
|----------------------|----------------------|-------|--------------------------------|------------------------|---------------------------|
| Interval by Interval | Pearson's R | .060 | .087 | .298 | .768 ^c |
| Ordinal by Ordinal | Spearman Correlation | .048 | .156 | .242 | .811 ^c |
| N of Valid Cases | | 27 | | | |

a. Not assuming the null hypothesis.

b. Using the asymptotic standard error assuming the null hypothesis.

c. Based on normal approximation.

Bar Chart



V45 * Sharing

Crosstab

Count

| | | Sharing | | | | | Total |
|-------|-----------------|---------|---|----|---|---|-------|
| | | 1 | 2 | 3 | 4 | 6 | |
| V45 | Permanent UP | 5 | 1 | 7 | 0 | 1 | 14 |
| | Temporary | 1 | 0 | 6 | 1 | 1 | 9 |
| | Dual (Gov & UP) | 1 | 0 | 3 | 0 | 0 | 4 |
| Total | | 7 | 1 | 16 | 1 | 2 | 27 |

Chi-Square Tests

| | Value | df | Asymp. Sig. (2-sided) |
|------------------------------|--------------------|----|-----------------------|
| Pearson Chi-Square | 5.127 ^a | 8 | .744 |
| Likelihood Ratio | 6.133 | 8 | .632 |
| Linear-by-Linear Association | .859 | 1 | .354 |
| N of Valid Cases | 27 | | |

a. 13 cells (86.7%) have expected count less than 5. The minimum expected count is .15.

Symmetric Measures

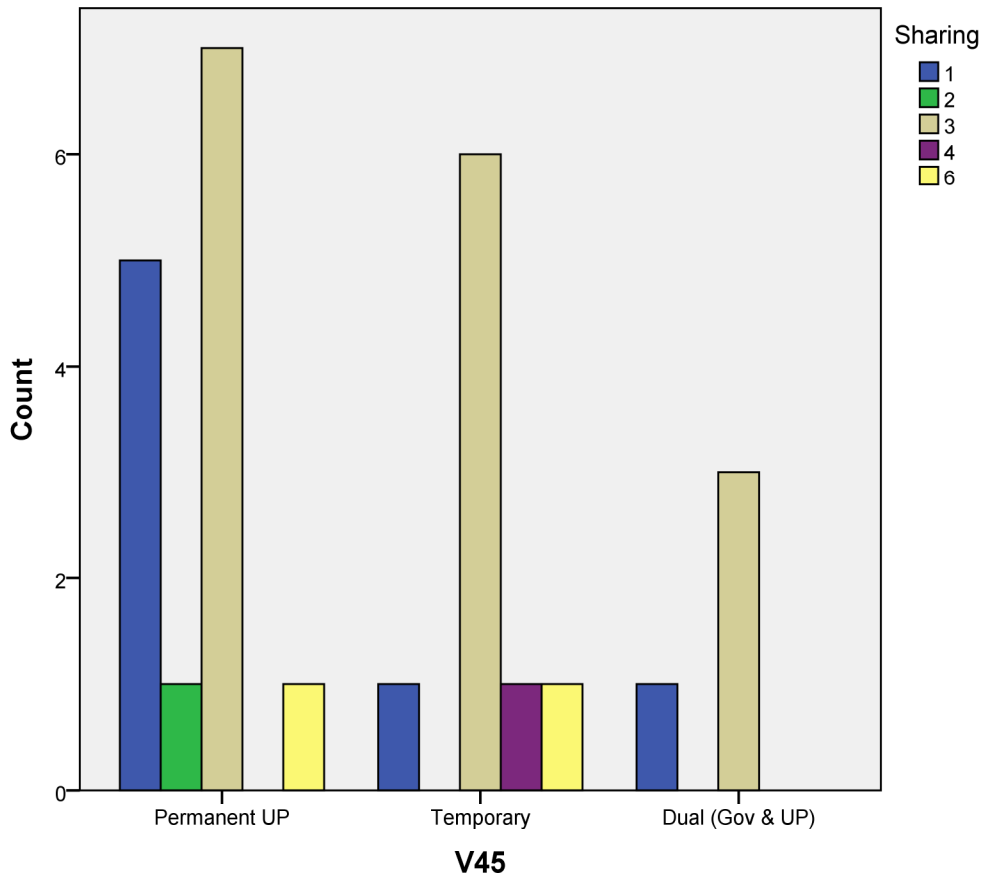
| | | Value | Asymp. Std. Error ^a | Approx. T ^b | Approx. Sig. |
|----------------------|----------------------|-------|--------------------------------|------------------------|-------------------|
| Interval by Interval | Pearson's R | .182 | .184 | .924 | .364 ^c |
| Ordinal by Ordinal | Spearman Correlation | .216 | .182 | 1.108 | .278 ^c |
| N of Valid Cases | | 27 | | | |

a. Not assuming the null hypothesis.

b. Using the asymptotic standard error assuming the null hypothesis.

c. Based on normal approximation.

Bar Chart



Professional identity / qualification * Sharing

Crosstab

| Count | | Sharing | | | | |
|---------------------------------------|---|---------|---|----|---|---|
| | | 1 | 2 | 3 | 4 | 6 |
| Professional identity / qualification | 1 | 0 | 1 | 2 | 0 | 0 |
| | 2 | 6 | 0 | 11 | 0 | 2 |
| | 3 | 1 | 0 | 3 | 1 | 0 |
| Total | | 7 | 1 | 16 | 1 | 2 |

Crosstab

| Count | | Total |
|---------------------------------------|---|-------|
| Professional identity / qualification | 1 | 3 |
| | 2 | 19 |
| | 3 | 5 |
| Total | | 27 |

Chi-Square Tests

| | Value | df | Asymp. Sig. (2-sided) |
|------------------------------|---------------------|----|-----------------------|
| Pearson Chi-Square | 14.356 ^a | 8 | .073 |
| Likelihood Ratio | 11.054 | 8 | .199 |
| Linear-by-Linear Association | .025 | 1 | .873 |
| N of Valid Cases | 27 | | |

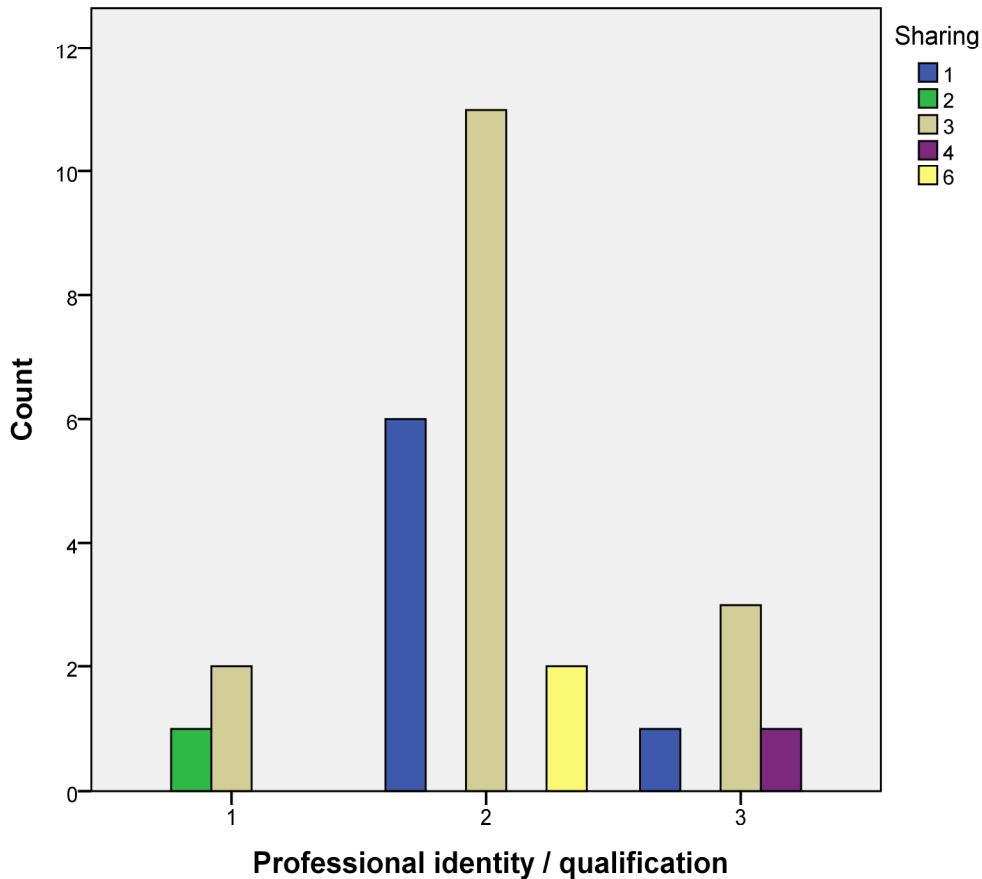
a. 14 cells (93.3%) have expected count less than 5. The minimum expected count is .11.

Symmetric Measures

| | | Value | Asymp. Std. Error ^a | Approx. T ^b | Approx. Sig. ^c |
|----------------------|----------------------|-------|--------------------------------|------------------------|---------------------------|
| Interval by Interval | Pearson's R | .031 | .121 | .157 | .877 ^c |
| Ordinal by Ordinal | Spearman Correlation | .098 | .165 | .490 | .628 ^c |
| N of Valid Cases | | 27 | | | |

- a. Not assuming the null hypothesis.
- b. Using the asymptotic standard error assuming the null hypothesis.
- c. Based on normal approximation.

Bar Chart



Age * Sharing

Crosstab

Count

| | | Sharing | | | | | Total |
|-------|-------|---------|---|----|---|---|-------|
| | | 1 | 2 | 3 | 4 | 6 | |
| Age | 20-29 | 0 | 0 | 2 | 0 | 0 | 2 |
| | 30-39 | 0 | 0 | 1 | 0 | 1 | 2 |
| | 40-49 | 0 | 0 | 10 | 1 | 0 | 11 |
| | 50-59 | 4 | 1 | 3 | 0 | 0 | 8 |
| | 60 + | 3 | 0 | 0 | 0 | 1 | 4 |
| Total | | 7 | 1 | 16 | 1 | 2 | 27 |

Chi-Square Tests

| | Value | df | Asymp. Sig. (2-sided) |
|---------------------------------|---------------------|----|--------------------------|
| Pearson Chi-Square | 26.805 ^a | 16 | .044 |
| Likelihood Ratio | 29.675 | 16 | .020 |
| Linear-by-Linear Association | 4.253 | 1 | .039 |
| N of Valid Cases | 27 | | |

a. 24 cells (96.0%) have expected count less than 5. The minimum expected count is .07.

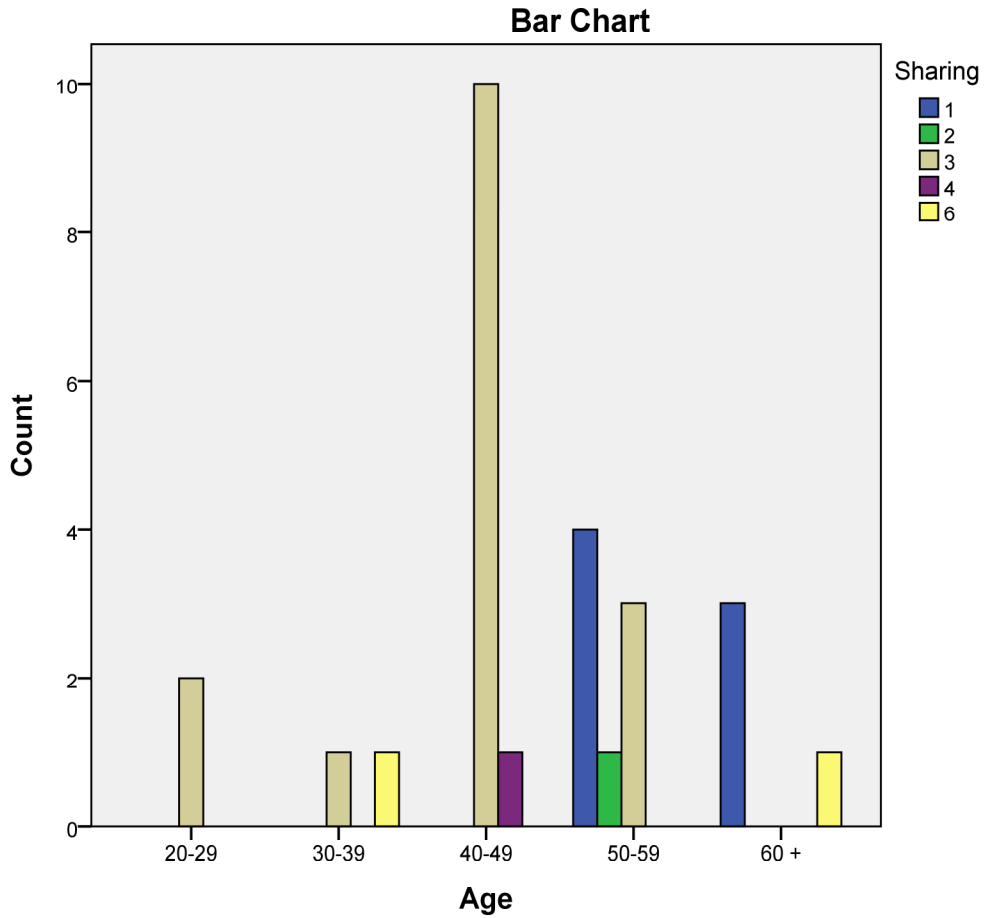
Symmetric Measures

| | | Value | Asymp. Std. Error ^a | Approx. T ^b | Approx. Sig. |
|----------------------|----------------------|-------|-----------------------------------|------------------------|-------------------|
| Interval by Interval | Pearson's R | -.404 | .236 | -2.211 | .036 ^c |
| Ordinal by Ordinal | Spearman Correlation | -.567 | .197 | -3.440 | .002 ^c |
| N of Valid Cases | | 27 | | | |

a. Not assuming the null hypothesis.

b. Using the asymptotic standard error assuming the null hypothesis.

c. Based on normal approximation.



Academic qualification * Sharing

Crosstab

| Count | | Sharing | | | | |
|------------------------|--------------|---------|---|----|---|---|
| | | 1 | 2 | 3 | 4 | 6 |
| Academic qualification | Diploma | 1 | 0 | 2 | 0 | 0 |
| | Bachelor | 0 | 0 | 3 | 0 | 0 |
| | Honours | 1 | 0 | 1 | 0 | 0 |
| | Masters | 4 | 0 | 6 | 1 | 2 |
| | PhD/Doctoral | 0 | 1 | 2 | 0 | 0 |
| | Post Doc | 1 | 0 | 0 | 0 | 0 |
| | Professor | 0 | 0 | 1 | 0 | 0 |
| Total | | 7 | 1 | 15 | 1 | 2 |

Crosstab

Count

| | | Total |
|------------------------|--------------|-------|
| Academic qualification | Diploma | 3 |
| | Bachelor | 3 |
| | Honours | 2 |
| | Masters | 13 |
| | PhD/Doctoral | 3 |
| | Post Doc | 1 |
| | Professor | 1 |
| Total | | 26 |

Chi-Square Tests

| | Value | df | Asymp. Sig. (2-sided) |
|------------------------------|---------------------|----|-----------------------|
| Pearson Chi-Square | 17.270 ^a | 24 | .837 |
| Likelihood Ratio | 16.429 | 24 | .872 |
| Linear-by-Linear Association | .001 | 1 | .981 |
| N of Valid Cases | 26 | | |

a. 34 cells (97.1%) have expected count less than 5. The minimum expected count is .04.

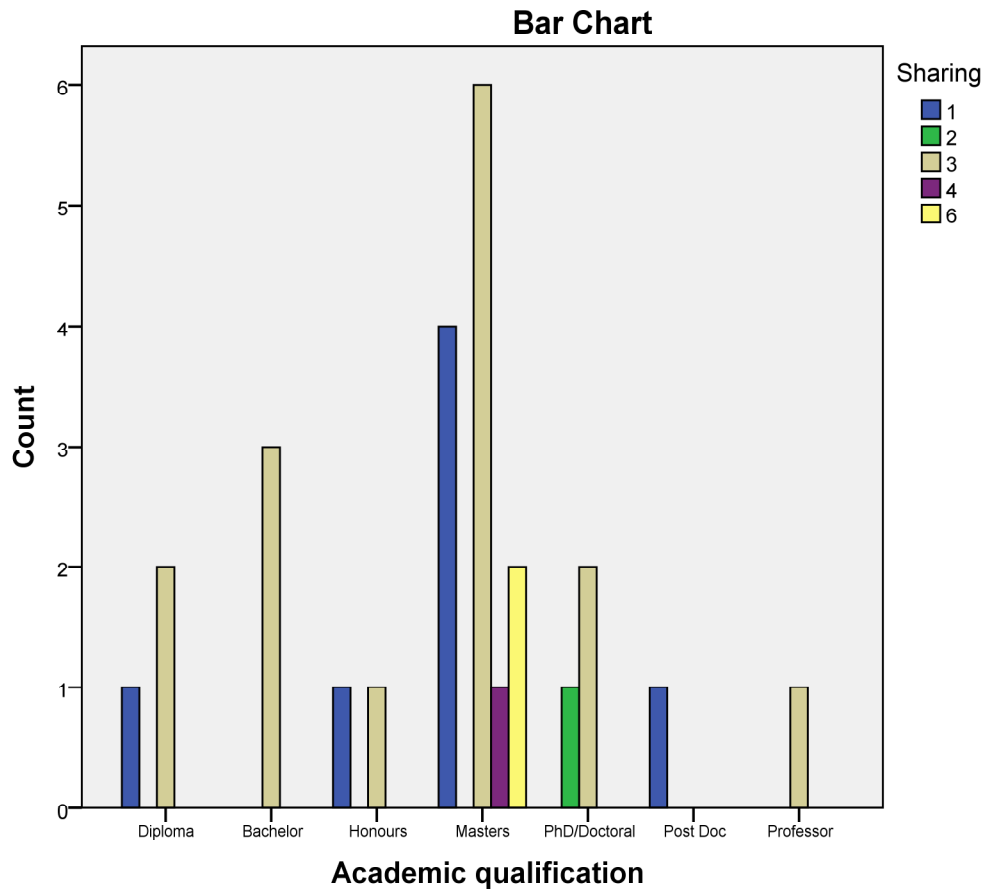
Symmetric Measures

| | | Value | Asymp. Std. Error ^a | Approx. T ^b | Approx. Sig. ^c |
|----------------------|----------------------|-------|--------------------------------|------------------------|---------------------------|
| Interval by Interval | Pearson's R | .005 | .136 | .023 | .982 ^c |
| Ordinal by Ordinal | Spearman Correlation | -.029 | .162 | -.143 | .887 ^c |
| N of Valid Cases | | 26 | | | |

a. Not assuming the null hypothesis.

b. Using the asymptotic standard error assuming the null hypothesis.

c. Based on normal approximation.



CROSSTABS

```

/TABLES=School Gender vv37 Acadpos V45 V97 V111 V112 BY StatusReporting
/FORMAT=AVALUE TABLES
/STATISTICS=CHISQ CORR
/CELLS=COUNT
/COUNT ROUND CELL
/BARCHART.

```

Crosstabs

[DataSet1] E:\Statomet_2013\Hannelie_SPSS\SoCland2_demo_LoU_new_13April_Hi_low_23Edited.sav

Case Processing Summary

| | Cases | | | |
|---|-------|---------|---------|---------|
| | Valid | | Missing | |
| | N | Percent | N | Percent |
| School * StatusReporting | 32 | 59.3% | 22 | 40.7% |
| Gender * StatusReporting | 32 | 59.3% | 22 | 40.7% |
| Lecturing experience * StatusReporting | 32 | 59.3% | 22 | 40.7% |
| AcadPos * StatusReporting | 32 | 59.3% | 22 | 40.7% |
| V45 * StatusReporting | 32 | 59.3% | 22 | 40.7% |
| Professional identity / qualification * StatusReporting | 32 | 59.3% | 22 | 40.7% |
| Age * StatusReporting | 32 | 59.3% | 22 | 40.7% |
| Academic qualification * StatusReporting | 31 | 57.4% | 23 | 42.6% |

Case Processing Summary

| | Cases | |
|---|-------|---------|
| | Total | |
| | N | Percent |
| School * StatusReporting | 54 | 100.0% |
| Gender * StatusReporting | 54 | 100.0% |
| Lecturing experience * StatusReporting | 54 | 100.0% |
| AcadPos * StatusReporting | 54 | 100.0% |
| V45 * StatusReporting | 54 | 100.0% |
| Professional identity / qualification * StatusReporting | 54 | 100.0% |
| Age * StatusReporting | 54 | 100.0% |
| Academic qualification * StatusReporting | 54 | 100.0% |

School * StatusReporting

Crosstab

Count

| | | StatusReporting | | | | | Total | |
|--------|---|-----------------|---|---|---|----|-------|----|
| | | 0 | 1 | 2 | 3 | 4 | | 5 |
| School | 1 | 0 | 0 | 1 | 1 | 0 | 1 | 3 |
| | 2 | 1 | 1 | 4 | 6 | 3 | 0 | 15 |
| | 3 | 0 | 1 | 3 | 2 | 7 | 0 | 13 |
| | 4 | 0 | 0 | 0 | 0 | 1 | 0 | 1 |
| Total | | 1 | 2 | 8 | 9 | 11 | 1 | 32 |

Chi-Square Tests

| | Value | df | Asymp. Sig. (2-sided) |
|------------------------------|---------------------|----|-----------------------|
| Pearson Chi-Square | 17.899 ^a | 15 | .268 |
| Likelihood Ratio | 14.728 | 15 | .471 |
| Linear-by-Linear Association | .705 | 1 | .401 |
| N of Valid Cases | 32 | | |

a. 23 cells (95.8%) have expected count less than 5. The minimum expected count is .03.

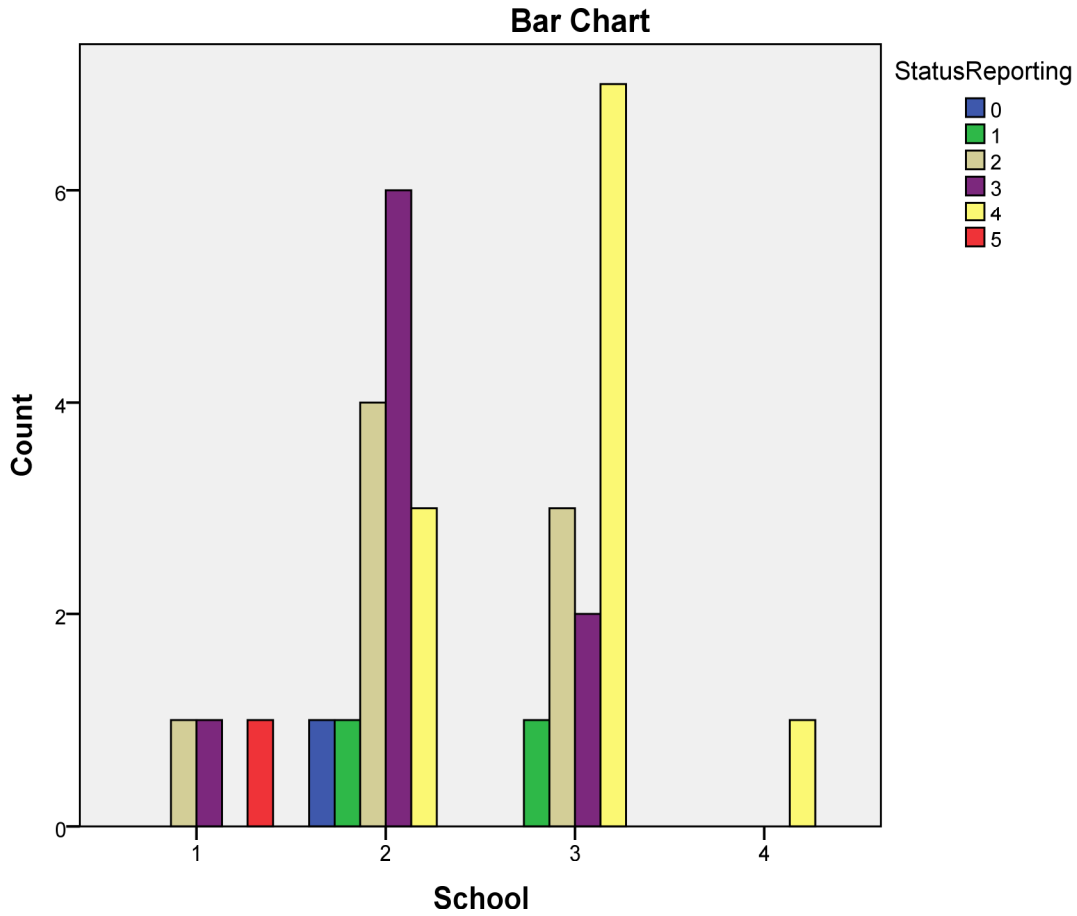
Symmetric Measures

| | | Value | Asymp. Std. Error ^a | Approx. T ^b | Approx. Sig. |
|----------------------|----------------------|-------|--------------------------------|------------------------|-------------------|
| Interval by Interval | Pearson's R | .151 | .184 | .836 | .410 ^c |
| Ordinal by Ordinal | Spearman Correlation | .205 | .191 | 1.145 | .261 ^c |
| N of Valid Cases | | 32 | | | |

a. Not assuming the null hypothesis.

b. Using the asymptotic standard error assuming the null hypothesis.

c. Based on normal approximation.



Gender * StatusReporting

Crosstab

| Count | | StatusReporting | | | | | | Total |
|--------|--------|-----------------|---|---|---|----|---|-------|
| | | 0 | 1 | 2 | 3 | 4 | 5 | |
| Gender | Female | 1 | 1 | 7 | 7 | 9 | 1 | 26 |
| | Male | 0 | 1 | 1 | 2 | 2 | 0 | 6 |
| Total | | 1 | 2 | 8 | 9 | 11 | 1 | 32 |

Chi-Square Tests

| | Value | df | Asymp. Sig. (2-sided) |
|------------------------------|--------------------|----|-----------------------|
| Pearson Chi-Square | 2.022 ^a | 5 | .846 |
| Likelihood Ratio | 2.118 | 5 | .833 |
| Linear-by-Linear Association | .062 | 1 | .803 |
| N of Valid Cases | 32 | | |

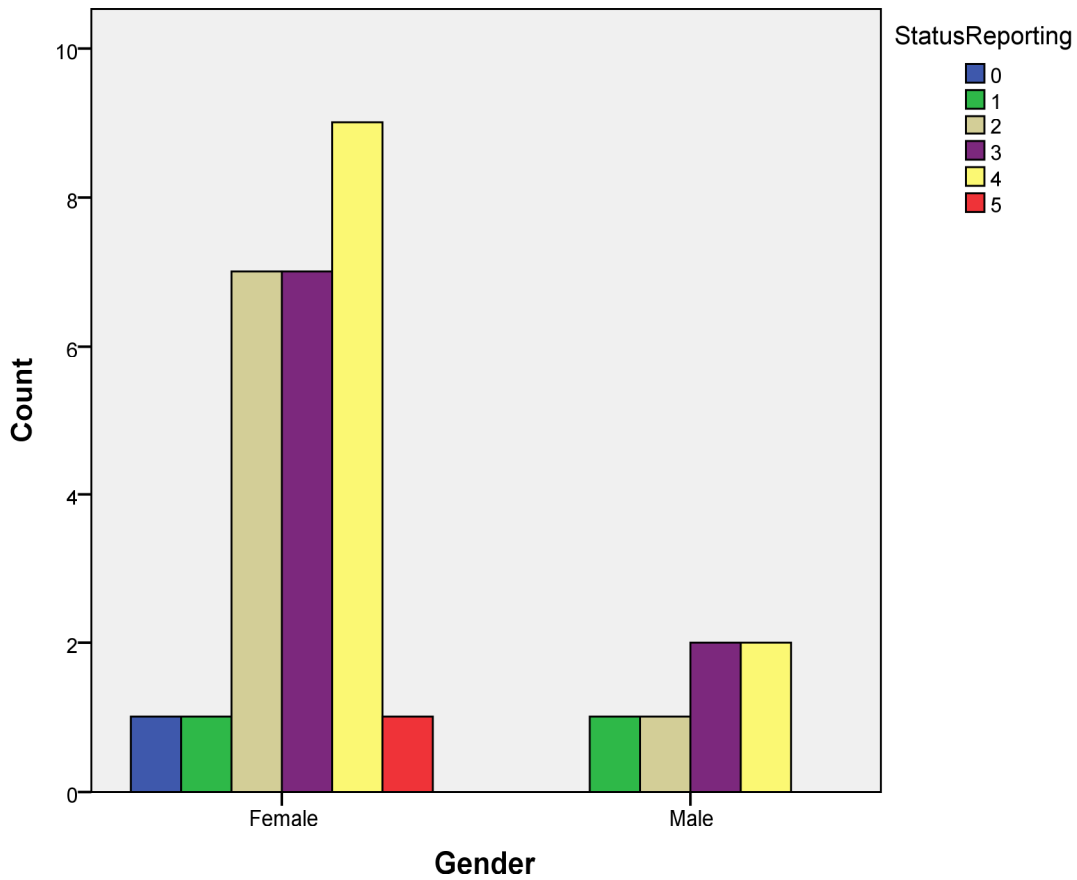
a. 9 cells (75.0%) have expected count less than 5. The minimum expected count is .19.

Symmetric Measures

| | | Value | Asymp. Std. Error ^a | Approx. T ^b | Approx. Sig. |
|----------------------|----------------------|-------|--------------------------------|------------------------|-------------------|
| Interval by Interval | Pearson's R | -.045 | .171 | -.246 | .808 ^c |
| Ordinal by Ordinal | Spearman Correlation | -.045 | .174 | -.248 | .806 ^c |
| N of Valid Cases | | 32 | | | |

- a. Not assuming the null hypothesis.
- b. Using the asymptotic standard error assuming the null hypothesis.
- c. Based on normal approximation.

Bar Chart



Lecturing experience * StatusReporting

Crosstab

Count

| | | StatusReporting | | | | |
|----------------------|-------------|-----------------|---|---|---|----|
| | | 0 | 1 | 2 | 3 | 4 |
| Lecturing experience | ≤5 years | 0 | 0 | 1 | 4 | 5 |
| | 6-10 years | 0 | 1 | 2 | 1 | 1 |
| | 11-15 years | 0 | 0 | 2 | 2 | 1 |
| | 16-20 years | 1 | 0 | 1 | 1 | 1 |
| | ≥ 21 years | 0 | 1 | 2 | 1 | 3 |
| Total | | 1 | 2 | 8 | 9 | 11 |

Crosstab

Count

| | | StatusRe... | Total |
|----------------------|-------------|-------------|-------|
| | | 5 | |
| Lecturing experience | ≤5 years | 0 | 10 |
| | 6-10 years | 1 | 6 |
| | 11-15 years | 0 | 5 |
| | 16-20 years | 0 | 4 |
| | ≥ 21 years | 0 | 7 |
| Total | | 1 | 32 |

Chi-Square Tests

| | Value | df | Asymp. Sig. (2-sided) |
|------------------------------|---------------------|----|-----------------------|
| Pearson Chi-Square | 19.168 ^a | 20 | .511 |
| Likelihood Ratio | 16.346 | 20 | .695 |
| Linear-by-Linear Association | 1.934 | 1 | .164 |
| N of Valid Cases | 32 | | |

a. 30 cells (100.0%) have expected count less than 5. The minimum expected count is .13.

Symmetric Measures

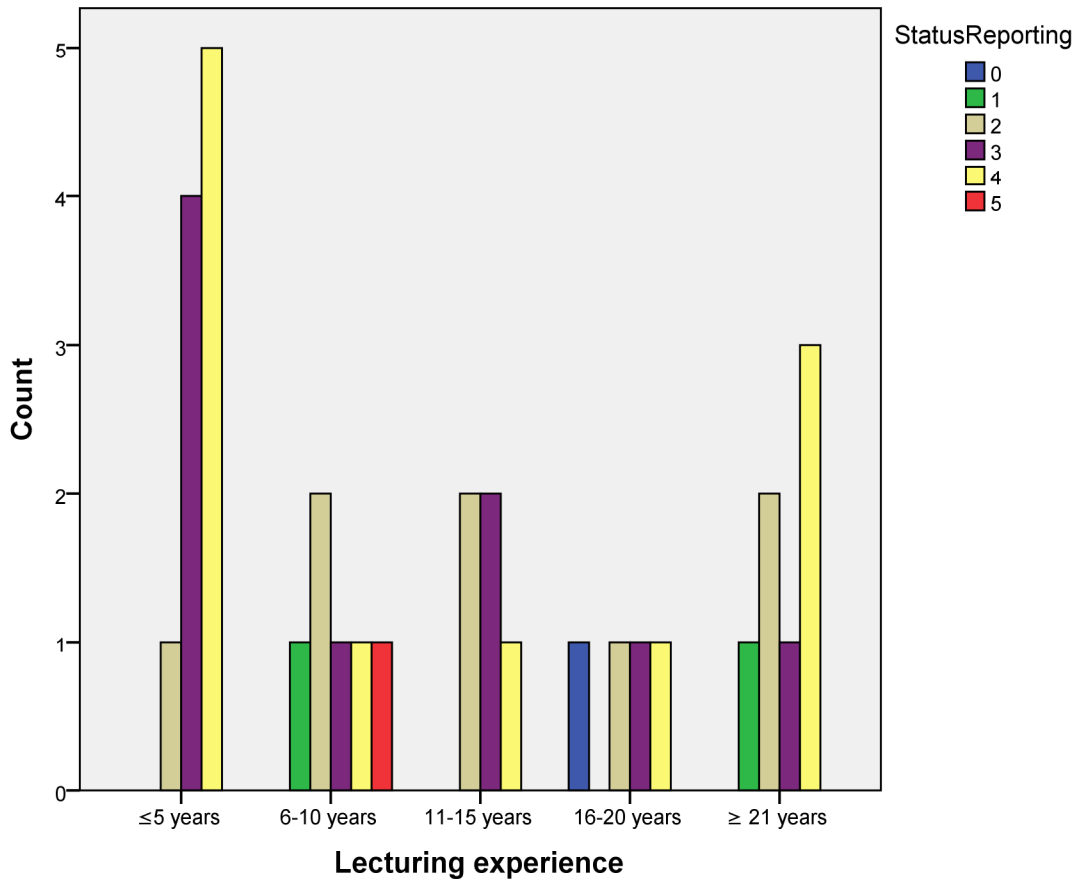
| | | Value | Asymp. Std. Error ^a | Approx. T ^b | Approx. Sig. |
|----------------------|----------------------|-------|--------------------------------|------------------------|-------------------|
| Interval by Interval | Pearson's R | -.250 | .145 | -1.413 | .168 ^c |
| Ordinal by Ordinal | Spearman Correlation | -.220 | .166 | -1.236 | .226 ^c |
| N of Valid Cases | | 32 | | | |

a. Not assuming the null hypothesis.

b. Using the asymptotic standard error assuming the null hypothesis.

c. Based on normal approximation.

Bar Chart



AcadPos * StatusReporting

Crosstab

| Count | | StatusReporting | | | | | |
|--------------|---------------------|-----------------|----------|----------|----------|-----------|----------|
| | | 0 | 1 | 2 | 3 | 4 | 5 |
| AcadPos | Junior lecturer | 1 | 0 | 2 | 2 | 2 | 0 |
| | Lecturer | 0 | 2 | 4 | 7 | 5 | 1 |
| | Senior lecturer | 0 | 0 | 2 | 0 | 2 | 0 |
| | Associate Professor | 0 | 0 | 0 | 0 | 1 | 0 |
| | Other | 0 | 0 | 0 | 0 | 1 | 0 |
| Total | | 1 | 2 | 8 | 9 | 11 | 1 |

Crosstab

Count

| | | Total |
|---------|---------------------|-------|
| AcadPos | Junior lecturer | 7 |
| | Lecturer | 19 |
| | Senior lecturer | 4 |
| | Associate Professor | 1 |
| | Other | 1 |
| Total | | 32 |

Chi-Square Tests

| | Value | df | Asymp. Sig. (2-sided) |
|------------------------------|---------------------|----|-----------------------|
| Pearson Chi-Square | 12.697 ^a | 20 | .890 |
| Likelihood Ratio | 14.301 | 20 | .815 |
| Linear-by-Linear Association | 2.068 | 1 | .150 |
| N of Valid Cases | 32 | | |

a. 28 cells (93.3%) have expected count less than 5. The minimum expected count is .03.

Symmetric Measures

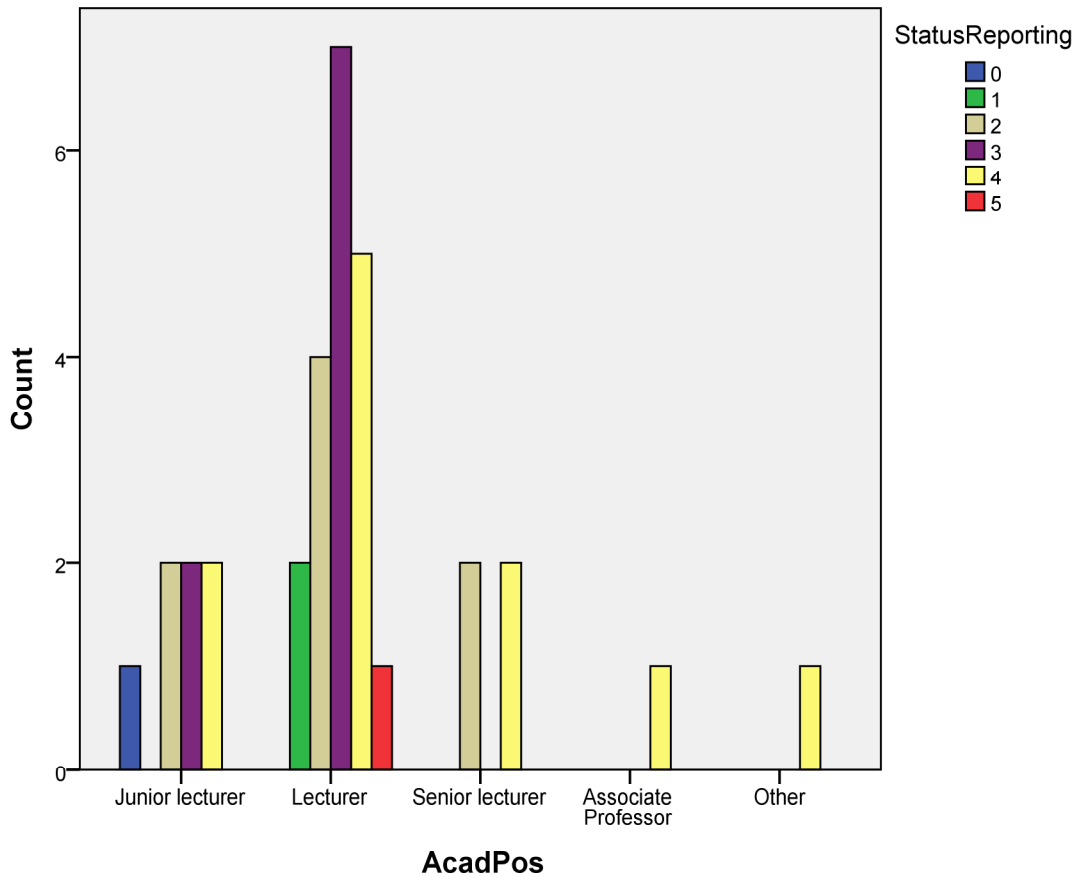
| | | Value | Asymp. Std. Error ^a | Approx. T ^b | Approx. Sig. ^c |
|----------------------|----------------------|-------|--------------------------------|------------------------|---------------------------|
| Interval by Interval | Pearson's R | .258 | .113 | 1.464 | .154 ^c |
| Ordinal by Ordinal | Spearman Correlation | .211 | .174 | 1.184 | .246 ^c |
| N of Valid Cases | | 32 | | | |

a. Not assuming the null hypothesis.

b. Using the asymptotic standard error assuming the null hypothesis.

c. Based on normal approximation.

Bar Chart



V45 * StatusReporting

Crosstab

| Count | | StatusReporting | | | | | |
|--------------|-----------------|-----------------|----------|----------|----------|-----------|----------|
| | | 0 | 1 | 2 | 3 | 4 | 5 |
| V45 | Permanent UP | 1 | 0 | 6 | 4 | 6 | 1 |
| | Extraordinary | 0 | 0 | 1 | 0 | 0 | 0 |
| | Temporary | 0 | 1 | 1 | 5 | 2 | 0 |
| | Dual (Gov & UP) | 0 | 1 | 0 | 0 | 3 | 0 |
| Total | | 1 | 2 | 8 | 9 | 11 | 1 |

Crosstab

| Count | | Total |
|--------------|-----------------|-----------|
| V45 | Permanent UP | 18 |
| | Extraordinary | 1 |
| | Temporary | 9 |
| | Dual (Gov & UP) | 4 |
| Total | | 32 |

Chi-Square Tests

| | Value | df | Asymp. Sig. (2-sided) |
|------------------------------|---------------------|----|-----------------------|
| Pearson Chi-Square | 16.471 ^a | 15 | .351 |
| Likelihood Ratio | 18.317 | 15 | .246 |
| Linear-by-Linear Association | .030 | 1 | .863 |
| N of Valid Cases | 32 | | |

a. 22 cells (91.7%) have expected count less than 5. The minimum expected count is .03.

Symmetric Measures

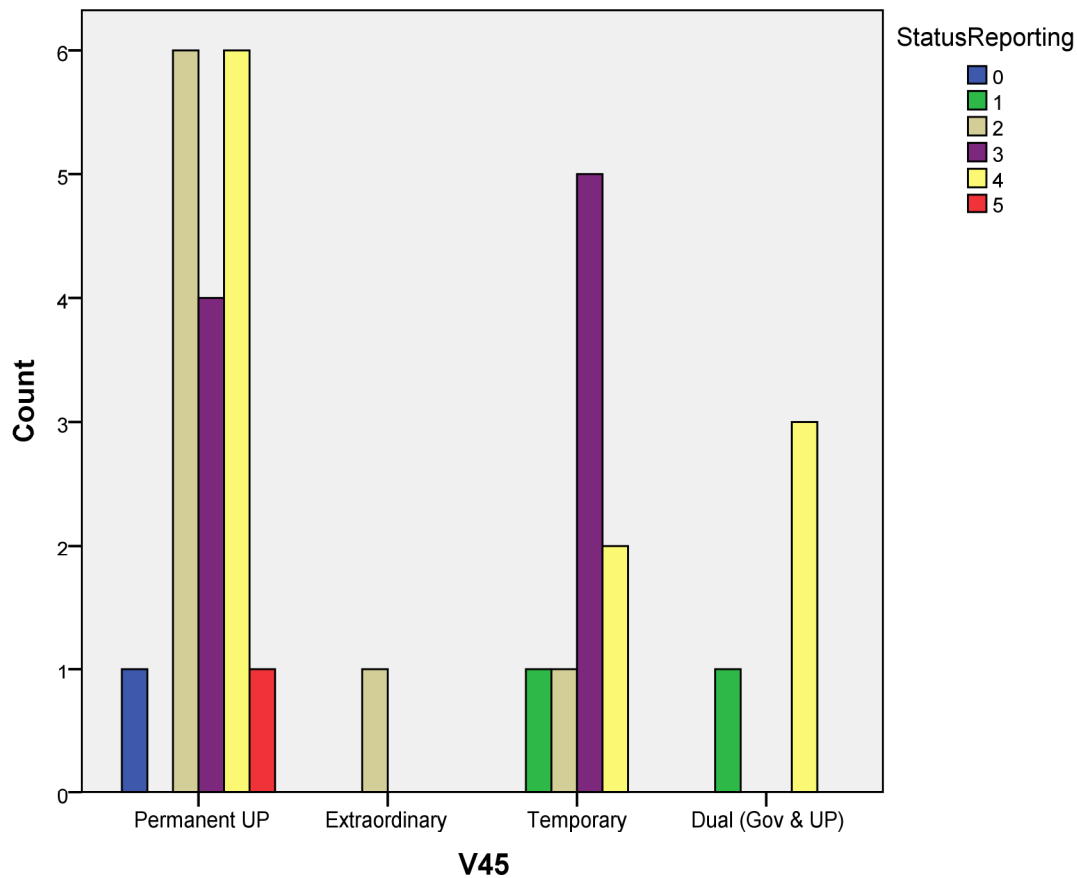
| | | Value | Asymp. Std. Error ^a | Approx. T ^b | Approx. Sig. ^c |
|----------------------|----------------------|-------|--------------------------------|------------------------|---------------------------|
| Interval by Interval | Pearson's R | .031 | .183 | .170 | .866 ^c |
| Ordinal by Ordinal | Spearman Correlation | .053 | .190 | .292 | .772 ^c |
| N of Valid Cases | | 32 | | | |

a. Not assuming the null hypothesis.

b. Using the asymptotic standard error assuming the null hypothesis.

c. Based on normal approximation.

Bar Chart



Professional identity / qualification * StatusReporting

Crosstab

Count

| | | StatusReporting | | | | |
|---------------------------------------|---|-----------------|---|---|---|----|
| | | 0 | 1 | 2 | 3 | 4 |
| Professional identity / qualification | 1 | 0 | 0 | 1 | 2 | 2 |
| | 2 | 1 | 1 | 6 | 7 | 5 |
| | 3 | 0 | 1 | 1 | 0 | 4 |
| Total | | 1 | 2 | 8 | 9 | 11 |

Crosstab

Count

| | | StatusRe... | Total |
|---------------------------------------|---|-------------|-------|
| | | 5 | |
| Professional identity / qualification | 1 | 0 | 5 |
| | 2 | 1 | 21 |
| | 3 | 0 | 6 |
| Total | | 1 | 32 |

Chi-Square Tests

| | Value | df | Asymp. Sig. (2-sided) |
|------------------------------|--------------------|----|-----------------------|
| Pearson Chi-Square | 7.489 ^a | 10 | .679 |
| Likelihood Ratio | 9.468 | 10 | .488 |
| Linear-by-Linear Association | .000 | 1 | .987 |
| N of Valid Cases | 32 | | |

a. 15 cells (83.3%) have expected count less than 5. The minimum expected count is .16.

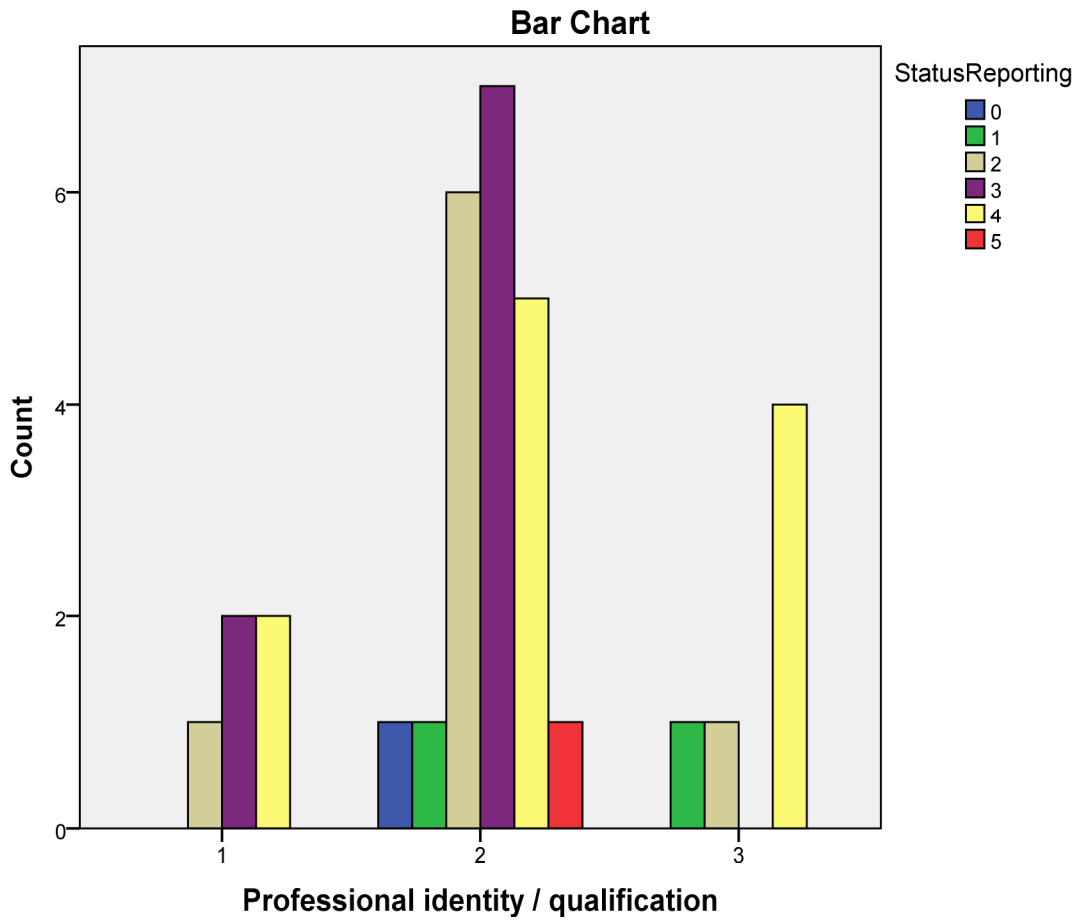
Symmetric Measures

| | | Value | Asymp. Std. Error ^a | Approx. T ^b | Approx. Sig. |
|----------------------|----------------------|-------|--------------------------------|------------------------|-------------------|
| Interval by Interval | Pearson's R | .003 | .165 | .016 | .987 ^c |
| Ordinal by Ordinal | Spearman Correlation | .039 | .186 | .213 | .833 ^c |
| N of Valid Cases | | 32 | | | |

a. Not assuming the null hypothesis.

b. Using the asymptotic standard error assuming the null hypothesis.

c. Based on normal approximation.



Age * StatusReporting

Crosstab

| Count | | StatusReporting | | | | | | Total |
|-------|-------|-----------------|---|---|---|----|---|-------|
| | | 0 | 1 | 2 | 3 | 4 | 5 | |
| Age | 20-29 | 0 | 0 | 1 | 1 | 1 | 0 | 3 |
| | 30-39 | 0 | 0 | 0 | 1 | 1 | 0 | 2 |
| | 40-49 | 0 | 1 | 0 | 5 | 7 | 0 | 13 |
| | 50-59 | 0 | 1 | 4 | 1 | 2 | 1 | 9 |
| | 60 + | 1 | 0 | 3 | 1 | 0 | 0 | 5 |
| Total | | 1 | 2 | 8 | 9 | 11 | 1 | 32 |

Chi-Square Tests

| | Value | df | Asymp. Sig. (2-sided) |
|------------------------------|---------------------|----|-----------------------|
| Pearson Chi-Square | 22.197 ^a | 20 | .330 |
| Likelihood Ratio | 25.554 | 20 | .181 |
| Linear-by-Linear Association | 4.061 | 1 | .044 |
| N of Valid Cases | 32 | | |

a. 30 cells (100.0%) have expected count less than 5. The minimum expected count is .06.

Symmetric Measures

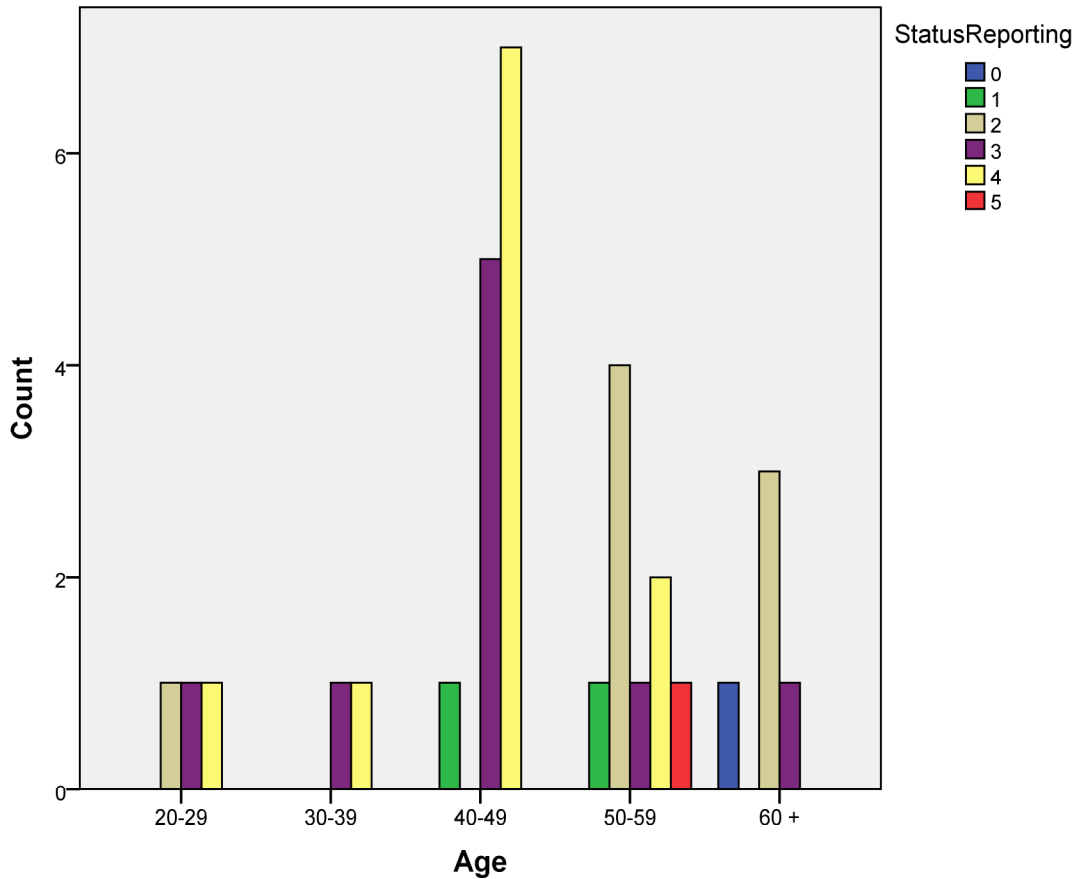
| | | Value | Asymp. Std. Error ^a | Approx. T ^b | Approx. Sig. ^c |
|----------------------|----------------------|-------|--------------------------------|------------------------|---------------------------|
| Interval by Interval | Pearson's R | -.362 | .149 | -2.127 | .042 ^c |
| Ordinal by Ordinal | Spearman Correlation | -.408 | .156 | -2.447 | .020 ^c |
| N of Valid Cases | | 32 | | | |

a. Not assuming the null hypothesis.

b. Using the asymptotic standard error assuming the null hypothesis.

c. Based on normal approximation.

Bar Chart



Academic qualification * StatusReporting

Crosstab

Count

| | | StatusReporting | | | | |
|------------------------|--------------|-----------------|---|---|---|----|
| | | 0 | 1 | 2 | 3 | 4 |
| Academic qualification | Diploma | 1 | 0 | 0 | 1 | 1 |
| | Bachelor | 0 | 0 | 1 | 1 | 2 |
| | Honours | 0 | 0 | 1 | 0 | 2 |
| | Masters | 0 | 2 | 4 | 6 | 3 |
| | PhD/Doctoral | 0 | 0 | 1 | 1 | 1 |
| | Post Doc | 0 | 0 | 1 | 0 | 0 |
| | Professor | 0 | 0 | 0 | 0 | 1 |
| Total | | 1 | 2 | 8 | 9 | 10 |

Crosstab

Count

| | | StatusRe... | Total |
|------------------------|--------------|-------------|-------|
| | | 5 | |
| Academic qualification | Diploma | 0 | 3 |
| | Bachelor | 0 | 4 |
| | Honours | 0 | 3 |
| | Masters | 1 | 16 |
| | PhD/Doctoral | 0 | 3 |
| | Post Doc | 0 | 1 |
| | Professor | 0 | 1 |
| Total | | 1 | 31 |

Chi-Square Tests

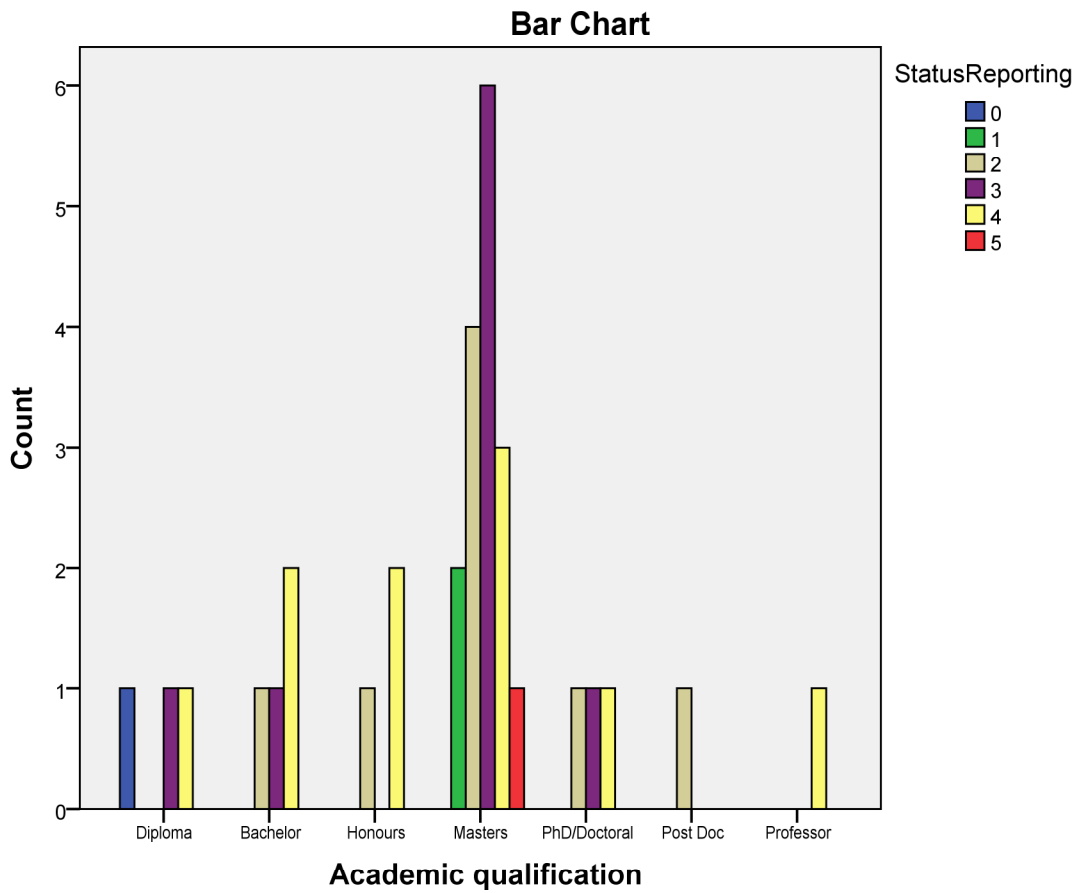
| | Value | df | Asymp. Sig. (2-sided) |
|------------------------------|---------------------|----|-----------------------|
| Pearson Chi-Square | 21.499 ^a | 30 | .872 |
| Likelihood Ratio | 19.175 | 30 | .936 |
| Linear-by-Linear Association | .109 | 1 | .741 |
| N of Valid Cases | 31 | | |

a. 41 cells (97.6%) have expected count less than 5. The minimum expected count is .03.

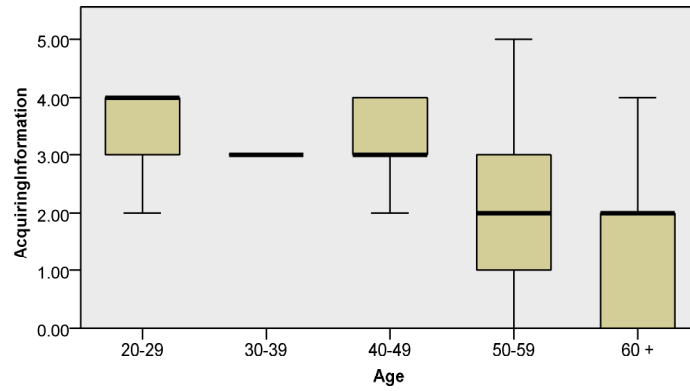
Symmetric Measures

| | | Value | Asymp. Std. Error ^a | Approx. T ^b | Approx. Sig. |
|----------------------|----------------------|-------|--------------------------------|------------------------|-------------------|
| Interval by Interval | Pearson's R | .060 | .206 | .325 | .747 ^c |
| Ordinal by Ordinal | Spearman Correlation | -.052 | .188 | -.281 | .781 ^c |
| N of Valid Cases | | 31 | | | |

- a. Not assuming the null hypothesis.
- b. Using the asymptotic standard error assuming the null hypothesis.
- c. Based on normal approximation.



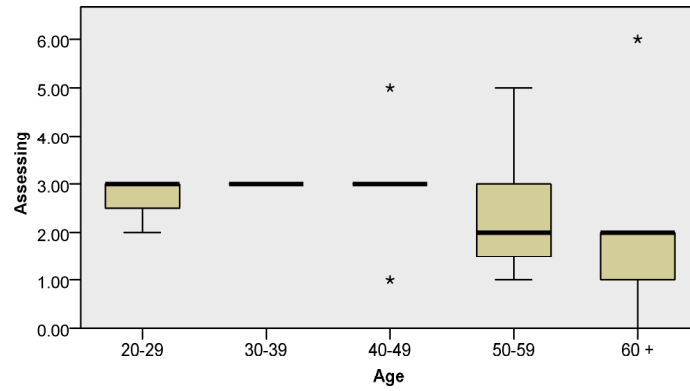
Independent-Samples Kruskal-Wallis Test



| | |
|---------------------------------------|-------|
| Total N | 32 |
| Test Statistic | 7.246 |
| Degrees of Freedom | 4 |
| Asymptotic Sig. (2-sided test) | .123 |

1. The test statistic is adjusted for ties.
2. Multiple comparisons are not performed because the overall test does not show significant differences across samples.

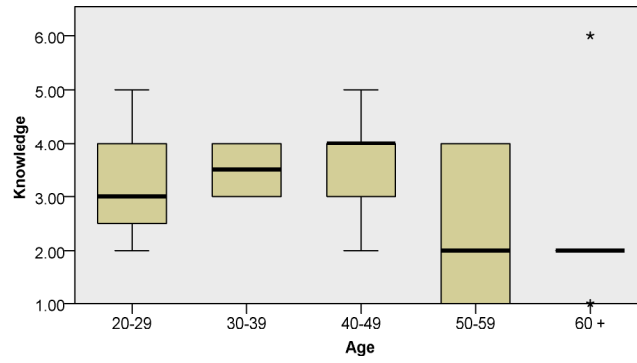
Independent-Samples Kruskal-Wallis Test



| | |
|---------------------------------------|-------|
| Total N | 31 |
| Test Statistic | 6.202 |
| Degrees of Freedom | 4 |
| Asymptotic Sig. (2-sided test) | .185 |

1. The test statistic is adjusted for ties.
2. Multiple comparisons are not performed because the overall test does not show significant differences across samples.

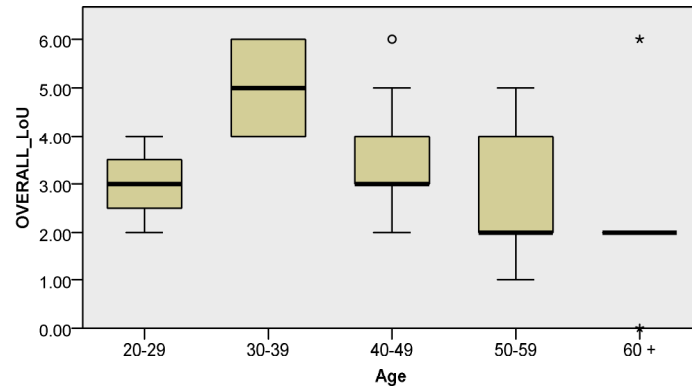
Independent-Samples Kruskal-Wallis Test



| | |
|---------------------------------------|-------|
| Total N | 32 |
| Test Statistic | 6.263 |
| Degrees of Freedom | 4 |
| Asymptotic Sig. (2-sided test) | .180 |

1. The test statistic is adjusted for ties.
2. Multiple comparisons are not performed because the overall test does not show significant differences across samples.

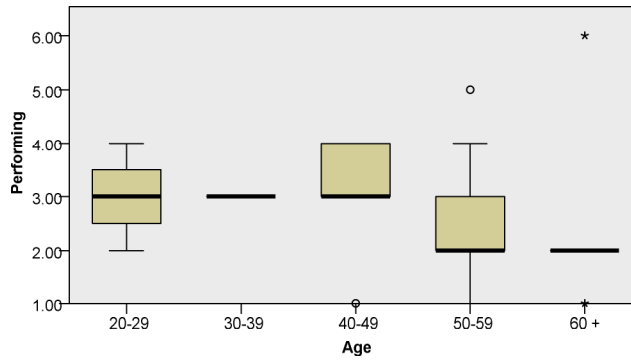
Independent-Samples Kruskal-Wallis Test



| | |
|---------------------------------------|-------|
| Total N | 32 |
| Test Statistic | 7.287 |
| Degrees of Freedom | 4 |
| Asymptotic Sig. (2-sided test) | .121 |

1. The test statistic is adjusted for ties.
2. Multiple comparisons are not performed because the overall test does not show significant differences across samples.

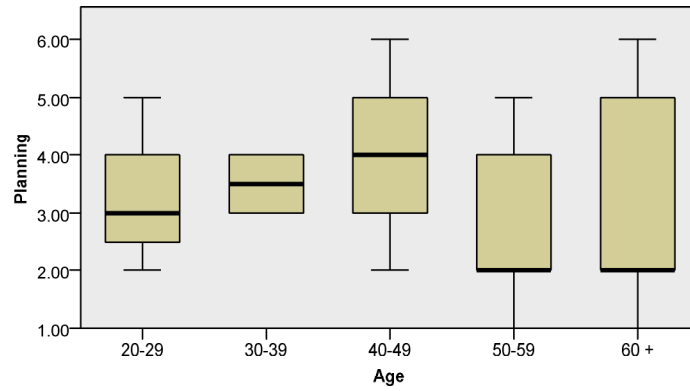
Independent-Samples Kruskal-Wallis Test



| | |
|---------------------------------------|-------|
| Total N | 32 |
| Test Statistic | 4.740 |
| Degrees of Freedom | 4 |
| Asymptotic Sig. (2-sided test) | .315 |

1. The test statistic is adjusted for ties.
2. Multiple comparisons are not performed because the overall test does not show significant differences across samples.

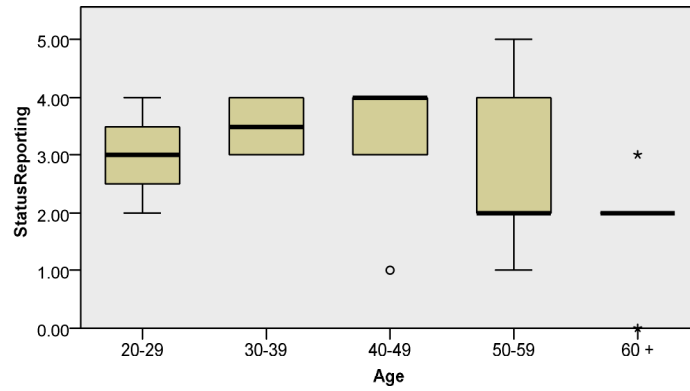
Independent-Samples Kruskal-Wallis Test



| | |
|---------------------------------------|-------|
| Total N | 32 |
| Test Statistic | 4.140 |
| Degrees of Freedom | 4 |
| Asymptotic Sig. (2-sided test) | .387 |

1. The test statistic is adjusted for ties.
2. Multiple comparisons are not performed because the overall test does not show significant differences across samples.

Independent-Samples Kruskal-Wallis Test



| | |
|---------------------------------------|-------|
| Total N | 32 |
| Test Statistic | 7.777 |
| Degrees of Freedom | 4 |
| Asymptotic Sig. (2-sided test) | .100 |

1. The test statistic is adjusted for ties.
2. Multiple comparisons are not performed because the overall test does not show significant differences across samples.

*Nonparametric Tests: Independent Samples.

NPTESTS

/INDEPENDENT TEST (Knowledge Acquiring Information Sharing Assessing Planning Status Reporting Performing OVERALL_LoU) GROUP (Gender)

/MISSING SCOPE=ANALYSIS USERMISSING=EXCLUDE

/CRITERIA ALPHA=0.05 CILEVEL=95.

Nonparametric Tests

[DataSet1] E:\Statomet_2013\Hannelie_SPSS\SoCland2_demo_LoU_new_13April_Hi_low_23Edited.sav

Hypothesis Test Summary

| | Null Hypothesis | Test | Sig. | Decision |
|---|--|---|-------------------|-----------------------------|
| 1 | The distribution of Knowledge is the same across categories of Gender. | Independent-Samples Mann-Whitney U Test | .869 ¹ | Retain the null hypothesis. |
| 2 | The distribution of Acquiring Information is the same across categories of Gender. | Independent-Samples Mann-Whitney U Test | .724 ¹ | Retain the null hypothesis. |
| 3 | The distribution of Sharing is the same across categories of Gender. | Independent-Samples Mann-Whitney U Test | .743 ¹ | Retain the null hypothesis. |
| 4 | The distribution of Assessing is the same across categories of Gender. | Independent-Samples Mann-Whitney U Test | .696 ¹ | Retain the null hypothesis. |
| 5 | The distribution of Planning is the same across categories of Gender. | Independent-Samples Mann-Whitney U Test | .588 ¹ | Retain the null hypothesis. |
| 6 | The distribution of Status Reporting is the same across categories of Gender. | Independent-Samples Mann-Whitney U Test | .832 ¹ | Retain the null hypothesis. |
| 7 | The distribution of Performing is the same across categories of Gender. | Independent-Samples Mann-Whitney U Test | .944 ¹ | Retain the null hypothesis. |
| 8 | The distribution of OVERALL_LoU is the same across categories of Gender. | Independent-Samples Mann-Whitney U Test | .621 ¹ | Retain the null hypothesis. |

Asymptotic significances are displayed. The significance level is .05.

¹ Exact significance is displayed for this test.

*Nonparametric Tests: Independent Samples.

NPTESTS

```
/INDEPENDENT TEST (Knowledge AcquiringInformation Sharing Assessing Plan  
ning StatusReporting Performing OVERALL_LoU) GROUP (vv37)  
/MISSING SCOPE=ANALYSIS USERMISSING=EXCLUDE  
/CRITERIA ALPHA=0.05 CILEVEL=95.
```

Nonparametric Tests

```
[DataSet1] E:\Statomet_2013\Hannelie_SPSS\SoC1and2_demo_LoU_new_13April_Hi  
_low_23Edited.sav
```

Hypothesis Test Summary

| | Null Hypothesis | Test | Sig. | Decision |
|---|--|---|------|-----------------------------|
| 1 | The distribution of Knowledge is the same across categories of Lecturing experience . | Independent-Samples Kruskal-Wallis Test | .673 | Retain the null hypothesis. |
| 2 | The distribution of AcquiringInformation is the same across categories of Lecturing experience . | Independent-Samples Kruskal-Wallis Test | .641 | Retain the null hypothesis. |
| 3 | The distribution of Sharing is the same across categories of Lecturing experience . | Independent-Samples Kruskal-Wallis Test | .111 | Retain the null hypothesis. |
| 4 | The distribution of Assessing is the same across categories of Lecturing experience . | Independent-Samples Kruskal-Wallis Test | .367 | Retain the null hypothesis. |
| 5 | The distribution of Planning is the same across categories of Lecturing experience . | Independent-Samples Kruskal-Wallis Test | .816 | Retain the null hypothesis. |
| 6 | The distribution of StatusReporting is the same across categories of Lecturing experience . | Independent-Samples Kruskal-Wallis Test | .601 | Retain the null hypothesis. |
| 7 | The distribution of Performing is the same across categories of Lecturing experience . | Independent-Samples Kruskal-Wallis Test | .539 | Retain the null hypothesis. |
| 8 | The distribution of OVERALL_LoU is the same across categories of Lecturing experience . | Independent-Samples Kruskal-Wallis Test | .545 | Retain the null hypothesis. |

Asymptotic significances are displayed. The significance level is .05.

*Nonparametric Tests: Independent Samples.

NPTESTS

/INDEPENDENT TEST (Knowledge AcquiringInformation Sharing Assessing Planning StatusReporting Performing OVERALL_LoU) GROUP (Acadpos)

/MISSING SCOPE=ANALYSIS USERMISSING=EXCLUDE

/CRITERIA ALPHA=0.05 CILEVEL=95.

Nonparametric Tests

[DataSet1] E:\Statomet_2013\Hannelie_SPSS\SoC1and2_demo_LoU_new_13April_Hi_low_23Edited.sav

Hypothesis Test Summary

| | Null Hypothesis | Test | Sig. | Decision |
|---|--|---|------|-----------------------------|
| 1 | The distribution of Knowledge is the same across categories of AcadPos. | Independent-Samples Kruskal-Wallis Test | .723 | Retain the null hypothesis. |
| 2 | The distribution of AcquiringInformation is the same across categories of AcadPos. | Independent-Samples Kruskal-Wallis Test | .731 | Retain the null hypothesis. |
| 3 | The distribution of Sharing is the same across categories of AcadPos. | Independent-Samples Kruskal-Wallis Test | .815 | Retain the null hypothesis. |
| 4 | The distribution of Assessing is the same across categories of AcadPos. | Independent-Samples Kruskal-Wallis Test | .451 | Retain the null hypothesis. |
| 5 | The distribution of Planning is the same across categories of AcadPos. | Independent-Samples Kruskal-Wallis Test | .564 | Retain the null hypothesis. |
| 6 | The distribution of StatusReporting is the same across categories of AcadPos. | Independent-Samples Kruskal-Wallis Test | .616 | Retain the null hypothesis. |
| 7 | The distribution of Performing is the same across categories of AcadPos. | Independent-Samples Kruskal-Wallis Test | .605 | Retain the null hypothesis. |
| 8 | The distribution of OVERALL_LoU is the same across categories of AcadPos. | Independent-Samples Kruskal-Wallis Test | .653 | Retain the null hypothesis. |

Asymptotic significances are displayed. The significance level is .05.

*Nonparametric Tests: Independent Samples.

NPTESTS

/INDEPENDENT TEST (Knowledge AcquiringInformation Sharing Assessing Planning StatusReporting Performing OVERALL_LoU) GROUP (V45)

/MISSING SCOPE=ANALYSIS USERMISSING=EXCLUDE

/CRITERIA ALPHA=0.05 CILEVEL=95.

Nonparametric Tests

[DataSet1] E:\Statomet_2013\Hannelie_SPSS\SoC1and2_demo_LoU_new_13April_Hi_low_23Edited.sav

Hypothesis Test Summary

| | Null Hypothesis | Test | Sig. | Decision |
|---|--|---|------|-----------------------------|
| 1 | The distribution of Knowledge is the same across categories of V45. | Independent-Samples Kruskal-Wallis Test | .802 | Retain the null hypothesis. |
| 2 | The distribution of AcquiringInformation is the same across categories of V45. | Independent-Samples Kruskal-Wallis Test | .806 | Retain the null hypothesis. |
| 3 | The distribution of Sharing is the same across categories of V45. | Independent-Samples Kruskal-Wallis Test | .238 | Retain the null hypothesis. |
| 4 | The distribution of Assessing is the same across categories of V45. | Independent-Samples Kruskal-Wallis Test | .672 | Retain the null hypothesis. |
| 5 | The distribution of Planning is the same across categories of V45. | Independent-Samples Kruskal-Wallis Test | .715 | Retain the null hypothesis. |
| 6 | The distribution of StatusReporting is the same across categories of V45. | Independent-Samples Kruskal-Wallis Test | .636 | Retain the null hypothesis. |
| 7 | The distribution of Performing is the same across categories of V45. | Independent-Samples Kruskal-Wallis Test | .780 | Retain the null hypothesis. |
| 8 | The distribution of OVERALL_LoU is the same across categories of V45. | Independent-Samples Kruskal-Wallis Test | .778 | Retain the null hypothesis. |

Asymptotic significances are displayed. The significance level is .05.

*Nonparametric Tests: Independent Samples.
 NPTESTS

```
/INDEPENDENT TEST (Knowledge AcquiringInformation Sharing Assessing Plan  
ning StatusReporting Performing OVERALL_LoU) GROUP (V97)  
/MISSING SCOPE=ANALYSIS USERMISSING=EXCLUDE  
/CRITERIA ALPHA=0.05 CILEVEL=95.
```

Nonparametric Tests

```
[DataSet1] E:\Statomet_2013\Hannelie_SPSS\SoC1and2_demo_LoU_new_13April_Hi  
_low_23Edited.sav
```

Hypothesis Test Summary

| | Null Hypothesis | Test | Sig. | Decision |
|---|--|---|------|-----------------------------|
| 1 | The distribution of Knowledge is the same across categories of Professional identity / qualification. | Independent-Samples Kruskal-Wallis Test | .632 | Retain the null hypothesis. |
| 2 | The distribution of AcquiringInformation is the same across categories of Professional identity / qualification. | Independent-Samples Kruskal-Wallis Test | .624 | Retain the null hypothesis. |
| 3 | The distribution of Sharing is the same across categories of Professional identity / qualification. | Independent-Samples Kruskal-Wallis Test | .834 | Retain the null hypothesis. |
| 4 | The distribution of Assessing is the same across categories of Professional identity / qualification. | Independent-Samples Kruskal-Wallis Test | .641 | Retain the null hypothesis. |
| 5 | The distribution of Planning is the same across categories of Professional identity / qualification. | Independent-Samples Kruskal-Wallis Test | .924 | Retain the null hypothesis. |
| 6 | The distribution of StatusReporting is the same across categories of Professional identity / qualification. | Independent-Samples Kruskal-Wallis Test | .607 | Retain the null hypothesis. |
| 7 | The distribution of Performing is the same across categories of Professional identity / qualification. | Independent-Samples Kruskal-Wallis Test | .796 | Retain the null hypothesis. |
| 8 | The distribution of OVERALL_LoU is the same across categories of Professional identity / qualification. | Independent-Samples Kruskal-Wallis Test | .854 | Retain the null hypothesis. |

Asymptotic significances are displayed. The significance level is .05.

*Nonparametric Tests: Independent Samples.

NPTESTS

/INDEPENDENT TEST (Knowledge AcquiringInformation Sharing Assessing Planning StatusReporting Performing OVERALL_LoU) GROUP (V111)

/MISSING SCOPE=ANALYSIS USERMISSING=EXCLUDE

/CRITERIA ALPHA=0.05 CILEVEL=95.

Nonparametric Tests

[DataSet1] E:\Statomet_2013\Hannelie_SPSS\SoCland2_demo_LoU_new_13April_Hi_low_23Edited.sav

Hypothesis Test Summary

| | Null Hypothesis | Test | Sig. | Decision |
|---|---|---|------|-----------------------------|
| 3 | The distribution of Sharing is the same across categories of Age. | Independent-Samples Kruskal-Wallis Test | .035 | Reject the null hypothesis. |

Asymptotic significances are displayed. The significance level is .05.

*Nonparametric Tests: Independent Samples.

NPTESTS

/INDEPENDENT TEST (Knowledge Acquiring Information Sharing Assessing Planning Status Reporting Performing OVERALL_LoU) GROUP (V112)

/MISSING SCOPE=ANALYSIS USERMISSING=EXCLUDE

/CRITERIA ALPHA=0.05 CILEVEL=95.

Nonparametric Tests

[DataSet1] E:\Statomet_2013\Hannelie_SPSS\SoCland2_demo_LoU_new_13April_Hi_low_23Edited.sav

Hypothesis Test Summary

| | Null Hypothesis | Test | Sig. | Decision |
|---|---|---|------|-----------------------------|
| 1 | The distribution of Knowledge is the same across categories of Academic qualification. | Independent-Samples Kruskal-Wallis Test | .933 | Retain the null hypothesis. |
| 2 | The distribution of AcquiringInformation is the same across categories of Academic qualification. | Independent-Samples Kruskal-Wallis Test | .455 | Retain the null hypothesis. |
| 3 | The distribution of Sharing is the same across categories of Academic qualification. | Independent-Samples Kruskal-Wallis Test | .758 | Retain the null hypothesis. |
| 4 | The distribution of Assessing is the same across categories of Academic qualification. | Independent-Samples Kruskal-Wallis Test | .363 | Retain the null hypothesis. |
| 5 | The distribution of Planning is the same across categories of Academic qualification. | Independent-Samples Kruskal-Wallis Test | .775 | Retain the null hypothesis. |
| 6 | The distribution of StatusReporting is the same across categories of Academic qualification. | Independent-Samples Kruskal-Wallis Test | .764 | Retain the null hypothesis. |
| 7 | The distribution of Performing is the same across categories of Academic qualification. | Independent-Samples Kruskal-Wallis Test | .900 | Retain the null hypothesis. |
| 8 | The distribution of OVERALL_LoU is the same across categories of Academic qualification. | Independent-Samples Kruskal-Wallis Test | .873 | Retain the null hypothesis. |

Asymptotic significances are displayed. The significance level is .05.

*Nonparametric Tests: Independent Samples.

NPTESTS

/INDEPENDENT TEST (Knowledge AcquiringInformation Sharing Assessing Planning StatusReporting Performing OVERALL_LoU) GROUP (School)

/MISSING SCOPE=ANALYSIS USERMISSING=EXCLUDE

/CRITERIA ALPHA=0.05 CILEVEL=95.

Nonparametric Tests

[DataSet1] E:\Statomet_2013\Hannelie_SPSS\SoC1and2_demo_LoU_new_13April_Hi_low_23Edited.sav

Hypothesis Test Summary

| | Null Hypothesis | Test | Sig. | Decision |
|---|---|---|------|-----------------------------|
| 1 | The distribution of Knowledge is the same across categories of School. | Independent-Samples Kruskal-Wallis Test | .626 | Retain the null hypothesis. |
| 2 | The distribution of AcquiringInformation is the same across categories of School. | Independent-Samples Kruskal-Wallis Test | .860 | Retain the null hypothesis. |
| 3 | The distribution of Sharing is the same across categories of School. | Independent-Samples Kruskal-Wallis Test | .958 | Retain the null hypothesis. |
| 4 | The distribution of Assessing is the same across categories of School. | Independent-Samples Kruskal-Wallis Test | .892 | Retain the null hypothesis. |
| 5 | The distribution of Planning is the same across categories of School. | Independent-Samples Kruskal-Wallis Test | .896 | Retain the null hypothesis. |
| 6 | The distribution of StatusReporting is the same across categories of School. | Independent-Samples Kruskal-Wallis Test | .370 | Retain the null hypothesis. |
| 7 | The distribution of Performing is the same across categories of School. | Independent-Samples Kruskal-Wallis Test | .944 | Retain the null hypothesis. |
| 8 | The distribution of OVERALL_LoU is the same across categories of School. | Independent-Samples Kruskal-Wallis Test | .760 | Retain the null hypothesis. |

Asymptotic significances are displayed. The significance level is .05.

*Nonparametric Tests: Independent Samples.

NPTESTS

/INDEPENDENT TEST (Knowledge Acquiring Information Sharing Assessing Planning Status Reporting Performing OVERALL_LoU) GROUP (Gender)

/MISSING SCOPE=ANALYSIS USERMISSING=EXCLUDE

/CRITERIA ALPHA=0.05 CILEVEL=95.

Nonparametric Tests

[DataSet1] E:\Statomet_2013\Hannelie_SPSS\SoCland2_demo_LoU_new_13April_Hi_low_23Edited.sav

Hypothesis Test Summary

| | Null Hypothesis | Test | Sig. | Decision |
|---|--|---|-------------------|-----------------------------|
| 1 | The distribution of Knowledge is the same across categories of Gender. | Independent-Samples Mann-Whitney U Test | .869 ¹ | Retain the null hypothesis. |
| 2 | The distribution of Acquiring Information is the same across categories of Gender. | Independent-Samples Mann-Whitney U Test | .724 ¹ | Retain the null hypothesis. |
| 3 | The distribution of Sharing is the same across categories of Gender. | Independent-Samples Mann-Whitney U Test | .743 ¹ | Retain the null hypothesis. |
| 4 | The distribution of Assessing is the same across categories of Gender. | Independent-Samples Mann-Whitney U Test | .696 ¹ | Retain the null hypothesis. |
| 5 | The distribution of Planning is the same across categories of Gender. | Independent-Samples Mann-Whitney U Test | .588 ¹ | Retain the null hypothesis. |
| 6 | The distribution of Status Reporting is the same across categories of Gender. | Independent-Samples Mann-Whitney U Test | .832 ¹ | Retain the null hypothesis. |
| 7 | The distribution of Performing is the same across categories of Gender. | Independent-Samples Mann-Whitney U Test | .944 ¹ | Retain the null hypothesis. |
| 8 | The distribution of OVERALL_LoU is the same across categories of Gender. | Independent-Samples Mann-Whitney U Test | .621 ¹ | Retain the null hypothesis. |

Asymptotic significances are displayed. The significance level is .05.

¹ Exact significance is displayed for this test.

*Nonparametric Tests: Independent Samples.

NPTESTS

```
/INDEPENDENT TEST (Knowledge AcquiringInformation Sharing Assessing Plan  
ning StatusReporting Performing OVERALL_LoU) GROUP (vv37)  
/MISSING SCOPE=ANALYSIS USERMISSING=EXCLUDE  
/CRITERIA ALPHA=0.05 CILEVEL=95.
```

Nonparametric Tests

```
[DataSet1] E:\Statomet_2013\Hannelie_SPSS\SoC1and2_demo_LoU_new_13April_Hi  
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```

Hypothesis Test Summary

| | Null Hypothesis | Test | Sig. | Decision |
|---|--|---|------|-----------------------------|
| 1 | The distribution of Knowledge is the same across categories of Lecturing experience . | Independent-Samples Kruskal-Wallis Test | .673 | Retain the null hypothesis. |
| 2 | The distribution of AcquiringInformation is the same across categories of Lecturing experience . | Independent-Samples Kruskal-Wallis Test | .641 | Retain the null hypothesis. |
| 3 | The distribution of Sharing is the same across categories of Lecturing experience . | Independent-Samples Kruskal-Wallis Test | .111 | Retain the null hypothesis. |
| 4 | The distribution of Assessing is the same across categories of Lecturing experience . | Independent-Samples Kruskal-Wallis Test | .367 | Retain the null hypothesis. |
| 5 | The distribution of Planning is the same across categories of Lecturing experience . | Independent-Samples Kruskal-Wallis Test | .816 | Retain the null hypothesis. |
| 6 | The distribution of StatusReporting is the same across categories of Lecturing experience . | Independent-Samples Kruskal-Wallis Test | .601 | Retain the null hypothesis. |
| 7 | The distribution of Performing is the same across categories of Lecturing experience . | Independent-Samples Kruskal-Wallis Test | .539 | Retain the null hypothesis. |
| 8 | The distribution of OVERALL_LoU is the same across categories of Lecturing experience . | Independent-Samples Kruskal-Wallis Test | .545 | Retain the null hypothesis. |

Asymptotic significances are displayed. The significance level is .05.

*Nonparametric Tests: Independent Samples.

NPTESTS

/INDEPENDENT TEST (Knowledge AcquiringInformation Sharing Assessing Planning StatusReporting Performing OVERALL_LoU) GROUP (Acadpos)

/MISSING SCOPE=ANALYSIS USERMISSING=EXCLUDE

/CRITERIA ALPHA=0.05 CILEVEL=95.

Nonparametric Tests

[DataSet1] E:\Statomet_2013\Hannelie_SPSS\SoCland2_demo_LoU_new_13April_Hi_low_23Edited.sav

Hypothesis Test Summary

| | Null Hypothesis | Test | Sig. | Decision |
|---|--|---|------|-----------------------------|
| 1 | The distribution of Knowledge is the same across categories of AcadPos. | Independent-Samples Kruskal-Wallis Test | .723 | Retain the null hypothesis. |
| 2 | The distribution of AcquiringInformation is the same across categories of AcadPos. | Independent-Samples Kruskal-Wallis Test | .731 | Retain the null hypothesis. |
| 3 | The distribution of Sharing is the same across categories of AcadPos. | Independent-Samples Kruskal-Wallis Test | .815 | Retain the null hypothesis. |
| 4 | The distribution of Assessing is the same across categories of AcadPos. | Independent-Samples Kruskal-Wallis Test | .451 | Retain the null hypothesis. |
| 5 | The distribution of Planning is the same across categories of AcadPos. | Independent-Samples Kruskal-Wallis Test | .564 | Retain the null hypothesis. |
| 6 | The distribution of StatusReporting is the same across categories of AcadPos. | Independent-Samples Kruskal-Wallis Test | .616 | Retain the null hypothesis. |
| 7 | The distribution of Performing is the same across categories of AcadPos. | Independent-Samples Kruskal-Wallis Test | .605 | Retain the null hypothesis. |
| 8 | The distribution of OVERALL_LoU is the same across categories of AcadPos. | Independent-Samples Kruskal-Wallis Test | .653 | Retain the null hypothesis. |

Asymptotic significances are displayed. The significance level is .05.

*Nonparametric Tests: Independent Samples.

NPTESTS

/INDEPENDENT TEST (Knowledge AcquiringInformation Sharing Assessing Planning StatusReporting Performing OVERALL_LoU) GROUP (V45)

/MISSING SCOPE=ANALYSIS USERMISSING=EXCLUDE

/CRITERIA ALPHA=0.05 CILEVEL=95.

Nonparametric Tests

[DataSet1] E:\Statomet_2013\Hannelie_SPSS\SoC1and2_demo_LoU_new_13April_Hi_low_23Edited.sav

Hypothesis Test Summary

| | Null Hypothesis | Test | Sig. | Decision |
|---|--|---|------|-----------------------------|
| 1 | The distribution of Knowledge is the same across categories of V45. | Independent-Samples Kruskal-Wallis Test | .802 | Retain the null hypothesis. |
| 2 | The distribution of AcquiringInformation is the same across categories of V45. | Independent-Samples Kruskal-Wallis Test | .806 | Retain the null hypothesis. |
| 3 | The distribution of Sharing is the same across categories of V45. | Independent-Samples Kruskal-Wallis Test | .238 | Retain the null hypothesis. |
| 4 | The distribution of Assessing is the same across categories of V45. | Independent-Samples Kruskal-Wallis Test | .672 | Retain the null hypothesis. |
| 5 | The distribution of Planning is the same across categories of V45. | Independent-Samples Kruskal-Wallis Test | .715 | Retain the null hypothesis. |
| 6 | The distribution of StatusReporting is the same across categories of V45. | Independent-Samples Kruskal-Wallis Test | .636 | Retain the null hypothesis. |
| 7 | The distribution of Performing is the same across categories of V45. | Independent-Samples Kruskal-Wallis Test | .780 | Retain the null hypothesis. |
| 8 | The distribution of OVERALL_LoU is the same across categories of V45. | Independent-Samples Kruskal-Wallis Test | .778 | Retain the null hypothesis. |

Asymptotic significances are displayed. The significance level is .05.

*Nonparametric Tests: Independent Samples.
 NPTESTS

```
/INDEPENDENT TEST (Knowledge AcquiringInformation Sharing Assessing Plan  
ning StatusReporting Performing OVERALL_LoU) GROUP (V97)  
/MISSING SCOPE=ANALYSIS USERMISSING=EXCLUDE  
/CRITERIA ALPHA=0.05 CILEVEL=95.
```

Nonparametric Tests

```
[DataSet1] E:\Statomet_2013\Hannelie_SPSS\SoC1and2_demo_LoU_new_13April_Hi  
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```

Hypothesis Test Summary

| | Null Hypothesis | Test | Sig. | Decision |
|---|--|---|------|-----------------------------|
| 1 | The distribution of Knowledge is the same across categories of Professional identity / qualification. | Independent-Samples Kruskal-Wallis Test | .632 | Retain the null hypothesis. |
| 2 | The distribution of AcquiringInformation is the same across categories of Professional identity / qualification. | Independent-Samples Kruskal-Wallis Test | .624 | Retain the null hypothesis. |
| 3 | The distribution of Sharing is the same across categories of Professional identity / qualification. | Independent-Samples Kruskal-Wallis Test | .834 | Retain the null hypothesis. |
| 4 | The distribution of Assessing is the same across categories of Professional identity / qualification. | Independent-Samples Kruskal-Wallis Test | .641 | Retain the null hypothesis. |
| 5 | The distribution of Planning is the same across categories of Professional identity / qualification. | Independent-Samples Kruskal-Wallis Test | .924 | Retain the null hypothesis. |
| 6 | The distribution of StatusReporting is the same across categories of Professional identity / qualification. | Independent-Samples Kruskal-Wallis Test | .607 | Retain the null hypothesis. |
| 7 | The distribution of Performing is the same across categories of Professional identity / qualification. | Independent-Samples Kruskal-Wallis Test | .796 | Retain the null hypothesis. |
| 8 | The distribution of OVERALL_LoU is the same across categories of Professional identity / qualification. | Independent-Samples Kruskal-Wallis Test | .854 | Retain the null hypothesis. |

Asymptotic significances are displayed. The significance level is .05.

*Nonparametric Tests: Independent Samples.

NPTESTS

/INDEPENDENT TEST (Knowledge AcquiringInformation Sharing Assessing Planning StatusReporting Performing OVERALL_LoU) GROUP (V111)

/MISSING SCOPE=ANALYSIS USERMISSING=EXCLUDE

/CRITERIA ALPHA=0.05 CILEVEL=95.

Nonparametric Tests

[DataSet1] E:\Statomet_2013\Hannelie_SPSS\SoCland2_demo_LoU_new_13April_Hi_low_23Edited.sav

Hypothesis Test Summary

| | Null Hypothesis | Test | Sig. | Decision |
|---|--|---|------|-----------------------------|
| 1 | The distribution of Knowledge is the same across categories of Age. | Independent-Samples Kruskal-Wallis Test | .180 | Retain the null hypothesis. |
| 2 | The distribution of AcquiringInformation is the same across categories of Age. | Independent-Samples Kruskal-Wallis Test | .123 | Retain the null hypothesis. |
| 3 | The distribution of Sharing is the same across categories of Age. | Independent-Samples Kruskal-Wallis Test | .035 | Reject the null hypothesis. |
| 4 | The distribution of Assessing is the same across categories of Age. | Independent-Samples Kruskal-Wallis Test | .185 | Retain the null hypothesis. |
| 5 | The distribution of Planning is the same across categories of Age. | Independent-Samples Kruskal-Wallis Test | .387 | Retain the null hypothesis. |
| 6 | The distribution of StatusReporting is the same across categories of Age. | Independent-Samples Kruskal-Wallis Test | .100 | Retain the null hypothesis. |
| 7 | The distribution of Performing is the same across categories of Age. | Independent-Samples Kruskal-Wallis Test | .315 | Retain the null hypothesis. |
| 8 | The distribution of OVERALL_LoU is the same across categories of Age. | Independent-Samples Kruskal-Wallis Test | .121 | Retain the null hypothesis. |

Asymptotic significances are displayed. The significance level is .05.

*Nonparametric Tests: Independent Samples.

NPTESTS

/INDEPENDENT TEST (Knowledge AcquiringInformation Sharing Assessing Planning StatusReporting Performing OVERALL_LoU) GROUP (V112)

/MISSING SCOPE=ANALYSIS USERMISSING=EXCLUDE

/CRITERIA ALPHA=0.05 CILEVEL=95.

Nonparametric Tests

[DataSet1] E:\Statomet_2013\Hannelie_SPSS\SoC1and2_demo_LoU_new_13April_Hi_low_23Edited.sav

Hypothesis Test Summary

| | Null Hypothesis | Test | Sig. | Decision |
|---|---|---|------|-----------------------------|
| 1 | The distribution of Knowledge is the same across categories of Academic qualification. | Independent-Samples Kruskal-Wallis Test | .933 | Retain the null hypothesis. |
| 2 | The distribution of AcquiringInformation is the same across categories of Academic qualification. | Independent-Samples Kruskal-Wallis Test | .455 | Retain the null hypothesis. |
| 3 | The distribution of Sharing is the same across categories of Academic qualification. | Independent-Samples Kruskal-Wallis Test | .758 | Retain the null hypothesis. |
| 4 | The distribution of Assessing is the same across categories of Academic qualification. | Independent-Samples Kruskal-Wallis Test | .363 | Retain the null hypothesis. |
| 5 | The distribution of Planning is the same across categories of Academic qualification. | Independent-Samples Kruskal-Wallis Test | .775 | Retain the null hypothesis. |
| 6 | The distribution of StatusReporting is the same across categories of Academic qualification. | Independent-Samples Kruskal-Wallis Test | .764 | Retain the null hypothesis. |
| 7 | The distribution of Performing is the same across categories of Academic qualification. | Independent-Samples Kruskal-Wallis Test | .900 | Retain the null hypothesis. |
| 8 | The distribution of OVERALL_LoU is the same across categories of Academic qualification. | Independent-Samples Kruskal-Wallis Test | .873 | Retain the null hypothesis. |

Asymptotic significances are displayed. The significance level is .05.

*Nonparametric Tests: Independent Samples.
 NPTESTS

```
/INDEPENDENT TEST (Knowledge AcquiringInformation Sharing Assessing Plan  
ning StatusReporting Performing OVERALL_LoU) GROUP (School)  
/MISSING SCOPE=ANALYSIS USERMISSING=EXCLUDE  
/CRITERIA ALPHA=0.05 CILEVEL=95.
```

Nonparametric Tests

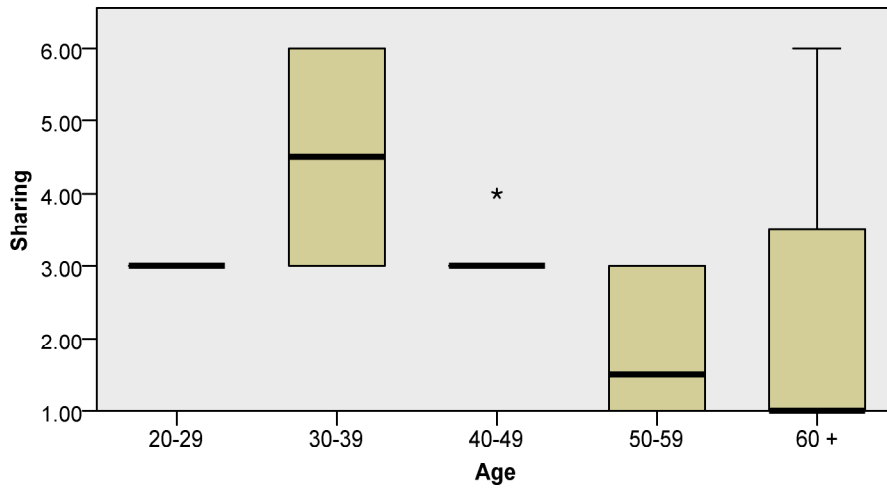
```
[DataSet1] E:\Statomet_2013\Hannelie_SPSS\SoC1and2_demo_LoU_new_13April_Hi  
_low_23Edited.sav
```

Hypothesis Test Summary

| | Null Hypothesis | Test | Sig. | Decision |
|---|---|---|------|-----------------------------|
| 1 | The distribution of Knowledge is the same across categories of School. | Independent-Samples Kruskal-Wallis Test | .626 | Retain the null hypothesis. |
| 2 | The distribution of AcquiringInformation is the same across categories of School. | Independent-Samples Kruskal-Wallis Test | .860 | Retain the null hypothesis. |
| 3 | The distribution of Sharing is the same across categories of School. | Independent-Samples Kruskal-Wallis Test | .958 | Retain the null hypothesis. |
| 4 | The distribution of Assessing is the same across categories of School. | Independent-Samples Kruskal-Wallis Test | .892 | Retain the null hypothesis. |
| 5 | The distribution of Planning is the same across categories of School. | Independent-Samples Kruskal-Wallis Test | .896 | Retain the null hypothesis. |
| 6 | The distribution of StatusReporting is the same across categories of School. | Independent-Samples Kruskal-Wallis Test | .370 | Retain the null hypothesis. |
| 7 | The distribution of Performing is the same across categories of School. | Independent-Samples Kruskal-Wallis Test | .944 | Retain the null hypothesis. |
| 8 | The distribution of OVERALL_LoU is the same across categories of School. | Independent-Samples Kruskal-Wallis Test | .760 | Retain the null hypothesis. |

Asymptotic significances are displayed. The significance level is .05.

Independent-Samples Kruskal-Wallis Test



| | |
|---------------------------------------|--------|
| Total N | 27 |
| Test Statistic | 10.336 |
| Degrees of Freedom | 4 |
| Asymptotic Sig. (2-sided test) | .035 |

1. The test statistic is adjusted for ties.

CROSSTABS

```

/TABLES=School Gender vv37 Acadpos V45 V97 V111 V112 BY Sharing
/FORMAT=AVALUE TABLES
/STATISTICS=CHISQ CORR
/CELLS=COUNT
/COUNT ROUND CELL
/BARCHART.
  
```

Crosstabs

[DataSet1] E:\Statomet_2013\Hannelie_SPSS\SoC1and2_demo_LoU_new_13April_Hi_low_23Edited.sav

Case Processing Summary

| | Cases | | | | |
|---|-------|---------|---------|---------|-------|
| | Valid | | Missing | | Total |
| | N | Percent | N | Percent | N |
| School * Sharing | 27 | 50.0% | 27 | 50.0% | 54 |
| Gender * Sharing | 27 | 50.0% | 27 | 50.0% | 54 |
| Lecturing experience * Sharing | 27 | 50.0% | 27 | 50.0% | 54 |
| AcadPos * Sharing | 27 | 50.0% | 27 | 50.0% | 54 |
| V45 * Sharing | 27 | 50.0% | 27 | 50.0% | 54 |
| Professional identity / qualification * Sharing | 27 | 50.0% | 27 | 50.0% | 54 |
| Age * Sharing | 27 | 50.0% | 27 | 50.0% | 54 |
| Academic qualification * Sharing | 26 | 48.1% | 28 | 51.9% | 54 |

Case Processing Summary

| | Cases |
|---|---------|
| | Total |
| | Percent |
| School * Sharing | 100.0% |
| Gender * Sharing | 100.0% |
| Lecturing experience * Sharing | 100.0% |
| AcadPos * Sharing | 100.0% |
| V45 * Sharing | 100.0% |
| Professional identity / qualification * Sharing | 100.0% |
| Age * Sharing | 100.0% |
| Academic qualification * Sharing | 100.0% |

School * Sharing

Crosstab

Count

| | | Sharing | | | | | Total |
|--------|---|---------|---|----|---|---|-------|
| | | 1 | 2 | 3 | 4 | 6 | |
| School | 1 | 1 | 0 | 2 | 0 | 0 | 3 |
| | 2 | 4 | 0 | 7 | 0 | 2 | 13 |
| | 3 | 2 | 1 | 6 | 1 | 0 | 10 |
| | 4 | 0 | 0 | 1 | 0 | 0 | 1 |
| Total | | 7 | 1 | 16 | 1 | 2 | 27 |

Chi-Square Tests

| | Value | df | Asymp. Sig. (2-sided) |
|------------------------------|--------------------|----|-----------------------|
| Pearson Chi-Square | 6.503 ^a | 12 | .889 |
| Likelihood Ratio | 8.057 | 12 | .781 |
| Linear-by-Linear Association | .018 | 1 | .893 |
| N of Valid Cases | 27 | | |

a. 18 cells (90.0%) have expected count less than 5. The minimum expected count is .04.

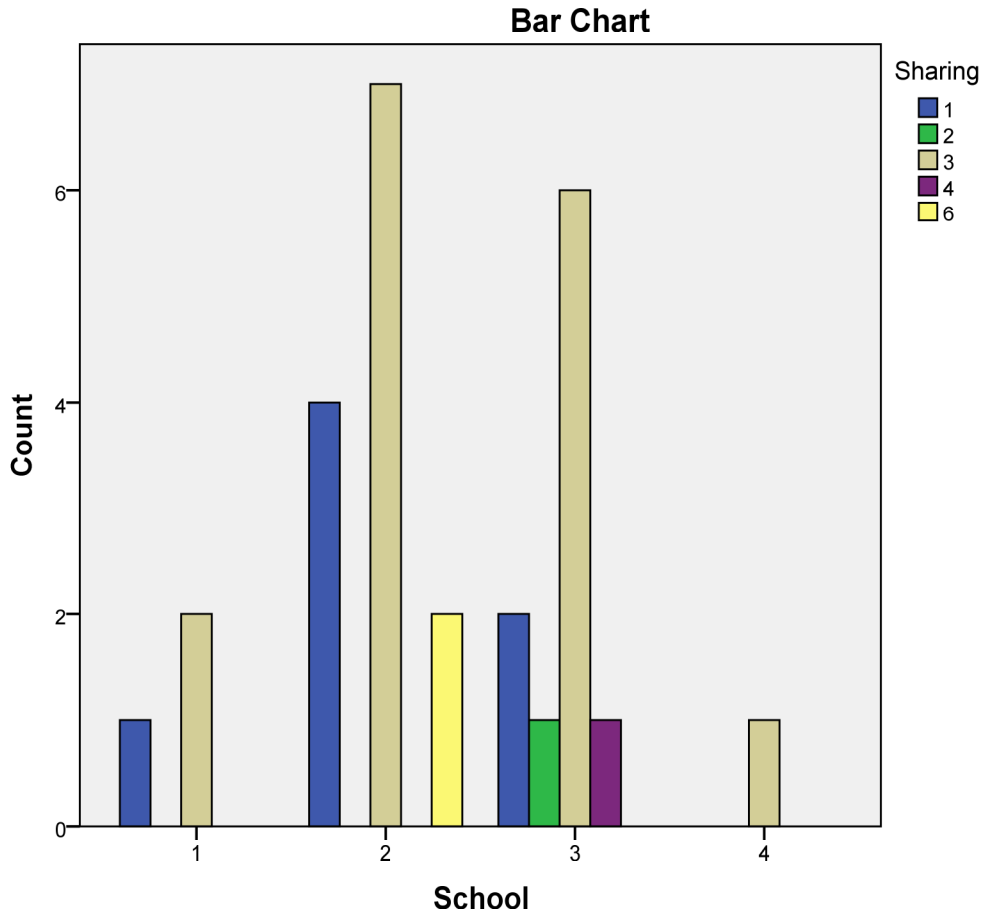
Symmetric Measures

| | | Value | Asymp. Std. Error ^a | Approx. T ^b | Approx. Sig. ^c |
|----------------------|----------------------|-------|--------------------------------|------------------------|---------------------------|
| Interval by Interval | Pearson's R | .026 | .145 | .132 | .896 ^c |
| Ordinal by Ordinal | Spearman Correlation | .063 | .172 | .313 | .757 ^c |
| N of Valid Cases | | 27 | | | |

a. Not assuming the null hypothesis.

b. Using the asymptotic standard error assuming the null hypothesis.

c. Based on normal approximation.



Gender * Sharing

Crosstab

| Count | | Sharing | | | | | Total |
|--------|--------|---------|---|----|---|---|-------|
| | | 1 | 2 | 3 | 4 | 6 | |
| Gender | Female | 6 | 1 | 14 | 1 | 2 | 24 |
| | Male | 1 | 0 | 2 | 0 | 0 | 3 |
| Total | | 7 | 1 | 16 | 1 | 2 | 27 |

Chi-Square Tests

| | Value | df | Asymp. Sig. (2-sided) |
|------------------------------|-------------------|----|-----------------------|
| Pearson Chi-Square | .603 ^a | 4 | .963 |
| Likelihood Ratio | 1.039 | 4 | .904 |
| Linear-by-Linear Association | .264 | 1 | .608 |
| N of Valid Cases | 27 | | |

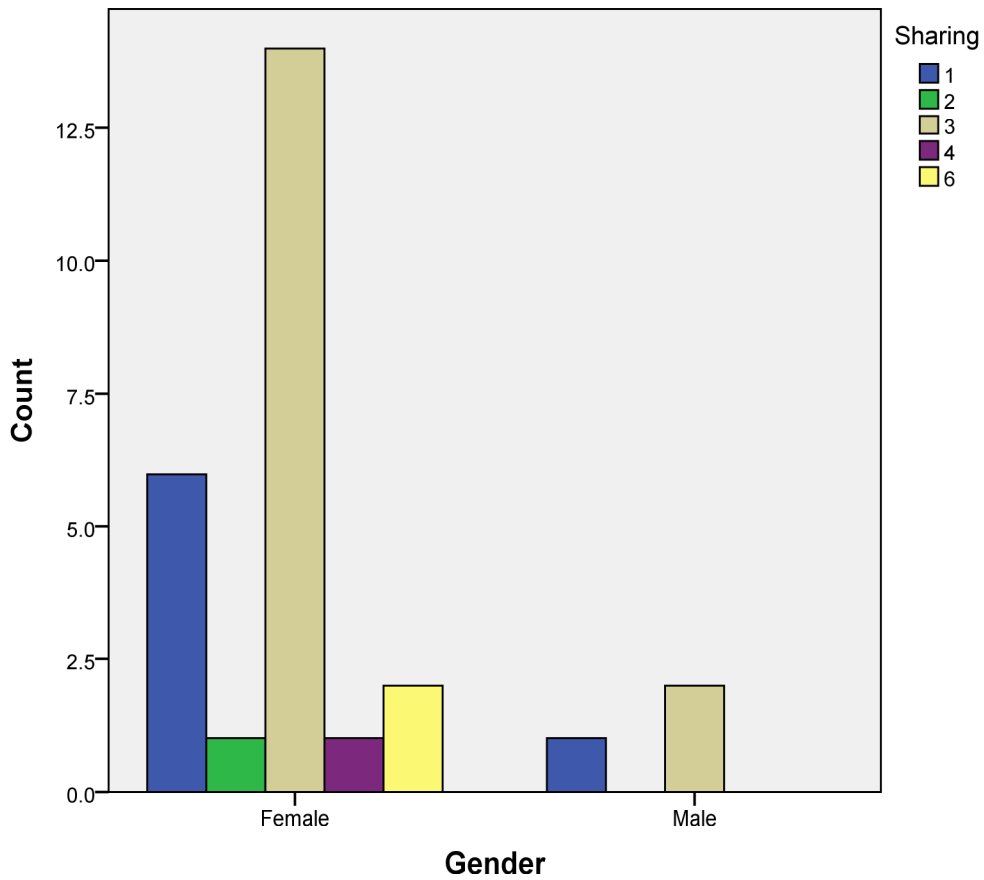
a. 8 cells (80.0%) have expected count less than 5. The minimum expected count is .11.

Symmetric Measures

| | | Value | Asymp. Std. Error ^a | Approx. T ^b | Approx. Sig. ^c |
|----------------------|----------------------|-------|--------------------------------|------------------------|---------------------------|
| Interval by Interval | Pearson's R | -.101 | .145 | -.506 | .617 ^c |
| Ordinal by Ordinal | Spearman Correlation | -.086 | .169 | -.431 | .670 ^c |
| N of Valid Cases | | 27 | | | |

- a. Not assuming the null hypothesis.
- b. Using the asymptotic standard error assuming the null hypothesis.
- c. Based on normal approximation.

Bar Chart



Lecturing experience * Sharing

Crosstab

Count

| | | Sharing | | | | |
|----------------------|-------------|---------|---|----|---|---|
| | | 1 | 2 | 3 | 4 | 6 |
| Lecturing experience | ≤5 years | 0 | 0 | 7 | 1 | 1 |
| | 6-10 years | 2 | 0 | 4 | 0 | 0 |
| | 11-15 years | 1 | 0 | 1 | 0 | 1 |
| | 16-20 years | 1 | 1 | 2 | 0 | 0 |
| | ≥ 21 years | 3 | 0 | 2 | 0 | 0 |
| Total | | 7 | 1 | 16 | 1 | 2 |

Crosstab

Count

| | | Total |
|----------------------|-------------|-------|
| Lecturing experience | ≤5 years | 9 |
| | 6-10 years | 6 |
| | 11-15 years | 3 |
| | 16-20 years | 4 |
| | ≥ 21 years | 5 |
| Total | | 27 |

Chi-Square Tests

| | Value | df | Asymp. Sig. (2-sided) |
|------------------------------|---------------------|----|-----------------------|
| Pearson Chi-Square | 17.802 ^a | 16 | .336 |
| Likelihood Ratio | 17.652 | 16 | .345 |
| Linear-by-Linear Association | 4.784 | 1 | .029 |
| N of Valid Cases | 27 | | |

a. 24 cells (96.0%) have expected count less than 5. The minimum expected count is .11.

Symmetric Measures

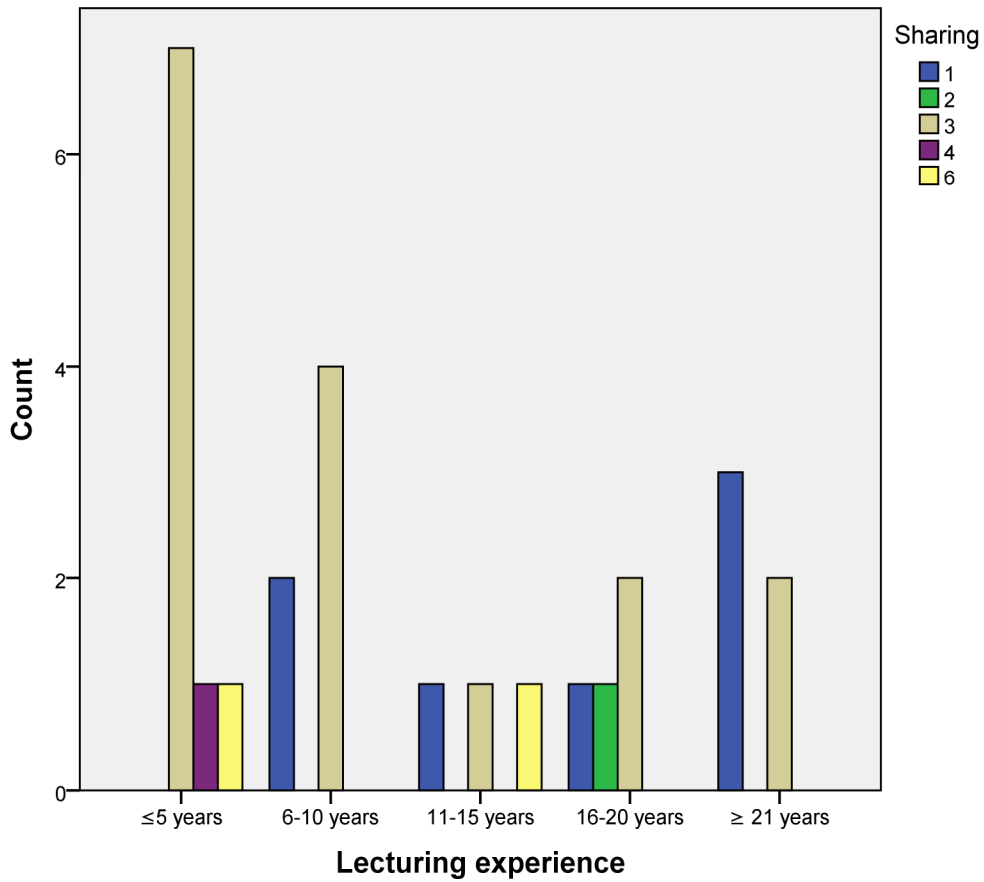
| | | Value | Asymp. Std. Error ^a | Approx. T ^b | Approx. Sig. ^c |
|----------------------|----------------------|-------|--------------------------------|------------------------|---------------------------|
| Interval by Interval | Pearson's R | -.429 | .138 | -2.374 | .026 ^c |
| Ordinal by Ordinal | Spearman Correlation | -.490 | .135 | -2.808 | .010 ^c |
| N of Valid Cases | | 27 | | | |

a. Not assuming the null hypothesis.

b. Using the asymptotic standard error assuming the null hypothesis.

c. Based on normal approximation.

Bar Chart



AcadPos * Sharing

Crosstab

| Count | | Sharing | | | | | Total |
|--------------|---------------------|----------|----------|-----------|----------|----------|-----------|
| | | 1 | 2 | 3 | 4 | 6 | |
| AcadPos | Junior lecturer | 2 | 0 | 4 | 0 | 0 | 6 |
| | Lecturer | 4 | 0 | 8 | 1 | 2 | 15 |
| | Senior lecturer | 1 | 1 | 2 | 0 | 0 | 4 |
| | Associate Professor | 0 | 0 | 1 | 0 | 0 | 1 |
| | Other | 0 | 0 | 1 | 0 | 0 | 1 |
| Total | | 7 | 1 | 16 | 1 | 2 | 27 |

Chi-Square Tests

| | Value | df | Asymp. Sig. (2-sided) |
|------------------------------|--------------------|----|-----------------------|
| Pearson Chi-Square | 9.563 ^a | 16 | .888 |
| Likelihood Ratio | 9.174 | 16 | .906 |
| Linear-by-Linear Association | .092 | 1 | .761 |
| N of Valid Cases | 27 | | |

a. 24 cells (96.0%) have expected count less than 5. The minimum expected count is .04.

Symmetric Measures

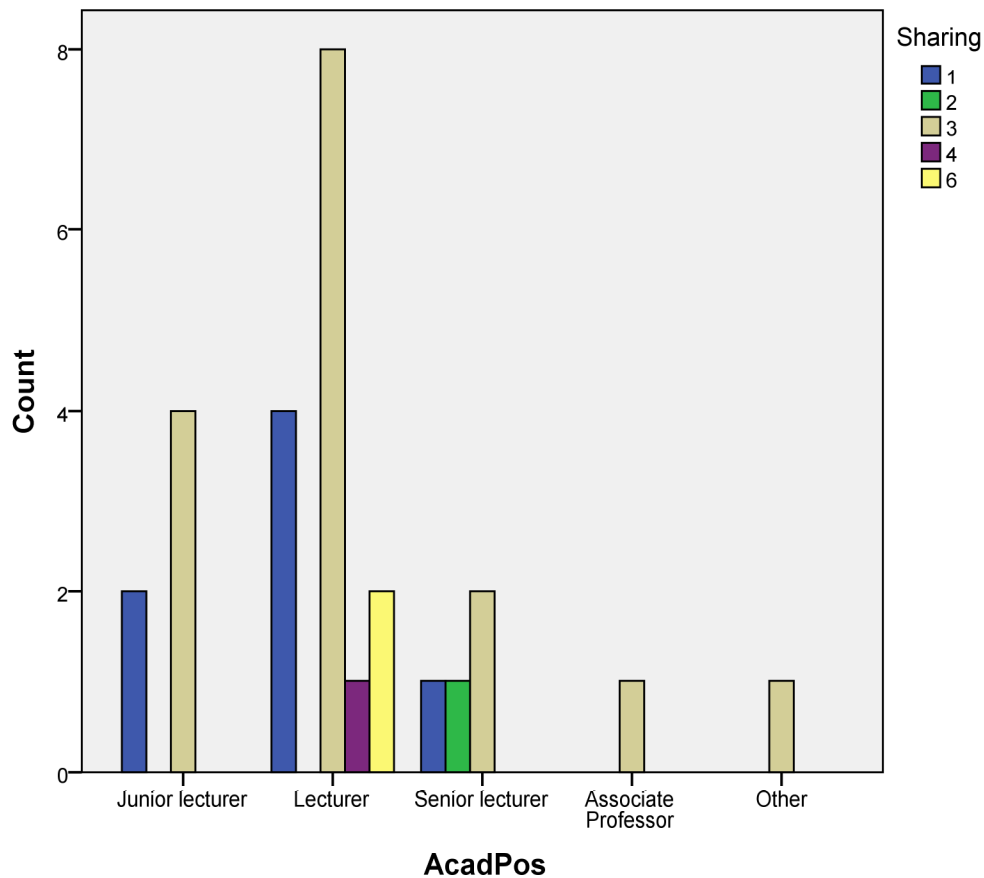
| | | Value | Asymp. Std. Error ^a | Approx. T ^b | Approx. Sig. ^c |
|----------------------|----------------------|-------|--------------------------------|------------------------|---------------------------|
| Interval by Interval | Pearson's R | .060 | .087 | .298 | .768 ^c |
| Ordinal by Ordinal | Spearman Correlation | .048 | .156 | .242 | .811 ^c |
| N of Valid Cases | | 27 | | | |

a. Not assuming the null hypothesis.

b. Using the asymptotic standard error assuming the null hypothesis.

c. Based on normal approximation.

Bar Chart



V45 * Sharing

Crosstab

Count

| | | Sharing | | | | | Total |
|-------|-----------------|---------|---|----|---|---|-------|
| | | 1 | 2 | 3 | 4 | 6 | |
| V45 | Permanent UP | 5 | 1 | 7 | 0 | 1 | 14 |
| | Temporary | 1 | 0 | 6 | 1 | 1 | 9 |
| | Dual (Gov & UP) | 1 | 0 | 3 | 0 | 0 | 4 |
| Total | | 7 | 1 | 16 | 1 | 2 | 27 |

Chi-Square Tests

| | Value | df | Asymp. Sig. (2-sided) |
|------------------------------|--------------------|----|-----------------------|
| Pearson Chi-Square | 5.127 ^a | 8 | .744 |
| Likelihood Ratio | 6.133 | 8 | .632 |
| Linear-by-Linear Association | .859 | 1 | .354 |
| N of Valid Cases | 27 | | |

a. 13 cells (86.7%) have expected count less than 5. The minimum expected count is .15.

Symmetric Measures

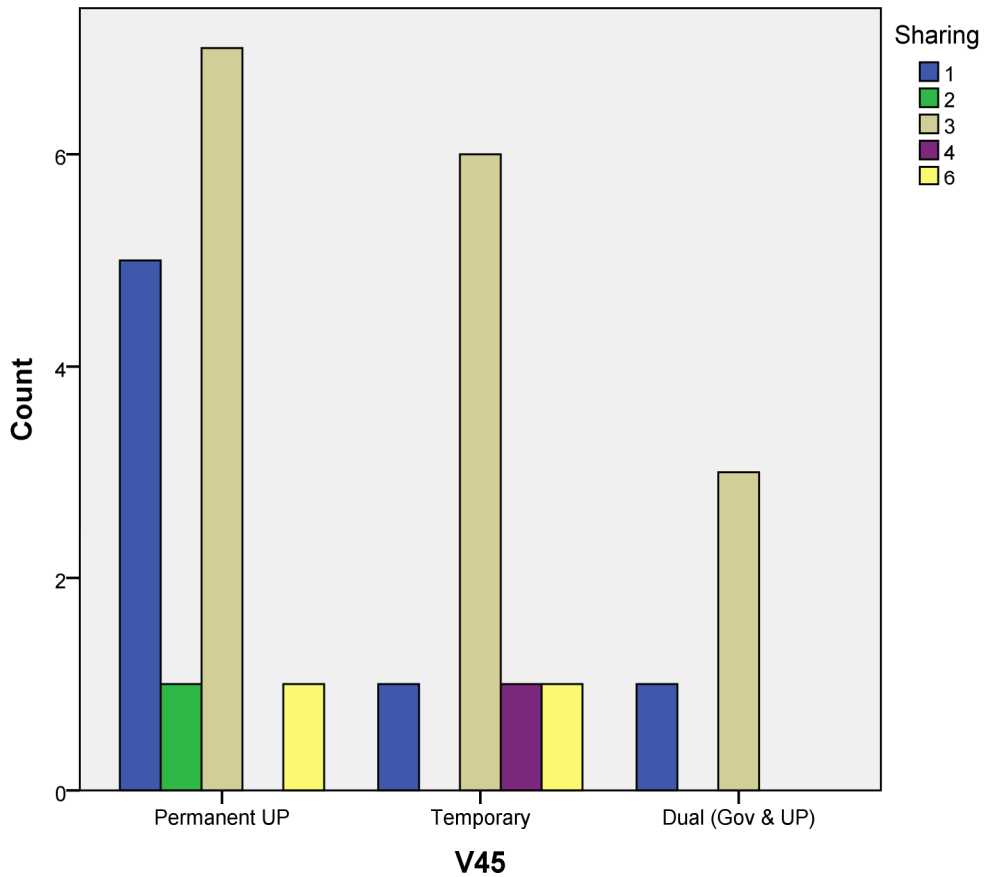
| | | Value | Asymp. Std. Error ^a | Approx. T ^b | Approx. Sig. ^c |
|----------------------|----------------------|-------|--------------------------------|------------------------|---------------------------|
| Interval by Interval | Pearson's R | .182 | .184 | .924 | .364 ^c |
| Ordinal by Ordinal | Spearman Correlation | .216 | .182 | 1.108 | .278 ^c |
| N of Valid Cases | | 27 | | | |

a. Not assuming the null hypothesis.

b. Using the asymptotic standard error assuming the null hypothesis.

c. Based on normal approximation.

Bar Chart



Professional identity / qualification * Sharing

Crosstab

| Count | | Sharing | | | | |
|---------------------------------------|---|---------|---|----|---|---|
| | | 1 | 2 | 3 | 4 | 6 |
| Professional identity / qualification | 1 | 0 | 1 | 2 | 0 | 0 |
| | 2 | 6 | 0 | 11 | 0 | 2 |
| | 3 | 1 | 0 | 3 | 1 | 0 |
| Total | | 7 | 1 | 16 | 1 | 2 |

Crosstab

| Count | | Total |
|---------------------------------------|---|-------|
| Professional identity / qualification | 1 | 3 |
| | 2 | 19 |
| | 3 | 5 |
| Total | | 27 |

Chi-Square Tests

| | Value | df | Asymp. Sig. (2-sided) |
|------------------------------|---------------------|----|-----------------------|
| Pearson Chi-Square | 14.356 ^a | 8 | .073 |
| Likelihood Ratio | 11.054 | 8 | .199 |
| Linear-by-Linear Association | .025 | 1 | .873 |
| N of Valid Cases | 27 | | |

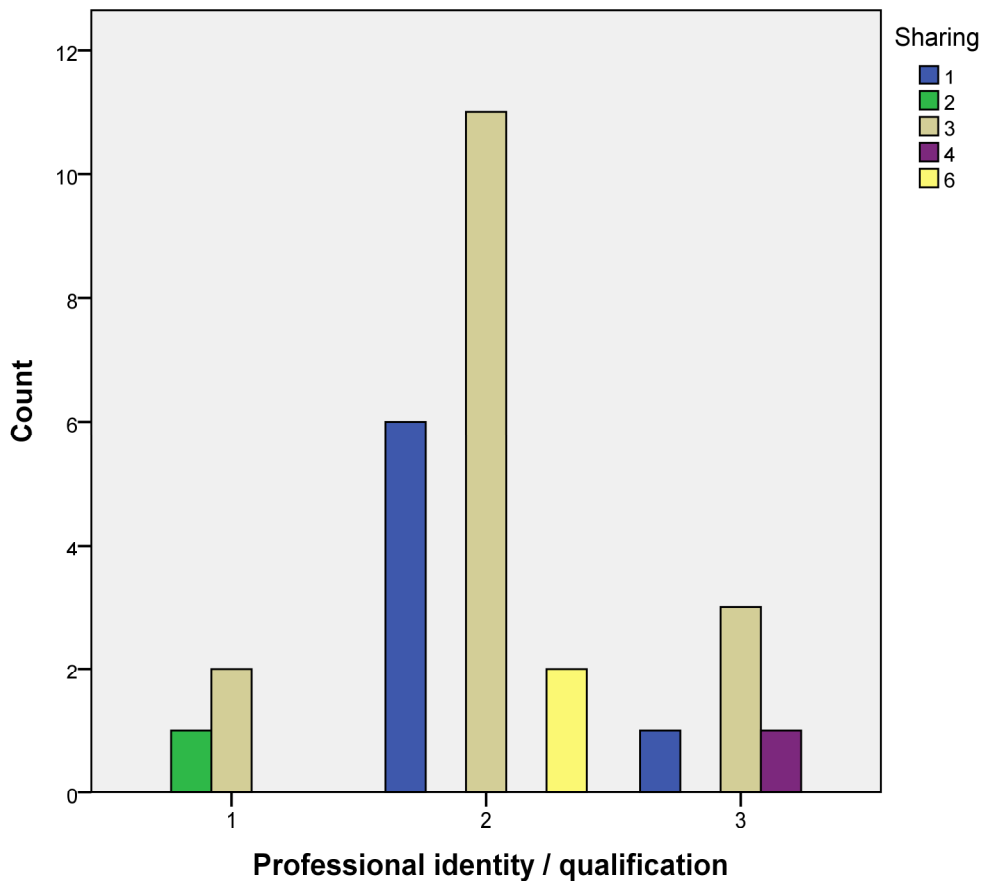
a. 14 cells (93.3%) have expected count less than 5. The minimum expected count is .11.

Symmetric Measures

| | | Value | Asymp. Std. Error ^a | Approx. T ^b | Approx. Sig. ^c |
|----------------------|----------------------|-------|--------------------------------|------------------------|---------------------------|
| Interval by Interval | Pearson's R | .031 | .121 | .157 | .877 ^c |
| Ordinal by Ordinal | Spearman Correlation | .098 | .165 | .490 | .628 ^c |
| N of Valid Cases | | 27 | | | |

- a. Not assuming the null hypothesis.
- b. Using the asymptotic standard error assuming the null hypothesis.
- c. Based on normal approximation.

Bar Chart



Age * Sharing

Crosstab

Count

| | | Sharing | | | | | Total |
|-------|-------|---------|---|----|---|---|-------|
| | | 1 | 2 | 3 | 4 | 6 | |
| Age | 20-29 | 0 | 0 | 2 | 0 | 0 | 2 |
| | 30-39 | 0 | 0 | 1 | 0 | 1 | 2 |
| | 40-49 | 0 | 0 | 10 | 1 | 0 | 11 |
| | 50-59 | 4 | 1 | 3 | 0 | 0 | 8 |
| | 60 + | 3 | 0 | 0 | 0 | 1 | 4 |
| Total | | 7 | 1 | 16 | 1 | 2 | 27 |

Chi-Square Tests

| | Value | df | Asymp. Sig. (2-sided) |
|------------------------------|---------------------|----|-----------------------|
| Pearson Chi-Square | 26.805 ^a | 16 | .044 |
| Likelihood Ratio | 29.675 | 16 | .020 |
| Linear-by-Linear Association | 4.253 | 1 | .039 |
| N of Valid Cases | 27 | | |

a. 24 cells (96.0%) have expected count less than 5. The minimum expected count is .07.

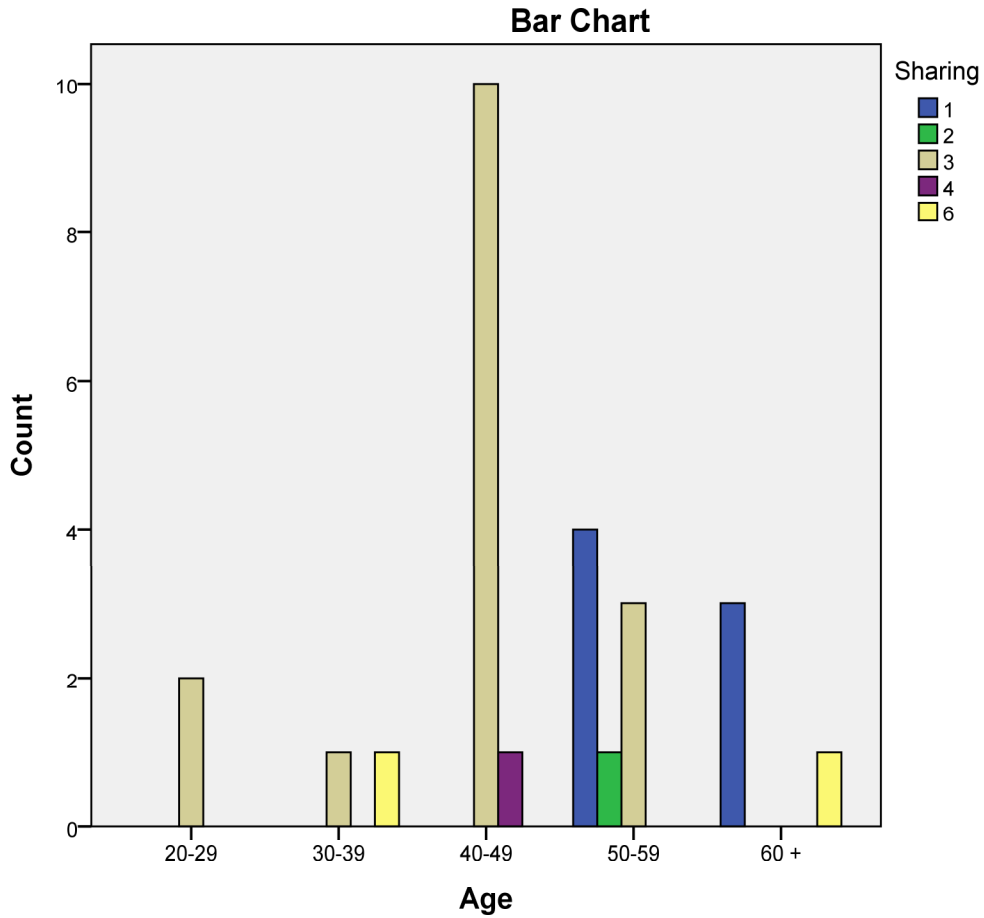
Symmetric Measures

| | | Value | Asymp. Std. Error ^a | Approx. T ^b | Approx. Sig. ^c |
|----------------------|----------------------|-------|--------------------------------|------------------------|---------------------------|
| Interval by Interval | Pearson's R | -.404 | .236 | -2.211 | .036 ^c |
| Ordinal by Ordinal | Spearman Correlation | -.567 | .197 | -3.440 | .002 ^c |
| N of Valid Cases | | 27 | | | |

a. Not assuming the null hypothesis.

b. Using the asymptotic standard error assuming the null hypothesis.

c. Based on normal approximation.



Academic qualification * Sharing

Crosstab

| Count | | Sharing | | | | |
|------------------------|--------------|---------|---|----|---|---|
| | | 1 | 2 | 3 | 4 | 6 |
| Academic qualification | Diploma | 1 | 0 | 2 | 0 | 0 |
| | Bachelor | 0 | 0 | 3 | 0 | 0 |
| | Honours | 1 | 0 | 1 | 0 | 0 |
| | Masters | 4 | 0 | 6 | 1 | 2 |
| | PhD/Doctoral | 0 | 1 | 2 | 0 | 0 |
| | Post Doc | 1 | 0 | 0 | 0 | 0 |
| | Professor | 0 | 0 | 1 | 0 | 0 |
| Total | | 7 | 1 | 15 | 1 | 2 |

Crosstab

Count

| | | Total |
|------------------------|--------------|-------|
| Academic qualification | Diploma | 3 |
| | Bachelor | 3 |
| | Honours | 2 |
| | Masters | 13 |
| | PhD/Doctoral | 3 |
| | Post Doc | 1 |
| | Professor | 1 |
| Total | | 26 |

Chi-Square Tests

| | Value | df | Asymp. Sig. (2-sided) |
|------------------------------|---------------------|----|-----------------------|
| Pearson Chi-Square | 17.270 ^a | 24 | .837 |
| Likelihood Ratio | 16.429 | 24 | .872 |
| Linear-by-Linear Association | .001 | 1 | .981 |
| N of Valid Cases | 26 | | |

a. 34 cells (97.1%) have expected count less than 5. The minimum expected count is .04.

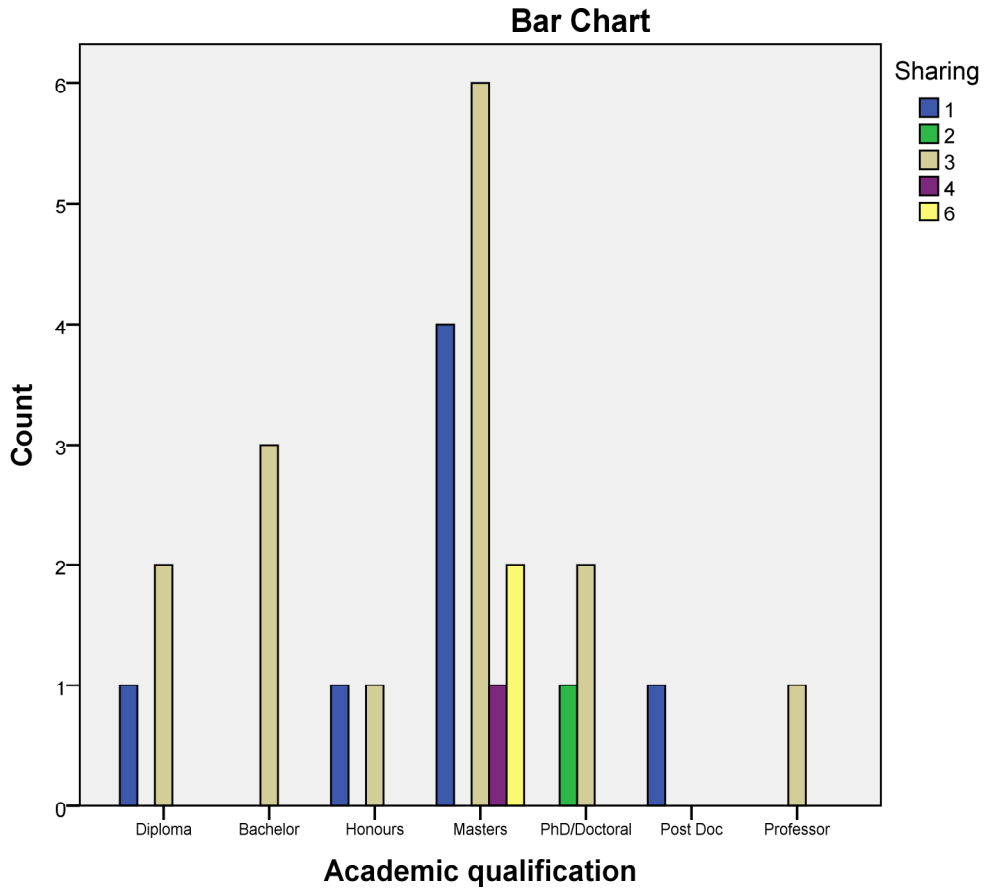
Symmetric Measures

| | | Value | Asymp. Std. Error ^a | Approx. T ^b | Approx. Sig. ^c |
|----------------------|----------------------|-------|--------------------------------|------------------------|---------------------------|
| Interval by Interval | Pearson's R | .005 | .136 | .023 | .982 ^c |
| Ordinal by Ordinal | Spearman Correlation | -.029 | .162 | -.143 | .887 ^c |
| N of Valid Cases | | 26 | | | |

a. Not assuming the null hypothesis.

b. Using the asymptotic standard error assuming the null hypothesis.

c. Based on normal approximation.



CROSSTABS

```

/TABLES=V111 BY Sharing
/FORMAT=AVALUE TABLES
/CELLS=COUNT
/COUNT ROUND CELL
/METHOD=EXACT TIMER(5).

```

Crosstabs

[DataSet1] E:\Statomet_2013\Hannelie_SPSS\SoC1and2_demo_LoU_new_13April_low_23Edited.sav

Case Processing Summary

| | Cases | | | | | |
|---------------|-------|---------|---------|---------|-------|---------|
| | Valid | | Missing | | Total | |
| | N | Percent | N | Percent | N | Percent |
| Age * Sharing | 27 | 50.0% | 27 | 50.0% | 54 | 100.0% |

Age * Sharing Crosstabulation

Count

| | | Sharing | | | | | Total |
|-------|-------|---------|---|----|---|---|-------|
| | | 1 | 2 | 3 | 4 | 6 | |
| Age | 20-29 | 0 | 0 | 2 | 0 | 0 | 2 |
| | 30-39 | 0 | 0 | 1 | 0 | 1 | 2 |
| | 40-49 | 0 | 0 | 10 | 1 | 0 | 11 |
| | 50-59 | 4 | 1 | 3 | 0 | 0 | 8 |
| | 60 + | 3 | 0 | 0 | 0 | 1 | 4 |
| Total | | 7 | 1 | 16 | 1 | 2 | 27 |

CROSSTABS

```

/TABLES=V111 BY Sharing
/FORMAT=AVALUE TABLES
/STATISTICS=CHISQ CORR
/CELLS=COUNT
/COUNT ROUND CELL
/METHOD=EXACT TIMER(5).

```

Crosstabs

[DataSet1] E:\Statomet_2013\Hannelie_SPSS\SoC1and2_demo_LoU_new_13April_Hi_low_23Edited.sav

Case Processing Summary

| | Cases | | | | | |
|---------------|-------|---------|---------|---------|-------|---------|
| | Valid | | Missing | | Total | |
| | N | Percent | N | Percent | N | Percent |
| Age * Sharing | 27 | 50.0% | 27 | 50.0% | 54 | 100.0% |

Age * Sharing Crosstabulation

Count

| | | Sharing | | | | | Total |
|-------|-------|---------|---|----|---|---|-------|
| | | 1 | 2 | 3 | 4 | 6 | |
| Age | 20-29 | 0 | 0 | 2 | 0 | 0 | 2 |
| | 30-39 | 0 | 0 | 1 | 0 | 1 | 2 |
| | 40-49 | 0 | 0 | 10 | 1 | 0 | 11 |
| | 50-59 | 4 | 1 | 3 | 0 | 0 | 8 |
| | 60 + | 3 | 0 | 0 | 0 | 1 | 4 |
| Total | | 7 | 1 | 16 | 1 | 2 | 27 |

Chi-Square Tests

| | Value | df | Asymp. Sig. (2-sided) | Exact Sig. (2-sided) | Exact Sig. (1-sided) |
|------------------------------|---------------------|----|-----------------------|----------------------|----------------------|
| Pearson Chi-Square | 26.805 ^a | 16 | .044 | .069 | |
| Likelihood Ratio | 29.675 | 16 | .020 | .001 | |
| Fisher's Exact Test | 28.158 | | | .001 | |
| Linear-by-Linear Association | 4.253 ^b | 1 | .039 | .037 | .024 |
| N of Valid Cases | 27 | | | | |

Chi-Square Tests

| | Point Probability |
|------------------------------|-------------------|
| Pearson Chi-Square | |
| Likelihood Ratio | |
| Fisher's Exact Test | |
| Linear-by-Linear Association | .007 |
| N of Valid Cases | |

a. 24 cells (96.0%) have expected count less than 5. The minimum expected count is .07.

b. The standardized statistic is -2.062.

Symmetric Measures

| | Value | Asymp. Std. Error ^a | Approx. T ^b | Approx. Sig. ^c |
|---|-------|--------------------------------|------------------------|---------------------------|
| Interval by Interval Pearson's R | -.404 | .236 | -2.211 | .036 ^c |
| Ordinal by Ordinal Spearman Correlation | -.567 | .197 | -3.440 | .002 ^c |
| N of Valid Cases | 27 | | | |

Symmetric Measures

| | Exact Sig. |
|---|------------|
| Interval by Interval Pearson's R | .037 |
| Ordinal by Ordinal Spearman Correlation | .002 |
| N of Valid Cases | |

a. Not assuming the null hypothesis.

b. Using the asymptotic standard error assuming the null hypothesis.

c. Based on normal approximation.

Crosstab

Count

| | | Highest_SoCii | | | |
|----------------------|---|---------------|---------------|----------|------------|
| | | Awareness | Informational | Personal | Management |
| AcquiringInformation | 0 | 2 | 0 | 0 | 1 |
| | 1 | 1 | 1 | 0 | 0 |
| | 2 | 4 | 1 | 0 | 1 |
| | 3 | 7 | 0 | 1 | 1 |
| | 4 | 6 | 1 | 1 | 0 |
| | 5 | 0 | 0 | 0 | 0 |
| Total | | 20 | 3 | 2 | 3 |

Crosstab

Count

| | | Highest_SoCii | | Total |
|----------------------|---|---------------|------------|-------|
| | | Collaboration | Refocusing | |
| AcquiringInformation | 0 | 0 | 0 | 3 |
| | 1 | 0 | 0 | 2 |
| | 2 | 0 | 0 | 6 |
| | 3 | 0 | 1 | 10 |
| | 4 | 1 | 1 | 10 |
| | 5 | 1 | 0 | 1 |
| Total | | 2 | 2 | 32 |

May 9, 2013

PRE = SoCi

POST

STAGE 0 – Awareness

Identical / variations of concerns of HPE's

| | | |
|----|----|---|
| 3 | 3 | |
| 12 | 12 | |
| 21 | 21 | |
| 23 | 23 | |
| 30 | 30 | Currently, other priorities prevent me from focusing my attention on the new clickUP. |

- ✓ Did not know what we needed
- ✓ It is expected of me to attend the workshop which motivated my attendance
- * ~~Lots of advertisements motivated my attendance~~
- ✓ Not sure what was going on with new system
- * ~~Saw the strengths of system from talking to colleagues~~
- * Courses should be mandatory for all staff
- ✓ Why the change to the new ClickUp system

May 9, 2013

STAGE 1 – Informational concerns

Identical / variations of concerns of HPE's

6 I have a very limited knowledge of the new clickUP.

* ~~How I should change my thinking~~ (#Personal)

✓ Lack of knowledge of wikis, blogs etc

✓ Want to know how to navigate/where to go

✓ How to get courses on ClickUp

✓ How to get access to ClickUp

✓ How to put content on ClickUp

✓ Wanted to learn the basics

✓ Use on communication functionalities

✓ Use of assessment functionalities

✓ How to manage files

✓ To know the different functionalities

✓ How I can use ClickUp for different modules

✓ What is ClickUp all about

✓ There were things that I could not do/find

✓ How to use ClickUp more effectively (#Man)

6 I have a very limited knowledge of the new clickUP.

✓ Knowledge and skills to use the system effectively.-(#Man)

✓ The use of assessment functionalities

✓ The use of mobile functions for students

✓ Management information is lacking

✓ How to make marks/grades available to students

✓ The use of communication functionalities

✓ Knowledge of different functionalities (Student view)

✓ Modify/edit and uploading documents

* ~~How I should change my thinking~~ (#Personal)

Plan structure

Make it pretty

Admin concerns

File sizes for visual material

May 9, 2013

STAGE 1 – Informational concerns

To familiarise myself with the system (from #14)

- * How to create a space with everything on it that students would need as well as communication #inf_01_06_new1_pre
- * How to structure the pages better #inf_01_06_new2_pre

14 I would like to discuss the possibility of using the new clickUP

- * See possibilities / capabilities
- * Have overview of possibilities
- * ~~Overview stimulate interest in other courses~~
- * A lot of ways the system can help you
- * ~~To familiarise myself with the system~~

14 I would like to discuss the possibility of using the new clickUP

- * Seeing other possibilities
- * Time to revise handouts to see other possibilities
- * Adapt ideas to fit possibilities
- * Want to see examples

15 I would like to know what resources are available if we decide to adopt the new clickUP.

- * What physical support resources
- * Wants a basic recipe to follow
- * Wants a process chart/map
- * What online resources are available
- * Revise the hand-out resources

15 I would like to know what resources are available if we decide to adopt the new clickUP.

- Revise notes
- Electronic booklet or guide
- Personal support
- Help to *migrate* modules to the new clickUP
- Layman's manual

PRE and POST concerns form Perceived needs Interview based on the SoC framework

May 9, 2013

STAGE 1 – Informational concerns

26

26

35

I would like to know how the new clickUP is better than what we have now

35

I would like to know how the new clickUP is better than what we have now.

* New ClickUp is different that old system

* How new clickUP works different from old

Too much information

Other training courses will be attended if they interest me / is something that we want to do / or to recap

Course introduction needed

The practicality / feasibility of ideas in the system

Course participants have different needs and concerns

~~To make environment look pretty (to #06)~~

Sceptical about practicality /feasibility

~~To plan the structure of the module (to #06)~~

Keeping up with/stay current/relevant

Should keep up with times / technology changes

Course where I can bring my tests and build while you are available to help

~~Time to attend training workshops #man~~

Overview course attended was not enough

Will the bandwidth be stable and enough

~~Time to practice everything after training #Man~~

~~Administrative concerns (to #06)~~

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May 9, 2013

STAGE 1 – Informational concerns

Where are we going with new ClickUp

I need to work hands on the system to see if it works

My needs are not based on a course

Courses about approaches in e-learning

Learn by demonstrating/showed how

Would like to have a feedback session on my use of the system

Need training (From per)

File sizes that can be uploaded (to #06

Will help to bring own content to training workshops

Short courses repeated as encouragement

May 9, 2013

STAGE 2 – Personal concerns

Identical / variations of concerns of HPE's

7

7

13

13

17 I would like to know how my teaching or administration is supposed to change

17

I would like to know how my teaching or administration is supposed to change

* How my thinking should change

* How to change my thinking

* Not knowing what was expected of me after integrating ClickUp into teaching

*

28 I would like to have more information on time and energy commitments required by the new clickUP.

28

* Time requirements to learn the system

*

Amount of learning required

Will I cope to develop everything from scratch

Felt insecure not knowing what was expected of me...

May 9, 2013

STAGE 2 – Personal concerns

33

33

- | | |
|---|---|
| * Will I master to use the system | Fear that I will not be able to master the system |
| * Concerned with my own skills with the innovation | My IT skills are not sufficient |
| * The amount of learning required #28 | The amount of information to assimilate each day too much |
| * The practice needed after training session | Fear that trying to work in the system is going to be frustrating |
| * Need training (#Inf) | Is the change really necessary |
| * How will I cope to develop everything from scratch #28 | <i>Pace of the training workshop (from #Man)</i> |
| * That it is not that difficult to master | |
| * Fear that I will not stay up with the rest of the class | |
| * Will the new ClickUp be user-friendly and easy enough for me to use it myself | |
| * I want to be able to use it myself | |
| * I felt overwhelmed by too much information in training/workshop | |
| * Remembering all the information | |
| * Get comfortable with the system | |

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STAGE 2 – Personal concerns

- * My own computer literacy/ability to use the computer
- * I felt uncomfortable and stupid during the overview course
- * I felt completely out of my comfort zone since new clickUP was totally different
- * I feel bad since I cannot use the system myself and have to ask for help
- * Is the change worth it?
- * That I will be frustrating sit down and figure it out on my own
- * I felt confused/lost at training session
- * Technology makes me feel anxious
- * ~~I felt insecure not knowing what was expected of me with regards to clickUP #28~~
- * I would like to be confident in using system
- * Wanted a sense of security that it is not that difficult/wanted to allay my fears.
- * Wanted to allay my fears – is it going to be another People Soft disaster?
- * Is this new innovation going to be worth the effort?

May 9, 2013

STAGE 3 – Management concerns

Identical / variations of concerns of HPE's

| | | |
|--|------------|---|
| 4 I am concerned about not having enough time to organize myself each day | 4 | 4 I am concerned about not having enough time to organize myself each day |
| <ul style="list-style-type: none"> * Not enough time to organise Not enough time to build the courses Not enough time to attend courses Not enough time to practice what I was taught <i>Time to practice everything after training (from #Man)</i> | | <ul style="list-style-type: none"> * Time to plan changes * Time for marking online * Use it in order to save me time * Can the system help to manage time / improve teaching * That I will not have everything ready / in place * Time to practice <i>Time to attend training workshops (from #Inf)</i> <i>Time to attend training workshops (from Man 25)</i> |
| 8 | 8 – | 8 – I am concerned about conflict between my interests and my responsibilities. Who's responsibility is the development of the module |
| 16 I am concerned about my inability to manage all that the new clickUP requires | 16 | 16 I am concerned about my inability to manage all that the new clickUP requires. |
| My inability to implement all the information | * | Frustration to download assignments from home connection. |

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STAGE 3 – Management concerns

My inability to manage blogs, wikis, etc

*

My inability to manage the uploading process

Unsure about having to take responsibility for everything

*

Not coping with the pace of the training workshop (#Per)

25

25 -

I am concerned about time spent working with non-academic problems related to the new clickUP.

The system that fell over (from Man)

When system is down /off

Amount of time to test new system and get things ready for students

Time to attend training workshops (#04)

34

34 –

Coordination of tasks and people is taking too much of my time.

Coordination of tasks in a block

Our teaching system not ClickUp friendly

 Submission of assignments on clickUP saves paper³

 Why printing of study guides necessary when using ClickUp²

To have a communication channel online for students – manage questions they have / providing necessary information

Submit assignments on ClickUp

Rubric manager is not user-friendly enough

¹ Not a concern

² Not a concern

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STAGE 3 – Management concerns

How will I manage communication with students

The system that fell over (#25)

I want for the system to make my life easier

To be able to access what students know/don't what their progress is over period of time

How to use ClickUp more effectively (from Inf 06)

I need to communicate with my students from (#24 Con)

Students to have access to information (from #Con)

To have a notice board for students (#Man)

Limitations in questions types

clickUP is not used optimally in the Faculty

Will the system be able to do what I need it to do?

Will the system lighten my workload and help with communication to students

More use of the communication functionalities

To be able to use the system efficiently

Help to manage the administrative tasks ?

Help to organise whole module this way.

Knowledge and skills to use effectively (from #06).

Access to learning material when needed (from Con)

Use of assessment tools to grade learning (from Con)

Risk to make copyrighted sensitive images available in clickUP

Will my use make a difference in time management and teaching (#11)

To monitor student activity in the module / provide evidence (#Con)

Student's access to computers (#CON)

Access to learning material when needed (#CON)

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STAGE 3 – Management concerns

Use of assessment tools to grade learning (from Con)

Risk to make copyrighted sensitive images available in clickUP (from Con)

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STAGE 4 – Consequence concerns

Identical / variations of concerns of HPE's

1 I am concerned about students' attitudes toward the new clickUP.

* Colleagues attitudes towards ClickUP

1 – I am concerned about students' attitudes toward the new clickUP.

11 I am concerned about how the innovation affect students

* Want best out of learning time

* Do this for the benefit of my students

* The cost using ClickUp for the student

* The user-friendliness will affect the students and colleagues' use

* That students can't get into the system

Want best teaching

11 – I am concerned about how the innovation affect students

That it is useful and interesting for students

My and the student's success with the system will be a motivation

Enhance student's learning

To make life easier for students

Will my use make a difference in time management and teaching 9MANO

I am concerned about the usability of the system for my students and colleagues that are not iT literate

Tracking to support students to pass

Easy access for students when needed in user-friendly way

How to accommodate the learning needs of students

Learning environment with easy access and user-friendly to students

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STAGE 4 – Consequence concerns

19

19

*

24 I would like to excite my students about their part in this approach.

24 I would like to excite my students about their part in this approach.

* To make use of interactive functions

Make it interesting for students with visual elements for example

* To make notices, marks, examples available

Engage students

* To have students come prepared to class

Variety of ways to deliver content / information to students

* To make it more accessible for my students

Making use of mobile functionalities in teaching

* To design it for different groups of students differently

Course about interactive methods / methods to get in interaction

* ~~I need to communicate with my students (#Man)~~

Make it fun for the students

Making use of exercises and assessments / discussions

32

32

I would like to know how my role will change when I am using the new clickUP.

* Students to have access to information (#Man)

To monitor student activity in the module / provide evidence (#Man)

* To have ClickUp as extension of my classroom

Student's access to computers (#Man)

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STAGE 4 – Consequence concerns

| | |
|--|---|
| * To have a notice board for students (#Man) | Access to learning material when needed (#Man) |
| * Students to get best teaching | Students feel comfortable accessing the information |
| * Students encourage me to use ClickUp | |
| * Want students to learn continuously | Use of assessment tools to grade learning (#Man) |
| * I am interested in technology for how for how it can promote student learning and teaching | Risk to make copyrighted sensitive images available in clickUP (#Man) |
| | Getting students engaged in discussing content |
| | To get students to become independent learners |
| | Students to learn how to write, site properly |
| | Information orientated – clickUP support that ³ |
| | clickUP can save students time and money ⁴ |
| | Integrate assessment into teaching more frequently |
| | Want students to use it more... |
| | Students demand the use of clickUP |
| | Quality of service to students improve with clickUP's use ⁵ |
| | Uneducated students |

³ Not a concern

⁴ Not a concern

⁵ Not a concern

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STAGE 4 – Consequence concerns

System allows to treat students fair

System allows to have continues engagement with students oppose to sporadic engagement.

STAGE 5 – Collaboration concerns
Identical / variations of concerns of HPE's

5

5

I would like to help other faculty in their use of the new clickUP

10

10

18

18

27

27

I would like to coordinate my efforts with others to maximize the new clickUP's effects.

Would like to integrate my efforts /collaborate when developing a new course

Want to work with librarian to update my course

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STAGE 5 – Collaboration concerns

29

29

29 – I would like to know what other faculty are doing in this area

- | | |
|--|---|
| * Useful if colleagues teaching in same block are trained | To have all elcturers comfortable in the use of clickUP |
| * Useful if colleagues teaching in department have idea of possibilities | |
| * That colleagues will be negative about the implementation | All should attend the Overview |
| * Everyone must use it then it will work perfectly | Will everybody buy into this |
| * Impact on self when colleagues are not using the system | Lack of interest in colleagues and students |
| * Increase in workload when colleagues are not using the system | Colleagues are first line of support |
| * Alls staff should be using the system else confusing the students | Negative influence(negativity) of colleagues regarding the system |
| * All staff to completes at least first 3 courses | Low uptake of colleagues |
| * Time required to help colleagues with the system | |

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STAGE 6 – refocusing concerns

Identical / variations of concerns of HPE's

2

2

*

*

9

9

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20

22

22

31

31

New developments will keep me interested

| | | | | | | | | | | |
|------|------|--|--|------|--|--|--|--|--|-----------------|
| | | | | #002 | | | | | | #_Inf_08_41_02 |
| | | | | #002 | | | | | | #_Inf_08_41_03 |
| | | | | #002 | | | | | | #_Inf_08_41_04 |
| | | | | | | | | | | #_Inf_08_41_05 |
| | | | | #005 | | | | | | #_Inf_11_49_01 |
| | | | | #005 | | | | | | #_Inf_11_49_01 |
| | | | | #009 | | | | | | #_Inf_11_49_02 |
| | | | | #006 | | | | | | #_Inf_12_53_01 |
| | | | | #009 | | | | | | #_Inf_13_54_01 |
| | | | | #009 | | | | | | #_Inf_14_55_02 |
| | | | | #012 | | | | | | #_Inf_15_56_01 |
| | | | | #012 | | | | | | #_Inf_15_56_01 |
| #029 | | | | | | | | | | #_Inf_16_57_01 |
| #029 | | | | | | | | | | #_Inf_16_60_01 |
| | #025 | | | | | | | | | #_Inf_17_65_01 |
| | #025 | | | | | | | | | #_Inf_18_66_01 |
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| | | | | | | | | | | #_Inf_32_114_01 |

| | | | | | |
|-----------------|------|-------------|-------------------------------------|--|---|
| #_Inf_08_41_02 | post | Information | Course | attend | address interests |
| #_Inf_08_41_03 | post | Information | Course | attend | address needs |
| #_Inf_08_41_04 | post | Information | Course | attend | to recap |
| #_Inf_08_41_05 | pre | Information | course | participants have | different needs and concerns |
| #_Inf_11_49_01 | pre | Information | Sceptical about | practicality / feasibility | for my specific needs |
| #_Inf_11_49_01 | post | Information | Sceptical about | practicality / feasibility | for my specific needs |
| #_Inf_11_49_02 | post | Information | To see the | practical implementation of | my ideas |
| #_Inf_12_53_01 | post | Information | How to | make things prettier | |
| #_Inf_13_54_01 | pre | Information | person to | work with | until I can do it myself |
| #_Inf_14_55_02 | post | Information | to plan | the structure | of a module |
| #_Inf_15_56_01 | post | Information | keeping up with | time (technology) | |
| #_Inf_15_56_01 | pre | Information | keeping up with | stay current / relevant | |
| #_Inf_16_57_01 | pre | Information | offer | courses | at different paces (for different learning needs) |
| #_Inf_16_60_01 | pre | Information | course | where I can bring my tests etc | and build |
| #_Inf_17_65_01 | pre | Information | Overview Course | attended | was not enough |
| #_Inf_18_66_01 | post | Information | TIME | to attend courses | |
| #_Inf_18_66_02 | pre | Information | TIME | to practice all after training | |
| #_Inf_19_70_01 | pre | Information | where are we | going with new clickUP | |
| #_Inf_20_73_01 | pre | Information | support necessary | in the form of individual questions | and online help |
| #_Inf_21_74_01 | post | Information | if the system and bandwidth | will be stable and large enough | for EVERYbody |
| #_Inf_21_74_02 | post | Information | if the system and bandwidth | will allow us to work on it | during BUSY times (limited time frames to do...) |
| #_Inf_22_75_01 | pre | Information | I need to work | handson in the system | to see how it works |
| #_Inf_25_93_01 | pre | Information | How to create a space | with everything on it that students would need | as well as communication |
| #_Inf_23_91_01 | pre | Information | My needs are not based on a course | | |
| #_Inf_24_92_01 | pre | Information | Courses about | approaches in elearning | |
| #_Inf_26_94_01 | pre | Information | How to | structure the pages better | |
| | | | | in an electronic environment | |
| #_Inf_27_100_01 | pre | Information | Learn by demonstrating / showed how | | |
| #_Inf_28_104_01 | post | Information | How the | access to clickUP modules | works |
| #_Inf_29_105_01 | post | Information | Would it be possible to upload | huge graphical files for a visual subject? | |
| #_Inf_30_106_01 | pre | Information | would like to have | a feedback session on my use of the system | |
| #_Inf_31_108_01 | post | Information | To repeat | to encourage | use |
| #_Inf_31_108_01 | post | Information | to bring own content | to courses would be helpful | |
| #_Inf_32_114_01 | post | Information | Confusion about the administrative | functions | e.gg. Making courses available |

Personal (2) The individual is uncertain about the demands of the innovation, his or her adequacy to meet those demands, and/or his or her role with the innovation. The individual is analyzing his or her relationship to the reward structure of the organization, determining his or her part in decision making and considering potential conflicts with existing structures or personal commitment. Concerns also might involve the financial or status implications of the program for individual and his or her colleagues.

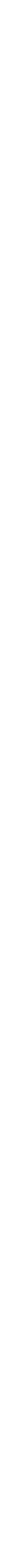
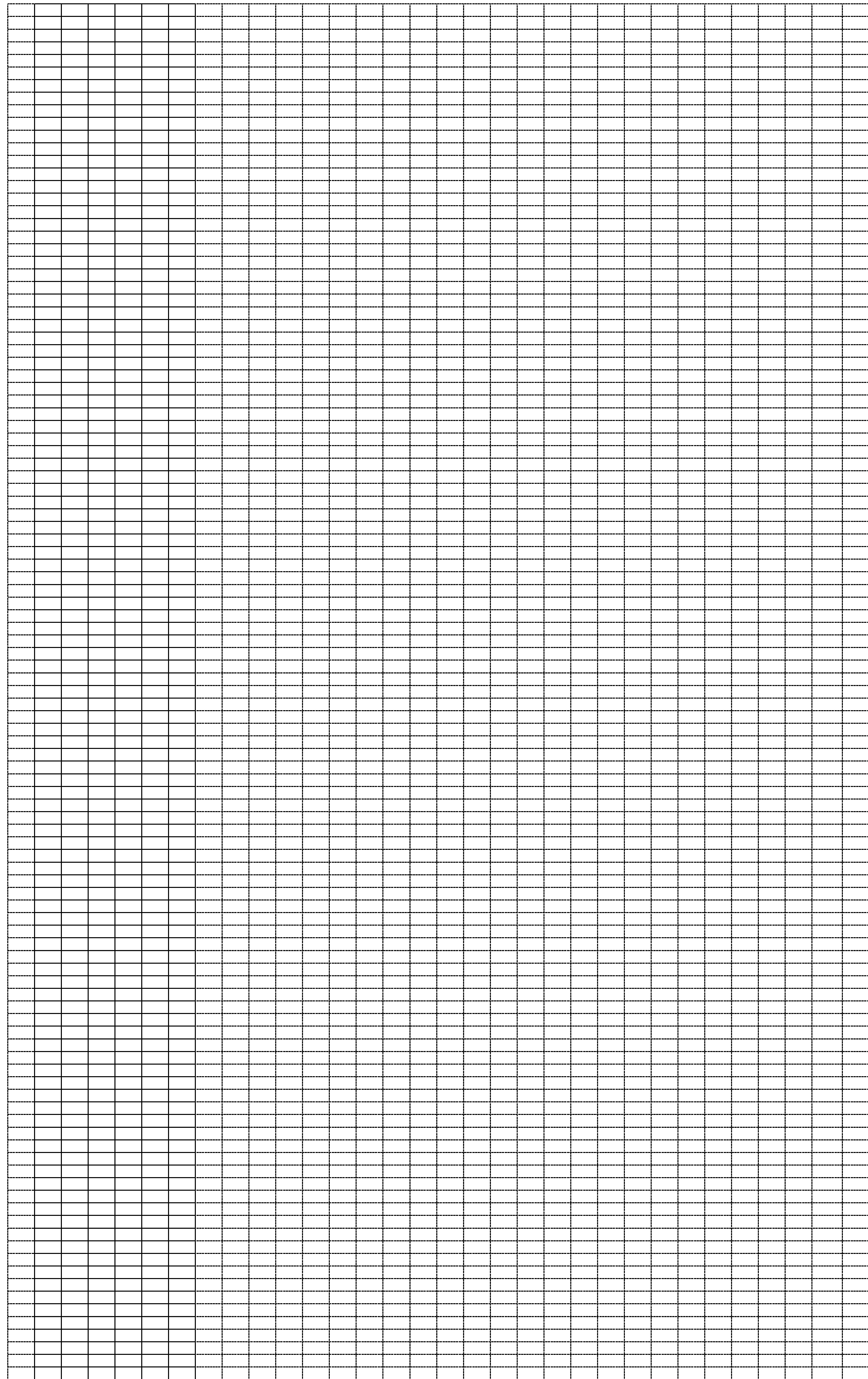
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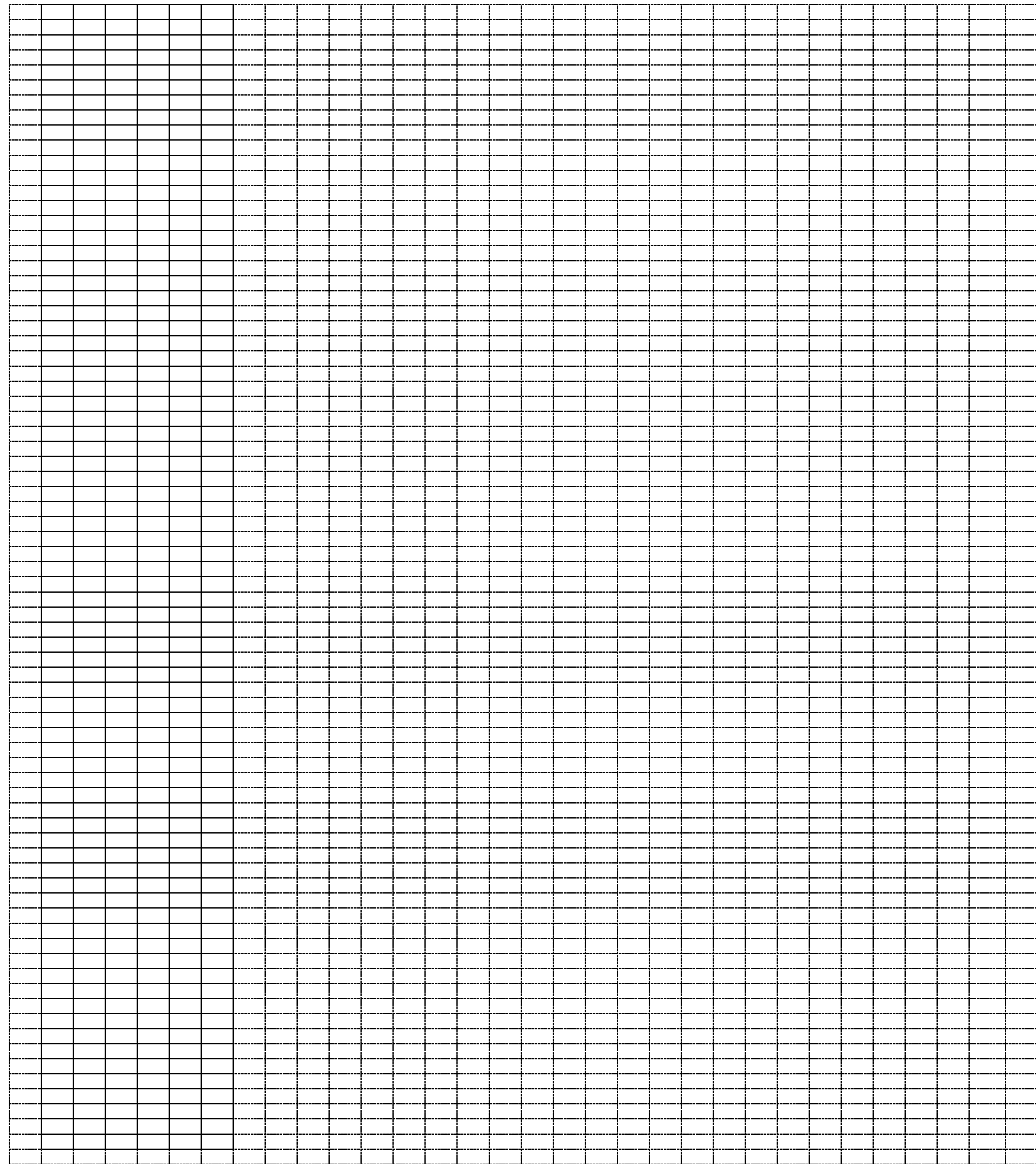
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|-----------------|----------|--|---|---|-----------------------|--|
| #_Per_01_07_01 | Personal | effect | reorganisation | on professional status | | |
| #_Per_02_13_01 | Personal | who | make decision | admin | change | |
| #_Per_03_17_01 | Personal | how | teaching | thinking | should change | |
| #_Per_03_17_02 | Personal | how my | thinking | should change | | |
| #_Per_03_17_03 | Personal | Not knowing what was expected | of me intergrating clickUP into teaching | | | |
| #_Per_04_28_01 | Personal | information | time | energy | requirements | |
| #_Per_04_28_02 | Personal | time requirements | to learn the system | | | |
| #_Per_05_33_01 | Personal | use | feedback | from students | change | |
| #_Per_06_52_01 | Personal | Will I master | to use the system | | | |
| #_Per_06_52_02 | Personal | Fear | will I have success | | | |
| #_Per_06_52_03 | Personal | Fear | will not be able to master | | | |
| #_Per_06_52_04 | Personal | concerned | about my own | skills with the innovation | (to work independent) | |
| #_Per_06_52_05 | Personal | update | my skills | | | |
| #_Per_06_52_06 | Personal | the amount of | learning required | | | |
| #_Per_06_52_07 | Personal | Practice needed | after training session | | | |
| #_Per_06_52_08 | Personal | Immediate application | after training session | | | |
| #_Per_06_52_09 | Personal | Need | training | | | |
| #_Per_06_52_10 | Personal | Will I grasp | it immediatley | | | |
| #_Per_06_52_11 | Personal | clickUP will be | challenging to master | | | |
| #_Per_06_52_12 | Personal | How will I | cope to | develop everything from scratch | | |
| #_Per_06_52_13 | Personal | Will I be able to | master all | the new functions and terminology | what is going on | |
| #_Per_06_52_14 | Personal | concern that I would | NOT understand | | | |
| #_Per_06_52_15 | Personal | How will I | cope (manage) with all of this? | | | |
| #_Per_06_52_16 | Personal | That it is not | that difficult the master | | | |
| #_Per_06_52_17 | Personal | Fear that I | will not stay up with the rest of the class | | | |
| #_Per_06_52_18 | Personal | Will the new clickUP be | userfriendly and easy enough | for me to use it myself? | | |
| #_Per_07_38_01 | Personal | I want to be | able to use it myself | | | |
| #_Per_09_45_01 | Personal | remembering | all the information | | | |
| #_Per_10_68_01 | Personal | Get comfortable | with system | | | |
| #_Per_10_68_02 | Personal | My IT skill | concerns me | That I alwys have to ask you | | |
| #_Per_11_72_01 | Personal | My own computer literacy | /ability to use the computer | | | |
| #_Per_11_72_02 | Personal | couldn't understand | it quickly enough | in the overview | | |
| #_Per_11_72_03 | Personal | I felt | uncomfortable and stupid | during the overview course | | |
| #_Per_11_72_04 | Personal | I felt | completely out of my comfort zone | new clickUP was TOTALLY different | | |
| #_Per_11_79_01 | Personal | Too much information | to assimilate in one day | Needed more time | | |
| #_Per_11_80_01 | Personal | I feel bad | because I cannot use the system myself | have to ask for help. | | |
| #_Per_11_81_01 | Personal | Is the change | worth it? | | | |
| #_Per_15_82_01 | Personal | THAT it will be | frustrating to | to sit down and figure it out on my own | | |
| #_Per_16_83_01 | Personal | I felt | confused /lost (@overview) | at training session | | |
| #_Per_17_86_01 | Personal | technology makes me | feel anxious | | | |
| #_Per_18_95_01 | Personal | I felt | insecure | not knowing what was expected of me with regards to clickUP | | |
| #_Per_19_96_01 | Personal | Will the training | help to improve my skills | in use of the system | | |
| #_Per_19_99_01 | Personal | That it is just too much | information / steps to remember | | | |
| #_Per_20_102_01 | Personal | That it was easier when started to use | than it seem initially in the course | | | |
| #_Per_21_116_01 | Personal | I would like | to be confident in using system | | | |
| #_Per_22_117_01 | Personal | Wanted a sense of security | that it is not that difficult | wanted to allay my fears | | |
| #_Per_24_120_01 | Personal | Wanted to allay my fears - Is it going to be | another people soft disater? | | | |
| #_Per_23_118_01 | Personal | Is this new innovation going to | be worth the effort? | | | |
| | | | Just understood the old system | | | |

Management (3) The individual focuses on the processes and tasks of using the innovation and the best use of information and resources. Issues related to efficiency, organizing, managing and scheduling dominate.

| | | | | | | | | | | |
|------|------|------|--|------|--|--|--|--|--|----------------|
| | | | | #002 | | | | | | #_Man_01_04_01 |
| | | | | #003 | | | | | | #_Man_01_04_02 |
| | | | | #003 | | | | | | #_Man_01_04_03 |
| | | | | #003 | | | | | | #_Man_01_04_04 |
| #029 | | | | #003 | | | | | | #_Man_01_04_05 |
| #017 | #012 | #013 | | #003 | | | | | | #_Man_01_04_06 |
| #012 | #013 | | | #003 | | | | | | #_Man_01_04_07 |
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| | | | | | | | | | | #_Man_03_16_01 |
| | | | | | | | | | | #_Man_03_16_01 |
| | | | | | | | | | | #_Man_03_16_2 |
| | | | | | | | | | | #_Man_03_16_3 |
| | | | | | | | | | | #_Man_03_16_4 |

| | | | | | | |
|----------------|------------|------------------|---|----------------------------|------------------------------|--|
| #_Man_01_04_01 | Management | not enough | time | organise | myself | |
| #_Man_01_04_02 | Management | not enough | time | to plan | changes | |
| #_Man_01_04_03 | Management | not enough | time | | | |
| #_Man_01_04_04 | Management | not enough | time | to mark | many clicks / download speed | |
| #_Man_01_04_05 | Management | not enough | time | | | |
| #_Man_01_04_06 | Management | Want to | save as much as possible time | | | |
| #_Man_01_04_07 | Management | need that system | help in management of time | | | |
| #_Man_01_04_08 | Management | not enough | time | to build the courses | | |
| #_Man_01_04_09 | Management | that I will not | have everything (for my online modules) | in place | | |
| #_Man_01_04_10 | Management | not enough | time to | attend training courses | | |
| #_Man_01_04_11 | Management | not enough | time to | practice what I was taught | | |
| #_Man_02_08_01 | Management | not enough | time to | practice what I was taught | | |
| #_Man_02_08_02 | Management | conflict | interest</ | | | |





HU: PN_FullGroup_v1
File: [E:\Hannelie\Data analysis\PN\Atlas doca\PN_FullGroup_v1.hpr6]
Edited by: Super
Date/Time: 13/05/06 05:36:44 PM

Codes-quotations list
Code-Filter: Code Family "Stage 3 Management__PRE" [14]

Code: #Man_01_04_03_pre {3-0}

P23: 003 - 23:9 [Time. It still is.] (2:1666-2:1683) (Super)
Codes: [#Man_01_04_03_pre]

Time. It still is.

P23: 003 - 23:13 [got limited hours because wejr..] (3:309-3:381)
(Super)
Codes: [#Man_01_04_03_pre] [*concerns_pre] [^lect!]

got limited hours because wejre only
halfday so that makes it difficult.

P31: 014 - 31:9 [Time. To transfer it from the ..] (4:253-4:320)
(Super)
Codes: [#Man_01_04_03_pre]

Time. To transfer it from the old to the new
and is it going to work

Code: #Man_01_04_08_pre {1-0}

P15: 046 - 15:3 [Time. Yes, time. IV Time. Time..] (2:5-2:123) (Super)
Codes: [#Man_01_04_08_pre]

Time. Yes, time.
IV Time. Time to be able to attend the courses, or...?
IE No, to build the..
IV The build the things?

Code: #Man_01_04_10_pre {1-0}

P26: 007- 26:12 [IE If I just had the time? IV ..] (3:389-3:938)
(Super)
Codes: [#Man_01_04_10_pre] [%train] [Time]

IE If I just had the time?
IV If you had the time.
IE There are lots of things, lots of the education, like Glynnis was
running an assessment
thing last year, or whatever, it just clashes with my teaching. So there
are always things like we
had two or three workshops I wanted to attend in the second half of last
year or the beginning of
this year but it was just because of my teaching.
IV Is that maybe why you also chose to attend the Saturday course?

IE That's correct, because that was the only time that it didn't clash with my teaching.

Code: #Man_01_04_11_pre {1-0}

P 9: - 9:24 [then when I understand it I ca..] (2:1-2:136) (Super)
Codes: [#Man_01_04_11_pre] [%train_need_pre]

then when I understand it I can... yes, and next time I can do it. But that I couldn't manage; I think that was my... the biggest problem.

Code: #Man_03_16_01_pre {1-0}

P34: 002_ - 34:6 [, and am I ever going to imple..] (2:327-2:365)
(Super)
Codes: [#Man_03_16_01_pre]

, and am I
ever going to implement it,

Code: #Man_03_16_02_pre {1-0}

P23: - 23:12 [Because we just donjt have the..] (2:1957-2:2023)
(Super)
Codes: [#Man_03_16_02_pre]

Because we just donjt have the time itjs
very difficult to do that.

Code: #Man_03_16_04_pre {1-0}

P25: 006- 25:13 [Looked dark having to take res..] (2:1007-2:1061)
(Super)
Codes: [#Man_03_16_04_pre]

Looked dark having to take
responsibility for everythin

Code: #Man_06_47_01_pre {1-0}

P23: 003 - 23:11 [And then to use the other moda..] (2:1793-2:2022)
(Super)
Codes: [#Man_06_47_01_pre]

And then to use the other modalities like
Blogs and Wikis you need a lot of time to
go onto the web, and see what students
are doing, and actually teaching online.
Because we just donjt have the time itjs
very difficult to do that

Code: #Man_07_48_01_pre {1-0}

P32: 015 - 32:17 [I didn't... now, the first tim..] (6:304-6:689)
(Super)

Codes: [#Man_07_48_01_pre]

I didn't... now, the first time that I said I had to print this, I think, I had something like, why? No, because the students have to have a copy. I'm like, why? Mecause that's the university's policy. Why? Mecause it's on Click Up, you must have it on paper and on Click Up, and I'm like, but why can I can I not just put it on Click Up because I'm putting it on Click Up already?

Code: #Man_08_57_01_pre {1-0}

P32: 015 - 32:45 [Those assignments that come in..] (16:621-16:835)
(Super)

Codes: [#Man_08_57_01_pre]

Those assignments that come in those boxes, and like, oh, I don't know what to do with all these assignments; just let them put it in on Click Up and then you'll just be led by when it's done; but there's no paper.

Code: #Man_09_62_02_pre {1-0}

P10: 038 - 10:8 [IE Definitely is, something th..] (1:3165-1:3688)
(Super)

Codes: [#Man_09_62_02_pre] [*communication]

IE Definitely is, something there's a need for students at a [unclear] time, and then I've got to think on, how must this work, and then I've got to make an announcement, so at present I've got the class captain's home numbers. So the students keep in touch with the class captains, if they don't, that's their fault, but if it's a Click, everybody has access to Click Up, because they open up a Facebook page, and they need me to go and Facebook, I said, if I go on Facebook, all 2...z students will be Facebooking me every

Code: #Man_14_92_01_pre {1-0}

P12: 041 - 12:48 [back door thing meant a lot to..] (4:1514-4:2147)
(Super)

Codes: [#Man_14_92_01_pre]

back door thing meant a lot to you...?

IE We actually did use it, the one time when Click Up fell over, or two times that it fell over...

IV It did take a bit of a knock that one.

IE It was actually funny, the one week it was the Tuesday, and we lost two groups, and then the next week it was the Thursday, which was then the other group, fortunately, otherwise I would have had the same group twice in row. We did use it a few times, where the portal was dead, and we could just go through the... the only thing there was, it's not always shown, how to use your student number and ID number or student number, or SUP portal, ID number...

Code: #Man_14_96_01_pre {1-0}

P 7: 031 - 7:37 [I want to be more hands on. I ..] (2:1174-2:1441)

(Super)

Codes: [#Man_14_96_01_pre]

I want to be more hands on. I want to just... for it to make, to make my life easier. To do everything on Click Up - the grading. So like I said, for now, I'm working on the assignment. I will want to move to grading, you know? How to put grades and stuff like that.

Code: #Man_15_98_01_pre {1-0}

P17: 051 - 17:32 [Just a smooth interface with t..] (2:677-2:1086)

(Super)

Codes: [#Man_15_98_01_pre]

Just a smooth interface with the students, and an easy way of assessing what the students know or don't know. And what their progress is at any time over that period. For instance that student that had difficulty getting on with a new computer or whatever two weeks or three weeks ago, I know she actually hasn't done anything before then either. And she's got a month left to do a book that's got 677 pages in

PRE = SoCi

STAGE 0 – Awareness

Identical / variations of concerns of HPE's

Evidence from interviews

3 I am more concerned about another innovation

* Did not know what we needed

ID003: "At that time we didn't know what we needed. That's the reality, that we haven't used the program."

ID025: "I just wanted to be able to get it, and do what I needed to do [overtalking]. None of that stuff. I just...I thought, okay, well, if they're going to change it, I guess I have to... You know, one of those..."

ID025: "Partly because our head of department said we must. [Overtalking], I mean, it was in January [?] [unclear] all did. But I have to be honest with you. I do regret that I actually didn't...I was not able to attend all of them. I would have loved to have attended all of them, because I also think if I had, I would be using it [?] more."

* It is expected of me to attend the workshop which motivated my attendance

ID012: "But I think if you work in thez in thez surroundings like a university thenz and this is offered to you then it is almost something that is expected as well."

ID015: "You know what, we were told that all the Dean said, all the first year modules must be on Click UP before... for the first semester this year."

ID015: "So the Professor said, you are going to do the Click Up, and I'm like, yes, Mam, I'm going; it as a forced... it was like enforced upon us."

* Lots of advertisements motivated my attendance

ID006: "Lot of advertising"

ID006: "Importance of it was communicated"

* Not sure what was going on with new system

ID036: "IV So, why did you think of changing?"

IE For that, I wanted to know what was happening, because I mean, that was... I

| | |
|--|---|
| | <p><i>think that one of the very first sessions, so nobody else could tell me anything about it anyway. We were all talking about it outside and none of us had a clue.”</i></p> <p><i>ID051: “What was your biggest concern about the implementation of this system at that time? IE That I didn’t know what was going on.”</i></p> |
| * Saw the strengths of system from talking to colleagues | <p><i>ID042: “It was like a new... It was a new thing. At that stage I hadn’t really saw... I hadn’t really actually realised its uses, so I don’t think it was something we had to do and we did it, but as you see what other lecturers are doing you realise what the strengths are - and my daughter, who is a tutor at UNISA, and how she tutors by means of the e-learning system and, you know, I get very envious the way the young brains can just assimilate things.”</i></p> |
| * Courses should be mandatory for all staff | <p><i>ID052: “IE Look, I think it is crucial and I mean the faculty keeps on advertising that our accreditation is based on the number of modules on Click Up. I think everybody is supposed [or forced?] to do Click Up. Not that we are being forced too. But I think if you want to keep up what UP expects from you, you have to do this course. They should make it mandatory.”</i></p> |
| * Why the change to the new ClickUp system | <p><i>ID046: “The initial part of it was not really for me; it was... I was under the impression, okay, everybody’s using it and if you want to lecture in this subject, you better, you know, you’ve got to learn to use.”</i></p> <p><i>ID046: “initially it was a lot of confusion why? Why is it necessary? I think that wasn’t really communicated properly from the start. At the end one can understand but you can always ask the question why do the University do not have the capacity to maintain that themself x why going to a new system. But maybe one want to be on the international front with all the new . A bit negative on that part.”</i></p> |

| STAGE 1 – Informational concerns | |
|--|---|
| Identical / variations of concerns of HPE's | Evidence from interviews |
| 6 I have a very limited knowledge of the new clickUP. | <p>ID005: “Because I knew nothing about it.”</p> <p>ID017: “I could learn more, yes.”</p> <p>ID002: “I didn’t really know much so that was mainly the reason why... yes, why I wanted to see.”</p> |
| * How I should change my thinking | ID009: “I wanted to get to know how I should change my thinking.” |
| * Lack of knowledge of wikis, blogs etc | ID013: “With those first sessions I heard a lot of terminology and words that I have heard before like Wiki [?], but never knew what it was, so it was actually my curiosity that brought me there because I just wanted to know what they’re talking about when they talked about Blogs, and Wikis, and whatever” |
| * Want to know how to navigate/where to go | <p>ID022: “navigation”</p> <p>ID036: “And then obviously try to understand some of the newer functions, the functions that’s now new in clickUP, and how to navigate in that would be good [?]. Yes.”</p> <p>ID007: “Just to be able to navigate my way around [unclear]. And also I was a new member of staff, I only joined the 1st of July last year so I needed to become accustomed to the whole ClickUp scenario.</p> <p>ID015: What I wanted to know was where to go, how to... where to start, the beginning,</p> |
| * How to get courses on ClickUp | ID015: And then, I don’t know how to get the subjects that I’m giving, the modules that I’m giving, I don’t know how to get it on... |
| * How to get access to ClickUp | <p>ID025: “I just wanted to be able to get it, and do what I needed to do”</p> <p>ID037: “I think, initially, I just thought, go and do the course so that you can have access.”</p> <p>ID015: “... to first find out where Click Up was, how to access this whole Click Up.”</p> |
| * How to put content on ClickUp | <p>ID015: “... so now they want us to have Click Up, but I don’t know how to put the stuff there.”</p> <p>ID007: “... secondly to be able to upload my content”</p> |
| * Wanted to learn the basics | <p>ID022: “Just to learn the new structure, get the basic principles, how it differed from the previous versions.”</p> <p>ID027: “By then it was, even the term Click Up for me it was ooh [?], so I heard [?] that best [?], of knowing more about what is it, what is entailed within this.</p> <p>ID029: “... to get started, to just get the basics.”</p> <p>ID044: “Well, basically, because it was a new Click Up system, obviously I needed to know how it works,</p> |

because as I said earlier on I would want to use it myself. I don't want to have an administrative person using it for me. So for me it was about the operational ways of, you know, using the new Click Up, and also how I can engage students more."

ID053: "So at that stage I just wanted to learn what is it about, how does it work, and sort of then thinking about how I'm going to use it in my course."

ID017: "So I just wanted to know what is the basics"

ID026: "I suppose to know how the software works."

ID015: "All I want to know is just how it works, where to start and how to work the system; ..."

ID017: "I wanted to know my way around it because I didn't mind exploring a bit and being independent trying things / figuring it out for myself"

* Use on communication functionalities

ID015: "Must I also wanted to know because, for me, I like to... I don't have all the students cell phone numbers or what. "

ID015: "And I know that they're in the contact list, so it's easy to put something in, so think about this, do this, so that's why I wanted to do it actually."

* Use of assessment functionalities

ID022: "... get the tests and assessments and assignments and things, you know. That's why I only did the first three;..."

ID051: "Yes, simply because the students that I had to take over are answering questions on clickUP, and if I don't know what clickUP is, I don't know what they do."

ID007: "... and then also using the assessment sort of, what do you call it, assessment functionality level four. I like the fact that the students can, you can put questions that students can utilise at their own time to test themselves on just how much of the content they know"

* How to manage files

ID031: "MP With the new system, like I said, it didn't have the file manager, so I needed to know where will I find those file manager things and stuff like that. How will I download? Where will I keep them? Because I remember I struggled. I was putting them somewhere where they were not supposed to be and I couldn't find them and when I went to the... Norma... she opened so many things that I didn't have a clue where were they. So that was what I needed to know. Where will I find my documents? How will I separate them?"

* To know the different functionalities

ID053: "At that stage I think it was important to know the different functions. This is what you can do and also where they're implemented, because I know there are the different designs. You can use the case study design and whatever. So just to try and think of how that would be applicable to the different subjects and ..."

ID014: "I think to make use of all the new functionalities in BlackBoard. What was demonstrated that time"

- * How I can use ClickUp for different modules *ID044: "... how I can use it for my different modules."*

- * What is ClickUp all about *ID027: "I just wanted an idea of what Click Up is, what is contained in Click Up"*
ID051: "I wanted to know what clickUP was all about."
ID051: "Well obviously I needed to know what the system consisted of. I would have preferred a little text book or a little book in advance, but I got it on the course. For instance when I did the overview I didn't do it with you, I ended up at main campus. And when I got there I was totally lost because they said oh, but you're supposed to have access to some system somewhere. And I said well tell me about it, how would I know that I'm supposed to have access. But as soon as I got here you said yes, here's how you get in, and you showed me that you had actually... it was something that you guys had to do in advance. You remember we sat in your office [overtalking]. So the overview, I played nicely making little things, whatever they wanted us to make, but I hadn't a clue why I was doing it. Because I couldn't get into the ORG777 [?] so I was just in somebody ..."

- * There were things that I could not do/find *ID041: "I fiddled around to see what, and then there were some things that I either couldn't find, or couldn't do, or there was some, and then I decided let me just at least, at the very least, do the Overview, and just, that was then an opportunity to see where the functionality is, and I was able to use, and that I needed to use, and how to use it."*

- * How to use ClickUp more effectively *ID010: "I would like to use the Click-up for more things and more effective, because I felt that I am not using it... that the... putting the notes and the guidelines and the timetables and things like that on the Click-up to me was, yes, it's good; it gets the students at least to a starting point for your classes, but I felt that it's not quite sufficient."*
ID044: "... how I can use it for my different modules. Remember that in the past I've used Click Up only for one module and it was mostly to put up notes for the students. So it was more about how I can use it for all the different modules and use it for more than just notes for the students, you know"
ID005: "That will be a learning opportunity and I think we can probably extend that - if it works - we will have to see how practical it is to see if we can also do it for the pre-graduates, although I think for them it is easy, because the clickUP system for the block 10 for instance are already there. I think we can try and use more of the interactive functions of clickUP. "
ID002: "... what can we do more to just extend the use of click-up"
ID012: "I must familiarize myself better so that I can use it optimally."
ID040: "En so ek dink om miskien nog meer van clickUP te leer sodat ek dit miskien baie meer kan gebruik en, ja, tot my voordeel. Veral met die administratiewe werk kan ek sien wat ek maar kan doen wat ek miskien nie nou besef nie want ek het nou nog nie tot daai punt gekom, ja."

- * How to create a space with everything on it that *ID026: "I wanted to have a site where everything comes together, so where all the information that*

students would need as well as communication
#inf_01_06_new1_pre

everybody needs should be there, but also where everybody else could communicate with each other as necessary."

- * How to structure the pages better
#inf_01_06_new2_pre

ID026: "And at that stage I also thought that I wanted to change the way I designed the pages, because I thought that it would work better in another way. So I had an idea of how I wanted to structure it, it was quite useful."

14 I would like to discuss the possibility of using the new clickUP

- * See possibilities

ID003: "And I think the other thing that frustrated me about the old Click Up was that I didn't know what I could do with the system ..."

ID003: "Like I said I think there are still a lot of things that we haven't used and capabilities that we haven't explored."

ID009: "... what all the possibilities are, etc."

ID013: "So it was more curiosity in the beginning than thinking that I am going to use this, but as I attended and saw what it could do ..."

ID017: "I thought it would be better to attend the ClickUP course just to know it's the right way necessarily. Yes and just to see if there's ... what I can do with the ClickUP"

ID002: "I can't remember specifically all the various courses but it was really just nice to see what it is that you can do and then, yes ..."

- * Have overview of possibilities

ID046: "I think an overview of what this thing can do, and then obviously my immediate goal was just get notes on a page where they go. That's it. So, it was an overview of what it's all about and that... how to get those notes on there, so that if somebody else, because they saw that, I can say clickUP. It was the nicest word - clickUP."

ID009: "Yes, but then I also realised that I had to get an overview first before I can actually engage in the things, you know, because you have to know what is available before you can start planning your learning activities."

ID002: "It was nice to get an overview of what you can do in click-up and it really made me want to do the rest of the courses because you, you know, and if you just mention those little things on this, you know, you say oh, that must be nice to know about and so it, yes, it made me more interested to go to the other courses as well."

- * Overview stimulate interest in other courses

ID002: "... yes, it made me more interested to go to the other courses as well. "

* A lot of ways the system can help you

ID003: "So there are a lot of ways the system could help you that we are not using"

* To familiarise myself with the system

ID040: "Dis reg, ja. Familiarise yourself with it, ja."

ID012: "To familiarize myself with the new system."

15 I would like to know what resources are available if we decide to adopt the new clickUP.

ID013: "So, curiosity, and then, of course, just for me to know, and to know what resources are available, and to use them, because things that make life easier for me I will always explore"

* What physical support resources

ID015: "And I wanted to know who do I phone if I can't get help; there's a help thing, I've phoned everybody from top to bottom but all the told me, oh, you must actually phone Hannelie. Okay. Because orientation didn't include this is Hannelie, so if you have problems with Click Up... so I just phoned everybody."

ID017: "But it is nice to know that there is somebody that you can call, if you struggle or can see. Yes."

ID002: "I would need support. That's definitely... so that's why I also thought, well, it's overwhelming but it's not so bad because you guys are here so it's always nice to know that you have really physical support."

D054: "In terms of training and support, then I thought I would need probably more assistance; but after doing the first training, it's not that difficult, it's strange because it looks different. But I don't think... at that point I probably overestimated the complexity; I thought it was going to be worse than it really has turned out to be."

ID013: "And then I also realised that I would need personal support, which I have, so it wasn't that I thought this isn't going to work, because I knew there would be a lot of ..."

ID025: "But then, I had to have a one-on-one session with you, actually, to... for it to really make sense ..."

ID014: "And also support. If you started with it. And it was not always clear to me. Although I got good support I call and get an answer. You sometimes feel W yah hshigh you are going to attend this course and now you are on your own. You can't call. Not that you can't call, but you feel guilty because you know everybody has got their own responsibilities and work - and now you calling in and you broke another person's thought process x and that is a concern. Sometimes I try to get it solved first and then you.... And I know there is limited support. Not limited support....but in terms of personnel. The support is fantastic from every one when I call. I get the answer and how to do it but I know there is so many people that provide that support and you are working with how many lecturers - a 1000. You know I think that is a big task. That needs to be expanded."

ID041: "If I have a question that, well, two things, on this, maybe not entirely relevant, but the one is, if I have a question, I can ask someone, then they can come back to me immediately and say, well this is... but I think that is the situation at the moment."

ID042: "Okay, something that's probably a pie in the sky in that I could say I would like... Okay, let's start with something very basic - I would like now to put these notes on clickUP, right, to be able to know that for the first and the second time I could come to Liana and say, Liana, I want to do it, could you just guide me through this and then when I've done it once and mastered it twice then I'll be fine - but everyone is so busy and you don't want to impose yourself on other people. But it wouldn't be an on-going... It wouldn't be a... I wouldn't be reliant long term because as soon as I've grasped it I would be able to do it and then I would be able to explore it... explore from there."

ID009: "I actually need someone to work with me until I can do it and then I'm fine."

ID036: "... something that I really cannot do yet, that I can still do one, but I think it now will be individual questions when I get stuck. That will be that, and also individual actions to go back to the help functions and see if I can figure out how to do that"

* Wants a basic recipe to follow

ID006: "Weet nie - my persoonlikheid wil eintlik maar 'n basiese resep hê en dan sal ek vandaar af - is ek gewoonlik nuuskierig genoeg om alternatiewe paaie te soek. Alternatiewe gebruike en toepassings en so aan - dis maar net my natuur dink ek."

* Wants a process chart/map

ID009: "Yes, that's right, the... you know if I had a thingy that would say okay, if you want to do this, then, you know, click on that, do that and that and that. Then your next step would be that and this is then what you do. That is why for my own students and programme I make them now and that's all part... table of contents, and they can ..."

* What online resources are available

ID009: "... so that I... so they can form a path of what to do next."

ID006: "...o ek het bietjie opgelees - op die network was heelwat materiaal beskikbaar en d..."

ID017: "And then at least the onlineY just place where you can go and have a look what are the steps, so that was... it's almost a minimal that I think was necessary for me."

* Revise the hand-out resources

ID003: "... so I think I'll go back to the material and see..."

26 I would like to know what the use of the new clickUP will require in the immediate future.

35 I would like to know how the new clickUP is better than what we have now

* New ClickUp is different that old system

ID022: *"I just wanted to get a rundown of, you know, how it's structured, you know, compared to the old one, and then I would play along by myself"*

ID025: *"I thought it would be really, really different. And initially, it looked like it was different, because it seemed like, when you guys presented it, it's like, you know, the...what I remember from the old ClickUp was that a lot of the stuff was already actually set up, whereas this one, you actual...there was a lot of stuff that you had to set up yourself, so I was worried about that. I mean, I remember being really worried, how am I going to actually set all of the stuff for myself but, you know, now that I look at it, it makes sense. But then, I had to have a one-on-one session with you, actually, to...for it to really make sense."*

ID026: *"Well I use the old clickUP, and as you were going to change I didn't know what the new one looked like."*

ID036: *"I wanted to... The first thing is I just wanted to understand how the old clickUP and the new clickUP differ or is the same"*

ID044: *"I Strangely enough, I mean that is the comment I made right at the beginning, whilst most people found it a little confusing, I found it actually more user-friendly than the other Click Up, because on this one you could see everything in fact on the first page as you enter the page with your things listed on the side.*

So to me it was more organised, let me put it that way, you could clearly see where things are, you know, and, yes, I don't know, I just found it more user-friendly."

ID049: *"So I think what I wanted to know is, yes, what I have done, how does it look in the new system and then what is new. What you have done and how are you doing it."*

ID014: *"And is the functionality still going to be the same - what I learnt and all the functionalities are not there and they are used very effectively in the old system. And that there is some critical functionalities not there and I will have to deal with that then. It is a big frustration"*

ID017: *"... and how it differs from the old ClickUP. So that was my main aim yes."*

ID002: *"... see first what... how is it different from the old one ..."*

Too much information

ID002: *"... of information so I was worried that how am I going to remember all of this, and am I ever going to implement it, but if you... I mean the course is in a very nice way, giving you page by page what you should do so if you go back to those hand-outs then y..."*

Course introduction needed

ID002: *"... when I came here I was not really told about click-up and nobody really... I didn't have an introduction course or anything so I was quite clueless, so what I learnt was really from others"*

Course participants have different needs and concerns

ID036: *"It was a huge group, and also for you it was new. So, I don't think the people were that experienced yet to understand the, sort of like me now the student, the students in the rooms, individual needs and concerns. It was also not here, which I think was a mistake. I've learnt from that; I will never go to one in another campus again because we just have different... And I found that very much when I was sitting down. I tried to ask the people next to me and their needs were so completely different from mine that we couldn't even, you know, find a common ground, so yes."*

ID036: *"The one was from chemistry and her only concern was this: she's got... I know it kills [?] a lot of our medical students. She's got like close to 1,::: students in chemistry that she needs to organise, and she does not see them every day. "*

ID036: *"... does not know them all, which is the difference. So, she needed to have it on that sort of level, and as much as possible of the assessment and grading and everything done, because it's just a bigger group. The young man next to me, I think he was from something like agriculture or forestry or something, he just switched off his mind and he just put his nose almost right on the screen and started farcifying the screen and playing with all the colours and options and things. He was just far ahead of me. I didn't understand... I don't understand the basics. And I felt so stupid, so yes, it wasn't very comfortable."*

ID029: *"... that the pace of the course is so slow that you actually have lost my attention or my track of thinking. Maybe you can offer different... because people learn in different ways."*

Sceptical about practicality /feasibility

ID005: *"Well I am still a bit sceptical about the practicalities and feasibility if it can work - I will be very grateful and I will be happy - the department will also be very happy"*

Keeping up with/stay current/relevant

ID012: *"And if you want to be current and relevant and stay up to dates and then you need to attend these courses."*

Course where I can bring my tests and build while you are available to help

ID029: *"But if I bring my pre-set ideas and then just practice in front of you and then where I get stuck, you can just help me; then I'll be okay. That's the type of course, style of course that I like ..."*

Overview course attended was not enough

ID025: *"Yes. I mean, I attended...I attended the overview; thought I knew [?] how to use it, but [unclear] realise I actually didn't [?]. I had to come back [overtalking]. So yes, but..."*

Time to practice everything after training

ID037: *"I think because of me being me and the way I work, after the training, directly after that, to have time to go and practise it all. I'm not bad with sitting something, a manual, on my lap, where I forgot what to do, and then go through this bit."*

ID040: *"Om, ja, [oorspraak]. Ek weet nie of ek heeltemal laat [onduidelik] gehad het nie vir 'n kursus gaan doen het nie. Ek dink dit was daar, maar jy't daar begin besef, hoor hier, jy kan dalk nou bietjie meer doen wat jy graag eintlik wil doen en agterna sê jy wil dit nou doen maar jy kry nou net nie die tyd om te gaan sit en speel en jousef net weer vardig genoeg te kry om dit te probeer doen nie, ja."*

ID040: *"Negatief. Het vaardig geoefen om te weet om dit reg te gebruik. Ja, dit vat 'n bietjie oefening om daar uit te kom. Maar enige ding is, ja. En tyd om daai te doen - dis die ding..."*

Where are we going with new ClickUp

ID036: "You know, where are we now, understand, with the old clickUP; when are we going to?"

I need to work hands on the system to see if it works

ID022: "I think what I needed was hands on. I wanted to get into that system to see how it works and as soon as that happened I started to feel much better"

My needs are not based on a course

ID041: "I have a problem with the courses, but that's just me, it's not that there's something wrong with the courses. I don't have a problem using the computers or figuring it out, so the courses, my needs aren't based on a course, I'm not the average computer user, so I think that I've experienced wider than a Black Course [unclear] of the system, so, what was the other one..."

Courses about approaches in e-learning

ID041: "The type of courses that I would attend, that I have attended is where there's more about not using Click Up per se, but approaches that you can use in electronic teaching. "

Learn by demonstrating/showed how

ID052: "For me I think if you show me. I mean the help functions are always there but help doesn't work so well if someone did not show you, so for me it was great to see you guys doing it."

Would like to have a feedback session on my use of the system

ID010: "I think it's a good starting point. I think it would be a good idea, after you had, at least for one semester, used the Click-up, to be able to go back for a feedback session, say, okay, fine, I used this; I couldn't get this sorted. To just get a sort of a sounding board, almost, to say, okay, fine, these are the things. Why am I struggling with this? I have tried all of these avenues. But that's going to have to be more on an individual basis. You can't go and do that in a group"

STAGE 2 – Personal concerns

Identical / variations of concerns of HPE's

Evidence from interviews

7 I would like to know the effect of reorganization on my professional status.

*

13 I would like to know who will make the decisions in the new system.

17 I would like to know how my teaching or administration is supposed to change

* How my thinking should change

ID009: "I wanted to get to know how I should change my thinking"

* Not knowing what was expected of me after integrating ClickUp into teaching

ID007: "My concern was being sort of insecure, not knowing what's expected of me in terms of integrating click up into my everyday sort of teaching or whatever."

28 I would like to have more information on time and energy commitments required by the new clickUP.

* Time requirements to learn the system

ID017: "... except in terms of just getting to know it in terms of time although I were able to catch it Quickly"

33 I would like to use feedback from students to change the program.

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| * Will I master to use the system | <p>ID042: "... wondered whether I would be able to master it as quickly"</p> <p>ID006: "Will I master all this"</p> <p>ID027: "MA Yes. So I heard that first and then I thought it's a very difficult thing but after that overview I realised that it means I can do it. So I had that positive spirit."</p> |
| * Concerned with my own skills with the innovation | ID009: "I had concerns about my own skills with it" |
| * The amount of learning required | ID013: " And that I can still learn so many new things, but I, Have proved... in the past 10 years of my life I think I have learned more than ever before, because there's always something new popping up, and you can actually learn new things' So, yes, that's also a challenge, but it keeps you going I suppose" |
| * The practice needed after training session | <p>ID007: "But then also for me, and it might not be for everyone, but for me I need to be on the system constantly and practice, otherwise I lose it. So...and then I couldn't do that and when I came back it was towards November so I went on holiday and I came back in the middle of Jan and I started setting up and it was like I'd lost everything. "</p> <p>ID013: "... because, as I said before, for me to learn something is by doing it' So, after the course, you think, oh, no, I can do all these things, and then when you try."</p> <p>ID012: "And I think the other thing is I think when you learn something you must apply it almost immediately to remember what happened in the courses. Because it is one thing going back to the material and often the material that we ..."</p> |
| * Need training | <p>ID013: "So I realised I would definitely need the training"</p> <p>ID012: "And I think the other thing is I think when you learn something you must apply it almost immediately to remember what happened in the courses. Because it is one thing going back to the material and often the material that we.</p> |
| * How will I cope to develop everything from scratch | <p>ID 053: " The time [?] because I was sort of overwhelmed as to how much you can do with it before coming, you know, on the course. And then I thought how on earth am I going to be able to get this done, because it's non-existent, you know, you sort of have to start from scratch.</p> <p>ID036: " Trying to master all these new functions and understand where they fit in, because it is quite a lot different from the previous... And also terminology, like you know, upload a file or something is now different, you know. So, it's... I'm used to the actions that need to happen, but the actions were also named, called different. So, everything together was just a bit too much for me."</p> <p>ID037: "That I would not understand what's going on. "</p> <p>ID038: "It's, am I going to cope with all this. Am I going to know the things properly, am I going to know</p> |

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| <ul style="list-style-type: none"> * That it is not that difficult to master * Fear that I will not stay up with the rest of the class * Will the new ClickUp be user-friendly and easy enough for me to use it myself * I want to be able to use it myself * I felt overwhelmed by too much information in training/workshop * Remembering all the information * Get comfortable with the system * My own computer literacy/ability to use the computer * I felt uncomfortable and stupid during the overview course * I felt completely out of my comfort zone since new clickUP was totally different * I feel bad since I cannot use the system myself and have to ask for help * Is the change worth it? * That I will be frustrating sit down and figure | <p><i>things so that the students can see it, how do I modify, edit, how do I go in, edit, modify, because then I must go to my original document, then upload it, you know, and that's all time consuming. "</i></p> <p><i>ID054: "I think, pretty much the same reason; just to get a feel what it's going to entail, how bad is it going to be, what does it look like; that I have some recognition of what I'm looking at."</i></p> <p><i>ID049: "The first day my concern was actually that I'm not going to stay up with the rest of the class."</i></p> <p><i>ID052: "The first thing was I used to think the old Click Up was a little bit complicated for me and I was a bit sceptical – they are calling it the new Click Up. I hope it's a bit easier and user-friendly - I don't have to open up my diary and go to look at the icons what must I do first, create files [?], I want something I don't need to look at the instructions all the time."</i></p> <p><i>ID052: "But like I say in our Department, I think, the medical faculty, it goes without saying your lecture notes has to some time or other go to Click Up. So for me I want it foremost that this is something that I would be able to do it by myself and not go to Mrs. Kruger and tell her to put it up. So for me that was important. One of my expectations was that I should be able to upload my notes myself."</i></p> <p><i>ID002: "... but it was really overwhelming because it was a lot of things that we were taught in one day and the same for the follow-up courses as well so I really felt a bit overwhelmed"</i></p> <p><i>ID002: "... of information so I was worried that how am I going to remember all of this"</i></p> <p><i>ID003: "My goals were to get more comfortable with the system because with the old Click Up I always felt that I didn't know what was going on. I was trying to do something but I had no clue, so I just wanted to feel more comfortable with the new system."</i></p> <p><i>ID010: "My own computer literacy. My own ability to use the computer."</i></p> <p><i>ID036: "I didn't understand... I don't understand the basics. And I felt so stupid, so yes, it wasn't very comfortable."</i></p> <p><i>ID010: "Yes, and it's not because I haven't been using the other Click-up, because I've been using the other Click-up quite regularly, but this one was so totally, totally different that it was to me as if it was a complete new world that I entered, and I didn't feel in my comfort zone. I was completely out of my comfort zone, ..."</i></p> <p><i>ID042: "I would like to be able to load my own info because I feel pretty bad and then secondly I would like to set assignments for the students to do for me - because I actually do that, but what happens now? I have to collect it and then I have to read it and mark it and give it. So basically that's [overtalking]."</i></p> <p><i>ID054: "biggest concern about the implementation? LI Biggest concern, I think, was almost the implementation of any innovation or any new system. There's a... is it worth the change?"</i></p> <p><i>ID049: "But it makes one a bit comprehensive. You know, it's... Even if it's just an assignment that you</i></p> |
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| <p>it out on my own</p> | <p><i>know you have to do. It's an additional stress. Like when you go to class and you are told... some times I just don't have Powerpoint. It's just a little sticker and that I can have class exercises and that's what I love. I am always apprehensive if I have to use the data projector. But I do that and initially up till last year I had that guy from audiovisual, I think, for every single class. And later on I said, I must just do it, you just stand here for moral support. Ja, so I, I like very much technology but the software side, what it can do, but I don't like the hardware at all. It makes me very anxious."</i></p> |
| <p>* I felt confused/lost at training session</p> | <p><i>ID049: "I was very confused."</i></p> |
| <p>* Technology makes me feel anxious</p> | <p><i>ID049: "But it makes one a bit comprehensive. You know, it's... Even if it's just an assignment that you know you have to do. It's an additional stress. Like when you go to class and you are told... some times I just don't have Powerpoint. It's just a little sticker and that I can have class exercises and that's what I love. I am always apprehensive if I have to use the data projector. But I do that and initially up till last year I had that guy from audiovisual, I think, for every single class. And later on I said, I must just do it, you just stand here for moral support. Ja, so I, I like very much technology but the software side, what it can do, but I don't like the hardware at all. It makes me very anxious."</i></p> |
| <p>* I felt insecure not knowing what was expected of me with regards to clickUP</p> | <p><i>ID007: "My concern was being sort of insecure, not knowing what's expected of me in terms of integrating clickUP into my everyday sort of teaching or whatever."</i></p> <p><i>ID007: "Insecurity, firstly, in not knowing the system. Learning the whole thing from scratch or... and then sort of insecurity around what's expected of you from a departmental level in terms of usage of Click Up. Because different people use it differently in the department so it's not sort of standard, it's up to you, it's up to the individual to use it how he or she pleases. So from I suppose..."</i></p> |
| <p>* I would like to be confident in using system</p> | <p><i>ID007: "For me the important things were being able to be confident to use the system"</i></p> |
| <p>* Wanted a sense of security that it is not that difficult/wanted to allay my fears.</p> | <p><i>ID054: "I think I just wanted to have some sense of security, that it's not going to be that difficult to do."</i></p> <p><i>ID054: "At that point in time it was more like to allay my fears, you just think, oh, yet again, another new system; because as you know the university has introduced a number of new systems recently, Peoplesoft [?] and so on, and in some cases we've had endless problems. So, at that point in time I just... let's go and have a look to see what does this all entail, and is it doable or is it going to be another Peoplesoft disaster."</i></p> |
| <p>* Wanted to allay my fears – is it going to be another People Soft disaster?</p> | <p><i>ID054: "There's a... is it worth the change? Often we change simply because change is... it's just change; now the developers are going to do this, is it now really going to be worth the effort, or is it going to be a failed innovation? Are we going to keep saying, oh, the old Click Up was better, and so on, and in a couple of years once we have settled into this one, we've got to go to a new one; so it was more that kind of feeling."</i></p> |
| <p>* Is this new innovation going to be worth the effort?</p> | <p><i>ID054: "There's a... is it worth the change? Often we change simply because change is... it's just change; now the developers are going to do this, is it now really going to be worth the effort, or is it going to be a failed innovation? Are we going to keep saying, oh, the old Click Up was better, and so on, and in a couple</i></p> |

of years time once we've settled into this one, we've got to go to a new one; so it was more that kind of feeling."

STAGE 3 – Management concerns

Identical / variations of concerns of HPE's

Evidence from interviews

4 I am concerned about not having enough time to organize myself each day

* Not enough time to organise

ID003: "Time. It still is."

ID003: "got limited hours because we are only half-day so that makes it difficult."

ID014: "Time. To transfer it from the old to the new and is it going to work"

Not enough time to build the courses

ID046: "Time. Yes, time. IV Time. Time to be able to attend the courses, or...? IE No, to build the...

IV The build the things?"

Not enough time to attend courses

ID007: "If I just had the time? "There are lots of things, lots of the education, like Glynnis was running an assessment thing last year, or whatever, it just clashes with my teaching. So there are always things like we had two or three workshops I wanted to attend in the second half of last year or the beginning of this year but it was just because of my teaching.

That's correct, because that was the only time that it didn't clash with my teaching."

Not enough time to practice what I was taught

ID037: "... then when I understand it I can... yes, and next time I can do it. But that I couldn't manage; I think that was my... the biggest problem."

8 I am concerned about conflict between my interests and my responsibilities.

16 I am concerned about my inability to manage all that the new clickUP requires

My inability to implement all the information

ID002: "and am I ever going to implement it,"

My inability to manage blogs, wikis, etc

ID003: "Because we just don't have the time it's very difficult to do that."

Unsure about having to take responsibility for everything

ID003: "Looked dark having to take responsibility for everything"

25 I am concerned about time spent working with non-academic problems related to the new clickUP.

34 Coordination of tasks and people is taking too much of my time.

Our teaching system not ClickUp friendly

ID003: "Those assignments that come in those boxes, and like, oh, I don't know what to do with all these assignments; just let them put it in on Click Up and then you'll just be led by when it's done; but there's no paper."

Why printing of study guides necessary when using ClickUp

ID015: "I didn't... now, the first time that I said I had to print this, I think, I had something like, why? No, because the students have to have a copy. I'm like, why? Because that's the university's policy. Why? Because it's on ClickUp, you must have it on paper and on Click Up, and I'm like, but why can I can I not just put it on Click Up because I'm putting it on Click Up already?"

Submit assignments on ClickUp

ID015: "Those assignments that come in those boxes, and like, oh, I don't know what to do with all these assignments; just let them put it in on Click Up and then you'll just be led by when it's done; but there's no paper."

How will I manage communication with students

ID038: " Definitely is, something there's a need for students at a [unclear] time, and then I've got to think on, how must this work, and then I've got to make an announcement, so at present I've got the class captain's home numbers. So the students keep in touch with the class captains, if they don't, that's their fault, but if it's a Click, everybody has access to Click Up, because they open up a Facebook page, and

The system that fell over

they need me to go and Facebook, I said, if I go on Facebook, all 2...z students will be Facebooking me every...

ID041: " We actually did use it, the one time when Click Up fell over, or two times that it fell over... "

IV It did take a bit of a knock that one.

IE It was actually funny, the one week it was the Tuesday, and we lost two groups, and then the next week it was the Thursday, which was then the other group, fortunately, otherwise I would have had the same group twice in row. We did use it a few times, where the portal was dead, and we could just go through the... the only thing there was, it's not always shown, how to use your student number and ID number or student number, or SUP portal, ID number...

I want for the system to make my life easier

ID003: "I want to be more hands on. I want to just... for it to make, to make my life easier. To do everything on Click Up – the grading. So like I said, for now, I'm working on the assignment. I will want to move to grading, you know? How to put grades and stuff like that."

To be able to access what students know/don't know what their progress is over period of time

ID051: "Just a smooth interface with the students, and an easy way of assessing what the students know or don't know. And what their progress is at any time over that period. For instance that student that had difficulty getting on with a new computer or whatever two weeks or three weeks ago, I know she actually hasn't done anything before then either. And she's got a month left to do a book that's got 677 pages in..."

STAGE 4 – Consequence concerns

Identical / variations of concerns of HPE's

Evidence from interviews

1 I am concerned about students' attitudes toward the new clickUP.

* Colleagues attitudes towards ClickUp

ID031: "MP I remember when I went there, I heard that the new Click Up and I was confused because I was seeing that I'm still finding my way even with the previous one and now people are hating the new one and I'm going to also hate it. It's going to be challenging."

11 I am concerned about how the innovation affect students

* Want best out of learning time

ID009: "Because I'm... I want to... I really want students to make the best out of their learning time"

* Do this for the benefit of my students

ID015: "It's a personal journey that you need to decide, I'm going to do this because it's for the benefit of my students."

* The cost using ClickUp for the student

ID024: "My biggest concern is always the cost to the students. The cost to the students is always my biggest concern, that yes, we say everybody must have Click Up, but are we looking at who these kids are? And then I'll always say, University of Pretoria... we have been University of Pretoria but let's look that we are changing our demographics and not just say everything IT, everything IT. Some people do not have bread and then when you talk of a computer, it will [unclear]. Yes. But fortunately for University of Pretoria is that we have facilities in the institution. Yes. Even though there are times where it will be frustrating during the weekend if I cannot access the library... it becomes a challenge but we do basically have the facilities"

* The user-friendliness will affect the students and colleagues' use

ID026: "The only concern is the usability for my students and my colleagues, seeing that they are not always that proficient in IT and the IT skills. I was worried that they were going to struggle with using it."

* That students can't get into the system

ID022: "they sent me emails in frantic because they can't finish their tests or something like that."

ID041: “Oh, the up time of the system, again, we are coming back to that, if the students can’t get into the system, then it is a problem. There was a stage where they had to log in and then they had to log in again, and they’re repeating things that everyone knows about.”

ID041: “It really affects, I’m not sure about the rest of you, but it affects us, what I use it for is really a Problem”

19 I am concerned about evaluating my impact on students.

*

24 I would like to excite my students about their part in this approach.

- * To make use of interactive functions *ID005: “I think we can try and use more of the interactive functions of clickUP”*
- * To make notices, marks, examples available *ID006: “Adding notices, marks, examples etc. “
ID006: “To make previous practicum and exams available “
ID006: “Provide revision material”*
- * To have students come prepared to class *ID029: “if I could load my lectures before ClickUP, then, you know, the students would have had time to prepare for class. But I don’t think it has helped that much; they don’t prepare very much. They’re not... still not in a habit, maybe of doing it. I think they, they look what’s on it but they don’t put in their effort.”*
- * To make it more accessible for my students *ID014: “To use the innovation and to make it more assessable and easier for the students. That was my first. That was challenging”*
- * To design it for different groups of students differently *ID022: “... they sent me emails in frantic because they can’t finish their tests or something like that.
ID041: “It really affects, I’m not sure about the rest of you, but it affects us, what I use it for is really a Problem”*
- * I need to communicate with my students *ID016: “Because as a lecturer I need to have this knowledge, I need to communicate with my students on Click Up, I cannot continue with paperwork. And then I think it’s my responsibility to make sure that I get this knowledge and make use of available resources like you offered in the workshop.”*

32 I would like to know how my role will change when I am using the new clickUP

| | |
|--|---|
| * Students to have access to information | <p><i>ID005: "We had this need on our website to post information that is accessible to our post-graduate students. I have spoken to several people also form Education Innovation department – and everybody referred me to clickUP, so that seemed to be the answer.</i></p> <p><i>ID005: "Well I am quite hopeful that we can do the same still and post information especially for our post graduate students to access that."</i></p> |
| * To have ClickUp as extension of my classroom | <i>ID006: "Extension of the classroom"</i> |
| * To have a notice board for students | <i>ID006: "To have a notice board in the student's study "</i> |
| * Students to get best teaching | <i>ID009: "... their experience to get the best teaching."</i> |
| * Students encourage me to use ClickUp | <i>ID015: "So they also encouraged me, the students, definitely."</i> |
| * Want students to learn continuously | <i>ID041: "What I want primarily is that the students need to learn continuously, and not just the things that they need to learn for the, the official block test. These tests don't count for marks, it's attendance and revision".</i> |
| * I am interested in technology for how for how it can promote student learning and teaching | <i>ID044: "Because I am interested in... not so much interested in technology, but interested in finding more useful ways of promoting student teaching, or learning, because I think that is to me the most critical thing. I am not a... what do you call it? I am not good with technology and I'm not technologically wise but I do want to explore anything that is going to make my teaching more effective. And also student learning, you know, more promoting, promote it in a way, you know, so to me it's more about promoting student learning and improving my own facilitation or teaching"</i> |

STAGE 5 – collaboration concerns

Identical / variations of concerns of HPE’s

Evidence from interviews

5 I would like to help other faculty in their use of the new clickUP

10 I would like to develop working relationships with both our faculty and outside faculty using this new clickUP

18 I would like to familiarize other departments or persons with the progress of this new approach.

27 I would like to coordinate my efforts with others to maximize the new clickUP’s effects.

29 I would like to know what other faculty are doing in this area

* Useful if colleagues teaching in same block are trained

ID005: “I think it is useful if the people involved in the blocks are being trained.”

* Useful if colleagues teaching in department have idea of possibilities

ID005: “I think it might also be helpful for other people in the department .especially paediatrics to have some ideas to how it is working and I think if you start using it you will probably have to know a little bit more...”

| | |
|---|---|
| * That colleagues will be negative about the implementation | <i>ID013: "That if everyone has to do this they are going to be so negative' I was thinking of colleagues of mine this is so exciting and this is so [unclear], but, oh, she won't do it, and he won't do it, and he..."</i> |
| * Everyone must use it then it will work perfectly | <i>ID013: "That was a concern because I realised that this should be, you know, everyone must do this, then it will work perfectly"</i> |
| * Impact on self when colleagues are not using the system | <i>ID013: "Yes, if they don't put up the marks and they don't put up the information"</i> |
| * Increase in workload when colleagues are not using the system | <i>ID012: "And in the department what happens is that those people either come for us for help nêz or they just don't access the new clickUP. And it is not a good thing if we look at our students and we say we are going to implement the new clickUP then everyone should implement the new clickUP. Not only a few lecturers because it is confusing to the students."</i> |
| * Alls staff should be using the system else confusing the students | <i>ID013: "Yes, it will not save me time, but make it worse, because then I have to do everything twice' So that was my main concern from the beginning"</i> |
| * All staff to completes at least first 3 courses | <i>ID012: "I think those that haven't completed at least say the first 3 courses should do it ASAP"</i> |
| * Time required to help colleagues with the system | <i>ID017: "... but I think in terms of colleagues I was more of concern that I need to help them possibly for longer times. "</i> |

STAGE 6 – refocusing concerns

Identical / variations of concerns of HPE's

Evidence from interviews

2 I now know of some other approaches that might work better

*

9 I am concerned about revising my use of the new clickUP.

20 I would like to revise the new clickUP's approach.

22 I would like to modify our use of the new clickUP based on the experiences of our students

31 I would like to determine how to supplement, enhance, or replace the new clickUP.

POST = SoCii

STAGE 0 – Awareness

Identical / variations of concerns of HPE's

Evidence from interviews

30 Currently, other priorities prevent me from focusing my attention on the new clickUP.

ID012 : *"Because if I need to choose if...I have priorities set out in my day I am not necessarily going to put time aside to familiarize myself with clickUP. I would rather have class timecounselling time with my students, administration meetings etc. So clickUP doesn't necessarily always earn the top spot if you prioritize during your day. Maybe one should actually go and sit and really make time in your day and stick to that."*

STAGE 1 – Informational concerns

Identical / variations of concerns of HPE's

Evidence from interviews

6 I have a very limited knowledge of the new clickUP.

ID051: IV: *"At this stage, what is your biggest concern about the implementation of new clickUP?"*
IE: *"I don't know enough."*

* Knowledge and skills to use the system effectively.

ID040: *"Ek dink dis net die feit dat... ons in 'n departement... het net nie genoeg kennis en vaardigheid het om dit te gebruik nie. Ek dink dit is nogal 'n concern. Dis hoekom ons dit nie genoeg gebruik nie. Ons doen die kursusse en ons apply dit nou nie, en dan gaan dit eintlik verlore en ek dink die concern is dat ons dit nie gebruik soos dit bedoel is om te gebruik nie."*

* The use of assessment functionalities

ID012: *"I think if one can at least do the content is fine kind of ...but the assessment should be better at this stage."*

ID015: *"I just need to find out how to mark that on the ClickUP system."*

ID017: *"... for students to actually submit their projects through Turnitin (which I haven't done, so I've only did it myself). So I think that it is one new thing that I definitely want to do and then the test that I definitely want to do."*

ID042: *"...secondly I would like to set assignments for the students to do for me..."*

STAGE 1 – Informational concerns

Identical / variations of concerns of HPE's

Evidence from interviews

- ID031: "At this stage, it's only the assignment ...".*
- * The use of mobile functions for students

ID005: "The mobile function would be one. That was something that is really new. Because doctors and students all of them have smart phones.....I think it is something that have changed our teaching as well – that you would give them feedback while you would be doing a session or a presentation that is another thing that we are not use to. We don't know how to set up such a function – I think if it is available and feasible. Then we should start using it."
 - * Management information is lacking

ID012: "I must familiarize myself better so that I can use it optimally.... Because I do think if I remember that pie chart now that we did in the beginning in the overview workshop there is so many functions that I not making use of now which is actually kind of terrible.should be better at this stage. And this hasn't happened yet with the management information ..."
 - * How to make marks/grades available to students

ID015: "I would like all the marks to be published also, because now there is Peoplesoft and ClickUP, you know. Just all of the... an overview, because right now it's very fragmented."

ID031: "I will love to have one, especially like I said, the grading... how to do grading for the students, how to make it available for them. So another workshop for something like that... it will be very good for me."
 - * The use of communication functionalities

ID017: "I think like we said in terms of knowing...for students to know that they can use it more regularly...for communication purposes."

ID038: "IV:.... , what is that you want to achieve with the ClickUP system at this precise moment?

IE: An effective communication with the students, with what they need to know. You know, besides the academic component of it. And perhaps even their suggestions to send it via the ClickUP, so that would be how I could access that information, or their concerns about certain things."
 - * Knowledge of different functionalities (Student view)

ID036: "And then the student view thing, that really concerns me. But I think I'm just focusing on one thing that worries me; I must just go and do it and see if it's that bad."
 - * Modify/edit and uploading documents

ID038: " Am I going to know the things properly, am I going to know things so that the students can see it, how do I modify, edit, how do I go in, edit, modify, because then I must go to my original document, then upload it, you know, and that's all time consuming. So the thing is, it's okay to have everything perfect in your upload, but if you make a mistake, you've got to edit it, and you can only edit in your original document, put it through your whole system, upload, and then okay..."
 - * How I should change my thinking

ID009: "you know I think my original goal is still the same but the...Hoe should I change my thinking?"

STAGE 1 – Informational concerns

Identical / variations of concerns of HPE's

Evidence from interviews

14 I would like to discuss the possibility of using the new clickUP

* Seeing other possibilities

ID003: "Yes, when we started with ClickUP we just wanted to get the basics done, we just wanted to have the basics, but I think now we have got that sort of, we have got a basic idea of the basics, and now we can start thinking about how to use the other possibilities."

ID006: "Maar dis altyd lekker om soos 'n skema te sien - sodat mens kan sien wat is die verskillende moontlikhede...hoeveel uitvloeisels is daar uit die program uit? Om te weet waar kan jy dalk gaan hulp soek of watter rigting kan jy dink om vir jou nuwe uitdaging of problem te skep. Jy weet 'n mens is mos 'n problem opsoekende wese - ons soek altyd weer na 'n probleem om op te los."

ID006: "...en om te wys of daar nie ander uitvloeisels kan wees nie - ander moontlikhede."

* Time to revise handouts to see other possibilities

ID003: "Time to go and read all the material again to see what else I can use..."

* Adapt ideas to fit possibilities

ID005: "I think I'm fairly positive and hopeful that it will work. Otherwise we will have to change some of the functions and adapt to certain needs ..."

* Want to see examples

ID006: "Ek dink so 'n voorbeeld"

ID041: "But maybe a bit more education or identifying possibilities for..., because I think there's a lot more possibility, if I just think about the anatomy, for students to, where specimens, where you would just, and that's how we started off, by just loading up a slide and saying, identify the [unclear] and I have all ten possible [unclear] and I just slotted in a different image type. So I have ten questions immediately, and then you can start slowly adding other stuff, and that's revision for the students. Maybe to a certain extent, not waiting for the lecturer to come and say, well I, can I do this, maybe identifying people that know what's going on, will make an assessment and saying, well, why don't we try this. That is the thought. "

15 I would like to know what resources are available if we decide to adopt the new clickUP.

ID040: "Ek dink as jy weet waar toe om te kom vir... jy weet, maar die notas is nogal baie goed om te gebruik, so as jy dit by jou het en jy weet daar is iemand na wie toe jy kan kom as jy 'n probleem het dink ek dan sal dit baie help - om te weet as ek nou vas hak dan is daar iemand na wie toe jy kan gaan wat

STAGE 1 – Informational concerns

Identical / variations of concerns of HPE's

Evidence from interviews

gaan help daarmee en jou help om die ding te oorbrug, ja..”

ID049: “What we have discussed, you know, that we can discuss with you, have you online, as the support, the online support but also it's really great that one can just pick up the phone and quickly say, or send an email. And you are always so quick to answer. All of you, you know, I'm not just talking about you per se.”

Revise notes

*ID 002: “I think I would first go and see what... exactly... plan what I exactly want and then I think we... I will need to either **go back to the notes** or come for help just guiding me in how to put it up and set it up because you sometimes want to do things and you don't think of things that can go wrong or, yes, so I think I would really either go on course if there's a course specifically on that what we want to do or just come for help, make an appointment and ask.”*

Electronic booklet or guide

ID005: “With the old clickUP you had something like a booklet - and if something like that could be made available electronically then it could help or it could be useful.”

Personal support

ID002: “or come for help just guiding me in how to put it up and set it up because you sometimes want to do things and you don't think of things that can go wrong or, yes, so I think I would really either go on course if there's a course specifically on that what we want to do or just come”

ID042: “A person.”

ID054: “What I would need, probably, is, as always, hands on support. I'm sort of the just in time kind of person, so I would do it sort of the week before I need to have it, and then hit the wall, and then probably phone you and say, how do I do X, or I tried to do Y and so on. In terms of anything else, I think, before attending courses it's probably hands on support; hands on support would be first, and then when I'm comfortable with what I can do, then I'll probably become more adventurous and try to do the next thing through a course. But until I can sort of bed down what I'm doing now, it's unlikely that I'm going to do a new course to do new things until I'm comfortable where I am...”

ID013: “To have support available when I need it, as, you know, just in time, what's that...?”

ID013: “I'm sitting there, doing something, and now I'm stuck, but there is the help menu and there is email, and there's a phone that I can pick up' So I'm not worried about that but I would need support as I'm doing it, but it is available, so I'm not worried' And then I need more hours in the day’

ID038: “If I'm currently, if I want to prepare something, then I can phone and say okay, this is how you do it, and give me a call, then we sit together and we upload it. So it comes at different times, which are the problem. If there's somebody available, I've been to the workshops and everything, but now I've got a personal [unclear] I want keep a chat going or I want to upload to someone or make an announcement, I want to get feedback from the students immediately, how can I get that as a pop up message where it just checks, or opens up in ClickUP.

STAGE 1 – Informational concerns

Identical / variations of concerns of HPE's

Evidence from interviews

Help to *migrate* modules to the new clickUP

ID036: "I need to just have some help to just get to migrate the things to my... to the new clickUP, and then I need to start looking at the functions and doing certain of the actions, and if I get stuck [unclear]. I can't say what it is. As I say, the migration is the first thing I need to concern myself with."

Layman's manual

ID042: "I don't think so. Maybe a, sort of, like, a layman's manual, you know. Now we want to put ABC100 on and stuff like that - okay, step one, step two - yes."

26 I would like to know what the use of the new
– clickUP will require in the immediate future.

35 I would like to know how the new clickUP is
better than what we have now.

* How new clickUP works different from old

ID014: "My biggest concern that everything is not going to work as one would like it to work... going from the old to the new. "

Other training courses will be attended if they
interest me / is something that we want to do /
or to recap

002: "I think it depends on what they are about and I would definitely go if it interests me. "

002: "I think I would really either go on course if there's a course specifically on that what we want to do"

002: " Maybe I must just attend the courses again just to recap and I'll also read the hand-outs."

The practicality / feasibility of ideas in the
system

005: " That it won't be feasible"

009: " I can see maybe this we must do a little bit different or that we must do a little bit different so I'm now seeing and experiencing the practical implementation of the ideas that I had, so I had the plan and I knew what I wanted to do but actually to package it and thrash it out and systematically..."

To make environment look pretty

005: " dan die leiding om iets mooier of beter te maak..."

STAGE 1 – Informational concerns

Identical / variations of concerns of HPE's

Evidence from interviews

To plan the structure of the module

009: *"I wanted tothrash it out and systematically... we thrashed out process before the time....you have to put it on paper and that I found very, very helpful. I went back to that how many times."*

Should keep up with times / technology changes

012: *"and I do think one should keep up with the time shouldn't fall back."*

Time to attend training workshops

025: *"I mean, I would attend. A lot of the times, I mean, I look to see what's up, and if it's in a timeslot that I'm able to attend, I would attend. There's no...like I said, because I want to maximise the use of it, and also because I really think, in those sessions, you know, people from different faculties, it's [unclear] but different things, you know, are using it in different ways, and you get these great ideas. So I think it's a... And above and beyond that, you have an opportunity to meet different people that you may not ever meet. So you know, I would attend them, but my problem is time, you know. It's just a time..."*

038: *"IV: Okay, what would encourage you to attend more or further workshops?"*

IE: Time."

Will the bandwidth be stable and enough

036: *"Yes, but I mean now a lot of people have gone onto it. I think there are actually quite a percentage that haven't done it yet. And I don't know about bandwidth and if everybody's on it, those type of concerns."*

036: *"But another thing... something that I think is maybe true on this campus is we've got only certain timeframes or windows. We need to do this now; we can't wait until, you know, it's a bit quieter on the system or something like that. "*

So, that may be a problem, but we'll see."

Administrative concerns

007: *"The getting started was...there was confusion for me because I didn't know who sort of loads my modules up for me. So, on the one hand my head of department was asking me what courses I was going to be involved in and I must tell him and he's going to write to, I think you guys, to say they have to give me access to these courses. So to me it was quite confusing, I didn't know that process."*

046: *"A little bit of hiccups with the administrative part, but I mean that, the availability of help, was quite good. So, making the module available and those kinds of things."*

File sizes that can be uploaded

007: *"I got a bit worried there because anatomy is a visual subject and I have to have the diagrams in my lectures, basically. Because otherwise it's useless, if I have just got the text there it means nothing. "*

Will help to bring own content to training workshops

046: *"...But now in retro, now that you've used it, I understand much more in terms of, you know, where you add to a menu - so, the basic structure. So, in a way I know its ideal and I know you guys say it's ideal when you have your course and everything, your info with you, but we don't go there with it. So, that would help a lot and I would definitely, if I have to go to a specific little course... for a specific course now,*

STAGE 1 – Informational concerns

Identical / variations of concerns of HPE's

Evidence from interviews

Short courses repeated as encouragement

definitely take the stuff with, or it will be in any case on the... on my login. So, that will help a bit, yes."

037: "Maybe support... not really support, but more encouragement, you know, and perhaps a repeat of stuff that has been done in an odd way. Not, yes, in a negative... on a regular basis, but vary things and... Because for people like me who forgot something..."

STAGE 2 – Personal

Identical / variations of concerns of HPE's

Evidence from interviews

7- I would like to know the effect of reorganization on my professional status.

13 - I would like to know who will make the decisions in the new system.

17 – I would like to know how my teaching or administration is supposed to change
How to change my thinking

009: " I wanted to get to know how I should change my thinking, what all the possibilities are, etc. I wanted to learn the stuff but what I identified that first Saturday morning was because I'm a slow learning on the e, I needed more time to look at the screen, read the screen and figure out stuff so I needed more time for the course and I also probably needed some content that I would use and start building..."

STAGE 2 – Personal

Identical / variations of concerns of HPE's

Evidence from interviews

28 – I would like to have more information on time and energy commitments required by the new clickUP.

33 – I would like to use feedback from students to change the program.

Fear that I will not be able to master the system

My IT skills are not sufficient

The amount of information to assimilate each day too much

Fear that trying to work in the system is going to be frustrating

Is the change really necessary

037: *"IV The fear that you will not be able to master..."*

009: *"To update my skills so that I can run this thing, this whole process."*

024: *"Yes, my IT skills... that I'm not able to upload things. I always have to try and get you people to upload for me."*

024: *"Monday, Tuesday... what... you start with an overview... understand an overview... we assume everybody has got an overview and then tomorrow's lesson follows the previous one. So if I was still slow, trying to understand the yesterday one, so that makes me... this second day one... and the third day one... so just like that because they were... yes. So you end up trying to grab one part and one... but then it's because you are not on the same level of IT, I think."*

024: *"If it's going to help me up skill... what... improve my skills, but you know what? If they were good, it's just too much where... yes. Then you end up looking at this whole process, that if I'm going to upload this document, it will take me X, Y and Z. If somebody else will do it within five minutes, let me just do the marking while they do that for me. Yes. I think somehow it gets to that point."*

054: *"It's that once I sit down and try to do it it's going to be frustrating."*

054: *"...is it really necessary to change, just kind of sort of almost understood the previous one, and now I've got a new one."*

STAGE 2 – Personal

Identical / variations of concerns of HPE's

Evidence from interviews

STAGE 3 Management

Identical / variations of concerns of HPE's

Evidence from interviews

4 I am concerned about not having enough time to organize myself each day

029: "problem is my academic time challenges and a shortage of time."

038: "IE And that is management, what kind of management, it's managing your research, managing the library work, managing the students, managing the courses, the list is just endless, so it's managing Click Up also."

003: "So I think our biggest issue is time.."

010: "...our biggest concern now? [Unclear] time? Time. Time, yes."

012: "I think time..."

013: "And then I need more hours in the day"

017: "Time. Just, yes, time."

* Time to plan changes

002: "...we're planning to make some changes but we need to take the time so my problem really is time, so I think just make time for that."

* Time for marking online

003: "And time for marking, it frustrates me, I sit and mark, and it takes hours to download. I have to click three times to get to the document that I actually have to mark, that's very frustrating."

* Use it in order to save me time

013: "I want to use it as much as possible in order to save time in the end, so that I have all the information in one place..."

* Can the system help to manage time / improve teaching

012: "think I will be in or keep remaining interested if I can see that what I learn is making a difference to either time management or my teaching attitude or abilities."

* That I will not have everything ready / in

049: "In fact I'm concerned that I won't have everything in place. "

STAGE 3 Management

Identical / variations of concerns of HPE's

Evidence from interviews

place

- * Time to practice

027: "And the negatives, on my side as a lecturer, time management, there's not enough time to practice whatever I was taught.."

007: "The negatives, for me it's time. I just don't have...I suppose I should make time but it's time. When I first start I guess I'm constantly on it so I do the basics to get things done, whatever, but then in the second half of the year I don't, I'm not coordinating any courses so I lose them. So I need to play and I play and then I forget."

8
- I am concerned about conflict between my interests and my responsibilities.

Who's responsibility is the development of the module

006: "Want soos blok een kom nou op. Hoe die formaat van clickUP daarvoor gaan uitrol nie. Want ons is 6/L dosente en of jy / Erika de Bruyn weer die baas is van skep soos in die verlede en of daar nou erens anders 'n integreerende persoon gaan wees nie ? Want anders moet elkeen van die 6/L dosente self sy bydrae uitrol op die stelsel. Sulke goed – aan Universiteit is daar nie ...(altyd nuwe dinge)"

16 I am concerned about my inability to manage all that the new clickUP requires.

- * Frustration to download assignments from home connection.
- * My inability to manage the uploading process
- * Not coping with the pace of the training workshop

003: "That's the biggest frustrations I think, with the case studies as well. That's why I just give 100, 100, 100, because it just takes me too long to download every one of them and then I get to a [unclear] or something I can't open.

024: "If it's going to help me ... improve my skills, but you know what? If they were good, it's just too much where... yes. Then you end up looking at this whole process, that if I'm going to upload this document, it will take me X, Y and Z. If somebody else will do it within five minutes, let me just do the marking while they do that for me. Yes. I think somehow it gets to that point."

042: " Okay, probably better timing of the courses and probably... better timing and... You know, when I sit there and I struggle with the first piece then it's a barrier, then I just as well... I can just as well get up and leave because then I don't absorb anymore... Yes and then someone says just press there. Okay, then you can go through the motions but, I mean, you haven't made it your own. "

STAGE 3 Management

Identical / variations of concerns of HPE's

Evidence from interviews

25

I am concerned about time spent working with non-academic problems related to the new clickUP.

When system is down /off

Amount of time to test new system and get things ready for students
Time to attend training workshops

002: *"things like when the system's offline"*

009: *"you know, if the system was off or the internet was off... so it's technology."*

003: *"...or block two it was the system, the students that couldn't upload, and whatever, but I understand that it's sometimes a ClickUP problem, and sometimes not, but basically that's my biggest concern."*

022: *"The concern is obviously just those little, you know, like the system crashes with the students and... they sent me emails in frantic because they can't finish their tests or something like that."*

014: *"..the amount of time to test the new and to get that ready."*

037: *"Obviously the time and that would be the time for the courses, definitely. There was a week off work, as well as the implementation time."*

34

Coordination of tasks and people is taking too much of my time.

Coordination of tasks in a block

006: *"Want soos blok een kom nou op. Hoe die formaat van clickUP daarvoor gaan uitrol nie. Want ons is 6/L dosente en of jy / Erika de Bruyn weer die baas is van skep soos in die verlede en of daar nou erens anders 'n integrerende persoon gaan wees nie ? Want anders moet elkeen van die 6/L dosente self sy bydrae uitrol op die stelsel. Sulke goed – aan Universiteit is daar nie ...(altyd nuwe dinge).."*

Submission of assignments on clickUP saves paper

015: *"this is a way, a system that can go paperless..."*

022: *"Replacing... Paper based work..."*

To have a communication channel online for

022: *"The communication with the students. They might not want to ask me directly in class so they*

STAGE 3 Management

Identical / variations of concerns of HPE's

Evidence from interviews

students – manage questions they have / providing necessary information

prefer to have an online conversation...

038: *“An effective communication with the students, with what they need to know. You know, besides the academic component of it. And perhaps even their suggestions to send it via the Click Up, so that would [unclear] how I could access that information, or their concerns about certain things..”*

Rubric manager is not user-friendly enough

022: *“rubric manager, structure of the rubrics are fairly limited; and that’s...”*

Limitations in questions types

022: *“negatives – test formats of questions, more variety..”*

clickUP is not used optimally in the Faculty

037: *“I don’t think people really use it optimally, you know; it’s part of the implementation problem. And everybody will have their own reason why they are not using it, so, yes...”*

Will the system be able to do what I need it to do?

038: *“My biggest concern, will it do everything I want it to do, and the problem is, are there aspects of it that I don’t need, and I know it’s going to service a whole university, but it depends what it holds for the Faculty of Health Sciences, specifically, because our needs are different from the campus needs.”*

Will the system lighten my workload and help with communication to students

040: *“What would encourage you to attend more or further workshops training?”*

IE : *Ek dink die feit dat ek weet dit gaan my werk ligter maak. As ek weet dit gaan my werk ligter maak en daar toe bydra... dan dink ek sal ek definitief doen, ja, ... want dit is die id e. As dit kommunikasie tussen jou en jou student kan verbeter dan ook want dit is ook ‘n groot problem...”*

More use of the communication functionalities

052: *“...towards the latter part of the year, to put announcements. I want to use that function much more, you know, because you always miss the students, or one, or two don’t come to class ...”*

To be able to use the system efficiently

037: *“To be efficient. And to communicate with students, do it myself, not ask my colleague to do it only. And, you know, because I do a lot of administration, for marks, and all that kind of thing, and I know it can be done that way. But...”*

Help to manage the administrative tasks ?

046: *“IE I think basically administration of the whole... of the whole course or module. I mean, it sounds like quite big, but that... whatever I need, whatever marks I need of somebody, whatever... whatever the... everything is, you know, administered through that. But I don’t have little spread sheets of here’s the marks, and here’s the year marks, and here’s the final semester marks, and this I must mail to this one, and this... That drives me crazy. So, if everything’s on one... one thing, you know, you...re immediately able to access it and know where the stuff is. And maybe a bit of tracking as well, seeing that... I mean, I do experience this with more and more students, and less of them actually attend class.*

STAGE 3 Management

Identical / variations of concerns of HPE's

Evidence from interviews

Help to organise whole module this way.

It's probably their right, but to track... I'm still scared of that student that does nothing, but just write a test, and then coming back to you and saying, yes, but now he needs a little bit of special attention; that there's some or other way that we can track if he did his little bit towards the scores. So, I'm still scared of that one or two students that's just going to disappear."

046: "and I think that is the nice thing about it or that will keep you interested, because that's your organisation of your whole module; where otherwise you would have had a file in this file and file in that and a file... And there everything just comes together, so all the reading, all the questions, all the evaluations is all in one. So, it just keeps you organised, which is awesome..."

STAGE 4 Consequence

Identical / variations of concerns of HPE's

Evidence from interviews

1 – I am concerned about students' attitudes toward the new clickUP.

044: "Well no concern at all, as I said, except for the students. You know if I can just get the students... I mean if we want to explore the system further it has to be something that is a collaborative effort between myself and the students. But, again, as I always say perhaps it's what I can do to make them collaborate more. There are still a lot of things that I have to explore, so that is... Otherwise, the rest, really, I mean for me there's all the motivation to use it, the support is available, everything is there for me, it's just a matter of, you know, getting the students to, you know, to want to use it."

11 – I am concerned about how the innovation affect students

STAGE 4 Consequence

Identical / variations of concerns of HPE's

Evidence from interviews

That it is useful and interesting for students

002: *"think I want it to be useful to students. I would like to make it more let's say colourful for students, ... I would like to put more visual material in because it's just... at the moment it's just information that they get so it can be a bit boring, so just to make it a bit **interesting** for them"*

My and the student's success with the system will be a motivation
Enhance student's learning

006: *"En die student se sukses. My sukses en die student se sukses sal my bly motiveer."*

009: *"...but then to enhance students' learn and independent learning."*

To make life easier for students

012: *"I think I would like to do it to make life easier for the students as well..."*

Will my use make a difference in time management and teaching

012: *"T hat what I learn is making a difference to either time management or my teaching attitude or abilities."*

I am concerned about the usability of the system for my students and colleagues that are not IT literate

026: *"The only concern is the **usability for my students and my colleagues**, seeing that they are not always that proficient in IT and the IT skills. I was worried that they were going to struggle with using it. "*

Tracking to support students to pass

046: *"So, I think a little bit of that tracking as well for who's active and who's not active, and who doesn't... read anything, or whatever – because at the end of the day, we...re there to help the student pass. You know, so it's not about how good am I with clickUP; it's got nothing to do with it. It must benefit them to be better."*

Easy access for students when needed in user-friendly way

014: *"That students will have easy access to it. That they won't struggle to log in and they will not call you and say the system is freezing/hanging can't get access and that they will get the information in the shortest route to the information. That they do not spend time with unnecessary links on and that that will increase their learning experience. I think that is the biggest challenge."*

How to accommodate the learning needs of students

041: *"but the students that don't want to do it in a group do it on their own. So I think to accommodate both, the single learner that wants to sit on his own, as well as the students that work in a group. There are many students that do work in a group, and they actually do work. You can see that they're not just sitting and chatting, they're actually working on the work.."*

Learning environment with easy access and user-friendly to students

026: *"If I could have my way it would be a place where firstly they'd get the information, it would be a place where they won't struggle to get the information, that everybody would be comfortable in that they can get everything where they want it to be. It would also be a space where people will discuss the problems they pick up or things..."*

19 – I am concerned about evaluating my impact on students.

STAGE 4 Consequence

Identical / variations of concerns of HPE's

Evidence from interviews

24 – I would like to excite my students about their part in this approach.

Make it interesting for students with visual elements for example
Engage students

Variety of ways to deliver content / information to students

Making use of mobile functionalities in teaching

Course about interactive methods / methods to get in interaction

002: *"it's just information that they get so it can be a bit boring, so just to make it a bit **interesting** for them also to go on click-up and see something else .."*

002: *"good way of engaging students in activities and students..."*

003: *"The nice thing about ClickUP is you can use **varied ways of delivery**, because you can put up detailed theoretical information for those who need it, and you can also put up videos, and whatever for the guys that want to have the more practical stuff."*

005: *"Because doctors and students all of them have smart phones – so they can access – and we see that in our ward rounds that people would – when you talk about a condition and they would look up in real time what are talking about – while you would give them a question about ... I think it is something that have changed our teaching as well – that you would give them feedback while you would be doing a session or a presentation that is another thing that we are not use to.."*

052: *"I think if you could tell me that you can now attach a video and something more interactive. It will definitely entice me to come for another course."*

010: *"The ability to get my students to start interacting more actively."*

013: *"That it actually works and that there's interaction with the students"*

026: *"IV Yes, you see, and if you think about topics, you know, it doesn't need to be what we have currently on the menu, it can be anything else, it can be anything that you can maybe think about [unclear]."*

IE Yes, it probably would be something like how to get some more interactive things going on an electronic learning management system. But probably to start off with, how to get interactive things on face to face. I found some of the podcasts and things about how people used it that was quite interesting. "

STAGE 4 Consequence

Identical / variations of concerns of HPE's

Evidence from interviews

Make it fun for the students

053: "At this stage I want to make it more fun for the students because going through what [unclear], okay, it's click-click, but very boring. Because there are a lot of articles and a lot of reading work, okay, which, you know, a postgraduate course is supposed to be a bit still [?] to make it more fun."

Making use of exercises and assessments / discussions

024: "These exercises and assessments.."

044: "Again I mean I have not really explored the assessment, of how to assess, and I want to. I mean I have not even attended the course on that. That's the first thing and then I would like to explore this discussion too, to see how I can, you know, use the ClickUP. So those are the two things that I'm actually aiming to achieve perhaps in the next year or two."

32 – I would like to know how my role will change when I am using the new clickUP.

To monitor student activity in the module / provide evidence

002: "for myself to be able to see what they are doing and because we need to know that they have been there and that they did all, you know, the requirements, yes, for me I just need to be able to monitor them in that way because it's difficult if you... like I said, if you don't have exams with marks and you can say, well, this is why you didn't pas "

Student's access to computers

002: "Other concerns: I don't know, I think students... there might be students who don't have access and who... I mean they can go to the computer labs but it depends on where they stay and how, you know, it's not as easy for some students as for others who maybe have a computer at home that you can use. I think that might also be a problem that not all students have access, and we would also like our... we were busy also creating a community where everybody involved in the programme can actually talk to each other but then there was also the problem of when the people are, say for instance, at the sites, they wouldn't necessarily have internet connection or some of... even some of the nurses' mentors we have that don't have internet access at all; they don't have computers so that's the one thing. If you want to use it, everybody needs to have the equipment so that's... I think that's one thing that might be a challenge"

STAGE 4 Consequence

Identical / variations of concerns of HPE's

Evidence from interviews

Access to learning material when needed

029: "study guides on, [unclear] roles so that students can have access to it very early. And, as I said, the DVD, the YouTube thing and [overtalking] extra learning materials.

003: "I just want my students to have access to material in real time when they need it..."

Students feel comfortable accessing the information

003: "to have information at their fingertips in a way that they feel comfortable accessing it, in a student friendly way."

002: "like I said, if you don't have exams with marks and you can say, well, this is why you didn't pass."

Use of assessment tools to grade learning

002: "Yes, and then also maybe assessment but not in the sense of testing but maybe assessing students in another way where you can actually get type of a grade but it wasn't a test they wrote. I don't know whether you can do something like that so that they... so that we can just have more aspects that add up to give them a satisfactory mark or a grade for them to pass."

Risk to make copyrighted sensitive images available in clickUP

006: "enigste wat ek het – is ons material / praktika material kan mens nie eintlik so vir die publike toeganklik maak nie. Gelukkig is dit nou student en hulle moet wagwoord toegang kry tot dit en ek vra hulle maar baie mooi om dit nie verder aft e druk en te publiseer of te laat rondle nie."

Getting students engaged in discussing content

022: "getting the students more involved and, you know, on themselves; getting them to discuss with each other, you know, amongst each other, create discussions and games"

To get students to become independent learners

022: "it can just make them more independent, that's the main thing, you know, so not so you have to... you know... they actually have to... if they get something on ClickUP, you know, they're not directly here to bug me about it and ask questions and ask questions. Whereas they take what they get there and think for themselves, they work it out amongst themselves."

Students to learn how to write, site properly

025: "Right now, I actually don't. Now that my students know that I've actually forced them to use it,

I...you know, they do use it. I probably would give them more training with [unclear]. And like you...I think one of the things that we talked about is actually even putting, sort of, stuff [?] for them to read, so that they understand the importance of it, but you know, students don't read, so I decided not to do it, because they're not going to read it, anyway. But you know, just for them to understand why we do it, and the importance of doing it, and for them to learn how to do it right. Because they do have to do a project in their third year, where it cannot be plagiarised at all, so the sooner they get started using [overtalking]."

Information orientated – clickUP support that

026: "We are very information orientated to what's the newest information, what's the newest guideline on this. So even if you just use it for that purposes it's already quite useful."

clickUP can save students time and money

031: "address your students' learning needs?"

STAGE 4 Consequence

Identical / variations of concerns of HPE's

Evidence from interviews

| | |
|--|---|
| | <p><i>MP I think so. It does because, first of all, I said the... just the notes... I put them on Click Up and most of the students... they have access to Internet [unclear] and in case like if there's something that you really do not understand, I can also add some journals, like I said, to them to say, follow that with this, you know? And so the students are... well, it also will be determined by my attitude toward Click Up. So... because other students will say something else, like I did Click Up for other modules and then when they come to my module and say, oh, okay, so we can actually use Click Up for things like that. So [overtaking].</i></p> |
| | <p><i>IV Yes. It's wonderful to open their eyes as well. Right. Yes.</i></p> |
| <p>Integrate assessment into teaching more frequently</p> | <p><i>MP And I've like... they... for assignment themes, it's going to save them money to print out, you know? Because it will save them doing an assignment. 1F typed pages and to print those pages and they will want to add pictures, you know? It's going to be more money for them, so this will really help. “</i></p> |
| | <p><i>007: “sort of know that in terms of the time limits and things like that and whatever I could do but refining those assessment functionalities and making it more...Integrating it more into my teaching in terms of assessing more frequently also and getting feedback”</i></p> |
| <p>Want students to use it more...</p> | <p><i>010: “I would like to have it used more by my students, more effectively, to add to</i></p> |
| | <p><i>their learning experience.”</i></p> |
| <p>Students demand the use of clickUP</p> | <p><i>046: “Yes. No, so yes, it's just the organisation I think will keep one interested in it. And students will force you to stay interested in it.”</i></p> |
| <p>Quality of service to students improve with clickUP's use</p> | <p><i>046:” So, the other positive in terms of implementation was basically quality of service to students. It would be... You feel that you can actually speak their language because you can use it. And the other positive was basically just the easiness to use it. It was much easier than what I thought.”</i></p> |
| <p>Uneducated students</p> | <p><i>046: “uneducated students. A lot of them still being on an old system, they don't get it and then it's like the new little thing.”</i></p> |
| <p>System allows to treat students fair</p> | <p><i>054: “n the sense that in the past when you were a student, if students ask you something, there's almost a dilemma if a student stops in the corridor after class and asks you something, because then the others don't hear. Or students ask you about a document, or a resource, the others don't get it; and that's a bit of... to me it brings about a bit of unfairness in the system where those who remember to ask or are bright enough to ask benefit; but those who don't know, don't get, and they're always left behind.</i></p> |
| | <p><i>So, now, I would go back the next morning and say, I had an interesting question, I'm going to post this onto your Click Up, and here's a link for a resource or whatever.</i></p> |
| | <p><i>IV Yes.</i></p> |

STAGE 4 Consequence

Identical / variations of concerns of HPE's

Evidence from interviews

System allows to have continues engagement with students oppose to sporadic engagement.

LI and then everybody can benefit from it; and it also stop student writing to me and asking a question because they now know, I will say yes and put it up for everybody; otherwise some benefit more than other, which, I think, is very unfair.

054: "So they only come in for a week at contract time, and then they go back and sometimes across the borders for some students. So in terms of being able to continue your learning off campus, I think, it's an important function. The possibility, for example, to set up things that open and close over time, opportunities with using Click Up. I have not explored it; I think those people who have done it have been very positive about the continuous engagement with the students. Now we don't have continuous engagement, we've got very sporadic, periodic engagement with students; and I think Click Up, if you set it up properly..."

IV Yes.

LI There is more of a continual engagement with students.

STAGE 5 – Collaborate

Identical / variations of concerns of HPE's

Evidence from interviews

5 – I would like to help other faculty in their use of the new clickUP.

027: "As I have already indicated I now level myself as a beginner in Click Up and is planning to move to an advanced stage where I can assist anyone in the department. Know exactly what is entailed and how, the how part of it, how can I get to this screen, how can I work on it? Can I work on it successfully and reach my goal in all the areas that was entailed in my workshop? I think that's my vision, I will be very pleased if I can be able to do that..."

10 - I would like to develop working relationships with both our faculty and outside faculty using this new clickUP.

STAGE 5 – Collaborate

Identical / variations of concerns of HPE's

Evidence from interviews

18 – I would like to familiarize other departments or persons with the progress of this new approach.

27 – I would like to coordinate my efforts with others to maximize the new clickUP's effects.

Would like to integrate my efforts /collaborate when developing a new course

Want to work with librarian to update my course

29 – I would like to know what other faculty are doing in this area

015: "What type of work do they do, because then I can link... because, for me, the nursing subjects are like the... this is where you put everything together, and right now I can't put it together; so, for me, that would be wonderful.The outcomes that they need to achieve."

036: "IE To at least have the same information, type of information that I had on the old clickUP system; to upgrade some of them. Something that I realised is that me and Susan from the library need to go and sit down. That one definitely needs to be upgraded. And then if possible just get one or two new things in there, but I'm not..."

013: "I think, sort of, have... not... maybe you would call it a workshop or a seminar where lecturers can **share how they use it**' To say, this worked for me, or I did this, and then a uTube video, and they had to do this, and it worked, or I tried this and it didn't work at all'

013: "**learn from one another and motivate one another**, because sometimes you'll think it's like a big mountain, and then it's actually not that big an issue to use"

014: "Maybe if other people can **share their experiences** and what work for them and what don't. And maybe to see how they do it and what the advantageand is maybe that don't have to be very long sessions. It can be short but to tap into other peoples experiences. But you can learn from other people's experiences then use that as a short cut."

STAGE 5 – Collaborate

Identical / variations of concerns of HPE's

Evidence from interviews

049: "You know what I would like is that that you had at one of the... I was never at a course but I had to present, that look and **show and tell** ... You see how others use it. Because I know it's available, like XXXX I actually just... her thing is one of the examples I think they should put up. And her... and what she does in the community is related to what I do. It's not the same so I think that will be my very first stop, is to just go and see how she arranged it and done it .."

054: "I think if other people said, oh, they're using X, Y and Z, and it's been working so well; it's been saving them time, for example. I think it's usually about time and about clarity of communication with students, the use; for example, [unclear] if it's been really useless for them. So, I think, personal experience by others is probably more important."

013: "Things like that so that you can sort of share experiences... and say, listen, this is how easy it is, if you put up your assessments..assignments, and your quizzes it automatically puts the marks on the grade book.."

017: "speak about how they implement certain systems and how it actually work for students."

013: "So it can motivate and inform one another like sort of case studies, if you can call it that, practical things.."

017: "SoY I thinkY to see how others use ClickUP successfullyY I think that would motivate me .."

053: "...actually just like to see what other people are doing but on a basic level, you know, because we see these wow courses that people have set up, and think, huh, okay, is that even possible? But just how... even just within my own department just to see how are they using it, and what are they putting on there, because some people have these really good ideas."

017: "I think that would motivate me but it needs to be relevant to how I can use it because we have smaller classes with one on one. Yes so I think that will motivate me to use it more when I see the possibilities in actual..."

To have all elcturers comfortable in the use of clickUP

003: "I would like to **have everybody comfortable with ClickUP** because that makes it a lot easier. What happened in block two for instance, the guys that weren't comfortable, everybody sent stuff to me, so I had to do all their work as well. So I think that would be the ultimate, if all the lecturers are comfortable, and have access and have their passwords sorted out that they can do their own thing where needed."

STAGE 5 – Collaborate

Identical / variations of concerns of HPE's

Evidence from interviews

All should attend the Overview

003: *"So I think that would be the ultimate, if all the lecturers are comfortable, and have access and have their passwords sorted out that they can do their own thing where needed."*

Will everybody buy into this

005: *"I think for everybody attending the overview sessions as well – it could be quite useful."*

Lack of interest in colleagues and students

013: *"Will people use it, staff members? Students have to, they don't have a choice, but, please, will everybody buy into this? But I strongly think that it will work perfectly or should work, for everyone, if everyone does it, if everyone is on it"*

Colleagues are first line of support

044: *"The lack of interest from the students, right, and the lack of interest and commitment from other lecturers."*

Negative influence(negativity) of colleagues regarding the system

027: *"So far it's like when I want to use one of the areas and I get stuck, if my colleagues are here I think they can act as my nearest support system, and if we also got stuck I think I can contact the specialist to come in."*

Low uptake of colleagues

031: *"And then I said the negative thing will be the influence from the other colleagues, but I'm glad that I attended the workshop."*

054: *"And then the low uptake of the workshop. There were not a lot of people in the class, but it is not... it doesn't bring about, you know, we're all on this journey together, it sort of, yes, well, there's sort of some of us who are doing it.."*

STAGE 6 -Refocusing

Identical / variations of concerns of HPE's

Evidence from interviews

2 – I now know of some other approaches that might work better.

9 – I am concerned about revising my use of the new clickUP.

20 – I would like to revise the new clickUP's approach.

STAGE 6 -Refocusing

Identical / variations of concerns of HPE's

22 – I would like to modify our use of the new clickUP based on the experiences of our students

31 - I would like to determine how to supplement, enhance, or replace the new clickUP.

New developments will keep me interested

Evidence from interviews

003: "New developments...Yes, for me to use new things every time."