CHAPTER 5: RESULTS

5.1 Introduction

The preceding chapter presented the methodology used to collect data about the content of under-graduate research methodology courses and the beliefs held by the lecturers who construct them. Part one of this chapter contains the data collected from universities in South Africa on the content of prescribed under-graduate research methodology textbooks as well as the coursework. Together, this information describes the curricula examined in this study. This is followed by a presentation of data from interviews with research methodology teachers about the way that they constructed their research methodology course.

In this chapter the researcher describes the interviewees according to the characteristics that are most important to the aims of the study. A thematic analysis with a coding structure was applied to the data. This thematic analysis is grounded in the hermeneutic circle of interpretation, which enabled the researcher not only to give the research participants a voice and understand their world, but also to make meaning from what they said. Nine beliefs held by the participants about under-graduate research courses were identified. The findings emanating from the analysis of the interview texts are presented below.

This chapter follows the structure of the previous one where the two parts of the study are presented separately. The integration of these parts will be attempted in the chapter that follows.

5.2 Part 1: An exposition of the content of under-graduate research methodology courses in South Africa

In this section of chapter 5 the findings of part one of the study are presented in the following order: a description of the departments and universities included in this section is given, together with a brief discussion of relevant issues pertaining to the sample. This is followed by a discussion of the results on level 1, a discussion of the results of level 2 and a conclusion with suggested points of further enquiry for the study.

5.2.1 Description of the sample

As reported in part 2 of the previous chapter, 82 departments or faculties were included in the study across 24 universities. The inclusion of only universities and not other tertiary learning institutions is to limit the scope of the study; in future research technikons could also be included. A description of the participating universities and faculties/departments is given below in table 5.

Table 5 Description of sample in terms of university, faculty and department

University	Faculty	Department
Vista University (Port Elizabeth campus)	Arts	Psychology
Vista University (Welkom campus)	Arts	Psychology
Vista University (Sebokeng)	Arts	Psychology
Vista University (Pretoria)	Arts	Psychology
University of the Witwatersrand	Arts	Social Work
		Philosophy
		Social Anthropology
		Sociology
		Psychology
	Commerce	Economics
University of the Free State	Social Sciences	Psychology
		Sociology
	Economic Sciences	Industrial Psychology
University of Natal (Pietermaritzburg)	Social Sciences	Sociology
		Psychology
	Economic Sciences	Economics
University of Natal (Durban)	Social Sciences	Sociology
		Social Work
		Psychology
University of Cape Town	Social Sciences	Sociology
		Environmental & Geographical Sciences
University of Durban Westville*	Social Sciences	Anthropology
		Psychology
		School of Life & Environmental Sciences
University of Fort Hare*	Social Sciences	Sociology
		Communication
University of Pretoria	Arts	Anthropology & Archaeology
		Communication Pathology
		Information Science
		Philosophy
		School for Social Sciences
		Social Work
		Sociology
Potchefstroom University	Medicine	Nursing
	Arts	Philosophy
		Psychology
		Social Work
		School for Communication & Information Studies

Rand Afrikaans University	Arts	Communication Science
		Human Resource Management
		Psychology
	Economics	Economics
University of Port Elizabeth	Arts	Anthropology
		Philosophy
		Psychology
		Social Work
University of the North*	Arts	Psychology
		Sociology
		Social work
	Science	Geography
		Nursing
	Education	Psychology of Education
Rhodes University (East London)	(Faculty not indicated)	Sociology and Industrial Sociology
		Psychology
		Social Work
Rhodes University (Grahamstown)	(Faculty not indicated)	Anthropology
		Sociology & Industrial Sociology
UNISA	(Faculty not indicated)	Anthropology & Archaeology
		Public Administration
		Education
		Industrial Psychology
		Psychology
		Nursing
		Social Work
University of Transkei*	(Faculty not indicated)	Anthropology
		Information Science
		Philosophy
		Political Science
		Sociology
University of Stellenbosch	(Faculty not indicated)	Economics
		Sociology
		Political Science
University of Zululand*	(Faculty not indicated)	Educational Psychology
		Geography
		Home Economics
		Industrial Psychology
		Philosophy
		Political Science
		Psychology
		Social Work

University of the Western Cape*		Geography
		Political Science
		Psychology
University of Venda*		Psychology
		Sociology

*   HDU

5.2.2   *Presentation of results: level 1*

The results of the first step in the data analysis process (data reduction preceded by data collection) are presented in tables 6 and 7 below. In table 6 the topics are listed with the corresponding frequency, as explained in the previous chapter, counted across all the departments involved in the study. The reader will notice that, in addition to the topics generated on the content and skills taught in under-graduate research methodology courses, the tables provide the categories in which the researcher placed the topics. These categories will be discussed in level 2. The reason for presenting the categories at this stage is for the reader to see which topics formed part of each category. The reader should note that the categories are not mutually exclusive, in other words, the individual topics do not necessarily fit into only one category (Neuman, 2000). For example, in table 7 the skills listed under the category of data collection could be placed in other categories if it was known what specific method of data collection is being used. The fact that specific reference was not made to the method for all cases hampered the researcher's task in categorising these topics. The data generated in this section, that is, the information contained in tables 6 and 7 will be discussed in the chapter that follows.

Due to the large amount of information presented in the tables, only certain points will be highlighted and discussed below. When continuing to the second phase of the data collection for this study, the aspects that have been punctuated as being important will be used to inform further the questions asked.

Table 6 Topics in research methodology texts (in categories) and frequency of appearance in course content

Topics and categories	Frequency
Philosophy of science	**13**
The relationship between theory and research / philosophical aspects of research: reality and mind / science and research / the nature of social and human inquiry / paradigms of research / interplay of theory and method	8
The generation of knowledge	1
The domain of methodology	0
Meta theory	4
Background to the research process, beginning research	**292**
Dimensions of research	0
Inductive and deductive reasoning	3
Types of research	2
Descriptive	6
Explanatory	3

Exploratory	0
Evaluatory	2
Intervention	3
Goals and objectives of professional research	0
Basic and applied research	2
The research process	68
Conceptualisation and operationalisation	63
Selecting a research topic	2
Identifying a problem	3
Problem solving method/cycle	1
Formulating a hypothesis	2
Literature overview	60
Research designs	0
Individual or group	59
Time series	1
Longitudinal research	0
Cross sectional research	0
Panel studies	9
Pilot studies	0
The research proposal	1
Project management	0
Quantitative and qualitative research (differences)	2
Data collection and recording	**64**
Data collection methods	61
Data preparation	1
Coding	1
Cleaning	0
Punching	0
Transferring	1
Database management	0
Analysis of data	0
Quantitative research & methods	**98**
Nomothetic research studies	3
Ex-post facto research	1
Epidemiological research techniques	1
Retrospective studies	1
Prospective studies	1
Comparative research	1
Equivalent control groups	1
Survey research	46
Census data	1
Questionnaires	0
Experimental research	15
Quasi-experimental	1
Control	0
Simulation and games	3
Laboratory research	23
Self-administered/self report	0

Types of observation research	84
Field research	27
Participatory observation	21
Structured observation	2
Passive observation	33
Naturalistic research	1
Interviewing	**15**
Interviews	14
Face to face interviews	1
Telephonic interviews	0
Participatory research	**8**
Action / participatory research	8
Non-reactive research, secondary analysis	**4**
Historical comparative research / archival / secondary analysis	3
Utilising existing statistics	1
Measurement	**11**
Measurement	3
Levels of measurement	2
Reliability, validity and bias in measurement	1
Validation	0
Measurement scales / scales and indexes	0
Psychometric tests / educational testing and measurement	0
Construction of tests / instrument design	3
Evaluation of tests: standardisation, reliability and validity	2
Item analysis	0
Quantitative data analysis	**107**
Quantitative analysis	55
Parametric and non-parametric statistics	0
Non-parametric methods	2
Basic statistics: concepts	14
Statistical methods	0
Normal distribution and standard scores	1
Measures of central tendency	0
Hypothesis testing	1
Frequency distributions	0
Significance testing	0
T-test	2
Differential research	1
Analysis of variance	3
Correlation	0
Simple regression	7
Multiple regression	2
Linear and matrix regression approaches	3
Measures of variability	0
Probability	4
Causality	2
Power	1
Single and simultaneous equation models	1

Bivariate	2
Univariate	0
Factor analysis	4
Repeated measurements	1
Autocorrelation and heteroscedacity	0
Chi-square	0
Econometric techniques	1
Sampling	**15**
Sampling	3
Types of sampling	10
Sampling error	2
Qualitative research & methods	**17**
Ethnography	1
Ethnomethodology	5
Grounded theory	0
Delphi method	1
Phenomenology	1
Non-experimental research	3
Focus group interviews	0
Case study	2
Life history collection	0
Single system design	1
Documentary research	0
Film, video and photography	3
Qualitative data analysis	**25**
Qualitative analysis	3
Content analysis	13
Secondary analysis	6
Text analysis	2
Conversational analysis	0
Narrative discourse analysis	0
Semiological	1
Interpretation of data and generalisation of results	**62**
Interpretation of data	4
Generalisation of research findings	58
Writing skills, reporting skills, publishing	**74**
Dissemination of research results	4
Report writing	1
Report to the community	33
Publication	36
Data presentation	**4**
Graphical presentations / graphical representation of space / tabular presentations	4
Reflexivity	**1**
The role of the researcher	1
Intervention research, policy formulation	**16**
Policy making and research	0
Scenario / situational analysis	12
Impact studies	1

Needs assessment	0
Development studies	1
Developmental research and utilisation model (DR&U)	2
Social accounting	0
Ethics	**6**
Ethics of research	2
Ethics and sponsors	2
Ethics and research subjects	0
Ethics and dissemination of research findings	0
Uses and abuses of research	2
Computer literacy	**0**
Aids to research	0
Computers and social research	0
Programme evaluation	**1**
Programme evaluation	1
Interpreting existing literature	**6**
Reading and understanding meaning	6
Triangulation	**9**
Triangulation	5
Combining quantitative and qualitative research	4

As presented in table 6, the research process is fundamental to most research methodology courses. De Vos (1998) equated the research process to 'methodology', which "merely means the way in which we proceed to solve problems …" (p. 37). Providing students with a 'map' of the way that research proceeds is included in many texts aimed at under-graduates (see Babbie & Mouton, 2001; De Vos, 1998; De Vos, Strydom, Fouché & Delport, 2002; Terre Blanche & Durrheim, 1999a; Neuman, 2000; Welman & Kruger, 1999). Some of these texts present the research process as an architectural blueprint whereas others explain the non-linear, interdependent nature of research (see chapter 2).

Other topics that received high frequencies (i.e., taught in more than half the courses surveyed) that were intuitive to the researcher's framework of the content presented in under-graduate courses included: individual or group designs, survey research, quantitative methods, literature review, conceptualisation and operationalisation, quantitative analysis, and generalisation of research findings. Some topics received fewer frequencies than expected, for example, sampling, topics related to philosophy of science, types of research, identifying a research problem, formulating a hypothesis and themes related to ethics. These findings could also be a result of the NRF's database structure that provides general information which is not divided into more specific topics.

The reader will have noticed that there are some topics that have no recorded frequencies. This is in itself a significant result. When discussing the unit of mind, Bateson (1972) explained that what is transferred onto a person's map from the territory is 'difference'. Information is a 'difference that makes a difference'. This occurs in a process where people select certain facts about the territory that are placed on their map, in other words, this becomes information. The importance of the zero findings is succinctly captured by Bateson (1972) when he said "[b]ut remember that zero is different from one, and because

zero is different from one, zero can be a cause in the psychological world …" (p. 452). This is different to the world of natural sciences where cause and effect exist and are 'real' and can be observed. 'Things' that do not exist, however, can have significance in the psychological world. What is *not* being taught in research methodology courses thus has meaning in the context of what *is* being taught. By way of illustration: the theme of computers and social research is not listed in the content of research methodology courses (although it receives a low frequency in 'skills taught' in table 7). This finding is discussed in the section on skills training.

Table 7 contains the skills that are acquired in under-graduate research methodology courses and the number of courses they are taught in. Some of the patterns that captured the attention of the researcher will be discussed below.

Table 7 Skills acquired in research methodology courses and frequency of appearance in course content

Skill acquired	*Frequency*
Philosophy of science	**13**
Issues within the philosophy of social science and social theory	9
Applied logic / critical reasoning / thought experiments from different presuppositions / conceptual analysis	4
Background to the research process, beginning research	**50**
Statement of problems / sources of research problems	3
Formulating a research question	1
Conceptualisation/theory building	2
Hypotheses	4
Variables	2
Project management / planning	3
Literature review/study	7
Research procedures	1
Research design	5
Types of research	2
Basic vs applied research	1
Laboratory vs field research	1
Exploratory	3
Explanatory	2
Descriptive	4
Longitudinal	1
Cross-sectional	2
Comparative research	1
Qualitative and quantitative approaches	5
Data collection and recording	**12**
Data gathering/collection / fieldwork	11
Data recording	1
Quantitative research & methods	**114**
Quantitative research / statistical research methods / nomothetic research studies	6
Prospective studies	1
Retrospective studies	1

Epidemiological research techniques	1
Experimental research	18
Pre-experimental research	2
Quasi-experimental methods	3
Equivalent control groups	1
Ex-post facto research	1
Correlation research	5
Survey research / census research	68
Questionnaire construction	6
Check-lists	1
Sampling	**6**
Sampling	4
Simple random sampling	1
Population sampling and means	1
Quantitative data analysis	**30**
Quantitative data analysis	6
Mathematical methods / statistical methods and techniques	7
T-test	1
Chi-square	2
Correlation	1
Regression	1
Normal distribution	1
Probability	1
Analysis of variance	1
Descriptive techniques / frequency analysis / summarising data / quantitative content analysis	4
Differential research	1
Application of forecasting techniques / econometric techniques / econometric model-building	3
Non-parametric methods	1
Measurement	**17**
Measurement	2
Instrument design / test construction	5
Testing and measurement	1
Measurement scales	2
Application of psychometric instrument	1
Item analysis	3
Validation	3
Qualitative research & methods	**52**
Qualitative research	11
Non-experimental research designs	1
Focus groups	7
Ethnography / ethnomethodology / historiography	8
Grounded theory	1
Narrative method	1
Life history collection	1
Case studies / single cases / single system design	17
Phenomenology	5
Types of observation research	**59**
Observation	12

Naturalistic	3
Systematic	3
Participant observation / field research	40
Passive observation	1
Participatory research	**17**
Participatory action research	14
Participatory methods	3
Programme evaluation	**18**
Programme evaluation / evaluation research	17
Evaluatory research	1
Interviewing	**25**
Interviewing	13
Interviewing schedule	2
In-depth interviews	6
Structured interviews	1
Semi-structured interviews	2
Open-ended / unstructured interviews	1
Qualitative data analysis	**21**
Qualitative data analysis	8
Text analysis / documents	3
Semiological	1
Content analysis	8
Discourse analysis	1
Non-reactive research, secondary analysis	**7**
Unobstrusive research	1
Secondary analysis / sources (government statistics, historical archives) / historical research	6
Interpretation of data	**3**
Data interpretation / evaluation of obtained results	3
Data presentation	**5**
Graphic data representation / graphical representation of space / graphical summary of statistical information / tabular analysis	5
Intervention research, policy formulation	**15**
Developmental methods / research	3
Scenario / situational analysis	2
Needs assessment	2
Intervention research	4
Developmental research and utilisation model (DR&U)	1
Impact studies	1
Development of services	1
Policy formulation	1
Ethics	**2**
Ethical considerations in research	2
Interpreting existing literature	**2**
Interpreting published documents	1
Reading and understanding meaning	1
Writing skills, reporting skills, publishing	**16**
Essay writing / structured writing	2
Report writing	10

Report-back to researched	2
Publication	2
Computer literacy	**2**
Computer skills (Internet)	2

As evidenced in table 7 the skill with the highest frequency (68) is survey and census research. Neuman (2000) captured the perceived importance of survey research in describing social phenomena, which may give a clue as to why it is practised as a skill in so many courses:

> The survey is the most widely used data-gathering technique in sociology, and it is used in many other fields, as well. In fact, surveys are almost too popular. People sometimes say, "Do a survey" to get information about the social world, when they should be asking, "What is the most appropriate research design?" (p. 247).

Conducting a good survey requires much thought and effort to avoid misleading or worthless results (Neuman, 2000), which may be why lecturers deem this an important skill for under-graduate students to practise. In some cases, probably as a result of their own research training, lecturers place much emphasis on using a survey design with its accompanying questionnaire to conduct research as the only way of submitting a successful under-graduate dissertation (Lowe, 1992). Students are thus encouraged by their lecturers and the content of textbooks to implement surveys in academic and practitioner spheres although some authors of under-graduate texts, such as Neuman who is quoted above, attempt to guard against this. Interestingly, the skill associated with constructing a questionnaire *per se* is only taught in six courses. This low frequency may be due to a lecturer subsuming questionnaire construction under the general heading of survey and census research in the Nexus database.

Lowe (1992) made the following statement about the emphasis placed on questionnaires in under-graduate dissertations in the discipline of geography:

> … as a result of the context in which they were taught geography and the specifics of their own research training a number of lecturers still highlight the questionnaire as the central feature of an under-graduate dissertation … Indeed, a dissertation is not a dissertation (let's face it) without a (formally structured and statistically significant) questionnaire survey … (p. 173).

Successful research, in this instance, is equated with a formal, structured, quantitative method. It seems that the message that is conveyed to students is '*if* you use a questionnaire, *then* your research will be successful' (a linear cause-effect statement) whereas the role of qualitative methods in producing a good dissertation is downplayed.

Second to the popularity of survey and census research, participant observation / field research is taught in forty courses. One reason for this may be that

> [m]any students are excited by field research because it involves hanging out with some exotic group of people. There are no cold mathematics or complicated statistics, no abstract deductive hypotheses. Instead, there is direct, face-to-face social interaction with "real people" in a natural setting (Neuman, 2000, p. 345).

By acquiring skills in field research, students can 'get their hands dirty' in the research process and are able to learn through experience. The above description of some quantitative methods as 'cold', 'complicated' and 'abstract' is seen in contrast to or as 'different from' qualitative methods.

Interviewing is another skill that is taught to under-graduate students. Taylor (1996) expressed her concern, however, that interviewing is still being taught to students in the following way:

> Many social science textbooks still include chapters that encourage the researcher to go to the interview situation with the impression that it is possible to become a neutral person for the duration of the interview. They imply that personal emotion and subjectivity can be put in a neat box before turning on the tape recorder. This dehumanising process is supposed to allow the research to generate unbiased, objective data that can be analysed by totally disregarding the presence of the interviewer (p. 107).

It is Taylor's contention that denying the researchers' identity and not acknowledging the role of their experience of the research process is a legacy from the positivist paradigm.

Even though a recent article (Yenza!, 2000) announced that the Internet is essential for the future of the way in which we conduct research and disseminate findings, and that computer and Internet literacy are fundamental skills for researchers in the social sciences and humanities, surprisingly little attention is given to this skill in the courses that were surveyed. Some universities expect students to acquire computer skills elsewhere, or as in the case of the University of Pretoria, basic computer courses are built into certain packages in the social sciences. In this way students acquire the necessary skills outside of the social sciences and their specific fields of application. Large under-graduate student numbers and a lack of computer facilities to accommodate these numbers may also contribute to departments reserving the acquisition of computer skills for post-graduate students involved in courses that require high computer literacy. That social scientists have only begun using the Internet to do research recently may also be a factor in the scarcity of its inclusion in curricula. Some recently published social science research texts (see Neuman, 2000; Terre Blanche & Durrheim, 1999a) include a small section on Internet searches related to performing a literature review. This may contribute towards the inclusion of this topic in future research methodology courses.

5.2.3   Presentation of results: level 2

As described in chapter 4, the results from level 1 of the data analysis were processed using the categories that were generated from the topics and displayed in conditional matrices. Due to limited

space the first two conditional features are illustrated in the circle format whereas subsequent features are listed on lines. This visual display of the data aids the researcher to conceptualise the different aspects pertaining to under-graduate research methodology courses.
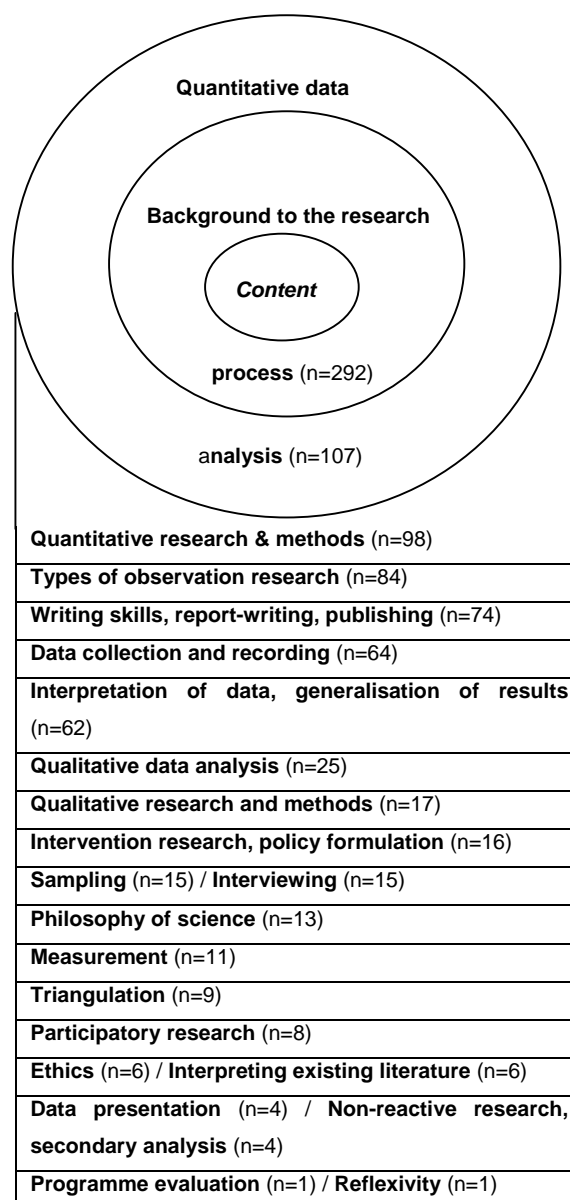

Quantitative data

Background to the research

Content

process (n=292)

a**nalysis** (n=107)

Quantitative research & methods (n=98)
Types of observation research (n=84)
Writing skills, report-writing, publishing (n=74)
Data collection and recording (n=64)
Interpretation of data, generalisation of results (n=62)
Qualitative data analysis (n=25)
Qualitative research and methods (n=17)
Intervention research, policy formulation (n=16)
Sampling (n=15) / **Interviewing** (n=15)
Philosophy of science (n=13)
Measurement (n=11)
Triangulation (n=9)
Participatory research (n=8)
Ethics (n=6) / **Interpreting existing literature** (n=6)
Data presentation (n=4) / **Non-reactive research, secondary analysis** (n=4)
Programme evaluation (n=1) / **Reflexivity** (n=1)

Figure 12 Conditional matrix of the categories of content of research methodology courses

After learning about the fundamental aspects of research, which would by default be included in most (if not all) research methodology courses, students are exposed to quantitative research (107 aspects of quantitative data analysis and 98 aspects of quantitative research methods respectively). Qualitative research methods and qualitative data analysis are included far less in the curricula according to the NRF's database. This finding could be further investigated with regard to post-graduate courses,

especially in the light of Rogers' (1986) assertion that no APA approved 'humanistically oriented'[1] doctoral programmes in psychology[2] existed at that time, a sentiment which Polkinghorne (1992) still supported six years later.   Although alternate research methods were developed within a broad humanistic methodology, academic psychology has not changed its position on its general methodological commitment. Polkinghorne (1992) stated that American academic psychology

> … continues, however, to adhere in the main to the use of research procedures that were adopted by the discipline during its logical positivist and behaviorist period. Psychology has been the most resistant of the disciplines that study humans to expand its methodological procedures. It has yet to adequately come to grips with the methodological implications of the changes in the philosophy of science that have taken place in the last half of the twentieth century (p. 226).

Lowe (1992) echoed this statement when she stated that qualitative methods are "… viewed – and hence taught – as afterthoughts to the more serious work of questionnaire design and tend, therefore, to disappear off a student's list of priorities" (p. 172). Despite some attempts at integrating aspects of quantitative and qualitative research, these two approaches are still dichotomised conceptually with quantitative approaches receiving the strongest support. The implication of this state of affairs, according to Kvale (1996), is that "[t]oday's social science students acquire a professional competency in analysing the social world as a mathematically constituted universe, but remain amateurs in the face of a linguistically constituted world" (p. 69). Ashworth (1995) also noted the lack of texts that adequately deal with the analysis and theory of qualitative research; if such material exists it is difficult to access and is not aimed at under-graduate audiences. This leaves the qualitative methods curriculum in psychology with little to work with.

According to figure 12, philosophy of science seems to be generally neglected in research methodology courses. Chamberlain (2000) and Scheurich (1997) have criticised the authors of research methodology texts for not including enough content on the philosophy of science. In a study on the methodology texts used in psychology courses in the USA, Proctor and Capaldi (2001) found that not only is philosophy of science rarely included in a text, but when it does occur an outdated version of a theory is presented. They cite the example of discussions in certain texts about Popper's falsification principle without mention of the criticism, rejection and modifications that his theory has been subjected to. Philosophy of science may be included as content in more courses than stated in the database as some of the themes incorporated in this category have also been placed under 'skills acquired in research courses' (see table 7). The lack of representation of philosophy in under-graduate courses is not unique to this study, as Lowe (1992) stated:

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[1] Polkinghorne's (1992) definition of 'humanistically oriented' is used, which he said refers "to the position that human existence includes unique characteristics, such as self-reflection, purposefulness, language, and culture" (p. 218).

[2] This refers to doctoral programmes that result in dissertations based on a humanistic methodology.

… under-graduates in general rarely get a good grounding in philosophy and its relationship to alternative methodologies. Even when they do, it is surprising how many students fail to connect this 'theory' to the method which they use later in their own dissertations and practical work (p. 173).

Hoshmand (1989) discussed alternate research paradigms at length. One of the conclusions she came to is that "[t]he inclusion of context and the richness of description offered by these paradigms can be helpful to researchers in developing an overall sense of a project and deciding on appropriate directions of inquiry throughout the process" (p. 37). This finding can guide the researcher in formulating some questions pertaining to the paradigms students are exposed to in particular and how these paradigms are related to research practice. One of the areas of interest in this study will be to explore whether the criticism of traditional views of research and the subsequent development of alternative paradigms (see chapter 2) has been applied in social science research methodology curricula in South African tertiary education. If any inclusion of this issue has taken place, the 'why' and 'how' of the inclusion of alternate designs needs to be investigated (Polkinghorne, 1983).

'Skills taught in courses' is also displayed in a conditional matrix in figure 13.

Types of

Quantitative research

Skills

& methods

(n=113)

observation research

(n=59)

Qualitative research & methods (n=52)
Background to the research process (n=50)
Quantitative data analysis (n=30)
Interviewing (n=25)
Qualitative data analysis (n=21)
Programme evaluation (n=18)
Participatory research (n=17) / **Measurement** (n=17)
Writing skills (n=16)
Intervention research, policy formulation (n=15)
Philosophy of science (n=13)
Data collection & recording (n=12)
Non-reactive research, secondary analysis (n=7)
Sampling (n=6)
Data presentation (n=5)
Interpretation of data (n=3)
Ethics (n=2) **/ Interpreting existing literature** (n=2) **/ Computer literacy** (n=2)

Figure 13 Conditional matrix of the categories of skills taught in research methodology courses

From the figure above it is self-evident that training in quantitative research skills is most prevalent in under-graduate research methodology courses. Observation research is placed next in the matrix, being taught in just more than half the courses when compared to quantitative research skills. Participant observation / field research is a large contributor to this category (see table 7). Terre Blanche and Kelly (1999) used phrases such as "takes place while things are actually happening", "gets you even closer to the action" and "you as the researcher become fully involved in the setting being studied" (p. 134) when describing participant observation. Four possible issues could be linked to the popularity of observation research in under-graduate research methodology courses:

▪ Firstly, lecturers can be questioned about whether the inherent experiential nature of participant observation could possibly be linked to the advocacy of experiential learning in current educational paradigms.

- Secondly, the growing call for the inclusion of alternate methods of research design (see chapter 2) could be an explanation for the popularity of observation research in the courses.

- Thirdly, the nature of participatory methods (emphasising inclusion, collaboration, empowerment) may lend itself to contributing towards the changing political scenario in South Africa, an assumption supported by Letseka (1997).

- Linked to the third issue is the corollary that academics and researchers who have been excluded from training in quantitative methods associated with the white male elite may have found comfort in alternate approaches as described by Bozalek and Sunde (1993/4) in chapter 3.

The above discussion implies that there is an emerging group of researchers who are using participatory methods to align the knowledge base of research methodology with new paradigms within this discipline as well as shifts in thinking about the 'what' and 'how' of the educational context. Being allowed to think critically about these issues, in what Letseka (1997) termed an 'educationally problematic context', may empower both the researcher and the researched.

Skills-training in qualitative research is not much further away in the matrix, but still occurs in fewer than half the number of courses that include quantitative methods. This observation echoes similar findings in the UK, for example. Richardson (1996) reported that post-graduate students engaged in psychological research found that their supervisors were not experienced enough to train them in the use of qualitative methods and some supervisors did not seem to appreciate the role of qualitative methods in psychological research. The students also reported that the use of qualitative methods was not sufficiently covered in their under-graduate courses. A culture of discouraging post-graduate work that makes use of qualitative methods seems to prevail (Richardson, 1996). A lecturer who teaches qualitative geography to under-graduate students admitted that "qualitative methods have presented me with some of the most difficult and seemingly insurmountable problems of my teaching career to date" (Lowe, 1992, p. 171). It seems that students are indoctrinated with statistical techniques that emphasise rigour and statistical significance before they are introduced to qualitative methods that then seem 'inadequate' and 'unscientific' in comparison.

As expected, many courses give attention to skills acquisition in various aspects of the beginning or introductory phase of research. These include statement of a research problem, hypothesis formulation, research designs, literature review and so on (see table 7). Writing skills are taught in 16 courses (this may be related to producing a literature review), although using writing skills to compile a report (included in 10 of these courses) seems more likely.

Intervention research (this also includes developmental research) and participatory research methods are taught in almost an equal number of courses. The former category is mostly included in research courses presented by social work departments, and even though these departments only comprise 11% of the total number of departments that were surveyed, these methods are well represented. What is taught in specific courses is, however, not evident from the data collected up to this point. The popular use of traditional developmental research methods, especially in developing countries has prompted Kondrat

and Juliá (1998) to list many authors who have called for the use of these methods to be supplemented by more participatory approaches and "particularly approaches that involve active participation in the research process by people whose lives will be affected by the findings" (p. 2). Teaching participatory methods seems to be more prevalent in non-social work courses; this could be a trend that the discipline of social work should investigate particularly in the light of South Africa being a developing country. It may be, however, that a course on intervention teaches students that the community should become co-researchers in the process rather than objects of study, a point already made in the 1970s by James G. Kelly, a major contributor to community psychology in the US (Altman, 1986).

Kondrat and Juliá (1998) further demonstrated how implementing participatory action research could enhance people's choice and general well-being. Even though participatory action research is usually associated with changing the balance of power between the researcher and the researched, it can also be used in more ordinary situations such as empowering a community to make changes in the lives of its members, something that was not perceived as being in their capacity before. A participatory approach is well-suited to empowering marginalised and disempowered people (Bhana, 1999). Teaching students to partake in this process is especially relevant in South Africa where groups of people have been oppressed and disempowered on the basis of one or a combination of factors such as race, gender, physical disability and sexual orientation. Using participatory methods, communities can co-research their own needs and find a solution for how these problems can be addressed. Terre Blanche and Durrheim (1999b) summarised this principle well in their assertion that

> [t]he realisation that knowledge-making is in itself a form of intervention has lead to an increasing emphasis on planning and executing research in such a way as to make explicit provision for how the research is to fit into its real-world context (p. 10).

Participatory methods are, however, not without their problems, as academics working from a critical theory perspective, such as Muller (2000), have pointed out. This discussion will be continued in chapter 6.

Data interpretation and presentation skills are not taught in many courses. This means that although both quantitative and qualitative data analysis are represented in 30 and 21 courses respectively, students are not expected to interpret (n=3) or present (n=5) the data in most cases. It may be that data analysis, interpretation and presentation is covered in depth in post-graduate courses. Under-graduate students are given the skills to begin research and to collect and record data, but are not able to process the data beyond this point.

5.2.4   *Suggestions for further points of enquiry*

In this section a summary is provided of the points made in this chapter with regard to issues that should be further explored in interviews with teachers of research methodology. These issues are presented as broad questions based on the results of part one. A semi-structured interview guide needed to be

developed for part two. This interview guide should operationalise the issues in specific questions that can be posed to the constructors of courses. The issues are as follows:

- The format of the introduction of social research to students: how students are introduced to social research is a very important issue as it lays the foundation for perceptions and attitudes that the students may develop about the subject. This can take place through the way in which the research process is presented, for example, as either an architectural blueprint or a more emerging process. Also, it may seem that some of the issues presented above indicate a dichotomy or tension between two opposite paradigms about how to do research, with the potential of a third way, namely mixed methods courses. There may, however, be multiple perspectives about how research courses should be constructed. One of the aims of this study is to describe, interpret and critically examine as many of these perspectives as possible.

- Including a philosophical foundation in research courses: the extent to which students are exposed to paradigmatic stances in the social sciences and are aware of the relationship between theory and method is an issue that needs to be explored. The results of part one indicate that not many courses pay attention to this topic. Lecturers can be asked to give their views on this finding.

- The dominance of quantitative methods and related themes, and the emergence of the teaching of alternate approaches: how curricula are structured and what content is included in a methods course is a further point of enquiry. This issue addresses the questions asked by Lyotard (1984) that were included in chapter 2: "Who decides what knowledge is, and who knows what needs to be decided?" (p. 9). The relationship between current debates in the politics of knowledge production and how they are translated into the curriculum of a course (if at all) needs to be explored.

- Linking methods courses to a substantive discipline: from the results in part one that describe the content of research courses at South African universities, the following question arises: are under-graduate students being trained to be mere technologists when researching the social world or are methods courses linked to substantive disciplines? Some of the names given to methods courses (mentioned earlier in this chapter) provide a clue to the answer of this question. Whether students can make the link between research and the substantive discipline they choose to practice can be explored.

- The extent of the influence of a new paradigm in the South African educational context on methods courses: current policies from government concerning higher education were discussed in chapter 2, but are not directly reflected in the content of the courses. How these policies shape the construction of the curriculum should be investigated.

5.3   Part 2: Academics' beliefs about how research courses should be constructed

In this section the results from the analysis of the interviews are presented. This is preceded by a description of the nine respondents that agreed to be interviewed.

5.3.1   Description of the sample

As described in part two of the methodology chapter, certain departments were selected for the purpose of conducting interviews. Table 8 summarises the various characteristics that were important to the selection and also reflects the sample that was ultimately chosen. As mentioned in the previous chapter, institutions (and provinces) would not be named in order to ensure the anonymity of the respondent and thereby provide confidentiality of specific interview data.

Table 8 Sample selected for interviews

	Type of course offered	Discipline	Institutional mode of instruction	Classification of institution	Type of interview
1	Qualitative	Anthropology	Distance	HAU	Face-to-face
2	Quantitative & qualitative	Human Resources	Residential	HAU	Face-to-face
3	Quantitative & qualitative	Sociology	Residential	HAU	E-interview
4	Qualitative & quantitative	Psychology	Distance	HBU	Face-to-face
5	Qualitative & quantitative	Anthropology	Residential	HBU	E-interview
6	Qualitative & quantitative	Geography	Residential	HAU	E-interview
7	Qualitative & quantitative	Nursing	Distance	HAU	Face-to-face
8	Quantitative	Industrial Psychology	Residential	HAU	E-interview
9	Qualitative & quantitative	Psychology	Residential	HAU	E-interview

Out of the 16 potential participants selected (plus a replacement sample of 10 individuals), nine were prepared to be interviewed face-to-face or returned their e-mailed questionnaires. Five females and four males took part in the study. The majority of interviewees were young or classified themselves as junior staff members; only two people had doctorates at the time of the interviews. The race of the participants was as follows: one black and eight white. It is evident from table 8 that the majority of interviews were conducted with historically advantaged universities. The mode of interviewing for most of the historically black institutions was e-mail due to their location; very few people from HBUs returned the electronic questionnaire despite the researcher's follow-up requests. Also, very few e-interviews were forthcoming from psychology departments. The researcher purposefully excluded any individuals from her own institution as she is intimately involved in all the interdisciplinary research courses presented to under-

graduate social science students and therefore preferred to become familiar with courses at other universities. By the time that had lapsed between the survey of the content of the courses and the interviews with some of the lecturers, many of the courses had changed their focus. In most of these cases the course consisted of content dealing with quantitative topics only. This has changed to the majority of courses presenting mixed methods approaches.

Taylor (1996) highlighted the demands of determining adequate sample size in qualitative research: "As a researcher doing a qualitative study, there is a pressure to carry out in-depth interviews and analysis, and yet still feel the need to have 'enough' cases" (p. 108). Within the time limits of the study, and based on the researcher's judgement that the data was adequate for analysis to commence (in terms of saturation), interviewing was ended. The sample is not ideal based on the requirements stated in chapter 4, but the researcher did attempt to be inclusive of as many of the characteristics discussed as possible.

5.3.2   Reactions to the e-interview and member check

Before the results from the analysis of the interview data are presented a brief discussion follows of the reactions to the e-interview schedule that was sent to respondents and the member check that was performed for the sake of validating the analysis. As the reader will recall in the section on e-interviewing in the previous chapter, the researcher included a question that asked interviewees to reflect on their thoughts when they were answering the questions about content and curriculum development. The researcher's aim was to have some information to aid her in interpreting the data received as it was devoid of non-linguistic cues. Respondents gave answers that were focused on their own interpretation of how questions should be asked in such a situation. Answers to the question 'What was going on in your thoughts when you were answering the previous two questions?' were, for example, "The questions were very general and not at all what was expected", "Whether enough detail was being provided, bearing in mind that the instruction was to 'be brief'", "Feeling that the questions were far too "open ended" for a self-administered questionnaire and would be more appropriate as the introductory questions in an interview-schedule that would enable the researcher to follow up with specific questions". One respondent answered, for instance, "As a researcher the focus was on the question and to give an accurate and realistic response to what was asked". They also wondered about the techniques that would be used to analyse the data and whether a follow-up questionnaire would be received. From their responses it is evident that the interviewees were focused on the technical aspects of the interview such as question formulation and their own viewpoints about research. This method of trying to gauge the respondents' reactions to the questions on a more subconscious level was not successful and thus cannot contribute to the interpretation of the data.

The researcher also re-contacted interviewees and requested them to respond to a document containing the themes that were generated from the data analysis. The member check was also not a success as no feedback was received. Perhaps the time between the interviews and the member check (approximately 10 months) was too lengthy. No comments from interviewees could be included in the themes.

5.3.3   Presentation of results

The section that follows contains the results from the analysis of the interview data. Nine beliefs held by the respondents concerning the construction of under-graduate research methodology curricula are presented from the analysis process that the researcher conducted. The categories are called beliefs because they hold the viewpoints of respondents on how and why the curriculum of their courses came into being. As explained in the previous chapter these are reconstructions based on the interpretations made by the researcher where an attempt was made to fuse horizons.   Although the process is interpretive, the specific characteristics of each case (interview) are excluded from this general report as Kelly (1999) noted that the interpretation "involves examination of the commonalities and differences between the separate cases in the form of situated accounts and writing up of the processes involved without recourse to specific contexts" (p. 416).   Therefore very little reference is made to a specific situation except where it can account for a distinct context within a category. Another reason for limiting 'for context' viewpoints is to protect the anonymity of interviewees, as some statements were so specific that they might lead to the identification of an individual.

The account is written in the present tense to give it a general form as well as in the past tense to indicate some of the historical aspects that have influenced particular curricula.   Some quotations from interviewees have been provided to give a lively form to the interpretation, but will be kept to a minimum so that the themes within categories are developed from the researcher's interpretive account and are not based on the over-use of quotations. The reconstruction is written in the third person as it represents the researcher's perspective of the interview material (Kelly, 1999).

The beliefs are not in any order of importance. The criteria that the researcher developed and used to decide which responses should be included in a specific category are provided under the title of each belief. Direct quotes from the interviewees are italicised. Providing these extensive descriptions of the subjective experiences of the research participants gives a voice to those who construct under-graduate research courses (Willig, 1999).

5.3.3.1   Belief 1: Under-graduate research methodology courses should be constructed by means of consensus

Criteria:
Code [01] (AC) – responses that describe curriculum development as a group activity where discussions take place to reach consensus
Code [02] (AC) – responses that indicate that a person in a position of authority approved the curriculum
Code [03] (FC) – responses that describe majority consensus as marginalising minority viewpoints

The content of this idea is that the persons responsible for the under-graduate research methodology course believe that the curriculum should be constructed by means of consensus. Academics thus meet to converse with each other to reach agreement (or establish commonalities) about what should be included in the course. One interviewee mentioned that the people lecturing the course made a "*wish list*"

of topics, which was then filtered down to twelve topics (one for each week of the semester over which the course is taught). Dialogues are held within disciplines on local, regional, national and/or international levels. Some course constructors, however, although not ignorant about curricula elsewhere, focus only on what is relevant locally.

Main decision-makers are usually colleagues within a department such as course and paper leaders and "*obviously also our head of department*". Heads of departments either give direction to the development of the course or they have the authority to grant final approval of the course. In one case a programme co-ordination committee in the department evaluates the curriculum. Discussions are held on a formal or informal basis. Electronic means are also used to collect information. As an interviewee explained: "*These days it's so easy to go on the Internet and look for one university in the United States and see how they do their thing*". When a group of academics working in an institution have to consult all the departments of a particular discipline on various campuses, electronic communication is often used to discuss the content of the course. Feedback from colleagues about the course is processed and used to revise subsequent curricula. Interviewees also used words such as "*workshopped*" or "*brainstormed*" when asked how they developed their course. Academics are thus the main stakeholders that decide what the essential elements are to which students need to be introduced in an under-graduate research course.

When interdisciplinary research modules are developed across departments in faculties, some departments believe that they are marginalised. Although these departments feel that they have a unique contribution to make to the curriculum they are not consulted, and it is often the 'bigger' departments that decide on the content of the curriculum and assume that the content is applicable to all other departments. The way that they deal with their exclusion from interdisciplinary research programmes is by promoting their independent research modules to other departments. Consensus by a majority can thus leave minorities feeling left out of the process.

5.3.3.2   Belief 2: Under-graduate research methodology curricula should be constructed based on the expertise and research experience of academics

Criteria:
Code [04] (AC) – responses that indicate that the persons who construct the course rely on their research expertise and experience to determine the content
Code [05] (FC) – responses that indicate that the lecturer's specific type of expertise or research experience shapes the course content

Once a "*common philosophy*" of what the content should be is agreed on, the various topics are assigned to lecturers, based on their interest and expertise. The lecturers select reading materials, develop the course and lead discussions with students. One respondent justified this approach by saying that "*All the lecturers concerned have good track records of research and had experience of team-teaching together. No need was felt to undertake literature reviews or surveys as the staff felt they knew the skills that students in the discipline needed*". This respondent called this "*a very pragmatic approach*". Academics

also apply their research experience to the content of courses. This experience includes conference attendance where pertinent issues on the national and international research agenda are presented, personal publishing records, working with renowned people in their field, the lecturer's relationship with industry and supervision of post-graduate students where gaps in students' research skills are identified and used to restructure the under-graduate curriculum. In the latter case the construction of the content of under-graduate courses becomes a process of modification and improvement over the years that is based on the skills that students need to acquire for further studies. Lecturers thus believe that many years of experience of working with students qualifies them to develop the curriculum to suit the needs of their students as a very specific audience.

Sometimes a lack of expertise in a certain area results in courses becoming focused on a specific area of research methodology. For example, even though some departments would like students to have a *"balanced"* view of research, they can only present qualitative courses due to the lack of personnel who could teach quantitative methods at a certain level. If a course constructor has a specialised field of expertise in research, he or she focuses the content of the course on this field, for example, psychometrics.

5.3.3.3   Belief 3: Under-graduate research methodology courses should provide students with only a basic introduction to research versus students acquiring research skills

Criteria:

Code [06] (AC) – responses that describe the curriculum as a basic introduction to research

Code [07] (FC) – responses that describe the curriculum as skills training in research

Many of the respondents made it clear that the under-graduate course they teach is only aimed at providing an introduction to research. Students learn useful background knowledge about research that can sometimes be implemented as skills in everyday life situations such as learning from your immediate environment by observing in it, knowing how to introduce yourself when entering situations and critical thinking skills. Some courses intentionally incorporate critical thinking and problem-solving skills in the curriculum, but according to the respondents the majority of courses do not claim to do more than impart knowledge. A few courses have specific outcomes in terms of skills such as enabling students to write a research proposal by the end of the course. The structure of the course is aimed at achieving this. For example "*theory is not taught for the sake of it and all unnecessary technical methodological details have been thrown out*".

5.3.3.4   Belief 4: There are specific philosophies about research that underlie an under-graduate research methodology curriculum

Criteria:

Code [08] (AC) – responses that describe the lecturer's philosophy about research that shapes the way in which the course is developed

Code [09] (AC) – responses that describe the lecturer's philosophy about the inclusion of qualitative and/or quantitative approaches in a course

Code [10] (FC) – responses that reflect the way in which prescribed texts address philosophies about research

The description of philosophies that underlie an under-graduate research methodology curriculum range from beliefs about the nature of research to the inclusion of specific methods such as interviewing and participant observation in anthropological research courses. Some of the beliefs about the nature of research methodology are reflected in the extracts below:

> *"The aim of the course is for students to get a larger picture and appreciate the research process more, to become enthusiastic about research as students see research as abstract. Research is pragmatic, it is how we generate knowledge".*

> *"Wel, my uitgangspunt is navorsing is 'n proses, as jy hom nie logies deurvoer van begin na einde toe nie gaan die navorsingsproses óf onwetenskaplik raak óf jy gaan die ding iewerste verloor so ons het logies begin by wat is navorsing en dan die teorieë wat dit onderlê en die logiese stappe wat dit volg …"*

> *"… ons het besluit jy kan nie inleidende navorsing, fundamentele navorsing vir 'n student leer as jy dit nie vir hom in 'n logiese patroon gee nie as jy hom nie logies deur die hele proses neem nie".*

> *"I realised later that different problems need different methods (also non-empirical)".*

> *"That is the one distinction between anthropology methodology and all the other things because we feel you can only provide good comment and good data by being involved with people on an extended basis kind of thing; and also that's why we feel participant observation is the only way that you can actually do it, because its only once you start participating, and that might only happen after how many years before people feel comfortable with you there; that you do live among the people and you participate in their daily activities that you really get the feel and that you really can generate almost like true data (if that makes sense)".*

Interviewees who teach quantitative methods-only courses do so "*because that is what our students will use if they do research*" and therefore see qualitative methods as unnecessary. Interviewees who teach

mixed qualitative and quantitative courses do not enter into the debate about which one is more important and say that each approach is afforded equal status in their courses. These mixed methods modules are often supplemented by compulsory courses in statistics or psychometrics. One interviewee made the following point about how students experience the two different approaches:

> "*The quantitative module tends to be more familiar to average students than the qualitative because in qualitative you have to grasp many different perspectives and paradigms and delve deeper into the origin of ideas before you start selecting topics and developing questionnaires, whereas the quantitative journey is maybe more known, more familiar to the average student. Students are more familiar with results of quantitative research because feedback from research locally is often in the form of relationships. You hear it on the news in the evening (Markinor research results) and read about it in the papers. Students link case studies and ethnography with therapy or something else; it does not fall under research because research is scientific, statistics*".

Interviewees who teach qualitative-only courses do so *because their philosophy is that "because you deal with people its not just a simple like equation that you do (1 + 1 = 2 kind of thing) because you deal with people and the complexity of that as such"*.

In summary, interviewees have the following diverse beliefs about fundamental aspects of the research methodology curriculum: the course content should reflect that research is logical, a process, a journey, empirical or non-empirical, scientific; that it consists of different methods, is pragmatic, not unnecessarily technical, deals with people, and is only possible by extended involvement with research participants.

Prescribed texts do not always fulfil this view of research:

> "*It [the text] was like the typical introductory text, you know in terms of they learn all these concepts; but all these concepts you walk away I mean, you know these concepts: what do you do with them? I think that's one of the reasons why in our module we integrate, we take a chapter from this, a chapter from that and we take a paragraph here and an article there, and we use all of that to sort of compile the module*".

Few interviewees reported that they use one text for the course; rather a list of readings is provided for students who are also encouraged to find their own material. Students can consult any of the texts as the outcomes of the course are formulated in such a way that narrow, single text-bound definitions are no longer the only way of achieving the aims of the course. In some cases lecturers have written course material or textbooks that are then prescribed to students either due to the structure of the institution (the distance education model of providing learning material to students in remote areas) or due to the expertise of the lecturer in the research field. In cases where lecturers want to incorporate alternative ways of knowing (see belief 5) into research courses, textbooks are very scarce. Although textbooks are being written for the South African context they are still based on mainstream Western perspectives: *"You*

look at a cover of a text, it's very African, but on page two Africa starts to disappear so people often fool us by using these concepts but in reality it's nothing new. Same pudding, different sauce." Thus Western texts (American and European) form the main part of the materials provided to students.

5.3.3.5   Belief 5: Under-graduate research methodology courses should be constructed by means of a critique of tradition

Criteria:

Code [11] (AC) – responses that refer to any shift from traditional (historical) emphases on certain content or structure of research courses

Code [12] (AC) – responses that refer to reasons for shifts from traditional curricula

Code [13] (FC) – responses that describe future curricula that deviate from tradition

Code [14] (FC) – responses that describe how colleagues react to changes in traditional curricula

Code [15] (AC) – responses that describe how the constructor of the course made a personal paradigm shift away from traditional content

Most of the respondents described their training as 'traditional', that is, a narrow definition of what research methodology entails. Many of the research courses that they now teach have, however, been re-developed in the past two or three years to include a broader approach to research. Respondents believe that one of three processes changed their own perspectives on research. Firstly, most respondents reported going through a paradigm shift, which allowed them to become critical of tradition or one-sided perspectives of the research process. In all cases the 'enlightenment' shifted the focus from a quantitative-only (in which they had been trained) to a quantitative and qualitative curriculum. Secondly, some of the respondents believe that disciplines transform when most academics that advocated traditional positions retire from academia thus leaving the discipline open to younger people, in other words, allowing the shift to happen through changes in the composition of academics. Respondents seem to agree that, if their own training was less traditional, if they form a critical mass in a department or if they are critical thinkers themselves, they are able to change the shape and content of the research course without too much resistance. Thirdly, respondents who did not have much exposure to statistics training themselves believe that this allows them to have a broader perspective on what the curriculum of a research course should entail.

One form of critique of tradition points to the limitations of the content of previous courses. The emphasis in new courses has shifted from focusing only on topics such as data analysis to all parts of the research process in order to train students to become experts in the entire research process. This idea is based on the belief that students need a broad foundation and should not have a narrow view of the research process. For example, students should "*know the difference between empirical and non-empirical research, they should have different options available when doing research*". The rationale for this is that the design of a research project is dependent on the research problem and students should be equipped to choose whatever means are available to solve the problem.

A shift of focus was sometimes further necessitated by overlap with other modules, especially those with statistical content. Other departments thus became stakeholders in the process of developing a curriculum by virtue of the delimitation of certain content to a specific discipline. Feedback from students in terms of dissatisfaction with the duplication of the curriculum in different modules (for example statistics and research methodology) was another contributing factor. According to the interviewees, communicating with the international scientific community, building research capacity and expertise and avoiding mistakes of the past (being driven by political ideologies) are also essential if we want to retain an international standard. These activities will lead to academic freedom as alternative approaches will be acknowledged and accepted.

Although most of the courses' content was decided through a process of consensual dialogue as reported in belief one, the critique of tradition is not well-received by all academics. In one case a respondent stated that changing the focus of the course content was mostly a solo process as the new content is viewed as revolutionary in his department. Possible conflict with colleagues about changing the focus existed, as the initial designers were proponents of a quantitative data analysis-focused curriculum and everyone did not sanction the shift to a more inclusive and alternative approach. Once again, however, the approval of an authority figure, the head of department, was sought to finalise the course content. The respondent reported that subsequently some of the 'hard-line' advocates of a quantitative-only curriculum had themselves made a paradigm shift and were considering different approaches in their own research careers.

Another form of critique involves the changes made in the substantive discipline itself. In moving from a 'volkekunde' (anthropology) to a 'antropologie' (social anthropology) approach[3] in the under-graduate research methodology curriculum, research topics such as narrative ethnography and focus group discussions become relevant to the curriculum. This was possible while retaining the two fundamental aspects to anthropological research, participant observation and interviewing, in the content. The respondent described the change as follows:

> "*Traditionally white people would enter a setting such as a village and record the different practices of a community using culture as the only measurement to explain events. Often the researcher's own value system would be enforced on the data and some good information would be suppressed. Now narrative ethnography can be used to give your informant the voice instead of only your voice as the researcher regarding what you are recording*".

The future of under-graduate research methodology training as described by some of the respondents does not seem to deviate from imparting knowledge about research. It is characterised by the following:

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[3] This transformation is explained in belief 9.

- possible changes in content: "*Multi-variate statistics (with the aim of model-building) are cutting-edge overseas as it is important to look at the dynamics of the context and test if the model addresses these dynamics*",

- changes in the way that research methodology is structured: "*In the ideal world I would want to see even more integration to the point where labels can start to disappear, where the student comes in and undertakes a journey to become a counsellor or to become a something in the field of psychology where research and other modules become so integrated in the programme that its not a separate entity at all. As I said earlier I think we are moving in that direction because at the end of the day there's still a part of our training that needs to be quantified, students need marks and marks must be given for something specific, but I think we are moving in the potential direction of a more integrated, contextualised programme where students don't have to, say, learn about communities in a chapter, close the book, open a new book and start learning about research, keeping in mind what he said earlier that there's already an encouragement of integrating/integration*"

- changes in topics that are focussed on HIV/AIDS, for example.

The acknowledgement of alternative ways of knowledge creation (e.g. African ways) is also new to research methodology curricula: *"It's wonderful and necessary because at the end of the day the main focus is where does knowledge come from, and if we only focus on one specific paradigm it gives a very one-sided look at how we understand knowledge, behaviour etcetera."* Although he is not in favour of leaving the positivistic paradigm behind, the respondent believes that exposing students to different paradigms will address the need for students to familiarise themselves with different ways of knowledge creation and then individually decide which journey to take, or what school to follow. Modules on the topic of knowledge creation can also support this move away from traditional ways of knowing *per se* where students become aware that research is only one way of observing and creating knowledge.

5.3.3.6 Belief 6: Under-graduate research methodology courses should be constructed to counteract students' negative attitudes

Criteria:

Code [16] (AC) – responses that describe students and lecturers' attitudes towards research methodology courses

Code [17] (AC) – responses that describe how courses can be constructed to influence students' attitudes

Some of the respondents believe that students find research methodology "*difficult*", "*abstract*", "*a punishment*" and "*vreemd*" (foreign) and that the students have pre-conceived ideas about what the subject entails, for example, a lot of statistical content. Furthermore, the belief exists that methodology is new information with strange terminology that needs to be mastered. One interviewee at a distance education institution reported that their department receives many more queries from students about the research course and that research methodology is the one subject that students fail repeatedly. Research methodology has a reputation as a difficult subject and students fail to see its relevance to their current or future professions or even their everyday functioning. Students also cannot use their work experience in a specific discipline to contextualise what they need to learn in the research course. Some

lecturers reported that they are not motivated to teach research methodology and argue amongst themselves about whom this task should be given to. Lecturers who are qualified in research (e.g. they have a research psychology degree) believe that some colleagues are 'forced' into lecturing research methodology without the necessary background, and because of this, students are sometimes given incorrect information.

Not all of the lecturers displayed a negative attitude towards research. One respondent, who views himself as an experienced researcher, connects his own research practices to the way in which research is taught to students and says that "*good teaching and good research are intimately connected, and senior students' need to be introduced to research techniques in an interesting and applied way so that it becomes real and meaningful and not simply an academic exercise*". He believes that research is a practical subject and students enthusiasm and appreciation for research should be awakened by the way the course is taught. Lecturers believe that they should construct a curriculum that is user-friendly so that students' interest in the subject is stimulated. The quotation below illustrates how one respondent's negative experience informs the way he constructs current research courses:

> "*The more purely positivistic quantitative way of thinking and approaching information and information gathering may alienate people in the field of psychology because psychologists - students - are being trained to become counsellors. Psychologists, they delve, explore, go deep, and to a certain extent that is not necessarily in line with what the positivistic paradigm may offer or prescribe. To a certain extent it may bring anxiety in the sense that research is this 'thing' you know, this thing. I remember from my own third year that it is this thing that you need to go through, it is forced onto you. I think that I have made a contribution in this institution in bringing research into the training, into the journey, not this separate thing there at the end of the corridor; that it fits in*".

5.3.3.7   Belief 7: Under-graduate research methodology courses should prepare students for post-graduate research requirements

Criteria:
Code [18] (AC) – responses that indicate that under-graduate research courses are developed with the aim of preparing students for post-graduate studies
Code [19] (AC) – responses that describe beliefs about the practical application of research

This belief is related to the process of supervision of post-graduate students by course constructors of under-graduate research curricula, as mentioned in belief two. Two opposing beliefs were prevalent amongst the interviewees. The first belief is that knowledge of research is not meaningful for the contexts in which a discipline is practised; under-graduate research methodology is only useful to students who continue with post-graduate studies as it forms a basis for the research that students must conduct to attain a post-graduate qualification. Research skills are not seen as fundamental to the discipline, but rather something that can be contracted out to experts such as marketing research companies once the student has become part of a workplace. In one case the under-graduate curriculum was developed to

focus only on quantitative research so that the post-graduate curriculum can deal with only the qualitative aspects that students use to complete their studies. These dissertations use mainly qualitative methods because it is believed that, in relation to quantitative methods, they more closely mirror the rest of the training that students receive in the substantive discipline. The second belief is that all professional persons do some degree of research in the execution of their duties, and thus skills in this field are necessary and integral to success in the workplace. For supervisors to forge and maintain relationships with the industry, post-graduate dissertation topics should focus on the problems faced by industry and try to find a solution. Also, research methodology is seen as a skill that can provide students with extra tools to be able to perform at the level expected from them in the workplace.

What these two viewpoints have in common, however, is that the curriculum has been adjusted from a narrow focus to a broader one so that students receive training in the entire research process in order to feel comfortable when doing research on a post-graduate level. Academics thus believe that they should focus their attention on the needs and requirements of post-graduate qualifications to determine the content of the under-graduate curriculum.

5.3.3.8   Belief 8: Under-graduate research methodology courses should comply with the current educational framework

Criteria:

Code [20] (AC) – responses that refer to the national higher education policy's influence on tertiary education contexts in general and research courses in particular

Code [21] (FC) – responses that describe how research courses are positioned within broader curricula that have been restructured to fit into the national higher education framework

Code [22] (FC) – responses that describe the influence of institutional restructuring on curriculum development

Some respondents believe that the current educational policy in South Africa should be taken seriously. The policy has impacted on the development of the research modules in that the new documentation was studied and principles of outcomes-based education were investigated so that academic programmes could be re-designed to build these principles into the courses. In the process most semester subjects were changed into modules. Two approaches were followed within the new dispensation: lecturers either integrated research components into specific modules or they designed research modules on their own. In some cases research methodology became a core module in certain programmes: "*The course was designed in this way to allow students to have some knowledge even if they had to leave the programme and find employment in any field of research such as field workers, community facilitators etcetera.*" Research modules were also rewritten to comply with policy. Distance education institutions were not as affected by rewriting as their pedagogic format, with some adjustments, usually contained most of what outcomes-based education requires.

Complying with national educational policy is viewed as a top-down approach where academics do not have much choice. A process is set in motion whereby senior members of staff attend meetings (the aim

of the meetings is not always clear) and junior staff have to carry out any decisions made. This can lead to feelings of resentment. As one respondent puts it: "*I think amongst academics there's a certain sense of 'we can function independently, we want to make our own decisions' so I think academics are a bit unhappy about this, the top-down thing happening, but it's always been like that but it seems to be more - how can I put it - enforced on another level almost*". A tension exists between being an independent academic and having to comply with the national education framework.

Although external forces influence the structure of courses, some academics view academia as allowing them a lot of freedom in terms of benefits such as the amount of vacation time, funding for involvement in departmental projects and attendance of international conferences. Nonetheless, the university as an institution is becoming more bureaucratic due to the increase in administrative duties that academic staff are experiencing, such as exercising more control over mark systems, attending many meetings and serving on committees. This creates a tension between the administrative and academic sides of curriculum development and teaching. One respondent believes that this situation originates with the top management of the institution and could also lie in the need to ease the workload of administrative staff.

Research methodology modules have also been reduced, in some cases, due to outcomes-based education and limited resources in terms of personnel. Structuring a programme according to OBE principles results in a proliferation of new modules and, as departments want to include the core modules of a substantive discipline in programmes, research modules are cut. The reduction in space allocated for research has been managed in two ways. Firstly, research has been made an integral part of each module in a substantive discipline. In other words, research methodology does not stand on its own as a module, but forms part of the processes involved in community projects and the like. The second way of managing this problem is by reducing the content of research modules to 'essential' aspects, for example, concentrating on only quantitative methods.

5.3.3.9 Belief 9: Certain economic, social and political contexts influence the construction of under-graduate research methodology curricula[4]

Criteria:

Code [23] (FC) – responses that reflect the influence of economics on research methodology curricula

Code [24] (FC) – responses that reflect social influences on research methodology curricula

Code [25] (FC) – responses that reflect the influence of politics on research methodology curricula

In some cases developers of under-graduate research curricula are sensitive to the needs of their clients, the students. Historically black and white universities alike have to deal with students who come from diverse backgrounds, especially the low socio-economic sector. Academics believe that curriculum development needs to take place within this reality. One respondent at an HBU explained his position as

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[4] Discussing the distinction between research methodology curricula at English and Afrikaans institutions within this belief may suggest ignorance and exclusion of events at historically black universities. As there were very few respondents from HBUs or people who studied at these institutions in this part of the study, it was difficult to include their experiences. The researcher is thus left in the position of relying on literature about the topic for later interpretation.

follows: "*To move into a first class and talk about the positivistic paradigm [is unrealistic as students] don't know what you are talking about to the point when you lecture a first module in statistics you teach students to use their calculators".* The mathematical ability of students also limits the type of content that can be included in courses. Content that requires this ability is often shifted to a post-graduate level. There are thus aspects external to the research curriculum that also need to be dealt with in the research class.

Some clear distinctions were also drawn in the way research methodology has been structured at Afrikaans and English institutions. The curriculum for anthropology, for example, was different at the two types of institutions. Anthropology departments at English universities would seem to focus more on the social aspects of studying people within a broader sense of the context. At Afrikaans universities, people are not necessarily studied according to culture and what is termed 'volksverwant' (an ethnos view). Other factors are not taken into consideration. This is currently viewed as a simplistic way of explaining people's behaviour.   A hidden agenda based on political and religious motivations underlies this methodology, as explained by one respondent. In summary, this agenda seems to play out as follows: white people, usually conservative Afrikaners, would enter into a very traditional village and record the different traditions using culture as the only measurement to explain behaviour. Often the community involved would be functioning on a so-called 'non-Christian' level and the researcher's value system would come into play where he or she could then motivate the community's need for religious conversion. Missionary work was thus done under the guise of ethnographic research.

The type of anthropology taught at English institutions examines broader socio-political factors and was more problem-oriented in thinking. In other words, the formulation of a research question is often based on a problem-oriented background rather than trying to do a straightforward ethnography (explaining a certain group of people's culture according to its cultural position, values and worldview).   A straightforward ethnographic approach also places the researcher outside the context in the role of an outsider. By critiquing tradition (see belief 5) and transforming their curricula to suit this critique, some anthropology departments at Afrikaans institutions have also made adjustments to their research courses. Ways in which this political repositioning of anthropology informs the under-graduate research methodology curriculum is the addition of new methods to the content (such as focus group discussions and narrative ethnography), and changing power relationships between the researcher and the researched (such as also giving the informant a voice when recording or writing down observations).

Another example of the English-Afrikaans split is noted in industrial psychology. Before the 1970s there were two psychology societies, one for English speakers and the other for Afrikaans speakers. These two groups merged in the 1970s but the two camps were still evident and had ideological debates on how to teach psychology. English universities integrated all areas of psychology while Afrikaans universities separated different types of psychology, for example, keeping industrial psychology separate. By attending many psychology conferences one of the respondents noticed that English universities focused on under-graduate training in research methodology so that students built on their knowledge from the beginning of their studies. Afrikaans universities only included research methodology on a post-graduate

level in the form of statistical methods while English institutions were developing a critical mindset in their students from an early stage.   Critical thinking is therefore seen as an added outcome of research courses.

South Africa's social context is also seen as a metaphor that curriculum development should be based on. As one respondent puts it: *"We are confronted every second with diversity in terms of race, culture, politics and history. Why in God's name do we want to stick to one paradigm when it comes to academia and ignore realities?"* Training students in different worldviews is thus equated to the socio-political paradigm shift made in this country from the exclusion of difference (or alternative ways of thinking) to acknowledging the validity of the diverse South African context.

5.4   Conclusion

In this chapter the findings from the research conducted in parts one and two were presented. Part one began with a description of the departments that were contacted for information about their research courses or found on the NRF website. The findings from the first two levels of analysis, done according to Miles and Huberman's (1994) interactive model, were then presented to describe the content of under-graduate research courses. The data were further reduced and displayed in two conditional matrices, based on the work of Strauss and Corbin (1994). These matrices were presented and discussed according to level two of Miles and Huberman's model. Part one was concluded with suggestions for further points of enquiry for part two of the study.

The beginning of part two presented a description of the sample that was drawn from the departments that were included in part one of the study. From the thematic analysis discussed in the previous chapter the researcher identified and discussed nine beliefs held by the interviewees about how and why they constructed their course(s) in a specific way. By following the hermeneutic circle, the researcher was able to interpret meaning from what the interviewees said; the beliefs are therefore a mixture of the participants' viewpoints and the researcher's interpretation of their meaning. As mentioned in the earlier chapter, most qualitative research would bring the project to an end at this point. Research undertaken within a critical paradigm, however, seeks to go beyond this stage. The next chapter therefore provides the final integration of the findings and a critical voice.