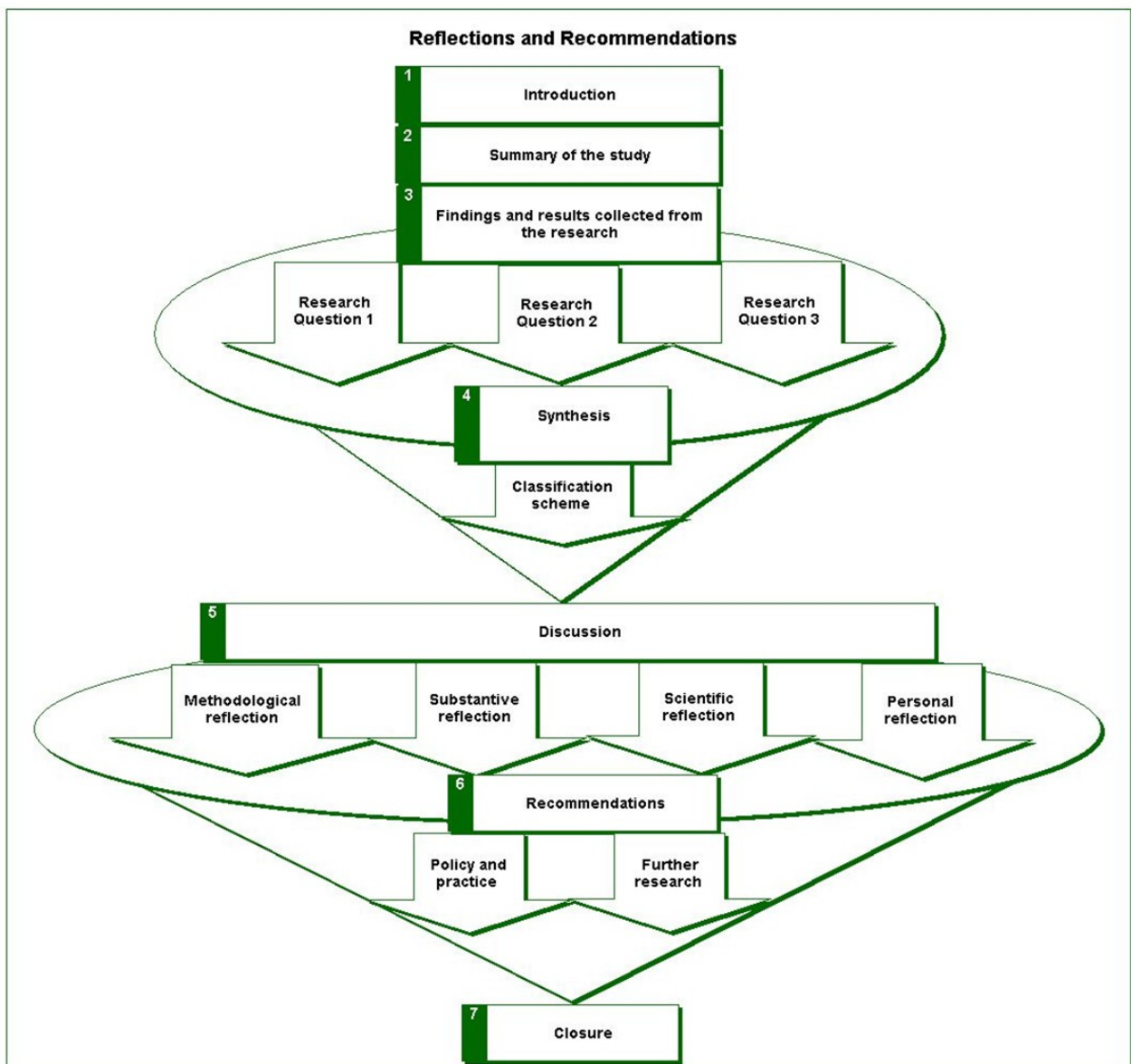


## Chapter 5: Reflections and Recommendations

“You cannot create experience. You must undergo it.” (Camus, n.d.)

The aim of this research was to determine the latent structure of the e-learning practitioner construct. In this chapter the findings of this study will be **interpreted and related to the context** created in the **literature review** (Chapter 2) and the **research methodology** (Chapter 3). Chapter 5 starts with a **summary of the research questions** and the **results for each question**. It discusses the **lessons learnt, presented as methodological, substantive and scientific reflections**. Lastly the chapter focuses on **recommendations** for policy and practice, further research and development. Figure 5.1 provides a synoptic presentation of the **layout structure** of Chapter 5.

Figure 5.1: Synoptic presentation of the layout structure of Chapter 5



## 5.1 Introduction

The historic background for this study presented the path, the roots and the thinking processes of the researcher in her search of the latent structure of the e-learning practitioner construct. The search for the '**story**' of the e-learning practitioner started with a series of research activities that set the stage for the e-learning practitioners' and Partners' stories. These stories are reflected in this study.

## 5.2 Summary of the study

The term 'e-learning practitioner' captures the characteristic profile of teachers/lecturers/instructors who create, use and maintain electronic teaching and learning environments for themselves and their students for pedagogical purposes. These instructors are professional educators and subject matter experts. However, the term suggests a context for the practitioner in which to conduct his/her practice. Therefore studying the e-learning practitioner construct includes a triad of person, job and work environment. The purpose of this study is **to uncover the building blocks and related structure of the e-learning practitioner: e-learning job relationship at TUT.**

Numerous studies and literature reports on the online facilitator (Backroad Connections, 2002; Illinois Online Network, 2003); e-moderator (Salmon, 2003), online mentor (Weston & Amundsen, 1999) and the participative instructor (University of Illinois, 1999; Hoffmann, 2003), as dimensions of the e-learning practitioner, suggest a need for understanding and clarifying the multifaceted nature of the e-learning practitioner. The rationale for this study stems from **various calls for research to identify and determine the nature of the characteristics of online teachers**, or in my terminology, e-learning practitioners (Kearsley, 1998; Burke, 1999; Rice, 2003; Korthagen, 2004). Behind these calls is the notion that if the different and multiple characteristics of the e-learning practitioner are valued, it may provide frameworks for the planning of interventions to enhance the productivity of e-learning practitioners and to guide the customisation of e-learning training programmes.

The framework for this study outlined in **Chapter 1**, presented the **approach, scope and context of the study** and a summary of the **research design and activities. Ethical considerations** and the value of the research were also discussed. A detailed account of the practical context of the study was given, highlighting the features of the P@W Programme and the supportive structures for e-learning practitioners at TUT. TUT reacted to e-learning challenges both strategically, by implementing the Strategic Technology Plan, and operationally, by implementing the capacity building P@W Programme, but failed to address the crucial question: "What is the nature of the phenomenon that needs to be supported?"

The **literature** states the importance of the special characteristics needed by e-learning practitioners to successfully practise e-learning (Kearsley, 1998; Gunn, 2001; Palloff & Pratt, 2001b; Salmon, 2003), but no evidence of e-learning training programmes accommodating the diversity of e-learning trainees in terms of their different person attributes could be found. Furthermore, no evidence could be found of screening or assessment procedures applied to identify the personal characteristics of these trainees prior to implementing the training programme. This implies that interventions through e-learning training programmes that do not take these very important human aspects into account firstly may fail to deliver successfully and secondly may lack the flexibility to identify specific niche areas, based on personal profiles to accommodate these e-learning practitioners.

In **Chapter 2** the main theme areas for this study, namely e-learning, e-learning practice, e-learning practitioners and person-job (P-J) fit were studied, and relevant issues and controversies were debated. The literature review process aims at finding research evidence to answer research questions, and the literature review product aims at the synthesis of the evidence into a benchmark for comparing existing research findings with the findings of this study. The literature was reviewed in respect of each of the research questions in this study and focused on studying **e-learning practice** to gain insight into the job of the e-learning practitioner (**research question 2**), and on studying the **e-learning practitioner** to gain insight into the characteristics of the person doing this job (**research question 1**), and concluded with the focus on the relationship between the person and the job in terms of **goodness of fit (research question 3)**. These topics were explored from various angles, including conceptualisations, issues and challenges in the respective fields, theoretical foundations and research initiatives, policies and current trends in the research fields. However, the literature review did not provide evidence to answer the research question adequately and therefore to answer the research question it was necessary to conduct a case study at TUT. To determine the latent structure of the e-learning practitioner construct, a holistic approach was needed.

In applying a **systems theory framework** to an integrated combination of P-J fit and interactionist theories, the researcher aimed to create a theoretical framework for positioning this study and for use as an approach to investigate the research problem and questions. Systems thinking provided the researcher with “a discipline for seeing structures that underlie complex situations, the wholes and relationships that can more readily foster an understanding of complexity” (Patton & McMahon, 1999:141). The **conceptual framework** based on this theoretical framework (see Figure 2.19) displays the relationship between the relevant study concepts and directed the research methodology followed in this study (see Chapter 3).

**Chapter 3** positioned the study in terms of **philosophical and methodological approaches**, outlined the research design considerations and also focused on the quality criteria relevant to this study. To enable me to make informed choices about these aspects, I had to reflect not only on my position as researcher, but also to weigh up different ontological, epistemological and methodological stances. Therefore my choices included a study design within the parameters of the phenomenological-hermeneutic traditions, using interpretive and systems approaches to guide the enquiry. Qualitative inquiry underpinned by system thinking ontological perspectives holds that personality is seen as a living organism and part of a whole (human) system and work behavioural styles are seen as a specific expression of personality within the work context. Unique characteristics of the participants' personalities influence their behaviour in (responses to) different work situations differently because they react differently to different aspects of the same events. Systems thinking promotes our "understanding of the underlying structure responsible for the patterns of behaviour" (Bellinger, 2004). Investigation of the latter is best done in a real-life context and therefore a case study approach was chosen as research strategy.

A **bricolage** of data collection methods and instruments was applied to collect evidence for answering the research questions. Rich and varied sources of data, for example interviews, participant observation, documents and archival records, were tapped during the data collection phase. Data analysis consisted of **quantitative and qualitative analysis**, including both inductive and abductive reasoning. Inductive reasoning was used to search for patterns in the research data. This was complemented by abductive reasoning to generate the best explanation for the set of observations. The credibility of the research was enhanced by adhering to several quality standards, for example auditability and validation (triangulation, crystallisation, analytical induction and tabulations). Several ethical principles were applied to the study to ensure the ethical conduct of practice. A summary of the research design, which was designed as a blueprint for addressing the research questions, is presented in Table 1.3.

The three research subquestions complemented by a number of research goals and subsidiary questions were addressed in **Chapter 4**. This also included a detailed discussion of the results of the data analysis and the research findings. To address the first subquestion, which deals with uncovering the characteristics of e-learning practitioners, **three levels** of Personal Profile Analysis (PPA) were investigated. These levels are embedded contexts that range from the international domain, higher education in terms of the TUT domain, and programme level in terms of the P@W Programme. Distinct profiles for the different groups identified a number of important characteristics and these were discussed accordingly. Profile enrichment included several data sources that gave me insight into the characteristic patterns and relationships that form the structure of the e-learning practitioner subsystem.

The findings for the second subquestion were presented in section 4.4 in Chapter 4, in terms of five e-learning job structures in the e-learning practice subsystem. Knowledge construction through the participation and interpretation of the study participants contributed to the relationship of knower and known in terms of identifying e-learning job characteristics and job structures. These job structures were matched to the findings of the first subquestion in terms of the identified personal profiles. Results of these matching patterns, the relationships between the person and the job, and the 'goodness of fit' were reported in section 4.5. A synthesis of these research findings resulted in a multifaceted answer to the main research question: **What is the latent structure of the e-learning practitioner construct?** which was integrated into a holistic picture of the systemic whole consisting of five possible scenarios. Different lenses were used to take 'snapshots and to illuminate the separate parts (the environment, the e-learning practitioner and the e-learning practice) of the system. Systems thinking was used to tell the story, to identify the characteristics of each subsystem, to draw the graphs and highlight the patterns and their relationships in each subsystem, and to use these building blocks to create the structure of the system (how they fit together). The different parts work together according to a specific plan driven by organising principles towards a specific goal to fulfil a common purpose and this gives meaning to the system. Influences such as time and context affect the system in such a way that any one or a combination of more than one or a combination of all the latent scenarios may emerge as a structure for the system in fulfilling a defined purpose. However, to simplify an understanding of the system, the building blocks of the system and their relationships in the two subsystems are organised into a **classifying scheme** as a way of **expressing the latent structure of the e-learning practitioner construct**. This study proposes the classifying scheme as a visual illustration of the structure and purpose of the e-learning practitioner system (see Figure 4.64).

## 5.3 Findings and results collected from the research

This section draws together the key findings of the research according to each of the three research subquestions, highlighting the implications of these findings.

### 5.3.1 *Research question 1*

**What is the latent structure of the e-learning practitioner construct in terms of person attributes?**

The personal attributes of the e-learning practitioner as discussed in the literature, as well as two levels of PPA of the e-learning practitioner at TUT, were investigated in this study. A literature study was conducted with the purpose of gaining general insight into the construct under investigation and addressing the first research goal, namely to uncover the characteristics

of e-learning practitioners as perceived by authors in the international domain. Apart from professional knowledge and skills, technical, managerial, organisational and time management skills, which are not relevant for this discussion, the literature review identified the following person attributes as important for the e-learning practitioner:

motivated, flexible, mentoring, participative, creative, patient, student support, constant feedback, adaptable, prompt, collaborative, adventurous, listener, understanding, persistent, coping with frustration, understanding language needs, good sense of humour and reflective.

The survey analysis showed the most important characteristics to be motivation and time management, planning and organisational skills, but also listed motivation, creativity and adaptability as the most important person attributes.

These characteristics **differ** from those captured by the PPAs of e-learning practitioners at TUT, listed as Precise, Logical, Accurate, Thorough, Careful, Systematic, Amiable, Dependable, Independent, Assertive, Detailed and Persistent. Independence and accuracy show the highest frequency in the Partner group, whilst the combination of independent activity, mobility and directness characterised the star performers. The most important descriptive characteristics of the e-learning practitioners at TUT show them to be logical, precise and accurate individuals.

In addition to these characteristics the practitioners themselves constructed a list of characteristics that they perceived as important for e-learning practitioners. They listed the following: creative, patience, innovative/new ideas, organised, peoples person, knowledge skills, communication, enthusiasm, dedicated, perseverance, compassionate and persistent. It is important to note here that these responses capture perceptions and not necessarily the reality of actual behaviour. Furthermore, these perceived characteristics differ widely from those selected by the participants in the screening survey and even more distinctly from the actual characteristics of the e-learning practitioners as reported on the PPA forms. Table 4.32 gives a comparison of these findings. It is interesting to note that of the most frequently mentioned characteristics that are perceived as important, creativity and patience display a low frequency on the lists derived from the PPA reports. These perceptions also featured as important influences in the HJA by the e-learning practitioners from TUT.

The results from this PPA only partly reflects the current thinking in the literature on e-learning practitioners. Palloff and Pratt (2001b) are of the opinion that introverted online teachers are more successful than those with charismatic personalities which does not correspond with the TUT choices of "peoples person" as being important. An interesting observation is that the list of e-learning practitioner skills and characteristics synthesised from the literature shows a

remarkable resemblance to a list compiled by teachers who participated in the NCVET project “One size doesn’t fit all: Pedagogy in the online environment” reported by Brennan (2003b:48). They listed the characteristics of a good online teacher as active, communicative, facilitative, adventurous, prepared to “have a go”, knowledgeable about content and medium, possesses a vision for the future, good manager/planner, organised, patient, creative, motivated, positive, emphatic, supportive, prompt, persistent, technically competent, someone who monitors student progress, pedagogical adept, compassionate, perceptive, collaborative, confident, committed to learning, adaptable, someone who doesn’t need sleep and has a good sense of humour. These characteristics correlate partly with the profiles of the TUT star performers.

However, the results from this research study are more complex than suggested by the lists of characteristics in the literature review. A PPA of the e-learning practitioner at TUT and the Partners in the P@W Programme at TUT, aimed not only at identifying the personal characteristics of e-learning practitioners, but also at reporting on comprehensive work behavioural style profiles. I analysed these personal profiles in terms of patterns, relationships and structure to deepen understanding of the construct under investigation. Analysis revealed that the DISC factor distribution for the total population of e-learning practitioners was divided equally between the Influence and Steadiness factors with a frequency of 21 percent each, the lowest frequency in the Dominance (16%) and the highest, namely 42 percent, in the Compliance factor. Therefore it does make sense that characteristics such as logical, precise and accurate, typical of persons with a high Compliance behavioural style will be the most prominent descriptive words for the e-learning practitioners at TUT. An exception is the behavioural styles of the star performer group which were the most prominent in the Dominance factor and evenly distributed in the other factors. This accounts for the star performers being typically described as independent active, mobile and direct.

Based on the previous discussion the basic structure of the e-learning practitioner construct in terms of person attributes as presented by the e-learning practitioners at TUT can be described as consisting of a CSID configuration. It is evident from these findings that there is a **discrepancy between the perceived** importance of behavioural styles with the Dominance factor, **and the reality** of existing TUT e-learning practitioners’ high Compliance style combinations. Judging from evidence produced by the star performer group, it may well be most important to have a high Dominance DISC structure configuration for e-learning practitioners. As the aim of this study is not to investigate job performance or to make value judgements of specific DISC structure configurations, the relationship between work behavioural style and job performance might be an interesting follow-up research study. It is important to remember that although personal attributes stay fairly constant over time, work behavioural styles may show changes and reactions to certain environmental influences. Findings indicate that the structure

of the e-learning practitioner construct in terms of person attributes is not a static structure. As discussed previously, the e-learning person attributes are viewed as a living subsystem of the e-learning practitioner system, displaying certain characteristics, patterns and relationships. They may emerge differently from their latent position depending on a number of influences, for example environmental structuredness.

### **5.3.2      *Research question 2***

#### **What is the latent structure of the e-learning practitioner construct in terms of the work environment context?**

Three levels of job analysis for the position of e-learning practitioner at TUT were investigated. The first area focused on the analysis of important job characteristics identified by a meta-analysis of the literature. Findings resulted in two HJA reports: one for the e-learning practitioner job definition in a structured environment and one for an unstructured working environment. Characteristics pertaining to these job structures involve a variety of challenging activities in which emphasis is placed on achieving results in a logical and factual manner. Ideally the person who is best suited to the role seems to be systematic, precise, careful, shrewd, probing, objective, reserved, serious, self-starting, inquisitive, mobile, active and alert and with a desire to get things done quickly and accurately. Quality, organisation, self-control and an analytical approach are also likely to be important factors in the success of this job. Based on the job requirements for an unstructured environment the job structure displays a CD/SI configuration. For a structured environment the job structure displays a CDS/I configuration and the job requires a person who is forceful, assertive, results orientated and has the ability to work in a steady, thorough, well-organised, logical and systematic manner. The job content is likely to include work that is challenging and requires investigation and research in order to resolve technical or specialist problems.

The second focus area analysed e-learning practice at TUT. Findings pertained to a job definition in an unstructured working environment calling for a person who is inspirational, manipulative and has the drive to achieve. The job is likely to require that definite, measurable results are obtained despite opposition or constraints. There may be pressure to meet deadlines in an environment characterised by unexpected interruptions and a wide variety of problems. Communication and people skills are also important aspects of the job. The person filling this role should be self-starting, competitive, imaginative, direct, influential, persuasive and self-confident. Independence, mobility, activity, pace and authority are also factors that could be important for this position. Based on the job requirements for an unstructured environment at TUT, the job structure displays a DI/CS configuration.



The views of e-learning practitioners from TUT and the Partners from the P@W Programme produced valuable data on how they perceive the job requirements for e-learning practice at TUT, and analysis of their construed HJAs provided me with a theoretical benchmark for e-learning job requirements for an unstructured environment at TUT. The job structure displays a DIC/S configuration, which showed similarities to the DI/CS structure, but added job requirements such as the job holder should also be systematic, precise, careful, shrewd, probing and objective. Although the DIC/S job structure is of a theoretical nature, it combined job requirements from both sides of the structuredness continuum to provide a usable option for e-learning practice at TUT.

The third focus area analysed e-learning practice embedded in the P@W Programme at TUT. Findings resulted in an adapted HJA report for job requirements in a structured working environment. The job is likely to involve concepts, equipment, ideas and problem solving where a sound depth of knowledge and expertise are a strong requirement. Persistence and the ability to see a job through to its conclusion seem to be important to the role, as is security and a structured working environment. Based on the job requirements for a structured environment in the P@W Programme, the job structure displays a SCD/I configuration.

The above-mentioned findings revealed that a high Dominance factor was identified as an important job requirement on all three job levels. The importance of this factor correlates with the degree of environmental structuredness in terms of the degree of environmental virtuality. Autonomy is one of the most important values of virtual organisations (Shin, 2004) and employees are expected to be self-motivated, self-directed and goal-orientated and to get results. Thus employees who value this type of work arrangement are likely to be a better fit for this job.

Choices made by all the groups involved in the construction of the HJA culminated in job requirements that pointed to a high Influence factor. Virtual teams rely heavily on electronic communication and although communication is the life blood of any team it is more important in virtual teams (Cascio, 2000, in Shin, 2004) because it is necessary for effective collaboration and for building trust (Shin, 2004). Electronic communication enables team members to connect across time and space. However, indices from the preliminary taxonomy and job requirements for the Partners in a structured work environment suggest a low Influence factor, bringing values like “working alone; can work in a job that requires little personal contact; preferring things to people, orientated to problem solving, trouble shooting and planning” to the job. Findings thus indicate that variation in the degree of importance of the Steadiness factor correlates with the pace of the environment – the fast pace of the unstructured environment

calls for a low Steadiness factor. This was also proposed by the report based on an analysis of literature. Adhering to an accepted work pattern requires a higher Steadiness factor. Movement of the Compliance factor from above the line to below the line in the different job analyses suggests environments that vary in terms of controlled operation and working independently. These variations are important considerations for a developing job such as e-learning practice at TUT, because flexible approaches to job design may contribute to enhanced P-J fit matches.

As mentioned previously the complexity of the e-learning practitioner job, contextualised in different settings, with a variety of available job roles, provides a kaleidoscope of job opportunities to accommodate different behavioural styles in various combinations. However, according to the above findings it would be safe to argue that two significant patterns, namely a high DI style combination and a high CS style combination, emerged. As discussed in the preceding paragraphs, these two opposite combinations at the ends of a continuum, contextualised in a specific working environment, will interact with the organisation to produce unique job requirements.

Situational job features that influenced practice were identified by the Partners. The lack of infrastructure was identified as the most important job distracter. Empowerment by acquiring new knowledge and skills, and the creative application and implementation of these acquired assets, as well as positive outcomes for their projects in terms of the set criteria, counteracted some of the job distracters. Encouragement and support offered by various groups were frequently mentioned as releasers and motivators.

The basic structure of the e-learning practitioner construct in terms of work environment context consists of **five possible configurations** namely: CD/SI, CDS/I, DI/CS, SCD/I and DIC/S. As discussed previously the e-learning job is a living subsystem of the e-learning practitioner system, displaying certain characteristics, patterns and relationships. Influences such as environmental structuredness and situational contexts may impact on job structure.

The research approach followed in terms of job redesign and job analysis is in line with modern approaches in fast moving organisations, namely to “assign a person to a specific project, and when the project changes the person’s tasks and responsibilities will change accordingly” (Grobler *et al.*, 2004:104). Manipulation of the work environment may also change the job characteristics and structure. Multitasking, a popular approach in many organisations, suggests the worker of the future “will be far more independent and self-directed than today’s” (Grobler *et al.*, 2004:104).

### 5.3.3 *Research question 3*

#### **How do the work environment and person attributes fit together in the structure of the e-learning practitioner construct?**

The main premise of this study is that in the work environment individual personal attributes have no meaning outside the context and that human job characteristics come to life in the relationship with the individual person. (Parts have meaning only in reference to the whole which is greater than the sum of its parts.) This relationship emphasises ongoing change through negative and positive feedback loops.

The PPA results were matched and scored against five different HJA results, according to the provided formula by Thomas International.

Findings pertaining to job requirements for the CD/SI structure suggest that only 32 percent of the TUT population fall within an acceptable range for goodness of fit. Although the Compliance factor is the most prominent factor in the TUT population, the Dominance factor is the least represented which means that if the job requirements call for a stronger Dominance factor presence the majority of the TUT population's behavioural characteristics do not seem to match the requirements of the HJA and would not be a natural fit for the job.

Findings pertaining to job requirements for the CDS/I structure suggest that only 36 percent of the TUT population fall within an acceptable range for goodness of fit. Although the Compliance factors are the most prominent and the Steadiness factors are moderately present in the TUT population, the Dominance factor is the least represented which means that if the job requirements call for a stronger Dominance factor presence the majority of the TUT population's behavioural characteristics do not seem to match the requirements of the HJA and will not be a natural fit for the job.

Findings pertaining to job requirements for the DI/CS structure suggest that the best fit for the job is the high Dominance factor (style combination percentage of 3.6%), whilst other patterns of style combinations between the Dominance and Influence factors show scores between five (style combination percentage of 5.4%) and four (style combination percentage of 19.8%) for goodness of fit. The other combinations (71.8%) do not seem to be in line with the requirements of the HJA.

Findings pertaining to job requirements for the SCD/I structure suggest that the best fit for the job is the high Steadiness factor (style combination percentage of 5.4%), whilst other patterns of style combinations between the Dominance, Steadiness and Compliance factors show a score

of five (style combination percentage of 5.4%) and four (style combination percentage of 26.9%) for goodness of fit. The other combinations (62.8%) do not seem to be in line with the requirements of the HJA.

Findings pertaining to job requirements for the DIC/S structure suggest that the best fit for the job is the high Dominance factor (style combination percentage of 1.8%), whilst other patterns of style combinations between mainly the Dominance, Influence and Compliance factors show scores between five (style combination percentage of 14.4%) and four (style combination percentage of 10.8%) for goodness of fit. The other combinations (73.5%) do not seem to be in line with the requirements of the HJA.

The higher the Steadiness and Compliance factors and the lower the Dominance factor, the more the job structure tends to favour standard operating procedures and a traditional approach, maintaining the status quo. Getting things right, attention to detail, ensuring quality and standards are important factors for these positions. Structure and security are provided by clearly defined job parameters and a predictable stable work environment. The P@W Programme provides a structured work environment, providing security and support for the Partners through a well-defined programme with tangible goals and parameters for job performance. This environment would favour not only the Partners but also the majority of the TUT population. Figure 4.58 shows that all the groups scored the highest for acceptable job compatibility with job structures in structured environments. This correlates well with finding that the Compliance and Steadiness factors are the most prominent factors in the TUT e-learning practitioner group.

The TUT e-learning practitioner group (excluding the star performer group) represents 55 percent of the TUT population but shows a remarkable resemblance to the acceptable job compatibility scores of the TUT population in the CDS/I and SCD/I job DISC structure for structured environments and correlates with the fact that the strongest DISC factor in the TUT population and TUT e-learning practitioner group is the Compliance factor including the highest clusters of style combinations, namely high CS and high SC.

The star performer group representing 23 percent of the TUT population also shows a remarkable resemblance to the acceptable job compatibility scores of the TUT population in the SCD/I job DISC structure for structured environments and correlates with some of the highest clusters of style combinations, namely high CSI and high SC in this group.

Findings indicate that the lowest acceptable job compatibility score of 8 percent was obtained by the Partner group in the DIC/S job structure, and their highest acceptable job compatibility score of 42 percent was obtained in the CDS/I job structure.

The higher the Dominance and the lower the Compliance factors, the more the job tends to favour the accomplishment of results in spite of unfavourable circumstances. Focusing on the e-learning job as a living organism, self-adaptation or self-emergence of functions and structures are relevant (Herrero, 2002). Although most of the e-learning practitioners at TUT were involved in telematic projects for teaching and learning, there were also activities in informal ad hoc projects mostly driven by the particular interested individual. In this way networks of people emerged from different parts of TUT, connected by teaching and learning goals not necessarily described in a job description. Persons displaying these profiles are motivated and inspired by the challenging and dynamic environment and enjoy experimenting with new technologies at a fast pace. This unstructured environment instead of prescribing strict rules and procedures allows for frameworks and directions to guide people on how to act, tolerating innovative thought, creative problem solving and independence to act. The e-learning practitioners at TUT describe the characteristics of the e-learning practitioner in the unstructured work environment as *inter alia* creative, patient, innovative, knowledgeable, perseverant, dedicated, working smarter to make life easier with less work, enthusiastic, affinity for technology, open to change, interested, and open-minded. As pointed out in section 4.1 these characteristics predominantly point to high a Dominance behavioural style, combining elements of the high Compliance and high Influence factors.

The majority of the TUT population does not show great strength in the Dominance factor in their behavioural styles and only 16 percent falls into this category. However, thirty-one percent of star performers has a strong Dominance factor and these behavioural styles generally favour the unstructured work environments, showing the highest acceptable job compatibility (39%) in these job structures. In comparing all the e-learning practitioner groups (see Figure 4.58), it is evident that the star performer group displays the overall highest scores for acceptable job compatibility in the DI/CS, SCD/I and DIC/S job structures.

The theoretical benchmark as perceived by the TUT e-learning practitioner groups (see section 4.2) has basically the same features as the DI/SC job structure created by the expert consensus group, but differs in terms of the Compliance factor which shifted from a low (DI/CS) to a high factor (DIC/S). In comparing this job structure with the personal profiles of the TUT e-learning practitioners to assess acceptable compatibility reveals resemblances to acceptable job compatibility scores for the TUT population as well as for the star performers, but not to the Partner group.

It is interesting to note that both the enriched HJA and the perceived benchmarks for the position of e-learning practitioner show the Dominance factor as being important for the job, but in reality the majority of practitioners' profiles show high Compliance (41%) and Steadiness (23%) factors. They lack strength in the one factor that they themselves perceive as very important for the job. Although the Partners' Compliance (42%) and Influence (25%) factors are the highest of all the groups, their acceptable compatibility with the DIC/S job structure is only 8 percent. The Partners in setting up their job requirements for the position of e-learning practitioner, and influenced by their participation for nearly a year in a structured work environment, also selected a DI/CS job structure (see section 4.4). These choices correspond with the choices of the expert consensus group. The Partner group's acceptable compatibility with the DI/CS job structure was only 25 percent. Furthermore the fact that the majority of the profiles of the group selected by the team from the Department of Telematic Education at TUT as star performers show the highest strength in the Dominance factor may suggest that the Dominance factor is important for the e-learning practitioner. It is also interesting to note that the Dominance factor is the only factor identified as high factor in **all the job structures**. However, the more structured the work environment becomes the less significant this factor seems to be because the environment and not the person drives the initiative – which has important consequences for the e-learning practice in the real world, as will be pointed out later in this discussion.

### 5.3.4 **Synthesis**

To view the systemic whole and to answer the main research question,

**What is the latent structure of the e-learning practitioner construct?**

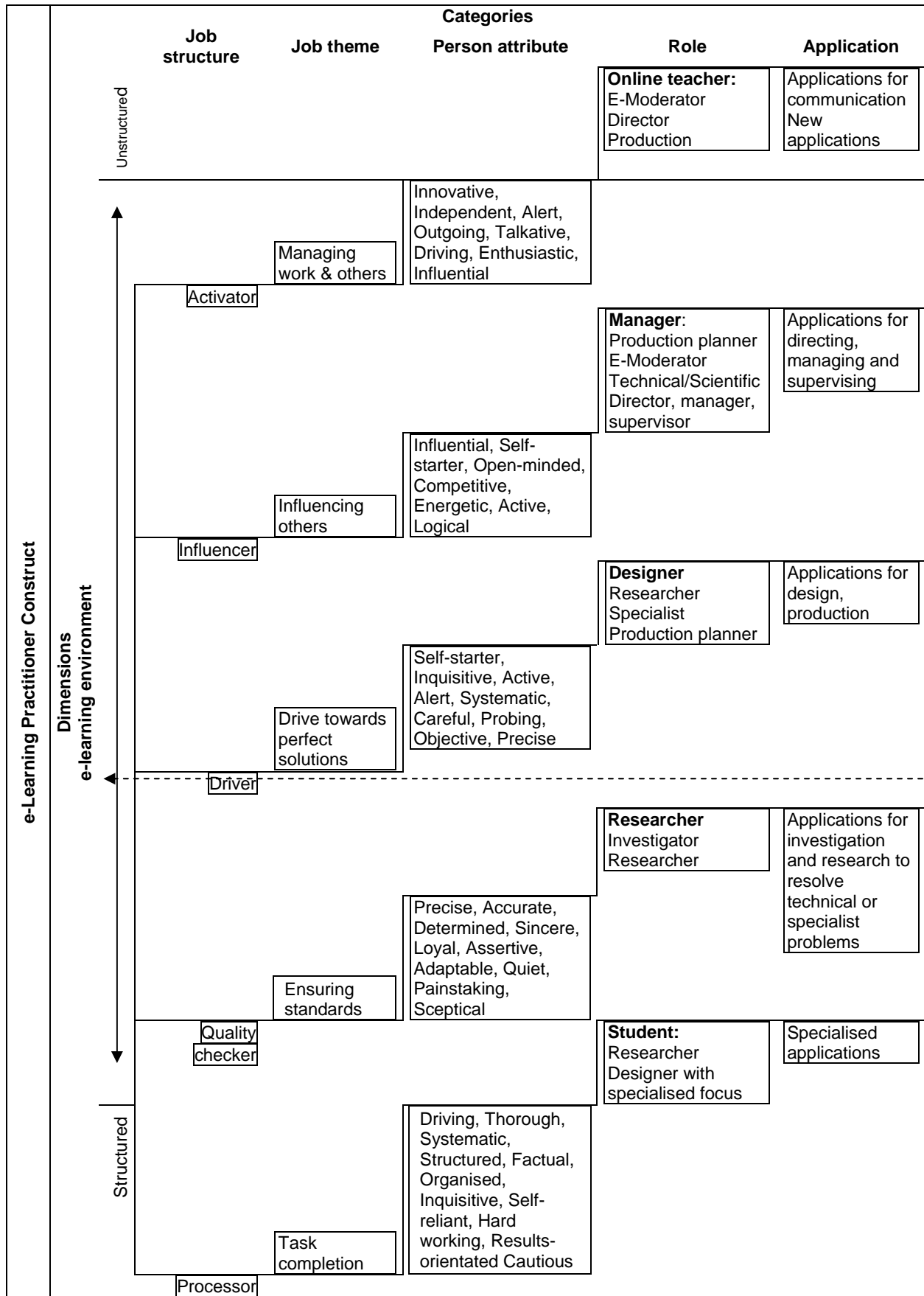
five possible scenarios were described. A combination of inductive and abductive reasoning were used to synthesise meaning from the ***What is...?***, the ***What should be...?*** and the ***What does it mean...?*** in each scenario. These were mapped onto a classification scheme for the e-learning practitioner construct (see diagram in Figure 5.2).

The classification scheme consists of two vertical dimensions that represent the e-learning practice environment. These environments lie on a continuum, blended at midline and becoming increasingly unstructured to more structured at the two poles. Influences impacting on the structuredness of the environment vary in strength and frequency, which implies a dynamic relationship that may from time to time change the interaction between the subsystems in the e-learning practitioner system. The proposed five scenarios are distributed along the continuum according to the job structure's environmental preference, for example the job structure for the Activator/Innovator is listed at the top, because this job structure calls for people who prefer

unstructured work environments that provide opportunities for experimenting with new ideas. Although the Activator and Influencer job structures tend to prefer an unstructured work environment, the Driver may also blend in with a more structured work environment. The Quality checker and Processor prefer the safety of a structured environment.

The scenarios are classified into five categories namely job structure, job theme, person attributes, roles and applications. Each scenario classification presents a different aspect of the e-learning practitioner construct. The main job themes also describe the purpose of each job structure, for example the Influencer being influential, a self-starter, open-minded, competitive and so on will get things done by influencing others to achieve in a variety of situations, or the Processor whose purpose is to 'get on with the job' and to complete tasks. A number of personal characteristics are listed in the person attribute category and were identified as those best suited to complement the job structures to fulfil specific job roles. It is important to note that these allocations are in no way prescriptive but rather present the 'best fit' scenario. For example, e-learning practitioners need training to keep up their practice and also to equip and empower them to cope with challenging jobs, therefore they most probably play the roles of life-long learner and student at some stage in their practice. The Partners in the P@W Programme in particular were outstanding students and those who fitted the profile of Processor were particularly comfortable in this role.

**Figure 5.2: Diagram of the classification scheme for the e-learning practitioner construct**





To conclude this discussion it would be fair to argue that the multifaceted nature of the e-learning practitioner construct cannot easily be summarised in a brief description. The story that emerged from the research findings suggests that the phenomenon under investigation presented itself as a dynamic product of multidirectional feedback with a multidimensional living structure, reacting to ongoing change by self-regulation to maintain stability. Interaction between the e-learning practitioner and the e-learning job is influenced by a number of situational features. Interactionist theory focuses on person-situation interaction on the premise that “trait activation is the process by which individuals express their traits when presented with trait-relevant situational cues” (Tett & Burnett, 2003:502). Application of interactionist theory in this study contributes to an understanding of the influence of situational features such as job demands, distracters and releasers as positive and negative cues for the activation of person attributes in e-learning practitioners, resulting in varying degrees of goodness of fit between the e-learning practitioner and the e-learning job (section 4.4.3.4 in Chapter 4).

Practical interventions may change the leverage point to achieve positive or negative adaptations of the P-J fit. However, the aim of this study was to delve deeper into the structure of the e-learning practitioner construct and not to plan interventions for practical problems. Therefore recommendations for possible interventions and the implications for training and career development will follow in a subsequent section on recommendations for practice.

## **5.4 Discussion**

This section discusses what I learnt from this research in terms of methodological, substantive and scientific lessons learnt. It is a reflective section on the methodological choices made in this study, as well as a commentary on the strengths and limitations of the applied methodology. Substantive reflection refers to the alignment of the research findings with some of the research findings from the literature. This reflective section concludes with a discussion on the research contribution to the scientific body of knowledge and a few personal comments from the researcher.

### **5.4.1 Methodological reflection**

Justification for the methodological choices made for this study were discussed in Chapter 3, however, as highlighted in Chapter 1, the historical background of this study had a profound influence on methodological choices made. The unfolding of the initial research project presented me with a number of tough choices to make, for example the initial research design included an online survey as data collection method and a taxometric data analysis to determine what taxonomic features were present. The results of this investigation would have provided me with the participants’ perceived image of the characteristics of e-learning practitioners, which would have been compared to a real-life situation in terms of the profiles

from the Partners in the P@W Programme. As explained in Chapter 1, the pilot study exposed this methodology as risky and therefore this route was discarded. Another pitfall may have been the use of positivist approaches for data analysis, for example factor or taxometric analysis that may be too limiting in their applications.

The title of this study implies more than merely a statistical analysis of the construct under investigation. Three important issues relate, firstly the study focus in terms of the **scope**. A too wide, undefined focus may result in a general taxonomy without discriminative features for the e-learning practitioner per se. Secondly, although the study proposed to synthesise 'shared meaning' from the online survey participants, there are limitations pertaining to **contextualisation** and **embeddedness** in an **e-learning practice** subsystem. Different thinking paradigms, the lack of a uniform theoretical framework and the diverse perceptions of the participants displayed when describing the construct under investigation may however prove beneficial to the study in terms of the richness of the collected data. Thirdly, the speculative nature of data (not being anchored in real-world situations) could also be a serious limitation to the study. A large sample of participants is crucial to ensure validity and reliability of such contributions by online participants. As this was not envisioned for this study, the focus narrowed to e-learning practitioners at TUT.

Transcribing this into systems thinking means that the two subsystems, e-learning practitioner (person) and e-learning practice (job), and their interacting relationship have no meaning without an environment. However, a mechanical input, process and output approach would also have limited the study. Therefore to compensate for the ontological and language limitations (Patton & McMahon, 1999) inherent to the systems theory approach, interpretive dimensions were added. However systems theory provided an alternative to statistical, taxometric approaches to constructing analysis by emphasising holistic approaches that assume that the whole is more than the sum of the parts of the whole. Both the hermeneutic and systems theory approaches suggest ways to understand textual data; to question, validate and reflect continuously (Mak & Elwyn, 2003) in an attempt to express interpretation of the 'whole'. Multiple text descriptions of their 'lived experience' by the e-learning practitioners were analysed and the hermeneutic cycle played an important role in the understanding of these texts.

The hermeneutic cycle involved reading the texts holistically, projecting meaning onto the texts and then going back to parts of the text to either confirm or reject that meaning. Successful interpretations involved understanding the participants' definition of the situation and therefore the case study was the chosen research strategy for this study. Because it investigates a phenomenon in its real-life context by using multiple sources of evidence (Yin, 1989), sensitivity to subtle meanings and nuances contributed to an enriched story to describe the latent structure

of the e-learning practitioner construct. Qualitative data analysis was very time consuming; the multiple data sources provided large volumes of rich texts that I had to unravel carefully and then reconstruct to ensure validity. Data triangulation and crystallisation were applied to enhance validity in the study.

A strength of this study was the bricolage approach, using mixed methods and a blend of qualitative and quantitative approaches to enrich data analysis.

Qualitative text analysis corroborated with quantitative PPA in terms of self-reported feedback from the participants.

All activities regarding the PPA/HJA data collection, analysis and reporting were done under the supervision of a registered industrial psychologist at TUT:

- The computerised analysis of the data and the computerised generation of the data reports were done by the Thomas International System at the Centre of Continuing Professional Development at TUT.
- Computerised analysis of the HJA was done by a registered as analyst, consultant and employee of Thomas International, Pretoria.
- Consultation services and quality checks were done by the industrial psychologist from the Centre of Continuing Professional Development at TUT, who is also registered as analyst for Thomas International, a registered analyst, consultant and employee of Thomas International, Pretoria as well as two registered analysts, consultants for Thomas International, Cape Town.

Reasons for choosing TI measuring instruments:

- Then PPA and the HJA complement each other to provide the researcher with a **very comprehensive** description of the P-J fit.
- The PPA gives an **accurate description** of the person attributes. The characteristics outlined in the Profile fitted the actual person extremely well.
- The reports given by the System are **person specific** and not merely vague, generic reports automatically generated by a computer.
- They are **validated reliable instruments** with international status.
- The instruments are **customised** for the South African working environment.

I completed a training course at Thomas International (23-24 August 2005), Cape Town and received PPA/HJA accreditation and therefore I acquired the necessary knowledge to understand and interpret PPA and HJA results. It was important for me to understand the

relevant concepts and terminology and to learn the DISC language. Interpretation depends on language.

I did not influence the data that was used in this study. The PPA and the reports were computer generated and done by consultants from Thomas International. The enrichment questionnaire/essay given to the Partners was administered by an objective external facilitator during a specific focus group session on 17 May 2004. The Partners' participation in the P@W Programme involved reflective diaries, blogs, summaries and essays about their experiences as Partners in the programme. These documents were archived at the Department of Telematic Education as part of a documentation process of the P@W Programme. These data sources were not generated for this study, and I did not influence the archival data.

A limitation of this study is that the e-learning practitioner case study at TUT is bound by time and context and therefore cannot be generalised. The small number of participants also affects the overall ability to generalise the results. This study does not include e-learning practitioners from institutions other than TUT; although it described the case as a dynamic reality it does not claim universality.

Informal conversational interviewing between the researcher and each of the e-learning practitioners at TUT took place during the first contact session, where a non-threatening, open-ended question was asked to put the respondent at ease. The conversation was free flowing and no field notes were taken. The fact that field notes were made after the conversations took place might be a weakness in terms of the limitations of the researcher's memory. However, great care was taken to keep quotes as close to the original as possible. Although the open-ended questions created unique response opportunities, they may have limited the responses of those participants who did not feel comfortable expressing themselves in their second or third language.

The instructional designers' involvement in identifying the star performers, as well as the expert consensus group's input into the HJA to develop the job structure for e-learning practice at TUT, contributed to rigor of the research process.

#### **5.4.2 Substantive reflection**

Despite the changing focus from technology to a more humanistic approach to e-learning (Atwell, 2004), I could find very few empirical research results on the subject of the e-learning practitioner as a person in a changing world of work and the literature review revealed a gap in this regard (Kearsley, 1998). The renewed emphasis on human beings as part of the online

teaching and learning process assumes that e-learning practitioners are important role players in the e-learning environment.

However, one of the most important features of individuals in the work environment, namely their person attributes, are not illuminated by research initiatives. Although various authors (Kearsley, 1998; Gunn, 2001; Palloff & Pratt, 2001b; Salmon, 2003) suggest some important person attributes, a lack of empirical research on this subject is evident from the literature. Pratt's research findings on the characteristics of the e-learning practitioner (Palloff & Pratt, 2001b) suggest that introverted people do well online, and that the extroverted person is not so comfortable with the online environment. He is of opinion that because introverted people, in the absence of bodily gestures and cues, are more inclined to reflect on text messages from students, they are better online communicators than extroverted people who rely on personal contact and personality cues for communication. Evidence provided by this study suggests that this might be the case in a structured environment, supported by various support systems such as formal e-learning projects, personal assistance from the Telematic team and so forth. In such cases the focus is on the role of e-moderator or online teaching and not necessarily on the role of project manager. Some of the star performers identified in this study displayed high CS or SC work behavioural styles, which are similar to an introvert communication style. These star performers thrive in a structured, well-supported e-learning environment. However, the findings of this study indicate that the **opposite** was also true.

The star performers in the unstructured e-learning environment displayed the highest percentage of high Dominance work behavioural style, sometimes in combination with a high Influence style. These star performers thrive in a challenging, changing environment with a high degree of virtualness. The most important characteristics of these individuals are independence, drive, enthusiasm and they are influential self-starters. Some of these characteristics may complement those of the extroverted person. Another interesting finding from this study is that the perceptions of the e-learning practitioners at TUT indicated the most important characteristics of e-learning practitioners as *inter alia* creativity, innovativeness and being people's persons. These findings complement observations by Gilly Salmon (2003:54-55) and Kemshal-Bell (2001). Kemshal-Bell's (2001:12) categorisation of the skills and attributes needed by the e-learning practitioner to fulfil the different job roles differentiate three main task areas: technical, facilitation and managerial skills. Some of the important attributes are interpersonal communication, including questioning, listening and feedback skills, relationship building and teamwork, motivation and being influential, a positive disposition, innovative/creative and experimental. These findings concurred with those proposed by the preliminary taxonomy of the characteristics of e-learning practitioners.

Opinions voiced by practitioners themselves were captured by Joy (2004) in a qualitative study on “Instructors Transitioning to Online Education”. Comments on the question: “What personality characteristics are needed for the e-learning practitioner?”, vary from *online teaching is not for everyone; takes a certain type of person to teach online; and matter of style and personality to Key to online is reflection and listening and teacher is receiving, not giving*. However, the opinions mentioned by Joy (2004) are somewhat vague and not very specific on this topic. Perceptions of the characteristics of the e-learning practitioner voiced by the e-learning practitioners at TUT had a tendency to view characteristics such as creativity, patience, innovativeness, organised and as being a people’s person as important.

A scan of the literature revealed just one study on profiling the online teacher using the Myers Briggs inventory (Fuller *et al.*, 2000) and one other study focusing on specific personality characteristics, namely cognitive playfulness, innovativeness and belief of essentialness (Dunn, 2004). Fuller *et al.*’s (2000) study using the Myers-Briggs Type Indicator (MBTI), and Anthony Gregorc’s Transaction Ability Inventory to determine teaching tendencies and styles, concluded that some preferred teaching styles may be more compatible with the dynamics of distance learning formats. They recommend that if the instructor’s preferred style of interaction is known it would be helpful in the e-tivities selection process aimed at meeting both the instructor’s and the learner’s needs (Fuller *et al.*, 2000). This implies a focus on a micro level of e-learning implementation.

This study had a broader focused including a micro level in terms of the personal characteristics of the e-learning practitioner and the job characteristics, a meso level in terms of the P-J fit, involving the person–job–environment triad, and a macro organisational level in terms of proposed practical interventions. According to Attwell (2004), it is important to approach the issues from both the micro, institutional viewpoint and from a macro policy perspective. He is of opinion that “for policy to be effective it requires changes in practice. Equally, effective practice has to be generalised to develop sustainable responses to the challenge of e-learning” (Attwell, 2004:3).

Dunn (2004) found a significant correlation between specific characteristics and the individual’s sustained ability to use technology at a high level in the classroom. These findings complement the findings of this study in terms of the following:

- The characteristics investigated by Dunn (2004) are also prominent in the work behavioural styles of the star performers at TUT in terms of the high Dominance factor present in the star performer group.

- A number of star performers also used different technologies at a high level in their e-learning practice over long periods.

Dunn (2004) also refers to yet another gap in current research on the adoption of innovation, namely the focus on factors affecting immediate change, with few studies referring to enduring or lasting change. However, her study focuses on very specific characteristics and not on personality characteristic profiles or behavioural types, as was the case in this study.

In my view, continuous change in the e-learning environment, sustainability pertaining to e-learning and e-learning practice, professional development and training to cater for the increasing demand for empowered e-learning practitioners are prominent trends and issues that emerged from the literature review on e-learning in higher education (Gunn, 2001; Twigg, 2001; Oliver, 2002; Browne & Jenkins, 2003; Salmon, 2003; Attwell, 2004; Vuorikari, 2004; Nichols & Anderson, 2005; Thompson, 2005). Research on the use of staff development programmes to promote effective teaching are prominent in the literature (Sparks & Loucks-Horsley, 1998; Bennett *et al.*, 1999; Hyde, 2002; Oliver & Dempster, 2002; Meyen & Yang, 2003), with authors repeatedly emphasising that the e-learning practitioner needs empowerment for coping with work demands, which implies a learner role for the practitioner. One of the Partners' roles in the P@W Programme was the role of learner/student. Their feedback on this role points to feelings of confusion and being overwhelmed by the tough programme demands and distracters, but they experienced the group's positive, enthusiastic participation, and perseverance and encouragement as releasers and motivators in the programme.

In spite of a vast number of research studies (Sanders, 2001; Kippen, 2003; Brennan, 2003b:38,58; Illinois Online Network, 2003) done on the importance of recognising diverse learning styles in the teaching and learning process, no evidence could be found on transfer of knowledge to the domain of the e-learning practitioner acting as a learner. I missed studies done explicitly on the learning styles of teachers or for that matter work behavioural styles of these "learners" as part of a holistic approach to professional development or as part of self awareness programmes for e-learning practitioners.

Brennan (2003a:27) identifies a some characteristics important for effective e-learning practice as "technological acumen, active learners, flexibility, high levels of intrinsic motivation, high levels of teacher *goodwill*, problem-based learning, independent learning, adult learning and teaching styles, literacy skills beyond a functional level and persistence". Australian practitioners' responses to a question about the nature of their every day online practices indicated job characteristics such as instructional design, online communication, assessment and e-mentoring (Kemshal-Bell, 2001:36). Experiences from participants in this study

complemented those mentioned by the Australians, but also included video conferencing, and video and multimedia production. It is important to keep in mind that the concept “job characteristics” used for this study focused on the human job in terms of work behaviour styles, which suggests a very specific approach emphasising the relationship between job and personality attributes. Therefore, although the work of those researchers who focused on identifying moderators in the relationship between personality measurement and job performance (Barrick & Mount, 1993; Van der Walt *et al.*, 2002) focused on job performance, their findings in terms of conditions that influence personality expression in the workplace provided me with stimulating food for thought, which crystallised in the application of ideas borrowed from both the interactionist and P-J theories.

Interactionist theories developed in reaction on the trait versus situation debate, recognising that individual behaviour is influenced by both personal traits and situational context (Haaland & Christiansen, 2002). Barrick and Mount (1993) cite various researchers who argue that situational strength, either weak or strong, moderates the relationship between personality characteristics and behaviour. Weak situations are those in which there are few demands to conform to the situation and strong situations are the opposite, where persons are restricted in the range of behaviours to exhibit. Strength and the relevance of the situation to the trait of interest are two distinct situational characteristics useful for understanding how traits relate to patterns of behaviour (Haaland & Christiansen, 2002; Tett & Burnett, 2003). Trait activation theory suggests that “situations activate the expression of traits when they provide trait-relevant cues” (Wilson & Witt, n.d:9) and the trait activation process follows when individuals express their traits when presented with trait-relevant situational cues (Tett & Burnett, 2003:502). The model proposed by Tett and Burnett (2003) was applied in this study and is consistent with person-situation interactionism. A number of ideas are relevant for this study (adapted from Tett & Burnett 2003:501):

- “work behavioural styles allow predictions about future behaviour on the basis of past behaviour;
- personal characteristics are latent potentials residing in the individual; understanding what triggers them is critical for understanding the role of personality in the work place;
- personal characteristic inferences are interpretations of overt behaviour;
- understanding personal characteristic expression calls for consideration of relevant situational features;
- person-job fit can be moderated by certain personal characteristics/job characteristics, and
- the person-situation interactionist model of job performance provides a framework for investigating situational issues in person-job relationships that were studied.”



Shifting the focus to the **process** of person-situation interaction, the model proposed by Tett and Burnett (2003) integrates several relevant assertions, for example traits are expressed in work behaviour as responses to trait-relevant cues; sources of cues can be grouped into task, social and organisational levels and trait-expressive work behaviour is distinct from job performance. This implies that work behaviours suitable for one job may not be ideal for another. The consequence of this assertion in terms of e-learning practice is to know **what** work behaviours are suitable for the job, and secondly to **differentiate** between the different job roles and career paths to optimise and utilise P-J fit to the advantage of the person and the organisation.

Five situational features relevant to personality expression at work are mentioned by Tett and Burnett (2003). From above discussion on interactionist theory and the person-situation interactionist model is the role of situational features in triggering responses is evident. Aiming at an HJA for the e-learning practitioner, this study focused only on three trait activators, namely job demands, distracters and releasers studied as positive and negative influences on P-J interaction. Results from this study identified a lack of infrastructure as the most prominent distracter. Although several innovative measures and alternatives were implemented to counteract this distracter, they were not sufficient to meet the demands and needs of the e-learning environment. As is argued by Atwell (2004) and others, sustainability is one of the key success factors in the implementation of e-learning, and results from this study underlined that programme sustainability without a supportive infrastructure in terms of availability of technology, fast Internet access and adequately equipped classrooms and computer laboratories would be under question. Study results also revealed that the fast pace and huge workload of the P@W Programme and Partners lack of knowledge and skills were experienced as exhausting demands. Empowerment through acquiring new knowledge and skills, the creative application and implementation of these acquired assets, as well as the positive outcomes of their projects in terms of the set criteria, counteracted some of the distracters. Encouragement and support offered by various groups were frequently mentioned as releasers and motivators and that a participative, interactional communication model is vital for this environment.

Although Boonzaier *et al.*, (2001) are of opinion that the Job Characteristic Model (JCM) is the most influential, well-known and widely discussed theory of job redesign, they question some of the postulated relationships proposed in the model. In their conclusion they maintain that future research goals relating to the JCM should be the identification, definition and measurement of appropriate worker and work environment characteristics (person and environment factors) that would account for significant amounts of variance in motivation and satisfaction beyond the influence of the job characteristics and so enhance the predictive validity and practical

usefulness of the model. Their plea and other research initiatives pertaining to the JCM are not relevant for this study, but they did **trigger a process of analogue thinking**, with consequent job redesign implications that will be discussed in subsequent paragraphs.

- Theme focuses evident from the empirical research on the JCM relate to factor structure of the job characteristics and subjective, objective and additional job characteristics (Boonzaier *et al.*, 2001).
- “Subjective ratings of job incumbents can be regarded as a sufficient and valid indicator of the extent of the job characteristics present in their jobs” (Boonzaier *et al.*, 2001:16).
- Energy wasted on frustrating environmental factors, negatively influences the relationships between the job characteristics and work behaviour (Oldham, 1976, in Boonzaier, *et al.*, 2001).
- Depending on the purpose and context, job descriptions may vary from broad to precise descriptions applied in various situations by human resource professionals.
- The success of the organisation depends on its employees (Grobler *et al.*, 2004) and therefore organisations should optimise on workforce benefits such as the behavioural style diversity of the workforce, P-J fit and cultural cohesion (Shelton *et al.*, 2002). This has the implication of recognising the individual’s needs and reinforcing positive motivational influences.
- In the research review conducted by Boonzaier *et al.* (2001:23), the authors conclude by saying that “according to these criteria, three dominant sets of variables constitute the world of work, namely the characteristics of the job, characteristics of the worker and characteristics of the work environment”.

The ideas embodied in the above statements inspired various reasoning and thinking processes. Analogue thinking was applied to link the HJA and the person-situation interactionist model to the JCM resulting in conceptualising an enriched HJA:

- HJA techniques were selected to analyse a job that does not formally exist, the resulting job description provides a broad holistic overview of the job scope characteristics and structure. The aim of the study is not to design a job description for e-learning practitioners, but to explore the job characteristics and their relationships in the job structure.
- The enriched HJA used the HJA technique to identify job characteristics and a factor structure of the e-learning practice.
- Subjective and objective ratings from different sources were used. Various groups of people, for example an expert focus group, specialist groups and e-learning practitioners were asked to participate in the analysis process and to give their subjective opinion on

the job characteristics of e-learning practice. The outcome of these analyses was an enriched HJA.

- Descriptions of trait activators as perceived by job incumbents were used.
- The outcome was presented as a broad narrative job description.
- A PPA was used to identify diverse behavioural styles from the participant group.
- HJA was applied to the results of the PPA to determine P-J fit.

Results from this study revealed that job redesign for e-learning practice resulted in a number of alternative job scenarios catering for a diverse job role distribution and a variety of work behavioural styles from the e-learning practitioners. Current research on e-learning practice seems to overlook the importance of HJA in the world of work. Furthermore, the literature review revealed a gap in the literature regarding formal studies done on the characteristics and profiles of the e-learning job. Therefore I had no benchmark for this study, but argued the case that knowledge of the characteristics of e-learning:

- practitioners and how these characteristics fit together in various **profiles and person attribute structures** may contribute to our understanding of the e-learning practitioner construct;
- practice (the e-learning job) and how these characteristics fit together in various **profiles and job structures** may contribute to our understanding of the e-learning practitioner construct, and
- practitioners and e-learning practice (the job) and how these characteristics fit together in terms of **goodness of fit** may contribute to our understanding of the e-learning practitioner construct in terms of a number of possible P-J fit scenarios.

P-E fit conveys the idea that for “optimal occupational performance employee characteristics must be congruent with the characteristics of the work environment” (Bergh & Theron, 2001:316) and that the degree of congruence will determine the satisfaction of both the employee and the employer.

Perceived fit is the subjective judgement that a person fits well in the environment, whilst actual or **objective fit is the comparison between separately rated person and environmental characteristics**. This is particularly relevant for this study in terms of the fit of PPA and HJA.

Little is known about “**which characteristics of people and environments are crucial for establishing fit**” (Van Vianen, 2001), however. These observations underline the importance of distinct conceptualisation of relevant concepts to ensure accurate operationalisation of the construct under investigation. Clear differentiation of the **fit type** may be useful in these endeavours, for example using *P-J fit type* as the theoretical framework of choice to measure

goodness of fit between the *person characteristics* of the e-learning practitioner and the *characteristics* of the e-learning job. Using customised measuring instruments such as the PPA and the HJA to measure the similarity between the person and the job characteristics.

The most important key issue in person-environment fit is in determining the relevant person and environment characteristics for that particular environment or situation (Shin, 2004:735).

I am of opinion that current research on e-learning and P-E fit in higher education does not provide sufficient answers to questions about the fit between the e-learning practitioner and the e-learning job. It seems that the principle of congruence between the characteristics of person and job, well recognised in the domain of human resource management, has been overlooked in the higher education e-learning domain. Furthermore, the literature review revealed a gap in the literature regarding formal studies done on matching the characteristics of the e-learning practitioner and the e-learning job in the e-learning environment. This study aimed at uncovering the **relationship between the e-learning practitioner and the e-learning practice** and how the **person and the job fitted together in the higher education work environment**.

Research results in this regard revealed that the highest job compatibility score between the different e-learning groups at TUT and the different job requirements presented by the five job structures was only 42 percent, which was obtained by the Partner group matching the CDS/I job structure. The lowest job compatibility score, 8 percent, was also obtained by the Partner group matching the DIC/S job structure. The job compatibility score for all the groups varied between 27 and 39 percent, which clearly indicates a relatively low compatibility. The interaction between a person and his/her job to fulfil a job purpose may be enhanced if the two fit well together. If, however, the person has to do work that requires strengths that he/she does not possess, it may take 30 percent of the available energy for self-motivation and another 20 percent of energy may be wasted in frustration, leaving only 50 percent of the available energy to do the job (Berens, 1999).

This study reported on the interactions between the e-learning practitioners, preferring a specific behavioural style, and their e-learning practice. Suggestions for practical interventions, such as the implementation of support programmes, job redesign and career development that may be applied as leverage points to change the output in terms of strengthened energy, are discussed in the following section on recommendations for practice.

Elaborating on the P-E fit model, Shin (2004) points out that this model

may be useful to P-E fit research in terms of four distinct theoretical implications namely, taking account the different degrees of virtuality; attempting to examine Person-Organisational fit (P-O fit), Person-Group fit (P-G fit), and Person-Job fit (P-J fit) simultaneously; delineating the simultaneous effect of different types of fit and their antecedents and specifying the moderating effect of organisational dispersion on the relationship of the three types of fit and individual outcomes (Shin, 2004:737-738).

Taking cognisance of degrees of virtuality was especially important for positioning e-learning at TUT. Results showed that in the unstructured TUT environment, e-learning practitioners chose the degree of virtuality in their e-learning practice for themselves. Some lectures preferred an e-learning component as enrichment for their traditional classes, whilst others implemented e-learning that spanned time, space, culture and boundaries.

Although this study may have partly addressed Shin's (2004) call for further research on aspects such as degrees of virtuality and the examination of employee qualities that are important for achieving a good fit, it also contributed to the understanding of another dimension not noted by Shin's model, namely that of environmental structuredness. The importance of degrees of structuredness in the virtual teaching and learning environment regarding P-J fit research was illustrated by the research results of this study. Understanding the e-learning practitioner construct clearly calls for recognising the importance of environmental and situational influences. As was revealed in the results of this study, the lack of infrastructure with respect to Internet, classroom and laboratory facilities, slow Internet access and student demands were the most prominent negative stressors on the e-learning practitioners. Positive influences on workload were the availability of new technologies and the support provided by assistants; furthermore nearly all the Partners mentioned the use of new technologies and the application of acquired knowledge as releasers that counteract the constraints. One example of this is the use of local WebCT servers in computer laboratories to cater for the slow Internet access speed; however, these interventions sometimes increased the administrative burden, which then again became a negative stressor.

### **5.4.3 Scientific reflection**

This research has a number of unique contributions to make. Matching the characteristics of the e-learning practitioner and the e-learning job in the e-learning environment to establish goodness of fit, has remained largely unresearched and little is known about "which characteristics of people and environments are crucial for establishing fit" (Van Vianen, 2001). This research has attempted to use a number of lenses to focus the spotlight on this process. In

applying a **systems theory framework** to an integrated combination of **P-J fit** and **interactionist theories**, I aimed to create a theoretical framework to position this study and to use as an approach to investigate the research problem and questions. System thinking offered me a language that could restructure my thinking by providing me with a “discipline for seeing structures that underlie complex situations, the wholes and relationships that can more readily foster an understanding of complexity” (Patton & McMahon, 1999:141).

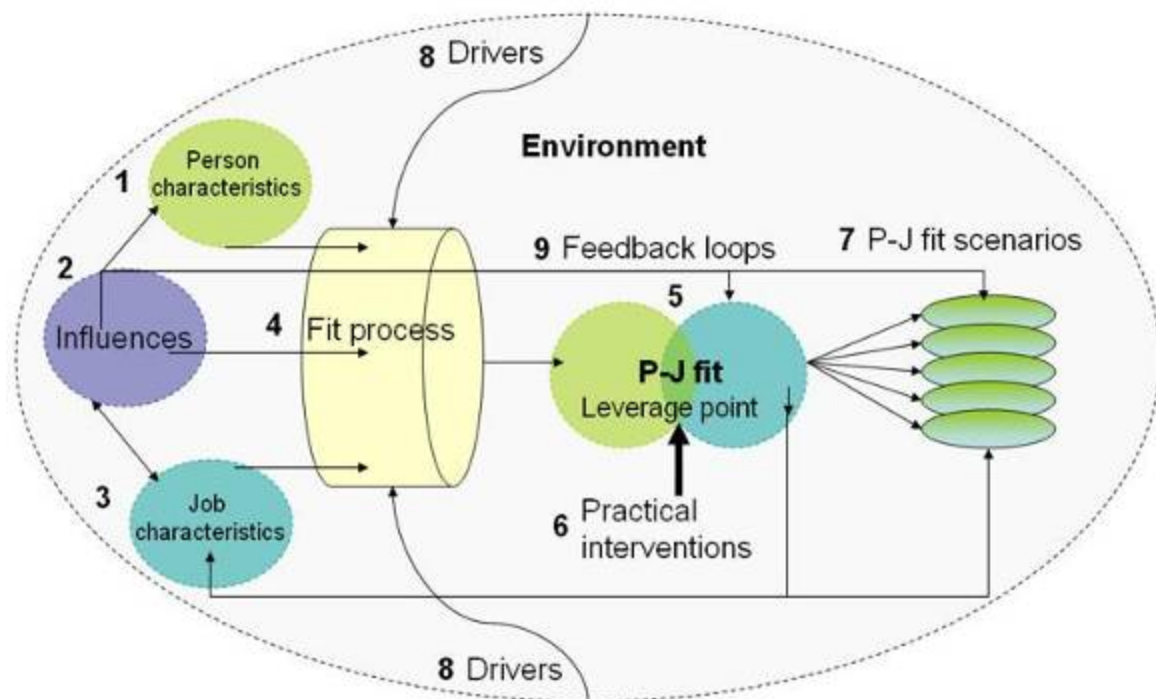
The combination of the languages of systems thinking and DISC complemented each other in my search for the latent structure of the e-learning practitioner construct. Systems thinking contributed to my understanding of the e-learning practitioner construct as a living system, including the two subsystems of e-learning practitioner and e-learning practice within the context of the e-learning and P@W Programme environments in the TUT organisation. Identification of the interactive styles and the movement of the influences within and between the systems is an attempt to give a “snapshot” of the dynamic interaction between the person and the job within the context of the work environment. The main premise is that systems can “best be understood by first examining their functioning in the context of the wider and hierarchical systems that surround them” (Bergh & Theron, 2001:476). Therefore this “snapshot” is an image of the e-learning context at TUT and generalisation to other systems in a different context may not necessarily yield the same results.

Bergh and Theron (2001) cite researchers such as Cattell, Eysenck and Kelly who used different references as examples of structural concepts to describe the personality system’s structure. They refer to personality structure in terms of traits or cognitive constructs and Roger utilised the self-concept of behaviour responses as an integrative structural concept (in Bergh & Theron, 2001:321).

In this study I used work behavioural styles expressed in terms of DISC language to describe a particular aspect of work personality structure. A PPA was used to uncover the person characteristics and work behavioural styles of e-learning practitioners (person subsystem), and the HJA, a personality-orientated job analysis, was applied to identify and describe job characteristics and job structure (job subsystem). To illustrate the relationships between these subsystems nested as dynamic parts of the e-learning practitioner systemic whole, I developed an interactionist model of the e-learning practitioner system (see Figure 5.3). The model illustrates the dynamic interaction between the person and the job subsystems in terms of the person characteristics of the individual (Figure 5.3#1) and the characteristics of the job (Figure 5.3#3) within the e-learning context. These are the inputs into the e-learning practitioner system. Interaction between the subsystems (Figure 5.3#4) led to certain outputs, for example P-J fit (Figure 5.3#5), moderated by environmental influences (Figure 5.3#2) and constantly monitored

by feedback systems (Figure 5.3#9). Environmental changes act as drivers (Figure 5.3#8) in the system, and practical interventions (Figure 5.3#6) such as the implementation of training and support programmes, job redesign and career development may be applied as leverage points to change the output. The output manifests as a number of P-J fit scenarios (Figure 5.3#7). The input-output is illustrated in Figure 5.3 in terms of a dynamic interactionist model of the e-learning practitioner system.

**Figure 5.3: A dynamic interactionist model of the e-learning practitioner system**



I developed this model to provide me with a theoretical framework that I could use as a roadmap to guide my reasoning and thinking processes. The ontological and epistemological positions of this study hold that the only reality is the reality construed by the observer in interaction with the observed. “This perspective is related to that of constructivism, which seeks to gather multiperspectival data in an attempt to glean richer knowledge from many perspectives” (Patton & McMahon, 1999:142). In an attempt to understand the structure of the e-learning practitioner construct, meaning was constructed by applying a matching process between self-knowledge and world-of-work knowledge as perceived by e-learning practitioners within the context of the e-learning work environment. For the pattern of organisation to be visible, it needs to be embodied in a structure that, in living systems, is an ongoing process. “Thus the process criterion is the link between pattern and structure. So system thinking means both contextual thinking and process thinking” (Capra, 1997).

Interaction between the e-learning practitioner and the e-learning job is influenced by a number of situational features. Application of interactionist theory in this study contributes to

understanding the influence of situational features such as job demands, distracters and releasers as positive and negative cues for the activation of person attributes in e-learning practitioners, resulting in varying degrees of congruence between the e-learning practitioner and the e-learning job. Results from this study reveal the stories of the e-learning practitioners in terms of these influences, highlighting a number of them applicable in the various roles that that e-learning practitioners fulfilled. Qualitative analysis of the participants' reflections captured in their bloggers, essays and other textual data revealed how these influences activated personal attributes in terms of their voiced reaction.

The adoption of an integrated theoretical framework based on systems theory, P-J fit and interactionist theory contributed to coherence in this study by providing a comprehensive conceptualisation of the theories and concepts relevant to understanding the e-learning practitioner construct. P-J fit theory offers a general model for measurement of person-job congruence applicable in a variety of contexts, therefore complying with principles of usefulness and simplicity, was the reason for choosing this model. Strengthened and complemented by principles of interactionist and systems theory, this model provided capacity for the building of a conceptual framework for this study. A conceptualisation of e-learning, e-learning practice and the e-learning practitioner, being the building blocks of the structure of the e-learning practitioner construct, attempted not only to clarify these concepts, but also to deepen an understanding of their interrelationships. Systems theory principles offered a broad framework, in terms of input, process and output, for analysing the complex e-learning practitioner system, its constituent parts and the way in which they interact. Principles of the interactionist theory enrich our understanding of these interactions by focusing on situational influences that impact on the process.

The systems thinking principle of nested arrangement of structures, each contained within the next was applied to the organisation of the e-learning environment in terms of international, organisational and programme environment levels and the characteristics of structured and unstructured e-learning environments on all three of these levels contextualised the systemic process of interaction. A graphical presentation (see Figure 3.4) is used to illustrate the relationship between these conceptualisations.

The DISC model was applied to identify and describe person and job attributes from the two subsystems in the e-learning practitioner system. The DISC model focused on work behavioural styles and human job requirements as embodiments of person and job characteristics, and offered an elegant classification scheme that partitioned information on characteristics both of the person and the job and defined the relationships among the pieces. For this reason I chose the DISC approach to classify, analyse and relate information pertaining to the characteristics of



e-learning practitioners and e-learning practice. Operationalisation of these concepts using the PPA, the HJA) and P-J fit measured goodness of fit and resulted in five possible P-J fit scenarios. This thesis suggests that the latent structure of the e-learning practitioner construct can be extracted from these scenarios. Ongoing change and environmental influences may impact differently on each of these scenarios to elicit overt manifestation.

#### **5.4.4      *Personal reflection***

The miracle is not that we do this work, but that we are happy to do it  
(Mother Teresa, n.d.).

This journey taught me to appreciate life and the uniqueness of individuals, to appreciate knowledge as the gateway to understanding and to appreciate interaction with dedicated, dear, wonderful colleagues. This journey was both energising and exhausting, and the fact that the research process took a rather circuitous route instead of a more direct one underlines the very nature of research in that getting to the end point is in itself an accomplishment, but it has been the journey that has made it all worthwhile.

### **5.5          Recommendations**

The following section makes a few recommendations from this study that may be useful from a policy, practical and research point of view.

#### **5.5.1      *Recommendations for policy and practice***

This study provides a classifying scheme for e-learning practitioners that may be used as:

- A planning framework for
  - the selection of new incumbents, as well as for the placement of staff in e-learning positions;
  - staff development programmes to accommodate different work behavioural styles, to allow for and capitalise on the strengths and limitations of these different styles for the e-learning job;
  - the use of scenario techniques to provide 'best-fit' options between e-learning practitioners and e-learning jobs;
  - support programmes for the enhancement of self-awareness, and
  - organisational/institutional interventions in terms of work environment and infrastructure.
- A reflective model to overcome reality with alternatives.
- Scientific knowledge to apply in an e-learning work environment to accommodate the behavioural style differences of practitioners. Line managers and staff developers need

to take cognisance of e-learning practitioner behavioural style patterns acting as pointers to specific person characteristics. Behaviour style variety is a key factor to take into consideration when work- and networked learning groups need to be established. Collaboration, as one of the niche areas of e-learning, offers possibilities not only for the e-learning practice but also for continuous professional development initiatives. Online networking involves a “hybrid of familiar forms of communication” (Salmon, 2003:19), which satisfies a variety of style preferences. Based on the findings from this study it is recommended that the use of open discussions on work style preferences may enhance work group dynamics, interaction and communication and ultimately job satisfaction and job performance.

Assumptions from P-J fit theory applied to this study hold that

- the greater the congruence between the personal characteristics of the e-learning practitioner and job requirements, the greater the likelihood of success and positive outcomes for the e-learning practitioners. P-E fit assumes an environmental context for the fit, therefore the person and job characteristics form a triad with the environment, resulting in interactional relationships;
- identifying the person characteristics of the e-learning practitioner, measuring their congruence with the e-learning practice attributes, to determine their relationship and their goodness of fit, contribute to our understanding of the structure of the e-learning practitioner construct, and
- misfits may result in a number of outcomes: dissatisfaction or ill-health; lead the person to become more self-aware; may provide opportunity for self development; or may prove to be a good match in a different situation.

Although the aim of this study was not to propose interventions to enhance P-J fit, a number of recommendations, based on the scientific knowledge about the latent structure of the e-learning practitioner construct gained through this research journey, will illustrate its practical application. The findings of this study reveal that the average P-J fit score is below 40 percent, therefore to enhance the match between practitioners and their jobs, the following interventions on the strategic as well as the operational level of organisation are recommended.

A number of strategies, such as the Strategic Technology Plan, the Multimode Teaching and Learning Strategy and the P@W Programme, are guiding strategic management of the e-learning initiative at TUT. On a strategic level, TUT experiences the same policy issues as most other organisations in higher education. Major policy areas such as funding, quality assurance, intellectual property, tuition and fees (EduTools, n.d.a-f), link to issues in the organisational/institutional, socio-economic and pedagogic domains (see Chapter 2 for detailed

discussion). This study indicates that these issues were also raised by the e-learning practitioners at TUT as

- lack of infrastructure especially in terms of Internet, classroom and laboratory facilities, slow Internet access and student demands;
- long exhausting hours spent battling to master new technologies, and to acquire the necessary knowledge and skills;
- feelings of confusion and being overwhelmed by tough programme demands and distracters;
- time restraints resulting in feelings of frustration and of being pressurised, and
- demands such as management of students and courses as well as interdepartmental communication.

The above-mentioned issues were experienced by e-learning practitioners as negative influences on P-J congruence, therefore to optimise the environment for e-learning implementation and to enhance programme sustainability, organisations **should not only take cognisance** of the importance of these issues, but strategic managers should also **intervene** in such a way that these influences are minimised in the P-J fit equation. Strategic planners for e-learning should be concerned about crucial aspects for successful implementation of e-learning such as infrastructure, accessibility and bandwidth. Without a supportive infrastructure in terms of availability of technology, fast Internet access and adequately equipped classrooms and computer laboratories, e-learning sustainability will be under question. Visionary strategic planners have the difficult task of weighing the needs of the present and the future complicated by the ever-changing e-learning environment. Debates about hardware and software applications, uncertainty about standards and lack of knowledge amongst policymakers do not alleviate their decision-making tasks. e-Learning as a 'moving target' "is a collection of technologies, products, services and processes – all in a state of constant evolution hurried along by the forces of competition" (Morrison, 2003:21). Adaptation to this rapidly changing environment is crucial for survival, therefore strategic planners should relook at the way they perceive e-learning. Mobile devices such as cellphones and PDAs are becoming extremely popular especially in Third World countries. This means that the m-learning wireless substitutes for the traditional computer network systems might be considered as possible solutions for some of the dilemmas that organisations are faced with. Higher education institutions are investing heavily in e-learning management systems, and the expense of continuous hardware and software upgrades has serious financial implications for these institutions. It is recommended that policymakers should also consider Open Source Software as a possibility for opening **different venues** for educational software. Attwell (2004) points out that open content development entails incentives for shared material, quality assurance and alternative licences to

the traditional copyright and that the use of Creative Common Licence aims at building a layer of responsible copyright by using “private rights to create public goods” (Attwell (2004:41).

Another important intervention that may enhance congruence and equilibrium in the P-J fit triad pertains to development and change. Higher education should strive for the creation of **sustainable work systems** that involve development by “re-generating resources” (Van Eijnatten, 2002:13). I agree with Van Eijnatten (2002) that only a system that is continuously developing itself can be called ‘sustainable’ and that a sustainable work system is one in which the “quality of work (i.e. employees health, well-being and personal development); the quality of the organisation (productivity, efficiency,...) and the quality of connections with the environment (both nature and society ...) are constantly kept at the same levels” (Van Eijnatten (2002:8).

Therefore to contain sustainability, the e-learning practitioner system should strive towards the development of its two subsystems contextualised in the e-learning work environment. This implies, on the one hand, a constant state of movement towards equilibrium and sustainability in the system, while on the other hand, over a period the dynamic movement may also result in a state of instability, calling for new developments and the regeneration of resources. Interaction between the subsystems and the environment make the system “both dynamic and complex” (van Eijnatten, 2002:8).

Policymakers at higher education institutions should take cognisance of the importance of environmental influences in the P-J fit scenario, as this study indicates that the presence or absence of environmental structuredness, support systems and development programmes may impact positively or negatively on the relationship between the e-learning practitioner and the e-learning job. This study indicates that workload and time demands on e-learning practitioners were frequently mentioned as exhausting job demands from e-learning practice. It is widely recognised that institutions need put in place policies and benchmarking procedures to accommodate changing job structures (Attwell, 2004). It is thus recommended that a good starting point might be to develop a formalised job structure for the e-learning job, with options for redesign as proposed by the scenarios outlined in the classification scheme for e-learning practitioners. Serious commitment from organisations to the implementation of e-learning suggests that these organisations would rethink the position of the e-learning practitioner in terms of job description and position.

Job redesign to formalise the e-learning practitioner job and to assign formal job descriptions and job specifications is crucial for the development of e-learning career paths. This study indicates that there are a variety of possible job structures that can be used creatively to suit the needs of both the organisation and the individual practitioner. Reflective approaches from

organisations, supported by both the scientific knowledge, and the scenario options indicated in this study, may contribute to appropriate redesign. This can enable micro-structural adjustments which, and I agree with Van Eijnatten (2002:13), “propose insights into practices that cumulatively allow for sustained innovation by incremental steps to radical change”.

Sustainable e-learning practitioner systems are not only about job redesign and “about learning how to work, but also about learning to know oneself” (Van Eijnatten, 2002:10). This study highlighted the importance of congruence between e-learning practitioners’ work behavioural styles and their jobs’ requirements for compatibility in the work environment. Van Eijnatten (2002:4) quotes Moldaschl (2000) to define “work intensity as a dyadic misfit between situational and personal characteristics”, and that “intensive work systems develop by consuming resources that are generated and provided by the social environment of the work system or organisation”. Therefore to respond to the P-J misfit indicated by the research results, interventions in terms of professional and personal development may act as leverage points to positively influence the subsystem relationship. Interventions such as the development of the e-learning practitioner’s knowledge and skills; self-awareness in terms of personal behavioural style strengths and limitations; and enhancement of personal capabilities may strengthen the matching capabilities of the e-learning practitioner subsystem to accommodate the fast changing e-learning world of work.

Organisational policymakers should re-evaluate the contribution of sustainable work systems in terms of regenerating resources. Promoting the congruence between the e-learning practitioner and the e-learning job may contribute to job satisfaction and general wellness at work. However, regeneration of human resources is only possible when the employee actively takes steps towards renewal, supported by opportunities provided by the organisation or institute.

Organisations also need to look at staff selection policies in terms of the recruitment of new incumbents for e-learning positions or placement of existing staff. As this study indicates, different personal profiles and work behavioural styles require specific job structures to enhance the goodness of P-J fit, and it is therefore indicated that if selection policies cater for these differences, informed choices could guide the recruitment and placement of staff in the e-learning environment. A laissez faire approach, without proper consideration of individual differences, might have negative economic and job performance consequences. If organisations commit to these practices, this will also imply PPA screening of recruits and e-learning practitioners, as well as proper analysis of the specific human job requirements.

Atwell (2004:3) links policy and practice as two major issues in e-learning by stating that: “For policy to be effective it requires changes in practice. Equally effective practice has to be

generalised to develop sustainable responses to the challenge of e-learning.” The above-mentioned recommendations and suggestions may contribute to “effective practice”, but are by no means a comprehensive list, and have only tapped into a few prominent issues.

### **5.5.2 Recommendations for further research**

In my search to uncover the latent structure of the e-learning practitioner, the rich, fast moving e-learning context provided scope for a number of exciting research possibilities. Listed below are a few potential research topics:

- In this study, PPA and HJA measured work behavioural style and human job requirements respectively. Replication of this study using a different set of lenses, for example the Myers Briggs Inventory and the Work Profiling System as measuring instruments, or application on a more comprehensive scale including participants from a variety of e-learning environments, may reveal more building blocks and patterns in the latent structure of the e-learning practitioner construct and could also confirm and verify the findings of this case study.
- Unique combinations of characteristics and personal profiles were displayed by the star performer group, and these findings need verification by means of replication at other higher education institutions.
- Applied research could determine the long-term effects of misfit or low compatibility between the e-learning practitioner and the e-learning job. Current P-J fit research indicates that misfit in the work environment leads to a variety of negative reactions. How would these negative reactions impinge on the e-learning practitioner system? How would they impact on the sustainability of the system?
- Practical interventions aimed as leverage points to enhance the e-learning P-J fit were recommended in the previous section. Further investigation is needed to determine the actual contribution of these interventions in terms of goodness of P-J fit.
- Future researchers may wish to take a practical in-depth look at specific scenarios outlined by the classification scheme for the e-learning practitioner construct.
- Definition of research themes by the European SUSTAIN network (Van Eijnatten 2002:15) highlighted the study of human resources regeneration in work organisations as a “large research task”. They call for more holistic and longitudinal research approaches that include the history of the system based on a methodological paradigm based on Cha-ordic Systems Thinking (Van Eijnatten 2002:7). Cha-ordic Systems Thinking conveys the idea that chaos and order are not opposites in the description of complex, dynamic, non-linear behaviour in organisations.

- Exploration of (a) the dynamic interaction between e-learning team members with diverse work behavioural styles and (b) the characteristics of e-learning work teams may provide useful pointers to guide the composition of effective e-learning work teams.

## **5.6 Final word**

Wachterhauser (1986:22) states that "[o]ur very ability to understand at all comes from our participation in the contexts that make reality meaningful in the first place".