CHAPTER 5: RESEARCH METHODOLOGY

5.1 Chapter overview

The diagram below gives a brief overview of this chapter:

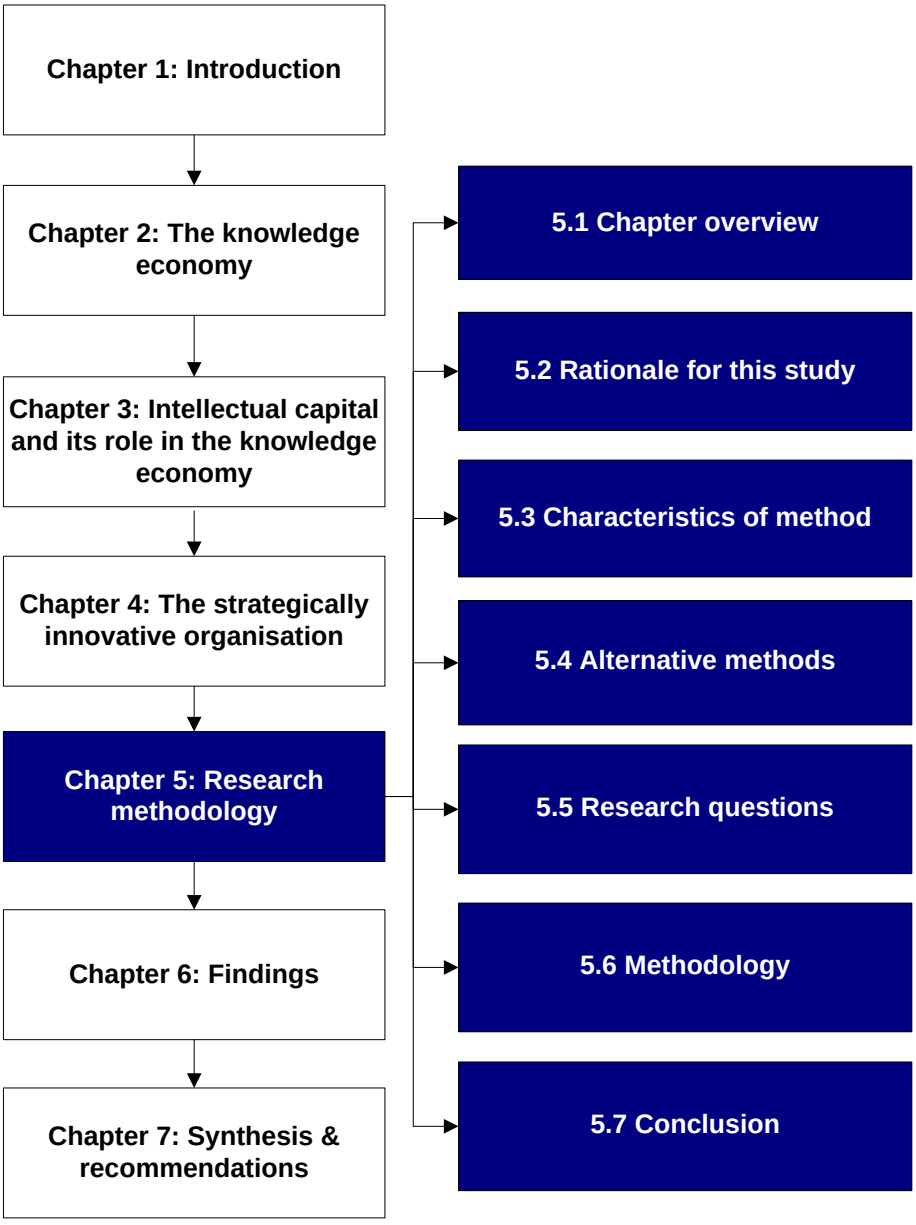

Figure 5.1: Chapter overview

The main aim of this chapter is to explain the methodology followed to conduct this research.

This study attempts to answer the following question pertaining to researching strategically innovative organisations:

To what extent can an instrument be developed to measure and organisation's strategically innovative environment?

To explore how strategically innovative organisations can be measured, literature was analysed pertaining to the knowledge economy, intellectual capital, the corporate curriculum, learning theory as well as strategic innovativeness. From analysing the literature certain variables were identified which were used to develop a Likert-based questionnaire (from now on referred to as instrument) to measure strategic innovativeness. Results from the instrument were then plotted on a four-quadrant matrix (see addendum 5).

The rationale for this study is given in section 5.2. In section 5.3 the characteristics of the selected research method are explained and in table 5.1 the implications of these characteristics for this study are highlighted.

5.2 Rationale for this study

The insurance industry is a multi-billion dollar industry worldwide. In South Africa there are eighty two registered long term insurers, a hundred and six short term insurers and two hundred and twenty friendly societies according to the Professional Provident Society of South Africa (2009).

According to Ferrante-Harris *et.al.* (2003) the global insurance market is in turmoil with market and organisational trends putting huge strain on insurers.

Two years on from Ferrante-Harris's *et.al* revelations about the insurance industry, Earley *et.al.* (2005) notes that insurers are still struggling to meet their ever changing

customer expectations. There is still increased competition in the insurance industry and distribution channels have been restructured. Earley *et.al.* (2005) highlights that this changing environment is putting a lot of pressure on margins and profits. Today this trend continues worldwide with insurance industry watchdogs, new regulations and increased scrutiny by rating agents, forcing insurers to become strategically innovative in order to rapidly bring new products to market in order to stay competitive.

The challenges that the insurance industry faces also have an impact on vendors supplying services to insurance organisations, thus forcing these vendors to become strategically innovative as well, due to the increased competition among them.

The problem facing insurance organisations and vendors is how to create an environment that would promote strategic innovation. By proposing an instrument to measure an organisation's strategically innovative environment this thesis attempts to provide these organisations with a tool to help them to become strategically innovative by evaluating the environments they find themselves in. The results from this instrument, when plotted on a strategic innovation matrix, could give organisations insight into the areas which they need to improve to become strategically innovative.

SDT Financial Software Solutions (Pty) Ltd (from now on referred to as SDT) is the industry leading vendor in evolutionary life administration and delivers advanced solutions for the financial assurance industry. Its cost-effective and highly flexible platforms based on Microsoft technology enable its life assurance customers to effectively create, deliver, administer and manage a full range of financial solutions - including insurance policies, group investment schemes, employee benefits, life assurance and credit life assurance.

SDT is based in Pretoria, South Africa, and has a staff complement of hundred life assurance and information technology specialists. The products delivered by SDT have found favour with demanding life assurance organisations in Southern Africa and beyond. The flexibility, value and advanced functionality of SDT's solutions are

enabling financial services providers in South Africa, Namibia, Zimbabwe, Malawi, Kenya, Swaziland, Lesotho, Ghana, Nigeria and Mauritius to manage the provision of their products to market effectively.

In 2006 SDT listed on Johannesburg's alternative stock exchange for small to medium enterprises, the AltX. This in itself posed many challenges for this information technology company, one of which was how to add value to its growing customer base and shareholders in tough economic conditions.

For SDT's customers to meet the demands of a changing knowledge economy in the life assurance industry in Southern Africa, it is believed that it needed to be strategically innovative as well. One of the challenges for SDT was therefore to understand which factors/variables contribute in creating an environment which would promote its customer base's strategic innovativeness. Analysing and understanding these variables would help SDT to customise its own product offering (which includes training as well), aligning it to specific customer needs. These needs may vary from customer to customer and country to country, based on the customer's specific strategy, the maturity of its business and specific financial legislation imposed by the various countries' financial governing bodies. Understanding which variables contribute to strategic innovativeness would also assist SDT in creating a "stimulating environment" (Harrison & Kessels, 2004:179) for its own staff to work in.

Developing an instrument to measure an organisation's strategically innovative environment was seen as an ideal method to ensure that the researcher and his reporting staff would gain the necessary knowledge and skills in understanding which variables contribute to the strategic innovativeness of SDT and its customers.

According to Boutellier and Gassman (2008) case study research is the most commonly used qualitative research method when researching business and management.

Given the circumstances mentioned above, case study research was therefore seen as the appropriate method to use. It was further established that this research would be explorative and qualitative in nature.

Case study research has certain characteristics. These characteristics are explained in the section below.

5.3 Characteristics of case study research

Mouton (2003) and other authors such as Holliday (2007) describe the aims of qualitative research as follows:

- To understand, rather than to explain
- A naturalistic observation rather than a controlled measurement
- The focus is on implementation rather than on quantifiable outcomes
- A subjective exploration of an insider's perspective rather that of an outsider
- To enhance further improvement and self-determination
- To gain an in-depth understanding of human behaviour and the reasons that drive this behaviour
- To investigates the *why* and *how*

Case studies are characterised by the following as described by Yin (2003), Neale *et al.* (2006) and Boutellier and Gassman (2008):

Table 5.1: Characteristics of case study research

Definition: A (normally) qualitative study based on a small number of cases (less than 50)	
Characteristics	
Description	**Impact on this study**
Design classification (Neale *et al*., 2006).	Empirical, text, low control.
Research questions: Exploratory and descriptive (Yin (2003) & Neale *et al*., 2006).	This study used both exploratory and descriptive questions to develop an instrument to measure strategically innovative organisations.
Typical applications: Case studies of organisations, social work research or political science (Neale et al., 2006).	In this study eight life assurance companies were used as cases to measure their strategic innovativeness and the variables that impact on the strategic innovativeness of these organisations.

Table 5.1: (Cont.)

Description	Impact on this study
Sampling: Theoretical or judgement sampling (Neale et al., 2006).	In this study the researcher together with executive members of SDT used their judgement to determine the sample.
Sources of data: Participant observation, semi-structured interviews, use of documentary sources and other existing data (Neale *et al*., 2006).	For this study interviews were the instrument of choice. In order to ensure reliability and validity these interviews were conducted telephonically with participants. They were then also recorded to enable the researcher to establish validity and reliability. Literature pertaining to the topics at hand were also analysed and reanalysed for crystallisation.
Analysis: Analytical induction or grounded theory approach (Neale *et al*., 2006).	In this study grounded theory was used to develop and apply the instrument.
Advantages	
Description	**Impact on this study**
Provides much more detailed information on the cases than other methods (Neale *et al*., 2006).	Participating organisations provided company data and profiles. This assisted in getting a more detailed understanding of the climate and environment in which they operate. It also helped to understand the challenges they face.
Allows for data presentation from multiple instruments, i.e. surveys, interviews, document review and observation (Neale *et al*., 2006).	For this study telephonic interviews were used to gather data. Literature pertaining to the topics at hand were also analysed and reanalysed for crystallisation.
Describes the real world without influencing or simplifying it (Boutellier & Gassman, 2008).	Eight life assurance organisations in Southern Africa were used as cases for this study.
Theories can be tested on real-life examples (Boutellier & Gassman, 2008).	Eight life assurance organisations in Southern Africa were used as cases for this study.
Limitations	
Description	**Impact on this study**
Can be lengthy (Neale *et al*., 2006).	This study was broken down into different phases in order to provide the information in an easily digested manner.
Lack rigor (Neale *et al*., 2006).	A systematic and multi-model approach to data collection was followed to ensure validity and reliability.
Non representativeness of cases (Boutellier & Gassman, 2008).	Eight life assurance organisations across Southern Africa were used as cases for this study.
Small number of analysed cases (Boutellier & Gassman, 2008).	Different cases were compared to one another as well as different theories were compared to establish a domain where the results could be verified.

(Adapted from: Yin (2003); Neale *et al.* (2006) & Boutellier and Gassman (2008))

In the first column of table 5.1 the characteristics of case study research are summarised with references to the advantages and disadvantages of this method. In the second column the impact these characteristics had on this study is explained.

The advantages and limitations of case study research and the implications on this study are summarised in table 5.1 above.

Case studies are further employed in research to reach different objectives. One of these objectives, according to Yin (2003), has relevance to this study:

- **Descriptive:** These case studies are used to describe an event or process. The main objective is to answer questions such as: How?, why? and what? For this study the process of developing an instrument (see addendum 1) to measure strategic innovation is described.

The Economist (2002, as cited by Boutellier & Gassman, 2008) highlights that the importance of case study research should not be neglected as case studies are used to sell ideas. This study attempts to sell the idea that by integrating elements of the knowledge economy, intellectual capital, the corporate curriculum, learning theory and strategic innovation an instrument can be developed to measure the strategically innovative environment of organisations.

There could have been alternative methods to conducting this study as noted in section 5.4 below.

5.4 Alternative methods

The researcher has identified two alternative methods to conducting this research. These alternative methods are described below:

5.4.1 Participant observation

Mouton (2003:148-150) describes participant observational studies as usually qualitative in nature and providing an in-depth description of a group of people or large community. Although very similar to case studies, observational studies are applied mostly to ethnographic studies of communities or cultures (Ezeh, 2003), in contrast to case study research which is applied to a “smaller” selection/group and is used mostly to study organisations. This study focused on eight life assurance organisations in Southern Africa and for this reason case study research was selected as the appropriate method of conducting this research.

Mouton (2003:148) also indicates that observational studies focus primarily on primary (new) data, in contrast to case studies which focus on hybrid data (i.e. new and existing data). In this study the researcher combined both new and existing data to develop an instrument (see addendum 1) to measure an organisation’s strategically innovative score. In combining both new and existing data to develop the instrument, case study research was used as the chosen methodology.

A limitation of observational studies (as is the case with case study research as well) is that data collection and analysis can be very time consuming. As mentioned earlier, this study was exploratory. Telephonic interviews were conducted on a selection of staff per organisation, which gave the researcher more control over the duration of this study. The researcher further believed that if observation had been the chosen method of data collection and analysis, the group might have been too small for proper analysis through observation. For this reason case study research also seemed to be more suited to this study due to the fact that this study focused on only eight organisations, thereby limiting the time for data collection and analysis.

Another possible method for data collection and analysis for this study could have been to compare the organisations with one another. The next section briefly describes a comparative study.

5.4.2 Comparative studies

Mouton (2003:154-155) notes that the primary focus of a comparative study is to find the similarities and differences between groups, as was also noted by Ragin (1989). The objects of the study could include organisations, countries, cultures and societies. Comparative studies also use hybrid data for data analysis, but a major difference between a comparative study and a case study, according to Mouton (2003:154), is that questions used in comparative studies are descriptive and historical, in contrast to case study research where the questions are exploratory. As this study was exploratory, the researcher chose the case study method to gather and analyse data.

Comparing different organisations to one another might look like the logical choice for determining their strategic innovativeness in terms of their similarities and differences; however, the focus of this study was to explore how strategic innovativeness could be measured by focusing on the organisational environment i.e. learning environment and the role of leadership in creating a strategic innovative environment. Exploring themes in a small group such as the knowledge economy (see chapter 2), intellectual capital (see chapter 3), the corporate curriculum, learning theory and approach to innovation (see chapter 4) gave the researcher an understanding of which variables could promote or inhibit strategic innovativeness.

As described later (see section 5.6), these variables were then applied in an instrument where individuals had to use a Likert-like rating to establish the impact these variables had on the participating organisations' overall strategic innovativeness. The results were then plotted on a four-quadrant matrix (see figure 4.5 and addendum 5) developed for this study to illustrate the overall strategically innovative results across all the participating organisations.

The focus of this study was therefore not to highlight the similarities and differences between the participating organisations, but rather to conduct an exploration to how strategic innovativeness could be measured.

5.5 Research questions

The qualitative method of research was used to gain an understanding of the concepts of knowledge economy, intellectual capital, the corporate curriculum, learning theory and strategically innovative organisations according to rubrics that attempted to address the following issue:

To what extent can an instrument be developed to measure an organisation's strategically innovative environment?

Once these concepts were clearly defined, an instrument to test for their complementary attributes in a strategically innovative environment was developed.

By answering the question above, the following sub questions arise:

- What is the knowledge economy and what impact does it have on a strategically innovative environment?
- What role does intellectual capital play in the strategically innovative environment?
- What is a strategically innovative organisation?
    - Which variables contribute to the creation of a strategically innovative environment?
- How can learning theory contribute to the creation of a strategically innovative environment?
- To what extent can organisations in the life assurance industry in Southern Africa be regarded as strategically innovative?

This study was conducted in a phased approach as discussed later in section 5.6.

5.5.1 Participants in this study

Eight life assurance organisations were selected by the researcher and management of SDT Financial Software Solutions (Pty) Ltd (hereafter referred to as SDT) for this

study. Selecting only eight cases ensured that this project concluded in a reasonable timeframe, thereby not prolonging the process. These organisations were all customers of SDT, a software development company in Pretoria, South Africa. The organisations varied in size and turnover. Some were listed on the JSE Limited. As a prerequisite for participation in this study, the organisations requested to stay anonymous. For this reason these organisations are referred to as organisations 1 to 8 in this study and are described in addendum 4.

In each organisation three staff members were interviewed telephonically. Statements were e-mailed to the participants two weeks prior to the telephonic interview. This gave the participants enough time to prepare for the telephonic interview. To avoid potential bias of the participants, the telephonic interviews were conducted individually and staff at different levels in the organisation was interviewed (i.e. senior management, middle management and general staff member). No additional questions were asked by the researcher. One interview per level was conducted and the staff members were identified by the researcher in collaboration with SDT.

These interviews were recorded to enable the researcher to analyse and reanalyse the data (see addendum 4).

The table below gives a brief overview of the participants in this study:

Table 5.2: Summary of participants

Country	Region	Number of organisations interviewed	Number of interviews	Date of interview
South Africa	Western Cape	1	3	2009/02/13
	Eastern Cape	1	3	2009/02/12-2009/02/13
	Gauteng	2	6	2009/02/14
Namibia	Khomas	1	3	2009/02/12
Lesotho	Maseru district	1	3	2009/02/16
Swaziland	Hhohho	1	3	2009/02/17
Mauritius	Port Louis	1	3	2009/02/18
Total		**8**	**24**	

5.5.2 Data collection methods

A combination of methods was used to collect relevant data. The methods used to collect the data are noted in chapter 1 (see section 1.6.3 and table 1.1). Literature reviews, web pages and participant interviews were used to collect data.

5.6 Methodology

This research was methodologically broken down into three phases. The qualitative research was done by means of contextual analysis (phase I) of current literature on the topic at hand.

In phase II an instrument (addendum 1) was developed, using the data in phase I.

In phase III the instrument was applied to different cases (see addendum 4) and the results plotted on a four quadrant matrix (see addendum 5) that was developed

using the data in phase I and Cronje and Burger's (2006) matrix as a base (see chapter 4, figure 4.3)

These phases are briefly summarised below:

5.6.1 Phase I: Contextual analysis

In this phase of the study the following categories were identified from analysing the literature:

- Knowledge economy (chapter 2)
- Intellectual capital (chapter 3)
- The corporate curriculum and learning theory (chapter 4)
- Strategic innovation (chapter 4)

Material within these categories was then analysed further to identify subcategories on the basis of specific content within the data.
This resulted in the following subcategories being identified:

- Integration
- Similarities
- Gaps

The strength of contextual analysis, as depicted by Mouton (2003), lies in the fact that it is a non-reactive method, which means that errors associated with the interaction between researcher and subjects are avoided. A main limitation of contextual analysis is the authenticity of the data sources (Mouton, 2003). This was overcome by testing the identified categories above for validity by using tools developed by other researchers on this particular topic, i.e. Harrison and Kessels's (2004) corporate curriculum (chapter 4), Cronje and Burger's (2006) initial matrix on learning theory (see figure 4.3) as well as Palmer and Kaplan's (2007) four quadrants on strategic innovation (see figure 4.2).

The output from the contextual analysis (phase I) was the identification of certain variables that promote or inhibit strategic innovation in organisations. These variables are:

- Proficiency
- Personal skilfulness
- Subject matter expertise
- Learning environment
- Complexity
- Leadership
- Approach to innovation
- Communities of knowledge

A further output from phase I was the design of a four-quadrant matrix of strategic innovation (see figure 4.5).

5.6.2 Phase II: Developing the instrument

In phase II an instrument was developed (addendum 1), based on the identified variables from phase I.

The instrument consisted of forty four statements.

Two statements per variable were formulated on the construction axis as well as on the instruction axis of the newly developed strategic innovation matrix (see figure 4.5, chapter 4). These statements were formulated by the researcher based on the characteristics of each axis as explained in tables 4.10 and 4.11 (see chapter 4). For the approach to innovation variable, eight statements per axis were formulated due to the emphasis on strategic innovation in this study. The statements on the construction axis were as follows:

Table 5.3: Statements on the construction axis

Variable	Statement
Proficiency	• In solving problems you are allowed to gain your own understanding (sometimes by "trial and error") first before someone tells you what to do • You are encouraged to experiment when faced with finding solutions to difficult problems in order for you to improve your understanding
Personal skilfulness	• Your past life and working experiences are key to adding value to your current employer • Your organisation values your past experiences
Subject matter expertise	• Your intentions and experience are central in creating and applying new knowledge in your environment • Your environment requires you to be an expert in your field
Learning environment	• You regularly engage in "lessons learnt" sessions to gain new insight into problems • You work in a flexible environment
Complexity	• Your work environment is constantly changing • You adapt easily to change
Leadership	• Your interests are valued in the workplace and are used to solve problems • Your manager is a guide, coach and mentor, without telling you how to do your job
Communities of knowledge	• You are encouraged to work in groups to solve difficult problems • Your work environment encourages socialising with one another
Approach to innovation	• You always start with the end in mind when dealing with complex issues • You are encouraged to challenge the "norm" • Your organisation integrates existing processes with creative new ideas • When facing a difficult problem you are encouraged to seek input from unconventional sources • Your organisation continuously seeks customer delight • Your organisation is inspired by what the consumer wants • Your organisation experiments with entrepreneurial ventures and organisational structures • Your organisation continuously seeks for breakthrough improvements

Various cognitive processes are used by the employee to process information and the manager normally has a facilitative role where he/she encourages group activity. The employees are encouraged to learn from their experiences by probing their environment, sensing what is going on and then acting on their senses, followed by making decisions based on their senses.

The statements in table 5.3 above were used to determine the degree to which the particular organisation lent itself to the serendipitous breakthroughs quadrant (figure 4.5) where innovation takes place in an constructivist environment (addendum 3).

The incremental breakthroughs (see figure 4.5) quadrant is characterised by an errorless approach to innovation. Innovation takes place in an instructivist environment (addendum 3) where the manager has a didactic, instructional function. Employees can be observed closely. Employees sense what is happening around them, they categorise it and then choose the appropriate response. Table 5.4 presents the statements on this axis.

Table 5.4: Statements on the instruction axis

Variable	Statement
Proficiency	• Your business outcomes are repeatable and predictable • Your working environment leaves no room for experimentation. Errors are not tolerated
Personal skilfulness	• You are encouraged to focus on the task at hand • You've got clear cut business objectives to meet
Subject matter expertise	• Your focus must be on "doing" and not necessarily "understanding" • You don't necessarily need to be an expert in your field to be successful in your job
Learning environment	• Tutorials and manuals exist with documented processes to follow • Your working environment is inflexible
Complexity	• You are faced with routine tasks on a daily basis • You are not faced with complex problems on a regular basis
Leadership	• Your manager is the sole provider of knowledge in your environment • Your manager instructs you on what to do and how to do it
Communities of knowledge	• In your environment group work not a priority • It is not a priority to socialise and interact with colleagues

Table 5.4: (Cont.)

Variable	Statement
Approach to innovation	• Your organisation focuses on understanding the present before improving the future • You are expected to follow clear cut rules • Your organisation continually seeks customer approval • You're a technology driven organisation • Your organisation adopts a "one size fits all" organisational model • Your organisation focuses on gradual improvements • Your organisation responds to "known" customer needs • When facing a difficult problem you are encouraged to seek input from obvious sources only

These statements were used to determine the degree to which the particular organisation lent itself to the incremental breakthroughs quadrant (see figure 4.5).

All these statements listed in tables 5.3 and 5.5 were then applied (phase III) in the form of a questionnaire with a Likert scale rating to test the extent to which an organisation could be strategically innovative. The results were plotted on a four-quadrant matrix (see addendum 5).

5.6.3 Phase III: Applying the instrument and plotting the results

In the instrument the evaluator had to rate each statement based on an adapted Likert rating. The following options were available as part of the rating (see addendum 1):

- Strongly disagree
- Disagree
- Agree
- Strongly agree

The reason this adapted Likert-based instrument had only four items was to force a decision, thus resulting in avoiding indecision as pointed out by Sclove (2001). The participants were also asked to provide comments (where applicable) when responding to a statement to ensure reliability.

Only one option per statement was allowed and the scoring for each option was as follows:

- Strongly disagree - 1
- Disagree - 2
- Agree - 3
- Strongly agree – 4

To plot the results per organisation on the matrix, the maximum score per variable was a mark out of eight (four marks per statement). In the case of the approach to innovation variable, the participants were asked to rate their organisation's approach to innovation based on eight statements. The maximum score for this variable was therefore a mark out of thirty two (four marks per statement). The total score for this variable was then divided by thirty two and multiplied by eight to give a total score out of eight (weighted average) for both the construction and instruction axes. Each organisation's result per variable was then plotted on a matrix as depicted in addendum 5.

To calculate the consolidated score per variable (across all eight organisations) all the scores per variable were added up per organisation and then divided by eight to get the average score per variable across all organisations.

5.7 Conclusion

The sections above described the methodology chosen to conduct this research. By applying the instrument to the selected cases the researcher hope to gain an understanding of what role the identified variables from phase I (i.e. proficiency, personal skilfulness, subject matter expertise, complexity, communities of knowledge, the learning environment, leadership and approach to innovation) could play in measuring a strategically innovative environment.

It is believed that the results from the instrument could also indicate which variables scored the highest and the lowest in terms of their contribution to an organisation's strategic innovativeness. The researcher believes that visibility on each variable's

score would assist organisations in identifying which areas they need to improve on in order to improve their strategically innovative environment.

The results from the instrument were plotted on a four-quadrant matrix to illustrate each organisation's strategically innovative results in relation to the four innovation quadrants (see addendum 5 and table 6.2).

This matrix together with the instrument can therefore be used to assess the organisational environment Palmer and Kaplan (2007) refer to.

By combining each organisation's results (see table 6.3) the researcher attempts to determine if life assurance organisations in Southern Africa could be regarded as being strategically innovative.

CHAPTER 6: FINDINGS

6.1 Chapter overview

The diagram below gives a brief overview of this chapter:

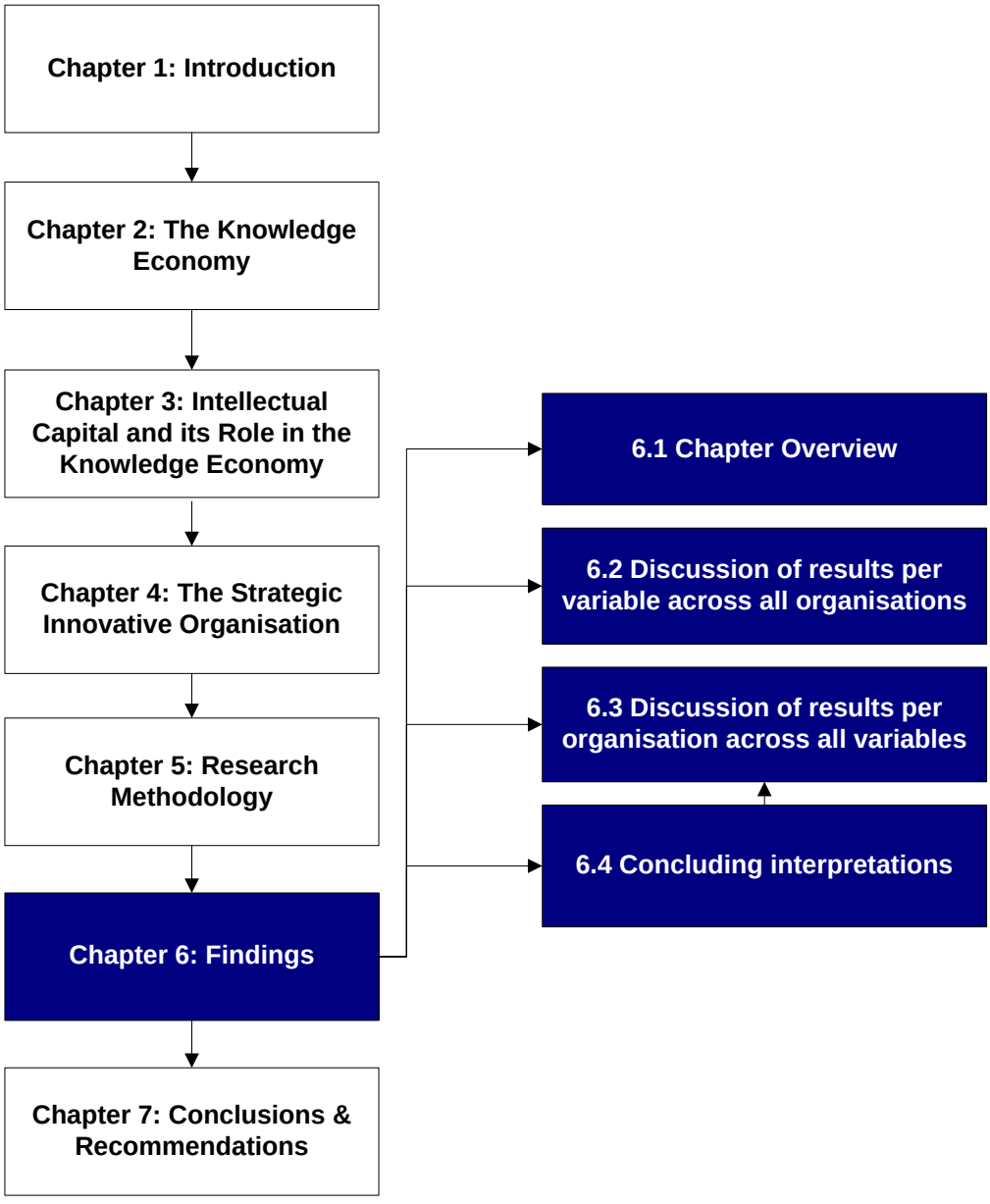

Figure 6.1: Chapter overview

The purpose of this chapter is to evaluate the method followed in developing an instrument to measure the strategically innovative environment of selected life assurance organisations in Southern Africa.

The further purpose of this chapter is to present an analysis and interpretation of data collected during the telephonic interviews to determine the extent to which the environments of the organisations selected for this study can be regarded as being strategically innovative. The analysis and interpretation are necessary to deny or confirm the findings of the literature review presented in chapters 2, 3 and 4.

In order to achieve the goal of this chapter the following aspects are addressed:

- Results are presented for all the participating organisations per variable that could promote or inhibit a strategically innovative environment. This provides a synopsis per variable across all organisations. These variables formed the basis of the instrument and understanding the results per variable could help in refining the instrument (see table 6.2).
- Consolidated results across all organisations are presented (see table 6.3). This view will highlight if the selected life assurance organisations' environments could be regarded as being strategically innovative. Reviewing the results across all organisations in respect of the instrument developed for this study could demonstrate the value such an instrument could have in measuring a strategically innovative environment.

6.2 Discussion of results per variable across all organisations

Table 6.1 (which is based on the results as depicted in addendum 5) gives a summary of the consolidated results across all organisations per variable. The aim of this section is to highlight which variables are most prominent in contributing to a strategic innovative environment in the selection of cases. By scoring the variables across all organisations the researcher will try to identify if certain variables are more commonly present than others across the organisations. Scoring the variables will also demonstrate the value the instrument could have in determining if the life assurance industry in Southern Africa have an operational environment

conducive to strategic innovation. The instrument could also be used to evaluate other industries and organisations.

A tick (√) is given per variable where the results indicate that the specific variable was plotted in the strategic innovation quadrant (see addendum 5). A total score is then given out of eight (because there were eight participating organisations) per variable. Where the variable was not plotted in the strategic innovation quadrant, no tick was given. The reason for giving no tick was that the researcher wanted to determine which organisations lent themselves towards strategic innovativeness regarding the specific variable.

The following sections will attempt to interpret the results achieved per variable.

6.2.1 Proficiency

Proficiency is described in table 4.5 as the technique organisations use for problem resolution and reflection. Organisations that are deemed to be strategically innovative in terms of their proficiency are characterised by the following as described in the preceding chapters:

- They are highly adaptable to changing circumstances.
- They are able to reinvent themselves to adapt to customers' needs and economic circumstances.
- They use a combination of techniques for problem resolution. These techniques may vary from brain storming, lessons learnt sessions on projects to instruction on how to grasp a new concept or new legislation.

By operating in the highly competitive market of life assurance, life assurance organisations constantly need to develop new products and adapt existing products to stay competitive. With so many organisations operating in this market and so many products to choose from, the consumer has multiple options to choose from. It has also become a lot easier for consumers to compare life assurance products with one another over the internet, thus making the environment even more competitive.

Chapter 2 referred to Bolwjin and Kumpe (1989) in Van Hootegem *et al.* (2005). These authors note that organisations followed an evolutionary path over the last 50 years (see table 2.2). These authors predicted that in the 2000s and onwards, organisations' focus would be on price, quality, flexibility, innovation and sustainable development. This new focus has left organisations with some challenging problems in terms of the aforementioned, if they want to stay competitive. Life assurance organisations therefore need to be proficient in creating quality products at a competitive price. These organisations need to be flexible to adapt to new financial legislation as well as a constantly changing economy. Finally these organisations' product offerings need to be sustainable in an ever-changing economy. All these factors, as highlighted by Bolwjin and Kumpe (1998), create a challenging environment for organisations to operate in. It could therefore be argued that employees in these organisations need to be very proficient in solving some challenging problems.

To gain an understanding of the participants' perception of proficiency in their organisations they had to answer the following questions:

- *In solving problems you are allowed to gain your own understanding (sometimes by "trial and error") first before someone tells you what to do*
- *You are encouraged to experiment when faced with finding solutions to difficult problems in order for you to improve your understanding*
- *Your business outcomes are repeatable and predictable*
- *Your working environment leaves no room for experimentation. Errors are not tolerated*

Table 6.1: Results per variable across all organisations

Variable	Organisation 1	Organisation 2	Organisation 3	Organisation 4	Organisation 5	Organisation 6	Organisation 7	Organisation 8	Total score
Proficiency	√	√	√	√	√	√	√		**7/8**
Personal skilfulness	√	√	√	√	√	√	√	√	**8/8**
Subject matter expertise						√			**1/8**
Learning environment			√				√	√	**3/8**
Complexity						√	√		**2/8**
Leadership				√					**1/8**
Communities of knowledge			√	√			√	√	**4/8**
Approach to innovation	√	√	√	√	√	√	√	√	**8/8**

By asking these questions the researcher attempted to understand the following:

- Were the participants encouraged to learn from past mistakes and to learn from others?
- Did they know exactly what they needed to achieve?
- Was their environment constantly changing?
- Were they allowed to experiment in order to solve problems?

The results from table 6.1 above indicate that seven of the eight organisations, organisations 1-7, were rated by the participants as being proficient.
In the interviews participants indicated that depending on the situation faced problem solving techniques might differ from one circumstance to another. This ability to adapt and to use different problem solving techniques is a conduit for sustainable development in these organisations. People are encouraged to learn from one another and guidance is given where needed. These factors indicate that seven organisations in this study could be rated as strategically innovative in terms of their proficiency.

One organisation, organisation 8, was rated borderline between the serendipitous breakthroughs quadrant and the strategic innovation quadrant. This borderline rating could be because participants were unsure about the level of proficiency in their organisation. This was verified by the researcher in the interviews when some participants indicated that they adapted their problem solving techniques depending on the situation faced. Some participants, however, could not confirm this. It is the researcher's belief that this indecisiveness could easily be rectified by encouraging individuals to use an array of problem solving techniques when faced with difficult problems.

As stated previously, the results from table 6.1 indicate that seven of the participating organisations in this study all placed a strong emphasis on proficiency in order to survive in a very challenging and competitive environment. It is recommended that these organisations keep up with exploring and implementing techniques to stay proficient. Suppliers to these organisations also need to keep proficiency improvement in mind when developing products and providing a service to these organisations. They need to be able to adapt quickly to this fast-paced

environment where time to market is critical for survival. Suppliers need to understand that price, flexibility, quality and innovation are critical for survival and their products need to adhere to these criteria.

For organisations to be strategically innovative, they need to be proficient. They also need staff members with a level of personal skilfulness to assist them in becoming strategically innovative as explained in chapter 4. The next section will discuss the personal skilfulness of the participating organisations.

6.2.2 Personal skilfulness

Table 4.5 described personal skilfulness as an individual's ability to apply their knowledge in ways that will benefit the organisation. Individuals can no longer only apply rules and procedures, but they need to improve and evolve these rules and procedures in order to innovate and enhance the organisation. In other words, they need to improve the organisation's strategic innovativeness by not only applying the correct knowledge, but knowing when and how to apply it. It would seem from the literature in preceding chapters that an individual's past experiences and an organisation's ability to set clear objectives are key in developing a level of personal skilfulness to help employees to know how and when to apply their knowledge to the benefit of the organisation.

Some personal skills that are required for individuals to contribute to an organisation's strategic innovativeness are (Harrison & Kessels, 2004):

- willingness to gather and support individually produced information of any form;
- supporting knowledge exchange by collective learning, i.e. bringing together individuals to discuss and reflect upon the knowledge they have gathered and
- supporting knowledge development by creating situations where people can utilise existing knowledge to solve problems and to produce new knowledge from it

By demonstrating these skills individuals will help create a strategically innovative organisation.

Participants were asked to rate the emphasis on personal skilfulness in their organisations based on the following statements:

- *Your past life and working experiences are key to adding value to your current employer*
- *Your organisation values your past experiences*
- *You are encouraged to focus on the task at hand*
- *You've got clear cut business objectives to meet*

The purpose of these statements was to give the researcher some insight into how personal skilfulness was perceived in the participating organisations. The researcher wanted to understand if the participants were encouraged to apply their knowledge to the benefit of the organisation by challenging the status quo and improving on current products, processes and procedures. It is also important to note that individuals need to be developed so that they understand when and how they should apply their knowledge. The researcher also wanted to understand if these organisations valued an individual's past experiences and highlighted the importance of these experiences in evolving the organisation.

Lastly, if individuals are focused only on the task at hand, it might influence their willingness to share their experiences, thereby inhibiting knowledge transfer. It is important to note that in a strategically innovative organisation business objectives need to be understood by all and must therefore be clear cut. It is no use for individuals to share past experiences and learn from one another if these experiences are not relevant to meeting the organisation's objectives as described in the preceding chapters.

The results from table 6.1 indicate that all organisations (8/8) were rated as strategically innovative regarding their ability to apply their knowledge in ways that would benefit the organisation. It seems that developing and promoting personal skilfulness was therefore a priority for the participating organisations and all

participants felt that their knowledge and skills were valued in order to achieve their organisation's objectives.

It is recommended that these organisations continue to enhance and promote their employees' personal skilfulness by creating a culture of knowledge sharing. This will enable new knowledge to be created and organisations then need to create an environment for this new knowledge to be applied. The participating organisations must continue to have clear-cut business objectives and it is recommended that a balance be created between focusing on daily tasks and making time for sharing new knowledge. Getting this balance right will improve the participating organisations' strategically innovative footprint in terms of personal skilfulness.

Suppliers, especially training providers, and suppliers doing product training for these organisations need to be sensitive to the fact that a strong emphasis is placed on the development of personal skilfulness, as indicated by the results from the this study (see table 6.1). It is therefore recommended that training material and training courses have the right mix between instructivist and constructivist elements (see addendum 3) as described by Cronje and Burger (2006). These authors conclude that constructivist and instructivist learning are complementary and should be mixed when developing training material or when providing training.

As pointed out, proficiency and personal skilfulness are important cogs in developing an organisation's strategically innovative footprint. It is, however, important to note that these two variables form part of a combination of other variables which affect an organisation's overall strategic innovativeness. Another important variable is the subject matter expertise that exists in an organisation. It is no use for an organisation to be proficient and have a high level of personal skilfulness amongst its employees but lack subject matter expertise. The next section attempts to reflect on the results pertaining to this variable.

6.2.3 Subject matter expertise

Chapters 2, 3 and 4 highlight the importance of subject matter expertise in an organisation. Subject matter expertise can be developed through acquiring Mode I

(scientific knowledge) or Mode II knowledge (applied experience) as described by Gibbons *et al.* (1994). As noted in chapter 4 (see table 4.2) where the application of the corporate curriculum (Harrison & Kessels, 2004) is explained, subject matter expertise should be directly related to the organisation's core competencies and strategy. Employees should have someone to "look up to", a guru from whom they can gain specialist knowledge, e.g. a junior software developer learning from a senior software developer. Employees should then apply and integrate their new knowledge which they gained from the subject matter experts in order to solve problems.

It is therefore evident from literature that subject matter expertise is vital to an organisation's existence. To understand how vital the participating organisations deemed subject matter expertise to be, the following statements were put to the participants for rating:

- *Your intentions and experience are central in creating and applying new knowledge in your environment*
- *Your environment requires you to be an expert in your field*
- *Your focus must be on "doing" and not necessarily on "understanding"*
- *You don't necessarily need to be an expert in your field to be successful in your job*

Only one organisation, organisation 6, could be plotted in the strategically innovative quadrant with regard to the perceived level of subject matter expertise present in this particular organisation, as is evident from the results in table 6.1. The results furthermore indicate that one organisation, organisation 4 was rated in the serendipitous breakthroughs quadrant with regard to its perceived level of subject matter expertise.

The results for the rest of the participating organisations, organisations 1, 2, 3, 5, 7 and 8, indicate that these organisations are on the brink of a high level of subject matter expertise, i.e. towards becoming strategically innovative. These organisations were borderline between the serendipitous breakthroughs quadrant and the strategic innovativeness quadrant. This shows that with a little guidance and focus they could move into the strategic innovation quadrant.

This was surprising to the researcher as it was expected that the cases would all rate high in this variable due to the nature of their business. The results confirm the opposite for the participating organisations, although most organisations were borderline (organisations 1, 2, 3, 5, 7 and 8). There could be a few reasons for these organisations being borderline, one of which could be that some participants felt that not enough focus was placed on the development of subject matter expertise in these organisations. Another assumption could be that some participants felt that they were faced with a lot of routine tasks on a daily basis that did not require a high level of subject matter expertise. These assumptions were confirmed when the interviewer asked the participants to comment further when they were a bit hesitant in answering the questions in the interviews. A further assumption is that some participants did not fully grasp what the statements were about. This is highly unlikely because the participants had two weeks to prepare for the interview and they were encouraged by the interviewer to ask questions if anything was unclear.

What is even more surprising is the fact that the results indicate that all the participating organisations scored high in the variables of proficiency and personal skilfulness but low in subject matter expertise, as pointed out already. The researcher is of the opinion that a high level of proficiency and personal skilfulness without a high level of subject matter expertise is counterproductive to the improvement of an organisation's strategic innovativeness. Rules and procedures need to be improved for an organisation to innovate. In order to improve and innovate individuals would need a thorough understanding of these rules and procedures and must know how and when to apply their knowledge, as discussed under personal skilfulness. Individuals also need to apply the right techniques to improve and innovate, as discussed under proficiency. So even though the results for the participating organisations indicate that these organisations demonstrate high levels of proficiency and personal skilfulness, without a high level of subject matter expertise to guide them, their techniques for and approach to problem solving, improvement and innovation might be less effective.

Due to the importance of a high level of subject matter expertise to develop and improve an organisation's strategic innovativeness, it is recommended that the

participating organisations that were borderline between the serendipitous breakthroughs quadrant and the strategic innovation quadrant (i.e. organisations 1, 2, 3, 5, 7 and 8), as well as organisation 4 in the serendipitous breakthroughs quadrant make every effort to develop further the subject matter expertise in these organisations.

As stated previously, the level of subject matter expertise is improved in an organisation by developing and acquiring Mode I (scientific knowledge) and Mode II knowledge (applied experience) as noted by Gibbons *et al.* (1994). The researcher therefore recommends that employees at all levels in the participating organisations engage with their human resource departments to plan their personal development in acquiring these modes of knowledge. Staff members could be sent on training courses (Mode I knowledge) (Gibbons *et al.*,1994) to hone their skills and could be rotated with other departments to learn new skills. Current skills and experience (Mode II knowledge) (Gibbons *et al.*,1994) could also be shared among staff members by rotating them and by giving them alternative tasks to break their daily routine.

The challenge for the participating organisations is to strike the right balance between Mode I and Mode II knowledge (Gibbons *et al.*,1994), as highlighted in the preceding chapters. These organisations should demonstrate Mode II knowledge (Gibbons *et al.*,1994) by integrating Mode I knowledge (Gibbons *et al.*,1994) in their daily activities. It is recommended that these organisations engage in activities such as scenario planning to assist in the integration of the different modes of knowledge as depicted in chapter 4. It is also recommended that a strong connection be established between the managers and employees for these managers to guide and coach the employees. This guidance and coaching will also assist in improving the level of subject matter expertise in these organisations.

Suppliers, especially when training on new products, should be sensitive to the fact that subject matter expertise needs to improve, as the results indicate. For these suppliers it is important to understand where the gaps exist in order to address the shortcomings. This could be achieved by doing proper training analysis before any training is conducted.

For organisations to develop their proficiency, personal skilfulness and subject matter expertise, individuals must work in an environment conducive to learning, as stated in previous chapters. The next section will discuss how the participating organisations perceived the learning environment they operate in.

6.2.4 Learning environment

In chapter 4 (see table 4.5) the learning environment of a strategically innovative organisation is described as being flexible, constantly adapting to achieve different outcomes. It was also stated that the learning environment should be uninhibited to promote personal interests and stimulation.

The work environment should therefore be conducive to learning as well as knowledge sharing and creation for organisations to improve and develop their strategic innovativeness. The researcher asked the participants to rate their learning environment according to the following statements:

- *You regularly engage in "lessons learnt" sessions to gain new insight into problems*
- *You work in a flexible environment*
- *Tutorials and manuals exist with documented processes to follow*
- *Your working environment is inflexible*

Through the statements above, the aim was to understand the learning environment of the participating organisations in terms of its flexibility and the promotion of feedback sessions and to determine if guides existed to assist staff members in fulfilling their daily tasks.

Three of the eight organisations, organisation 3, 7 and 8, could be plotted in the strategically innovative quadrant with regard to the perceived learning environment, as is depicted in table 6.1.

The results for the rest of the participating organisations, organisations 1, 2, 4, 5 and 6, indicate that these organisations were on the brink of establishing a learning environment conducive to strategic innovation. They were borderline between the

serendipitous breakthroughs quadrant and the strategic innovativeness quadrant, which indicates that with a little guidance and focus, they could move into the strategic innovation quadrant.

There were a few reasons for these organisations to be borderline, one of which was that some participants felt that not enough focus was placed on the development of tutorials and manuals in their respective departments. Other participants categorically stated that these guides did not exist in their departments and that they were so busy working that there was no time to develop any guides. Another reason was that some participants felt that their environment, although flexible, was not flexible enough to promote different styles of learning. In discussion, some participants also felt that they only occasionally learnt from past mistakes and that these mistakes could be repeated in future. This occasional repetitive failure was noted by the participants as having a lack of formal feedback sessions. In chapter 2 (see figure 2.5) Vermeulen (2007) notes that employees may resign due to a lack of feedback because they feel that they are not growing anymore. Employers should therefore make sure that feedback is given constantly if they wish to retain their staff and intellectual capital.

Interesting to note, as already mentioned, is that the participating organisations need to improve its subject matter expertise as well if it wishes to improve its strategic innovativeness. The researcher is of the opinion that if subject matter expertise is not improved, individuals might create (Mode I) and apply (Mode II) knowledge that is not necessarily beneficial to the organisation. It was mentioned earlier that to improve subject matter expertise an environment should be created to promote the acquisition of Mode I and Mode II knowledge (Gibbons *et al.*,1994). The results pertaining to the participating organisations' learning environment indicate that if the learning environment in these organisations (organisations 1, 2, 4, 5 and 6) does not become more flexible, supported and documented, staff members in these organisations will have difficulty in acquiring Mode I and Mode II knowledge (Gibbons *et al.*,1994).

It is recommended that the participating organisations focus on creating a more flexible learning environment which is uninhibited as suggested in Harrison and

Kessels's (2004) corporate curriculum (see table 4.2). It is also recommended that the participating organisations make every effort to document guidelines and procedures. It is important that tutorials be in place to assist employees in acquiring Mode I knowledge (Gibbons *et al.*,1994). An uninhibited and flexible learning environment will then assist in employees integrating Mode I and Mode II knowledge (Gibbons *et al.*,1994) by sharing new knowledge, ideas and experiences.

Another important cog in improving and developing strategic innovativeness is ensuring that employees stay interested in their work by making sure that there is a fair amount of complexity in their daily tasks. The corporate curriculum (table 4.2) of Harrison and Kessels (2004) also suggests creating and steering creative turmoil in an organisation to stimulate employees. It is believed that creative turmoil will ensure that these employees continuously learn and develop.

The next section will report on the results with regard to the complexity variable.

6.2.5 Complexity

Normally strategically innovative organisations operate in a highly complex environment which is constantly changing (see table 4.5).

Strategically innovative organisations have a balance between stability and creative turmoil in organisations as mentioned in chapter 4. Individuals should always work in an environment which intrigues them, otherwise they might get bored. This research further suggests that employees should be moved around in different departments to stimulate their growth and to build their confidence and skills. However, the reason and goals must be clearly communicated beforehand so that these individuals are stimulated as suggested by Harrison and Kessels (2004).

There should always be a balance between creative turmoil (change) and calm and stability, because too much calm and stability can lead to complacency, one-sided specialisation and an excessive internal focus.

The participants were asked to rate their organisation's perceived approach to complexity based on the following statements:

- *Your work environment is constantly changing*
- *You adapt easily to these changes*
- *You are faced with routine tasks on a daily basis*
- *You are not faced with complex problems on a regular basis*

The intent of the statements above was to give the researcher an appreciation for the complexity participants had to deal with on a daily basis.

Only two organisations, organisations 2 and 7, could be plotted in the strategically innovative quadrant with regard to the perceived level of complexity associated with the participants' daily tasks, as is evident from the results in table 6.1. The results furthermore indicate that two organisations, organisations 1 and 2, are on the verge of being strategically innovative in terms of the level of complexity present in their environment. These organisations were borderline between the serendipitous breakthroughs quadrant and the strategic innovativeness quadrant, which indicates that with a little guidance and focus, they could move into the strategic innovation quadrant.

There could be several reasons why organisations 1 and 2 were rated borderline. Some participants indicated that their environment did not change often and they therefore did not need to adapt to frequent changes. Other participants in the same organisation noted that their environment was constantly changing and they adapted easily to these changes. It is assumed that this mixed message could be ascribed to the fact that these individuals worked in different departments with different objectives. Another interesting fact is that individuals from the same organisation felt that the environment was quite complex, while others in the same organisation indicated that they were faced with routine tasks on a daily basis. It was assumed that senior level participants had to deal with a higher level of complexity than junior staff members and this therefore resulted in a conflicting message. This assumption was confirmed by one of the senior staff members interviewed.

The remaining organisations, organisations 3, 4, 5 and 8, rated in the serendipitous breakthroughs quadrant in terms of the level of complexity present in their environment.

Due to the importance of a high level of complexity present in daily tasks to develop and improve an organisation's strategic innovativeness (see table 4.5), it is recommended that every effort be made to raise the level of complexity in organisations 1, 2, 3, 4, 5 and 8.

The researcher therefore recommends creating a balance between stability and creative turmoil in organisations, as noted in chapter 4. Individuals should be allowed to work in an environment which intrigues them, otherwise they might get bored. The researcher further suggests moving employees around in different departments to stimulate their growth and to build their confidence and skills. However, the reason and goals for moving employees around must be clearly communicated beforehand so that these individuals are stimulated.
The eight pillars of the corporate curriculum (see table 4.5) indicate that creating the right balance between calm and stability and creative turmoil can lead to radical innovation. This creative turmoil could be introduced by instigating change in an environment. The corporate curriculum, however, warns that disturbance alone, without the drive to innovate, can be very counterproductive. Organisations should therefore be very clear on what the objective is for introducing change in an environment.

Consequently it could be argued that leadership is extremely important in developing a strategically innovative organisation. The importance of strong leadership at all levels in an organisation was confirmed by the literature review in chapters 2, 3 and 4. The next section reports on the findings regarding the perceived leadership style in the participating organisations.

6.2.6 Leadership

The preceding chapters all highlighted the importance of strong leadership in creating a strategically innovative organisation. Chapter 3 suggested that leadership should combine teaching and learning to the benefit of the organisation as advised by Rastogi (2000:39-48) and Mayo (n.d.).

By combining teaching and learning leaders would play a very important part in developing employees as noted in chapter 3 (section 3.4).

Participants were asked to rate the level of leadership in their organisations based on the following statements:

- *Your interests are valued in the workplace and are used to solve problems*
- *Your manager is a guide, coach and mentor, without telling you how to do your job*
- *Your manager is the sole provider of knowledge in your environment*
- *Your manager instructs you on what to do and how to do it*

A strategically innovative organisation's leaders are characterised by being mentors and coaches, guiding individuals to success as was evident from analysing the literature in chapters 2, 3 and 4.

The aim of these statements was to give the researcher some insight into how the participants perceived their managers, i.e. leaders. The researcher wanted to establish if individuals' interests were valued and whether these interests were then used to solve problems. The researcher also wanted to establish if the leaders in the participating organisations were seen as guides, mentors and coaches, playing a facilitative role as opposed to being the authoritative provider of knowledge that instructs people what to do and how to do their jobs.

Probably the most significant finding in this study is that only one out of the eight organisations, organisation 4, could be regarded as strategically innovative regarding its leadership. It seems that this organisation is characterised by

management acting as a mentor, guide and coach to instil trust in its employees' ability to innovate, as described in chapter 4 (see table 4.5).

Organisation 5, 6 and 7 were on the verge of being strategically innovative in terms of the level of leadership demonstrated in their environment. These organisations were borderline between the serendipitous breakthroughs quadrant and the strategic innovativeness quadrant.

This result might indicate that, with regard to leadership, these organisations are in a transition phase to become more strategically innovative. It is, however, unclear to the researcher why organisations 5, 6 and 7 were rated borderline. It is quite possible that with a little guidance and focus, they could move into the strategic innovation quadrant.

Organisations 1, 2, 3 and 8 were rated in the serendipitous breakthroughs quadrant regarding their approach to leadership.

It is recommended that organisations 1, 2, 3, 5, 6, 7 and 8 seriously consider leadership development at all levels as a method to improve their strategic innovativeness.

This study argues that in a strategically innovative organisation (such as organisation 4) a strong emphasis should be placed on leadership in order to guide, facilitate and coach the process of lifelong learning and to develop individuals' personal skilfulness, practical judgement and integration of different modes of knowledge.

Without exceptional leadership organisations will struggle to become strategically innovative.

6.2.7 Communities of knowledge

Strategic innovation flourishes in uninhibited learners who participate in self-controlled communities of practice as indicated in chapter 4.

This research also emphasised the importance of communities of knowledge in a strategically innovative organisation. By building collaborative communities of practice that rely on the practical judgement/wisdom of its members, the organisation's value systems will be respected in order to promote strategic innovativeness. Chapter 4 (section 4.6) also describes the bond (i.e. connection strength) that needs to exist between employees and management. It is important that there be a strong connection between peers and management. This bond builds trust and respect and enables individuals to share knowledge freely among themselves and management in informal discussions.

For the researcher to understand what emphasis the participating organisations placed on developing communities of knowledge, the participants were asked to rate their organisation's approach to developing and building these communities based on the following statements:

- *You are encouraged to work in groups to solve difficult problems*
- *Your work environment encourages socialising with one another*
- *In your environment group work is not a priority*
- *It is not a priority to socialise and interact with colleagues*

By discussing these statements the researcher attempted to understand if the participating organisations encouraged their staff to engage in group activities to solve problems and if employees were encouraged to interact with one another and their management in an informal way.

Four organisations, organisations 3, 4, 7 and 8, were rated as strategically innovative in this variable. The results from table 6.1 indicate that these organisations place strong emphasis on creating communities of knowledge for sharing ideas. Table 4.5 suggests that staff members in these organisations should have a strong connection between themselves and their manager. This good relationship between staff members and management could enable the organisation to develop Mode II knowledge by integrating Mode I knowledge (Gibbons *et al.*,1994). The results for these organisations could also indicate that scenario planning plays an important part in dealing with difficult problems.

The claims above were confirmed by participants during the interviews. All participants indicated that they were encouraged to engage in group work and socialise with one another. Participants also confirmed a good relationship between themselves and their manager and that they engaged in scenario planning in informal forums on a regular basis.

Three organisations, organisation 2, 5 and 6, were on the verge of being strategically innovative in terms of the presence of communities of knowledge in their environment. These organisations were borderline between the serendipitous breakthroughs quadrant and the strategic innovativeness quadrant.

This result might indicate that, with regard to establishing communities of knowledge, these organisations are in a transition phase to become more strategically innovative. Some participants did confirm that their organisations were trying to improve knowledge sharing by encouraging group work and informal discussions on certain issues and topics. These participants also indicated that they had started involving management in these knowledge sharing sessions but that it would take time for these forums to develop fully. By listening to the interview recordings the researcher is of the opinion that group work and knowledge sharing sessions in these borderline organisations take place on an ad hoc basis and should be encouraged even more. By making the establishment of communities of knowledge a priority, the researcher believes that it will improve the strategic innovation footprint of these borderline organisations.

The results from table 6.1 further indicate that organisation 1 is in the serendipitous breakthroughs quadrant with reference to the communities of knowledge variable. The differences between organisations in the serendipitous breakthroughs quadrant and those in the strategic innovation quadrant with reference to communities of knowledge are explained in chapter 4 (see table 4.5). The major difference between organisation 1, which falls in the serendipitous breakthroughs quadrant, and organisations 3, 4, 7 and 8, which are in the strategic innovation quadrant, could be that the connection strength between employees and management in organisation 1 is not as strong as that in organisations 3, 4, 7 and 8. This was confirmed by the participants from the latter organisations who

indicated that they regularly shared knowledge and ideas with their superiors, whereas in organisation 1 participant felt that there was a stronger relationship amongst peers than with management. This indicates that staff members from organisation 1 were more comfortable sharing knowledge and ideas amongst themselves than with their superiors.

It is recommended that organisation 1 promote the formation of informal focus groups to share knowledge. These groups should consist of employees at all levels in the organisation to promote the development of Mode II knowledge (Gibbons *et al.*,1994) by using scenario planning to integrate Mode I knowledge (Gibbons *et al.*,1994). It is also recommended that management encourage the formation of these groups and encourage employees at all levels in the organisation to participate and share knowledge. The researcher also believes that by engaging in social events, management will develop trust amongst employees which will assist in building stronger connections between management and staff. It is believed that stronger connections will build trust and therefore will promote knowledge sharing between employees at different levels in the organisation.

The next section will discuss the participating organisations' approach to innovation.

6.2.8 Approach to innovation

Table 4.5 indicates that in a strategically innovative organisation the approach to innovation is controlled and that breakthroughs are initiated by the organisation. Strategically innovative organisations deliberately seek a quantum change and guide all activities in the organisation to achieve huge breakthroughs. Any innovation achieved is not by chance and rather is intentionally achieved.

In order to understand the participating organisations' approach to innovation the researcher asked the participants to rate their organisation's approach to innovation according to the following statements:

- *You always start with the end in mind when dealing with complex issues*
- *You are encouraged to challenge the "norm"*

- *Your organisation integrates existing processes with creative new ideas*
- *When facing a difficult problem you are encouraged to seek input from unconventional sources*
- *Your organisation continuously seeks customer delight*
- *Your organisation is inspired by what the consumer wants*
- *Your organisation experiments with entrepreneurial ventures and organisational structures*
- *Your organisation continuously seeks for breakthrough improvements*
- *Your organisation focuses on understanding the present before improving the future*
- *You are expected to follow clear cut rules*
- *Your organisation continually seeks customer approval*
- *You're a technology driven organisation*
- *Your organisation adopts a "one size fits all" organisational model*
- *Your organisation focuses on gradual improvements*
- *Your organisation responds to "known" customer needs*
- *When facing a difficult problem you are encouraged to seek input from obvious sources only*

As explained in chapter 5 (see section 5.6.2) participants were asked to rate their organisation's approach to innovation based on sixteen statements. The reason for the fairly high number of statements associated to this variable is the emphasis on strategic innovation in this study. From the statements above the researcher's intention was to comprehend the way in which the participating organisations approached innovation.

The results from table 6.1 indicate that all the organisations were rated by the participants as having a strategically innovative approach to innovation.

Palmer & Kaplan (2007) describes a strategically innovative approach to innovation as an approach where an organisation:

- "starts with the end in mind" – identifies long-term opportunities and then "bridges back to the present"
- assumes a rule-breaker (revolutionary) posture

- seeks to create new competitive space/playing fields
- seeks breakthrough, disruptive innovation – while continuing to build the core
- marries process discipline with creative inspiration
- seeks inspiration from unconventional sources
- seeks unarticulated customer needs
- is consumer-inspired (seeks consumer delight)
- may experiment with entrepreneurial "new venture" or other organisational structures

It was assumed that organisations would demonstrate the above characteristics (see table 6.1). This assumption was confirmed by the researcher in the interviews when all participants described their organisations as having a strategically innovative approach to innovation. Participants all indicated that their respective organisations a placed strong emphasis on being innovative by demonstrating the characteristics as depicted above. It is recommended that the participating organisations continue to improve their approach to innovation.

It needs to be mentioned that although an organisation has the correct approach to innovation, this study argues that all the variables discussed above impact on an organisation’s strategic innovativeness. Even though an organisation’s approach to innovation might be strategically innovative, variables such as proficiency, complexity, learning environment, subject matter expertise, leadership, personal skilfulness and communities of knowledge all play a part in the level of strategic innovativeness of an organisation.

This section described the score out of eight for the participating organisations per variable with reference to being strategically innovative. From the results in table 6.1 the overall score per variable is summarised below from highest to lowest.

Table 6.2: Summary of results per variable across all organisations and recommendations

Position	Variable	Score	Organisation	Recommendations
1	Personal skilfulness	8/8	1-8	• These organisations should continue to enhance and promote their employees' personal skilfulness by creating a culture of knowledge sharing. • The participating organisations must continue to have clear-cut business objectives and it is recommended that a balance be created between focusing on daily tasks and making time for sharing new knowledge. • Suppliers, especially training providers, and suppliers doing product training for these organisations need to be sensitive to the fact that a strong emphasis is placed on the development of personal skilfulness by the participating organisations. • Training material and training courses must have the right mix between instructivist and constructivist elements (see addendum 3) as described by Cronje and Burger (2006).
1	Approach to innovation	8/8	1-8	• It is recommended that the participating organisations continue to focus on improving their approach to innovation.
2	Proficiency	7/8	1-7	• The organisations should keep up with exploring and implementing techniques to stay proficient. • Suppliers need to keep proficiency improvement in mind when developing products and providing a service to these organisations. Suppliers need to be able to adapt quickly to this fast-paced environment where time to market is critical for survival. • Suppliers need to understand that price, flexibility, quality and innovation are critical for survival and their products need to adhere to these criteria.

Table 6.2: (Cont.)

Position	Variable	Score	Organisation	Recommendations
3	Communities of knowledge	4/8	3, 4, 7 & 8	• The formation of informal focus groups to share knowledge should be encouraged. These groups should consist of employees at all levels in the organisation to promote the development of Mode II knowledge (Gibbons et al.,1994) by using scenario planning to integrate Mode I knowledge (Gibbons et al.,1994). • Management should encourage employees at all levels in the organisation to participate and share knowledge. • By engaging in social events management will develop the trust amongst employees which will assist in building stronger connections between management and staff. It is believed that stronger connections will build trust and therefore will promote knowledge sharing between employees at different levels in the organisation.
4	Learning environment	3/8	3, 7 & 8	• These organisations should focus on creating a more flexible, uninhibited learning environment. • These organisations should make every effort to document guidelines and procedures.
5	Complexity	2/8	6 & 7	• These organisations should create a balance between stability and creative turmoil. • Individuals should be allowed to work in an environment which intrigues them. • It is suggested that employees be moved around in different departments to stimulate their growth and to build their confidence and skills. However, the reason and goals for moving employees around must be clearly communicated beforehand so that these individuals are stimulated.

Table 6.2: (Cont.)

Position	Variable	Score	Organisation	Recommendations
6	Subject matter expertise	1/8	6	• Employees at all levels in the participating organisations should engage with their human resource departments to plan their personal development. • Staff members could be sent on training courses (Mode I knowledge) (Gibbons et al.,1994) to hone their skills and could be rotated with other departments to learn new skills. • Current skills and experience (Mode II knowledge) (Gibbons et al.,1994) could also be shared among staff members by rotating them and by giving them alternative tasks to break their daily routine. • These organisations should demonstrate Mode II knowledge (Gibbons et al.,1994) by integrating Mode I knowledge (Gibbons et al.,1994) in their daily activities. • These organisations should engage in activities such as scenario planning to assist in the integration of the different modes of knowledge. • A strong connection needs to be developed between the managers and employees for these managers to guide and coach the employees. This guidance and coaching will also assist in improving the level of subject matter expertise in these organisations. • Suppliers, especially when training on new products, should be sensitive to the fact that subject matter expertise needs to improve. For these suppliers it is important to understand where the gaps exist in order to address the shortcomings. This could be achieved by doing proper training analysis before any training is conducted.
6	Leadership	1/8	4	• Potential leaders at all levels in the organisations should be identified. • Leaders should be developed through formal and informal training. • Leadership forums could be created. • Leaders should be fast-tracked to key decision-making positions.

Table 6.2 above indicates that the variables of personal skilfulness and approach to innovation ranked highest across all organisations in terms of having a strategically innovative environment.

The proficiency variable was ranked second, with seven organisations, organisations 1-7, meeting the criteria for being strategically innovative with regard to being proficient.

The community of knowledge variable was ranked third, with organisations 3, 4, 7 and 8 meeting the criteria for being strategically innovative with regard to communities of knowledge.

The learning environment variable was ranked fourth, with organisations 3, 7 and 8 meeting the criteria for this variable in reference to being strategically innovative.

The complexity variable was ranked fifth by the participants. Only organisations 6 and 7 met this criteria for being strategically innovative.

Subject matter expertise and leadership were ranked sixth, with organisation 6 (subject matter expertise) and organisation 4 (leadership) the only two organisations that met the criteria for being strategically innovative with reference to these variables.

Ranking these variables for highest to lowest indicate which variables are most commonly prominent across these organisations. The results (see table 6.2) indicate that personal skilfulness and approach to innovation are the most prominent variables across all the organisations.

Table 6.2 indicates that if the participating organisations wish to improve their strategic innovation footprint, they need to work hard in improving their:

- communities of knowledge;
- learning environment;
- complexity;
- subject matter expertise and
- leadership

In table 6.2 the researcher suggests some recommendations if the participating organisations wish to improve on the variables listed above. It is believed that by

improving these variables, these organisations will improve their overall strategic innovativeness.

This section discussed the results achieved by the participating organisations per variable. These results were summarised in tables 6.1 and 6.2. A question that may arise is how these organisations rated in terms of the criteria set for a strategically innovative organisation. The next section will attempt to answer this question by discussing the consolidated view across all organisations.

6.3 Discussion of results per organisation across all variables

This section will attempt to rate the participating organisations across all variables.

By rating the organisations the researcher will attempt to illustrate which organisations could be deemed as having the most strategic innovative environments, thus illustrating the value that a measuring instrument could have in the life assurance industry. By combining the scores across all cases the researcher will attempt to establish if life assurance organisations in Southern Africa could be regarded as having a strategically innovative environment.

Table 6.3 gives a summary of the consolidated results per organisation across all variables and is based on the results as depicted in addendum 5. A tick (√) is given per variable where the results indicate that the specific variable was plotted in the strategic innovation quadrant (see addendum 5). A total score is then given out of eight for each organisation, one tick for each variable that was rated in the strategic innovation quadrant. Where the variable was not plotted in the strategic innovation quadrant, no tick is given. The reason for giving no tick is that the researcher wanted to determine which organisations lent themselves to strategic innovativeness across all variables.

6.3.1 Organisation 1

In organisation 1 (see addendum 5) three variables: proficiency, personal skilfulness and approach to innovation, were rated in the strategic innovation quadrant by the participants (see table 6.3).

Two variables: leadership and communities of knowledge, were rated borderline between the serendipitous breakthroughs quadrant and the strategic innovation quadrant.

The variables leadership and communities of knowledge were rated in the serendipitous breakthroughs quadrant.

Organisation 1's total score: 3/8

6.3.2 Organisation 2

In organisation 2 (see addendums 5 and 6) three variables: proficiency, personal skilfulness and approach to innovation, were rated in the strategic innovation quadrant by the participants (see table 6.3).

Four variables: leadership, subject matter expertise, complexity and communities of knowledge, were rated borderline between the serendipitous breakthroughs quadrant and the strategic innovation quadrant.

The variable leadership was rated in the serendipitous breakthroughs quadrant.

Organisation 2's total score: 3/8

6.3.3 Organisation 3

In organisation 3 (see addendum 5) five variables: proficiency, personal skilfulness, learning environment, communities of knowledge and approach to innovation, were rated in the strategic innovation quadrant by the participants (see table 6.3).

One variable: subject matter expertise, was rated borderline between the serendipitous breakthroughs quadrant and the strategic innovation quadrant.

Two variables: leadership and complexity were rated in the serendipitous breakthroughs quadrant.

Organisation 3's total score: 5/8

6.3.4 Organisation 4

In organisation 4 (see addendum 5) five variables: proficiency, personal skilfulness, leadership, communities of knowledge and approach to innovation, were rated in the strategic innovation quadrant by the participants (see table 6.3).

One variable: learning environment, was rated borderline between the serendipitous breakthroughs quadrant and the strategic innovation quadrant.

Two variables: subject matter expertise and complexity, were rated in the serendipitous breakthroughs quadrant.

Organisation 4's total score: 5/8

6.3.5 Organisation 5

In organisation 5 (see addendum 5) three variables: proficiency, personal skilfulness and approach to innovation, were rated in the strategic innovation quadrant by the participants (see table 6.3).

Five variables: subject matter expertise, learning environment, complexity, leadership and communities of knowledge, were rated borderline between the serendipitous breakthroughs quadrant and the strategic innovation quadrant.

No variables were rated in any other quadrant.

Organisation 5's total score: 3/8

6.3.6 Organisation 6

In organisation 6 (see addendum 5) five variables: proficiency, personal skilfulness, approach to innovation, subject matter expertise and complexity, were rated in the strategic innovation quadrant by the participants (see table 6.3).

Three variables: leadership, learning environment and communities of knowledge, were rated borderline between the serendipitous breakthroughs quadrant and the strategic innovation quadrant.

No variables were rated in any other quadrant.

Organisation 6's total score: 5/8

6.3.7 Organisation 7

In organisation 7 (see addendums 5) six variables: proficiency, personal skilfulness, approach to innovation, complexity, learning environment and communities of knowledge, were rated in the strategic innovation quadrant by the participants (see table 6.3).

Two variables: leadership and subject matter expertise, were rated borderline between the serendipitous breakthroughs quadrant and the strategic innovation quadrant.

No variables were rated in any other quadrant.

Organisation 7's total score: 6/8

Table 6.3: Summary of results per organisation across all variables[3]

Variable	Organisation 1	Organisation 2	Organisation 3	Organisation 4	Organisation 5	Organisation 6	Organisation 7	Organisation 8	Consolidated result
Proficiency	√	√	√	√	√	√	√		
Personal skilfulness	√	√	√	√	√	√	√	√	
Subject matter expertise						√			
Learning environment			√				√	√	
Complexity						√	√		
Leadership				√					
Communities of knowledge			√	√			√	√	
Approach to innovation	√	√	√	√	√	√	√	√	
Total	**3/8**	**3/8**	**5/8**	**5/8**	**3/8**	**5/8**	**6/8**	**4/8**	**34/64 (53%)**

[3] See also addendum 5

6.3.8 Organisation 8

In organisation 8 (see addendum 5) four variables: personal skilfulness, approach to innovation, learning environment and communities of knowledge, were rated in the strategic innovation quadrant by the participants (see table 6.3).

Three variables: proficiency, complexity and subject matter expertise, were rated borderline between the serendipitous breakthroughs quadrant and the strategic innovation quadrant.

The leadership variable was rated in the serendipitous breakthroughs quadrant.

Organisation 8's total score: 4/8

The results from table 6.3 indicate that organisation 7 could be regarded as the most strategically innovative of the participating organisations.

The total score across all organisations is 34/65 (54%) as indicated in table 6.3.

6.4 Concluding interpretations

This study explored how an instrument could be developed using Burger & Cronje's (2006) matrix on learning theory as a base and then integrating (see table 4.5) this matrix with elements of the knowledge economy (chapter 2), intellectual capital (chapter 3), the corporate curriculum, learning theory and strategic innovation (chapter 4). It was found that these elements are complimentary to one another and a combination of different variables, based on these elements, could promote or inhibit the creation of a strategically innovative environment. By integrating the elements above the author of this thesis attempted to develop a holistic measurement tool (Palmer & Kaplan, 2007) for determining how an organisational environment (Palmer & Kaplan, 2007) could be created that would promote strategic innovation.

This instrument was then applied to eight cases and the results plotted on a matrix (see addendum 5) to demonstrate the value such an instrument could have in determining if an organisation's environment is conducive to strategic innovation.

The purpose of this study was therefore to develop a pilot instrument. With further research this instrument could be refined by applying it to more cases and by adding more constructs to it.

The results from section 6.2 suggest that the participating organisations environments could be viewed as being moderately strategically innovative with a consolidated score of 34/64 (53%) (see table 6.3).

It appears from the results (see table 6.1) that if the participating organisations wish to improve their strategically innovative environment, they need to work hard in improving their:

- subject matter expertise (1/8) and leadership (1/8);
- complexity (2/8);
- learning environment (3/8);
- communities of knowledge (4/8) and
- proficiency (7/8)

The results from the instrument could therefore also help organisations prioritise which areas they would like to improve, as demonstrated above.

This chapter also suggested some recommendations for the organisations in this study (see table 6.2) to improve their operating environments. These recommendations will help SDT to understand its customers' environment and will further assist SDT in customising its products, therefore adapting to its customers' needs.

Chapter 7 concludes this research with a synthesis of the findings and recommendations of the study.