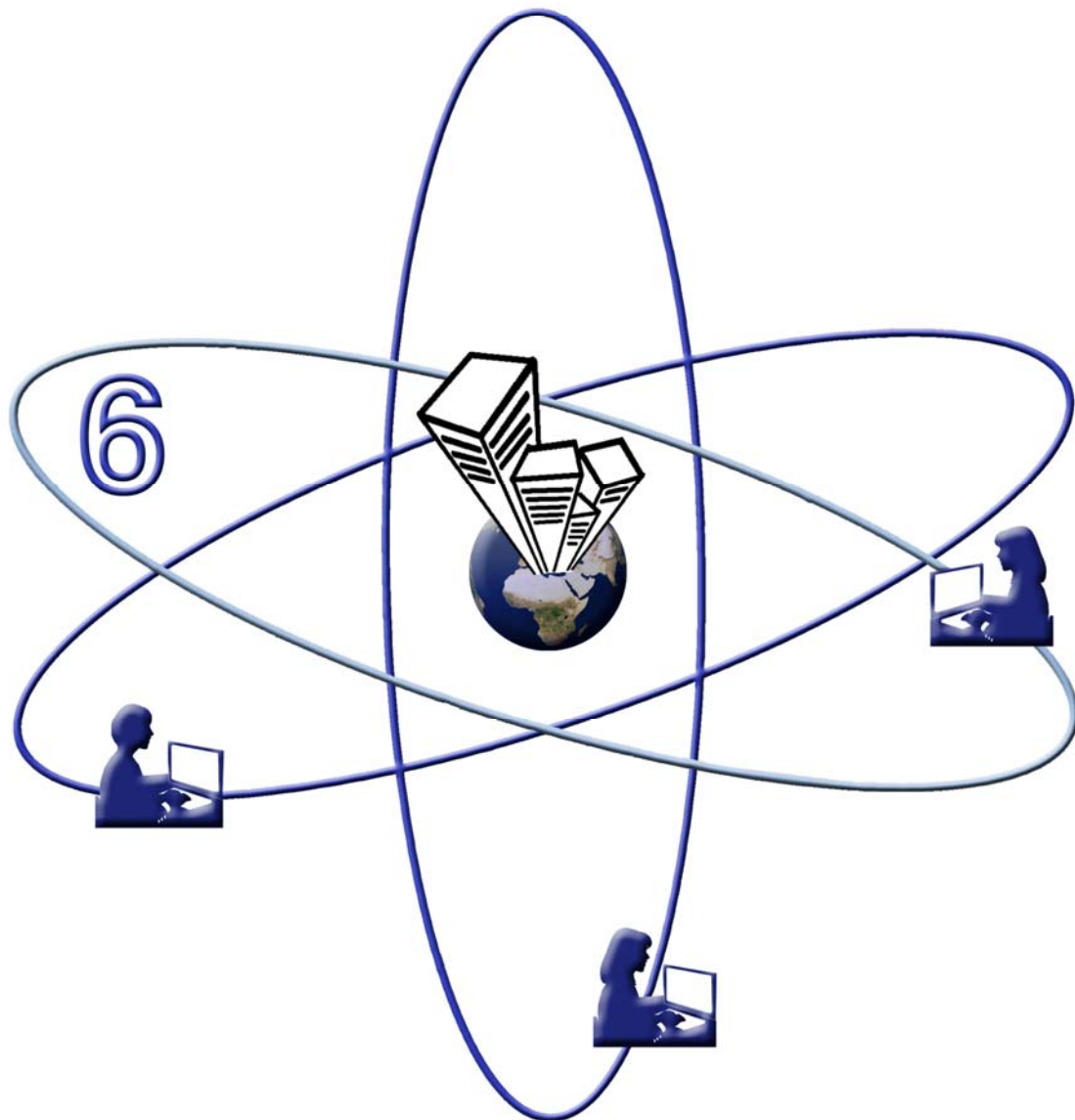




# The management of people, processes and places in the virtual workplace

## CONCLUSION



## 6.0 CONCLUSION

### 6.1 INTRODUCTION

The evolvement of the workplace towards the virtual workplace led to its own unique challenges, challenges relating to people, business process and workplace management.

The literature overview conducted and discussed in chapter 3 covered the changing nature of work through the different waves of change leading to the evolvement of the virtual workplace, people in the virtual workplace, including the types of virtual workplaces, its advantages and disadvantages. This was followed by a discussion of the types, levels, characteristics, modelling and roles and responsibilities related to business processes. The waves of change relating to business process management, business process improvement and business process maturity are included in the latter part of chapter 3.

The Extended Hermeneutic Circle of Learning was developed and used as guideline for the research conducted into the **people, processes and places** components of the virtual workplace. The research conducted is discussed in chapter 4, followed by the proposed framework to support the management of people, processes and places in the virtual workplace in chapter 5.

This chapter brings to a close this thesis and covers the application of the different phases of the Extended Hermeneutic Circle of Learning, namely the literature review, selecting of the cases and data collection. This is followed by data ordering, data analysis and completed with the literature comparison. This is followed by an evaluation of the research based on the seven principles for interpretive field studies and the answering of the research questions. The research questions are answered in chapter 5 and listed in table 6.1, including the sub-questions. The research is also evaluated against Klein and Meyers (1999:67–94) and Walsham and Sahay (1999:39–66). The contributions made by this study, its limitations and future research topics conclude this chapter.

## 6.2 THE EXTENDED HERMEUNETIC CIRCLE OF LEARNING

The Extended Hermeneutic Circle of Learning as discussed in chapter 2 was developed as research framework. Its application and results are discussed as the concluding chapter of this thesis.

## 6.3 PHASE 1: RESEARCH DESIGN

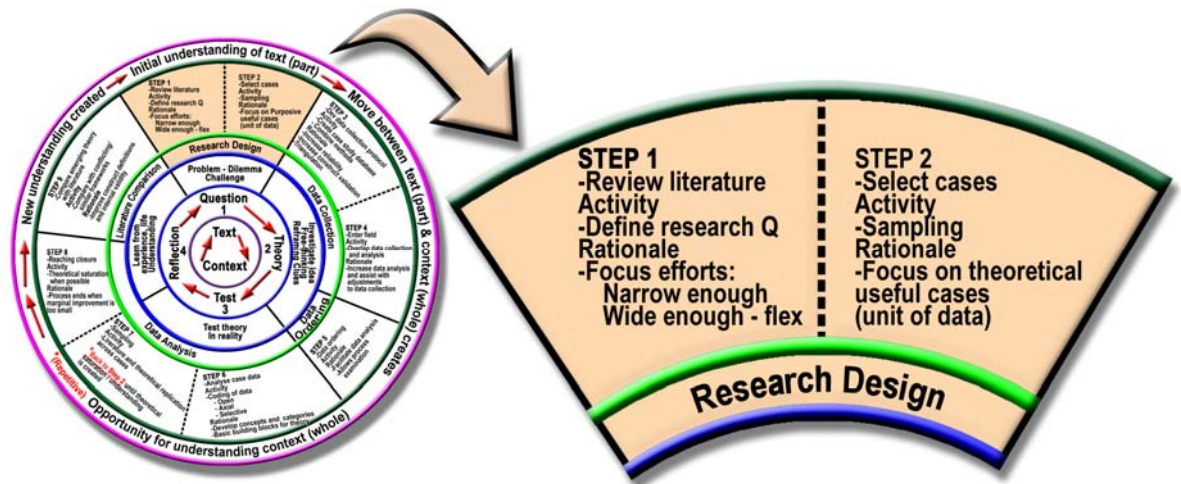


Figure 6.1: Extended Hermeneutic Circle of Learning – research design

### 6.3.1 Step 1: Review of literature

The research effort was focussed through an extensive literature study in chapter 3 as required in step 1 of the Extended Hermeneutic Circle of Learning. It covered the changing nature of work that led to the establishment of the virtual workplace. This was followed by a discussion on the types of virtual workplaces, people in the virtual workplace, including the advantages and disadvantages of the virtual workplace. Business processes, including its levels and characteristics, business process modelling, business process management as well as business process improvement and maturity were covered in the latter part of chapter 3.

This literature review provided background to enhance the understanding of the main and sub research questions. The three main research questions were defined with the emphasis on the three components related to the

management of people, processes and places in the virtual workplace. The interview questions each focussed on these components, thus providing structure to the sub research questions.

The interview questions were narrow enough to focus on the areas of research within the three components. The questions related to the people component focussed on the experiences in the virtual workplace with regard to business processes, management style required and management principles. Questions related to business process characteristics and business process change control was included in the process component. The place component's questions addressed unique challenges, defining supporting business processes and the most common virtual workplace used by the participants. The questions were also broad enough, thereby providing flexibility for invaluable discussions and sharing of experiences.

The interview questions are included in chapter 2, table 2.2.

### **6.3.2 Step 2: Selecting cases**

Purposive sampling assisted in focussing the research effort for this thesis. The literature overview covered the changing nature of work with the evolvement of the workplace through its different waves including the virtual workplace, business processes and business process management.

The cases (footnote 1) used in this research were structured as follows:

#### **6.3.2.1 Literature overview**

The literature overview in chapter 3 constituted the first case, providing background on the changing nature of work followed by the evolvement of the virtual workplace, people in the virtual workplace and the types of virtual workplaces. The advantages and disadvantages of the virtual workplace were also covered. Business processes, its levels and characteristics, business process modelling, business process management, including business process improvement and maturity, were included in the literature review.

### 6.3.2.2 Case study

This was followed by a case study conducted with a research company in Alabama, USA. This company is referred to as Company F in chapter 4 and is included in appendix A. The case study focussed on management in the virtual workplace including the organisational structure. Business process management and the business processes supporting the virtual workplace were included in the case study. Performance management, recruitment, training, communication and interaction were also covered. The advantages and disadvantages concluded the case study. The purpose of the case study was to obtain the knowhow and experiences of an international company.

#### **Advantage**

The advantage of the case study used is that it provided structured detail related to the research for this thesis, that is the virtual workplace including its advantages and disadvantages experienced, organisational culture and structure and business process details. Thus, this case study supported the qualitative research conducted and provided rich information on experiences in the virtual workplace. This correlates with the advantage stated by Cooper and Schindler (2001:138).

#### **Disadvantage**

The possible disadvantage of a case study that it can be “*scientifically worthless*” as it may not meet minimal design requirements is noted, although it still has a significant scientific role (Cooper & Schindler, 2001:138). The case study used as a data collection method in this research provided significant detail and therefore fulfilled a significant role. This stated disadvantage is thus not considered.

### 6.3.2.3 Focus group discussions

The third case comprised of the focus group discussions. The focus groups consisted of four to five participants who shared their experiences and challenges related to management, business

processes and challenges in the virtual workplace. The participants were business process experts, business process analysts and modellers working virtual. The questions as referred to in section 6.2.2.1 and included in chapter 2 were used during the focus group discussions.

### **Advantage**

The advantage of gathering qualitative data from a number of participants at the same time was evident from the focus group discussions. It was a relative inexpensive method of research as the only direct cost involved related to travelling. This correlates with the advantages as discussed in section 2.3.1.1 as part of focus groups. The enthusiastic group discussions provided a wealth of information, thus supporting the qualitative research done for this thesis.

### **Disadvantage**

The disadvantage of focus group discussion relate to a limited number of questions, usually not more than 10 questions in no more than two hours, translating into focused time management. This correlates with the disadvantage stated in section 2.3.1.1 which reflects on focus group discussions. Power play was not evident due to assistance rendered by the participating companies with the selection of participants.

#### **6.3.2.4 Interviews**

Interviews were conducted with individual business process experts, business process analysts and business process researchers. The individuals worked in both the virtual and traditional workplaces. The same set of questions was used during the interviews. The interviews constitute the fourth case.



### **Advantage**

The interactive interviews provided detailed information, thereby supporting the qualitative research in the same manner as that of the focus group discussions.

### **Disadvantage**

The disadvantage experienced in terms of interviews was the time involved to obtain the same volume of qualitative data as what would have been obtained as part of a focus group discussion. However, it still provided invaluable qualitative data.

#### **6.3.2.5 Weblog**

A weblog, also known as a blog, was used to demonstrate the use of technology to cross time and place boundaries. The weblog posts and comments correlated with the people, processes and places components of the research.

### **Advantage**

The weblog was quick and easy to create and did not require expenses other than a computer and internet connectivity. As bloggers' participation is not time and place dependent it provided flexibility benefits as discussed in section 2.3.1.2. The comments posted to the weblog were concise and of good quality, thus making it a usable tool.

### **Disadvantage**

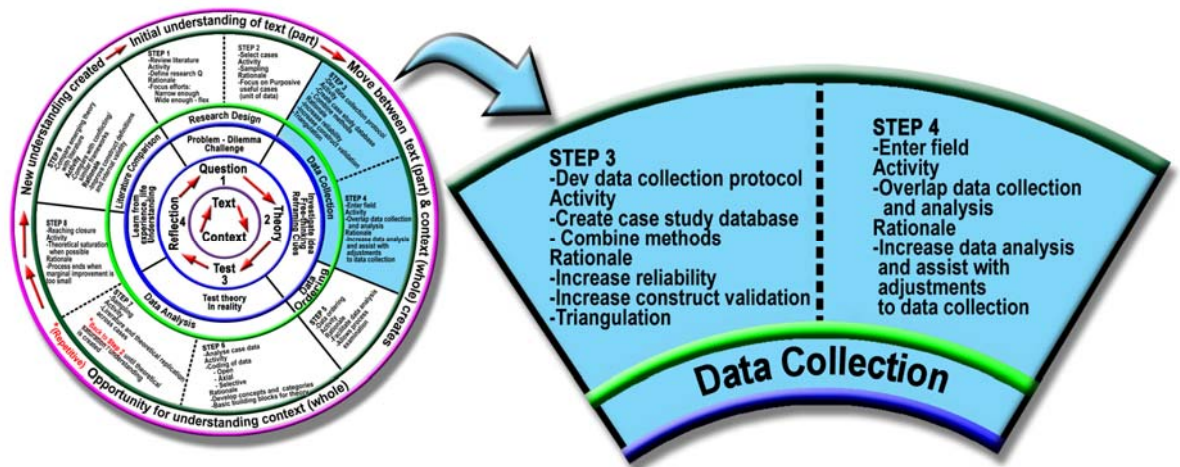
The disadvantage experienced was first and foremost the time it took to get the weblog in circulation. It can take several weeks for the weblog to generate user traffic. Constant effort is needed to distribute the weblog and encourage participation. It also does not provide face-to-face interaction as is the case with focus groups and interviews. Questions posted to the weblog need to be kept short (having no more than five words) as was suggested by a research participant.

### 6.3.3 SUMMARY

The literature overview, case study, focus group discussions and interviews supported the qualitative research conducted for this thesis. The selection of a weblog needs to be considered carefully due to the uncontrollable nature of participation and the time it takes to generate user traffic.

The combination of detail discussions in the focus groups and interviews, the descriptive case study, as well as the weblog comments assisted in obtaining a high level of information richness, thereby contributing to the research conducted for this thesis.

### 6.4 PHASE 2: DATA COLLECTION



**Figure 6.2: Extended Hermeneutic Circle of Learning – data collection**

#### 6.4.1 Step 3: Develop rigorous data collection protocol

This step involved the creation of a structure for the participants and organisations contributing to the research. The structure provided guidance with regard to research ethics. It also assisted in ensuring anonymity of the participants and the companies they represented. Participants were allocated numerical numbers which was used for transcribing purposes. An alphabetical letter was assigned to the organisations represented, thus ensuring anonymity for the organisations.



Participation in the focus groups discussions and interviews was voluntary. Participants were ensured that no personal details would be made available to any other party at any point in time and any references to any participants would be anonymous. Participants were also assured that, should they want to discontinue their participation in the focus group discussion or interviews, they would be free to do so.

The questions used during the focus group discussion and interviews have been structured and grouped according to the defined components, namely ***people, processes and places*** which is in correlation with the central theme of this thesis. The questions have been listed in chapter 2, table 2.2 and are also discussed in section 6.3.1.

A weblog was created and used for online participation and data collection. Participants could post comments anonymously or use a name of their choice. Data collected through the weblog would also be referenced, excluding any names and other references of personal nature. The weblog was created using standard software available from Google. The weblog featured the purpose of the weblog on the home page. All email invitations for participation included the purpose of the weblog, namely that research was conducted into the management of people, processes and places in the virtual workplace as part of meeting the requirements towards obtaining a PhD degree. The statement also included the name of the university and the researcher's details.

Weblog statistics covering various aspects of the weblog is available in Appendix C. Standard weblog analytics as provided by Google were used for the generation of the weblog statistical reports. The statistics are provided for information purposes and to demonstrate how the boundaries related to time and place became irrelevant. The reports reflect on the number of visitors, the countries from which the visitors were and the number of visits on the site. No other statistical analysis will be done, therefore the statistical detail would not be impacting on the qualitative nature of the research.

A qualitative approach would be followed with triangulation of evidence according to the people, processes and places components. Keeping to these components is in correlation with the theme of this thesis and assisted in creating an understanding of the relationships in the collected data.

### **Advantage**

The advantage of having a defined data collection protocol is that it provides structure and guidance to the researcher and the participants, thereby minimising possible misunderstanding. The protocol defined for this research set the structure for the focus group discussions and interviews clarifying expectations and minimising confusion.

### **Disadvantage**

The researcher did not experience disadvantages as part of developing and using of proper protocol.

## **6.4.2 Step 4: Enter the field**

The activity of data collection consisted of focus group discussions and interviews conducted with business process experts, business process analysts and business process researchers from the telecommunications, financial, consulting and research industries. Focus group participants were identified by the organisations and the sessions were scheduled at venues convenient for the companies and research participants. Tables 2.3, 2.4, 2.6, 2.7, 2.8 and 2.9 contain the profiles of the participating companies and research participants. The complete list of participants is included in appendix B.

Before the focus group discussion and interviews commenced, the data collection protocol, purpose and focus of the research were explained to the participants. The participants' consent on the recording of the focus group discussions and interviews were obtained before the digital tape recording and video recordings commenced.

This was followed by discussions based on the related components, namely people, processes and places following the questions stipulated in table 2.2. The sound and visuals of the recordings were checked as soon as the discussions were concluded. Backup material was created of all the focus group discussions and interviews. Transcripts were done directly after completion of the discussions, as that provided the best opportunity to reflect on the discussions. Participants and organisations were referenced according to the numerical and alphabetical numbers allocated to them.

The weblog was used for online participation. Themes corresponding with the research components were posted on the blog. Comments received on these themes were archived and printed before being used in combination with the data collected during the focus group discussion and interviews. The weblog was used during the period 16 April to 31 July 2010.

### **Advantage**

The focus group discussions and interviews were conducted in a focussed and structured manner following the questions formulated earlier. This ensured consistency, which was important for the gathering of data relevant to the management of people, processes and places in the virtual workplace. The focus group discussions facilitated the gathering of qualitative data from a number of participants at the same time. Due to the interview, participants were more flexible and the interviews were arranged with more ease. The use of a weblog has the advantages of being inexpensive and allowing participation at any time from any place as discussed in section 2.3.1.2, covering weblogs. Focussed and to the point comments were received on the weblog. Information richness was obtained through the combination of detail discussions in the focus groups, interviews, the descriptive case study and the weblog comments. This richness of the information assisted in creating meaning and understanding of the people, processes and places relationship.

### **Disadvantage**

The use of a weblog needs to be reviewed based on the time and effort it takes to get the weblog into circulation and generate user traffic.

### 6.4.3 SUMMARY

The research protocol assisted in defining the structure and provided guidance to the researcher with regards to research ethics. This was important, as all the participants involved needed to understand the intended research, research method and their role in the research. The focus group discussions and interviews were conducted after the research intent was explained and all the discussions were recorded with the consent of the participants. Backups were made of the recordings, including the transcripts. This was followed by the data ordering as discussed below.

### 6.5 PHASE 3: DATA ORDERING

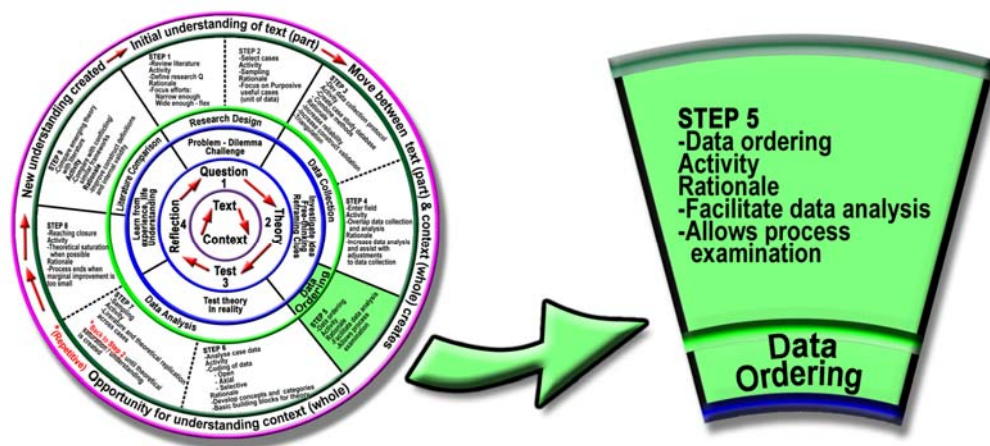


Figure 6.3: Extended Hermeneutic Circle of Learning – data ordering

#### 6.5.1 Step 5: Data ordering

In this step the recorded focus group discussions and interviews were transcribed in the same sequence it was conducted. A separate transcript was made for each focus group discussion and interview conducted. The participants were referenced in the transcripts according to the numerical number allocated to them and the organisation according to the alphabetical number.

The case study conducted with participating Company F was endorsed. This endorsement including the case study was printed for record purposes and

further use during the data analysis. The case study has been included in appendix A.

The weblog comments were collated and printed for record purposes as well as data analysis. Weblog statistics were generated using standard software available from Google analytics. These statistics have been included for information purposes as discussed in section 6.4.1. See appendix C for weblog statistics.

Email communications related to the arrangement of the focus group discussions and interviews were printed for record purposes. A list of the participants was compiled and has been included as appendix B. Company profiles were completed for each of the participating companies and are available in tables 2.3, 2.4, 2.6, 2.7 and 2.8 respectively.

This activity was followed with the data analysis as discussed in section 6.6.1.

### **Advantage**

This structured approach assisted in facilitating data analysis in a consistent manner. Transcribing of recording is a time consuming process, but deemed a vital part of data ordering, since it provides data in a written format which was important for data analysis. The written format enabled the researcher to categorise the concepts identified. The result of the data ordering activity was to have all the data sources in written format.

### **Disadvantage**

Data ordering as such can be seen as a time consuming task although it is crucial for data analysis. Thus, time constraints need to be taken into account.

## **6.5.2 SUMMARY**

Properly recorded focus group discussion and interviews were transcribed, ensuring anonymity of participants and organisations through the use of

numerical numbers and alphabetical letters. Weblog comments were collated and the case study that was conducted, was endorsed. Supporting documentation, such as the company profiles and participation list have been compiled. The data ordering activity resulted in having the data sources and supporting documentation in written format.

## 6.6 PHASE 4: DATA ANALYSIS

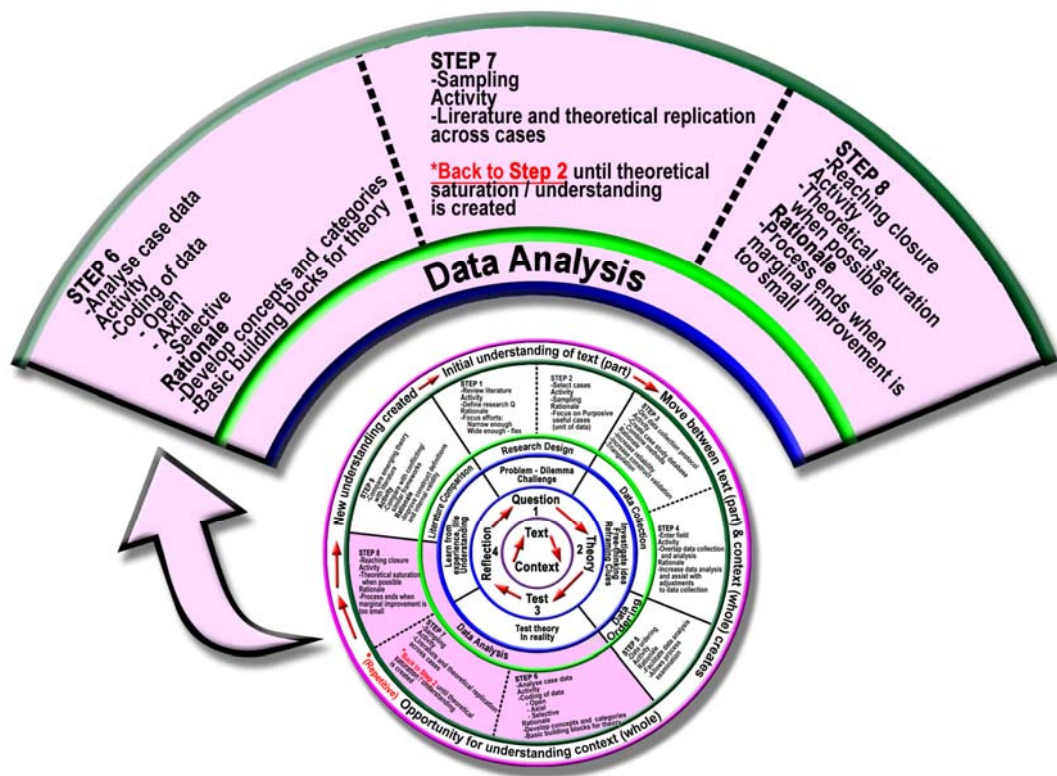


Figure 6.4: Extended Hermeneutic Circle of Learning – data analysis

### 6.6.1 Step 6: Analyse case data

The transcriptions of the recorded focus group discussions and interviews were coded following an open coding approach. This relates to questions being asked, answers being provided and the answers being compared. Data analysis commenced as follows:



- The data obtained from the case study conducted with a research company in Alabama, USA, was analysed. The case study is referenced as case number two in section 6.3.2.2,
- the data compiled as part of the focus group discussions was analysed (case number three in section 6.3.2.3),
- the data accumulated during the interviews was analysed (case number four in section 6.3.2.4), and
- the data generated by the weblog, as discussed in section 6.3.2.5, was analysed.

During the coding process the data was broken down into concepts related to the three components, namely people, processes and places. These components were identified per data source, namely the case study, transcripts and weblog. It should be noted that throughout the thesis reference has been made to people, processes and places as components; although in terms of triangulation of data it is called categories. Thus, for the purpose of this discussion reference is made to categories and concepts. The people, processes and places categories with its concepts have been summarised in figure 4.2.

The people, processes and places categories with its related concepts became the first set of building blocks of the framework for the management of people, processes and places in the virtual workplace. The people, processes and places categories and its concepts were discussed in chapter 4 and have been summarised in figures 4.3, 4.4 and 4.6 respectively.

The relationship between the three categories became evident which led to the deriving of the management, technology and practice categories. The people, processes and places categories as initially defined now became the concepts upon which the management, technology and practice categories were defined. Thus, the development of the management, technology and practice categories structured the people, processes and places concepts into the management framework for people, processes and places in the virtual workplace.

The management of people, processes and places in the virtual workplace framework consisting of the management, technology and practice categories have been summarised in figures 5.5, 5.7 and 5.9.

### **6.6.2 Step 7: Purposive sampling**

The concepts and categories as identified during the coding of the transcripts and weblog were compared with the case study as stated in step 2, section 6.3.2. This comparison was done to confirm and extend the concepts related to the people, processes and places categories. The relationship between these categories became evident and formed the initial framework for the management of people, processes and places. The relationship of these categories as discussed in section 6.6.1 led to the construction of the management, technology and practice categories, thereby establishing the framework for the management of people, processes and places in the virtual workplace.

The conceptualisation and description of the management framework is discussed in chapter 5, including graphical presentations of the concepts and categories. These graphical presentations also support the core theme of the research, namely people, processes and places.

Steps 2 to 7 were repeated until theoretical saturation was achieved as described below:

- Listening during focus groups discussion and interviews. Bullet notes of key concepts were made.
- This was followed by the transcribing of the focus group discussions and interviews. Key concepts were highlighted by underlining it.
- The transcripts were analysed to identify the concepts and categories, including referencing to the initial concepts identified.

- The concepts related to the people, processes and places categories were identified and grouped together. These are displayed graphically according to the figures indicated in section 6.6.1.
- Further analysis of these people, processes and places categories led to the deriving of the management, technology and practice categories. The people, processes and places categories initially defined, now became the concepts underpinning the management, technology and practice categories. These categories formed the basis from which the management framework for the management of people, processes and places in the virtual workplace was derived. The management, technology and practice categories with its related concepts are depicted the figures listed in section 6.6.1.

Repeating of these steps translates into moving between the parts (people, processes and places) and the whole (management in the virtual workplace) thereby interpreting it in context of the parts and the whole. Thus, understanding has been created, using interpretivism as the philosophical basis with the hermeneutic circle as discussed in chapter 2.

### **6.6.3 Step 8: Reaching closure**

Closure was reached when the concepts and categorisation became saturated and improvement margins decreased. This point of saturation was reached when the identified concepts were integrated into the management, technology and practice categories, thereby providing the management framework for the people, processes and places in the virtual workplace.

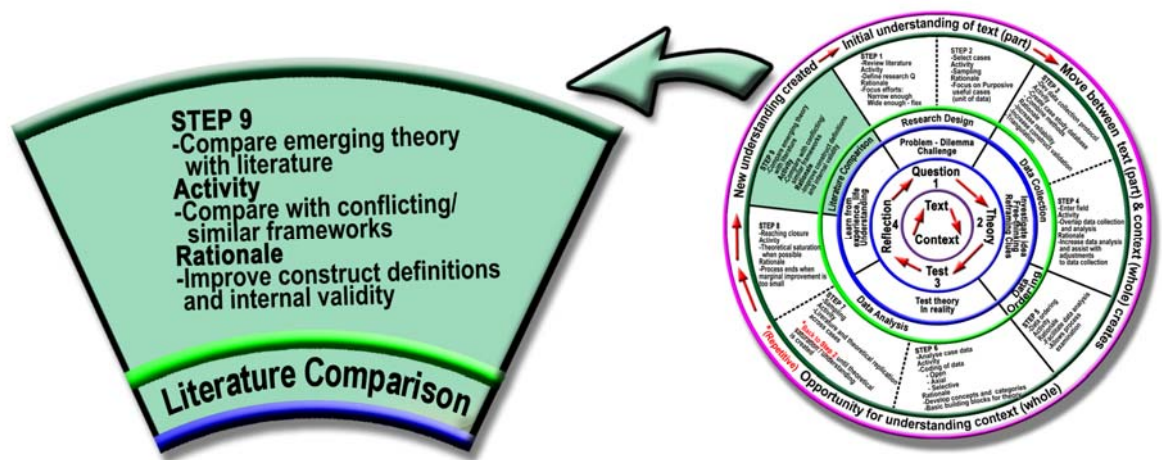
#### **Advantage**

The process of identifying concepts and categorisation provided a structured approach for data analysis. It facilitated in identifying the relationship between concepts enabling the creation of categories. This structured approach enabled the researcher to construct the framework for the management of people, processes and places in the virtual workplace with the focus on the relationship between the different concepts.

### 6.6.4 SUMMARY

The concepts that emerged from the structured data analysis were firstly categorised according to the people, processes and places categories. Based on the relationship between the initially defined categories the management, technology and practice categories were defined with the people, processes and places concepts as basis. The data analysis phase was concluded with the deriving of the people, processes and places management framework.

### 6.7 PHASE 5: LITERATURE COMPARISON



**Figure 6.5: Extended Hermeneutic Circle of Learning – literature comparison**

#### 6.7.1 Step 9: Compare emergent theory with existing literature

During this step the people, processes and places management framework was compared with the literature related to the virtual workplace and its types, people in the virtual workplace, infrastructure, business processes, business process management and business process management improvement. Roles and responsibilities were also covered. Areas of concern which were identified and which are addressed by the people, processes and places management framework, such as organisational culture, management, business process governance, business process levels, integration of business process tools and infrastructure were covered in the literature. The people, processes and places management framework is thus supported by the literature.

## 6.7.2 SUMMARY

The research conducted was concluded with the literature review and it was found that the areas of concern addressed with the people, processes and places management framework were covered in the literature.

## 6.8 EVALUATION OF RESEARCH

This section covers the research conducted and its evaluation based on a set of principles for conducting and evaluating interpretive field studies in information systems as described by Klein and Meyers (1999: 67–94). This set of principles' usage "*applies mostly to the conduct and evaluation of interpretive research of a hermeneutic nature.*" These principles are interdependent and interrelated and do not apply equally to all field studies. However, the manner in which the principles are applied is left to the discretion of researchers, reviewers and authors (Klein & Meyers, 1999:68, 71). This will be followed by an evaluation of the research based on authenticity, plausibility and criticality as discussed by Walsham and Sahay (1999:39–66).

### 6.8.1 The fundamental principle of the hermeneutic circle

*"The most fundamental principle of hermeneutics is that of the hermeneutic circle".* Interpretation is a process of moving between the parts to create an understanding of the whole, and then back from an overall understanding of the whole to an improved understanding of the parts (Klein & Meyers, 1999:71). The relationship between the whole and the parts is understood in terms of its shared meaning. The hermeneutic circle suggests that understanding is created through moving between the parts and the whole (Klein & Meyers, 1999:71) and this correlates with the discussion of the hermeneutic circle in sections 2.2.2 and 2.2.3, including figures 2.1, 2.2 and 2.3.

The researcher conducted a literature review related to the changing nature of work and how it led to the evolvement of the virtual workplace. This literature review included people in the virtual workplace, business processes with its

characteristics, levels and modelling. Business process management with its waves of change were also covered. Business process improvement was included in order to provide for distinguishing between business process management and business process improvement. The literature overview covered learning and the creation of understanding which led to the development of the Extended Hermeneutic Circle of Learning used as guideline for the research conducted for this thesis. The Extended Hermeneutic Circle of Learning is discussed in section 2.2.5 and is depicted in figure 2.4.

This was followed by a case study done with a research company in Alabama, USA, which substantiated the virtual workplace, organisational, management and business process related components. The case study also covered the advantages and disadvantages of the virtual workplace. The focus group discussions, interviews and weblog latched onto the case study in exploring the people, processes and places components related to the virtual workplace. These people, processes and places components are discussed in chapter 4. This created a deeper understanding of the relationship between these components, which led to the deriving of the management, technology and practice categories as part of the virtual workplace. Absorbing this deeper understanding led to the development of people, processes and places management framework discussed in chapter 5.

### **6.8.2 The principle of contextualisation**

The contextualisation principle refers to the researcher taking cognisance of the social and historic context of the research subject. Interpretivist research observes organisational patterns as constantly changing, thus *“the relationships between people, organisations, and technology are not fixed”* (Klein & Meyers, 1999:73).

This study is seen in the context of the virtual work environment and the experiences of virtual workers with the inclusion of experiences from abroad. This study elaborated on the changing nature of work from the traditional to the modern, technologically enabled virtual workplace. The changing



relationship as referred to by Klein and Meyers (1999:73) above was evident from the research. The experiences are described in detail in chapter 4. The people, processes and places management framework related to the virtual workplace was derived from the experiences shared by the participants.

### **6.8.3 The principle of interaction between the researchers and the subjects**

This principle relates to the interaction between the researcher and the research participants and cognisance needs to be given to the possibility of facts being produced due to the social interaction of the researcher and the participants (Klein & Meyers, 1999:74).

The researcher was not socially involved, employed or in a working relationship with any of the participants, meaning that the researcher was not closely involved with the participants.

### **6.8.4 The principle of abstraction and generalisation**

This principle indicates that abstraction and generalisation should be carefully related to the study details as it was experienced and collected by the researcher. This enables readers to follow how the researcher arrived at the theoretical results (Klein & Meyers, 1999:75). This translates into the researcher showing how the theoretical insight was obtained (chapter 4).

In this research the study details relate to the management of people, processes and places in the virtual workplace. The case study was used to obtain insight into the virtual workplace and the challenges experienced. This was followed by the focus group discussions, interviews and weblog which had the same focus. The qualitative results obtained were categorised and used to gain a deeper understanding of people, processes and places in the virtual workplace. It is difficult to state to what extent the results would be generalised, since organisational maturity may influence the management of people processes and places related to the virtual workplace. This limitation is addressed in section 6.11.

The deeper understanding created by this study resulted in the identification of the management, technology and practice categories with its related concepts. This enabled the researcher to derive the people, processes and places management framework (chapter 5).

#### **6.8.5 The principle of dialogical reasoning**

The principle of dialogical reasoning relates to the researcher's sensitivity to possible disagreements or oppositions between the theoretical preconceived notions (prejudices) and the results obtained from the research. Hermeneutics recognises prejudice as the necessary starting point, as that represents initial understanding. Understanding created in one stage of the research can become a prejudice for the next stage and it is important that the researcher takes cognisance of such prejudices (Klein & Meyers, 1999:76).

The researcher was previously involved in business process management in a traditional organisation. This translates into the researcher's subjectivity being recognised in the compilation of the research questions. The researcher did not work virtually, but was aware of the challenges posed by the virtual workplace. She was exposed to the challenges related to people, processes and infrastructure in the virtual workplace due to contractors having worked virtually for the traditional organisation. The researcher was convinced that a framework for the management of people, processes and places in the virtual workplace will support the fluent and constant changing workplace by addressing the challenges faced in the virtual workplace.

This framework is discussed and graphically presented in chapter 5 of this thesis.

#### **6.8.6 The principle of multiple interpretations**

This principle relates to the researcher studying the influence that social context has upon the field of study and documenting of the perspectives shared by the participants. The researcher also needs to be sensitive to differences in perspectives among the participants. In the case of

contradicting perspectives, the researcher needs to gain an understanding of these contradicting perspectives (Klein & Meyers, 1999:77).

Participants from different types of organisations were involved and no restriction was placed on the gender or race of participants. Although the same concerns and challenges were raised by the participants, difference in interpretation of concepts, such as trust, was identified. This could be attributed to differences in the South African and German cultures. This difference in interpretation was indicated in chapter 4. The limitation this could impose is addressed in section 6.11.

#### **6.8.7 The principle of suspicion**

The principle of suspicion emphasises that the researcher needs to be aware of possible twisted or bias (favouritism) in the experiences shared by the participants. This could be due to the participants' social world of belief and the manner in which they lived their experiences in the virtual workplace (Klein & Meyers, 1999:78).

The case study, focus group discussions and interviews were conducted in an organised manner with a general positive attitude. The focus group and interview participants shared their experiences voluntarily and with enthusiasm. Cultural differences led to a different interpretation of trust and were noted in chapter 4.

A meaningful level of information richness was obtained through the combination of detailed discussions in the focus groups and interviews, the descriptive case study, as well as the weblog comments. During the focus group discussion and interviews participants enthusiastically shared and discussed viewpoints. The case study provided structured information and the weblog focussed and summarised comments. Thus, the information richness obtained assisted in creating deeper meaning and understanding of the research topic.

The following three points will focus on authenticity, plausibility and criticality as discussed by Walsham and Sahay (1999:39–66).

#### **6.8.8 Authenticity**

Authenticity refers to proving the researcher being “*there in the field*” (Walsham & Sahay, 1999:59). The researcher used direct quotes in the text (chapter 4) based on the transcripts made of the focus group discussions and interviews. These quotes reflect upon the experiences of the participants in context of the people, processes and places components.

The researcher indicated how the people, processes and places management framework was developed from the data obtained in the case study, focus group discussions, interviews and weblog.

#### **6.8.9 Plausibility**

The essence of plausibility is the manner in which the text makes sense to the reader, thus connecting to the reader’s personal and social experience, as well as the contribution it is making to the field of study (Walsham & Sahay, 1999:60).

The researcher used figures to organise the data into the people, processes and places components, which is the central theme of this thesis. This was followed with the identification of the management, technology and practice categories, based on the people, processes and places components. These categories were also presented in figures thereby organising the thoughts and theory leading to the development of the framework for the managing of people, processes and places in the virtual workplace.

The researcher organised the thesis through proper structuring of the different chapters. This was done from the setting of the background and the development of the research methodology, followed by the literature study (chapters 1, 2 and 3 respectively). The Extended Hermeneutic Circle of Learning as developed in chapter 2, was used as guideline for the research conducted and discussed in chapter 4. Based on the research conducted the

people, processes and places management framework was developed and presented (chapter 5) followed by the conclusion of the thesis.

The research is providing something unique and distinctive in the form of the framework for the management of people, processes and places in the virtual workplace underpinned by the relationship between people, processes and places. As part of the multi-method research approach the researcher used a weblog, commonly known to be a social network tool, for research. This is discussed in sections 2.3.1.2 and 2.3.2.2, including the results in section 6.4.2.

#### **6.8.10 Criticality**

According to Walsham and Sahay (1999:61) criticality is *“concerned with whether the text activates readers to re-examine assumptions underlying their work”* and to reflect upon it. The researcher hopes that readers of this thesis will reflect upon their work activities and workplace when working virtual and how they can use this management framework to assist them in minimising some of the challenges identified.

Imagining new possibilities is also a way in which criticality can be stimulated with the reader and is done through the use of metaphors or images (Walsham & Sahay, 1999:62). This was not done in this thesis although other areas of research are covered in this chapter.

### **6.9 RESEARCH QUESTIONS ANSWERED**

The sub research questions identified and listed in table 1.1 were answered in the chapters as indicated in the table 6.1: Sub research questions answered. From this, the main research questions were answered.



<b>RESEARCH SUB QUESTIONS</b>			
<p><b>WHAT IS:</b> Investigates the core or essence of the research problem and strives to describe the structure of the problem and its associated concepts. According to Roode, JD (nd) the assumption is namely that universally accepted descriptions or definitions exist.</p>			
1.1	<p><b>What research approach will be followed?</b></p> <ul style="list-style-type: none"> <li>• Qualitative, interpretive</li> </ul>	✓	Chapter 1
1.2	<p><b>What is learning?</b></p> <ul style="list-style-type: none"> <li>• Learning</li> </ul>	✓	Chapter 2
1.3	<p><b>What is hermeneutics?</b></p> <ul style="list-style-type: none"> <li>• Hermeneutics</li> <li>• Hermeneutic circle of learning</li> <li>• Extended Hermeneutic Circle of Learning</li> <li>• Application of the Extended Hermeneutic Circle of Learning as guideline for research conducted as part of this thesis</li> </ul>	✓ ✓ ✓ ✓	Chapter 2  Chapter 6
1.4	<p><b>What is a virtual workplace?</b></p> <ul style="list-style-type: none"> <li>• Waves of change</li> <li>• People in the virtual workplace</li> <li>• Types</li> <li>• Define and derive own definition</li> <li>• Advantages</li> <li>• Disadvantages</li> <li>• Infrastructure</li> </ul>	✓ ✓ ✓ ✓ ✓ ✓ ✓	Chapter 3 Chapter 4
1.5	<p><b>What characteristics are unique to the virtual workplace?</b></p> <ul style="list-style-type: none"> <li>• Specific differentiators</li> </ul>	✓	Chapter 3 Chapter 4
1.6	<p><b>What is a business process?</b></p> <ul style="list-style-type: none"> <li>• Define</li> <li>• Type of business processes</li> <li>• Levels of business processes</li> <li>• Characteristics of business process</li> <li>• Business process governance, roles and responsibilities</li> </ul>	✓ ✓ ✓ ✓ ✓	Chapter 3 Chapter 4
1.7	<p><b>What is business process management (BPM)?</b></p> <ul style="list-style-type: none"> <li>• Define and derive own definition</li> <li>• Waves of change</li> <li>• Difference between BPM and business Process Improvement (BPI)</li> <li>• Business process maturity</li> </ul>	✓ ✓ ✓ ✓	Chapter 3
1.8	<p><b>What management characteristics are unique to the</b></p>		





	<b>virtual workplace?</b> <ul style="list-style-type: none"> <li>Trust, culture, manage over a distance, manage outputs</li> </ul>	✓	Chapter 4 Chapter 5
<b>HOW DOES:</b> Describes the problem through direct observation as it unfolds in reality.			
2.1	<b>How does the virtual workplace impact on business processes?</b> <ul style="list-style-type: none"> <li>Improve agility, performance</li> <li>Type of business processes that support the people in the virtual workplace</li> </ul>	✓ ✓	Chapter 4 Chapter 5
2.2	<b>How does business processes differ between the virtual workplace and the traditional workplace?</b> <ul style="list-style-type: none"> <li>Type of business processes</li> <li>Methodology/approach</li> </ul>	✓ ✓	Chapter 4
2.3	<b>How do management characteristics differ between the virtual workplace and the traditional workplace?</b> <ul style="list-style-type: none"> <li>Specific differentiators – autocratic versus collaborative partnership</li> </ul>	✓	Chapter 4
2.4	<b>How does business processes and technology impact on an individual's activities/performance in the virtual workplace?</b> <ul style="list-style-type: none"> <li>Integrated tools, workflow, internet capacity, server access</li> </ul>	✓	Chapter 4 Chapter 5
<b>WHY IS:</b> Describes the real-life behaviour and features or characteristics of the research problem in order to establish relationships between the different variables within the area of research. Roode (nd) notes the assumption can be made that revealing these relationships can lead to generalisation of the research area and its contributory or underlying consequences.			
3.1	<b>Why does the virtual workplace need different business processes?</b>	✓	Chapter 4
3.2	<b>Why does the virtual workplace need a different management style?</b>	✓	Chapter 4
3.3	<b>Why does the individual working in the virtual workplace require different business processes?</b>	✓	Chapter 4
<b>HOW SHOULD:</b> Focuses on conclusions, implications and insights obtained during research as well as norm or standard set by the research results. It can have various outcomes, such as prescriptive or regulatory conclusions or redefining of the problem area.			
4.1	<b>How do people, processes and places interact in the virtual workplace?</b> <ul style="list-style-type: none"> <li>Relationship</li> </ul>	✓	Chapter 5
4.2	<b>How should people, processes and places be</b>		

	<b>supported in the virtual work place?</b> <ul style="list-style-type: none"> <li>• Framework for the management of people, processes and places in the virtual workplace</li> </ul>	✓	Chapter 5
4.3	How should training and development be done in the virtual workplace?	✓	Chapter 3 Chapter 4 Chapter 5

**Table 6.1: Sub research questions answered**

The main research questions are answered as follows:

**Place: What characteristics unique to the virtual workplace distinguishes it from the traditional organisation?**

The virtual workplace is decentralised and can exist anywhere at any time. It could be an office at home, at an airport and could exist for a specific purpose, such as a project. It is a flexible environment allowing for structuring of working hours to suit personal requirement. Due to its fluency it has no formal structure and it crosses the boundaries of time and space. The traditional workplace is mostly centralised with a formal structure and fixed office hours, thereby dictating time and place to work.

**Process: What characteristics are unique to business processes in the virtual workplace, distinguishing it from business processes in the traditional organisation?**

Business processes in the virtual workplace are often computer supported and standard in nature. Computer supported business processes relate to business processes that are workflow-oriented, sustaining asynchronous activities. Manual activities still need to be performed at a centralised office leading to the creation of a rhythm supporting the remote worker. Business process combinations exist in the traditional workplace, such as manual, semi-automated (email) and automated business processes with workflow components.

**People: *Can a framework or structure to support the management of people, processes and places in the virtual workplace be developed?***

The framework for the management of people, processes and places in the virtual workplace was developed, consisting of the management, technology and practice categories identified. This framework incorporates the people, processes and places components and the manner in which they interact in the virtual workplace, in a structured, holistic framework. The reference to holistic in this context relates to the three components, namely people, processes and places not being viewed in isolation.

## 6.10 CONTRIBUTION OF THIS RESEARCH

The contribution of this research is evaluated in the following section based on the principles proposed by Introna (1992:5.31– 5.33).

- **Does the theory raise problems previously not perceived, for example problems of an increasing depth, and does it display an ever-increasing fertility in suggesting new problems?**

People, business processes and virtual workplaces are covered in detail in the literature, but limited theory for the management of people, processes and places in the virtual workplace could be ascertained. This research explored the people, processes and places components and its relationship relevant to the virtual workplace. The management framework for the management of people, processes and places in the virtual workplace was developed based on the management, technology and practice categories as identified. This framework incorporates the people, processes and places components based on their relationship into a holistic structure.

New ideas that originated from this research are discussed in the section on future research in the latter part of this chapter.

- **Does the theory anticipate novel facts and auxiliary theories?**

People, processes and places in the virtual workplace were explored using an interpretivist, qualitative approach with the Extended Hermeneutic Circle of Learning as guideline. Understanding of the parts (people, processes and places) in terms of the whole, which is

the virtual workplace, was created. The framework for the management of people, processes and places in the virtual workplace was developed as a result of the learning achieved. The framework identified management, technology and practice categories with the people, processes and places concepts related to each. It is important that these concepts are to be viewed taking cognisance of their relationships to one another.

- **Is the theory more precise in its assertions and in the facts it explains than previous theories?**

Yes, it has. Limited theory for the management of people, processes and places in the virtual workplace was ascertained. Thus, the framework for the management of people, processes and places in the virtual workplace and its theory is new to the business process and virtual workplace domains.

- **Has the theory unified or connected various hitherto unrelated problems, or concepts?**

This theory has unified previously seemingly unrelated concepts with regard to management and the virtual workplace. These concepts were unified through the development of this management framework based on the relationship between the people, processes and places components in the virtual workplace.

- **Does the theory have positive and negative heuristic power?**

The Extended Hermeneutic Circle of Learning was developed by the researcher and used as guideline for the research conducted for this thesis assisted in providing a positive learning opportunity. The researcher obtained a deeper understanding of the challenges related to the virtual workplace, leading to the development of the framework for the management of people, processes and places in the virtual workplace.

- **Has the theory produced a new perspective on existing problems and thus created a new understanding of these existing problems?**

This theory produced a new perspective on the relationship people, processes and places have and more specifically with regard to the virtual workplace. A new understanding of the challenges related to the virtual workplace was obtained through the use of a case study, focus group discussions, interviews and a weblog. This new understanding assisted in the development of this management framework.

The new understanding created includes that the virtual workplace needs computer-supported process to enable easier functioning. Automated processes and workflow processes were identified as types of computer-supported processes needed in the virtual workplace.

- **Has this theory produced unconventional ideas, ideas that radically challenge current conceptions?**

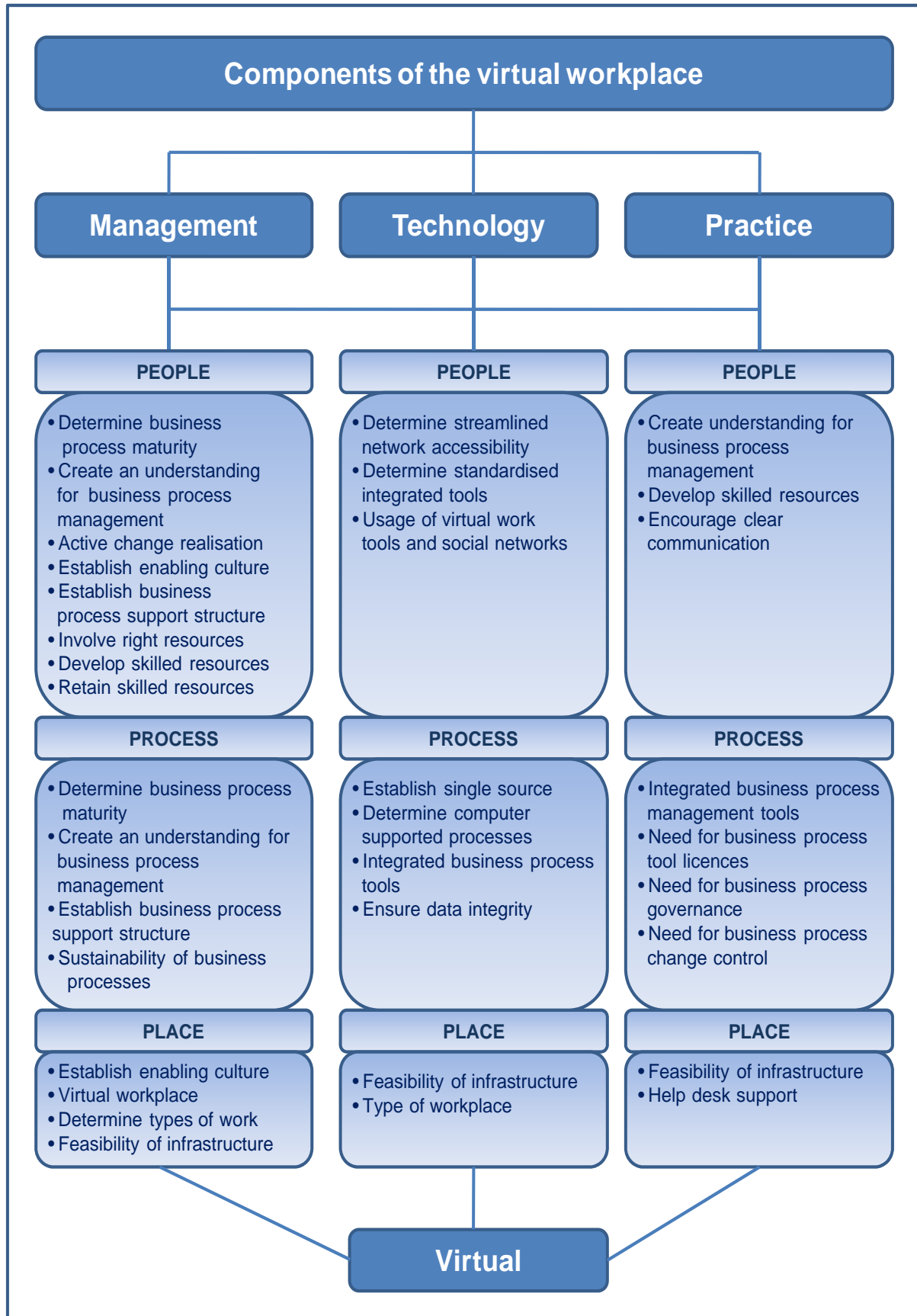
It is difficult to discern if the framework developed as part of this thesis radically challenges current conceptions. Even so, this framework suggests that the people, processes and places components related to the virtual workplace cannot be viewed in isolation due to their relationship with one other. The extent to which an organisation may be able to use this framework will depend on an organisation's maturity. This is addressed in the section covering future research.

Based on the evaluation as described above it is stated that the contributions made by this thesis are threefold, namely:

- Firstly, the researcher developed figures 3.9, 3.10 and 3.11 depicting the estimated timelines relating to the waves of change, the innovation highlights related to the individual waves and the organisational change leading to the establishment of the virtual workplace. These three figures follow the central theme of this thesis with innovation highlights relating to **process**, organisational change referring to **people** and the virtual workplace having relevance to **place**.

- Secondly, the Extended Hermeneutic Circle of Learning (figure 2.4) as developed by the researcher suffice as guideline for the research conducted for this thesis. The Extended Hermeneutic Circle of Learning assisted the researcher in obtaining a deeper understanding of the people, processes and places components in the virtual workplace. Thus an improved understanding of the parts (people, processes and places) and the whole (virtual workplace) and its relationships was obtained.
- Thirdly, the results obtained from the research led to the development of the framework for the management of people, processes and places in the virtual workplace. This newly developed framework provides structure to the people, processes and places components, based on its relationships. This new management framework therefore represents progress in the people, process and virtual workplace domains.





**Figure 6.6: Management framework for the components of the virtual workplace**

## 6.11 LIMITATIONS

This research was done to develop a framework integrating the people, processes and places components in the virtual workplace. Limitations could be possible in the application of the framework for the management of people, processes and places in the virtual workplace based on organisational maturity. Organisational maturity in terms of the organisation's culture and management may also influence the application of this framework. Operational matters, such as remote server access, have been identified during the research. As technological assessments have not specifically been addressed by the research conducted for this thesis, it could be seen as a limitation. The limitation related to this type of technology assessment goes hand in hand with the positioning of BPM as part of this research, as can be seen in figure 3.8. The focus for the research has been on a specific subset of people as identified in section 1.6.2 and this could be seen as a limitation. These limitations are incorporated in areas for future research (section 6.12).

Acknowledgement is given to the value added by the different types of BPM software tools; however, evaluation of BPM software is beyond the scope of this research.

Generalisation of findings may become apparent as the management framework is being used.

## 6.12 FUTURE RESEARCH

Future areas of research have been identified and are indicated in this section.

- Research into the impact on a company and its job structure when moving towards a virtual workplace. This relates, for example, to the structure of IT related jobs.
- Research into the assessment of business process maturity, specifically relating to the virtual workplace and the development of such an assessment model or tool.

- Research into organisational readiness for moving towards the virtual workplace. This latches onto an enabling organisational culture and organisational maturity.
- Information is distributed effortlessly through technology and the internet. This effortless distribution can be seen as positive or negative. In a positive light it reflects on the ease with which information can be obtained. In a negative light it reflects on spam and overload. Research into experiences related to both the positive and negative can shed light on the impact it has on the effective functioning of people.
- The influence of cultural differences in the virtual workplace.
- The influence of instant messaging (IM) on corporate language and the conveyance of corporate messages.
- Findings from the research conducted highlighted challenges to ensure data integrity specifically related to the business process repository and in the influence of steno-type or short hand style of data capturing.
- Research into reviewing and addressing technological limitations, such as remote server access problems experienced by virtual workers. This correlates with the operational level of BPM.
- Expand the research to include other groups of people or people who fulfill different types of functions while working remotely.

### **6.13 CONCLUSION**

This chapter discussed the Extended Hermeneutic Circle of Learning used as guideline for research conducted for this thesis. The advantages and disadvantages were included in each phase. The Extended Hermeneutic Circle of Learning provided a structured approach assisting in the analysis of the data obtained. By following the hermeneutic circle of learning a deeper understanding of the parts, namely people, processes and places in context of the virtual workplace was obtained. The understanding created reflected on the relationship between people, processes and places in the virtual workplace and the management of the people, processes and places. The researcher derived the management framework for the management of people, processes and places in the virtual workplace based on the concepts and categories identified. This was followed by an evaluation of the research

conducted based on the principles identified by Klein and Meyers (1999:67–94) and Walsham and Sahay (1999:39–66). This evaluation is indicative of the structured approach that was followed which assisted the researcher in the development of the framework for the management of people, processes and places in the virtual workplace. The research contribution based on Introna’s (1992:5.31–5.33) principles, limitations and future ideas for research are discussed in the latter part of this chapter.

In conclusion, the nature of work changed over time leading to the establishment of the virtual workplace. This decentralised workforce functions from various locations through the use of technology. The workforce requires processes and a supportive management corps to support them in the execution of their activities. The framework for the management of people, processes and places in the virtual workplace sets guidelines to support employees in the virtual or distributed workplace.