Chapter Four

Empirical Research, Analysis and Interpretation of Data

4.1 Introduction

The underlying research paradigm for this study lies within the interpretivist perspective. According to Jansen (2007:21, 57) the interpretivist point of view foregrounds the meaning that individuals assign to their experiences and that the social context is crucial in assessing and understanding human behavior. The research will be conducted from this point of view because the researcher belief that it is important to understand the natural setting of the participants in order to understand the phenomena.

Qualitative approach was used to establish why the Mindset e-Learning system is not effectively utilised in nurses' professional development in a public hospital setting, as well as how the utilisation, through an Appreciative Inquiry strategy, of the Mindset Health e-Learning system, could enhance nurses' professional development in future (Polit & Beck, 2006:210). In this research a single qualitative case study was chosen, because of the nature of the research was exploratory within a specific case, as supported by Yin (1994:284), i.e. the quest as to why the Mindset e-Learning system is not effectively used by nurses in their professional development, and in the pursuit of finding the answer as to how the Mindset Health e-Learning system could be utilised and appreciated in future, to enhance nurses' professional development in a public hospital setting (Polit & Beck, 2006:210).

Another reason for a qualitative inquiry originated from the observation that Mindset Health frequently performs quantitative surveys on the use of their e-Learning system with success, due to the resultant constructive feedback they obtain. However, the reasons for unsatisfactory usage can be explored thoroughly by means of a qualitative method and investigation.
The utilisation of the Mindset Health e-Learning system for professional
development remains low, as reflected by electronic reports attained from the
system (Mindset, 2007). Because of the reasons stated above, the researcher
had confidence that a qualitative research would provide the basis for the in-
depth investigation that would deliver the desired information that would

After collection of the necessary data, an in-depth analysis of the findings
followed. The next step was to formulate strategies that would enhance the
use of the Mindset Health e-Learning system for nurses' professional
development in a public hospital setting (De Vos et al., 2002:275).

### 4.2 Research methodology

The following paragraphs will outline the research design, research site,
description of participants (study population), sampling and data collection of
this study.

#### 4.2.1 Research design

In this research a single qualitative case study was deployed (De Vos et al.,
study research as a systematic inquiry into an event or a set of related events
which aims to describe and explain the phenomenon of interest. Yin (1999:
1209) states that a case study is ideal to incorporate various challenges within
one case that is why the researcher chose a case study design to illuminate
the different challenges within this real-life research context. The same author
further elaborates that a case study is a design focuses in-depth on a single
phenomenon within a real life context in a qualitative case study (Yin 1994:
1211). Hence the researcher explored the phenomena of research in-depthly
as described in data-collection (see 4.4) This case included a public hospital
setting, where the Mindset Health e-Learning system was placed to facilitate
professional development of nurses. The description of the research site follows underneath.

4.2.2 The research site

The data collection for this study took place in a regional public hospital in the Free State Province of South Africa. This is a level one hospital, thus a referral hospital (all district hospitals refer to this hospital), which provides all the specialisation services in health, e.g. internal medicine, mental health, surgery, obstetrics, gynecology, etc. This hospital has a total bed number of 590 (five hundred and ninety) beds with an average bed occupancy of 84% - 95%, hence this hospital is mostly fully occupied at any given time.

Including the emergency and day health services, the health professionals in this hospital service an average of 10,000 (ten thousand) patients per month. In contrast with this broad service, this hospital currently has 650 nurses. Of these 50% are professional nurses and 50% belong to the sub-categories.

Nurses are responsible for the first contact consultancy, referral and contingency health care services in a hospital. Only professional nurses are responsible and accountable for their practice, therefore the extended role of the professional nurse is to supervise the practice of the sub-category nurse. Statistically, each professional nurse is accountable for 33 - 50 patients per shift and the supervision of one sub-category nurse. Over and above this burden and overload, the hospital is rated more than 40% under-staffed in terms of nurses, according to the head of nursing. These figures clearly illustrate the seriousness of the shortage of nursing personnel in our hospitals, their subsequent work overload, as is especially noticed by those who facilitate a professional development programme. As described by one of the participants: "...it is terrible...".

Fortunately, the strength of this hospital is the fact that it has an organised in-service training programme, including an e-Learning system, called ICAM, from the Department of Health. Each department has a Course Centre, where
four professional nurses per department are elected to attend in-service training, in order to train the others in the department. Training thus spreads through the department.

This ICAM system has an independent administrator, not directly employed by the hospital, who coordinates, plans, supports, facilitates and monitors all ICAM training. This e-Learning training programme is organised, formalised and fully integrated into the general in-service training programme of this hospital, according to the focus group participants.

4.2.3 Study population

In both phases of data-collection the population consisted of different cadres of nurses working in the clinical setting, as well as in the in-service training department of a specific public hospital setting (De Vos et al., 2002:209). Participants who were approached for interviews / discussions, were thus nurses working in these two departments in the same public hospital.

4.2.4 Sampling

A non-probable, purposive sampling method was used in this study to obtain participants (De Vos et al., 2002:334). Purposive sampling was used, because the purpose of this research was to develop strategies to enhance the use of the Mindset Health e-Learning system for nurses' professional development in future. Since this research focused on the professional development of nurses working in a specific public hospital, the participants in this study were the different cadres of nurses working in the clinical setting of a certain public hospital, as well as nurses working in the in-service-training department of that same public hospital. All cadres of nurses from the two departments who volunteered to take part in the research, were included in the sample. These nurses adhered to the purpose of this study. The sample focused on data saturation, instead of the number of participants (Greeff, 2008:299). The reason for including these participants, was for them to answer the research questions. The findings were contextual, because the aim of the research was
not to generalise, but to influence practice within the specific context investigated.

4.4 Data collection

Data were collected through multiple qualitative data-collection methods, as are discussed below (De Vos et al., 2002:156). Two different methods were deployed in two phases during the same sets of interviews, while field notes were made to enrich the data for analysis. Multiple data collection techniques were used to obtain information from the two groups of participants in this public hospital. Focus group discussions were used to collect data from the nurses working in the clinical department of the hospital (Greeff, 2008:299), because of the large number of nurses working here. Contrary, unstructured, in-depth interviews were performed to obtain data from this smaller group of nurses working in the in-service training department (Greeff, 2008:296). Although the two phases are discussed separately below, they took place during the same sets of interviews.

During the first phase of the interview, general qualitative interviewing strategies were used to explore why the Mindset Health e-Learning system is not used effectively for nurses' professional development in a public hospital, followed by the second phase, an Appreciative Inquiry strategy to explore how, through the appreciation of the Mindset Health e-learning system, nurses' professional development in a public hospital setting could be enhanced. Appreciative Inquiry strategies were used, because the Mindset Health e-Learning systems are installed in public hospitals by the government, to fast-track professional development through their use. Nurses, on the other hand, are confronted with the challenge to use the Mindset Health e-Learning system for their professional development. This change is thus inevitable and needs to be effected. In this phase the researcher explored how nurses could appreciate and use the Mindset Health e-Learning system for their professional development in future. A brief description of these two phases of data-collection follows:
4.4.1 Phase one
The aim of this phase was to explore why the Mindset Health e-Learning system is not effectively used for nurses' professional development in a public hospital setting. The research question that was asked during the first phase of the data collection is described below:

The following open-ended question was asked to each of the two participant groups:

Question
"Why are you not using the Mindset Health e-Learning system effectively for your professional development?"

Probing during data collection was facilitated by the following techniques, as used by the researcher during this phase (Okun, 1997:60).

- **Minimal verbal response**: The interviewer made use of short, neutral verbal responses, like 'mmm...'.

- **Non-verbal communication skills**: Agreeing by nodding the head, or through gestures. The interviewer made use of silence, eye contact, a relaxed and open body posture.

- **Paraphrasing**: The verbal message or the words of the participants were repeated by making use of differing words and phrases, or by means of synonyms by the interviewer.

- **Clarifying**: When the interviewer wanted to understand the basic nature of the participants' statements he ventured explanations of what they had said.
• **Reflecting**: No interpretation was done, but the interviewer showed empathy and signs that he had heard the participant.

• **Summarising**: The interviewer synthesised what had been said during the interview and emphasised the important cognitive themes by using this technique.

The researcher used the above techniques in the focus group discussions, together with the added skills of having to facilitate the group discussions, using group interaction skills (De Vos *et al.*, 2002:318).

### 4.4.2 Phase two

According to Cooperrider and Avital (2004:4), *Appreciative Inquiry* strategy was used, specifically in situations where change is inevitable and needs to be accepted. This implies the researcher’s search for the best strategy in which to operationalise processes in an organisation (Cooperrider *et al.*, 2008:3). In the context of this research, the e-Learning system was installed by the Department of Health and Mindset Network’s collaborative efforts, thus adhering to the quest for nurses’ professional development. Therefore the researcher was obliged to explore strategies to put this e-Learning system into the desired use. In the first phase the researcher explored ‘why not’, which focused on the current experience of the participants. Phase two concentrated on ‘how it could be in future...’ if the participants were to deploy their strengths to make the Mindset Health e-Learning system work in a public hospital (Barret & Fry, 2005:26).

Cooperrider and Avital (2004:55) agree with Barret and Fry (2005:18-21) that *Appreciative Inquiry* is a collaborative, capacity building and inclusive process, which is exactly why the researcher chose this strategy for the second phase. The researcher wanted to collaborate with participants and include them in the development of a workable strategy through which the advantages of the
Mindset Health e-Learning system could be effectively utilised by nurses for their professional development in this public hospital setting.

Appreciative Inquiry builds capacity through the use of unconditional, positive questioning, followed by a capacity building discourse, where the researcher focuses constructively on building a desired future in the context of the participants (Barret & Fry, 2005:26).

Four open-ended, semi-structured questions were asked to both groups of participants: These questions were based on the four pillars of the Appreciative Inquiry technique (Barret & Fry, 2005:55-64; Cooperrider et al., 2008:5), i.e. Discovery, Dreaming, Designing and Destiny. The research questions that were asked during the second phase of the data collection are described below

**Question One**

"Describe how best the Mindset Health e-Learning system for professional development can be used in this hospital in future?"

This question was based on Discovery, where the participants were to discover the functional purpose of using the Mindset e-Learning system. Questioning resorted around the best of what was at the time, meaning that the Mindset Health e-Learning system was already available, thus how best it could be utilised for the professional development of nurses.

**Question Two**

"What are the possibilities that could be brought about for using the Mindset Health e-Learning system in this hospital?"

This question instilled Dreaming, where participants had to imagine the possibilities surrounding the utilisation of the system. Questioning centred around what might be the best option(s) in the direction of an ideal situation or ideas about what an ideal situation would be like.
Question Three

"What strategies can we use to enhance Mindset Health e-Learning system’s use for teaching and learning in this public hospital setting for nurses’ professional development?"

This question was to provoke Designing, where participants were to use their own context to propose a workable process of how to make use of this e-Learning system. The researcher focused on questions that would assist the participants in constructing alternative strategies to utilise the Mindset Health e-Learning system in their context.

Question Four

“How can we sustain nurses’ professional development by using the Mindset Health e-Learning system?"

This question focused on Destiny, where participants would contribute to sustain the effective use of the Mindset Health e-Learning system in a public hospital setting.

Data collection during all interviews comprised the following:

- Audio-recordings: All interviews were audio-recorded, followed by a verbatim transcription of the recordings later during analysis.
- Field notes: During the process of data collection field notes were taken in both phases of this research (Cresswell, 1994:154), as discussed below.
  - Descriptive Notes: These notes described the participants, the setting and how the participants behaved during the interview.
  - Reflective notes: These were the reflecting thoughts of the interviewer after the interview, which would assist during data analysis.
  - Demographic notes: The time, date and context of the interview.
Data collection would be considered complete once saturation had been reached, meaning that sufficient data had been gathered to identify repeating themes (Greeff, 2008:299). However, the saturated data would have to be compared to data obtained from the literature review in order to substantiate reliability. In addition to literature control, the data from the two methods would also be triangulated to enhance the rigour of the research (De Vos, et al., 2008:84). To conclude, information emanating from phase one was used to determine the reasons why the Mindset Health e-Learning system was not used effectively, while in phase two the participants co-constructed strategies that would help enhance the use of the Mindset Health e-Learning system for nurses' professional development. This data were then used to construe constructive ‘teaching and learning’ strategies that may enhance the use of the Mindset Health e-Learning system within a public hospital setting for nurses' professional development. The following findings emanated from the data being collected.
4.4.3 Realisation of data collection

The realisation is discussed to highlight some of the limitations in this research, although these limitations were altered to workable solutions by the application of the Appreciative Inquiry method. This realisation also contributes to the 'truth value' of the research, because in qualitative research the data collection does not always unfold according to the original planning (Basset, 2004:15).

Research data were collected at a regional public hospital in the Free State of South Africa, where the Mindset Health e-Learning system had been installed. It was difficult to schedule appointments for interviews, due to the shortage of personnel, and due to the fact that personnel were overloaded with their daily roles and functions. However, the researcher managed to arrange for appointments through the mediation of the Head of Nursing. Four sets of interviews were scheduled over a period of two days. The following information was obtained from either the Head of Nursing, human resources department (in-service trainers), or from the focus groups. Due to confidentiality the documentation of the hospital could not be quoted.

Two in-depth interviews were scheduled, one with a participant from the human resource department, responsible for in-service training of nurses, and another with a participant from the health and safety department, who is the Mindset Champion at the hospital. The Mindset Champion is a staff member who is the contact member for Mindset Health and who is responsible for facilitating the use of the Mindset Health e-Learning system. It is noteworthy to mention that the facilitation of the use of the Mindset Health e-Learning system is not a core function at this hospital, as this participant has his full-time duties in the health and safety department. Both these participants are professional nurses assisting with in-service training. The Mindset Champion unfortunately was not present at the hospital during the week of interviews, due to an emergency workshop in the Gauteng region. The researcher was then forced to do a telephonic interview instead.
Two focus group discussions were conducted at the same hospital.

The first focus group consisted of three professional nurses from emergency health (trauma), obstetrics and gynaecology, and internal medicine, an enrolled nurse from the trauma department, an enrolled auxiliary nurse from operation theatre, and the principal network controller from the ICT department.

The second focus group consisted of three professional nurses from the same departments as the previous professional nurses, two enrolled nurses from operations theatre and an enrolled auxiliary nurse from the emergency health department.

Each focus group thus consisted of six participants and the different nursing categories were represented, e.g. professional nurse, enrolled nurse and enrolled auxiliary nurse. The reason why this is worth mentioning is that when the researcher reflected on the time during which interviews had been scheduled, the mediator proposed that professional nurses be interviewed separately from the other sub-categories of nurses. However, the participant from human resources preferred to mix the groups. The participant from human resources also emphasised that Mindset Health did not have the buy-in from the Executive Management, except the head of nursing who knew the benefits of the system. The significance thereof became evident during the findings, when the researcher realised that the bureaucracy in the public health setting in South Africa should not be undermined if you envisage successful facilitation of processes in a public hospital.

4.5 Data analysis of phases one and two

A qualitative data analysis technique was used to analyse the data obtained during this research (recorded and verbatim transcriptions). As this was a qualitative case study (selected hospital and two groups), data analysis had to
be seen as a twofold approach (De Vos et al., 2008:334), starting with data collection and continuing during the process of data analysis.

Creswell (2009:183) asserts that the process of data analysis is to deduce scientific sense from the data. This author is of the opinion also that data analysis in a case study revolves around the in-depth description of the case, as well as the analysis of the data for themes and issues (Creswell, 2009:184). The researcher hence followed the same route as described by the previous author.

The techniques of coding qualitative data are described by Tesch (quoted by Creswell, 1994:153-159) and Creswell (2009:186). The following steps were followed in this research:

- Read through all transcripts to form an idea of the possible themes that occur in the data.
- Choose one script (longest, shortest or most interesting) and read it again.
- Underline the spoken words and concepts used in the interview.
- Transfer the underlined words and concepts to the left side of the page.
- Write down your personal perceptions on the right side of the page after you have read through the same interview again. These will form your categories.
- Translate the spoken words or concepts into scientific language.
- Take a following interview and execute the same steps.
- Develop categories and sub-categories of the themes prevalent in the data.
- Refine the categories further after you have read and re-read several interviews.
• Establish themes for the categories in order to formulate the main findings represented in the data.

• Formulate the main findings in a table for further description.

4.6 Literature control

A literature control was conducted by using different search engines, e.g. EBSCOHost, and other credible Internet search engines, like WHO online journals. The keywords used were: e-Learning, education, nursing education, professional development, hospital, health care personnel, theories in e-Learning, e-Education, online-Learning.

This literature control was used to verify the findings of the qualitative research activities with the same being presented in the literature. The literature control process was to ensure that the findings were embedded in the current literature and to increase the credibility of the research findings (De Vos, et al., 2008:84).

4.7 Rigour of the research

The rigour of the research was maintained by applying a framework of trustworthiness in qualitative research, as described by Krefting (1991:215), which is referred to as the truth-value, or credibility of the research.

The method of data collection where the participants informed the researcher by sharing their experiences, was a form which strengthened credibility; because the strategies that were developed were deduced from the participants' lived experiences. In this research the participants were involved in building a workable strategy to use the Mindset Health e-Learning system for the professional development of nurses in their hospital.
Secondly, this research was done in the described setting and there was no need to transfer or fit findings into other research contexts. The main aim of the study was to apply these strategies to the same, or to a similar context as that of the research setting. This research was applied in an applicable context only, i.e. public hospitals.

*Intuitive generalisation:* Readers of this research decide through recognition of similar aspects that the research findings could be transferred to similar contexts (Moule, 2006:372). Intuitive generalisation is further strengthened through the detailed presentation and description of the research process.

An evaluation of the *consistency* of the research findings was obtained by a clear description and application of the research process, as described in this chapter outlining the empirical research process.

*Prolonged involvement* of the researcher in nursing education and the development of e-Learning material for nurses, contributed to the appropriate interpretation of the findings.

*Triangulation of data:* In-depth interviews and focus-group discussions were used to compare and contrast the findings of this research project. The use of these two methods and the field notes strengthened the rigour of this research.
4.8 Ethical aspects

4.8.1 Ethical considerations

This research project was approved by the Research Ethical Committee of the North-West University. The researcher further adhered to ethical considerations prescribed by ethical research guidelines for Health Care Professionals (Brink, et al., 2006:30). The three main principles were applied, namely the principle of respect and human dignity, the principle of justice and the principle of beneficence.

**Principle of respect and human dignity**

Permission for this research was obtained from the national health authorities, as well as from the participants. Participants understood the aim and objectives of this research, before informed consent was obtained from them (see Appendix One). The researcher respected the views of participants and conducted the research in such a manner that the dignity of participants was protected and enhanced. Consistent transparency and maximum involvement of participants throughout the research remained an important approach to continuously adhere to the principles of respect and human dignity.

**Principle of justice**

Participants had the freedom to withdraw from the research if they were experiencing discomfort at any time. Their input in the research would have been omitted on their request if they had decided to withdraw.

**Principle of beneficence**

The research methodology used in this research, namely Appreciative Inquiry, lended itself to the process where participants informed the researcher in order to develop strategies to use the Mindset Health e-Learning system. An opportunity to develop professionally through e-Learning and the improvement in nursing competence to manage HIV and AIDS, are examples of the possible benefits of using the Mindset Health e-Learning system.
4.9 Discussion of data analysis and findings of this research

Interviews and focus group discussions were transcribed verbatim (see Appendix Two). These transcriptions were analysed, using the schedule in section 4.5. Data were independently analysed by the researcher and an independent co-coder. Findings were refined after a consensus discussion. These findings are discussed in paragraphs to follow, using a similar format as for the data collection. The findings formulated from the data obtained from the participants working in the in-service training department are discussed first, followed by the discussion of the findings from the nurses working in the different clinical departments. Findings are further discussed in the two phases, namely the phase presenting reasons why the Mindset Health e-Learning system is not used effectively and the Appreciative Inquiry phase (see chapter four, 4.3.1 and 4.3.2). Although there are four questions in Phase Two, the findings are not necessarily reported in the same sequence, due to the categorising of the data that emerged into themes in 4.9.1.2 and 4.9.2.2.

4.9.1 Findings from the participants responsible for in-service training

4.9.1.1 Phase one

This phase answered the question: "Why are you not using the Mindset Health e-Learning system effectively for your professional development?"

(i) Lack of use of the Mindset Health e-Learning system for nurses' professional development.

Both participants reiterated that they had never used the system, although the system had been installed more than a year ago. This became clear from the responses below:
"...we never used the system, but we will start as soon as possible."

"I never had a chance to use the system."

No literature was found where an e-Learning system had never been utilised. However, in the development of an e-Learning system, according to Allen (2006:38), it is important in the planning phase to do a proper analysis and planning to identify accurate implementation strategies. It is therefore implied that e-Learning developers should do a proper assessment and planning in order to forecast appropriate implementation. It was evident that this had been one of the shortcomings of the implementation of the Mindset Health e-Learning system in this public hospital.

(ii) Inadequate support from the executive management to use the Mindset Health e-Learning system.

The participant from the in-service training department emphasised that any process that did not have the buy-in from management, would not be communicated to the end-user, like the Mindset Health e-Learning system that did not have the buy-in from management at all levels and that, at the time of the interviews, was unknown to the end-user. The participant expressed the opinion that the executive management had experienced logistical problems with Mindset Health that needed clarification, and that this was a probable explanation for fearing to promote or engage the system. The result, however, was a complete failure to make use of the system.

"We do not have the buy-in from management, that is why we are not sure if we can use this system, due to problems that ... (another hospital in the province) experienced with the same system."

Ismail (2002:331) asserts that the most important aspect of implementing an e-Learning system is to make sure that the governing and organisational policies support this change. The previous assertion is supported by Childs et al. (2005:24), in the sense that the participants clarified that one of the
organisational barriers was a resisting management. The latter is further highlighted by Van der Merwe (2004:177), where he states that it is challenging to change the existing cultures, especially if the leadership of an institution is resistant. As narrated in the discussion, the executive management of this institution had not supported the role-out of the Mindset Health e-Learning system fully, which, as per the literature, posed a stumbling block for the effective utilisation of the Mindset Health e-Learning system.

(iii) Insufficient training of the in-service trainers by Mindset Health to impart training further.

Both nurses working in the in-service training department confirmed that they had received training from the Mindset Health team, but added that they were not absolutely sure how the system worked, or how they should apply the system. The following statement supported this:

"We were trained, but I am not exactly sure how the system is working, we need someone from Mindset, at least for three months."

According to Anderson (2005:2), the Community inquiry model (see chapter 2, figure 2.5), reiterates that there needs to be a teaching presence, and if not, there can be no learning presence. This showed in this research, because of the fact that the in-service trainers did not feel competent, the Mindset Health e-Learning system had not been used at the time for professional development.

(iv) Limited time to use the Mindset Health e-Learning system, due to the shortage of personnel.

The nurses working in in-service training were of the opinion that there was limited time for the nurses in the clinical departments, because they had two breaks per shift, which they used to rest, due to their busy programmes. Both
in-service trainers felt that official time should be allocated to facilitate training. The following statement supported this:

"Nurses only have half an hour tea and half an hour lunch per shift and they use it to rest, because they are overworked, because of the shortage of staff."
"The room is locked, we are only available for the key from seven in the morning to four in the afternoon and nurses are mostly busy that time."

These link to the shortage of personnel issue, as discussed in chapter one, as was also found by the WHO (2004:9) in their effort to facilitate solutions to this challenge, especially on the African continent. This research argues that the e-Learning system was supposed to alleviate the pressure, but it seemed to have posed further stressors for the already overburdened nurses. Therefore, it urged the researcher to examine possible solutions around the challenge of the shortage and overburdening of health personnel.

(v) Lack of time for in-service trainers, due to other full-time work responsibilities.

The Mindset champion was a full-time employee in the Health and Safety department, and would, therefore, have many duties and responsibilities to attend to. No extra time was allocated to him at the time for coordinating the Mindset Health system, although it was in the planning. The other in-service trainer was mostly booked for meetings and other responsibilities, e.g. the week of the interviews she was involved in a quality assurance inspection. It was evident from the following statements:

"...as for now, we are busy with a quality assurance inspection for the coming two weeks, so I don't know..."

"I am full-time employed in Health and Safety, although Mrs ... said that we will talk...."
These statements link to the previous discussion, as they are directly related to the staff shortage and the existing overburdening of the in-service trainers and trainees. Van der Westhuizen (2004:178) also underlined another insight from an academic perspective, namely that the job demands of academic staff need to be considered during the implementation of an e-Learning system. This links directly to the observation made that the job demands of the in-service trainers had not been assessed before adding extra responsibilities. That is why they had not yet embarked on using the Mindset Health e-Learning system at the time, because their readiness seemed to have been influenced by the demands of their workload at the time.

(vi) Fear of misuse of the Mindset Health e-Learning system.

This was evident from the fact that the Mindset Health e-Learning system was locked up and the keys were with the security staff at reception. Members of security staff worked from seven o'clock in the morning to four o'clock in the afternoon.

The fear of not using the system properly probably resulted from the fact that in-service participants had not been effectively trained on the Mindset Health e-Learning system and also because they had other full-time responsibilities. Locking up the e-Learning system was a protection measure in order to curb misuse. On the other hand the same protective activity threatened accessibility to use the Mindset Health e-Learning system, which contradicts Beaumont (2005:66), in that it should enable personnel to access learning at times and places that would best suit their personal life styles.

(vii) Inadequate technical support from Mindset Health for maintaining Mindset Health e-Learning system.

One of the nurses in in-service training mentioned that the Mindset Health e-Learning system had not been in a working condition for more than three months. The hospital technical staff did not know what to do and response on
the part of Mindset Health technicians was slow in spite of regular contact with them.

"...also this machine was not working for more than three months..."

Although e-Learning is about the learning and not the electronic equipment, technology plays an important role in e-Learning (Ismail, 2002:331). Technology enhances learning and therefore it is pivotal to have adequate technical support. Allen (2006:38) concurs with the previous author in his deliberation on effective implementation of an e-Learning programme.

(viii) Teacher readiness versus learner readiness.

The researcher also detected uncertainty and hesitation among the in-service trainers who apparently did not feel confident enough to proceed with the use of the Mindset Health e-Learning system, due to only three brief contact sessions by Mindset Health before the time. This became evident from the lack of commitment to start, as well as from one of the in-service trainer’s statements, namely:

"Although I am trained, I am not totally sure how the system is working..."

Wodecki (2006:83) believes that teachers need motivation to teach e-Learning. If a teacher wishes to equip a learner, the teacher must in the first place be well-equipped in the relevant field of teaching and learning. If a teacher is not ready to deliver what is expected of him or her it becomes one of the pivotal challenges of implementing an e-Learning programme. To capacitate teachers with regard to using an e-Learning system would therefore be a very important factor if the use of an e-Learning system is to function effectively or successfully.
4.9.1.2 Phase two

This phase focused on the Appreciative Inquiry where the researcher asked four semi-structured questions. This phase appeared more challenging to the in-service trainers, who found it more difficult to discuss this aspect, due to the fact that they had never used the system, thus making it difficult for them to visualise it. However, the following findings originated from their discussion:

(ix) Support from management to formalise a weekly process to use the Mindset Health e-Learning system.

One of the executive managers had already agreed to formalised training, due to previous experience with using the Mindset Health e-Learning system. There had been initial discussions regarding the use of this system for professional development. The in-service trainers were also of the opinion that the buy-in at all levels of management would guarantee the sustenance of the Mindset Health e-Learning system. It became clear that the developers and implementers of the Mindset Health e-Learning system had undermined the bureaucratic system ‘(red tape)’ in the public hospital setting. It was expressed in the following statements:

"One of the executive managers already agreed and they can start with weekly training..."

"All levels of management should buy in, in order for this system to work."

This links to the previous discussions, where it was emphasised that if management resists change, it is viewed as a major stumbling block for facilitating the use of an e-Learning system. However, since one of the executive managers had already agreed to using the process, it included the potential of improving the utilisation of the Mindset Health e-Learning system in this hospital.
Proposal to regularise and integrate the Mindset Health e-Learning system.

Both in-service trainers were of the opinion that this system was beneficial and had 'interesting' information that could help nurses in their professional development. Through negotiation, nurses could be granted time on a regular basis weekly for using the Mindset Health e-Learning system in order to improve their competence and knowledge.

"...even if I am not sure about the system, the information that I saw can really help nurses; there are videos, lessons and exercises..."

Ismail (2002:335) notes that the Learner Management System (LMS) and Learner Support System (LSS) are developed in an e-Learning programme to formalise and organise e-Learning, hence serving as a plan or schedule for e-Learning. In support, Allen (2006:37) is of the opinion that implementing e-Learning is a formal process and needs adequate planning. Therefore, the request to regularise and organise e-Learning concurs with the general requirement for the effective use of an e-Learning system.

Request for a blended learning approach for use of the Mindset Health e-Learning system.

It became clear during the data collection, that although Mindset Health had planned a self-directed learning approach, it might still take time. The in-service trainers were of the opinion that a person from Mindset Health should be at the hospital, for at least three months, to train and support. This finding was not surprising as the participants were fully aware of their limited time (they occupied full-time positions) and had also expressed their hesitation due to unfamiliarity with the system as such. A request of this nature could well be understood and appreciated.
"...we need a person from Mindset to be here, at least for three months, and later monthly, to assist and help with training."

Such possibilities and practices were discussed in the literature review as a communication approach in e-Learning (see Chapter two, 2.4.4). Van der Westhuizen (2004:157) further supports Mindset Health’s expectations for the e-Learning system in his words: “e-Learning holds pedagogical promises like self-directed learning”. However, in this case, the end-users requested a blended approach to start with, while self-directed learning would develop at a later stage and once they had become comfortable with the system. The same author also asserts that blended learning employs different strategies and various delivery systems, where the best from both e-Learning and classroom teaching can be utilised to facilitate learning (Van der Westhuizen, 2004:159).

Cossu et al. (2006:45) relate to the challenges in the transformation of teaching and learning when bringing electronic and computing devices into a hospital setting. It would be a misjudgement to expect of all health professionals to be ready to use e-Learning systems, which is why the same authors embrace the use of blended learning to scaffold the e-Learning into the hospital setting.

From this discussion it became clear that blended learning would be the preferable approach for facilitating the effective transformation from face-to-face learning to e-Learning. It is thus advisable that Mindset Health approach the implementation of their e-Learning system from a blended learning point of view.

(xii) Individual and group learning to facilitate effective learning.

Both the in-service training participants were of the opinion that a more formal group approach should be taken weekly with staff in order to facilitate
learning. They added that members of staff could also learn by themselves, individually, as the system also supported self-learning.

"... as much as group learning is requested, I also think people can come by themselves, take the key and use the equipment..."

Joubert et al. (2007:3) describe different individual and group learning strategies that can be applied. According to these authors, learning is promoted through using and accommodating different learning styles, while applying either individual or group learning strategies. As discussed in chapter 3, the Mindset Health e-Learning system has been designed to include both individual self-directed learning and group learning facilitation.

4.9.2 Findings from the participants working in the clinical departments

4.9.2.1 Phase one

(i) Lack of use of the Mindset Health e-Learning system.

Participants working in the clinical departments were unaware that Mindset Health had installed an e-Learning system. These participants were overtly amazed that the Mindset Health e-Learning system had been installed more than a year ago. The first time that the participants had apparently heard of the Mindset Health e-Learning system, had been prior to the interview. This was in contrast with the participants from the in-service training department who had been informed about the installation of the system.

Participants from in-service training acknowledged that they had never informed the colleagues of the clinical departments and that they had left alone doing so because of the reasons discussed above (see 4.9.1.1). It was clear that due to a lack of communication the information had never reached the proposed end-users of the system. Their surprised reactions were expressed as follows:
"I don't know...

"People were not aware...

"Where did they install it?"

The discussion in section 4.9.1.1(i) emphasised the importance of sufficient training and that the in-service trainers appeared to be in need of exactly that to improve their teacher readiness in order to facilitate the desired use of the Mindset Health e-Learning system. The insight gained from the literature review, proved by the findings, would equally apply to learners in this study, because learning did not take place as a result of the absence of information regarding the Mindset Health e-Learning system, as supported by the Community of Inquiry Model (chapter 2).

(ii) Lack of training or usage of the Mindset Health e-Learning system.

Because these participants had never heard of the Mindset Health e-Learning system, no training had taken place to familiarise them with the system. The participants from the training department also agreed that no training had occurred, but said that they would possibly start the following Wednesday.

"We don't know whether there are people who have been trained."

"We have never used it before. first time I heard of the system..."

As far as sufficient training as well as using the system is concerned these remarks correspond with those reflected in section 4.9.1.1 above. The findings all point in the same direction, i.e. failure to actually use the system and benefit from doing so. In the case of these nurses such learning could not have taken place as they were ignorant of the very existence of such a system in their close vicinity because no related information had been conveyed to them.
Inaccessibility of the Mindset Health e-Learning system to the nurses working in the clinical departments.

Nurses from among focus group one had had a longer period of time to experiment with the Mindset Health e-Learning system than those from focus group two who had learnt about the presence of the system only very shortly before the interviews. However, both focus groups verbalised that it had not been accessible, because it was situated behind locked doors. Firstly, the auditorium, where it had been installed, had always been locked and it would have been an effort to obtain the keys. The keys had also only been available during office hours, which had made self-directed learning difficult, because of nurses being occupied with their daily tasks. When the auditorium had been open, there had been either a meeting, or an educational class proceeding. The result of this state of affairs was that gaining entrance to the system was a complicated matter that did not at all contribute to or encourage the using of the system.

Most of the participants suggested the relocation of the e-Learning system to the information centre, or to the gynecology department, where it would be accessible. The nurses also suggested the installation of a second Mindset Health e-Learning system in an appropriate location, e.g. in the library.

"...for this thing to be in here, ah! ... for the people to use it, I suggest that if it was in the library..."

"...sometimes you find it is locked here..."

"...if it can be installed in the gynae clinic..."

"This door is always locked, the key is downstairs."

As discussed in section 4.9.1.1, the lack of use of this system had stemmed from the insecurity, as expressed by the in-service training department, due to insufficient training from the developers. The researcher, however, also realised that, because the end-users, namely the nurses in the clinical departments, were not involved during the implementation planning, the non-
use of the Mindset Health e-Learning system related to shortcomings during the implementation phase of the development process, as per Allen (2006:37).

(iv) Limited time for nurses in the clinical departments, due to the staff shortage and high workload.

The issue of demanding workloads and staff shortages, was mentioned by both groups. However, this was not presented as a major issue, because of the group having had a formalised schedule in terms of their in-service training. The researcher gained more respect for these colleagues, working in the clinical departments, who could still organise their careers, despite the pressure. The burden of their workload and staff shortages, as expressed by the group, concurred with the statistical information given by one of the executive managers. The words of one of the nurses from the one focus group clearly expressed the desperate situation existing in the public health sector, as was well understood by the researcher, being a nurse himself.

"Over the weekend it was a bash, so there was a lot of assaulted people, they were assaulted. And there is the chronic ill patients that are coming, they have asthma and on top we are only four professional nurses, nursing more than 200 patients. Some you have to say, go to the national, the other to the poly clinic, like that, it is not easy, with only two doctors, mmh ai! It is terrible! And you find some patients are collapsing and some are in emergency for resuscitation. Imagine, where two sisters have to work in the stitch room, the other one in triage and the other one in consultations. There is no balance with the ratio of personnel, it is difficult, I mean...!

These findings also relate to those being discussed in section 4.9.1.1. The shortage of staff in public hospitals is a major issue. This seemed to have become a cliché, but unless the above words of the participant are taken seriously as being an accurate portrayal of the current status quo, the challenge will remain. It is noteworthy to mention that the nurses in the clinical
departments had worked out a coping mechanism for themselves to accommodate their growth, in spite of their work challenges. These nurses have, during the interviews, suggested ways of how to integrate the Mindset Health e-Learning system in their daily work life.

(v) Insufficient empowerment and utilisation of the ICT department of the hospital.

One of the participants in the focus groups was an ICT expert and she informed the group of her involvement in the initial training session given by Mindset Health. She has, however, not heard from Mindset Health again since the first contact session. She reiterated that she had been responsible for technical support in the hospital. This information links to the finding in section 4.9.1.1, where the in-service trainers shared their dissatisfaction with the technical support provided by Mindset Health. This raised the question as to why a valuable resource at the hospital had not been sufficiently capacitated to assist with technical support.

"I remember we were here for ... it was one day, but then they said they will come again around March, April for something like two days, but then I never heard anything afterwards."

"I am here to give technical support."

This finding supports that of the in-service trainer who experienced that the developers had not responded when the system had been disfunctional for three months. The positive that emanates from this finding is the fact that the ICT expert expressed her availability in providing technical support, should formal arrangements be negotiated regarding use of the Mindset Health e-Learning system. The same literature that applied in section 4.9.1.1, is applicable here.
Learner readiness versus teacher readiness.

An aspect that one of the group participants pointed out touched on the learner versus teacher readiness, as is also discussed in this research context. The interviews were conducted in the auditorium, where the Mindset e-Learning system had been installed. The researcher noted that the Mindset Health e-Learning system was plugged out and switched off. The latter was a clear practice at most hospitals where this system was not utilised. What was more significant was when one of the professional nurses from the focus groups exclaimed to all participants that the e-Learning system was not only switched off, but that it was hidden behind the black board. No one entering the auditorium could therefore have noticed the Mindset Health e-Learning system.

This incidence clearly represented the lack of readiness of the in-service training personnel to utilise the benefits of the Mindset Health e-Learning system, as was confirmed by their 'closed mindedness' during their interviews. In strong contrast though, the participants from the clinical departments seemed far more ready or eager to use the Mindset Health e-Learning system, as became evident from their proposals for enhancing the utilisation of this system. 'Hiding' the Mindset e-Learning system behind the board also suggested that transformation from traditional classroom teaching was a challenge for this hospital's in-service trainers at the time. The latter challenged a deeper form of readiness, which was the readiness to change the teaching and learning strategies in their in-service training department.

"...look ... we don't even know about it, it is hiding behind the board, see...

...the plug is removed from the wall..."

The researcher sensed a huge difference between the projection of the in-service trainers and the nurses in the clinical department. During this phase, as previously mentioned, both focus group participants were more open and made suggestions, which guided the teaching and learning strategies that
could enhance the usage of the Mindset Health e-Learning system. The latter created an opportunity for the in-service trainers and the nurses working in the clinical department, to collaborate in order to work out a workable solution to this challenge for the future.

4.9.2.2 Phase two

(vii) More information on the Mindset Health e-Learning system.

Both focus groups requested the researcher to briefly explain what the Mindset e-Learning system was about. Both focus groups asked questions in order to make suggestions to enhance the use of the system. As was mentioned before, the researcher did not sense any techno-phobia from these participants, but to the contrary, they used their hospital intranet system, as well as another e-Learning system in the hospital. The focus groups requested information, like pamphlets, Mindset Health promotional information, even meetings with Mindset Health. Participants requested strategies to facilitate awareness of the Mindset Health e-Learning system for the bigger hospital community.

"I think if maybe they can have some leaflets..."
"...eh, Mindset, it gives different information...
"...marketing the system...

The Demand-driven model in chapter 2 (see figure 2.4) described learner needs as an important aspect of an e-Learning programme. The nurses expressed their needs, which formed an important link to formalising the strategies that would enhance the usage of the Mindset Health e-Learning system. Verbalising their needs implied that these nurses had not been involved in the implementation phase of the Mindset Health e-Learning system.
(viii) Proposal to receive training on the Mindset Health e-Learning system for all nurses.

Most participants expressed a desire to be trained on the system in order to familiarise themselves to utilise the system. They noted that a bigger number of clinical people would have to be trained in order to train others, to enable more people to use the system effectively. Most nurses presented a selfless attitude to learn during the focus group discussions and their requests for better teaching and learning strategies would allow for the benefit of the bigger group of employees and for contingency. It is noteworthy to mention that the request by the ICT expert, to enforce learning, was twice ignored by the nurses, and the nurses requested a formal scheduling instead. This is important to note, because one of the strategies that had been discussed at great length by Mindset Health, was to enforce the Mindset Health e-Learning system from the National Department of Health’s side. The researcher therefore deduced that learning should be negotiated with the nurses and not be enforced.

"We also talk about training, yes training…"

"I mean I am expecting the people, if I am not available, if somebody is available, he should know how to utilise to give other people information…"

"…teach the other people…"

These findings link to the request for sufficient training by the in-service training participants in 4.9.1.1. This is seen as a basic principle in the implementation of an e-Learning system, as discussed by Allen (2006:38). It had been proved by this author that training and motivating of users/learners indeed build and reinforce confidence, in this case sufficient confidence for them to use an e-Learning system. The statement ‘practise makes perfect’ is applicable in this situation.
(ix) Proposing a blended approach to facilitate learning by using the Mindset Health e-Learning system.

Both focus groups proposed a blended e-Learning approach accompanied by specific criteria. It was clear that the participants knew what they wanted and that they had learned to cope with the shortage of personnel and their high workload. Different approaches to blended learning included the request for an independent training coordinator, appointed by Mindset Health, who would have to be a professional nurse-educator from the college, and who would facilitate the teaching and learning on behalf of Mindset Health. Participants based this request on their other e-Learning system (ICAM), which had been running smoothly at the time, using the same model as the personnel requested. This coordinator was expected to train new users, support users on an ongoing basis and mobilise the interest of nurses to use the Mindset Health e-Learning system effectively. The request for a teaching and learning facilitator was overtly communicated.

Another request was to integrate the content of the Mindset Health e-Learning system on the intranet of the hospital for either small group learning, or for individual, self-directed learning. Some participants enquired whether the Mindset Health e-Learning system was accessible via the internet, for them to access it from home.

"...there could be somebody like a coordinator, like the ICAM administrator, this somebody should be available..."

"ICAM neh, mostly e be ntse e le diprofessional nurses and some of them mostly they were in a college..."

"...can it go through the internet?"

"...that's like medi-tech..."

These findings can be associated with similar requests and questions by the in-service training participants. The participants working in the clinical department elaborated and provided diverse modes for the blended approach, which would suit their circumstances.
Suggestion to integrate the Mindset Health e-Learning system in the in-service training programme at the hospital.

The participants from the focus groups proposed that the Mindset Health e-Learning system be integrated in their formal in-service training programmes at various levels. Firstly, they requested that the different “Course Centres” per department be used to facilitate teaching and learning, including the Mindset Health e-Learning system. A further request was to integrate the Mindset Health content on the intranet system of the hospital, as mentioned above. Some participants felt that the training department should take responsibility for integrating Mindset Health e-Learning in the in-service training programme.

“...we have the course centres, according to departments...”

“There is no formal process in place...”

It seems logical that one would negotiate for the integration of a new e-Learning system in the professional development programme of nurses. Childs et al. (2005:24) noted the organisational issues involved in integrating an e-Learning system into the current learning process of an organisation. The participants provided clear guidelines with regard to their expectations.

Appeal to formalise the implementation of the Mindset Health e-Learning system.

Most participants requested a more formal approach towards integrating the Mindset Health e-Learning system into their teaching and learning schedules. Apart from the inclusion at the course centres and a re-positioning of Mindset Health within the training department, they suggested formal scheduling, coordination, training and monitoring. Some suggested that the Mindset Health e-Learning system become part of the orientation programme of new staff members, regular training, e.g. an hour per week for experienced staff members, and a time table with relevant topics weekly by Mindset Health e-Learning. Some members enquired whether Mindset Health packaged their information modular, which, fortunately, was the case.
In summary it can be stated that participants requested more formal strategies for teaching and learning and for incorporating the Mindset Health e-Learning system.

"...perhaps the training section itself was supposed to take over and say, OK, let's start scheduling..."

"...at least one person from a certain ward, they can at least have one hour..."

"...you can get one of the 'ntho', modules neh ... if it does have printout maybe if you want to print something to give to people..."

Perusing the models as discussed in chapter two (see all three models - figures 2.3-2.5 in Chapter 2) the researcher deduced that e-Learning is a formal engagement in teaching and learning. All three models have a specific process through which e-Learning is applied, starting from its foundation phases, to building to the continuous interaction to facilitate learning. The information obtained from the different participants contained suggestions for more suitable strategies to accommodate their specific needs and circumstances. Their problems might well be addressed by offering a formal framework that would greatly enhance their usage of the Mindset Health e-Learning system.

4.9.3 Triangulation of the in-depth interviews with the focus group discussions

During the discussions of the findings from the in-depth interviews and the focus groups, it became clear that the findings all related to each other. Both groups of participants had similar reasons, or suggested similar strategies, for enhancing the use of the Mindset Health e-Learning system. Most of the findings were either discussed during the literature review, or during the literature control (see 4.9.1. or 4.9.2), which enhanced the truth value, or trustworthiness of this research.
The findings mainly suggested that the inadequate training and motivation of the in-service trainers, regarding the Mindset Health e-Learning system during implementation, led to the lack of use of the Mindset Health e-Learning system in this hospital. This was evident from the fact that the nurses in the clinical departments had not received any training and had never used the system at the time of the interviews and discussions. Therefore, the participants from the in-service training department feared to engage deeper, which could be ascribed to the lack of empowerment by Mindset Health, or their respect for the bureaucratic system that exists in public hospitals.

The nurses working in the clinical departments were far more open during the focus group discussions. All findings shed light on the challenges and were the starting point in building strategies for the effective use of the Mindset Health e-Learning system.
This chapter presented the empirical process of the research, the realisation of the data collection, as well as the findings. Contrary to the perceptions at Mindset Health, the researcher did not sense a fear for technology by the nurses during data collection, but rather a need for in-depth training on the Mindset Health e-Learning system and continuous involvement of all users.

From the above discussion it is clear that, despite the challenges, the current professional development process of this hospital was already strong, and it had the necessary potential to successfully incorporate the effective use of the Mindset Health e-Learning system. The findings of this research seemed familiar, due to the literature review undertaken first, including the perusal of previous research and other literature about e-Learning. Therefore, the truth value of this research was confirmed in that the research findings agreed with the literature review and literature control.

In the following chapter, the researcher briefly summarises this research study, provides recommendations or strategies being formulated from the findings that would enhance the use of e-Learning, and ends with conclusive remarks.
Chapter Five
Summary, Recommendations and Conclusion

5.1 Summary of chapters

In this chapter the researcher summarises the completed process of this research study. Recommendations in the form of strategies are being formulated, based on the research outcomes, as envisaged at the beginning of the research, as to how to enhance the use of e-Learning in nurses' professional development. This chapter ends with conclusive remarks on this research project.

In chapter one the researcher introduced, defined and contextualised this research. Chapter two focused on a literature review, by focusing on learning theories and applications of e-Learning, in order to introduce the underlying teaching and learning theories for e-Learning and the determinants of effective e-Learning. Adding to the literature review in chapter two, chapter three focused on the nature of professional development in the nursing profession. In chapter three the researcher also described the Mindset e-Learning system, which was the focus of this research, due to its unexpected underutilisation in public hospitals. Both chapters two and three specifically focused on the first three objectives of the research.

Chapter four presented the empirical phase of this research, the realisation of the data collection, as well as the findings. The findings of this research seemed quite familiar, due to the representative literature review that was undertaken in chapters two and three. The truth value of this research was high, due to the agreement of the findings with both the literature review and
literature control. Chapters four and five addressed the last two objectives of this research.

5.2 Recommendations of this research

As was mentioned in chapter one that the recommendations of this research would be presented in the form of strategies, formalised in a conceptual framework (see figure 5.1).

According to the online dictionary, a strategy is a plan, pattern of actions, or method, designed to achieve a goal (Online Dictionary, 2009). Wordweb further defines a strategy as a systematic plan of action (Wordweb, 2009). When applied to this research, strategies were developed to enhance the use of the Mindset Health e-Learning system, i.e. the goal. As per definition also, strategies are described as a 'patterns of actions', which is why the researcher formalised the strategies into a pattern, namely, a conceptual framework, to present a step-by-step workable plan of action.

In the context of teaching and learning, Joubert et al. (2007:1) define teaching and learning strategies as a broad plan and process, where the teacher successfully presents specific outcomes and the learners utilise these outcomes to achieve their goal. In this research, teaching and learning strategies were deduced to enhance the effective use of the Mindset Health e-Learning system for nurses' professional development.

It became evident during the literature review, data collection and analysis phases, that transformation must be part of the teaching and learning strategies being developed for an e-Learning context, since e-Learning cannot be viewed in the same category as traditional classroom learning. In addition, Woodill (2004:6) is of the opinion that e-Learning should be called e-Teaching, as the aim is to facilitate learning by using ICT. However, the author states that learning can only take place under conducive conditions for teaching and learning (Woodill, 2004:6). The author emphasises that e-Learning is not classroom teaching and that both the teachers and learners must be prepared for
and comfortable with the e-Learning milieu. The researcher also wanted to focus educators' attention on the fact that the e-Learning milieu differs from the traditional classroom context. That is why the direction of this research was to develop teaching and learning strategies that would enhance the use of the Mindset Health e-Learning system, by presenting them in a conceptual framework. Following is a diagrammatic representation of the conceptual framework that unfolded in this research and applies to the findings of this research, and which will serve as the framework for formulating the required strategy.
Figure 5.1 Conceptual Framework of strategies to enhance the use of the Mindset Health e-Learning system in nurses' professional development (designed by the researcher)
5.2.1 Strategies to enhance the use of an e-Learning system for nurses’ professional development

As the aim of this research was to enhance the use of the Mindset Health e-Learning system for nurses’ professional development in a public hospital setting, the researcher endeavored to compile a set of broad strategies, based on the findings of this research.

This research had shown that the main factor that negatively influenced the utilisation of the Mindset Health e-Learning system, occurred during the implementation phase of the Mindset e-Learning system, with the result that the system had never been used in the hospital being investigated.

Henceforth follows the discussion of the strategies, as summarised in figure 5.1. A good strategy, also one designed for the classroom setting, should include the creation of an environment that is conducive to teaching and learning. As per figure 5.1, the strategies of this research were embedded in a climate conducive to teaching and learning. The researcher used the concept, ‘climate’, instead of ‘context’, because the word context applies to a classroom setting and does not fit into the ubiquitous circumstances of e-Learning. The concept, climate, is also preferred by Gravett (2006:44), who states that the climate includes the physical climate (physical and spacious), as well as the affective-social- and intellectual climate. This was supported by the outcomes of phase one of this research [(see 4.9.1.1(iv), (v), and (vi), and 4.9.2.1(iii) and (iv)].

Based on the research findings, the e-Learning system had been installed inside an unsuitable venue, according to the participants; resulting in its underutilisation. Consequently, the nurses requested that the e-Learning system be relocated to the library, as well as that a second system should be installed at the gynecology clinic. This e-Learning system, which had been installed in the auditorium, was inaccessible to nurses, as the auditorium had either been locked most of the time or otherwise occupied during the nurses’ working hours. Time constraints during working hours also posed a problem. If the
nurses’ requests of relocation could be adhered to, the physical constraints that had been caused by the location of the Mindset Health e-Learning system at the time of the research could be eliminated.

Another aspect of this strategy is the affective-social and intellectual climate, as were suggested by especially the participants from the in-service training department and the ICT expert. The fact that these participants were still insecure and had not received any support from Mindset Health, contributed to the fact that the nurses in the clinical departments were uninformed about the Mindset Health e-Learning system. Alleviating this insecurity through follow-up training and support would contribute to the motivation of the participants of the in-service training department in doing a better job as trainers, and therefore improve the affective-social climate, which would eventually promote learning. In return learning would strengthen the intellectual climate amongst nurses in the clinical departments. Facilitation of learning, using the Mindset-Health e-Learning system, would subsequently improve. The implementation of this core strategy should hugely enhance the use of the e-Learning system.

According to the layout of this conceptual framework (figure 5.1), a strategy is delivered by a specific stakeholder at a specific time. Knowing the processes at Mindset Health and public hospitals, suitable time is proposed by the researcher in the discussion below. Adding to the systematic, or step-by-step pattern of a strategy, are the phases of the conceptual framework, namely the initiation, building and utilisation phases. Hence, more strategies are discussed below, relating to the time and phase and stakeholders.

Starting with the initiation phase, which is the beginning of the implementation phase of using the Mindset Health e-Learning system, all strategies relating to this phase are proposed to take place before and during the installation of the Mindset Health e-Learning system in a public hospital. Strategies for this phase were derived from the findings in 4.8.1.1(i) and (ii), 4.9.2.1(i) and 4.9.2.2(vii), which include the Awareness Campaign, the Distribution of Information and the Promotion of the Mindset Health e-Learning system.
As these are broad plans, awareness may include introduction and launching of the e-Learning system to all users, especially the end-users, i.e. nurses. Some participants mentioned that pamphlets could be distributed to spread more information about the Mindset Health e-Learning system, followed by active promotion of the system, hence marketing actions.

Initiation, according to the Wordweb, is a formal entry into an organisation, or an act to start an activity (Wordweb, 2009). Therefore, the application of these strategies envisions contributing to the formal entry of the Mindset Health e-Learning system into the public hospital, and adhering to the requirements of the White Paper on e-Education, mentioned in chapter one, regarding use of e-Learning for the professional development of nurses. Mindset Health as a stakeholder would be responsible for 'initiating' the system into public hospitals.

The next phase is the building phase, that contributes to the process of building confidence to use the Mindset Health e-Learning system. Strategies in this phase should be performed shortly, possibly within a week, after the installation of the Mindset Health e-Learning system in the public hospital. These strategies would endeavour to address the findings in 4.9.1.1(iii), (vii) and (viii), and 4.9.2.1(v), (vi), (viii) and (ix). These strategies include Systems Training, Continuous Training Support and Active Motivation. What was significant in the findings was that nurses were not experiencing technophobia, as was assumed by Mindset Health, but instead requested effective training and support in order to use the Mindset Health e-Learning system. During this phase the users could build confidence and competence to use the system for their professional development. Proficiency and comfort in the use of the Mindset Health e-Learning system would be the outcome of this phase and the primary stakeholder being responsible would be Mindset Health, who should empower the in-service trainers to take over this function. Mindset would, however, still remain accountable, as the end-users in the hospital requested a coordinator from Mindset Health to drive this process. According to the end-users the coordinator should be a professional
nurse, competent in teaching and learning, similar to the administrator of the ICAM system.

The third phase, that should be a continuous interaction, is the utilisation of the system. The two previous phases build towards this phase, where participants construed a sustainable resolution for their challenges. As can be gathered from 4.9.1.2, and 4.9.2.2[(x) and (xii), the participants in this research own this phase. The utilisation phase is the strength, which the stakeholders can build upon to enhance and sustain the use of the Mindset Health e-Learning system. This is also a phase where the in-service trainers take over to facilitate learning, according to the expectations of the end-users. In this case a blended e-Learning approach was preferred, strengthened by group, or individual teaching and learning strategies. In terms of this phase the end-users requested the Mindset Health e-Learning system to be integrated into their in-service training programme. One way of integration being proposed was the request for the training department to be responsible for scheduling the Mindset Health e-Learning. In this sense as the training department would be responsible for the complete professional development of nurses in the hospital, they would know how to make Mindset Health e-Learning an effective part of the professional development schedule. Another level of integration being proposed, was on the electronic platforms of the hospital, i.e. the intranet, Meditech, as well as integrating it with the already existing e-Learning system, iCAM. This could even improve the self-directed aspect of learning nurses.

Following the integration would be the organisation of professional development in this hospital. Each department has a course centre where four nurses are trained to then train the others in the department. At each given time, one or two of the four nurses are on duty, therefore training is organised and ongoing. In spite of the shortage of personnel and over-burdened nurses, professional development still continues in this innovative manner.

In addition to organisation, formalisation and regularisation were proposed by the nurses working in the clinical departments. An example of formalisation
were requests to make Mindset Health e-Learning part of the orientation of new employees, and also to have a formal programme of the modules per week. Regularisation includes that the Mindset Health e-Learning should have a slot in the training schedule at least one hour per week, as requested by both the in-service trainers and the nurses. This would contribute to the sustenance of the use of the Mindset Health e-Learning system. Supporting sustenance is monitoring, which should be the role of the Mindset Health coordinator in this public hospital. The primary stakeholder responsible would be the in-service training department of the public hospital. Through their formal, innovative system of professional development in the hospital, they could assist with the facilitation of learning, but Mindset Health would remain accountable for enhancing the use of its system, by instituting an effective monitoring system.

5.3 Conclusion

The researcher exhibited the recommendations of this research in the form of strategies conceptualised in a framework in order to accomplish the initial aim of this research, namely to find strategies that would enhance the use of the Mindset Health e-Learning system in nurses' professional development. However, these strategies may only be the beginning of a process to enhance the use of the Mindset Health e-Learning system for nurses' professional development, as was suggested by the statement by one of the nurses: "...maybe there will be a step forward, they are going to utilise it...".

Though these strategies are broad, they provide guidance for the possible roles and functions of both the hospital and Mindset Health that would enhance the utilisation of the Mindset Health e-Learning system in nurses' professional development.

An Appreciative Inquiry was used to mobilise the strengths in the public hospital setting, as well as to start the initial processes of consultation with the end-users, i.e. the nurses in the clinical departments. The involvement of
these nurses would contribute to the nurses taking ownership of the Mindset Health e-Learning system, which could improve its application.

The way forward would be to present this research report to the hospital where the data were collected and to Mindset Health, in an attempt to inform both parties of the findings and to continue negotiations for possible ways of enhancing the use of the Mindset Health e-Learning system in the public hospital being investigated.

Further research is recommended to refine these strategies. This preliminary conceptual framework of the strategies could be refined and 'modelled' in the same hospital context. Refining could, *inter alia*, include further negotiations with all stakeholders, further refining of the conceptual framework through implementation and quantitative testing during follow-up research, investigation of other public hospitals where the Mindset Health e-Learning system has been installed, and more such possibilities. This would contribute to the broader goal in South Africa and Africa, namely, to enhance the effective utilisation of e-Learning systems towards the professional development and continuous professional development of nurses.