

**EXPLORING ONLINE LEARNING EXPERIENCES OF  
POSTGRADUATE NURSING EDUCATION STUDENTS AT A  
SELECTED NURSING EDUCATION INSTITUTION IN  
KWAZULU-NATAL**

A Dissertation Submitted To:

The School of Nursing and Public Health College of Health Sciences

**University of KwaZulu-Natal (UKZN)**

In Partial Fulfilment of a:

MASTERS DEGREE IN NURSING (EDUCATION)

VALERIE N. MDUNGE

RESEARCH SUPERVISORS:

PROFESSOR N.G. MTSHALI

DOCTOR S.Z. MTHEMBU

**2012**

## DECLARATION

I, Valerie Ndingiliza Mdunge, hereby declare this research dissertation titled “Exploring online learning experiences of postgraduate nursing education students at a selected nursing education institution in KwaZulu-Natal” is my original work. It has never been submitted for any other purpose or to any other academic institution. Sources of information used in this work have been acknowledged in the reference list.

Student`s name: Valerie Ndingiliza Mdunge

Signature..... Date.....

Supervisor`s name: Prof. N.G. Mtshali

Signature..... Date.....

Co- supervisor`s name: Dr. S.Z. Mthembu

Signature..... Date.....

## **DEDICATION**

This dissertation is dedicated to my family, friends and colleagues, for their love and support.

**N**

## ACKNOWLEDGEMENTS

Above all, I would like to express my thankfulness to God Almighty who directed me in His plan.

- My sincere appreciation goes to my research supervisor and lecturer, Doctor Sindi Mthembu, for all her support, guidance, encouragement and patience throughout the study period. I have been blessed to have her as my supervisor.
- My greatest gratitude also goes to my co- supervisor, Professor Fikile Mtshali, for her input, advice and tolerance.
- My deep appreciation to all my family members, especially my husband, Bheki, who has stood by me with support, understanding and love; thank you so much. Also to my children, Wandile, Siyanda, Sipiwe and Busi, for being there for me.
- Special thanks go to my sister, Monica Zuma, Zenna Phakamile Zuma my sister-law, and all my nieces and nephews for their support and understanding.
- Warm appreciation and heartfelt thank you goes to my friends especially Nelisiwe Ndlovu and Zanele Zwane for prayers, motivation and support.
- To the study participants, this work was a success because of you. I am so thankful.

## **ABSTRACT**

### **Background**

Online learning is becoming an indispensable complementary teaching and learning tool and has been an integral aspect of education in many tertiary institutions around the world. In nurse education and training, online learning, web-based learning or e-learning is a fundamental necessity, especially in the light of the growing shift into information and communication technology (ICT).

The South African e-education policy requires every teacher and every learner in the education and training sector to be ICT capable and be able to use ICTs confidently and creatively to help develop the skills and knowledge they need as lifelong learners, to achieve personal goals and to be full participants in the global communities.

### **Purpose**

The purpose of this study was to explore the online learning experiences of postgraduate Master's Degree nursing education students at a selected nursing education institution in KwaZulu-Natal.

### **Methodology**

A qualitative, exploratory, descriptive research design was used and the whole population of sixteen postgraduate nursing education students who were exposed to online learning participated in the study. Data was collected through semi-structured individual followed by focus group interviews and thematic data analysis was used to analyse data.

### **Findings**

The study revealed that it was the first time that most of the participants had been exposed to an online learning course, and reflected that they had felt empowered by this experience

which provided them opportunities of reflection and deep learning. Participants indicated that the range of interactions and the level of engagement determined the eventual level of knowledge constructed.

It was revealed from the findings that the online facilitator plays a key role in guiding, supporting and ensuring that the learning outcomes are achieved by all students. Benefits of the online learning space included increased socialisation, convenience and flexibility, asynchronicity and accessibility to learning material. Challenges were lack of real-time response, financial cost and technical issues.

### **Recommendations**

This study recommends an intense orientation of students to ICT and to be informed of requirements before the commencement of online course. The online facilitators must be more visible in the online space and participate more often in the discussions and stimulate constructive dialogue.

## **LIST OF FIGURES:**

|                                  |    |
|----------------------------------|----|
| Figure 1.1: Conceptual framework | 10 |
|----------------------------------|----|

## **LIST OF APPENDICES:**

|   |     |
|---|-----|
| Appendix 1: Interview Guide                       | 110 |
| Appendix 2: Information sheet                     | 111 |
| Appendix 3: Declaration (Informed consent)        | 112 |
| Appendix 4: UKZN- Ethical Clearance               | 113 |
| Appendix 5: UKZN - Permission to conduct Research | 114 |

## **LIST OF ABBREVIATIONS:**

|        |  |
|--------|--|
| DOE    | Department of Education                              |
| ICT    | Information and communication technology             |
| IT     | Information technology                               |
| LAN    | Local area network                                   |
| Moodle | Modular Object-Oriented Dynamic Learning Environment |
| NEIs   | Nursing education institutions                       |
| PG     | Postgraduate   |
| SANC   | South African Nursing Council                        |
| SON    | School of Nursing                                    |
| UK     | United Kingdom                                       |
| UKZN   | University of KwaZulu-Natal                          |
| WHO    | World Health Organisation                            |

# Table of Contents

|   |     |
|---|-----|
| DECLARATION .....   | ii  |
| DEDICATION.....   | iii |
| ACKNOWLEDGEMENTS .....  | iv  |
| ABSTRACT.....   | v   |
| LIST OF FIGURES: .....  | vii |
| LIST OF ANNEXURES:.....                                       | vii |
| LIST OF ABBREVIATIONS:.....                                   | vii |
| CHAPTER ONE.....  | 1   |
| INTRODUCTION .....  | 1   |
| 1.1 BACKGROUND TO THE STUDY .....                             | 1   |
| 1.2 PROBLEM STATEMENT .....                                   | 5   |
| 1.3 PURPOSE OF THE RESEARCH .....                             | 7   |
| 1.4 OBJECTIVES OF THE RESEARCH .....                          | 8   |
| 1.5 RESEARCH QUESTIONS.....                                   | 8   |
| 1.6 SIGNIFICANCE OF THE STUDY.....                            | 9   |
| 1.7 CONCEPTUAL FRAMEWORK .....                                | 9   |
| 1.8 OPERATIONAL DEFINITION OF TERMS.....                      | 13  |
| 1.9 CONCLUSION.....   | 13  |
| 1.10 DISSERTATION OUTLINE.....                                | 14  |
| CHAPTER TWO .....   | 15  |
| LITERATURE REVIEW .....                                       | 15  |
| 2.1 INTRODUCTION .....  | 15  |
| 2.2 THE EVOLUTION OF ONLINE LEARNING AS A LEARNING TOOL ..... | 15  |
| 2.3 CATEGORIES OF ONLINE LEARNING .....                       | 17  |
| 2.3.1 Synchronous Online Learning .....                       | 17  |
| 2.3.2 Asynchronous Online Learning .....                      | 18  |

|       |   |    |
|-------|---|----|
| 2.4   | TYPES OF ONLINE LEARNING .....                        | 19 |
| 2.4.1 | Facilitated online learning.....                      | 19 |
| 2.4.2 | Self-paced online learning .....                      | 19 |
| 2.4.3 | Blended or hybrid learning .....                      | 19 |
| 2.5   | THEORETICAL BASIS FOR ONLINE LEARNING.....            | 21 |
| 2.5.1 | Cognitive Learning Theory.....                        | 21 |
| 2.5.2 | Constructivist Learning Theory .....                  | 23 |
| 2.5.3 | Engagement Learning Theory.....                       | 26 |
| 2.5.4 | Connectivism Learning Theory .....                    | 28 |
| 2.6   | BENEFITS OF ONLINE LEARNING.....                      | 29 |
| 2.7   | CHALLENGES AND BARRIERS OF ONLINE LEARNING .....      | 32 |
| 2.8   | EMPIRICAL STUDIES ON ONLINE LEARNING.....             | 33 |
| 2.8.1 | Students' Perceptions of Online Learning .....        | 33 |
| 2.8.2 | The Role of the Facilitators in Online Learning ..... | 37 |
| 2.8.4 | Recommendations to Improve Online Learning .....      | 39 |
| 2.9   | CONCLUSION.....                                       | 40 |
|       | CHAPTER THREE .....                                   | 41 |
|       | RESEARCH METHODOLOGY.....                             | 41 |
| 3.1   | INTRODUCTION .....                                    | 41 |
| 3.2   | RESEARCH DESIGN .....                                 | 42 |
| 3.2.1 | Exploratory Design .....                              | 42 |
| 3.2.2 | Descriptive Design.....                               | 42 |
| 3.3   | RESEARCH SETTING .....                                | 43 |
| 3.4   | POPULATION .....                                      | 43 |
| 3.5   | SAMPLE AND SAMPLING PROCEDURE.....                    | 44 |
| 3.6   | DATA COLLECTION PROCESS .....                         | 44 |
| 3.7   | DATA ANALYSIS.....                                    | 47 |

|  |    |
|--|----|
| 3.8 DATA MANAGEMENT.....                             | 48 |
| 3.9 ETHICAL CONSIDERATIONS.....                      | 48 |
| 3.10 ACADEMIC RIGOUR AND TRUSTWORTHINESS.....        | 49 |
| 3.10.1 Credibility.....                              | 49 |
| 3.10.2 Transferability.....                          | 49 |
| 3.10.3 Dependability.....                            | 50 |
| 3.10.4 Confirmability.....                           | 50 |
| 3.11 CONCLUSION.....                                 | 50 |
| CHAPTER FOUR.....                                    | 51 |
| PRESENTATION OF THE FINDINGS.....                    | 51 |
| 4.1 INTRODUCTION.....                                | 51 |
| 4.2 SAMPLE REALISATION.....                          | 51 |
| 4.3 PRESENTATION OF DATA FINDINGS.....               | 52 |
| 4.3.1 Students' online learning experiences.....     | 52 |
| 4.3.2 Ability and skill to use technology.....       | 54 |
| 4.3.3 Issues of internet and computer access.....    | 57 |
| 4.3.4 Degree of interaction and engagement.....      | 58 |
| 4.3.5 Role of the facilitator.....                   | 61 |
| 4.3.6 Benefits of online learning.....               | 63 |
| 4.3.7 Challenges of online learning.....             | 66 |
| 4.3.8 Students' recommendations for improvement..... | 68 |
| 4.4 CONCLUSION.....                                  | 69 |
| CHAPTER FIVE.....                                    | 71 |
| DISCUSSION, RECOMMENDATIONS AND CONCLUSION.....      | 71 |
| 5.1 INTRODUCTION.....                                | 71 |
| 5.2 DISCUSSION OF THE FINDINGS.....                  | 72 |
| 5.2.1 Students' online learning experiences.....     | 72 |

|   |    |
|---|----|
| 5.2.2 Ability and skill to use technology .....       | 75 |
| 5.2.3 Issues with internet and computer access .....  | 77 |
| 5.2.4 Degree of interaction and engagement.....       | 78 |
| 5.2.5 The role of the facilitator .....               | 81 |
| 5.2.6 Benefits of online learning.....                | 83 |
| 5.2.7 Challenges of online learning .....             | 85 |
| 5.2.8 Students' recommendations for improvement ..... | 88 |
| 5.3 CONCLUSION.....                                   | 89 |
| 5.4 LIMITATIONS OF THE STUDY.....                     | 90 |
| 5.5 RECOMMENDATIONS.....                              | 90 |
| REFERENCES .....                                      | 92 |

## INTRODUCTION

### 1.1 BACKGROUND TO THE STUDY

It has been suggested that information and communication technologies (ICTs) can and do play a number of roles in education. These include providing a catalyst for rethinking teaching practice (Shaheeda, Ngambu & Czerniewicz, 2006); developing the kind of graduates and citizens that are required in an information society (Department of Education (DOE), 2001); improving educational outcomes (especially pass rates); and enhancing and improving the quality of teaching and learning (Wagner, 2001; Garrison & Anderson, 2003).

Over the past few decades, the use of ICT has become evident in all spheres of life, with people of all ages accessing computers and the internet to interact and communicate on a daily basis (Louw & Hanmer, 2002).

Technology can be used for enhancing teaching in the classroom and for educating students outside of the traditional classroom scenario. The traditional delivery system for higher education has been a classroom setting with a professor giving lectures and students listening and writing notes. Interaction between the teacher and student has been viewed as an essential learning element within this arrangement. However, innovations in delivery mechanisms have changed this paradigm (Shaheeda et al., 2006) and advances in ICT are enabling little used delivery modes, such as online learning, to gain new life (O'Malley & McCraw, 1999).

The growth in online learning has been exponential in the sphere of general education, with ICT integrating the active learning principles of reflection, interaction and engagement (Koch, Andrew, Salamonson, Everett & Davidson, 2010; Evans, Gibbons, Shah & Griffin,

2004; Freasier, Collins & Newitt, 2003). Online learning, however, has become specifically relevant to medical and allied health education. Online learning environments reduce time and space barriers to learning and thus are called ‘anytime, anywhere learning’ (O’Neil, Fisher & Newbold, 2009). Grainne Conole, at the United Kingdom (UK) Open University, commenting on the growth of online learning wrote, *‘Online learning is no longer a peripheral activity, the province of the isolated enthusiast, but is pervading Higher Education, not just as an effective infrastructure for distance courses but blended with more traditional approaches on campus’* (Conole & Fill, 2005, p.1). According to Kim et al. (2005), online learning is making a significant impact on the fabric of higher education. The number of online courses offered by different colleges and universities, including nursing education institutions (NEIs), is growing at a rapid rate (Rodriguez et al., 2008).

Nowadays, in order to adapt to globalization and advances in information technology (IT), online learning communities are being incorporated into nursing education to expand opportunities for learning (Julie & Fakude, 2006; WHO, 2005), and the integration of these technologies into educational curricula has been demonstrated to have a positive effect on students’ learning (Harvey, 2003). With the current advances in ICT, such as improved power, faster data transfer rates with the attendant lowering of cost, technology-enabled instruction in the form of online learning has emerged as a feasible and economically sound means of expanding access to quality higher education (Asunka, 2008).

Khan (2005) asserts that the use of ICT in delivery of education has a major implication for students and institutions since it provides opportunities to create a well-designed, student-centred, interactive, affordable, efficient and flexible online learning environment. The use of ICT to facilitate learning has found support among many scholars (Rohleder, Bozalek, Carilissen, Leibowitz & Swart, 2007; Oblinger & Oblinger, 2005). In South Africa, the use of

ICT is supported by the Department of Education (DoE) White Paper (2004). The South African government has indicated that ICT has the potential to improve the quality of education and has pledged to “... *invest in national initiatives to increase access... and provide electronic resources of highest quality...*” to students in South Africa (DoE, 2004, p. 11). This investment in technology is essential, as today’s students in higher education are part of the first generation to have regular access to the vast resources of the internet. There is also evidence that modern students are not only comfortable with technology, but that it has fundamentally changed the way in which they communicate and learn (Barnes et al., 2007). This shift has led to educators in higher education questioning how their institutions are adapting to take advantage of these new tools and the new methods of teaching (Oblinger & Oblinger, 2005). There has thus been a dramatic increase in the number of online courses offered by universities, and most higher education courses take advantage of the improved learning experience which has been perceived **as** being of high quality (Rodriguez et al., 2008).

Technology has developed and expanded and current efforts are directed at online learning and the integration of the internet as a tool for education delivery. Nurse educators are making increased use of online learning in nursing education because it has been recognised as a useful tool for providing and facilitating high quality and flexible teaching (Reilly & Spratt, 2007; Woo & Reeves, 2007). According to the philosophy and policy of the South African Nursing Council (SANC) with regard to professional nursing education, a variety of learning opportunities covering the full spectrum of the curriculum must be provided (SANC, 1992). Likewise, educators’ teaching styles should be adapted to accommodate the new digital generation.

It has been argued that flexibility of time and mastery of the learning process has enhanced the effectiveness of learning as it increases student motivation, satisfaction and enjoyment in learning (O'Neil et al., 2009). It has also been suggested that the incorporation of computer technology into the nursing profession increases skill in clinical reasoning and expert decision making. May et al. (2009) conducted a study on students' perceptions of self-paced, web-based electives. Students reported having a favourable experience with self-paced online courses, highlighting flexibility as a major benefit. However, they also described various challenges, which included lack of interaction with classmates and the faculty, which led to social isolation; difficulty in conveying material online; technical difficulties, such as computer access and lack of audio synchronization for power point slides; and the lack of immediate feedback (May et al., 2009).

A survey conducted by Sit et al. (2005) on students' experiences in online learning within a part-time, post-registration nursing degree programme revealed that convenience and flexibility with regards to time were highly rated. Students indicated that they were able to work through the subject material at their own pace and navigate the subject learning material, while also having opportunities to interact with their peers and teachers. The findings showed the value of supplementary face to face resource sessions as these contributed to students' overall satisfaction with online learning (Sit et al., 2005). Meyer et al. (2007) conducted a study to explore and interpret students' affective experiences in an online learning environment and the findings showed that the students experienced both positive and negative emotions. Feelings of loneliness and isolation which increased levels of uncertainty, anxiety and frustration due to technical problems were highlighted by participants, while positive experiences included interaction, interdependence, communication, support and feeling of belonging (Meyer et al., 2007).

Online learning is defined as the use of the internet to access learning material, interact with the content, facilitator and other students and to obtain support during the learning process in order to acquire knowledge, to construct personal meaning, and to grow the learning experience (Ally, 2004). Carliner (1999) defines online learning as educational material that is presented on a computer, whereas Khan (1997) defines online instruction as an innovative approach for delivering instruction to a remote audience, using the web as a medium.

Terms that can be used interchangeably with online learning include e-learning, web-based learning, internet learning, distributed learning, computer-assisted learning, tele-online learning, network learning, virtual learning and distance learning. All these terms imply that the student is at a distance from the teacher or facilitator, that the student uses some form of technology (usually a computer) to access the learning material, that the student uses technology to interact with the teacher and other students, and that some form of support is provided to the student (Ally, 2004).

## **1.2 PROBLEM STATEMENT**

Online learning is becoming an indispensable complementary teaching and learning tool. The challenges lie in identifying and conceptualising ways that online learning can usefully contribute to pedagogical designs, curricula and student learning experiences (Shaheeda et al., 2006). The South African government has identified the use of ICT for teaching and learning as an important priority. The South African e-education policy states that: *“Every South African manager, teacher and learner in the education and training will be ICT capable (that is, use ICTs confidently and creatively to help develop the skills and knowledge they need as lifelong learners to achieve personal goals and to be full participants in the global community) by 2013”* (DOE, 2004, p. 17). According to Shaheeda et al. (2006), the ultimate goal of the DOE e-education policy is the realisation of ICT capable managers,

educators and learners by 2013. Read together with the National Higher Education Plan, these two policies have ramifications for instructional designers, educators, students and researchers. As with the rest of the world, higher education in South Africa is under pressure to increase participation from diverse groups of students and to produce the skills required for a rapidly changing society. It is in this educational context that new opportunities for online learning have arisen.

Just as the demand for online learning opportunities has increased, the complexity of providing this type of education has also grown. In order to meet the increased demand for nurses and simultaneously keep up with modern technology to meet their students' needs, NEIs are facing the challenges of changing not only their traditional pedagogical beliefs about teaching, but also the way they design nursing education (Runquist, DeLaO'Kerns, Fee, Choi, & Glittenberg, 2006; Ironside & Valiga, 2006; AACN, 2005; Murray, 2005; Ritchie, MacNeil, Evans & Micsinszki, 2005; Gebbie et al., 2003). Further complicating this milieu is the fact that the nursing curriculum is historically mandated and based on a model recognised as unresponsive to student preferences and needs (Fawcett, 2005). This leaves nurse educators wondering what the current student perceives as attractive and motivating in their online learning experiences.

Online learning is fast becoming a tool to train soft skills in South Africa (Deller, 2010) and given the growing importance of self-managed learning, understanding meta-cognition (self-monitoring and self-regulation of abilities) is becoming an area of increasing research interest (Renner & Renner, 2001; Zimmerman & Schunk, 2001). Soft skills include all the critical cross-field outcomes (CCFO's) specified by the DOE in South Africa. According to Sharpe and Benfield (2005), online learning developments based on changes to traditional pedagogy

evoke the most inconsistencies in student perceptions and it is here that individual differences emerge as possible success factors.

As online learning is a new way of teaching, limited research has been conducted on students' experiences (Moule et al., 2010, Dyrbye et al. 2009; Julie & Fakude, 2006; Sit et al. 2005). As no research has been conducted in this field at the University of KwaZulu-Natal, this study is aiming to fill the gap. Determining the current perspectives of students regarding teacher-student interactions in their online courses will provide vital information about where nurse educators need to direct their focus when developing or revising courses (Trilling & Hood, 1999; Potter & Perry, 2005; Sand-Jecklin & Schaffer, 2006).

The most likely explanation for the lack of research on the experiences of online students is that the overwhelming majority of online learning research to date has focused on establishing the value of particular online learning course designs, teaching methods or tutor interventions (Sharpe & Benfield, 2005). The objectives have been teacher-focused rather than student-focused, with the evaluative objectives aimed at investigating the pedagogic worth of online learning innovations. Much of the research focus in online education has been on technical characteristics such as platforms, download speed, engaging links, streaming audio and streaming video. Evaluating the experiences of students as participants of this teaching and learning methodology is thus limited, especially in nursing education. This study therefore aims to investigate postgraduate nursing students' experiences of their interactions whilst participating in an online course at a selected nursing education institution in KwaZulu-Natal.

### **1.3 PURPOSE OF THE RESEARCH**

The purpose of this study was to explore the online learning experiences of postgraduate (PG) nursing education students at a selected Nursing Education Institution in KwaZulu-Natal.

#### **1.4 OBJECTIVES OF THE RESEARCH**

This study was driven by the following objectives:

- (a) To explore the experiences of PG nursing education students who were exposed to online learning at a selected NEI in KZN.
- (b) To describe the views of PG nursing education students relating to online interactions and engagement, and access and use of the online learning component in their programme.
- (c) To describe the benefits and/or challenges of online learning in post graduate nursing education as experienced by the students at a selected NEI in KZN.

#### **1.5 RESEARCH QUESTIONS**

The study sought to answer the following research questions:

- (a) What are the learning experiences of PG nursing education students who were exposed to an online course?
- (b) What are the views of PG nursing education students on issues relating to engagement and interaction in the online course that they were exposed to?
- (c) What are the views of PG nursing education students on issues relating to access of the online course that they were exposed to?
- (d) What are the views of PG nursing education students on issues relating to technology use during the online course that they were exposed to?
- (e) What were the perceived benefits of online learning in PG nursing education courses?
- (f) What challenges were experienced by the PG nursing education students who were participating in the online learning module or course?

## **1.6 SIGNIFICANCE OF THE STUDY**

The results of this study may provide information that will add to the body of knowledge related to online learning. It will be available for use by online and academic staff in improving such programmes, not only for nursing education, but for higher education institutions at large. The responses from the participants may have the potential to assist in creating an improved online learning environment, improved learning practices for online courses and further support the on-going development of the existing programme(s) at the School of Nursing. The outcomes of this study may assist in providing policy makers in higher education, nursing education and the South African Nursing Council (SANC) with scientific evidence on how to address the factors influencing online learning of students. Lastly, the outcomes may contribute to the baseline data for further research.

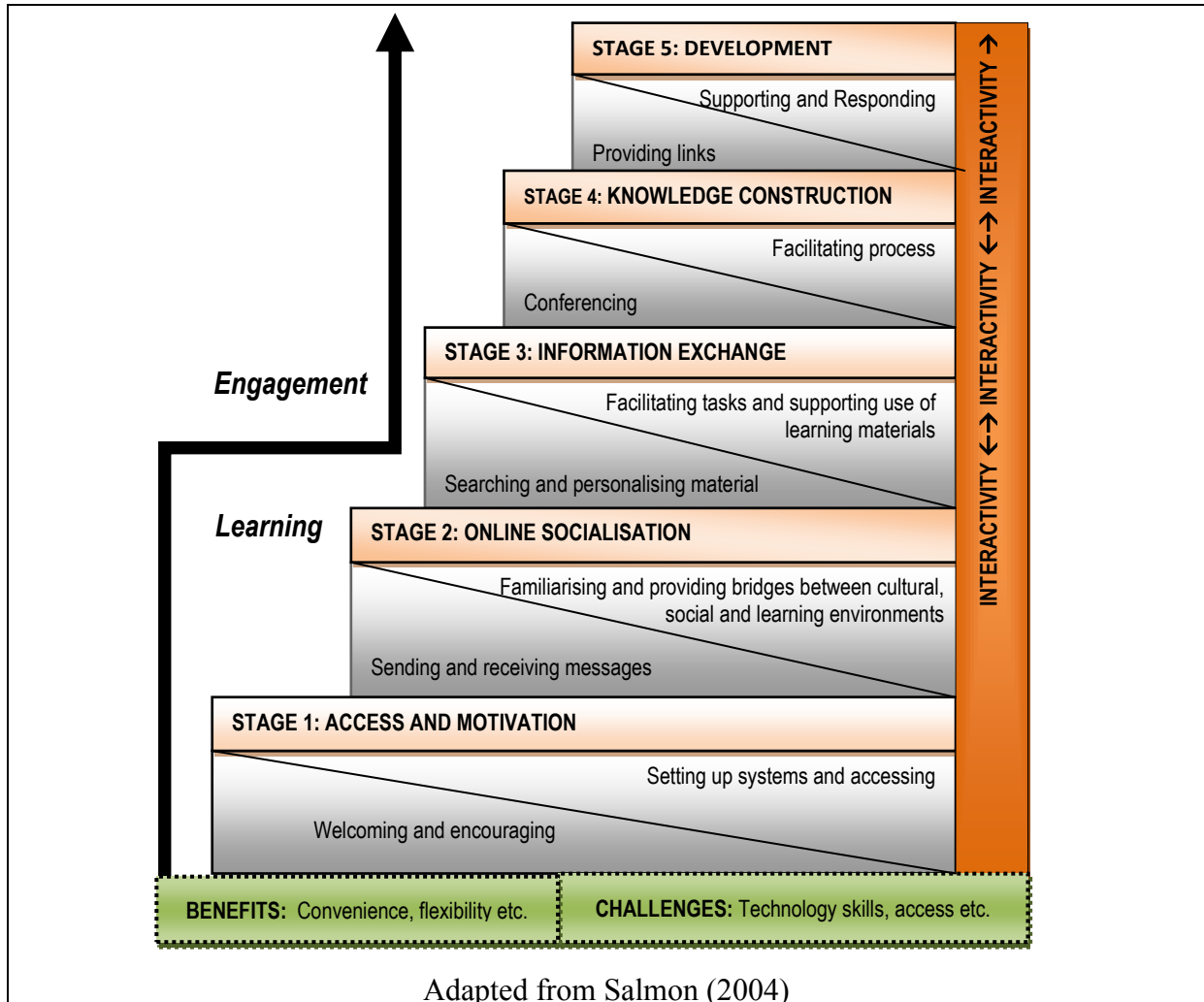
## **1.7 CONCEPTUAL FRAMEWORK**

Burns and Grove (2009) define a framework as an abstract, logical structure of meaning, which serves as a guide to the development of the study. The conceptual framework adopted for this study is Salmon's (2004) five-stage model of interactivity and online teaching and learning delivery. This model demonstrates the intensity of interactivity between the participants at different stages of an online course (student to content, student to student and student and instructor).

According to Salmon (2004), the five stages that students go through in an online learning course are access and motivation, online socialization, information exchange, knowledge construction and development. Each stage requires participants to master technical skills (shown at the bottom left of each step), online moderating skills (shown at the right top of each step), learning and engagement which takes place in all the stages (shown as arrow on

left) and an amount of interactivity is required between the participants at each stage (bar running along the stages), as depicted in figure 1 below.

**Figure 1.1: Conceptual Framework for Online Learning**



**Stage 1 (Access and motivation):** This stage commences with information regarding connectivity and what technical support will be given to the students, along with strong motivation and encouragement to put in the necessary time and effort. The online facilitator’s role is to allay the fears and frustrations of the students by giving all the necessary information and the steps to follow in order to succeed with the course, such as passwords, how to access the course web site, and the posting and technical support they will receive should the system not respond as expected (Salmon, 2004). Learning and engagement are the

essential elements to get the participants through the early stages of online learning and becomes more intense as they progress through the stages. This facilitates the accomplishments of the programme and/ or learning outcomes.

**Stage 2 (Online socialization):** This stage is critical to the success of the online course and involves the socialization and networking of the participants to create an online learning community. Some students, according to Salmon (2004), are reluctant to participate in written discussion forums, and they should receive encouragement to read and enjoy other students' contributions for a while until they have gained enough confidence to respond and post their own messages. As they become more familiar with the online culture and technology, they will be able to participate more comfortably (Salmon, 2004).

The role of the facilitator is to help the students as online participants to develop a sense of community. This is similar to the more traditional face to face techniques of icebreaking, brainstorming ideas in a group, taking tea breaks and so on. Informal social interaction is an important component of online learning as it not only helps students feel comfortable interacting in this environment, but also combats feelings of isolation or solitude. Informal social interaction consequently fosters a welcoming learning community that cultivates live discussion among its community members who feel respected and free to express their views (Salmon, 2004).

**Stage 3 (Information Exchange):** This stage serves as an orientation to the course and provides the opportunity for information exchange. Information starts to flow and the students feel excited about the immediate access and fast information exchange. Students also express concern about the volume of information suddenly becoming available and the risk of

information overload. The facilitator can provide answers for frequently asked questions to ease some of the unnecessary communication (Salmon, 2004).

**Stage 4 (Knowledge Construction):** This stage assists learning and knowledge to be constructed through interaction. As interactions unfold and expand, students engage in some active exploration of issues, taking positions and discussing their viewpoints in argumentative formats. They reflect on and re-evaluate their positions. The facilitator plays a role in building and sustaining groups, ensuring that diverse views are given consideration and helping to keep the discussions on track (Salmon, 2004).

**Stage 5 (Development):** Students explore their own thinking and knowledge building processes as they reflect on and discuss how they are networking and evaluate the technology and its impact on the learning process. Students become responsible for their own learning and require little support from the instructors. Experienced students become helpful as guides or technical stewards to less experienced peers and provide feedback to the instructor to help improve the learning process (Salmon, 2004). Throughout the all stages learning and engagement takes place.

**Online Learning Variables:** The other variables in online learning include dialogue, programme structure and student autonomy. The first variable, *dialogue*, is developed by teachers and students during the course of interaction that occurs when the facilitator gives instructions and the students respond. Dialogue and interaction are similar and are used synonymously. The second variable, *programme structure*, is the extent to which an online course element (learning outcomes, content themes, presentation strategies and evaluation activities) change to meet the specific needs of the individual student. The third variable, *student autonomy*, is the extent to which the student, rather than the facilitator, determines the

goals, learning experiences and the evaluation decisions of the learning programme in the teaching and learning relationship (Moore, 1997).

Some of the concepts of the above conceptual framework were used to guide the development of this study. The researcher aimed at analysing the experiences of post graduate students who were participating in an online course relating to issues of online socialisation, student engagement and interaction and the role played by the facilitator. Other variables that were also covered included challenges and benefits of online learning.

## **1.8 OPERATIONAL DEFINITION OF TERMS**

**Online learning:** refers to as learning which takes place through the web based interface where the course materials are made available online and students interact with peers and instructor not at the same through online communication tool.

**Postgraduate nursing education student:** In the context of this study a post graduate nursing education student is a student who is registered for a Master's Degree programme in nursing education.

**A nursing education institution** refers to any nursing education institution, whether a school or college, public or private that is accredited as a nursing provider by the SANC in terms of Act no 33 of 2005.

## **1.9 CONCLUSION**

The background of this study established that there has been a rapid increase in the use of information and communication technology in higher education. The use of online learning in delivery of education has a major impact for students and institutions since it provides opportunities to create well designed, student-centred, interactive, affordable, convenient and flexible online learning environments. However, as it is a relatively new way of teaching and

learning in the field of nursing education, limited research has been conducted to date. Therefore, this study was aimed at exploring online learning experiences of postgraduate nursing education students in a selected education institution.

## **1.10 DISSERTATION OUTLINE**

**Chapter one** presents an overview of the study. The background is presented followed by the study context, problem statement, purpose, research objectives, research questions, the significance, conceptual framework and operational definition of concepts.

**Chapter two** presents a review of literature related to the subject under study. A synthesis of related literature on the evolution of online learning and the theory grounding this type of learning is presented. Empirical studies on the roles and perceptions of both students and facilitators have been highlighted.

**Chapter three** presents the research methodology and an outline of how the data was collected and analysed. It also describes the positivist paradigm and quantitative research design that were employed in this study.

**Chapter four** presents the data analysis, the research findings and a discussion of the findings.

**Chapter five** presents the discussion of findings, recommendation for improvement and conclusion reached in this study.

### LITERATURE REVIEW

#### 2.1 INTRODUCTION

A literature review is an organised written presentation of what has been published on a topic by scholars and includes a presentation of research conducted in the selected field of study (Burns & Grove, 2009). The review of literature in this study will provide an overview of online education with specific reference to the experiences of nursing students with regard to online learning. An electronic search was conducted at the library of the University of KwaZulu-Natal. EBSCOHOST was utilised, which provided access to the following databases: medical literature analysis and retrieval system online (Medline); cumulative index to nursing and allied health (CINAHL); ERIC; nursing and academic edition; Google scholar and advanced Google scholar; science direct and Pub med, to mention but a few. The following keywords were used in the searches: online learning, e-learning, e-education, web-based learning, information and communication technology (ICT), information and technology (IT) learning, distance learning, internet-based learning, distributed learning, computer-assisted learning, network learning, virtual learning, technology as well as technology-assisted learning.

#### 2.2 THE EVOLUTION OF ONLINE LEARNING AS A LEARNING TOOL

The early forms of online learning generally consisted of existing training material that had been transformed into an electronic medium (Wesley, 2002). With the advent of the World Wide Web (www) in the 1990s, Web 1.0 was introduced (a read only medium) in which information was transmitted and consumed, making people passive consumers of information. In the following decade, the next generation of Web technologists and designers harnessed the power of user contribution, collective intelligence and network effect and

brought into effect Web 2.0, (a read and write medium). This created a platform in which content was created, shared, remixed, repurposed and passed along (Downes, 2005; O'Reilly, 2006). According to Graham (2005), the revolution of online learning began as this medium introduced new geographically independent communication models like email and web-browsers that were efficient, easy to use and economically viable to be adopted by users. According to Sloman (2004), suppliers of computer-based training were filled with optimism when they realized the implications of delivery through the web and placed online learning on a pedestal, promising that it would revolutionise education due to its flexibility, self-pacing capabilities and huge cost savings in comparison to traditional instructor-led training courses (Wesley, 2002). However, certain issues emerged as online learning evolved and critics pointed out the isolation of online learning and the importance of interaction in the context of teaching and learning (Wesley, 2002).

In South Africa (SA), the African National Congress document of 1994, 'A Policy Framework for Education and Training', saw online learning as an approach that would give SA's previously disadvantaged majority increased access to information and afford opportunity for redress. This document further defines online learning as an educational practice that is a precondition for success in restructuring the educational system to provide lifelong learning in our country, as it seeks to remove all unnecessary restrictions to learning. It prescribes that education should be conducted in a flexible manner, so that as many people as possible can take advantage of learning opportunities throughout their lives. To achieve this, it is necessary to stop thinking of education as something that occurs within the walls of a school where information is imparted by a lecturer. It requires that structures and conditions are set up which enable learners to learn where, when, what and how they want to. Importantly it should not only be a matter of access, but must offer quality learning that brings a reasonable chance of success.

Furthermore, the White Paper on Education (DOE, 1995) places great emphasis on the value and principles of online education and training and states as follows:

*“The Ministry of Education is anxious to encourage the development of an online learning approach since it resonates with the values and principles of the national education and training policy which underpins this document and has applicability in all learning contexts”.*

Since year 2000 there has been an increase in the interest in technology in South Africa and more institutions are spending more budget in ICT infrastructure

From the foregoing discussion it can be seen that online learning is an approach which combines many principles. These include learner centeredness, lifelong learning, flexibility of learning provision, the removal of barriers to access learning, the provision of learner support and the construction of learning programmes in the expectation that the learner can succeed.

## **2.3 CATEGORIES OF ONLINE LEARNING**

Online learning can be classified into two broad categories, synchronous and asynchronous.

### **2.3.1 Synchronous Online Learning**

Synchronous online learning involves interaction between students and the facilitator which takes place at a specified time, although the students and facilitator are in different places. The interaction is live and requires all participants to be available for the specified period of time when the classes are held. Synchronous online learning can take the form of texts, chats and/or video conferencing (Hiltz & Goldman, 2005).

According to Hrastinski (2008), synchronous online learning is commonly used by the media in the form of video-conferencing and chats, and has the potential to support online students in the development of learning communities. Instructors and students experience synchronous

learning as more social and students feel like participants rather than isolates. It also avoids the frustration of asking and answering questions in real time. Takalani (2008) adds that in synchronous online learning, students and instructor(s) engage in live interaction through the internet technologies. It is therefore an environment whereby technologies are used to create a virtual learning space similar to the traditional classroom, lecture or meeting. It follows, of course, that all participants have to be connected to the virtual learning space.

### **2.3.2 Asynchronous Online Learning**

This type of online learning allows students to work at their own place and preferred times, and can include e-mail or online conferencing. The most important element of this type of learning is that students need not be present at the same time or in the same place as other students with whom they are communicating or from whom they are learning, although it can happen that they are online at the same time by chance or plan (Hiltz & Goldman, 2005).

Asynchronous online learning is the most revolutionary aspect of online learning which frees students from the restrictions of time and space. Students from different time zones and different continents can participate in the same courses. Content can be explored and discussed in depth, and students can post a thought at any time for other students to comment on. Even those who are trailing behind in the course work have access to all discussion posts, thus benefiting from the input of their peers.

Hrastinski (2008) further adds that asynchronous online learning is facilitated by media and discussion boards, supports work relations among students and instructors, even when the participants cannot be online at the same time. Asynchronous online learning makes it possible for students to log on to an online environment at any time and download documents or send messages to their instructor or peers.

## **2.4 TYPES OF ONLINE LEARNING**

### **2.4.1 Facilitated online learning**

Facilitated online learning is common in academic settings and involves an instructor, referred to as a facilitator, and a group of students. The interaction, however, does not occur in real time. Students communicate with each other through threaded discussions, which encourage peer interaction, and can get personalised guidance from the facilitator when necessary (Broadbent2002). The facilitator brings value to the course by holding participants accountable for the various learning objectives. Through the interactive component of facilitated online learning, the facilitator can judge whether the participant is grasping the content. Despite the asynchronous nature of the discussions, this form of online learning still involves certain scheduling concerns since at the end of module, facilitators should hold a conference call or web meeting to review the module's lesson and close it off before moving to the next lesson.

### **2.4.2 Self-paced online learning**

Self-paced learning does not require interfacing between an instructor and the student. The most common examples are web-based training courses. Learning material can be accessed and completed without requiring an instructor or interaction among students. According to Broadbent (2002), self-paced learning is a process whereby students can access computer based, web-based training material at their own pace. Modules are set up either online or through a software programme and the students interact with the material at their own rate to learn and acquire new skills.

### **2.4.3 Blended or hybrid learning**

There are various definitions of blended learning (Deng & Yuen, 2009) and a universally accepted definition has not yet emerged. Garrison and Vaughan (2008) define blended

learning simply as the thoughtful fusion of face-to-face and online learning experiences by bringing together traditional physical classes with elements of virtual education (Finn & Bucci, 2004). Choid and Groeneboer (2004) define blended learning as learning that involves online learning, face-to-face learning, and self-paced interactions among the facilitators, students and instructional system. With blended learning more than one teaching or learning method are combined to complement each other and students benefit from getting information from both methods. The basic principle is that face-to-face oral communication and online written communication are optimally integrated such that the strengths of each are blended into a unique learning experience congruent with the context and intended educational purpose (Garrison & Vaughan, 2008).

More specifically, in a blended learning environment, the responsibility of the facilitator and the students are altered. Lindsay (2004) states that teaching in blended learning requires the facilitator to have a different set of skills to foster and maintain an active learning environment where a large amount of responsibility for learning is placed with the student. However, this increases independent learning and initiation. While students in this form of learning are active and show initiative, they still depend on the facilitator to give direction and to stimulate discussions by asking questions.

The use of blended learning allows the learning community that has been established in the classroom setting during face to face encounters to continue to thrive outside the traditional classroom setting. According to Brown (2003), blended learning has all the benefits of online learning; including cost reduction, time efficiency and location convenience for the students. In addition, Aycock, Garnham and Kaleta (2002) found that blended learning increases student interactivity, improves student performance and increases facilitators' satisfaction with the course.

## **2.5 THEORETICAL BASIS FOR ONLINE LEARNING**

Several important learning theories have been highlighted within the field of online learning which include the cognitive theory, the constructivism learning theory, the engagement theory and the connectivity theory. These theories will be discussed within the context of the online learning that took place in this study.

### **2.5.1 Cognitive Learning Theory**

According to Ally (2004), cognitivists believe that learning is an internal process that involves the use of memory, critical thinking, reflection, motivation, meta-cognition (understanding one's own cognitive process) and the integration of knowledge with prior knowledge. Thus, learning is achieved through authentic problem solving or explicit teaching of cognitive strategies alongside content knowledge (De Villiers, 2006). The cognitive approach views the process of learning and the cultivation of cognition as being more important than the mere acquisition of knowledge. Educators who subscribe to cognitivism encourage students to develop critical thinking skills and reflect on their own learning (De Villiers, 2006). These skills can be fostered through the medium of online instruction which can provide practical suggestions for the innovative use of critical thinking strategies. It also affords students the opportunity to participate fully in online discussions, giving them time to reflect between messages.

Cognitive psychology looks at learning from an information processing point of view, where information is received through the different senses and further transferred to the short-term and long-term memory through different cognitive processes (Ally, 2004). Therefore, online learning must use strategies that will enable students to transfer the learning materials through the senses to the sensory store and then to the working memory. It is important, therefore, to ensure that the necessary information can be easily assimilated by the students.

For example, the attributes of the screen (colour, graphic, size of text, etc.) the location of information on the screen, the pacing of information and the modes of delivery should all be taken into account (Allay, 2004).

The amount of attention transferred to working memory depends on the amount of attention that is paid to the incoming information and whether the cognitive structures are in place to make sense of the information. Online learning designers, therefore, must be able to establish whether the appropriate cognitive structures are present in the students which will enable them to process the information. If they are not present, the designers must provide pre-instructional strategies to develop the cognitive structures of the students so that they can proceed accordingly.

The time span of the working memory is very short and if information in the working memory is not processed efficiently, it will not be transferred to long-term memory for storage (Kalat, 2002). Online learning strategies must present the material by grouping information into chunks of five to nine meaningful units to enable the learners to process the material efficiently, compensating for the limited capacity of short term memory.

Cognitivists postulate that information is stored in the long-term memory in the form of nodes to form relationships known as networks. Online learning topics should therefore be presented in the form of information maps that show the major concepts and the relationship of the concepts, and online learners should be asked to generate the information maps during the learning process to facilitate deep processing (Bonk & Reynolds, 1997). Online learning students should be encouraged to use their metacognitive skills to help in the learning process. They should be given opportunities to reflect on what they are learning, collaborate with other online learners, self-check questions and be provided with feedback on how they are progressing (Allay, 2004).

### **2.5.2 Constructivist Learning Theory**

Constructivism is the most frequently cited theoretical framework applied to online course development and teaching. Constructivism is defined as *'learning that is a process of constructing meaning; it is how people make sense of their experience'* (Merriam, Caffarella & Baumgartner, 2007). The early development of the constructivist theory can be attributed to the work of Dewey (1916), Vygotsky (1978) Piaget (1972) and Bruner (1996), who proposed that students could learn actively and construct new knowledge based on their prior knowledge. According to Knowles and Kerkman (2007), most learning strategy theories are based on the constructivist perspective of learning, which contends that meaning and knowledge are constructed by the learner through a process of relating new information to prior knowledge and experience.

Many researchers (Harman & Koohang, 2005; Hung, 2001) agree that the constructivism learning theory, which focuses on knowledge construction based on students' previous experiences, is a good fit for online learning because it ensures learning among students. Constructivism is one of the theoretical approaches that advocates the use of online teaching and learning, as it not only ensures accessibility of coursework, enhances administrative tasks and facilitates active student engagement with the content, the educator and each other, but also enhances problem-based learning, information gathering skills and improved communication between educator and students (Rowe & Struthers, 2009). These characteristics of online teaching and learning allow students to take a greater responsibility for learning and for educators to act as facilitators of learning. To promote the construction of knowledge, instructors have to provide good interactive online instructions, since the learning agenda is controlled by the student (Murpy & Cifuentes, 2001).

Online learning within a constructivist framework seeks to achieve particular learning outcomes. It involves a process of engaging in authentic problem solving tasks that are aligned with learning objectives, with the assessment being a clear demonstration of whether the set objectives have been met. Such alignment of learning tasks, objectives and assessment serves not only as testimony that the student has achieved the learning objectives, but also a demonstration of the quality of learning and sign posts to students what still has to be learnt (Fallows & Bhanot, 2005).

From a social constructivist perspective, researchers (Rohleder et al., 2007; Oblinger & Oblinger, 2005; John, 2003) suggest the use of ICT in education as it facilitates active student engagement with content, educator and each other, enhances problem-based learning (PBL), improves information gathering skills, improves communication between the educator and students, ensures accessibility of coursework and enhances administrative tasks. Boulos et al. (2006) also advocate for the use of ICT in education since it has been shown to increase channels of communication, facilitate collaborative learning and create a framework for social construction of knowledge. These characteristics of ICT in education allow students to take greater responsibility for learning and for educators to act as facilitators rather than lecturers.

The constructivist perspective indicates that the educator plays the role of facilitator, while the students' role is one of constructing reality through interactions with the environment (Hiemstra, 2007). Constructivism espoused students are to enjoy learning, develop social and interpersonal skills, have an understanding of the content being taught and learn to think in an efficient manner (Kelsey, 2007; Low, 2007). Constructivism encourages collaboration and co-operation during learning (Palloff & Pratt, 1999). Working with other students gives students real life experiences and allows them to use and improve their meta-cognitive skills.

When assigning students into groups for group work, their level of expertise and learning style should be taken into account so that all the team members can benefit from one another. Online learning allows students to collaborate and co-operate with other students and educators and share ideas at any time from any place (Paurette, 2003).

Proulx (2006) encourages educators to be cognizant of the fact that students bring with them prior knowledge. Students' prior knowledge deserves recognition and may be utilized in constructing new meaning. This can be applied to online learning where students can be given time to reflect and internalise the information and embedded questions on the content can be used throughout the lesson to encourage reflection and processing of the information. Students have a role to play in the learning environment as their learning needs direct the communication of new information which is, in turn, individually constructed. Learning from mistakes is a key element of constructivist learning activities, as they provide opportunities for further learning.

Savery and Duffy (2006) proposed some useful principles that can help online educators develop a learning environment rich in constructivist ideology with the goal of helping students achieve positive learning outcomes. These include: (a) anchoring all learning to a larger task or problem; (b) supporting students to develop ownership of the overall problem or task; (c) designing an authentic task and learning environment to reflect the complexity of the environment they should be able to function in at the end of learning; (d) giving the students ownership of the process used to develop a solution; (e) designing the learning environment to support and challenge the students' thinking; (f) encourage testing ideas against alternative views and alternative contexts; and (g) providing an opportunity for and support of reflection on both the content and learning process.

Therefore, to achieve the goals of online learning, facilitators should provide learning resources and activities that will be student centred, which will aid students to conduct their own learning, encourage active participation in learning and facilitate collaborative work practices within learning communities.

### **2.5.3 Engagement Learning Theory**

The engagement learning theory, according to Kearsley and Shneiderman (1999), is a conceptual framework for online learning and teaching that is consistent with the constructivist approach. The engagement theory supports online learning as it specifically promotes activities that involve the cognitive processes of students. Students are motivated to learn when the nature of the learning environment is meaningful and includes activities such as creating, problem solving, reasoning, decision making and evaluation (Kearsley & Shneiderman, 1999).

One of the most important factors related to online learning is the element of interaction (Moore, 2001; Picciano, 2002). The interactive tools offered by online learning can positively influence the success and satisfaction of the students who participate in online courses. Moore (2001) identified three types or dimensions of interactivity that support learning in online courses and Bouhnik and Marcus (2006) introduced a fourth type. These are: (a) interaction with the content; (b) interaction with the facilitator; (c) interaction among students; and (d) interaction with the system.

***Interaction with the content:*** This takes place when the student, with the help of the teacher or the institution, establishes new knowledge by encountering new information and combining it with the body of knowledge already retained by him or her. Moore (2001) notes that with this type of interaction there can be no knowledge construction, because the knowledge construction process entails the students' intellectual interaction with the content,

which results in the changes in the students' understanding, the students' perspectives and the cognitive structure of the students' minds (Bouhnik & Marcus, 2006).

***Interaction with the facilitator:*** The connection between the student and facilitator and learning outcomes is well documented and this interaction has received attention in both classroom and distance education settings. The teacher's verbal (giving praise, soliciting view point, humour and self-disclosure) and non-verbal (physical proximity, touch, eye contact, facial expression and gestures) immediacy behaviours can lessen the psychological distance between the facilitator and the students, thereby leading to increased learning. Moore (2001) warns that the physical distance that exists between the student and facilitator in online learning may result in a psychological and communication gap, thus leading to ineffective learning. It is important, then, that the facilitator should play an active role in motivating, supporting and enhancing student interest during online learning. According to Bouhnik and Marcus (2006), online learning requires special behaviour patterns, like 'special' dialogue, to bridge the gap.

***Interaction among students:*** Interactions among students through course discussions seem to be most influential aspect of online courses (Swan et al., 2000). One of the basic features in traditional learning classrooms is communication amongst students. However, the ability to ask questions and share ideas with others also features in online learning courses whereby students can compensate for gaps in their knowledge through interaction with their peers or group mates, an important advantage of learning in a group (Picciano, 2002).

***Interaction with the system:*** Learning activities entail complex procedures of interaction and the benefits of the technology can be lost if the complexity is not appreciated, understood and dealt with in a satisfactory manner. There is a need for the technology to remain transparent and for guidance to be given to students to eliminate barriers (Bouhnik & Marcus, 2006).

#### **2.5.4 Connectivism Learning Theory**

Connectivism is a theoretical framework that helps to understand learning and although it is mainly concerned with cognitive development, according to Siemens (2004), connectivism is a learning theory which is contextualised in the 'digital era' and characterised by the influence of technology in the field of education. In connectivism, interaction occurs within a network, which is defined by Siemens (2004) as a connection between identities. The different activities are integrated into the network and any changes will affect the entire network and all participants in the network (Siemens, 2004). Learning, therefore, is not an isolated experience, but rather an experience of combining and connecting separate nodes of knowledge. It is important to incorporate online learning into education practice to up-skill students in the use of information technology to enable them to connect with multiple networks and information sources (Kop & Hill, 2008).

According to Siemens (2006), learning is a process of creating networks which feed into the organisation or institution and which, in turn, feed back into the network, thus continuing to provide learning to individuals. This cycle of knowledge development (personal to network to organization) allows students to remain current in their field through the connections they have formed (Siemens, 2005). Online learning has paved the way for new, innovative learning experiences in which learners in different places can participate through the internet, which is the network of networks.

In addition to the guidance provided by the online facilitators, the online networks provide a base of expertise and knowledge built by the students themselves throughout their interactions. Students can play an active role within the learning community (node) by plugging into the networks in order to obtain information by sharing, interacting, dialoguing and thinking together with other sources of information (Kop & Hill, 2008).

According to Downes (2007), the field of technology is advancing at a rapid pace, constantly upgrading and enhancing the modes of learning across the networks. Technological advances are continually introducing new learning experiences which educators can incorporate into their programmes, thus taking advantage of the power of the internet. Downes (2011) points out that students can exponentially improve their own learning by plugging into the network to access relevant information. Online learning can be achieved in many different ways; e-mail, online communities, conversations, web searches and reading blogs, all of which extend the learning practice beyond classroom and allow real life experiences (Giesbrech, 2007).

Online global networks stimulate debate (Minocha, 2009), which is beneficial to a learning environment as it helps students to discuss problems and gain multiple insights by taking into account the views of others. Thus connectivism empowers students and enables them to take responsibility for their learning by connecting them to the multiple information sources.

The teacher is a facilitator rather than a lecturer. The teachers make the resources available to the students to enable them to connect to multiple sources of information and validate information. They also play a role in providing online learning ecologies, shaping communities, raising learning needs and releasing students into environments conducive to forming networks (Minocha, 2009). According to Conole and Alevizou (2010), the role of the facilitator is to influence and shape networks by amplifying, aggregating, curating, modelling and filtering. The facilitator also has to consider students' experiences in order to know the motivational factors for their engagement and the support structure available.

## **2.6 BENEFITS OF ONLINE LEARNING**

The increased use of online learning to offer instruction and provide access to information resources has changed the image of learning in higher education. According to Broadbent (2002), the central focus for online learning is learning, but the common benefits that recur in

the debates are flexibility, accessibility, active independent learning, responsibility, confidence promotion and interactivity.

Online learning provides flexibility in terms of pace and the student is not confined to a specific area or a specific time. According to Katz and Oblinger (2000), the use of such technologies has resulted in the removal of time and place constraints, with instruction available whenever the learner wants to access the information. In addition, online learning facilitates situated learning since students can complete online courses while working in their own space and can contextualize the learning (Anderson & Elloumi, 2003).

The same sentiment of flexibility is echoed by other researchers who maintain that online learning removes the barriers of time and space and offers the same instructional material to each student every time they need it (Allen, 2003; Bullen, 2003; Piskurich, 2003). Churton (2008) argues that online learning enables a 'student-centred' teaching approach because learning happens asynchronously in that learners are not constrained by the traditional classroom practice of everyone learning the same content in the same time period. Online learning has the capacity to incorporate individual learning approaches that will meet individual needs as learners are able to engage with content in a manner that is comfortable for them.

In terms of accessibility, the students have access to an online course and learning material at any time and any place. With today's technology, a student who owns a laptop or any type of internet capable device can access online learning at any time. Some fortunate people can even access the internet from their cell phones, without the need for land-based phones (Kruse, 2006).

Active learning is one of the main characteristics of constructivism. The students are not passive recipients into whom teachers pour knowledge, but rather knowledge constructors who learn from experts through experience and socialisation (Kruse, 2006). Churton (2008) argues that online learning encourages students to be more active in their learning. Since they are required to take responsibility for their own learning, they need to engage with the content more carefully and to develop analytic skills in order to discern whether information is useful or not. Online learning also fosters independence. According to Greener (2008) and Rodriguez, Rooms and Montanez (2008), independent learners delve into the rich resources offered in the digital environment. While not only developing critical thinking, the independent nature of online learning offers students the opportunity to be independently paced.

Online learning also has the benefit of encouraging students to take responsibility for their learning and build self-knowledge and self-confidence. Roberts and Dyer (2005) argue that online learning provides a wide range of innovative ways of facilitating learning, including being able to access resources at a convenient time and maintain one's own pace. Online learning makes collaboration and discussion easier, as students are able to express their ideas and learn from each other (DOE, 2004). Students can easily interact with the course content, their instructors and other students through forums, chats or e-mail and they have time to reflect on their communications before they post them.

King, Lee and Viehland, (2004) further add that online learning is a great equalizer. By eliminating barriers of time and distance, online learning enables all individuals to take charge of their own lifelong learning. According to Bielawski and Metcalf (2003), the true power of online learning is its potential to provide the right information to the right people at the time and place. Anderson and Elloum (2003) assert that online learning benefits

instructors as their instructions can be done anytime and from anywhere. Online material can be updated at any time, and the students are able to see the changes at once. If students have access to the internet, instructors can direct them to appropriate information based on their needs.

## **2.7 CHALLENGES AND BARRIERS OF ONLINE LEARNING**

Like any other teaching and learning methods, online learning has its drawbacks. These include bandwidth issues, increased cost, increased workload, loss of human contact and students experiencing technical difficulties. According to Namahn (2002), bandwidth limitations can result in slower performance for sound, video and intensive graphics, causing long waits for downloads that can affect the ease of the learning process. Kruse (2006) points out that it is not feasible for online learning sites to utilize a lot of audio or video files because not everyone has the luxury of a high bandwidth as with cable and satellite company providers.

Online learning has a wide range of associated costs; starting up cost, the on-going cost and the cost of keeping the equipment up to date. Systems can take more time and money to develop than expected and not all courses are delivered well by computer. According to Carnevale (2006), online learning is more costly than other methods. Technological equipment is not available to everyone, and although prices are constantly being reduced, not everyone can afford to participate in online learning (Kruse, 2004).

There is also loss of human contact. Computers cannot replace a friendly face and too much reliance on computers limits social interactivity levels. Another challenge that has been highlighted by the UDI Online Project (2010) is that online courses are not always properly structured or administered, resulting in students feeling isolated or dissatisfied with the experience. Many students and instructors feel that online learning is cold and impersonal and

that the valuable aspect of open discussion of class content between students and instructors has been lost.

Greener, (2008) and Roach and Lemasters (2006) have cited increased workload as a challenge that is associated with online learning. Ill structured courses and technology issues, such unfamiliarity with the technology used or lack of technology skills can cause confusion and add to the workload. Kruse (2004) further points out that students commonly suffer from technophobia, which is made worse by unavailability of required technologies.

## **2.8 EMPIRICAL STUDIES ON ONLINE LEARNING**

### **2.8.1 Students' Perceptions of Online Learning**

Asunka (2008) examined the attitudes, experiences and perceptions of twenty six undergraduate students who were enrolled in an online course at the Ghanaian University. The results revealed that the students exhibited a certain amount of uneasiness with the different self-directed style of online learning as since they were used to face to face instruction. The majority of the students appreciated the communication with the instructor as it contributed in motivating them to pursue the course. Their overall perception of collaborative online learning, however, was that it offered no advantage over face to face instruction (Asunka, 2008).

Carroll, Booth, Papaioannou, Suttan and Wong (2009) conducted a study on health professionals' experiences of online learning techniques. Several positive key themes emerged from the data and the most frequently reported themes were communication, socialization, student confidence, flexibility and information sharing, which concurs with the findings of other researchers (Kenny, 2002; Atack & Rankin, 2002).

Nakos, Deis and Jourdan (2002) conducted an exploratory study on students' perceptions of online courses. The study revealed that the overall perception of online courses was satisfactory. Yaghoubi, Mohammadi, Iravani, Attaran and Gheidi (2008) conducted a study in Iran on virtual students' perceptions of online learning and their findings revealed that participants identified the main advantage as flexibility in time and place, which facilitates ease and quick sharing of learning material, and the biggest disadvantage as inadequate technology.

Koch, Andrew, Salamonson, Everett and Davidson (2010) conducted a study at the University of Sydney on nursing students' utilisation of a web-based intervention developed for the bioscience unit and their perceptions regarding its benefit and value. It emerged from the study that participants believed that the web-based activities had enhanced their learning and they would like similar interventions to be incorporated into all subjects of their course. Flexibility in terms of time, place and usage enabled students to study at their own pace and web-based learning provided them with the tools to practice online learning. The negative points they highlighted were that they had been given no explanation on how to use some of the activities, the reliance on WebCT to access essential online course material and activities could be a problem if technical difficulties precluded access (Koch et al., 2010).

A qualitative study of physicians' experiences with on-line learning in a Master's degree programme at the University of Illinois was conducted by Dyrbye, Cumyn, Day and Heflin (2009) on forty eight students. Students indicated that the reason for choosing to take the online course was convenience and flexibility because it enabled them to overcome constraints that would have prohibited them from participating in the programme. They also indicated that the cost of the programme was another benefit as the tuition was lower and expenses related to travel and lodging could be avoided. It emerged from the results of the

study that the online programme also gave them time to reflect on the material. Although the results revealed some clear advantages over traditional teaching methods, the students also reported that online teaching lacked quality and the engagement of the academic staff (Dyrbye et al., 2009).

Creative thinking and critical thinking were rated very high by participants in a study conducted by Malaik and Shabbir (2008) to examine students' perceptions, motivation and engagement with learning technology in their self-directed learning time. However, they placed more value on face to face learning and communication than on online learning. They also made reference to the lack of guidance by the teachers on the online course (Malaik & Shabbir, 2008). On the other hand, findings of a survey conducted by Weaver, Nair and Sprat (2005) at Monash University in Australia to gauge students' perceptions of their use of WebCT showed that participants had experienced positive study interactions. Students who participated in the online study reflected that their lecturers had made good use of the technology in terms of well-designed units that were rich with resources, and that timely feedback and good interaction with teaching staff had contributed toward positive online learning experiences (Weaver et al., 2005).

Young's (2006) study investigated students' views of effective online teaching in higher education at the University of the Western United States. Results of this study revealed that syllabus was thorough and available at the start of the course, the expectations of the instructors were clear, fair and challenging, and that the instructors were always available and involved throughout the course. In a study conducted by Julie and Fakude (2006) at the University of the Western Cape on the experiences of nursing students on online learning, the majority of the students felt that they had gained communication and internet skills and would recommend online learning to others. They perceived convenience and easier

communication as the main benefits of online learning, but also observed that they had experienced certain challenges, such as confusion, network problems, work going missing after submission and lack of immediate response to individual work (Julie & Fakude, 2006).

Gallager-Lepak, Reilly and Killon (2009) explored students' perceptions of the community in an online learning environment. The themes that emerged were clustered into structural, processual and emotional factors. With regard to structural factors, the participants pointed out that they benefited from faculty involvement as positive reinforcers and clear communications, especially mandatory posting. Passive students were enforced to be active. Teamwork was acknowledged by students because it gave them the opportunity to interact. They felt, however, that technical problem sometimes distracted them from learning. The processual factors that emerged included the sense of becoming a self-directed student and the transition from being a novice to an expert was highly appreciated. They were thrilled about the convenience, and feedback from students and faculty promoted trust and confidence, but they found the disconnection amongst students led to isolation. The emotional factors included both positive and negative emotions being expressed by the participants which can impede or motivate learning. Participants made reference to anonymity and the difficulty of discerning nonverbal cues in nonverbal communication (Gallager-Lepak et al., 2009).

Goldsmith et al. (2010) conducted a study on Master students' perceptions of online learning at the Abilene Christian University. The survey consisted of 45 questions on their perceptions of instructional design, programme selection, personal qualities and technology skills. The findings showed that participants viewed the online learning environment as rigorous and motivating as compared to a face to face environment. They found it easy to get help from others and enjoyed group work. However, the students were less positive about their ability to

self-manage, complete their assignments on time and manage their study time, thus supporting the reality that working on line requires self-discipline (Goldsmith et al., 2010).

### **2.8.2 The Role of the Facilitators in Online Learning**

The role of the teacher in an online environment differs from their traditional role in that the online instructor is expected to become a facilitator of online learning (Frese, 2006; Jaffee, 2003). Online facilitators must adapt to a new way of teaching and relate differently to their students. Frese (2006) also asserts that the role of an online facilitator requires skilful manipulation of discussions and learning activities in order to engage online students and ensure that they interact sufficiently with the content.

The facilitators' roles, according to Paulsen (1995) and Mason (1991), are categorised trilaterally into organisational, social and intellectual roles, with each role requiring different techniques. When serving in an organisational role, the instructor sets the agenda, objectives and procedure for posting and interacting in the online discussions. The social role reinforces good discussion behaviour through prompt feedback. The intellectual role, being the most important, requires the facilitator to nurture the intellectual climate and to encourage responses from the students by asking questions.

Berge (1995), assigned similar roles to the facilitators, but added a fourth role. According to this researcher, online instructors enact pedagogical, social, managerial and technological roles. While the first three perform much the same functions as outlined in Mason's (1991) categories, the technical role of the facilitator is to make the participants comfortable with the system and the software that is being used so that they can concentrate on the academic task at hand.

### **2.8.3 Facilitators' Perceptions of Online Learning**

In a survey conducted by Ryan, Hodson-Carlton and Ali (2005), all nursing faculty members indicated that students' expectations are different in online courses. They found that students expected communication within 48 hours of posting a question which required them to make adjustments in the way they work, as delayed responses can have negative consequences in online learning. Faculty members also expressed concerns that students were not aware of their responsibilities as online students and stressed the importance of students having a thorough understanding of technology before enrolling on an online course.

Based on the study that was conducted by Ruth (2006) on an online university programme, it was found that the reluctance of the full time faculty to participate in an online programme was traced to several causes; one being the loss of research time because of the work involved in developing and teaching online classes. It was found that even repeated delivery of the same online courses required extensive preparation time and that more effort is required to deliver a high quality course. It was also noted that the effort to maintain the quality of the course increased as the number of online students increased. Another factor that was identified was that the financial reward structure did not correspond with the amount of work involved. A report in *The Chronicle of Higher Education* noted that financial rewards for online learning professors are decreasing as administrators have come to perceive technology as a routine element of academic duties (Carnevale, 2006).

In a study conducted on quality online instruction by Frese (2006), online instructors felt that online training and technical support is critical for online instructors and many reported that the online technical support was understaffed. They reported that they wanted training on a regular basis on more advanced topics so that they could improve their online classes.

According to Ryan et al. (2005), the majority of faculty members cited the ability to schedule their time and work from varying locations and thoughtful student responses as positive aspects of online learning. Flexibility was seen as a significant advantage by faculty members interviewed by Hopewell (2007). Faculty members reported that online learning allows them to be more open and to feel less stifled when expressing their views and opinions. Some faculty members even reported that they have revised their beliefs about face to face classes based on their online experiences. One faculty member reported that meeting more frequently in an online community allowed for creating a greater impact on how students learned and provided an increased personal connection with students (Hopewell, 2007).

In a qualitative study on faculty lived experiences in the online environment conducted by Conceicao (2006), participants reported that teaching online requires more time to design and deliver instruction than a face to face course. However, study participants also reported a high degree of reward and satisfaction in being involved in designing and delivering an online course and noted that online teaching had provided them with the opportunity to enhance their instructional skills and reflective thinking.

#### **2.8.4 Recommendations to Improve Online Learning**

Lack of recognition of the hard work that academic staff have to invest in the design and facilitation of online learning courses causes academic staff to be demoralised and can decrease the level of productivity and commitment to online learning. However, if online learning can be made part of prestigious projects that get recognition for the faculty, the facilitators will not feel that they are losing valuable time for research or other prestigious projects because it would be equally valued. Recommendations have been made for professional development that prepares faculties to teach online.

According to Hinston and LaPrairie (2005), there is a need for faculties to experiment and apply their online skills within the context of their own curricula. Along similar lines, Barker (2003) recommends that online instructors should be added to an online course so as to gain a better understanding of how teaching and learning occurs. Many researchers (Fish & Gill 2009; Britt, 2006; Tallent-Runnels, Thomas, Lan, Cooper, Ahern, Shaw & Liu, 2006) also suggest that training in and familiarity with online instruction is important in developing a faculty's acceptance and utilization of this mode of instructional delivery.

## **2.9 CONCLUSION**

The review of literature revealed that online learning is an essential teaching and learning methodology with lots of benefits which makes it possible to render effective, efficient, convenient and flexible learning. Online learning is student-centred, it encourages students to take responsibility for their learning and builds self-confidence and self-knowledge. There are obviously drawbacks, as in any other teaching and learning method, and those highlighted included being impersonal, having lost the human touch, increased costs and technical problems, all of which hinder effective learning and teaching. Recommendations were highlighted as crucial to attain the objectives of learning.

---

### RESEARCH METHODOLOGY

#### 3.1 INTRODUCTION

This chapter describes the research approach and the details of the methods used in this study to explore the phenomenon of mentoring as perceived and experienced by the postgraduate students on online learning. Other information in this chapter includes the description of how the data was managed and analysed, as well as how the ethical issues related to the study were negotiated.

Research methodology refers to the “*application of all steps, strategies and procedures for gathering and analysing data in a research investigation in a logic and systemic way*” (Burns & Grove, 2009). Methodology refers to the framework of theories and principles on which a research design and method are based (Holloway & Wheeler, 2010). The selection of an appropriate research methodology or strategy is the key to finding a research design that will facilitate the progress and success of the research project and is probably the single most important decision that the researcher has to make.

A qualitative approach guided by the naturalist interpretive paradigm was used in this study because the researcher wanted to understand human thoughts and actions and also obtain deep insights and information about the phenomenon of online learning in health professional education (Lincol, 2000). This approach enabled a mode of systematic enquiry oriented towards the understanding of human beings in their natural settings, that being the nature of the interactions of postgraduate students with each other, with their facilitators and with the online learning environment. The aim was to discover or uncover new insights, meanings and understandings (Brink and Wood, 1998; Chenitz and Swanson, 1986). This approach allowed

the researcher to examine life experiences in an effort to understand and give meanings to the phenomenon (Bryne, 2001).

## **3.2 RESEARCH DESIGN**

A research design is defined by Punch (2005) as the overall plan for a piece of research that includes four main proposals: the strategy, the conceptual framework, the question of who or what will be studied and the tools that will be used for collecting and analysing empirical material. Mouton (2001) defines a research design as a plan or blueprint of how one intends to conduct the research. In this study, the research design was of a descriptive and exploratory qualitative design.

### **3.2.1 Exploratory Design**

Welman et al. (2005) assert that an exploratory qualitative research design is undertaken in order to obtain a better understanding of the phenomenon under study, the researcher usually makes use of semi-structured interview to formulate questions that have been predetermined. In addition to this, the researcher may use in-depth interviews to obtain information about highly sensitive and emotive issues that the participant might be reluctant to describe on paper. In this study, the researcher explored the online learning experiences of postgraduate (PG) nursing education students at a selected NEI in KZN through semi-structured, individual and focus group interviews.

### **3.2.2 Descriptive Design**

Burns and Grove (2009) point out that a descriptive design enables a researcher to obtain knowledge and clarity about the phenomenon of interest within the particular field of study. A descriptive design is therefore used to identify problems with the current practice, and to justify current practice and the ways in which respondents perform all those actions in which the researcher is interested. Polit & Hungler (2010) assert that a descriptive design provides

descriptions of variables in terms of which the research questions can best be answered. In this study, the researcher was interested in online learning and the views or experiences of PG nursing education students as the main variables.

### **3.3 RESEARCH SETTING**

Babbie and Mouton (2001) state that a researcher should aim at describing and understanding all the events that are relevant to a study in the concrete and natural context in which they occur. This study was conducted in a natural setting which was convenient and comfortable for the participants. The selection of the setting was determined by the availability of the participants who were exposed to online learning as they provided relevant data pertaining to the study. Therefore, the researcher selected a setting that provided relevant data by selecting one NEI in KZN and postgraduate nursing education students who were exposed to an online learning course or module for their online learning experiences. The selected NEI is a university-based nursing education institution which offers both undergraduate and postgraduate nursing programmes. At the postgraduate level, this NEI has just commenced an online learning course or module through Modular object-oriented dynamic learning environment (Moodle), with the first student cohort registered for 2009/2010. The postgraduate online course or programme that was being offered was a module for a Master's degree in Nursing Education.

### **3.4 POPULATION**

The term 'population' refers to the aggregate or totality of those conforming to a set of specifications (Polit & Beck, 2010). It refers to all the subjects or elements that can take part in a study if they meet the set criteria. According to Hycner (1999), the phenomenon under study dictates the type of participants to be used. It forms the entire group of individuals or objects that the researcher is interested in studying (Burns & Grove, 2009). The target

population in this study included all the postgraduate nursing education students at the selected nursing education institution. The total number of the population was 16 PG nursing students that were enrolled in an online learning module for their Master's degree in Nursing Education.

### **3.5 SAMPLE AND SAMPLING PROCEDURE**

Sampling is defined as the process of selecting an element within the population that represents the entire population so that inferences about the population can be made (Polit & Beck, 2010). Non-probability purposive sampling was used to select the participants who knew the most about the phenomenon and could give the most information (Burns & Grove, 2009). According to Burns and Grove (2009), with purposive sampling, the researcher consciously selects certain participants, elements, events or incidents to include in the study. The researcher purposively selected all the postgraduate nursing education students to participate in the study, thus making a total sample of 16. This included all the students who were registered for a Master's Degree in Nursing Education in the 2009/2010 period.

### **3.6 DATA COLLECTION PROCESS**

Burns and Grove (2009) define data collection as a precise, systematic gathering of information relevant to the research or specific objectives, questions or hypothesis of the study. In this study, the researcher used individual semi-structured interviews and focus group discussions for the verification process. The interviews were guided by eight main questions and probing questions (**See Annexure 1**). According to De Vos, Strydom, Fouch & Delpont, (2006) semi- structured interviews are interviews that are organized around areas of particular interest that expand closed and open-form questions with probes designed to obtain additional clarifying information and are conducted like normal conversations, but in a more free-flowing and purposeful way (Bless & Higson- Smith, 1997).

The researcher bracketed her views, preconceptions and judgements first, before engaging in the process of data collection to avoid unnecessary bias and to confront data in its purest form, as stated in Burns and Grove (2009). Bracketing was critical in this study because the researcher had participated in some online learning experiences.

The researcher firstly conducted individual interviews with the selected nursing students and then held two focus group discussions. Each focus group had five participants. A total of ten participants participated in the focus group discussions. Questions were posed to the participants to guide the discussion and they were further probed by the researcher to obtain more information regarding their experiences in online learning. The first part of the questioning was aimed at exploring how participants experienced online learning and their attitudes on the phenomenon. The second part explored the perceived benefits, advantages, disadvantages or challenges of online learning and the researcher also sought to determine participants' recommendations for making online courses more successful.

The researcher can be seen as orchestrator or facilitator of an inquiry (Lincoln & Guba, 2005). Two mock interviews were conducted with two participants before the actual data collection to familiarize the researcher with the process and logistics related to collecting qualitative data, such as the use of an audio recorder and probing, which is the asking of relevant and follow-up questions with aim of further clarifying or exploring issues (Balls & Smith 2010). The mock interviews were transcribed and shared with the research supervisor for her guidance before engaging in the actual process of data collection. This assisted in ensuring that relevant data was collected by the researcher. This information was not used as part of data.

The process of data collection began by having a meeting with all the postgraduate nursing education students who were the participants in the study. The researcher explained the

purpose of the study, the importance of the participants' involvement and their rights as participants. All participants were assured that anonymity and confidentiality would be observed by using codes instead of their names when recording data. Data was collected in quiet, private office spaces which were requested from the Heads of the institutions where the participants were employed. According to Balls & Smith (2010), in qualitative research it is advised that researchers do not to use any space that is linked to their power, such as their own office spaces, but that they should rather use a neutral space.

The participants who agreed to participate were requested to sign an informed consent which was kept separately from the data to ensure that there was no way of linking the names of the participants to the collected data. The researcher arranged a time schedule with the participants, taking into consideration their availability so as to avoid disturbing their class sessions. Data was collected during their free periods and lunch times. Each individual interview took about 30 to 45 minutes. An audio-recorder was used to capture the interview sessions, taking into consideration that the researcher in this study was still a novice, taking accurate notes and facilitating an interview at the same time could have been a challenge. The researcher also jotted down any non-verbal expressions of the participants in order to make sense of the data. Groenewald (2004) refers to this technique whereby the researcher makes field notes of all that she hears, sees, experiences and thinks in the period of collecting and reflecting on the inquiry process as memoing.

Permission to use the audio-recorder was obtained from the participants. At the end of each interview, the researcher thanked the participants and provided a brief summary of the collected data for verification purposes. The researcher then explained that she might have to come back for further verification of the transcribed data and/or further exploration of issues as and if needed. The researcher also kept a reflective journal for her to reflect on the whole

interviewing process and her opinion of how the interviews had gone, including how the rapport was established and whether her own perceptions had an influence on the course and content of the interviews or not, as stated in Morse and Field (1995).

### **3.7 DATA ANALYSIS**

The data from the audio tape was transcribed verbatim. The captured data was analysed using thematic analysis (Polit & Beck, 2010). The researcher followed Braun & Clarke's (2006) step by step process for thematic analysis. This is a deductive, flexible method of qualitative research for identifying, analysing and reporting patterns (themes) within the data. The six steps are:

- **Phase 1:** Familiarizing oneself with the data, transcribing the data, reading and re-reading, and noting down initial ideas.
- **Phase 2:** Generating initial codes, coding interesting features of the data in a systemic fashion across the entire data set, collating data relevant to each code.
- **Phase 3:** Searching for themes, collating codes into potential themes, gathering all data relevant to each potential theme.
- **Phase 4:** Reviewing themes, checking if the themes work in relation to the coded extracts and the entire data set, generating a thematic 'map' of the analysis
- **Phase 5:** Defining and naming themes, on-going analysis to refine the specifics of each theme and the overall story the analysis tells, generating clear definitions and names of each theme
- **Phase 6:** Producing the report, the final opportunity for analysis. Selection of vivid, compelling extract examples, final analysis of selected extracts, relating back of the

analysis to the research question and literature, producing a scholarly report of the analysis.

### **3.8 DATA MANAGEMENT**

The data was transcribed and proof read by the researcher and a research assistant who was requested to listen to the audio-recorded data to check whether the data had been properly transcribed. A coding system was used to maintain confidentiality. The audio-tapes and the transcribed data were stored under lock and key in the research supervisor's office at the School of Nursing. As a further precaution, the computer used to store the data had a special password known only to the researcher. The data will be stored at the UKZN for five years before being incinerated.

### **3.9 ETHICAL CONSIDERATIONS**

Ethics approval was requested from the Research Ethics Committee of the Faculty of Health Sciences at the UKZN. Permission to carry out the study was obtained from the Head of the selected NEI. Written informed consent was obtained from the participants. Informed consent is defined as the measure whereby the researcher obtains the participants' permission for voluntary participation in the study.

Participants were informed that there would be no risks or benefits from participating in this study (Polit & Beck, 2010). A letter explaining the purpose of the study was attached to the consent form. Confidentiality and privacy were maintained throughout the research process. Codes were assigned to transcripts instead of the names of participants to ensure anonymity and confidentiality. Participants were informed that they had the right to withdraw from the study at any point if they so wished.

### **3.10 ACADEMIC RIGOUR AND TRUSTWORTHINESS**

Academic rigour refers to the logical accuracy, scientific adequacy or trustworthiness of the research outcomes with respect to openness, scrupulous adherence to the philosophical perspective of the approach and thoroughness in collecting data (Burns & Grove, 2009). The potential strength of a qualitative research theory may be lost if appropriate strategies are not followed to reduce careless handling of data and the researcher biases (Khalifa, 1993). The concept of trustworthiness is used to make certain of the quality and value of the final results and conclusions reached in qualitative research (Lincoln & Guba, 2005). It is important that trustworthiness is reflected throughout the research study. It is also necessary that the researcher specifically addressed academic rigour by using the relevant criteria and appropriate strategies for the qualitative design, as stated by Bhattachaya (2007). The strategies that were used in this study included credibility, transferability, dependability and confirmability.

#### **3.10.1 Credibility**

The core of credibility in qualitative research is the content of the participants' accounts, as well as the ability to collect information consistently and document it accurately so that a similar study can be repeated (Silverman, 2005). Therefore, the data was checked by the research promoter and one of the NEI's research committee members to validate the researcher's conclusions. The researcher also followed up by asking the postgraduate nursing students who participated in the study to validate the correctness of the data and data analysis.

#### **3.10.2 Transferability**

Transferability refers to the generalizability of the data, that is, the extent to which the findings can be transferred to or have applicability in the other group (Polit & Beck, 2010; de Vos, Strydom & Deport, 2007). This was done through detailed description of information

obtained from the participants so that someone other than the researcher would be able to determine whether the findings could be applied to another research study.

### **3.10.3 Dependability**

According to Streubert, Speziale and Carpenter (2003), dependability is the stability of data over time. Therefore, the accuracy and authenticity of the data in qualitative research are important to determine the dependability of the data collected. To ensure dependability, the researcher conducted data quality checks or audits, peer review coding and also consulted with an expert in qualitative research (the research promoter) who monitored the data collection process, the analysis and the interpretation of the data.

### **3.10.4 Confirmability**

This is the guarantee of the objectivity that is the potential for congruence between two or more independent about the data's accuracy, relevance and is supported by the literature and that there is a similarity between the researcher's interpretation and the evidence (Polit & Beck, 2010). Confirmation was obtained by doing an audit of the data and by obtaining the participants' responses to the findings for cross checking and verification.

## **3.11 CONCLUSION**

A qualitative approach guided by the naturalistic interpretive paradigm was used in this study and the research design was descriptive and exploratory. The study was conducted in a natural setting, convenient and comfortable for the sixteen postgraduate nursing education participants. Non-probability purposive sampling was used to select the study participants and semi-structured interviews were used. Ethical research norms were respected in this study and measures were taken to ensure transferability, dependability and confirmability. Details about how the data obtained from the study was treated are provided in chapter four, which presents the research findings.

## **CHAPTER FOUR**

---

### **PRESENTATION OF THE FINDINGS**

#### **4.1 INTRODUCTION**

This chapter discusses the analysis of data and presents the findings of the study. The content analysis that was used to analyse the responses was based on the questions that were used for the interview guide following a thematic analysis by Braun and Clarke (2006). According to these authors, one of the advantages of this type of analysis is its theoretical freedom. Audio recorded interviews were transcribed, transcripts were read and re-read and then compared to the notes taken at the time of interviews. The findings from this qualitative study are presented in conceptual themes.

The purpose of the study was to explore the views of postgraduate (PG) nursing education students on online learning at a selected nursing education institution (NEI) in KwaZulu-Natal (KZN). The objectives of this study were to: (a) explore the experiences of PG nursing education students who were exposed to online learning; (b) describe the views of PG nursing education students relating to online interactions and engagement, access and use of the online learning component in their programme; and (c) describe the benefits and/or challenges of online learning. The last part of the chapter presents a summary of findings.

#### **4.2 SAMPLE REALISATION**

The population for this study consisted of 16 PG nursing education students who had enrolled in an online learning module for Masters in Nursing Education at a selected university-based NEI in KZN. The total population was taken as the sample for this study (Polit & Hungler, 2010) due to limited PG student numbers.

### **4.3 PRESENTATION OF DATA FINDINGS**

The data in this study emerged from individual and focus group interviews. A total of 16 individual interviews were done, each taking an average of 20-30 minutes. Two focus groups interviews were conducted with five PG nursing students per group, each taking approximately an hour. Theoretical rather than inductive thematic analysis was conducted to analyse data that emerged from the individual and focus group interviews.

The codes that emerged were grouped into conceptual themes that corresponded to the concepts on Salmon's (2004) conceptual framework on online learning. The themes included: (a) students' online learning experiences; (b) their ability and skill to use technology; (c) issues of internet and computer access; (d) their degree of interaction and engagement; (e) the role of the facilitator; (f) benefits of online learning; (g) challenges of online learning; and (h) envisaged recommendations for improvement.

#### **4.3.1 Students' online learning experiences**

It emerged that it was the first time that most of the participants had experienced an online learning mode of content delivery. Some of the participants indicated that online learning met their educational as well as their technical needs. They also reported that online learning empowered them to be self-directed students. Some explanations from the participants were:

*It was the first time engaged in such a learning methodology and the experience was a great one... For the first time in my life, I felt in control of my learning and felt in charge...*

*For me eh... It was a new learning experience and at the very beginning I did not know what was expected ... I was puzzled if there was any learning that would happen at all... but as the course continued the whole group got the hang of it and I also found myself actually running with it...*

*The learning process equipped me with both technical and cognitive enhancement.*

*My experience is that the online learning course facilitated my initiative, I had to drive my own learning, I learnt to be self-paced since I had to make decisions on when and where to access the course, took note of the due dates for discussions and posting of the learning activities.*

Participants revealed that the nature of the online learning discussions provided them the time for reflection on their learning and opened a safe space for dialogue where they did not feel as threatened by others as they did in face-to-face classrooms. Data sources revealed that participants preferred this mode of learning, as evident in the following abstracts:

*I had time to reflect on the learning tasks because the responses and postings were not expected immediately...*

*We could work independently and be able to come out with your own ideas... it was interesting that you could also agree with people independently not being influenced by how you are thinking.*

*Online learning allowed us to debate our viewpoints freely, without the fear of the facilitator or other students judging you or passing remarks or expressing negative facial gestures.*

Another key point that emerged was that students not only learned by reflection, but also by exploration, introspection, interaction with the facilitator and other students, and sharing information within the group. The participants indicated that online learning experiences encouraged deep learning. The following are some of their observations:

*... I found it better than the face-to-face because with texting, it's easy to think about what is learnt, correct and refine what I wanted to communicate to the rest of the group... rather than just open classroom*

*discourse because with the latter what you have said you cannot take back.*

*I think understanding of the readings has to be greater when you're a student online than when you're in the classroom, because these are your ideas, you have to pull ideas from the readings, gave a deep thought from them and from various other resources then responded.*

Also, regarding the experience of learning in the online mode, the following participant's comment was significant as the online environment had afforded her the opportunity to improve her writing skills, as indicated in the following excerpt:

*One had to be good at expressing herself in writing... otherwise others could not get a sense of what you trying to say. Remember, this was a learning platform, so everyone had to clearly understand what was said and learn from it. For me, that was very important.*

#### **4.3.2 Ability and skill to use technology**

Participants indicated that in order for their learning experience to be fruitful and productive for them, they needed to be technologically comfortable and confident in their ability to use computers. It emerged from the data sources that although the majority of the participants had some computer skills, they had found the new experience of online learning initially challenging, which had made them feel anxious, stressed and/or apprehensive. The participants expressed the following views:

*I was comfortable since I had the skill already of using the computer but it was frustrating and stressful at first because I was exposed to this type of learning for the first time. My skills eventually grew from strength to strength...*

***Once you engage with online learning... your computer and searching skills become sharp and you gain confidence since you practice all the time so I can say it was good learning experience.***

Participants indicated that they had thought they knew how to use technology, but did not realize how much depth it had in terms of technology skills required. Some of the participants reported that they had not felt comfortable and had had to quickly develop computer skills to bridge the gap. The views of the participants on the use of technology were as follows:

***I was concerned and scared at first because I had never been exposed to this type of learning but as we progressed with the module... I gained the computer skills and it became more and more interesting.***

***I had minor computer skills although I didn't have formal computer training ... I like the computer and I use it a lot preparing my stuff. Online learning really improved my technology skill and confidence.***

***I would say I had some background knowledge and confidence on technology use however, with online learning, I was unsure because I had never been exposed to it before.... but because I knew how to use the computer, it wasn't really difficult...***

It must be highlighted that although many participants were computer literate, some of them had not been computer literate at the beginning of the online course and had felt threatened by their lack of computer skills. They explained that their colleagues had helped them to up-skill themselves, as stated in the following excerpts:

***I was uncomfortable and had no confidence because I had little technology experience but with the help of the colleagues I slowly gained the skill and managed to pull through.***

*I was a bit insecure and uneasy because I did not have computer skills... I thought it was going to interfere with my learning but with the help of other students, I managed.*

*... Though I had some skill it was not enough, but as the course progressed I developed the skill.*

*Initially I was terrible and technology-challenged because I was not familiar with the computer and the use of internet. There were times where I could not move to the page until I had to request someone to assist.*

It became evident that there were mixed feelings among the participants. Most of the students perceived online learning as individually-paced, autonomous, motivating *and* competitive. Some of the participants' comments were:

*I think understanding of the readings had to be greater and was committing... when you're an online student than when you're in the classroom, because these are your ideas, you have to pull ideas from the readings and from various other resources... and they are your own ideas to others.*

*It felt more competitive because I could see everyone's work; I wanted to outdo the other people...and at the end, get satisfaction from it and that for me, was rewarding and encouraging.*

*To build on ideas, and in certain cases, competition to create a challenge to others... I had to read extensively and engage with the material twice or even thrice because I needed to understand it... I needed to push so as to be at par with others.*

### **4.3.3 Issues of internet and computer access**

Issues related to internet and computer access surfaced as a matter of concern for most of the participants. It was revealed that some participants were only able access the online material at home where they had little technological support, whilst others had computer access both at home and at work. Some participants reflected that:

*I had some module which required me to attend physically but with this one I worked on it at home because I had the computer and internet I accessed online material in my computer.*

*I had a computer with internet at home but I was not familiar with the technology at times I would struggle trying to log in to access material but with the help of the children I ended up doing it on my own.*

*I didn't have a problem since I was able to access both at work and at home... I preferred however, to go to the varsity since there was technology support available at the LAN.*

Some of the participants, however, had no computers at home and had to travel to an internet café or the university to access the online module. Others had to purchase new computers so they could have access in the comfort of their homes. Some of the participants explained:

*I did not have access to computer and internet at home, so I had to drive to the campus or drive to the internet cafe to attend to the online tasks and activities assigned to us.*

*I was particularly disadvantaged by the fact that I did not have access to internet at home or in my office so I had to go to the campus or drive to the internet cafe.*

*... At the commencement of the module I had no computer and no internet and could not access the work at home which was an inconvenience on*

*my side but I bought the computer... as time progressed I had the internet installed.*

#### **4.3.4 Degree of interaction and engagement**

Interaction emerged as an important aspect of online learning. Interactivity was described as the opportunity to access other opinions and information not residing within the limited resources that one might have accessed. Participants revealed how the degree and/or level of interaction with other students and with the facilitator affected their online learning experience. It was indicated that online interaction was an important aspect of the learning process and student success. They also indicated that it was increasingly possible for students to interact with one another, even when geographically separated.

Most of the participants cited the importance of interactivity as the most beneficial aspect of online learning generally. The sub-categories that emerged under this theme were: (a) student-to-student interaction; (b) student-to-facilitator interaction; and (c) student-to-content interaction.

**(a) Student-to-student interaction:** It was revealed that the students used each other as resources and for support by commenting on the information they collect from various resources, observations and experiences of each other. According to data sources, the participants felt that the peer student interactions were open and active, with a high degree of intellectual engagement. Online discussions were viewed by participants as useful, well thought out, of a deep-learning nature and requiring them to be active learners. Some of the views of the participants on interactive engagement were:

*I believe my role was to participate and communicate with other students and discuss the things which were part of the curriculum module that we were doing....*

*The interaction with the peers was... I can say it was good because of the responses we received though at first it was not that much up until the facilitator highlighted the importance of interaction...*

*Interactivity was really important for all students. The way the discussion forums were structured really helped us to be grounded in what we were learning...*

*The level of engagement was amazing... It was professional and everybody was active, you could not have dodged, you had to write own view then other people would critically analyse and debate around one's thought until the views were clear and acceptable to all*

It was indicated that responses from peer group mates were received timeously and that they facilitated knowledge construction. Participants reported that they shared information, supported each other, worked with groups, and made a continuous effort to improve writing skills because colleagues read all their work. This is expressed in the following extracts:

*... A great deal of engagement took place because everybody responded and sent their postings immediately especially when there were debates about a certain subject. The group members posted their thoughts and deliberated on the discussion topic and everyone posted their viewpoints supported by literature as we were expected....*

*When it was group assignment you had to be there electronically and on time ... with the group and shared your views so that everybody engage and interact as required...*

*The level of interaction was high... It was exciting to be able to interact with peers online ... and actually learning from those interactions...*

Notwithstanding the fact that many participants were satisfied with the level of online interactions and engagements, data sources revealed that some of them felt that student-to-student interactions and level of engagement were insufficient and not up to the level they

had expected it to be. It was reported that only a few students initiated the discussions and debated the issues, and that it was always the same few. They indicated that some students took long to respond to postings and had to be probed by the facilitators in order to interact.

This is illustrated in the following extracts:

*We were struggling to all engage as a group... other students would post one comment as though it was a task to be fulfilled yet in my views and understanding, the module was meant to allow on-going conversation... the interaction was poor in my view.*

*There were few students who would initiate the discussions but it took too long for others to respond thus rendering the whole discussion slow and dragging for long.*

*I found myself interacting with one and the same colleagues two or three people instead of all members of the group...*

*At first there was not much interaction, as individual just posted their work and nobody would comment... the facilitator had to stimulate the discussion and even invite us by names to get us started.*

**(b) Student-to-facilitator interaction and engagement:** This sub-category included the level of interactions between the facilitator and the students. The participants viewed the facilitator as supportive, and very helpful, saying that she gave instructions relating to the module, various other communication or feedback and also guided the online discussions. Some participants stated that:

*The facilitator engaged us in critical debates and provided topics that would stimulate active debates and deliberations.*

*We would sometimes find comments from our facilitator, showing us where we were in terms of the course content... she would also highlight where we needed to go for more information.*

*The facilitator monitored our discussions and encouraged those who were less involved to put effort up to the extent of assigning specific work for them.*

*She was good... diligent to check if we had done the work like the posting of task, she would always remind us about the deadlines so that we can put effort.*

**(c) Student-to-content interaction and engagement:** It emerged that the online learning experience allowed for interaction with and about the content. Participants indicated that they were afforded an opportunity to interact with the module content before interacting with the other students and/or facilitator. The following are the abstracts from the participants' descriptions of the student-to-content interactions:

*In the past, interactions only occurred in the classroom and almost solely between teachers and students... now we are introduced to the modern e-learning interaction tool which makes the learning experience more worthwhile and valuable.*

*In online learning doesn't necessarily require real-time communication... Interactions among students and the facilitator and the content can be independent of time and place.*

*Online learning afforded us more time to read our books, understand the content well before clicking into Moodle. You must have understood the section before being challenged by others... be able to defend your views...*

#### **4.3.5 Role of the facilitator**

It was clear from the data sources that most important role of the online facilitator was to model effective teaching and accept the responsibility of keeping discussions on track, contributing special knowledge and insights, weaving together various discussion threads and course components, and maintaining group harmony. Participants perceived the role and

qualities of the facilitator in an online environment as very important for facilitation and enhancement of learning. It emerged that the facilitator gave technical support, encouragement and motivation, as indicated in the following excerpts:

*As adults who were not used to the computer, the support and encouragement she offered was great and remarkable which made us to pull through till the end of the course... at the same time, made sure we achieve the learning outcomes.*

*Our facilitator had a positive attitude and very supportive, you would think you are doing great because of the encouraging comments, once commended us on the depth of the discussions we were engaged on.*

*Since I was not comfortable with the technology, she eased my frustration by giving technological support and guidance which was evident in the orientation she conducted and throughout the module since she knew that we were not familiar with technology and as they say... technology immigrants.*

Although most participants revealed that the facilitator was approachable, non-judgmental, supportive and professional some, however, perceived that there was an element of anonymity in the online environment. Some of the views are expressed in the excerpts below:

*When we were meeting face-to-face and motivated us to keep up the good effort. She was concerned about the problems we were facing as online beginners, she would ask us individually*

*The facilitator was helpful to those students who were shy and not as verbal... however, I feel that our relationship with the facilitator to lacked that student-facilitator personal connection...*

*Obviously, face-to-face interactions and body language were absent... I was just thinking about the missing piece and uncomfortable... You need connectedness with the facilitator.*

#### 4.3.6 Benefits of online learning

It was revealed by the participants that the true power of online learning is found in its potential for the students to share and exchange information, its convenience and its flexibility in allowing students to work at their own pace. Four sub-themes emerged from this theme which are: (a) increased socialisation (b) convenience and flexibility; (c) accessibility; (d) asynchronicity; and (e) computer skills.

**(a) Increased socialisation:** Participants viewed their relationships with other students as increased socialization. It emerged that students shared information, supported each other, worked with groups and made a continuous effort to improve writing skills because colleagues read all their work. They valued each other's contributions and perceived a sense of equality in the course. Some of the participants stated that:

*The online environment is public and permanent academic platform... everyone is able to see ones strengths and weakness of others... but usually we were supportive to each other.*

*We feed off one another and learn who does well in the class and you try to do as well or better than that person... this, for me accelerated learning.*

*It was important that one improves her writing skills so that others can understand... remember they are not there to ask follow-up questions and responses there and then.*

*The online environment provided an opportunity to learn about other students' clinical practices... and to connect with people from other countries.*

**(b) Convenience and flexibility:** Most of the participants described flexibility and convenience as the most beneficial features of the online learning environment. As adult

students, they appreciated the flexibility of being able to control time, place and pace. This is shown in some of the following extracts:

*I already had experience with computer, but I still learned new ways to optimize my use. The benefits were that you attend to your work twenty four seven at your own tempo... you are not confined in one place in one time; any time is suitable especially as mature learners.*

*... I could attend my online tasks or assignment anywhere... anytime at my own convenience... that was nice. For me the benefits are the flexibility of time... eh... I think it's a good method for adult learners.*

*You access it wherever, whenever... you pace yourself, you decide when you want to do the work... for me that was the key benefit... It allowed me to conduct my work in my own space, at my own speed, at my own suitable time.*

*Really, online learning was clear and organized. Much better than in-class sessions because it was hands-on and on our own time. I liked the online format because I could define my own time and pace that worked for me.*

In spite of the slight feelings of isolation from the facilitator that was highlighted by some of the participants, the findings revealed that the benefits clearly overrode the negatives. The participants found the online learning environment to be very conducive and effective to learning, as indicated in the excerpts below:

*I've had many extremely interesting links from the facilitator and other students that may not have gone into my mind.*

*Online learning was successful because of the content and online tools we were learning and how the facilitator was helping us.*

*We gained experience with quite a good range of the technologies currently available for e-learning.*

**(c) Asynchronicity:** It emerged that the asynchronous aspect of online learning allowed students to work on their own, anywhere, in their own time and log into the online space whenever they were ready. Participants indicated that the asynchronous nature of the discussions and chats were well considered. They felt that they were allowed time for reflection, to mull over ideas, refer back to previous messages and take any amount of time to prepare for responses, as reflected in the following abstracts:

*The module gave us more time to think about what we wanted to post... I could make my point, write everything out, and made sure I wrote what I wanted to write...*

*You can express your thoughts without interruption... You have more time to reflect on and respond to discussions and other students' comments, and since the time frame is longer you are able refine responses before posting.*

*Of course, we didn't have a situation where people would want to take over the class discussion... instead, we all had opportunities of thinking hard of what we wanted to say and the shy people could also participate more... everyone got to say what they wanted to say.*

**(d) Accessibility to learning material:** The participants expressed that the online environment was flexible, convenient and offered accessibility to many resources. Technical support was available to students from the facilitator and their fellow students. The courseware and related tools facilitated learning. Participants highlighted the benefit of orientation to the course as it eased the stresses that were related to the online learning experience. These sentiments are expressed in the following excerpts:

*E- learning was very good because one can combine family life and career together and learn at the same time.*

*You become what you want to be at your convenience and waste less time and energy. It also helped me with my IT skills.*

*The online learning environment was very stimulating. I loved my interaction with my peers. I loved the interaction with the facilitator...*

*I enjoyed learning and using the internet and finding articles online... That was really exciting and fun.*

*The orientation was good, the facilitator showed us what was expected from us, how to use password and log on, write and post messages, we did that repeatedly and told us that was the manner we were to communicate and interact.*

*The orientation afforded us the opportunity to get acquainted with the program and how we could navigate through the system*

#### **4.3.7 Challenges of online learning**

Though online learning may have numerous benefits, participants mentioned some of the challenges which they felt had hampered their online learning experiences. The most frequently mentioned challenges included (a) lack of real-time response; (b) financial cost; and (c) technical issues.

**(a) Lack of real-time response:** Participants identified certain elements of the online learning experience that they found difficult to work with such as group work and social isolation, as some of the students were not actively participating in the work assigned for the group. They also found that one of the drawbacks of working online was that they did not receive immediate feedback from the facilitator or their peers. Unlike the more traditional way of learning where students can get help or receive prompt feedback during a class, they

had to wait a little longer to get responses from peers and/or the facilitator. The participants explained as follows:

*You felt like you were just all alone. I just thought I was typing into space or something... and there was no one on the other side.*

*The feedback from the facilitator I think it was not enough because after the deliberations about the activities with other students about the topic posted to us, the facilitator's comments will be delayed... we needed her input right when we were also online.*

*Feedback from the facilitator was not as expected... I guess it's because she had so much workload during this semester, I was not sure about the validity of our discussions in terms of meeting the module objective.*

*You do expect feedback so that you know that you are in the right path and that was very limited... sometimes until the next topic is commenced... you see there were set dates for postings and we needed to know if we were on the right direction before proceeding to the next tasks...*

**(b) Financial costs:** Financial cost emerged as a challenge as some of the participants had to purchase computers and also arrange for internet access, costs that they hadn't catered for. This is explained in the following excerpts:

*It was costly for me because I had other plans I did not know that the module was going to be conducted online, I had to buy a Laptop and also had internet installed...*

*Cost was a challenge because I had to travel to the university LAN from work or home to access the computer and internet... eventually I had to buy the laptop which was not budgeted for.*

*... I had to apply for internet to be installed at home because it was not possible to make through the whole module without internet and when you have internet you worry about the cost.*

**(c) Technical issues:** The participants highlighted their frustrations with the technological problems they encountered, which sometimes distracted them from effective contribution to online learning sessions. Some participants stated that:

*Most of the time I used to access online at home it frustrated me because my system was not of good quality, the bandwidth was limited and slow operating.*

*Losing my postage was quite stressful you would only realise when there is no response towards your discussion and another problem which made me feel like a fool when I was unable to edit or delete the posted message when I discovered it had flaws.*

*Sometimes I was not able to access Moodle and thus would not be able to contribute to the discussions. This was wearisome because I would lose important engagements with my peers... it meant having double sessions the next time you access the online class.*

#### **4.3.8 Students' recommendations for improvement**

Participants suggested that timely feedback from the facilitator was very important. Several students reported that they wanted prompt responses to technical problems as expressed in the following excerpts:

*I think being accessible... I mean the facilitator... and responding in an appropriate time frame would help because if we type our posting...we hanged on, waiting for responses.*

*It is just responding and knowing that the facilitator is actively involved in what we are doing that makes all the difference.*

The participants also highlighted a number of recommendations that they felt would improve and enhance the online learning experiences. They recommended that the facilitator could be more objective and more encouraging of their contributions, and that the quality of the content could be enhanced to ensure that it was always relevant to the subject being covered. These recommendations are reflected in the following statements:

*The use of various learning options can stimulate student participation and interaction... few examples include small online group discussions, polling activities and one-on-one message exchanges to name what I can think of.*

*The facilitator should always consider such things as the tone and content of the posting and time of the posting in relation to the tasks at hand.*

*The online facilitator need to be content if two or three well articulated, major points are communicated in a particular thread of discussion.*

*It is important that the material is always relevant, questions and activities developed for students should relate to the student' experiences.*

One participant suggested that it would be a good idea to invite an expert(s) on the subject to visit the online space to comment on the students' postings. This interesting recommendation is stated in the following abstract:

*Guest experts may have been invited to join the online conversation with students to respond to posted contributions or so... students can then ask questions to the online visitor.*

#### **4.4 CONCLUSION**

In this chapter, the researcher discussed data obtained from interviews conducted with the PG nursing students. Students explained their learning experiences as they progressed through the steps of accessing the online learning tool through Moodle, online socialization,

exchanging information, and conferencing to construct and deconstruct knowledge. Findings showed that online learning promoted critical thinking skills and self-directedness as students adopted the responsibility for their own learning. The benefits and challenges of online learning as perceived by the students were also highlighted.

The summary of the findings as presented in this chapter are that most students in this study had been exposed to online learning for the first time and had felt empowered by the experience. Online learning provided a deep learning approach and opportunities for reflection. Whilst some participants were already computer literate, others, at the beginning of the course, had found the use of technology challenging as it was a new experience for them. Those who had already been exposed to computers and the internet and had easy access to these facilities were at an advantage as opposed to those who had not used a computer before. However, with the support of the facilitator and their colleagues this was later overcome and all the students were of the opinion that their levels of knowledge had been enhanced by the course. The facilitator played a key role in guiding, supporting and ensuring that the learning outcomes were achieved by all. The main benefits of the online learning space included appreciation of the flexible nature of the course and the transferable skills the students had gained. The main challenges that emerged for this type of learning were the financial burden it carried and the student's initial lack of technology skills. Participants came up with innovative recommendations for the improvement of the online course, which included the proposal of inviting subject experts into the online space.

The next chapter will be dedicated to a discussion of the findings using current literature, and the recommendations and conclusion of the study.

### DISCUSSION, RECOMMENDATIONS AND CONCLUSION

#### 5.1 INTRODUCTION

This chapter presents the discussion, recommendations and conclusions reached in this study. The discussion and interpretation in this study have taken into consideration the purpose of the study, which was to explore the views of post-graduate nursing education students on online learning. A total of 16 postgraduate students who were registered for Master's Degree course in nursing education described their experiences with an online learning module. Verbatim transcriptions of interviews were used as the primary source of data in this study. Through thematic analysis, eight themes emerged for this study, which are as follows: (a) students' online learning experiences; (b) their ability and skill in using technology; (c) issues of internet and computer access; (d) degree of interaction and engagement; (e) the role of the facilitator; (f) benefits of online learning; (g) challenges of online learning; and (h) participants' recommendations for the improvement of online learning.

The summary of the findings as presented in the previous chapter were that most students in this study had been exposed to online learning for the first time and had felt empowered by the experience. Online learning provided a deep learning approach and opportunities for reflection. Whilst some participants were already computer literate, others, at the beginning of the course, had found the use of technology challenging as it was a new experience for them. Those who had already been exposed to computers and the internet and had easy access to these facilities were at an advantage as opposed to those who had not used a computer before. However, with the support of the facilitator and their colleagues, this was later overcome and all the students were of the opinion that their levels of knowledge had been enhanced by the course. The facilitator played a key role in guiding, supporting and ensuring

that the learning outcomes were achieved by all. The main benefits of the online learning space included appreciation of the flexible nature of the course and the transferable skills the students had gained. The main challenges that emerged for this type of learning were the financial burden it carried and the students' initial lack of technology skills. Participants came up with innovative recommendations for the improvement of the online course, which included the proposal of inviting subject experts into the online space.

## **5.2 DISCUSSION OF THE FINDINGS**

### **5.2.1 Students' online learning experiences**

It emerged from this study that it was the first time most of the participants had experienced an online learning mode of content delivery. Some of the participants indicated that online learning met their educational needs and had contributed to improving their technical skills. These findings are echoed by the findings of de Silva, Fernando, Sumanasekera, Liyanagama and de Silva (2010), who stated that participants in their study felt that online learning improved their knowledge through online reading material, as well as their participation in discussions and doing assignments. The results of this study also revealed that the technical skills of students improved greatly because they had to learn to upload assignments, download files and documents (such as portable document format) and have a working knowledge of the online learning environment. McDonald, Stodel and Chambers (2008), also found that students who participated in online courses acquired new and relevant knowledge, their technical skills improved as they gained confidence in applying the necessary skills related to achieving the resource learning outcomes of their online course.

The participants of the current study also reported that online learning empowered them to be self-directed students. These findings are supported by Cercone's (2008) assumptions that, the self-directed learning of online students includes independence, willingness to take

initiatives, persistence in learning, self-discipline and the desire to learn more. Concurring with this, many researchers (Sit, Chung, Chow & Wongs, 2005; Brookfield, 1997; Cranton, 1994) state that adult online students are self-directed, highly motivated and are able to find resources and evaluate their learning progress to meet their goals. Students in online courses engage in self-directed and autonomous learning while taking greater responsibility for mastery of course content (Coombs-Richardson, 2007; Sampson, 2003; Parise, 2000). Further supporting the findings are the views of Sit et al. (2005), who came to the conclusion that online learning empowered students to be self-directed, accountable and to take responsibility for their own study since they are able to access and work through the subject material at their own pace.

It emerged that online learning required students to take a greater responsibility for their own learning. According to Knowles and Kerkman (2007), students working online cannot simply follow the herd of students attending class, but are required to log into the online classroom as a solitary initiative. Once in, however, they will find comments from the facilitator and other online classmates. For this, self-directed will is needed, as indicated by the participants in this study.

Participants in this study revealed that the nature of the online learning discussions provided them time for reflection on their learning and opened a safe space for dialogue with no feelings of being threatened by others, as in traditional classrooms. These study findings echoed the findings of Kirkwood and Price (2005), who are of the view that online learning gives participants an opportunity to reflect upon each message posted, provide a considered response and participate in a thoughtful manner, which is more considered and reflective than is possible in a face-to-face session. This is further supported by the findings of Dyrbye, Cumyn, Day and Heflin (2009), who found that online learning students have time to reflect

on the comments of others and can take a little longer time to formulate a meaningful answer, rather than simply speaking to be heard.

Another key point that emerged was that students not only learned by reflection, but by exploration, introspection and interaction with the facilitator and other students, and that by engaging with others and sharing information exposed them to the online group dynamics. These findings concur with those of Ali, Hodson-Carlton and Ryan (2004), who cited that online learning stimulated participants' critical thinking skills because they were required to search for information from a variety of sources, which made interactions with both the faculty and other students stimulating and interesting. These findings were also in line with Wozniak (2006), who states through the medium of online interaction, the students and facilitator learn a lot through reflection of other participants' postings and comments. This author indicated that online learning allowed students to judge their own standard of learning and that continual feedback from the facilitator is a good indicator of progress and encourages deeper learning. According to Robin and Hullinger (2008), online learning increases the opportunity to stimulate a higher order level of thinking and allows students more time to think critically and reflectively. They are of the opinion that online learning stimulates analysis, synthesis, judgement and application of content.

It emerged in this study that students, as online participants, supported each other, worked within online groups as allocated by their facilitator and made continuous efforts to improve their writing skills because colleagues read all their work. These findings are consistent with Vonderwell, Liang and Alderman (2007), who stated that good understanding of required tasks and good writing skills were needed by online students to explain themselves fully and appropriately and were influential to the success of the discussions. They found that online learners who were inexperienced and lacked writing skills struggled to figure out the writing

conventions that emerged in the discussions which made them appear less competent and unable to complete the requirement of the course. The same view is shared by Robin and Hullinger (2008), who stated that participants felt they had to develop good writing skills in online learning as it was essential to write clearly and effectively for other students to be able to read and respond to their view-points. Further supporting the views are Park (2008) and Tu (2001), who are of the view that the nature of the online learning environment afforded the participants time to better their own scientific writing skills since they had to respond in writing to the comments and postings of their online colleagues. Online participants also spend a tremendous amount of time gathering information, organizing their thoughts and composing meaningful discussion messages, as it was indicated in this study as well.

### **5.2.2 Ability and skill to use technology**

It emerged from the data sources that the majority of the participants managed to develop computer skills although it was a challenging new experience for some of them who initially experienced emotions of anxiety, fear and/or apprehension. These findings are supported by Ivers, Lee, and Carter-Well (2005), who pointed out that if students were comfortable with their own computer skills when they enrolled on online courses, it would boost positive perceptions about online learning and they would not be intimidated by the online environment. These findings are further echoed by other researchers (Zembylas, 2008; O'Regan, 2003) who stated that students displayed different emotions towards online learning as alongside their positive emotions, they had feelings of doubt, discomfort and anxiety which were generated by the unknown methodology, their inability to use computers and issues with access and use of the internet. These findings are also congruent with Takalani (2008), who indicated that the students who participated in the study he conducted also displayed mixed emotions. Some of the students revealed that there were times of confusion and apprehension when they were not clear with instructions and did not have

anybody to turn to for support, while others, who were competent and comfortable with computers, had positive feelings towards online learning.

Some of the participants in the current study reported that at the beginning of the course they had not been comfortable with the use of technology and had had to make a concerted effort to develop computer skills to bridge the gap. Supporting these findings were Meyer, Cronje and Eloff (2007), who contended that their participants had experienced feelings of discomfort and insecurity during the initial phase of their online study because they did not have the level of technology (IT) skill that was required, but that after feelings of chaos and not trusting their abilities, they started to take charge of the situation by developing the necessary IT skills. These findings concur with Miers, Clarke, Pollard, Rickaby, Thomas and Turtle (2007), who indicated that many students participating in online study courses were initially apprehensive about the experience and expressed concern regarding their knowledge and skill, but later acknowledged that they had used their own initiative to up-skill themselves.

The participants of this study who had not been computer literate when they started the online module indicated that this had negatively impacted their learning experiences. This is echoed by the findings of Moule, Ward and Locker (2010), who stated that participants reported that being computer illiterate adversely affected their learning and they felt they had needed more training prior to embarking on the course. Takalani (2008) argues that students who are computer illiterate find online learning difficult and not an ideal medium for learning as they are in a situation where they have to learn and interact with the instructor, student and content without having the necessary technology skills.

The participants of this study revealed that they perceived online learning as individually-paced, autonomous, motivating and competitive and that these attributes contributed

positively to their development of IT skills. According to Hannay and Newvine (2006), online students enjoyed the autonomy offered by the online learning experience as they could choose to engage in the learning process at any time that was convenient to them. They valued self-paced instruction as it provided them with high levels of motivation to learn, thus ensuring better performance. Takalani (2008) concurs with these findings, stating that online learning makes students move from lecturer dependency to independency. Students use the internet as a source of information and since the instructors are not physically available, the students are therefore forced to be independent when it comes to their own learning. Students need to be proactive and self-reliant as indicated in this study.

### **5.2.3 Issues with internet and computer access**

This study revealed that not all the participants had the same levels of accessibility to computers and the internet, which affected their perceptions of online learning. It was revealed that some participants were only able access the online material at home, whilst others had computer access both at home and at work. In a study conducted by Mitchell, Ryan, Carson and McCann (2006) and Woznaik (2006) it was found that although the majority of the participants accessed their learning material both at home and university, they found it more convenient and liked working on the course content from home. Attack and Rankin (2002) asserted that participants who did not have access to a computer at home found online courses challenging.

The issue of internet access was another concern for some of the students. In order to access the online module some participants had to travel to internet cafes or the university, while others had to purchase new computers or get internet packages so as to be able to access in the comfort of their homes. These findings are highlighted by Takalani's (2008) study which revealed that many students did not own personal computers which they can use at home and

were therefore compelled to work at designated venues or centres where they can access computers. Various other studies (Moule; Ward and Locker, 2010; Kaur and Sidhu, 2010; Kahiigi, Danielso, Hansson, Ekenberg and Tusubira, 2009) also found that although some students had computers, not all had internet connections in their residential areas and the difficulties they faced in gaining internet access made online learning challenging for them.

#### **5.2.4 Degree of interaction and engagement**

The findings of this study revealed that participants perceived that while the role of modern technology in education has merit, the content of the course alone does not create a learning environment and that students' interaction online, just like student interaction in traditional classrooms, is a critical component of the learning content. The participants of this study appreciated the opportunities offered by online learning to interact with their group mates and the facilitator, even although they were geographically separated. This is consistent with Coldwell, Craig and Goold's (2006) findings that online learning enhanced access to resources and made it possible for interaction with others and lifted the geographic boundaries. Weller (2001) states that online learning is increasingly meeting the educational needs of the students by accommodating individual students, encouraging interactivity and providing information, learning and communication without considering the geographic zones.

**Student-to-student interaction:** The participants felt that interactions with peer students were open and active with a high degree of intellectual engagement. Participants viewed the online discussions as useful, insightful and of a deep-learning nature, which required them to be active learners. These findings are in line with Maxfield (2008), where students reported achieving a rich learning experience from the course design and their participation in discussions, which allowed them to learn at a much deeper level from the perspectives and

experiences of other students. Duffy, Dueber and Hawley (1998) echoed the same sentiment that the online environment fosters in-depth information processing and critical thinking in students by allowing them time to process their thinking when engaging in online discussions. This is further supported by Battalio (2007) who argues that the paradigm shift to interactive learning offers unique and exciting possibilities for deep learning. These findings are in contrast with Maurino and Schoenacher (2009), however, who reported that the discussion threads in the online learning are collections of duplicative entries by students and that there was no deep learning or critical thinking in their online discussions. Characteristics of deep learning, according to Knowles and Kerkman (2007), are an intention to understand material for oneself, vigorous and critical interaction with knowledge content, relating ideas to one's previous knowledge and experience, discovering and using organising principles to integrate ideas, relating evidence to conclusions and examining the logic of arguments, as indicated by the participants in this study.

Participants in this study indicated that responses from their peers were received timeously, which facilitated knowledge construction and information sharing. This view is shared by Mabrito (2005) and Kassop (2004), who state that online learning is highly interactive and that when the students post questions on the discussion board, their fellow students respond quickly and intelligently, thus facilitating constructive discussion. The same sentiments are echoed by Gallagher-Lepak, Reilly and Killion (2009), who found that the responses from students were received on time and prompted trust, confidence and learning. The prompt response sped up mutual exchange of information and continuous input on the discussion thread.

On a negative note, however, participants in the current study reported that it was always the same few students who initiated the discussions and debated issues and that some students

took so long to respond to postings that they had to be probed by the facilitator to contribute to the discussions. This finding is supported by Maurino and Schoenacher (2009) who stated that the majority of students did not fully participate in the discussions, leaving it to only a handful of students. These authors added that some students were not disciplined enough to participate the required number of times and within the required time frame, and that this lack of interactivity retarded the discussion thread. These findings are further supported by Moule et al. (2010) who found that some students that would wait until all the others had posted their comments, thus frustrating their fellow students by the lack of group commitment to collaborative online learning. This created a negative experience, which led to the belief that online work was extra and superfluous. This was supported by Nichol, Minty and Sinclair (2003), who revealed that students found it frustrating to have to wait for the responses when they were excited about a particular topic and anxious to discuss it.

**Student-to-facilitator interaction and engagement:** It emerged that the participants were happy with the manner that the facilitator gave instructions relating to the module and with any other communication or feedback and that guided the online discussions. According to Vonderwell, Liang and Alderman (2007), the instructor's feedback is an essential element of online learning and is important for student learning. Vonderwell et al. (2007) suggested that instructors should guide the learning and facilitate discussions by responding to individual student's questions as well as to the class as a whole. Liu, Lee, Bonk, Su and Magjuka's (2005) study concurs with the findings that an online facilitator should use various instructional techniques which foster understanding of the key concepts of the course and provide timely and quick feedback. In contrast to these findings, Ivers et al. (2005) indicated that the participants of their study complained that they had experienced a lack of instructions and communication from the instructor, which left them feeling overwhelmed, excluded and intimidated by the online experience.

**Student-to-content interaction and engagement:** Participants of this study appreciated the fact that they were afforded an opportunity to interact with the module content before interacting with the other students and/or facilitator. These findings are in accordance with the findings of a study conducted by Arend (2009) in which students reported that they had been given opportunities to explore different concepts related to the course and dig deeper into a concept or topic. They elaborated that they engaged in in-depth discussions about the concept or topic, and that it was a place where they would challenge other students' ideas and support their own viewpoints. Conrad and Donaldson (2004) and Twigg (2001) reported that participants' interaction with the coursework of online modules involves more than merely reading the text and requires them to actively engage with the course content and the online learning community. The study of Moore and Kearsley (2005) further support the findings that the online learning environment obliges students to interact with the content and with each other.

### **5.2.5 The role of the facilitator**

Participants perceived the role and qualities of the facilitator in an online environment as being very important for facilitation and enhancement of learning. They highlighted the crucial need for orientation to ease the stresses that are related to an online learning course. According to Salmon (2004), students need to be familiar with the online platform which can be achieved by proper orientation and assistance in mastering the necessary computer skills. Salmon also indicated that students should be motivated and given technical assistance on how to access the course content and use the system efficiently. Askov, Johnston, Petty and Young (2003) concur with the findings that students should be provided with basic skills training in the computer and internet use before they commence with content instruction. Once they have had a chance to practice using the technology, they will be better prepared to engage with the content provided online. The findings are further echoed by Churchill

(2005), who argued that the facilitator should clearly outline the minimum requirements expected of them during their online course to effectively enhance their learning experience.

The participants in the current study indicated that the facilitator engaged them in the learning process and stimulated their thinking capacity. Information was not dished out to them, but they had to seek for it and became active participants of their own learning. According to Huang (2002), the constructivist theory has important implications in online learning. This author stressed the importance of the online facilitator building experiences that enabled the students to search for knowledge and find resources to build on this knowledge to solve problems. The findings are further supported by Berge (1995), who highlighted that the role of the online instructor is to model effective teaching by facilitating educational processes for students understanding of critical concepts of knowledge sharing and knowledge building through interactive discussion.

The findings of the current study revealed that the facilitator did not only facilitate content, but also gave technical support, encouragement and motivation. These findings were supported by Carroll, Booth, Papaioannou, Suttan and Wong (2009), who stated that the role of the facilitator was to offer formal support and encouragement to the students. Such support took the form of prompt and instructive help in directing group activities and technical assistance on the use of the discussion board which were considered as vital in the delivery of the course. This is further supported by Salmon (2004), who views the online instructor as a weaver who facilitates effective online discussion, promotes a friendly environment by encouraging participation, motivates and engages students in a community of inquiry, sets clear expectations for online interaction prior to the beginning of the course and gives technical support or refers students for technical support and allows them sufficient time to learn new programmes.

Most of the participants revealed that the facilitator was very approachable, non-judgmental, supportive and professional. However, some perceived that there was an element of anonymity in the online environment. According to Illinois Online Network (2008), an online instructor must be able to compensate for the lack of physical presence by creating a supportive environment where students feel comfortable participating. An online instructor must be approachable and treat the students politely and with respect so that they feel comfortable in contributing in an online community. These findings were also supported by other studies (Parker, 2010; Coleman, 2009), who state that an instructor in an online environment must be more approachable than in traditional settings as students may want to communicate with them without waiting for office hours, which may not be convenient. This open communication provides enhanced contact between the instructor and students.

#### **5.2.6 Benefits of online learning**

It was revealed by the participants that the true power of online learning is found in its convenience and its flexibility in being able work at one's own pace, online asynchronicity and accessibility of learning materials.

**Convenience and flexibility:** Most of the participants described convenience and flexibility as the most beneficial features of the online learning environment. It emerged that, as adult students, they appreciated the flexibility of having control over time, place and pace. The findings echoed the findings of Kim, Liu and Bonk (2005), who indicated that the majority of students in their study noted flexibility as the most important benefit of online learning. Most of the students were adults who had lots of responsibilities juggling between full time jobs, family and school, and being able to learn at their convenience in terms of pace, time and place had a positive influence on their learning. In another study conducted by Dyrbye, Cumyn, Day and Heflin (2009), the participants revealed that online learning provided

convenience and flexibility that enabled them to overcome constraints that would have prohibited them from participating in their study programme because of family demands, and geographical and work related constraints. The findings are further supported by Koch, Andrew, Salamonson, Everett and Davidson (2010), who revealed that online learning is flexible in terms of time and place, and allowed students to study the at their own pace and access material at a place and time convenient to them. According to the findings of Korhonen and Lammintakenan (2005), however, online learning was convenient and flexible only if the participants had access to a home computer and time to devote to studying online.

**Increased socialisation:** Participants in the current study commented on the socialization that was a part of online interaction and the relationships that they developed with other students. The findings of Carroll et al. (2009) echoed the same sentiment that participants had made positive comments about group work, saying that they had learned a great deal from one another and shared valuable information through socialization. According to Billings et al. (2001) and Billing & Halstead (2005), socialization is inherent in online learning activities and contributes to the development of skills. In a study conducted by Ali et al. (2004), however, findings revealed that students viewed their relationships with colleagues as ranging from increased socialization to no socialization.

**Asynchronicity:** Participants indicated that the asynchronous nature of the discussions and chats were well considered. Some felt that they had been allowed sufficient time to mull over ideas, refer back to previous messages and take any amount of time to prepare their responses. According to Ali et al. (2004), participants cited that asynchronous discussion provided time to view postings and prepare responses. Participants reported that this method gave them the time they needed to pass comments and make their view-points known, write everything out and made sure they wrote what they wanted to write. For them, it was not a

situation where some people take over the classroom activities, but it was an opportunity where even the shy people could participate with no immediate stress and pressure. Vonderwell (2003) indicates that online learning facilitates creation of ideas. For this researcher, the 'on-real' time aspect of asynchronous discussion gives the students enough time to share a composed thought or question, be able to reword messages before posting them online and revisit the discussion message to assess their own contribution. Further supporting the findings are Billings & Halstead (2005) and Coombs-Richardson (2007), who assert that students take advantage of the asynchronicity of the technology, since they can compose, edit and refine their ideas before expressing them to the group or review their comments before posting to the discussion forum.

**Accessibility to learning material:** The participants expressed that the online environment was flexible, convenient and offered accessibility to many resources. The participants noted the importance of technical support, saying that it had worked well for them. They added that the course-ware and related tools had facilitated learning. May, Acquaviva, Dorfman and Posey (2009) are of the view that the technology skills that are gained by students as they practice benefit them in accessing learning resources twenty-four a day from anywhere, allowing improved flexibility in completing coursework.

### **5.2.7 Challenges of online learning**

Although online learning may have numerous benefits, the participants indicated that this mode of learning also had some challenges which hampered their online learning experiences.

**Lack of real-time response:** In this study the data revealed that the elements that were not working well for the participants included group work and social isolation. Participants indicated that the online learning experience was challenging when they did not receive

immediate feedback. Unlike face-to-face classroom situations where the students can get help or receive prompt feedback during the lessons, participants revealed that with online sessions, they had to wait a little longer to get response from peers and/or the facilitator. This finding echoed the findings of Kim, Liu and Bonk (2005) whose participants stated that they found online learning very challenging when there was lack of opportunity to receive feedback or to receive answers in real time. They said it took longer to get a response in their online environment than in the classroom where they could ask questions and receive a quick response from the facilitator or peers. The same sentiment was echoed by Liu et al. (2005) and Dyrbye et al. (2009) who indicated that students expressed the need for more immediate and real-time feedback to confirm that their understanding and efforts were on track and also to defuse the problems quickly. Wang and Woo (2007) also highlighted lack of immediate response from others as a challenge because not all students participate at the same time.

In this study, participants also felt that lack of real time responses led to social isolation and ineffective group work. According to Miers et al. (2007), students miss the social information that they gain from face-to-face interactions within group activities, as online learning lacks the personal touch of being able to see someone. One cannot, therefore, maintain eye contact or interpret body language, expressions and non-verbal behaviour, all of which give one reassurance of acceptance within the group. The findings are consistent with the findings of Gallagher-Lepak et al. (2009) where participants reported that they felt out of the loop and experienced feelings of aloneness in the online environment. The same findings are further echoed by Derby et al. (2009), who pointed out that online discussions are difficult because online participants are not completely sure of what their group mates are saying as they have lost the benefit of contextual cues, voice inflections pauses and body language. Students further commented that sharing the workload in an online course depended on equitable participation from all participants.

**Financial costs:** The data revealed that some of the participants in this study had to purchase computers and also arrange for internet access. Financial cost also emerged as a challenge to those who had no computer and internet facilities at home. According to Meyer, Cronje and Eloff (2007), participants stated that they had not been sufficiently informed with regard to additional financial requirements for the course, such as fees for a computer and the internet. They had been caught unawares as they had not planned for the financial impact of these expenses. The same sentiments were echoed in a study by Childs, Blenkinsopp, Hall and Walton (2005) when students voiced concern about the financial implications of their online course because they had been compelled to purchase computers, printers and internet access as they had not had the necessary technology at home or work. Another issue that was noted by Knowles and Kerkman (2007) is that there is a financial implication if students are not computer literate and take more time than required to do their readings on the internet.

**Technical issues:** The participants in this study highlighted frustration with the technological problems encountered, which was viewed as distracting them from effective contribution to online learning sessions. Meyer, Cronje and Eloff (2007) cited that participants experienced frustration due to technical problems and a lack of technical know-how which compromised their participation. These results are consistent with other researchers (Graham, Mogel, Brallier & Palm, 2007; Coombs-Richardson, 2007; Hara & Kling, 2000) who state that students' frustrations and dissatisfactions emanate from technical problems and lack of technical support for IT management. Many other researchers (Gallagher-Lepak et al. 2009; Liu et al. 2007) have also referred to technical issues, arguing that computer glitches and slow operating systems distract students from contributing effectively in their learning. These IT problems need to be tabled as expected challenges to students at the commencement of the course, as well as the actions that need to be taken when they manifest.

### **5.2.8 Students' recommendations for improvement**

The participants highlighted a number of innovating recommendations for the improvement of online learning. Participants suggested that timely feedback from the facilitator was very important. Several students recommended prompt responses to technical problems. According to several researchers (Bonk, Kirkley, Hara & Dennen, 2001; Berge, 2001; Ashton, Roberts & Teles, 1999), the instructor can make students more comfortable with online learning by diagnosing and clarifying the technical problems they encounter and by attending to them immediately. Immediate response to technical problems was also highlighted by Ali et al. (2004). Campbell, Cancannon and Flynn (2005) stated that when students voice that immediate technical support is considered a crucial element to the success of the online learning programme, facilitators should take note to improve and enhance the online learning experiences.

The participants of this study also recommended that the facilitator should ensure that students are encouraged to contribute to online discussions. According to the findings of Gallagher-Lepak et al. (2009), such encouragement would force passive students to be more active, as participation is hallmark of online discussion. These findings are congruent with Berge (1995), who asserts that students should be required to sign in and contribute a certain number of times and respond to the topic under discussion before answering the posted messages by other participants. In contrast to these findings, Gulati (2008) considers compulsory participation to be a threat to student individuality and counter-productive to online learning interaction.

The participants also recommended that the facilitator should ensure relevance of the content covered. According to Lofstrom and Nevgi (2007), relevance and meaningfulness of learning activities and content are crucial to the transferability of knowledge and that instructors

should keep that in mind when designing material for use with technological devices. This sentiment is further echoed by Berge (1995), who argues that instructors must develop activities for students that relate to the topic and are relevant to the students' experiences.

One of the participants suggested inviting a visiting expert(s) to the online space. According to Berge (1995), guest experts may be invited to join the conference with the students to respond to posted contributions or answer questions related to the topic under discussion. Haggerty (2007); and Palloff and Pratt (2000) recommended access to experts in relation to the instructional design and pedagogical aspect of teaching and learning in the online environment.

### **5.3 CONCLUSION**

This study focused on exploring the experiences of post graduate students on online learning. Although a large majority of students had never taken an online class prior to this course, the overall perceptions of this study indicated that students displayed a high level of satisfaction and positive attitudes in relation to the online learning module, which was part of their master's degree course. Although the participants identified certain barriers to online learning, the positive aspects outweighed the negative ones. The participants perceived online learning as a worthwhile experience as it allows for easy access to learning material twenty-four hours a day from anywhere, thus allowing improved flexibility and convenience. Online learning is perceived as beneficial as it allows for increased interactions with the instructor, students and content for sharing and exchange of information, thus promoting deep learning and increased socialisation.

One of the perceived barriers cited by participants was to do with technical problems which distracted them from being active in their learning. The other drawback that was pointed out

was the absence of real time responses from the facilitator and their peers, which they felt retarded the whole learning process.

#### **5.4 LIMITATIONS OF THE STUDY**

There were few limitations that need to be considered in the interpretation of the results of this study. The non-probability nature of the sampling technique used limits the representativeness of the study sample. The participants were drawn from a single course and within a single university, which therefore weakens the degree of generalisation about the findings. Other limitations included the short time (only one year) in which the course had been running, the small size of the group and the input of only one facilitator.

The records of the students' online collaborative activities probably did not represent all the activities that took place in the online course since the students involved in this study had personal contact with each other in other modules, unlike typical online courses where students are located in diverse geographical areas. Despite these limitations, however, the researcher believes the study contributes meaningfully to the online learning environment.

#### **5.5 RECOMMENDATIONS**

Further research with a higher proportion of students across a range of courses and with successive courses to explore the experiences of more advanced online learners is recommended. Since this study was a qualitative study; a quantitative study is recommended, which will undertake to determine what learning strategies students use during online courses. Additional information can be collected on future groups to determine quantitative traits of the online participants such as age, gender, marital status, family background and all other demographic factors which might influence online learning experiences.

Orientation to technical and computer skills needed to participate in online courses must be instituted before the commencement of the course to allay the negative emotions associated with being technophobic. Students should be introduced to ICT before the commencement of a course to enhance a smooth online journey. Prior to enrolment to the course, students should be informed of the requirements and expectations in terms of computer skills and online exposure so that they can prepare themselves financially and otherwise.

The online facilitators must participate more often in the discussions to connect and motivate students and intervene when appropriate to inter-student discussions if they do not show positive interaction and constructive dialogues on the topic or subject content being covered. The online facilitators must be technologically visible and participate more often in the online discussions to instantly post comments, guide discussions, probe students, monitor the depth and length of discussions and motivate students. They should also intervene in sluggish inter-student discussions to stimulate constructive dialogue so that the learning outcomes can be achieved.

## REFERENCES

---

African National Congress (ANC). (1994). A Policy Framework for Education and Training. *African National Education Department*. Johannesburg.

Ali, N.S., Hodson-Carlton, K., & Ryan, M. (2004). Students perceptions of online learning: implications for teaching. *Nurse Educator*, 29: 111-115.

Allen, M. (2003). The lessons of e-learning. *Optimize*, 12: 51.

Ally, M. (2004). Foundations of educational theory for online learning. In Anderson, T. & Elloumi, F. (Eds.): *Theory and practice of online learning*. Athabasca University, Athabasca.

American Association of College of Nursing. (2005). Introduction to community-based education. Retrieved on 15<sup>th</sup> February 2012 from [www.aacn.nche.edu/media/news\\_releases/2005/enr105.htm](http://www.aacn.nche.edu/media/news_releases/2005/enr105.htm).

Anderson, T. & Elloumi, F. (2003). Theory and practice of online learning. Athabasca University online. Retrieved on 12<sup>th</sup> February 2012 at <http://cde.athabasca.ca/onlinebook>.

Arend, B. (2009). Encouraging critical thinking in online thread discussions. *The Journal of Educators*, 6:1-23.

Ashton, S., Roberts, T. & Teles, L. (1999). Investigation of the role of the instructor in collaborative online environments. *Poster session presented at the CSCL 1999 Conference*, Stanford University, CA.

Askov, E.N., Johnston, J., Petty, L.L. & Young, S.J. (2003). Expanding access to adult literacy with online distance education. Cambridge, MA: NCSALL. Retrieved on 31<sup>st</sup> March 2012 from <http://www.ncsall.net/fileadmin/resources/research/op-askov.pdf>.

Astani, W., Ready, K.J. & Duplaga, E.A. (2010). Online course experience matters: Investigating student's perceptions of online learning. *Issues in Information System*, 11(2): 14-20.

Asunka, S. (2008). Online learning in higher education in Sub-Saharan Africa: Ghanaian University student's experiences and perceptions. *Internal Review of Research in Open and Distance Learning*, 9(3): 1-17.

Atack, L. & Rankin, J. (2002). A descriptive study of registered nurses experiences with web-based nursing courses. *Advances in Nursing Science*, 23: 41-52.

Aycock, A., Garnham, C. & Kaleta, R. (2002). Lesson learned from the hybrid course project; *Teaching with Technology Today*, 8(6): 1-6.

Babbie, E. & Mouton, J. (2001). *The practice of social research*. Cape Town: Oxford University Press. South Africa.

Balls, M.S. & Smith, G.W.H. (2010). *Analysing visual data*. United Kingdom: Sage publication

- Barker, A. (2003). Faculty development for teaching online: Educational and technological issues. *The Journal of Continuing Education in Nursing*, 34(6): 273-278.
- Barnes, K., Marateo, R. & Ferries, S. (2007). Teaching and learning with the net generation. *Innovate*, 3(4).
- Bassette, P. (2011). How do students view asynchronous online discussions as a learning experience. *Interdisciplinary Journal of Online Learning and Learning Objects*, 7: 69-79.
- Battacharya, K. (2007). *Introduction to qualitative methods in education: a student handbook*. Merphis. TN: Battacharya.
- Battalio, J. (2007). Interaction online: a re-evaluation. *The Quarterly Review*, 8: 333-352.
- Berge, Z.L. (1995). Facilitating computer conferencing: Recommendations from the field. *Educational Technology*. 35(1) 22-30.
- Berge, Z.L. (2001). Active, interactive and reflective e-learning. *The Quarterly Review of Distance Education*, 3(2): 181-190.
- Bielawski, L. & Metcalf, D. (2003). *Blended e-learning, integrating knowledge, performance, support and online learning*. Amherst, Massachusetts. HRD Press.
- Billings, D.M., Connors, H.R. & Skiba, D.J. ( 2001). Benchmarking best practices in web-based nursing courses. *Advances in nursing. Journal of Nursing Science*, 23(3): 41-52.
- Billings, D. & Halstead, J. (2005). *Teaching in nursing: a guide for faculty*. Elsevier Saunders- Missouri.
- Bless, C. & Higson-Smith, C. (1997). *Fundamentals of research methods: an African perspective*. Juta and Company: Kenwyn.
- Bolliger, D. & Martindale, T. (2001). Student satisfaction in an online Master's Degree program in instructional technology. *Presented at the annual meeting of the Association for Educational Communications and Technology*, Atlanta, Georgia.
- Bonk, C.J. & Reynolds, T.H. (1997). *Learner-centered web instruction for higher order thinking, teamwork and apprenticeship*. In B.K. Khan (Ed.). *Web-based instruction*. Englewood Cliffs, NJ: Educational Technology Publication.
- Bonk, C.J., Kirkley, J.R., Hara, N. & Dennen, N. (2001). Finding the instructor in post-secondary online learning: Pedagogical, social, managerial and technological location. In Stephenson, J. (Ed.) *Teaching and Learning Online: Pedagogies for New Technologies*, 76-97, London: Kogan Page, 2001.
- Bouhnik, D. & Marcus, T. (2006). Interaction in distance online learning courses. *Journal of the American Society Information Science and Technology*, 57(3): 229-305.
- Boulos, M.N.K., Maramba, I. & Wheeler, S. (2006). Wikis, blogs and podcasts: a new generation of Web-based tools for virtual collaborative clinical practice and education. *BioMed Central Medical Education*, 6: 41.
- Braune, V. & Clarke, V. (2006). Using thematic analysis in psychology. *Qualitative Research in Psychology*, 3, 77-101.

- Brink, P.J. & Wood, M.J. (1998). *Advanced design in nursing research*. London: Sage.
- Britt, R. (2006). Online education: Survey of faculty and students. *Radiologic Technology*, 77(3): 183-190.
- Broadbent, B. (2002). *ABCs of e-learning reaping the benefits and avoidance the pitfall*. Jossey-Bass/ Pfeiffer, San Francisco, CA.
- Brookfield, S. (1997). Adult learning: International Encyclopaedia of Education. Oxford. Pergamon Press. Retrieved on 11 November 2011, from <http://nlu.nl.edu/ace/Resources/Documents/AdultLearning.html>.
- Brown, R. (2003). Blending learning: Rich experiences from a rich picture. *Training Development in Australia*, 30(3):14-17.
- Bruner, J.S. (1996). *The culture of education*. Harvard University Press. Cambridge.
- Bryne, M.M. (2001). Linking philosophy, methodology and methods in qualitative research. *AORN Journal*, 73(1) 207-210.
- Bullen, M. (2003). E-learning emergence. *CGA Magazine of Toronto*, 37(4).
- Burns, N. & Grove, S. (2009). *The practice of nursing research: Conduct, Critique and Utilization*. Missouri: Elsevier. USA.
- Campbell, M., Concannon, F. & Flynn, A. (2005). What campus-based students think about the quality and benefits of e-learning. *British Journal of Educational Technology*, 36(3), 501-512.
- Carliner, S. (1999). *Overview of online learning*. Amherst, MA: Human Resource Development Press.
- Carnevale, (2006). Professors seek compensation for online courses. *Chronicle of Higher Education*, 50(49).
- Carroll, C., Booth, A., Papaioannou, D., Suttan, A., & Wong, R. (2009.) UK Healthy-Care Professional's Experience of Online Learning Techniques; A systematic Review of Qualitative Data. *Journal of Continuing Education in the Health Professionals*, 29(4): 235-241.
- Carswell, L., Thomas, P., Petre, M., Price, B. & Richards, M. (2000). Distance education via the Internet: The student experience. *British Journal of Educational Technology*, 31(1), 29-46.
- Cercone, K. (2008). Characteristics of adult learners with implication for online learning design. *Association for Advancement of Computing in Education Journal*, 16(2):137-159.
- Chenitz, W. C. & Swanson, J. M. (1986). *From practice to grounded theory: qualitative research in nursing*. Mento Park. Calofornia: Addison.
- Childs, C., Blenkinsopp, E., Hall, A. & Walton, G. (2005). Effective e-learning for health professionals and students-barriers and their solutions. A systematic review of literature findings from HeXL project. *Health Information and Libraries Journal*. 22(2): 20-32.

- Choid, K.V. & Groeneboer, C. (2004). An Intergrated Cost for Blended Learning Environment. In: *Cantoni, L and McLoughlin, C. 2004 eds: World Conference on Educational Multimedia, Hypermedia & Telecommunications*. Norfolk: AACE, pp 1012-1019.
- Churchhill, T. (2005). E-reflections: a comparative exploration of the role of e-learning in training higher education lecturers`. *Turkish Online Journal of Distance Education*, 6(3): 48-57.
- Churton, M.W. (2008). Pedagogical considerations for online (e-learning) teaching-learning. *SEAMEO ICT Conference*.
- Coldwell, J., Craig, A. & Goold, A. (2006). *Student perspectives of online learning*. Research proceedings, 97-107.
- Coleman, S. (2009). Why do students like? Retrieved 18 January 2012 from <http://www.worldwidelearn.com/education-articles/benefits-of-online-learning.htm>.
- Conceicao, S. (2006). Faculty lived experiences in the online environment. *Adult Education Quartely*, 57(1): 26-45.
- Connors, H. R. (2001). Electronic education: What we know and what we do not know. *Journal of Professional Nursing*, 17(6): 273-274.
- Conole, G. & Alevizou, P. (2010). A literature review of the use of Web 2.0 tool in Higher Education. *A report commissioned by Higher Education Academy*. The Open University. Walton Hall, Milton Keynes UK.
- Conole, G. & Fill, K. (2005). A learning design toolkit to create pedagogically effective learning activities. *Journal of Interactive Multimedia Education*, 8:1-16.
- Conrad, R.M. & Donaldson, J.A. (2004). Engaging the online learner. Activities and resources for creative instruction. *Jossey-Bass guides to online teaching and learning. Volume 1*. San Francisco, CA: Jossey-Bass
- Coombs-Richardson, R. (2007). Personalizing distance education. *Kappa Delta Pi Record*, 43(2): 71-75.
- Cranton, P. (1994). *Understanding and promoting transformative learning: a guide for educators of adult*. Jossey-Bass. San Francisco.
- Cuba, E, G. & Lincoln, Y. S. (2005). *Fourth generation evaluation*. Newbury Park, CA: Sage.
- Deller, K. (2010). The human element is critical to online learning success. *People Dynamics*, 1: 25. Deng, L., & Yuen, H. K. (2009). Designing blended learning communities: Principles and implementation, In F. L. Wang, J. Fong, & R. C. Kwan (Eds.), *Handbook of research on hybrid learning models: Advanced tools, technologies, and application* (pp. 228-243). Hershey, PA: IGI Global Publications.

- de Silva, R.E.E., Fernando, J. Sumanasekera, D.R.N. Liyanagama, S.D., de Silva, D.P. (2010). Student perceptions of an online post graduate course in family medicine in Sri Lanka. *Sri Lanka Journal of Bio-Medical Informatics*, 1(4): 205-2013.
- Deng, L. & Yuen, H.K. (2009). Designing blended learning communities: Principles and implementation. In F.L, Wang, J. Fong and R.C. Kwan (Eds.). *Handbook of research on hybrid learning models: Advanced tools, technologies, and applications* (pp. 228-243). Hershey, PA: IGI Global Publications.
- Department of Education (DOE). (2004). Draft white paper on e-Education. *Transforming learning and teaching through Information and Communication Technology (ICTs)*. Government Gazette No 26734. Pretoria.
- Department of Education (DOE). (2001). *The National Plan for Higher Education Online*. Retrieved on 22 August 2011 from <http://www.polity.org.za/html/govdocs/misc/higheredu>.
- Department of Education (DOE). (1995). *White Paper on Education and Training*. Notice 196 of 1995, Parliament of the Republic of South Africa. Cape Town, 15 March.
- De Villiers, M.R. (2006). "A learning theory approach in support of outcomes-based online learning." In: CITTE 2006 ICT: Enabling collaboration and transformation in higher education. *Proceedings of the CITTE 2006 Conference on Information Technology in Tertiary Education*. Pretoria
- De Vos, A.S., Strydom, H., Fouch, C.B. & Deport, S.C.L. (2006). Research at grassroots level for social sciences and human service profession. Pretoria: Van Schaik
- Dewey, J. (1916). *Democracy and education*. The Free Press. New York.
- Downes, S. (2005). E-learning. *E-learning Magazine*. Retrieved on 23 March 2012 from <http://elearnmg.org/subpage>.
- Downes, S. (2007). What is connectivism. Online connectivism conference: University of Manitoba. Retrieved in November 2011 from <http://itc.umanitoba.ca/moodle/mod/forum/discuss.php>.
- Downes, S. (2011). Connectivism networked and social learning. Retrieved on 5<sup>th</sup> November 2011 from <http://www.connectivism.ca>.
- Duffy, T.M., Dueber, B. & Hawley, C. L. (1998). Critical thinking in a distributed environment: A pedagogical base for the design of conferencing systems. In C.J. Bonks & K.S. King (Eds.). *Electronic collaborations: Learner-centered technologies for literacy, apprenticeship and discourse*, 51-78. Mahwah, NJ: Lawrence Erlbaum Associates.
- Dyrbye, L., Cumyn, A., Day, H. & Heflin, M. (2009). A qualitative study of physician's experiences with online learning in a masters degree program: Benefits, challenges, and proposed solutions. *Medical Teacher*, 31: 40-46.
- Evans, C.N., Gibbons, J., Shah, K. & Griffin, D, K, (2004). Virtual learning in a biological sciences: pitfalls of simply 'putting notes on the web'. *Computers and Education*, 43(1): 49-61.
- Fallows, S. & Bhanot, R. (2005). *Quality Issues*. In ICT- based Higher Education (Eds). London: Routledge Falmer.

- Fawcett, J. (2005). *Contemporary nursing knowledge: analysis and evaluation of nursing models and theories*. Philadelphia: F.A. Davis.
- Finn, A. & Bucci, M. (2004). A case study approach to blended learning. Retrieved on 19 November 2011, from <http://www.centra.com/download/whitepapers/CaseStudy-BlendeLearning.pdf>.
- Fish, W.W. & Gill, P.B. (2009). Perceptions of online instruction. *The Turkish Online Journal of Educational Technology*, 8: 53-64.
- Freasier, B., Collins, G. & Newitt, P. (2003). A web-based interactive home quiz and tutorial package to motivate undergraduate chemistry students and improve learning. *Journal of Chemistry Education*, 80(11): 1344-1347.
- Frese, J.C. (2006). *A faculty development handbook for quality online instruction*. Unpublished doctoral dissertation, Nova South Eastern University (UMI No 3210255).
- Gallagher-Lepak, S., Reilly, J. & Killion, C.M. (2009). Nursing student perceptions of community in online learning. *Contemporary Nurse*, 32(1-2): 133-146.
- Garrison, R. & Anderson, T. (2003). *E-learning in the 21<sup>st</sup> century: a framework for research and practice*. Routledge Falmer, London.
- Garrison, D.R., & Vaughan, N.D. (2008). *Blended learning in higher education: Framework, principles, and guidelines*. San Francisco: Jossey-Bass.
- Gebbie, K., Rosenstock, L. & Hernandez, L.M. (Eds.). (2003). *Who will keep the public healthy? Educating public health professionals for the 21<sup>st</sup> century*. Washington, DC: The National Academies Press.
- Giesbrech, N. (2007). *Connectivism: Teaching and learning*. Retrieved in November 15, 2011, from <http://design.test.olt.ubc.ca/connectivism:-teaching-and-learning>
- Goldsmith, L., Snider, D. & Hamm, S. (2010). Student perception of their online learning experience. *International Journal of Education Leadership Preparation*, 5(4).
- Graham, P. (2005). Web 2.0. Retrieved on 24 April 2012 from <http://www.paulgraham.com/web20.html>.
- Graham, J.M., Mogel, L., Brallier, S.A. & Palm, L.J. (2007). Do you online? The advantages and disadvantages of online education. *Journal of Online Learning and Teaching*, 4: 133-141.
- Greener, S. C. (2008). Self-ware and self-directed: student conceptions of blended learning. MERLOT. *Journal of Online Learning and Teaching*, 4: 243-253.
- Groenewald, T. (2004). A phenomenological research design illustrated. *International Journal of Qualitative Methods*, 3(1).
- Guba, E.G. & Lincoln, Y.S. (2010). Competing paradigms in qualitative research. In N. K. Denzin & Y. S. Lincoln (Eds.), *Handbook of qualitative research* (pp. 105-117). London: Sage.

- Gulati, S. (2008). Compulsory participation in online discussion: Is this constructivism or normalization of learning? *Innovations in Education and Teaching International*, 45: 183-192.
- Haggerty, C. (2007). Students' experiences of the online learning environment: Working towards improvement. *Health Studies Dissertations and Thesis*. Paper 4.
- Hannay, M. & Newvine, T. (2006). Perceptions of distance learning: Comparison of online and traditional learning. *MERLOT Journal of Online learning and Teaching*, 2(1): 1-11.
- Hara, N. & Kling, R. (2000). Student's distress with Web-based distance education course. *Information Communication and Society*, 3(4): 557-579.
- Harman, K. & Koochang, A. (2005). Discussion board: A learning object. *International Journal of Knowledge & Learning Object*, 167-77.
- Harvey, B. (2003). *Investing in technology: The impact in student learning*. ERIC Digest. ERIC Clearing House on Information and Technology. ERIC Document no: ED479843.
- Hiemstra, R. (2007). Writing objectives, executive summaries, criterion referenced testing, goals for the first team meeting and stages of team growth, retrieved on 10<sup>th</sup> April 2012 from <http://home.twcny.rr.com/hiemstra/miscellaneous.html>.
- Hiltz, S.R. & Goldman, R. (2005). *Learning together online: Research on asynchronous learning networks*. Mahwah, NJ: Lawrence Erlbaum Associates.
- Hinsson, J.M. & LaPrairie, K.N. (2005) Learning to teach online: Promoting success through professional development. *Community College Journal of Research and Practice*, 29: 483-493.
- Holloway, I. & Wheeler, S. (2010). *Qualitative research in nursing* (3rd edition). Oxford, UK, Blackwell.
- Huitt, W. 2001. Krathwohl et al. taxonomy of the affective domain. *Educational Psychology Interactive: Taxonomy of affective domain*. Valdosta, G.A., Valdosta State University.
- Hong, K.S., Lai, K.W. & Holton, D. (2003). Student's satisfaction and perceived learning with a Web-based course. *Educational Technology and Society*, 6(1): 116-124.
- Hopewell, T.M. (2007). Meeting academic and professional expectations in the online professorate. Unpublished doctoral dissertation, Northern Arizona University.
- Hrastinski, S. (2008). A study of asynchronous and synchronous e-learning discovered that each support a different purpose. *Educause Quarterly*, 4.
- Huang, D. ((2002). Toward constructivism for adult learners in online environments. *British Journal of Educational Technology*, 33: 27-37.
- Hung, D. (2001). Theories of learning and Computer-Mediated Instructional Technologies. *Educational Media International*, 38(4): 281-287.
- Hung, D. (2001b). Designing principles for web learning; implications for Vygotskian thought. *Educational Technology*, 41(3): 33-41.

- Hycner, R.H. (1999). Some guidelines for phenomenological analysis of interview data. In A. Bryman & R.G. Burgess (Eds.). *Qualitative research*, 3: 143-164.
- Illinois Online Network (ION). (2008). *What makes a successful online facilitator?* Retrieved on 11<sup>th</sup> November 2011 from <http://www.ion.uillinois.edu/resources/tutorials/pedagogy/instructorProfile.asp>.
- Ironside, P. & Valiga, T. (2006). Creating a vision for the future of nursing education: Moving towards excellence through innovation. *Nursing Education Perspective*, 27(3): 120-121.
- Ivers, K.S., Lee, J.M. & Carter-Well, J. (2005). *Students' attitude and perceptions of online instruction*. Paper presented at the national educational computing conference, Philadelphia.
- Jafee, D. (2003) Virtual transformation: Web-based technology and pedagogical change. *Teaching Sociology* 31(2): 227-236.
- John, R. (2003). Application of web-based learning in teaching social work law. *Social Work Education*, 22: 429-443.
- Julie, H. & Fakude, L. (2006). Reflection on nursing students online learning experiences. *Joint Information Systems Committee*, 1(2): 53-60.
- Kahiigi, E.V., Danielson, M., Hansson, H., Ekenberg, L. & Tusubira, F.F. (2009). *An empirical investigation of students' perceptions of e-learning in Uganda*. International Information Management Corporation.
- Kalat, J.W. (2002). *Introduction to psychology*. Pacific Grove, CA: Wadsworth Thompson Learning.
- Kassop, (2004). Ten ways online education matches or surpasses, face-to-face learning. In J.J. Hirschbuhl and D. Bishop (Eds.). Annual Edition: *Computers in Education 04/05 (pp. 198-201)*. Guildford, CT; McGraw-Hill/Dushkin.
- Katz, R. & Oblinger, D. (2000). The "e" is for everything: e-commerce, e-business and e-learning in the future of higher education. *Educause Leader Strategies*, (2). San Francisco, CA: JosseyBass Publishers.
- Kaur, R. & Sidhu, G.K. (2010). Learner autonomy via asynchronous online interactions: A Malaysian perspective, *Internal Journal of Education and Development using Information and Communication Technology*, 6(3): 88-100.
- Kearsley, G. & Shneiderman, B. (1999). Engagement theory: a framework for technology-based teaching and learning. Retrieved on 13 April 2012 from <http://home.sprynet.com/~gkearsley/engage.htm>.
- Keller, C. & Cernerud, L. (2002). Student's Perceptions of Online learning in University Education. *Journal of Educational Media*, 27(1): 55-67.
- Kelsey, K. (2007). *Constructivism: strength and weakness*. Retrieved on 18 November 2012 from [www.adulteducation.wikibook.us](http://www.adulteducation.wikibook.us).
- Kenny, A. (2002). Online learning: Enhancing nurse education? *Journal of Advanced Nursing*, 38: 127-135.

- Khalifa, M. (1993). Inducing the quality of home health care theory through the use of grounded theory methodology. *International Journal of Nursing Studies*, 30(3): 269-286.
- Khan, B. (1997). Web-based instruction: What is it and Why is it? In B.H. Khan (Ed). *Web-based instruction* (pp. 5-18). Englewood Cliff, NJ: Educatioal Technology Publications.
- Khan, B.H. (2005). *Managing online learning: design, delivery, implementation, and evaluation*. Hershey, PA: Information Science Publishing.
- Kiluk, J.A. (1994). Meta-analytic studies of findings on computer-based instruction. In E. L. Baker & H. F. O'Neil, Jr. (Eds.), *Technology assessment in education and training*. Hillsdale, NJ: Lawrence Erlbaum.
- Kim, K. Liu, S. & Bonk, C.J. (2005). Online MBA students perceptions of online learning: Benefits, challenges and suggestions. *Internet and Higher Education*, 8: 335-344.
- King, D., Lee, J. & Viehland, D. (2004). *Electronic Commerce: A managerial Perspective*. Upper Saddle River. New Jersey: Prentice. Hall
- Kirkwood , A. & Price, L. (2005). Learners and learning in the twenty-first century; What do we know about students attitudes towards and experiences of information and communication technologies that will help us design courses??. *Studies in Higher Education*, 30(3): 257-274.
- Knabe, A.P. (2004). *Constructivist learning perspectives in the online public relations classroom*. Prism 2, Retrieved on 16 March 2012 from <http://praxis.massey.ac.nz> .
- Knowles, E. & Kerkman, D. (2007). An investigation of student attitude and motivation toward online learning. *Student motivation*, 2:70-80.
- Koch, J. Andrew, S. Salamonson, Y. Everett, B. Davidson, P.M. (2010). Nursing student perception of a web-based intervention to support learning. *Nursing Education Today* 30: 584-590.
- Kolb, D.A. (1984). *Experiential learning: Experience as the source of learning and development*. Prentice Englewood Cliffs, NJ: Educational Technology Publications.
- Koohang, A. & Harman, K. (2005). Open source: A metaphor for online learning. *Information Science: The International Journal of an emerging Transdiscipline*, 8: 75-86.
- Kop, R. & Hill, A. (2008). Connectivism: Learning theory of the future or vestige of the past? *International Review of Research in Open and Distance Learning*. 9(3): 1-13.
- Korhonen, T. & Lammitaken, J. (2005). Web-based learning in professional development: experiences of finish nurse managers. *Journal of Nursing Management*, 13: 500-507.
- Kruse, K. (2004). What are Synchronous and Asynchronous Training? Retrived March 20 2012 from <http://www.e-learningguru.com/article/art1-7.htm>.
- Kruse, K. (2006). The benefits and drawbacks of e-learning. Retrieved on 16 March 2012 from <http://www.e-learningguru.com/article/art1-3.htm>.
- Lincoln, Y.S. (2000). Emerging criteria for quality in qualitative and interpretive resources. *Qualitative Inquiry*: 275-289.
- Lincoln, Y. & Guba, E. G. (2005). *Naturalist inquiry*. Newbury Park, CA: Sage

- Lindsay, E.B. (2004). The best of both the worlds: teaching a hybrid course. *Academic Exchange Quarterly*, 8(3): 317-321.
- Liu, X., Bonk, C.J., Magjuka, R.B., Lee, S. & Su, B. (2005). Exploring four dimensions of online instructor role: a program level case study. Retrieved on 16 March 2012 from <http://faculty.weber.edu>.
- Liu, X., Magjuka, R., Bonk, C. & Seung-hee, L. (2007). Does sense of community matter? An examination of participants perceptions of building learning communities in online course. *The Quarterly Review of Distance Education*, 8(1): 81-93.
- Lofstrom, E. & Nevgi, A. (2007). From strategic planning to meaningful learning: diverse perspectives on the development of web-based teaching and learning in higher education. *British Journal of Educational Technology*, 38(2): 312-324.
- Louw, J.A. & Hanmer, L. (2002). *Implication of the information revolution for economic development in South Africa*. Department of trade and industry policy support programme management unit. New Mucleneuck, Pretoria, South Africa.
- Low, C. (2007). Too much online learning ignores the latest thinking in educational psychology retrieved from [http://www.trainingreference.co.uk/e\\_learning/e\\_learning\\_low.htm](http://www.trainingreference.co.uk/e_learning/e_learning_low.htm).
- Mabrito, M. (2005). Guidelines for establishing interactivity in online courses. *Innovate Journal of Online Education*, 1(2).
- McDonald, C.J., Stodel, E.M., Chambers, L.W.(2008). An online interprofessional learning resource for physician, pharmacists, nurse practitioners and nurses in long-term care:benefits, barriers and lesson learned. *Information for Health and Social Care*, 33(1): 21-38.
- Malaik, S. & Shabbir, M.S. (2008). Perception of university students on self-directed learning through learning technology. *European Journal of Scientific Research*, 24(4): 567-574.
- Malone, T.W. (1981). Towards theory of intrinsically motivating instruction. *Cognitive Science*, 5: 333-369.
- Mason, R. (1991) Moderating educational computer conferencing. *Deosnews*, 1(19).
- Maurino, P.S.M. & Schoenacher, S. (2009). Student perceptions of online discussions: Is there agreement between students and faculty? Retrieved on 19<sup>th</sup> February 2012 from [www.iiis.org/CD2010SCI/EISTA\\_2010/EA304XV.pdf](http://www.iiis.org/CD2010SCI/EISTA_2010/EA304XV.pdf).
- Maxfield, R.J. (2008). *Online education for non-traditional adult students: Perceptions and attitudes of emergency service workers in asynchronous environment*. UNISA theses.
- May, L., Acquaviva, K.D., Dorfman, A. & Posey, L. (2009). Medical student perceptions of self-paced, web-based electives: A descriptive study. *The American Journal of Distance Education*, 23: 212-223.
- Merriam, S.B., Caffarella, R.S. & Baumgartner, L.M. (2007). Learning in adulthood: A comprehensive guide (3<sup>rd</sup> Ed). San Fransisco, C A: Jossey-Bass.
- Meyer, R.E. (1998). Cognitive, meta-cognitive and motivational aspects of problem solving. *Instructional Science*, 26(1-2): 49-63.

- Meyer, S., Cronje, J.C. & Eloff, I. (2007). Cyber Surfer: Affective considerations of surviving online learning. *South African Journal of Higher Education*, 21(3): 429-442.
- Meyer, S. & Van Niekerk, S. (2008). *Nurse educator in practice*. Cape Town, Juta.
- Mezorow, J. (1991). *Transformative dimension of adult learning*. San Francisco: Jossey-Bass.
- Miers, M.A., Clarke, B.A., Pollard, K.C., Rickaby, C.E., Thomas, J. & Turtle, A. (2007). Online Interprofessional Learning: The student experience. *Journal of Interprofessional Care*, 21(5): 529-542.
- Minocha, S. (2009). *A study of the effective use of the social software to support student learning and engagement*. Joint Information Systems Committee. University of Bristol.
- Mitchell, E.A., Ryan, A., Carson, O. & McCann, S. (2006). An exploratory study of web-enhanced learning in undergraduate nurse education. *Journal of Clinical Nursing*, (12): 2287-2296
- Moore, M.G. (1989). Three types of interaction. *The American Journal of Distance Education*, 3(2): 1-6.
- Moore, M.G. (1997). *Theory of transactional distance*. In D. Keegan (ed.) *Theoretical Principles of Distance Education* (pp 22-38). New York: Routledge.
- Moore, M.G. (2001). Surviving as a distance teacher. *American Journal of Distance Education*, 15(2): 1-5.
- Moore, M.G. & Kearsley, G. (2005). *Distance education: A system view*. Belmont CA: Wadsworth.
- Morse, J.M. & Field, P.A. (1995). *Qualitative research methods for health professionals*. Thousand Oaks, CA: Sage.
- Moule, P., Ward, R. & Locker, L. (2010). Nursing and Health student's experiences and use of online learning in higher education. *Journal of advanced nursing*, 66(12): 2785-2795.
- Mouton, J. (2001). *How to succeed in your master's and doctoral studies*. A South African guide and resources book. Paarl: Van Schaik.
- Murphy, K.L. & Cifuentes, L. (2001). Using Web tools collaborating and learning online. *Distance Education*, 22(2): 285-385.
- Murray, J.P. (2005). Finding nursing voice. *Nursing Education Perspective*, 26(1): 2.
- Myers, I. (1978). *Myers-Briggs type indicator*. Palo Alto, CA: Consulting Psychologists Press.
- Nakos, G.E., Deis, M.H. & Jourdan, L. (2002). Student's perception of on-line course. *Online Journal of Distance Education*, 3:1-15.
- Namahn, M.N. (2002). *E-learning: a research note*. Retrieved on 2. February 2012 from <http://www.namahn.com/resources/documents/note-e-learning.pdf>.

- Nichol, D.J., Minty, I. & Sinclair, C. (2003). *The social dimensions of online learning, innovations in education and teaching international*. Taylor & Francis, Ltd.
- Oblinger, D.G. & Oblinger, J.L. (2005). Educating the Net Generation. *Educause*, 2(1): 2.20.
- O'Malley, J. & McCraw, H. (1999). Students' perceptions of distance learning, online learning and traditional classroom. *Online Journal of Distance Learning Administration*, 11(4): 1-11.
- O'Neil, C., Fisher, C. & Newbold, S. (2009). *Developing online learning environments in nursing education*. New York: Springer Publishing Company.
- O'Reilly, T. (2006). Web 2.0 Compact Definition: Trying Again. Retrieved on 23 October 2011 from <http://radar.oreilly.com/archives/2006/12/web-20-compact.html>.
- O'Regan, K. (2003). Emotion and e-learning. *Journal of Asynchronous Learning Network*, 7(3): 78-92.
- Oxford Advanced Student Dictionary. (2009). *International student edition (7<sup>th</sup>)*. Oxford.
- Paivio, A. (1986). *Mental representations: A dual coding approach*. Oxford: Oxford University Press.
- Palloff, R. & Pratt, K. (1999). *The virtual student: A profile and guide to working with online learners*. San Francisco: Jossey-Bass.
- Palloff, R. & Pratt, K. (2000). Making the transition: Helping teachers to teach online. Unpublished paper presented at *EDUCAUSE annual conference*. Retrieved on May 2012 from EBCO Database.
- Parise, P. (2000). Herding cats or how are online classes changing the educational paradigm? *Library Computing*, 5: 1-12.
- Park, M.K. (2008). *The lived experiences of Asian International students in online learning environment and higher education*. A doctoral Dissertation, University of Missouri. Columbia
- Parker, M.A. (2010). Using virtual classroom: student perceptions of features and characteristics in an online and a blended course. *Journal of Online Learning and Teaching* 6(1).
- Paulsen, M.P. (1995). *Moderating educational computer conferences*. In Z.L. Berge and M.P. Collins (Eds.). *Computer-mediated communication and the on-line classroom in distance education* 81-104. Cresskill, NJ: Hampton Press.
- Paurrelle, S. (2003). *E-learning and constructivism*. Learning and Teaching Enhancement Unit (LTEU). Canterbury Christ Church University College. Briefing paper.
- Petrides, L.A. (2002). Web-based technologies for distributed (or distance) learning: Creating learning-centered educational experiences in the higher education classroom. *International Journal of Instructional Media*, 29(1): 69-77.
- Piaget, J. (1972). *The psychology of the child*. New York: Basic books.

- Picciano, A.G. (2002). Beyond student's perceptions: Issues of interaction, presence and performance in online course. *Journal of Asynchronous Learning Networks*, 6(1).
- Piskurich, G.M. (2003). *Preparing learners for e-learning*. Jossey-Bass: Pfeiffer.
- Polit, D.F. & Beck, C.T. (2010). *Nursing research: principles and methods*. Philadelphia: Lippincott Williams and Wilkins.
- Polit, D.F. & Hungler, B.P. (2010). *Essentials of nursing research: methods, appraisal and utilization*. Lippincott, Philadelphia.
- Potter, P.A. & Perry, A.G. (2005). *Fundamentals of nursing*. St. Louis, MO: Elsevier.
- Poulter, M. (2000). *Providing computer based learning for lecture theatre or web*. Learning and Teaching Support Network (LTSN) Centre for Economics.
- Proulx, J. (2006). Constructivism: Are-equilibration and clarification of the concepts, and some potential implications for teaching and pedagogy. *Radical Pedagogy*, 8(1).
- Punch, K.F. (2005). *Introduction to social research: quantitative and qualitative approaches*. London: Sage.
- Reilly, A. & Spratt, C. (2007). The perceptions of undergraduate student nurses of high-fidelity simulation-based learning: a case report from the University of Tasmania. *Nurses Education Today*, 27: 542-550.
- Renner, C.H. & Renner, M.J. (2001). But I thought I knew that: Using confidence estimation as a debasing technique to improve classroom performance. *Applied cognitive psychology*, (15): 23-32.
- Ritchie, L.A., MacNeil, M., Evans, M. & Micsinszki, S. (2005). Surviving: registered nurses' experiences in baccalaureate nursing program. *International Journal of Nursing Education Scholarship*, 2(1): 1-15.
- Roach, V. & Lemaster, C. (2006). Satisfaction with online learning. A comparative descriptive study. *Journal of Interactive Online Learning*, 5: 317-332.
- Roberts, T.G. & Dyer, J.E. (2005). The influence of learning styles on student attitudes and achievements when an illustrated web lecture is used in an online learning environment. *Journal of Agricultural Education*, 46 (2): 1-11.
- Robin, C.C. & Hullinger, H. (2008). New benchmarks in Higher Education: Student engagement in online learning. *Journal of Education for Business*. 101-108.
- Roble, L.R., Farnsworth, B.J., Flynn, J.B. & Horne, C.D., (2004). This new house: building knowledge through online learning. *Journal of Professional Nursing*, 20: 333-343.
- Rohleder, P., Bozalek, V., Carilissen, R., Leibowitz, B. & Swart, L. (2007). Student's evaluation of the use of online learning in a collaborative project between two South African universities. *Higher Education Springer Netherlands*, 56(1): 95-107.
- Roudriguez, M.C., Rooms, A. & Montanez, M. (2008). Student's perceptions of online learning quality given comfort, motivation, satisfaction and experience. *Journal of interactive online learning*, 7(5): 105-125.

- Rowe, M. & Struther, P. (2009). The use of information and communication technology by South African physiotherapy students. *South African Journal of Physiotherapy*, 65(3): 33-37.
- Runquist, J. J., DeLaO`Kerns, R., Fee, S.S., Choi, M. & Glittenberg, J. (2006). A co-created learning process in a doctoral seminar. *Journal of Nursing Education*, 45(1): 32-34.
- Ruth, S.R. (2006). E-learning: a financial and strategic perspective. *The IT Practitioner's Journal Educause Quarterly*, 29(1).
- Ryan, M., Hodson-Carlton, K. & Ali, N.S. (2005). A model for faculty teaching online: Confirmation of a dimensional matrix. *Journal of Nursing Education*, 44(8): 357-365.
- Salmon, G. (2004). *E-moderating: the key to teaching and learning online*. London: Kogan Page.
- Sampson, N. (2003). Meeting the needs of distance learners. *Language Learning and Technology*, 7(3): 103-118. Retrieved on 11<sup>th</sup> February 2012 from <http://llt.mbu.edu/vol7num3/pdf/sampson.pdf>.
- Sand-Jecklin, K.W. & Schaffer, A.J. (2006). Nursing students' perceptions of their chosen profession. *Nursing Education Perspectives*, 27(3): 130-135.
- Sargeant, J., Curran, V., Jarvis-Selinger, S., Ferrier, S., Allen, M., Kirby, F. & Kendall, D. (2004). Interactive Online Continuing Medical Education: Physician's perceptions and Expectations. *The Journal of Continuing in the Health Profession*, 22: 227-236.
- Savery, J.R. & Duffy, T.M. (2006). Problem based learning: An instructional model and its constructivist framework [Electronic version]. In B. Wilson (Ed.), *Constructivist learning environment: Case studies in instructional design*. Englewood Cliffs, NJ: Educational Technology.
- Shaheeda, J., Ngambu, D. & Czerniewicz, L. (2006). The role of ICTs in higher education in South Africa: one strategy for addressing teaching and learning challenges. *International Journal of Education and Development using ICT*, 3(4).
- Sharpe, R. & Benfield, G. (2005). The student experience of e-learning in higher education: A review of the literature. *Brooks e-Journal of Learning and Teaching*, 3(1): 1-10.
- Siemens, G. (2004). A learning theory for the digital age. Retrieved June 12, 2011 from <http://www.elearnspace.org/articles/connectivism.htm>.
- Siemans, G. (2005). Connectivism: A learning theory for the digital age. *International Journal of Instructional Technology and Distance Learning*. Retrieved on June 12, 2011, from [http://www.itdl.org/Journal/Jan\\_05/article01.htm](http://www.itdl.org/Journal/Jan_05/article01.htm).
- Siemans, G. (2006). Connectivism: learning and knowledge today. *Paper presented at the Global Summit*. Technology connected futures in 2006.
- Silverman, S. (2005). *Doing qualitative research*. London: Sage publication.
- Sit, J.W., Chung, J.W., Chow, M.C. & Wongs, T.K. (2005). Experiences of online learning: Students' perspective. *Nurse Education Today*, 42: 364-366.

- Sloman, M. (2004). *The e-learning revolution from proposition to action*. London: CIPD.
- Song, L., Singleton, E.S., Hill, J.R. & Koh M.H. (2004). Improving online learning: Student perceptions of useful and challenging characteristics. *Internet and Higher Education*, 7:59-70.
- South African Department of Education (DOE). (2003). *Draft white paper on e-education : Transforming learning and teaching through ICT*. Pretoria: Government Printer.
- South African Nursing Council. (1992). *Philosophy and policy on nursing education and training*. SANC. Pretoria: Government Printer.
- South African Nursing Council (SANC). (2005). *Nurses Act No. 33 of 2005*. SANC. Pretoria: Government Printer.
- Spangle, M.G., Hodne, G. & Schierlig, D. (2002). Approaching value-centred education through the eyes of an electronic generation: Strategies for distance learning. *Paper presented at the Annual Meeting of the National Communication Association*. New Orleans, L.A. ERIC.
- Sternberg, R.J. (1998). Meta-cognition, ability and developing expertise: What makes an expert student? *Instructional Science*, 26(1-2): 127-140.
- Streubert Speziale, H. & Carpenter, D.H. (2003). *Qualitative research in nursing: Advancing the humanistic imperative*. Lippincott Williams & Wilkins.
- Swan, K. (2001). Virtual interaction. Design factors affecting student satisfaction and perceived learning in asynchronous online learning courses. *Distance education*, 22(2): 306-331.
- Swan, K., Shea, P., Fredericksen, E., Pickett, A., Pelz, W. & Maher, G. (2000). Building knowledge, building communities: Consistency, contact and communication in the virtual classroom. *Journal of Education Computing Research*, 23(4): 389-413.
- Takalani, T. (2008). *Barriers to e-learning amongst postgraduate black students in higher education in South Africa*. Unpublished master's dissertation. Stellenbosch University. South Africa.
- Tallent-Runnels, M.K., Thomas, J.A., Lan, W.Y., Cooper, S., Ahern, T.C., Shaw, S.M. & Liu, X. (2006). Teaching courses online: A review of the research. Faculty perceptions of online teaching and learning administrator. *Review of Educational Research*, 76(1): 93-135.
- Trilling, B. & Hood, P. (1999). Learning, technology and education reform in the knowledge age or we are wired, webbed and windowed, now what?" *Educational Technology*, 39(3): 5-18.
- Tu, C.H. (2001). How Chinese perceive social presence: an examination of interaction in online learning environment. *Education Media International*, 38(1): 45-60.
- Twigg, C.A. (2001). *Innovations in online learning: moving beyond no significant difference*. Monograph 4, the Peer Learning and Technology Program, Rensselaer Polytechnic Institute.
- Tyler, R. (1949). *Basic principles of curriculum and instruction*. Chicago: University of Chicago Press.

UDI Online Project (2010). Student perceptions of online/blended learning storrs: University of Connectiit. Center on postsecondary education and disability. Retrieved on 25 February 2012 from <http://www.udi.uconn.edu>

Vonderwell, S. (2003). An examination of asynchronous communication experiences and perspectives of students in an online course: A case study. *Internet and Higher Education*, 6: 77-90.

Vonderwell, S., Liang, X. & Alderman, K. (2007). Asynchronous discussions and assessment in online learning. *Journal of Research on Technology in Education*, 39(3): 309-328.

Vygotsky, L.S. (1978). *Mind in Society*. Cambridge, MA: Havard University Press.

Waddell, D.L. & Hayes, J.M. (2000). Does online nursing short change the RN to BSN students? *Georgia Nursing*, 5: 36-39.

Wagner, A.D. (2001). IT and education for the poorest of the poor: constraints, possibilities, and principles. *TechKnowLogia*, July/August: 48-50.

Wang, O. & Woo, H. (2007). Comparing asynchronous online discussions and face-to-face discusions in a classroom setting. *British Journal of Educational Technology*, 38(2): 272-286.

Ward, M.E., Peters, G. & Shelley, K. (2010). Student and faculty perceptions of the quality of online learning experiences. *International Review of Research in Open and Distance Learning*, 11(3): 57-77.

Weaver, D., Nair, S.C. & Spratt, C. (2005). Evaluation: WebCT and the student experience. In Kandlbinder, P. (Ed). *Making a Difference, 2005. Evaluations and Assessment Conference Refereed papers*, 25-32, Sydney: UTS.

Welman, J.C., Kruger, S.J. & Mitchell, B. (2005). *Research methodology*. Pretoria: University Press.

Weller, M.J. (2001). Why the internet is a significant educational technology. Retrieved on 16<sup>th</sup> February 2012 from <http://webcache.ggoogleusercontent.com>.

Wesley, D. (2002). A critical analysis on the evolution of e-learning. *International Journal on E-Learning*, 10.

Woo, Y. & Reeves, T.C., (2007). Meaningful interaction in web-based learning: a social constructivist interpretation. *Internet and Higher Education*, 10:15-25.

World Health Organisation (WHO). (2005). *Mental health policies and programmes in the workplace*. Mental health policy and service guidance package. WHO. Geneva: Switzerland.

Wozniak, H. (2006). Online discussions: improving the quality of the student experience. In M. Tulloch, S. Relf & P. Uys (Eds.). *Breaking down boundaries: International experience in open, distance and flexible education*.

Yaghoubi, J., Mohammadi, I.J., Iravani, H., Attaran, M. & Gheidi, A. (2008). Virtual students' perceptions of online learning in Iran. *The Turkish Online Educational Technology*, 7(3).

Young, L.E. & Maxwell, B. (2007). *Teaching nursing: theories and concepts*. In Young, L.E., Paterson, B.L. (Eds.). *Teaching Nursing: Developing a Student-centered Learning Environment*. Lippincott Williams and Wilkins, Philadelphia, pp.8-19.

Young, S. (2006). Students' view of effective Online Teaching in Higher Education. *The American Journal of Distance Education*, 20(2): 65-77.

Zembylas, M. (2008). Adult learner's emotions in online learning. *Distance Education*, 29(1): 71-87.

Zimmerman, B. & Schunk, D. (2001). *Self-regulated learning and academic thought*. Lawrence Erlbaum Associates.

# **APPENDICES**

## APPENDIX 1: INTERVIEW GUIDE

**Research Title:** Exploring online learning experiences of post graduate nursing education students at a selected nursing education institution in KwaZulu-Natal.

### QUESTIONS

1. What are your views with the online learning module/course that you were recently exposed to?

*Probing questions:*

- Technical skills and support
- Access and requirements
- Learning process
- Online learning environment
- Learning material

2. Tell me about the online session that you had on using Moodle before and during the module/course?

*Probing questions:*

- Resources/equipment
- Computer Skills
- Time and availability
- Computer access

3. How comfortable were you with the technology for the delivery of the online module/course?
4. What was your role as an online participant in an online learning space or classroom?

*Probing questions:*

- Student autonomy
- Setting and achieving learning goals

5. What was the role of the facilitator in an online learning space?
6. How would you describe the level or degree of online interactions or/and engagements during the online learning module/course?

*Probing questions:*

- Your role as a student
- Peer online engagements and interactions (with fellow students)?
- Student-facilitator online engagements and interactions (with the teacher)?
- Engagement with the course content

7. Can you please share the benefits and/or challenges associated with your experiences during the online learning module?

*Probing questions:*

- If there were any challenges, so please explain how you managed to overcome them.

8. What recommendations can you offer for developing a positive online learning programme at the school?

## APPENDIX 2: INFORMATION SHEET

**Date** : 20 July 2011

**Name of Research Student** : Valerie Mdunge

**Address of student** : 14 Cuckoo Circle, Yellowwood Park, 4004

**Student Number** : 208528816

**Contact Number** : 0722130896

**Name of Supervisor** : Prof N. G. Mtshali

**Name of Supervisor** : Dr S. Z. Mthembu

**Contact Number** : 031-2601075

**Name of Department** : School of Nursing

**Name of Institution** : University of KwaZulu Natal (Howard College Campus)

Dear Participant

I am completing a research project as part of the requirements for Master's Degree (Nursing Education).

**Title of the Research:** Exploring online learning experiences of postgraduate nursing education students at a selected nursing education institution in KwaZulu-Natal

**Purpose of the research:** This study aims to explore the online learning experiences of postgraduate nursing education students at a selected nursing education institution in KZN.

**Description of the Procedure:** Your participation is requested as you represent the population under study. As part of the research process, you are required to sit for an interview which will take you about 20 to 30 minutes to complete. The researcher will ask from you, the suitable venue and time for this.

**Ethical Aspects:** Please note that your identity and information will be treated with utmost confidentiality.

Please feel free to ask any questions you may have so that you are clear about what is expected of you.

**Please note that:**

- you are free to *not* participate
- you are free to withdraw at any stage without repercussions
- your name will not be used nor will you be identified with any comment made when the data is published
- there will be no risks attached to your participation.

**Advantages to you as a respondent:**

The findings of the study will be made available on completion.

Thank you.

Researcher: \_\_\_\_\_

### APPENDIX 3: DECLARATION

**Researcher** : Valerie Mdunge  
**Student Number** : 208528816  
**Cell number** : 0722130896  
**E-mail** : [valsam@telkomsa.net](mailto:valsam@telkomsa.net)

#### DECLARATION

**Title:** Exploring online learning experiences of postgraduate nursing education students at a selected nursing education institution in KwaZulu-Natal.

I..... (Full names of the participants) hereby confirm that I understand the contents of this document and the nature of this research project and I consent to participating in the research project.

I understand that my participation is voluntary and I may withdraw my consent without penalty and fully understand the conditions and time commitment involved in my participation..

Participant's signature: .....

Researchers name: Mrs V. N. Mdunge

Researcher's signature: .....

Date: .....

## APPENDIX: 4 Research Ethical Clearance Approval



Research Office, Govan Mbeki Centre  
Westville Campus  
Private Bag x54001  
DURBAN, 4000  
Tel No: +27 31 260 3587  
Fax No: +27 31 260 4609  
[snym@m@ukzn.ac.za](mailto:snym@m@ukzn.ac.za)

29 September 2011

**Mrs VN Mdunge (208528816)**  
School of Nursing

Dear Mrs Mdunge

**PROTOCOL REFERENCE NUMBER: HSS/0940/011M**

**PROJECT TITLE: Exploring online learning experiences of postgraduate nursing education students at a selected nursing education institution in KwaZulu-Natal**

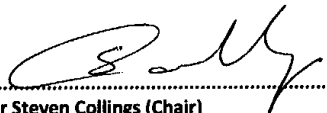
In response to your application dated 20 July 2011, the Humanities & Social Sciences Research Ethics Committee has considered the abovementioned application and the protocol has been granted **FULL APPROVAL**.

Any alteration/s to the approved research protocol i.e. Questionnaire/Interview Schedule, Informed Consent Form, Title of the Project, Location of the Study, Research Approach and Methods must be reviewed and approved through the amendment /modification prior to its implementation. In case you have further queries, please quote the above reference number.

**PLEASE NOTE: Research data should be securely stored in the school/department for a period of 5 years.**

I take this opportunity of wishing you everything of the best with your study.

Yours faithfully

  
.....  
**Professor Steven Collings (Chair)**  
**HUMANITIES & SOCIAL SCIENCES RESEARCH ETHICS COMMITTEE**

cc. Supervisor – Dr S Mthembu  
cc. Mr S Reddy

**APPENDIX 5: Letter of request to conduct research at the University of KwaZulu-Natal**

20 July 2011  
14 Cuckoo Circle  
Yellowwood Park  
4004

Head of Department  
School of Nursing  
University of KwaZulu-Natal  
Durban  
4041

Dear Madam/Sir

**Re: Request for permission to conduct a study**

**Title of the study:** Exploring online learning experiences of postgraduate nursing education students at a selected nursing education institution in KwaZulu-Natal.

**Researcher:** V.N. Mdunge (Student No: 208528816)

**Supervisor:** Dr S. Mthembu

I hereby request the permission to undertake a research project in your institution. The purpose of the study is to explore online learning experiences of postgraduate nursing education students for the year 2009/2010. The module was offered through Moodle. The permission requested from the NEI is to use one your postgrad programmes and the students that were enrolled or registered for this.

The study might benefit the institution in improving the online learning environment. The study does not have any risk or discomfort and is conducted as a requirement for Masters Degree purpose.

Yours Sincerely

---

Mrs V. N. Mdunge  
Cell: 0722130896  
E-mail: [valsam@telkomsa.net](mailto:valsam@telkomsa.net)

Supervisor: Prof N.G. Mtshali  
Tel: 0312602497  
E-mail: [mtshalin2@ukzn.ac.za](mailto:mtshalin2@ukzn.ac.za)

Supervisor: Dr S. Mthembu  
Tel: 0312601075  
E-mail: [mthembus1@ukzn.ac.za](mailto:mthembus1@ukzn.ac.za)

