

**EXPLORING POSTGRADUATE NURSING STUDENTS'
PERCEPTIONS ON ADJUSTMENT TO THE USE OF
INNOVATIVE TEACHING STRATEGIES AT A SELECTED
HIGHER EDUCATION INSTITUTION IN KWAZULU-NATAL**

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DECLARATION

I, Siphon Bhekumuzi Ngema, student number 216075468 hereby declare that this research dissertation titled '*Exploring postgraduate nursing students' perceptions on adjustment to the use of innovative teaching strategies in a selected higher education institution in KwaZulu-Natal*' is my own work. All the cited sources are acknowledged.

Date: 01 September 2017

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Date: 01 September 2017

Research Supervisor

DEDICATION

I dedicate this work to my wife, Nompumelelo for all the love and support that has enabled me to reach this far. My daughter Siqualesihle and mother Beatrice; I am who I am because of you. I love you all.

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ABSTRACT

Prior to the 21st century, the predominant educational approach in nursing was teacher-centred, as evident by the abundant use of traditional teaching methods. Currently, nursing educators are being encouraged to use teaching strategies that enable students to be more responsible for their learning. In recent years much has been reported about innovative teaching strategies, but there has been little synthesis on postgraduate nursing students' perceptions to the use of innovative teaching strategies. Consequently, the researcher decided to conduct a study on exploring postgraduate nursing students' perceptions on adjustment to the use of innovative teaching strategies.

Purpose: The purpose of this study was to explore and describe postgraduate nursing students' perceptions on adjustment to the use of innovative teaching strategies at a selected higher education institution in KwaZulu-Natal.

Methodology: A positivist paradigm and a quantitative approach were adopted. Exploratory descriptive design was used. Non-probability convenience sampling was adopted to select participants. Data was collected using a structured questionnaire. Data was analysed using SPSS version 23.0.

Results: Identified innovative teaching strategies used in higher education institution include Problem-based learning (PBL), the use of technology, Portfolio, case study, simulation and Community-based education. Factors influencing the adjustment were the use of scenarios and problem-based situations, lecturer being effective with lessons and activities, lecturer not being judgemental of one's life experiences and the

students' being empowered to discover their own potential. The barriers were poor level of orientation and the lack of immediate feedback by educators concerning students' progress.

Recommendations: Nursing education institutions should orientate postgraduate nursing students at the beginning of the course in order to allow them time for adjustment to innovative teaching strategies.

Key words: postgraduate nursing students, innovative teaching strategies, perceptions.

LIST OF ABBREVIATIONS

CBE	Community-based education
DoH	Department of Health
NLN	National League for Nursing
PBL	Problem-based learning
PHC	Primary Health Care
PhD	Doctor of Philosophy
SA	Strongly agree
SANC	South African Nursing Council
SAQA	South African Qualification Authority
SD	Strongly disagree
SPSS	Statistical Package for the Social Sciences
Std.Dev	Standard Deviation
UK	United Kingdom
UKZN	University of KwaZulu-Natal
UNISA	University of South Africa
US	United States
VC	Video conferencing
WHO	World Health Organization

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CHAPTER ONE

INTRODUCTION

1.1 Introduction and Background

Prior to the 21st century, the predominant educational approach in nursing and the health professions was teacher-centred, as evidenced by the abundant use of traditional teaching methods, including lectures, lecture discussions with and without demonstrations, seminars, audio-visual augmentation media and collaborative teaching (Waltz, Jenkins and Han, 2014).

In 2009, the World Health Organization (WHO, 2009) published a document proposing global standards for initial education of professional nurses and midwives. The standards specify that nursing education schools should use innovative teaching strategies to provide classroom and clinical learning that encourage the development of clinical reasoning, problem solving and critical thinking skills in their programme. The WHO further emphasizes that nursing education school should provide a curriculum that promotes a progressive nature of education and lifelong learning.

According to the National League for Nursing (NLN 2005), nursing education programs should be designed to involve students as active participants in the educational enterprise. These programs should be flexible to meet constantly changing demands and individual student learning needs, be accessible and responsive to diverse student populations, and be accountable to the public (Stanley and Dougherty, 2010).

Recent literature challenges educators to use innovative ways of teaching in order to implement student-centred learning approaches. It highlights the need to focus curricular content to meet the challenges encountered by new graduates, new ways of learning and new ways of actively engaging the students (Sinclair and Ferguson, 2009). Furthermore, nursing education needs to move from content-driven curricula to new teaching strategies that foster a learning-centred approach to education, as no one teaching approach will address the learning needs of every student (Murphy, Hartigan, Walshe, Flynn and O'Brien, 2011).

According to Keeling (2008), more recent trends in curriculum revisions integrate core educational concepts such as learner-centred, evidence-based, and case-based approaches and thus contribute to the aspiration of the Bologna process. The Bologna process is an intergovernmental commitment to restructure higher education systems. It emphasises the need for dramatic reform to modernise Europe's outdated education system. The Bologna process prioritises student-centred learning approaches (Adam and Expert, 2008).

According to Murphy et al. (2011), learning cannot be explained using one perspective alone. More contemporary interpretations of these learning theories focus on knowledge transformation that is relevant to the learners and urge transformation that is relevant to the learners and aims to expand their frame of reference.

The current move in the United States and other countries moving away from secondary and tertiary care towards primary health care (PHC) will have an electrifying influence on the practice of nursing as the focus of treatment is aimed at prevention and maintenance of health. Budgetary constraints and a shrinking nursing workforce have added an additional strain on the ability of nurses to remain clinically competent

in this fast-paced health care environment (Distler, 2007). The author further explained that the population of students have shifted, with more adult and ethnically diverse students entering various nursing programs. These changes have resulted in nursing schools throughout the world revising their approach to learner education to keep up with the challenge associated with these influences (Distler, 2007). Concepts such as problem-based learning, critical thinking, evidence-based practice, and student centered teaching strategies have replaced traditional terminology typically linked with education and practice (Distler, 2007).

Some studies suggest that postgraduate nursing students have difficulty in adjusting to the use of innovative teaching strategies in higher education. The implication could be that most postgraduate nursing students are from a largely teacher-centred traditional teaching methods background. Seemingly this could point to the fact that most of them lack critical and problem solving skills (Fong, Sidhu and Fook, 2014). This is because in lecture based learning environments, students are usually passive recipients of information. In this project, innovation is defined as using knowledge to create ways and services that are new (or perceived as new) in order to transform the system (Neuman, Pardue, Grady, Gray, Hobbins, Edelstein and Herrman, 2009).

In the last decade, nursing has undergone important changes in order to meet the needs of the dynamic society. According to Gandhi et al. (2015), nurse educators are being encouraged to use teaching methods that enables students to be more responsible for their learning. Teachers have to adopt the role of being a facilitator for learning. Innovative teaching strategies in nursing are expected to promote nursing students to be actively involved in self-regulated learning, to transform traditional one-way delivery of knowledge to cultivate a patient-centred teaching and learning model (Gandhi et al., 2015).

The innovative teaching strategies help learners to foster the ability of health informatics, communication skills, collaborative skills, reflection, cultural sensitivity, critical thinking, as well as evidence-based health care. A study which was done with students at the University of Pakistan on the perceptions and preferences of contemporary teaching methods, revealed that students prefer problem-based learning (PBL) and case studies as the best teaching methods (Mythili, Gandhi, Thirumoorthy and Muralidharan, 2015). The results of this study further indicate that students perceive innovative teaching strategies in a better way compared to the traditional teaching method as it enhances their motivation for learning, learner control, and self-directed learning abilities.

Nursing education institutions has adopted different innovative teaching strategies in their curriculum in order to provide nursing curriculum that promotes a progressive nature of education and lifelong learning. These include innovative teaching strategies like problem-based learning, community-based learning, simulation, online learning, digital teaching aids, case-based learning etc. The South African Nursing Council (SANC) also shares the same view as it believes that all programmes of nursing education should be directed towards the provision of nursing practitioners who are able to deliver effective, comprehensive nursing care based on the needs of the community they serve (Maunye, Meyer and Van Velden, 2009).

Maunye, Meyer and Van Velden (2009), further explained that the South African Qualifications Authority (SAQA) requires the inclusion of critical outcomes in all programmes of education and training. The implications of the demands put forward by the SAQA and the SANC are that lecturers should expose learners to various teaching strategies in order for the latter to attain the intended outcomes. Modern patient care has become increasingly complex and it requires that nursing staff and

students possess the ability to make evidence based decisions (Benner, Hughes and Sutphen, 2008). It requires nurses to think like a nurse. Thinking like a nurse requires critical thinking skills. It is for this reason that there has been a paradigm shift from traditional teaching methods to a more active learning and innovative teaching approaches.

According to South African Nursing Council (SANC, 2014), nurse education should promote innovative practice in its educational environment. This is possible through innovative teaching strategies in higher education. The delivery of successful health and social care services depends on effective and strong leadership. According to Dolamo (2014), curriculum redesign, the use of innovative teaching methods that reflect work-place realities, and portfolios that illustrate competency are some solutions proposed to meet the demand for competent nurse leaders.

According to Potgieter (1996), contemporary nursing literature has repeatedly indicated the need for creativity in nursing. The complexity of contemporary nursing practice owing to the explosion of knowledge and technology, changing human values and diverse health care systems, requires an innovative and creative nurse who can adapt to change and provide a holistic, individualised, context-specific patient care.

Higher levels of cognitive thought, creative thinking and problem-solving skills have been emphasized as desirable qualities of nursing students. Literature suggest that the evolution of innovative strategies and the ways to implement them into nursing curricula be explored in order to assist and encourage students to develop these higher cognitive skills (Van Graan, Williams and Koen, 2016). A University of South Africa (UNISA) systematic literature study on the nature of creativity and the processes involved in creative thinking and learning in nursing education revealed that the most

significant determinants in teaching for creativity are the learning environment, the educator-student relationship and the provision of a variety of participatory student-centred teaching strategies (Potgieter, 1996).

1.2 Problem statement

Currently, postgraduate nursing students are experiencing difficulties in adjusting to the use of new teaching strategies in higher education (Baharudin, Murad and Mat, 2013). The implication could be that some of postgraduate nursing students are from a traditional educational background which is teacher centred. Traditional teaching methods have been criticised for not developing critical thinking skills in students (Mthembu, Mtshali and Frantz, 2014). According to a study on critical thinking among postgraduate students, some of them lack critical and creative thinking skills, some are unable to use computers (Fong et al., 2014). In modern years much has been written about innovative teaching strategies, but there has been little synthesis on postgraduate nursing students' perceptions on adjustment to the use of innovative teaching strategies (Neuman et al., 2009).

Even though technology has created many opportunities to develop new teaching strategies in nursing, certain barriers to the adoption of technology have been identified. The barriers to adoption include reliability, lack of time to learn, uncertainty that using technology matters, and lack of support (Butler and Sellbom, 2002). In a study which was conducted on the perceptions and barriers to the use of information communication technology (ICT) in a teaching hospital in Nigeria, a majority (56, 6%) stated that they do not have access to information technology. Results further showed that unreliable network connection, high work demand, inadequate number of computers, and poor system design with associated failure to fit work demands are

some of the major barriers to the use of ICT (Irinoye, Ayandiran, Fakunle and Mtshali, 2013).

Based on the above statements there is a need for the exploration of postgraduate nursing students' perceptions on adjustment to the use of innovative teaching strategies.

1.3 Purpose of the study

The purpose of this study is to explore and describe postgraduate nursing students' perceptions on adjustment to the use of innovative teaching strategies at a selected higher education institution.

1.4 Research objectives

In order to accomplish the above task, the study was guided by the following objectives:

1. To describe innovative teaching strategies used in higher education institution among postgraduate nursing students.
2. To determine factors influencing adjustment to the use of innovative teaching strategies among postgraduate nursing students at a selected higher education institution.
3. To identify barriers among postgraduate nursing students in using innovative teaching strategies at a selected higher education institution.

1.5 Research questions

Specifically, the study aims to answer the following key questions:

1. What are innovative teaching strategies used in higher education?

2. What are factors influencing postgraduate nursing students' adjustment to use innovative teaching strategies in higher education?
3. What are perceived barriers among postgraduate nursing students in using innovative teaching strategies in higher education?

1.6 Significance of the study

This study is particularly significant to three broad areas namely nursing education, nursing practice and policy making. These are further explained below.

1.6.1 Nursing education

Findings from this study could influence nursing educators to use innovative teaching strategies in higher education. Findings from this study may also help nurse educators to identify barriers among postgraduate nursing students in using innovative teaching strategies in higher education. Furthermore, postgraduate nursing students may receive support from their teachers with regards to the use of innovative teaching strategies in higher education.

The findings might allow nurse educators to become aware of the importance of innovative teaching strategies in higher education and to include these both in the classroom and clinical settings. Furthermore, this study could influence students positively towards accepting the use of innovative teaching strategies in higher education. Findings from this study may also help to fortify the curricula of nursing educators during curriculum review.

1.6.2 Nursing practice

Findings from this study may seek to address the issue of improving the quality of nurse education which will positively impact on the quality of nursing care provided.

The findings from this study could also facilitate evidence based nursing education practice in organisations. Furthermore, it could also help in developing critical thinking approaches to use in the selection of nursing actions appropriate for the rescue of patients with acute health problems. The results of this study may inform and improve practice and health services delivery resulting in better outcomes for consumers and their families. Findings from this study might allow practitioners to become aware of the importance of innovative teaching strategies and to develop strategies to include these in clinical settings.

1.6.3 Policy makers

Findings from this study may assist in providing policy makers in higher education with scientific evidence on how to address the factors influencing postgraduate nursing students' adjustment to use innovative teaching strategies.

The findings from this study could also enlighten policy makers on innovative teaching strategies used in higher education, thus helping them in planning the properly budget for buying necessary equipment. The findings from this study could also serve as baseline data for further studies relating to student success.

1.7 Conceptual framework

The conceptual framework underpinning this study is based on a reviewed literature and was adapted from Malcolm Shepherd Knowles' Adult Learning Theory (1913-1997). The theory combines information from a number of authors. Most of the concepts used are from Knowles (1969), Felder (1996), Felder and Brent (2005) and Kolb (1984). The main concepts in this framework include learning environment, adult learner, teaching and learning styles, active learning, student-centred learning,

teacher-centred learning, experience, motivation and intervening conditions and learning.

Figure 1: Learning of adult learners.

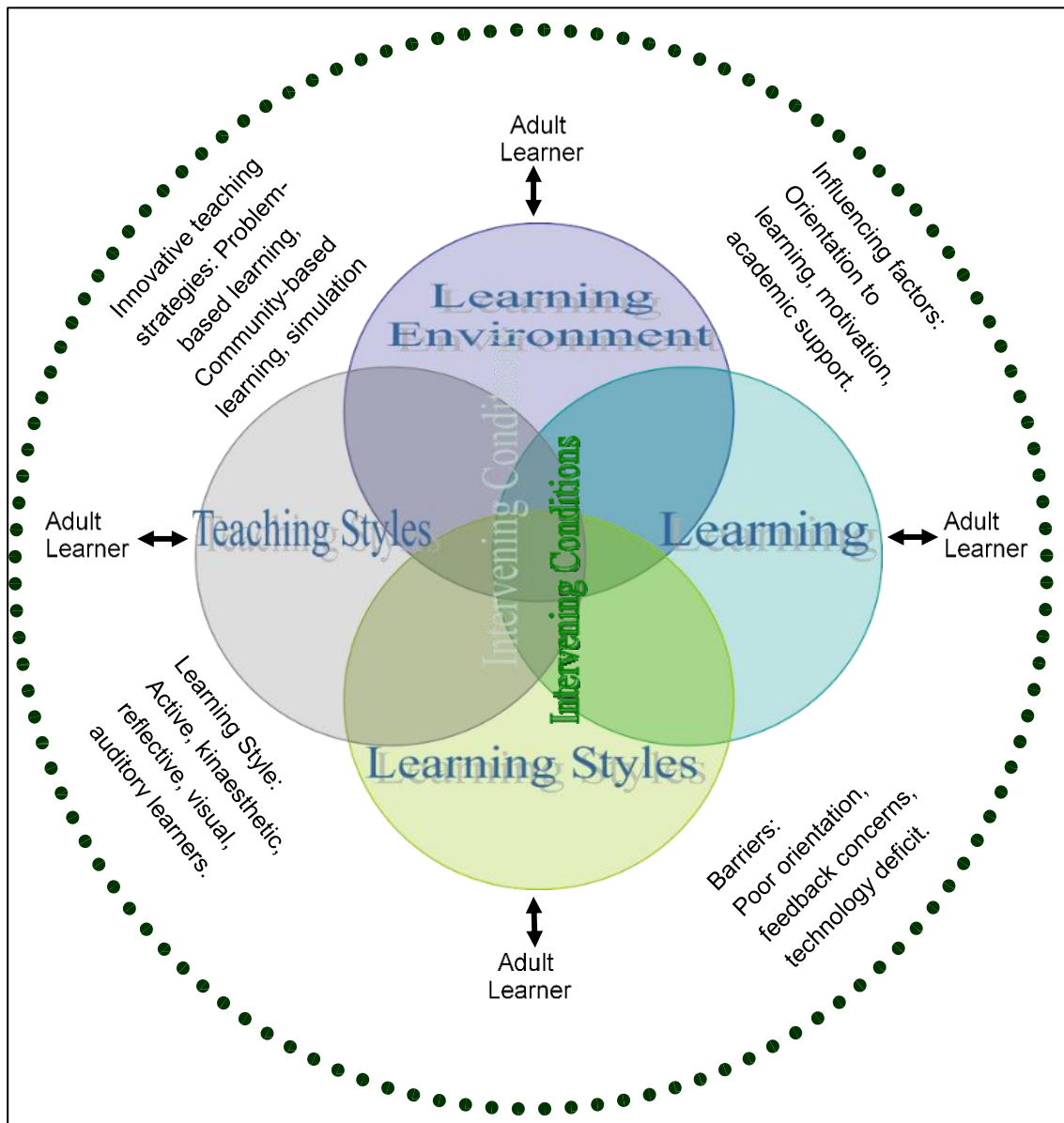


Figure 1 Conceptual framework: Adult learning theory

Adult learning is a core concept, all concepts feed into this core concept. Each concept has supporting sub-concepts, discussed under each concept. An adult learner in this conceptual framework is described in terms of age. He/she must be mature, usually 23 years or older and can obtain mature age exemption to access higher education such as university entrance without having a Matriculation Endorsement (Nkwanyana, 2012). This learner in the context of this study is anyone undergoing postgraduate studies in nursing. The learning of this adult is influenced by a number of factors which include teaching styles, the learning environment, as well as other intervening conditions. Adult learning may take various forms, either-superficial, profound or strategic.

1.7.1 The adult learning theory

Malcolm Sherperd Knowles (1913-1997), was well known for the use of the term andragogy as similar to adult education. According to Malcolm Knowles, andragogy is the art and science of adult learning, thus andragogy refers to any form of adult learning (Kearsley, 2010). In 1980/4, Knowles propounded the following assumptions about the characteristics of adult learners that are different from the assumption about child learners (pedagogy).

- a) self-concept - as a person matures his/her self-concept moves from one of being a dependent personality toward that of a self-directed human being
- b) adult learner experience - as a person matures he/ she accumulates an experience that becomes an increasing resource for learning
- c) readiness to learn - as a person matures his/her readiness to learn becomes oriented more to the developmental tasks of his/her social roles
- d) orientation to learning - as a person matures his/her orientation toward learning shifts from one subject-centeredness to one of problem centeredness

- e) motivation to learn - as a person grows, the motivation to learn is internal (Knowles, 1984).

Knowles further proposed the following four principles that are applied to adult learning:

- a) adults need to be engaged in the planning and evaluation of their instruction
- b) experience including mistakes provides the basis for the learning activities
- c) adults are more concerned in learning subjects that have immediate relevance and impact on their work or personal life
- d) adult learning is problem-centred rather than content-centred (Kearsley, 2010).

Adult learners are more self-directed in their learning and they bring more to a learning situation because of their wider experience (Torgerson, Porthouse and Brooks, 2003). According to Knightley (2007) adult learners experiences can be a valid source of learning. Adult learners can also take away more because they target learning that is relevant directly relating to their learning needs.

According to Knowles (1969), adult learners seek education that relates or applies directly to their perceived needs. They seek education that is timely and appropriate for their current lives, practices and roles (Tusting and Barton, 2006). The authors further explained that adult learners have a drive towards self-direction and towards becoming autonomous learners. More importantly, they have the ability to discover their own learning abilities and learning styles.

Adult learning theories that emerged after Knowles's adult leaning theory included a dimension of self-direction; a process of learning in which people take the primary initiative for planning, carrying out, and evaluating their own learning experiences (Caffarella and Merriam, 2000). Knightley (2007) grouped the aims of self-directed

learning under three major headings: (1) to enhance the ability of adult learners to be self-directed in their learning, (2) to foster transformational learning as central to self-directed learning, and (3) to promote emancipatory learning and social action as an integral part of self-directed learning.

The model by Schön (1983, 1987, and 1991) introduced a concept of reflective practice into adult learning. Schön's model aims to overcome the limit of technical rationality which separates the theory from practice and promotes integration of theory and practical experiences. Schön's model proposes the concepts of reflection-in-action, theories-in-use and knowing-in-action (Redmond, 2004).

Mezirow (1990) introduced the concept of transformational learning into adult learning. Transformational learning is described by Mezirow as the process of becoming critically aware of how and why our assumptions have come to constrain the way we perceive, understand, and feel about our world; changing these structures of habitual expectation to make possible a more inclusive, discriminating, and integrative perspective; and finally, making choices or otherwise acting upon these new understandings (Mezirow, 1990). In the context of this study, the adult learner is viewed in terms of all the characteristics presented, in addition to Knowles's six core characteristics of adult learners.

According to this conceptual framework, there are two main teaching styles used: teacher centred and student-centred teaching styles. Lea, Stephenson and Troy (2003) define student-centred learning as ways of thinking and learning that emphasize student responsibility and activity in learning rather than what the teachers are doing. They argue that student-centred learning should incorporate the following principles:

- a) Reliance upon active rather than passive learning and emphasis on deep learning and understanding
- b) Increased responsibility and accountability on the part of the student,
- c) Increased sense of autonomy in the learner,
- d) Interdependence between teacher and learner,
- e) mutual respect within the learner-teacher relationship, and
- f) Reflexive approach to the learning and teaching process on the part of both teacher and learner since information and concepts are separated from the contexts in which they naturally occur.

Furthermore, meaning exists independent of the perceiver, and attainment of externally defined learning outcomes provides evidence of acquisition (Lea, Stevenson and Troy, 2003).

Student centred approaches are rooted in constructivism epistemology: knowledge and context are inextricably connected, meaning is uniquely determined by individuals and is experiential in nature, and the solving of real problems provides evidence of understanding (Lea, Stephenson and Troy, 2003)

Teaching methods used in student-centred learning include problem-based learning (as a broad concept), community-based learning, case-based learning etc. According to Nkwanyana (2012) teacher-centred styles are traditional approaches which are used in a number of educational programmes. Furthermore educators whose practice is based on behaviourism devote their time and resources to deconstructing the subject matter into its constituent parts, developing a sequenced, well-structured curriculum and content to be mastered by the students (Nkwanyana, 2012). Teaching methods commonly used include lectures and seminars with the teacher providing

structured material for the students to master. Although teacher-centred approaches are criticised for ignoring the needs of learners, they have a place in teaching certain content and abstract concepts (Nkwanyana, 2012). According to Nkwanyana (2012) student-centred styles on the other hand are based on the constructivist learning theory. Student-centred styles place emphasis on student responsibility towards their learning, discovery learning and active participation, with minimal guidance from the teacher. According to Felder and Henriques (1995) the role of the teacher is that of developing a structured learning environment where students are given support and guidance to attain skills in self-evaluation and independence in their learning information and respond to the learning environment.

Literature shows that there are a number of learning styles, for example, make reference to 32 learning styles. Commonly referred to learning models presenting different learning styles include Myers-Briggs Type Indicator (MBTI), Kolb's Learning Style Model, Herrmann Brain Dominance Instrument, (Felder and Brent, 2005, Felder and Henriques, 1995) Felder-Silverman Learning Style Model and many others. Felder and Brent (2005) Cautioned that there is no preferred or inferior learning style because all have different strengths and weaknesses.

In this conceptual framework concepts used arise mainly from two models: Felder's model (1993) and Kolb's experiential learning model (1984). These two models were chosen because they differ, they bring in a unique perspective and they are also broad enough in that they include concepts which are found in other models. Felder's model of learning styles is based on Jung's theory of 1971. Felder (1996) suggested a model with five dichotomous learning styles. The five learning styles referred to in this conceptual framework include sensing and intuitive learners; visual and auditory

learners; inductive and deductive organisation, active and reflective learners, and sequential global learners.

According to Felder and Brent (2005) sensing learners (sensors) prefer information that comes in through their senses and intuitive learners (intuitors) favour information that arises internally through memory, reflection, and imagination. Sensors like facts, data, and experimentation whereas intuitors prefer principles and theories. The visual and auditory learners' category is based on the assumption that a number of people learn most effectively with one of the two modalities (visual or auditory) and tend to miss or ignore information presented in another form (Felder and Brent, 2005). Visual learners remember best what they see - pictures, diagrams, flow charts, time lines, films, demonstrations. If something is simply said to them they will probably forget it.

Auditory learners remember much of what they hear and then say. They gain a great deal out of discussion, prefer verbal explanation to visual demonstration, and learn effectively by explaining things to others (Felder, 2005). In the category of inductive and deductive learners, reflective learners, and sequential and global learners, inductive learners prefer to learn a body of material by seeing specific cases first (observations, experimental results, numerical examples) and working up to governing principles and theories by inference. On the other hand, deductive learners prefer to begin with general principles and to deduce consequences and applications (Felder, 2005).

In the light of the assumption that deduction tends to be more concise and orderly than induction, students who prefer highly structured presentations are likely to prefer a deductive approach, while those who prefer less structure are more likely to favour induction. Induction is a reasoning progression that proceeds from particulars

(observations, measurements and data) to generalities (governing rules, laws, and theories).

Deduction proceeds in the opposite direction. In induction one infers principles; in deduction one deduces consequences (Felder and Brent, 2005). Although the active and reflective domain is in Felder's model, it uses or shares concepts from Kolb's experiential model. According to this domain an "active learner" is someone who feels more comfortable with, or is better at, active experimentation than reflective observation, and conversely for a reflective learner. Because of their personalities, active learners do not learn much in situations that require them to be passive, such as lectures (Felder, 2005). They prefer hands-on learning and discovery learning. Reflective learners on the other hand tend to be theorists. They prefer time to stand back and reflect on the learning experience in relation to specific theories. In most cases, they learn better by themselves or at most with one other person.

Kolb classifies learners according to four learning styles: accommodators, divergers, convergers and assimilators. Accommodators prefer engaging in concrete experience and active experimentation during the learning process (Arthurs, 2007). They learn best through hands-on experience. Divergers use concrete experience and reflection to view concrete situations from many different viewpoints; they enjoy brainstorming (Arthurs, 2007; Felder and Brent, 2005). Convergers prefer abstract conceptualisation and reflective experimentation during the learning process. They use theories for problem solving. Assimilators use abstract conceptualisation and reflective observation to understand, organise and synthesize large amounts of data into a concise, logical framework (Arthurs, 2007).

Global learners on the other hand take in information in seemingly unconnected fragments and achieve understanding in large holistic leaps (Felder, 2005). Sequential learners can solve problems with incomplete understanding of the material; their solutions are generally orderly and easy to follow, but they may lack a grasp of the “big picture”- the broad context of a body of knowledge and its interrelationships with other subjects and disciplines. On the contrary, global learners need to understand how the material being presented relates to their prior knowledge and experience before they can master the details (Felder and Brent, 2005). Deep learning results from having a critical eye on each statement or formula or analytic procedure presented in class or in the text restating text in one’s own words for meaning making, trying to relate new material to things previously learned or to everyday experience.

Strategic learning is used mainly to obtain high grades by those students overloaded with work (Lublin, 2003). It requires students to be well organised and efficient in their studying. Students carefully assess the level of effort they need to exert to achieve their ambition, and if they can achieve by remaining superficial they will do so, but if the instructor’s assignments and tests demand a deep approach, they will respond to this demand (Lublin, 2003). It is imperative to note that a student may adopt different approaches to learning on different courses and even for different topics within a single course (Nkwanyana, 2012).

The learning environment as one of the concepts within this framework indicates that learning takes place within a set environment. This environment has a number of factors which are internal and external, and these influence the learning of students. The internal factors may include learning resources, teaching styles, learning culture and climate while external factors may be those factors associated with the

background of adult learners, their families, and work as well as socio-economic and political factors (Nkwanyana, 2012).

1.8 Operational Definition of terms

The following are key terms that require operational definitions to put the reader into proper perspective of this study.

Postgraduate student is used to refer to a student who continues to study for an advanced degree after earning a bachelor's degree or other first degree (Merriam-Webster, 2004). For the purpose of this study, the term postgraduate student was limited to those doing Ph.D, Masters and Honours degrees. Furthermore, in this study the concept postgraduate student was used interchangeably with adult learner.

Adult student is used consistently with higher education institutions which define adults by using chronological age and additional factors such as delayed post-secondary enrolment, part-time attendance, full-time work while enrolled, financial independence, single parenthood, military service, and lack of a standard high school diploma. The literature surrounding adult learners suggests that learning across the lifespan, culture, personality, political beliefs, and ethnicity are additional factors of far more significance than chronological age (Aslanian, 2001).

Graduate refers to one who has received an academic and professional qualification in an institution higher of learning.

Perceptions relate to ways of understanding, interpreting, experiencing, conceptualising or viewing something (Muraraneza, Mtshali and Mthembu, 2016). In this study, perception refers to the understanding postgraduate nursing students have

with regard to adjustment to the use of innovative teaching strategies in higher education.

Adjustment refers to the way postgraduate nursing students adapt to the use of innovative teaching strategies. Usually, it refers to reactions to identifiable stressors, with adjustment involving adapting the self to the situation, changing the situation, or both (Levesque, 2011).

Innovation in teaching and learning is defined as doing something new in teaching and learning for nursing, midwifery and allied health, in pre-and post-registration, undergraduate or post-graduate courses. This could include recruitment, widening participation, curricula and course development and design, application of technology, management skills and institution structure, changes to the culture and process of innovation, or improving future employability of students (Dearnley, McClelland and Irving, 2013). For the purpose of this study, innovative teaching strategies refer to the new ways of teaching in higher education.

Higher education refers to education got formally or informally at an institution of higher learning usually a university (Odebero, 2015). For the purpose of this study, this will be limited to university education.

1.9 Overview of dissertation chapters

Chapter 1: This is an introductory chapter that introduces the whole research study. It starts by giving background information to the study, problem statement, research objectives, and research questions, significance of the study, conceptual framework guiding this study and operational definitions.

Chapter 2: This chapter deals with reviewed literature, and sections are organised by topic or themes and sub-themes that emerged from the relevant literature. These include innovative teaching strategies used in higher education, factors influencing adjustment to the use of innovative teaching strategies among postgraduate nursing students in higher education, and the perceived barriers to the use of innovative teaching strategies among postgraduate students.

Chapter 3: This chapter outlines the research methodology used in this study, the research approach, research design, research setting, population, sampling and sample, data collection instrument and process, data analysis, validity and reliability issues, ethical considerations and data management.

Chapter 4: This chapter present the findings of the study.

Chapter 5: This chapter presents the discussion of the data, limitations, recommendations and conclusion.

1.10 Conclusion

The aim of this chapter was to provide an introduction to the use of innovative teaching strategies in higher education institution. The background to the problem of adjustment to the use of innovative teaching strategies among postgraduate nursing students in higher education institution was presented referring to international, national and local situations. The purpose and objectives of the study were highlighted. The conceptual framework that guided the study was also presented in this chapter.

CHAPTER TWO

RELATED LITERATURE REVIEW

2.1 Introduction

This chapter presents reviewed empirical and relevant literature. The purpose of the literature review is to demonstrate both what is known and not known about the topic. The Chapter highlights research studies on learning theories, innovative teaching strategies used in higher education, and factors influencing adjustment to the use of innovative teaching strategies among postgraduate nursing students. It also focuses on barriers to the use of innovative teaching strategies among postgraduate nursing students in higher education institutions.

The literature search was done manually and via the internet and database searches such as ebscohost and google scholar. It also included books and book chapters published both locally and internationally. Sources of information were acknowledged using Harvard referencing style.

2.2 Learning theories

Although people disagree about how learning takes place, but they agree that learning is imperative. There is no single definition of learning that is universally accepted by theorists. Learning is defined as an enduring change in behaviour (Schunk, 1996). Similarly, Siemens (2014) defines learning as a persistent change in human performance or performance potential which is a result of the learner's experience and interaction with the world.

Learning theories present instructional planners with a documented methods for facilitating learning as well as a basis for intelligent strategy selection (Ertmer and

Newby, 1993). The authors further explained that, learning theories are a source of confirmed instructional strategies, tactics and techniques.

Additionally, learning theories and research present information about relationships between instructional elements and the design of instruction, indicating how specific techniques might best fit within a given situation (Ertmer and Newby, 1993). On a similar note, Shuell (1986) asserts that learning theories can enlighten teaching and the use of various educational resources including technology. The author further explains that the learning activities in which the students actually engage determines what a student learns in the classroom.

Traditional teaching methods were designed from the foundation that was teacher-centred and textbook driven with emphasis on singular skills that were narrow (Burrell, Finch, Fisher, Rahim and Dawson, 2011). The same authors further explained that, since the modern employment environment has changed by becoming increasingly complex, diverse, globally, and technologically advanced. Therefore, it is important to apply knowledge that becomes adaptable across a variety of skills.

According to Burrell et al. (2011), student-centred learning has made a huge difference in today's learning for adult students. In addition, it has been argued that various teaching methods are more effective than what is used for younger students and that adults learn by practising skills rather than hearing the story. These can be achieved by using innovative teaching strategies in higher education. Therefore, it is imperative for educational facilitators to understand various learning theories in order to apply effective teaching strategies that facilitate learning. The following section focuses on several learning theories commonly applied in nursing education such as behaviourism, cognitivism and constructivism learning theories.

2.2.2 Behaviourism learning theory

Behaviourism associates learning with changes in either the manner or frequency of visible performance. Learning is achieved by demonstrating a proper response following the presentation of a specific environmental stimulus (Ertmer and Newby, 1993). Additionally, behaviourism stresses the importance of the effect of those actions and behaviourists are of the view that responses that are followed by reinforcement are more likely to be repeated in the future (Ertmer and Newby, 1993).

According to Ertmer and Newby (1993) the arrangement of stimuli and the effects within the environment is the most crucial factor influencing learning. The goal of instruction for the behaviourist is to produce an aimed response from the learner, which can be achieved by ensuring that students know how to execute a response as well as the conditions under which that response should be made.

Instruction is planned around the presentation the target stimulus and by providing the student with opportunities to practice making a proper response. According to Ertmer and Newby (1993), behaviourist theories argue that the role of instructional designer is to determine which prompts can produce the desired response.

The above argument is in line with Schunk (1996) who asserts that behaviourism theory explains learning in terms of environmental events. Behaviourists believe that responses to stimuli are strengthened when followed by satisfying effects (Schunk, 1996). The author further explained that operational conditioning which is the learning theory established by B.F Skinner (1904-1990) is based on the assumption that

features of the environment which includes stimuli, situations and events serve as prompts for responding.

Reinforcement enhances responses and expand their future likelihood of occurring when the stimuli are present. Shaping is used to alter behaviour, which involves successive approximations of desired behaviour toward its desired form of frequency (Schunk, 1996).

Additionally, according to Skinner (2011) behaviourism assumes that a student passively responds to environmental stimuli. Positive or negative reinforcement decreases the possibility of an event recurring. The application of stimulus is called positive reinforcement whereas the withdrawal of a stimulus is called negative reinforcement (Skinner, 2011). Therefore, this theory supports traditional teaching methods which are teacher-centred. In traditional teaching, students are viewed as passive recipients of information in the learning process and teachers are viewed as transmitters of knowledge. Traditional teaching methods include lectures and demonstrations.

Behaviourists recommend strategies that are applicable to building and enhancing stimulus-response association, including the use of instructional prompts, practice, and reinforcement (Ertmer and Newby, 1993). Ertmer and Newby assert that these strategies have been proven effective in facilitating learning that involves recalling facts, applying explanations, generalisations and automatically performing a specified procedure. According to Ertmer and Newby (1993) behaviourist principles have been blamed for inability to adequately explain the acquisition of higher levels of skills such as language development, problem solving, and critical thinking. This was supported by Cooper (1993) who criticised behaviourist principles by saying that they result in a

reductionist and fragmented program, which concentrates on low-level skills at the expense of higher level-skills.

2.2.3 Cognitive learning theory

The cognitive learning theory focuses on mental processes and knowledge structures that can be deduced from behavioural indicators that are responsible for different types of human behaviour. It is concerned with different mental activities like perceptions, memory, thinking, and knowledge representation which are related to information processing and problem solving (Shuell, 1986).

Similarly, Ertmer and Newby (1993) asserts that cognitive theories stress more complex cognitive processes such as thinking, language, concept formation and information processing instead of only focusing on observable behaviour. In addition, cognitive theories focus on the conceptualisation of students' learning processes and addresses issues of how information is received, organised, stored, and retrieved by the mind (Ertmer and Newby, 1993). This is supported by Yilmaz (2011) who argues that cognitivists focus on how knowledge is acquired, making knowledge meaningful and helping students associate new knowledge with prior knowledge in memory.

Cognitivist principles include placing emphasis on the active involvement of the learner in the learning process (self-planning, monitoring, and revising techniques) and stressing on structuring, organising, and sequencing of information to facilitate maximum processing (use of cognitive strategies such as outlining, summaries, advance organizers and synthesis). They also give prominence to the creation of learning environments that allow and encourage students to make connections with previously learned materials (Ertmer and Newby, 1993).

As opposed to behaviourists, Yilmaz (2011) states that previous knowledge plays a more important role than stimuli in orienting behaviour or response and also intervenes between a stimulus and response. The author further argues that people are not animals or machines that respond to the environmental stimuli (Yilmaz, 2011).

On the other hand, the cognitivists perceive learning as an active process which includes acquisition or reorganisation of the cognitive structures through which humans store and process information. As such, they view students as active participants in the process of knowledge acquisition.

Wadsworth (1996) stated that cognitive classroom practices should be real. The teacher is expected to present a rich classroom environment that encourages students' spontaneous exploration. Students are encouraged to be active constructors of their own knowledge through experiences that foster assimilation and accommodation.

Therefore, this theory supports the use of innovative teaching strategies in higher education, which are student-centred. In innovative teaching, learning is a social process where students are active participants in the learning process. Teachers create innovative and stimulating environments in order to enhance effective learning. Students are given an opportunity to share ideas with teachers and their peers and in so doing, they take responsibility for their learning.

Innovative teaching strategies such as simulation, role playing, portfolio development, short lecture and problem-based learning (PBL) are very useful in innovative teaching (Nicolaidis, 2012). Furthermore, literature on postgraduate education proposes that adult students are self-directed, problem-centred and are more interested in learning useful information (Applin, Williams, Day and Buro, 2011).

2.2.4 Constructivist learning theory

Constructivism refers to the view that students construct knowledge for themselves during the teaching and learning process (Hein, 1991). Similarly, Harlow, Cummings and Aberasturi (2007) relate to constructivism as a theory explaining that individuals create meaning on their own. The constructive learning theory contends that learning is an active process in which the learner uses his/her senses to create meaning out of it. Constructivists stress that for the learner to learn he/she needs to do something because learning is not the passive acceptance of knowledge which exist out there (Hein, 1991).

The same author contends that constructivist students learn to learn as they learn. In other words, they learn how to construct meaning. Learning is a social activity since it is linked to connection with other people such as teachers, peers, family as well as casual acquaintances (Hein, 1991). This is supported by Woo and Reeves (2007) who argue that in constructivist learning, students acquire knowledge through participation within the social practices of a learning environment which may include group assignments, group projects as well as social practices of the local community. Woo and Reeves (2007), further state that learning is perceived as a social product produced by the process of conversation, discussion and negotiation (Woo and Reeves, 2007).

Additionally, Nicolaides (2012) asserts that in constructivist theory, learning is a social process whereby relevant learning only takes place once an individual is engaged in social activities. These include improving student's capability to use ideas and information, testing of ideas and evidence, facilitation of personal development and improvement of students' capacity to plan and manage their learning experience (Nicolaides, 2012).

Constructivists assume that learning is contextual. They believe that education should not be isolated from its social contexts because it is impossible to separate education and experience. Further, they argue that we learn in relationship to what we know, what we believe, our prejudices and our fears. Therefore, education must focus on learners' experiences and interests rather than on a predetermined body of knowledge (Hein, 1991). Similarly, Woo and Revees (2007) maintain that constructivist learning and thinking is situated in a social contexts. The imperative constructivist assumption consists of real or situated learning where students takes part in activities which are directly relevant to their real life and which take place within a culture similar to an applied setting.

Additionally, constructivist learning theories believe that learning environments should come closer to real life environments. They view learning as a social phenomenon because the learner builds on his/her prior knowledge and beliefs, as well as on the knowledge, beliefs and actions of others. They believe that learning needs to be scrutinised in its social, cultural and historical context (Burrell et al., 2011).

According to Schunk (1996), an important assumption of constructivism is that students are active participants in the learning process and they develop knowledge for themselves. Constructivists emphasize integrated curriculum in which students study a topic from multiple perspectives. Another constructivist assumption is that teachers should not teach in the traditional way of presenting instruction to a group of students. Rather, they should create situations such that students are actively involved in the learning process through manipulation of materials and social interaction (Schunk, 1996).

This theory supports the use of innovative teaching methods because in innovative teaching, experience is the best source of knowing rather than textbooks. Learners learn best by doing, experimenting and finding meaning in their own actions. Teachers are viewed as mediators of knowledge rather than transmitters of knowledge and learners are viewed as constructors of knowledge (Uys and Gwele, 2004). In addition, it has been argued that postgraduate students learn better by ensuring that they learn in a way that they can apply knowledge by practising the skills, rather than being given direct instruction (Burrell et al., 2011). This can be achieved by using different innovative teaching strategies outlined below.

2.3 Innovative teaching strategies used in higher education

This section elaborates on the various innovative teaching strategies such as the problem-based learning (PBL), community-based learning (CBL), case studies, simulation, portfolio and role play.

2.3.1 Problem-based learning as an innovative teaching strategy

Higher education institutions continue to use various teaching methods to help students in learning competencies essential to the nursing profession. Literature on adult education proposes that adult students are self-directed, problem-centred and are more interested in learning useful information (Applin et al., 2011). Teaching strategies that present students with an opportunity to contextualise information are more compatible with the needs of professional practice. Problem-based learning (PBL) has been identified as one innovative teaching method that is useful in contextualising the problem, the content, skills and knowledge learned throughout the course (Hung, 2009). This is supported by Applin et al. (2011), who argues that PBL is one teaching method in nursing education that promotes contextualisation of knowledge crucial to nursing practice.

PBL is the most recognised and applied innovative teaching strategy in nursing education. Conventional teaching methods such as lecturing and demonstration have been blamed for their inability to produce students who are capable of solving real life problems. These methods often result in students being able to solve textbook problems (Hung, 2009). Similarly, Applin (2011) asserts that the lecture method is ineffective for learning in the nursing professions as it encourages surface learning since students are not actively involved in the process of learning.

However, problem-based learning is defined differently by different authors. It is described as a teaching method that simultaneously improves both problem solving strategies and disciplinary knowledge bases which is achieved by giving students the active role of problem-solvers confronted with an ill-structured problem that emulates real-world problems (García-Famoso, 2005). The same author further explains that PBL is one of the teaching strategies that best implement constructivist theories since students have to take part in tasks and activities in actual environment. In PBL an educator presents a problem to students. The students then discuss the problem and list what they know and what they need to know. They identify resources to be used and try to generate possible solutions. Lastly, they recap their work, present the problem and defend their solution (Gracia-Famoso, 2005).

The above description of PBL is supported by Schmidt, Van der Molen, Te Winkel and Wijnen (2009) who describe PBL as a small-group educational method characterised by the use of an ill-structured problem as the context for students to learn clinical reasoning skills and acquire knowledge about the problem. PBL is regarded as a cognitive constructivist approach to learning. The same authors argue that the problem presented represents the part of the world that must be understood and discussing the

problem in a small group and self-study aims to help students construct a theory explaining the problem in terms of its underlying structures.

According to Hung (2009), PBL is different from other instructional methods in that its structure of the content is problem centred. In addition, the strength of PBL is on its four educational objectives, which are contextualisation, reasoning process, self-directed learning skills and motivation to learn. The learning process in PBL starts with problem solving rather than content. In PBL, students are not receiving subject information from the teacher in a logical sequence. Instead, subject information is organised as a problem (Hung, 2009). Another important element in PBL is the reasoning process whereby students engage in inquiry processes in which critical and creative skills are vital for learners to achieve problem solving tasks imposed upon them. These cognitive processes and abilities promote students' higher-level thinking skills, and hence, result in deeper learning and better application of the knowledge in the future (Hung, 2009).

The above views are supported by Applin et al. (2010) who asserts that in PBL the problem is encountered first in the learning process and it serves as a catalyst for the application of problem solving or reasoning, as well as for the search for information required to understand mechanisms responsible for the particular issue and how it might be approached. The same author also agrees that PBL supports contextualisation of knowledge and that it also adopts a deeper style of learning. Moreover, PBL enhances critical thinking, problem solving skills, and increases self-directed learning (Applin et al., 2010).

Similarly, Othman and Shalaby (2014) describe PBL as an adult learning approach that assists students improve advanced skills in self-directed learning, decision-making, critical thinking and problem-solving.

Studies undertaken globally and in South Africa have indicated that most students prefer the use of PBL over traditional teaching strategies. The study which was done in USA to compare PBL and lecture-based learning in adult health nursing course indicated that students from the PBL group gained more knowledge and the level of motivation was higher towards learning compared to students in the lecture group (Hwang and Jang, 2005). This is in line with the study which was done in Canada whereby PBL graduates linked their abilities to think critically and their abilities to engage in self-directed evidence-based practice as vital to enabling them to meet their competencies (Applin et al. 2011). Additionally, a descriptive study which was done in Canada indicated that students considered PBL as a powerful teaching strategy as it is useful in construction of their professional knowledge, developed their problem-solving skills, and enhanced their self-directed learning skills (Othman and Shalaby, 2014).

The study which was done in Nigeria on medical students comparing the learning effectiveness of PBL with traditional learning revealed that most students favoured PBL over traditional learning methods. Students reported that PBL sessions presented more learning fun, was useful in encouraging team work and the acquisition of communication skills and enhanced critical thinking and reasoning skills as compared to traditional learning (Saalu, Abraham and Aina, 2010).

Furthermore, a study which was done in South Africa revealed that students acknowledged the value of PBL in the development of critical thinking, communication skills, and problem solving and teamwork skills. Students reported that the positive experiences overshadowed the negative experiences (Rakhudu, 2011).

Although many studies suggest that PBL is an effective teaching strategy, some argue that it is an ineffective teaching strategy. Schmidt, Van der Molen, Te Winkel and Wijnen (2009) concluded that PBL is a less effective teaching strategy because it stresses less emphasis on direct instruction of students. Moreover, it has not promoted higher levels of knowledge in students. Similarly, Hung (2009) argues that PBL is not an effective method because students have to collect information on their own and it is expensive in that it need more educators and time to conduct the course. Additionally, the study which was done by Othman and Shalaby (2014) revealed that students mentioned heavy workload and time consumption as one of the flaws of PBL.

2.3.2 Community-Based learning as an innovative teaching strategy

Community-based education (CBE) is one of the innovative teaching strategies that has been introduced in current nursing education. CBE is in line with the policy of the World Health Organization (WHO) which seeks to foster the type of educational programme for health personnel that will make them responsive for the needs of the population they serve, in order to achieve the goal of health for all (WHO,1985).

In November 1985, a WHO Study Group on community-based education of health personnel met in Geneva to clarify the meaning of the phrase community based-education, to determine its implications, to suggest how to put it into practice, and to recommend ways of fostering it.

It was resolved that students should work in an environment closely resembling that in which they are to work after graduation and that they should be more than passive receivers of information provided by teachers in lecture halls (WHO, 1987). Community-based education is defined differently by different authors. The World Health Organization defines community-based education as a means of achieving educational relevance to community needs and, consequently, of implementing a community oriented educational programme (WHO, 1987).

CBE consists of learning activities that extensively use the community as a learning environment, in which not only students but also teachers, members of the community, and representatives of other sectors are actively engaged throughout the educational experience (WHO,1987) . On the other hand Torp and Serge (2002, as cited in Mthembu, Mtshali and Frantz, 2014) define CBE as an experiential learning and teaching strategy arranged around the investigation and resolution of chaotic, real world problems.

They further explained that CBE is a problem oriented learning curriculum which integrates the curriculum with real life, offers real experiences that encourage active learning and support real knowledge construction. Students are problem solvers as they identify the causes of health problems and the conditions needed as part of the solution. In this approach, teachers are regarded as problem-solving colleagues (Top and Serge, 2002 as cited in Mthembu, Mtshali and Frantz, 2014).

Similarly, Skinner, Onoka and Ofoebgu (2008) describe CBE as a teaching strategy using the community as a learning environment where not only students but also educators, members of the community and representatives of other sectors are actively engaged throughout the educational experience. They describe community-

based education (CBE) as a teaching strategy whereby students learn important skills by doing practical sessions in community settings.

The World Health Organization (WHO, 1995) recommended that basic education for community health practice should prepare nurses to identify, assess, plan, implement and evaluate populations at risk. In CBE, students work with community members to solve community problems whereby a nurse educator plays the role of being a facilitator (Uys and Gwele, 2004).

According to Okayama and Kajii (2011), CBE has been introduced in many medical schools around the world. A study which was done in Japan to determine whether CBE increases students' motivation to practice community health care revealed that indeed CBE motivates students to practice community health care. The results of this study further revealed that, students' motivation is enhanced by the health education activity (Okayama and Kajii, 2011).

According to Mekwa (2000), the South African Department of Education (DoE) and the council on higher education (CHE) endorse the implementation of CBE as a responsive educational method. Mekwa (2000) states that CBE is a tool to foster primary health care (PHC), as it affords students the opportunity to learn by providing services to under-resourced communities. Similarly, a study by Ndateba, Mtshali and Mthembu (2016) revealed that the community-based learning experiences of students promote the PHC philosophy and that underprivileged community settings provide a rich learning environment.

According to Mtshali (2009), educating health professionals in South Africa using the community-based education principle is a recommended national policy. However, it was identified that in a number of nursing education institutions planning,

implementation and evaluation of CBE tend to be uncoordinated, ineffective and haphazard, which results in poor student motivation.

Mtshali did a study in 2009 to analyse the implementation of community-based education in basic nursing school programmes in South Africa. The results of this study revealed that collaborative decision-making involving all stakeholders was vital particularly during the curriculum planning phase. Additionally, special principles should be adopted when selecting community sites to ensure that the selected sites are able to facilitate the development of required graduate competencies (Mtshali, 2009). Various higher education institutions for health professionals, including nursing institutions have responded positively by allowing students to engage in PHC-associated activities.

According to Ndateba, Mtshali and Mthembu (2016), CBE refers to learning activities that occur in a community setting whereby students are allocated to various communities (urban, peri-urban and rural or semi-rural areas) to undertake activities relevant to community health needs and that address community health related-needs.

CBE provides opportunities for students to learn in situations similar to those in which they might work later in their professional lives. Furthermore it may equip students with transferable core competencies such as leadership skills, the ability to work in teams, and the skill to interact with the community (Ndateba, 2015). Similarly, Mtshali and Gwele (2016) assert that CBE offers opportunities for the development of leadership skills and also facilitates an understanding of different personalities that may be encountered when working with others.

2.3.3 The lecture method

According to Mc Garr (2009), lecture method is the major teaching strategy used in higher education. The author further adds that the reason why it has survived the competition of innovative teaching strategies is that it is not expensive and it is easy to prepare. Furthermore, it is possible for the lecturer to relate the lecture content to his or her students' previous knowledge, hence making learning more meaningful (Mc Garr, 2009). This view is supported by a study which was done by (Sajjad, 2010) to determine the effectiveness of various teaching methods in higher education. The participants of this study rated lecture method as the best teaching method. The reasons include that it saves time, the teacher provides all information related to the topic, and students listen attentively to the lecture.

Similarly, a study conducted by Covill (2011) revealed that students believe that they learn a great deal through the lecture method and they are of the view that their retention of the material will be long-lasting. Additionally, a study conducted by Marmar (2014) revealed that students prefer the lecture method over active learning methods. Through the lecture method, the teacher does not only provide all information related to topic, but it is also time saving and students attentively listen and take notes.

Although many studies suggest that most students prefer lecture method over active learning methods, some believe that it is an ineffective method. A study conducted by Soltani, Naderi and Zare (2012) revealed that students prefer small-group learning methods over lecturing. Similarly, the results of a study conducted by Jarahi (2013) revealed that medical students earn higher exam scores in student-centred teaching methods compared to the lecture method.

According to McGarr (2009), the lecture method is often characterised as the transfer of the lecturer's notes to the students' note pad without any thinking of the information. The same author further explains that this contributes to the student's isolation and disengagement from the lecture, which discourages critical thinking and analysis of the content. Schmidt, Wagner, Smeets, Keemink and Van der Molen (2015) who suggest that lectures are poor methods of promoting critical thinking support this view. They further explain that student engagement is low and the attendance of lectures tends to be low.

2.3.4 Technology as an innovative teaching strategy

Technology has opened the door to many new teaching approaches for nurse educators. However, the challenges facing faculty who did not grow up in the computer age continue to be a problem (Axley, 2008). Tele-education has been used to deliver continuing education to rural health professionals. The vital modes are, video, computer and audio. Audio technologies involve the transmission of the spoken word between students and educators (Curran, 2006).

According to Axley (2008), nursing education managers continue to support ongoing faculty development in the area of distance education and the use of technology in the teaching and learning process. The use of technology in healthcare is no longer optional. As early as the 1990s, nursing education did begin to incorporate technology into the teaching and learning process as power-point presentations started replacing the overhead projector.

According to Al-Fahad (2009), courses using a variety of media are being offered to students in an effort to serve the educational needs of the increasing population due to the rapid development of technology. A study conducted by Fahad (2009) in Saudi

Arabia, revealed that mobile learning is an effective tool in improving communication and learning. Similarly, a study by Phillippi and Wyatt (2011), argues that the smartphone is a popular accessory already in the pocket of many nursing students. It was found that smartphones promote self-directed learning and encourage students to reach out for accurate information without stigma.

According to Curran (2006), video-conferencing (VC) as a teaching modality has been widely accepted for delivering distance education courses to healthcare providers using audio, video and computers either synchronously or asynchronously. VC specifically provides the opportunity for participants in rural and remote areas who due to time, travel, and cost constraints would normally be unable to access these. In Western Australia where video-conference services were set up for clinical telemedicine, educational use was about 40% of the time.

Similarly, in South Africa, a study was conducted by Chipps (2010) to review and evaluate the current use of video-conference education for nurses in KwaZulu-Natal. Two nursing courses conducted via video-conferencing were evaluated against a set of criteria. Results revealed that the courses were implemented successfully using VC. Results of this study indicated that, in the light of saving time and money, VC can be used to teach specialist nursing courses to rural nurses (Chipps, 2010). Similarly, Halili, Sulaiman and Rashid (2014), assert that video-conferencing technology minimises the time and saves costs between remote areas. It also improves access to learning.

2.3.5 Simulation as an innovative teaching strategy

Simulation is defined as a situation that is built to resemble clinical practice as closely as possible (Rauen, 2004). On the other hand, Aebersold and Tschannen (2013)

define simulation as the plan of an expected potential course of events for a simulated clinical experience.

Simulation has emerged as a means of promoting experimental learning in various contexts in nursing (Murphy et al., 2011). According to Weaver (2011), simulation presents opportunities for interactive learning that can be used in any nursing course. He further explained that it can be used as a supplement for traditional classroom lessons. Moreover, simulation mirrors the clinical environment and mimics patients' responses in a safe environment without risks to patients.

Additionally, simulation motivates students to push the limit of their abilities so that they can better learn what to do in a real clinical situation (Weaver, 2011). Murphy, Hartigan, Walshe, Flynn and O'Brien (2011) who argue that simulation facilitates active application of learning and participation in nursing activities as well as deeper understanding of care in a safe environment support this view. They further explain that it provides an alternative way of learning while giving consideration to patient safety and comfort.

2.3.6 Case-studies

Case studies have recently been introduced as one of the innovative teaching strategies in many countries around the world (Popil, 2011). They have been used by various disciplines including nursing, healthcare, business, social sciences and law. A case study is, like any other method, defined differently by different authors. It is defined as an active learning technique that presents students with a variety of imperative skills such as communication, problem-solving, analytical and critical-reasoning skills (Popil, 2011). The same author further explained that, it is often an

explanation of a real situation, commonly involving, a decision, a challenge, an opportunity, a problem or an issue faced by a person or people in an institution.

According to Popil (2011), case study integrates the views of experiential learning by presenting student-centred education and opportunities that will motivate students through active involvement. Case studies promote decision making in a safe environment. Moreover, they enhance the development of critical thinking skills by presenting the chance for direct data analysis that includes consideration of the outcomes. The same author further explains that, case studies provide students with an opportunity to experience real patient situations that they may not have experienced in a clinical environment (Popil, 2011). Similarly, Pilato and Ulrich (2014), define a case study as a teaching technique that provides students with complex and real-life problems. Students are expected to make decisions and come with a solution to the problem presented by an educator.

Furthermore, students are allocated to learning teams who will analyse and discuss their individual findings and prepare for the classroom discussion. They argue that it is a highly effective teaching method in that students apply the concepts they learn and they are expected to present the cases to their peers and their teachers (Pilato and Ulrich, 2014). Additionally, Bimray, Le Roux and Fakude (2013) define a case study as a teaching strategy in which ideas are triggered through complex problem analysis of real or hypothetical situations. For them, a case study provides a means for applying theoretical principles in practice.

The same authors further argue that it is possible in a case study method for students to make decisions about real-life situations which could be done in a rational and organised manner in a safe environment. Moreover, the application of case studies

enhances students' understanding of complex and complicated issues, promotes active learning, and encourages the development of problem solving skills as well as critical thinking.

Habasisa and Hlalele (2014) define case study as a story with a concealed message that describes an actual situation in which an individual or group has to make a decision or solve problems. The same authors further explain that a case study is one of the innovative teaching strategies that are learner-centred, prioritise problem-solving and foster life-long and community-oriented learning principles. Moreover, it enhances deep learning than surface learning, encourages interaction between learners and teachers, more fascinating experiences for students and educators, enhances self-directed learning and generally improves motivation. The authors also argue that case studies bridge the gap between theory and practice.

Studies undertaken globally and in South Africa have revealed that case study is a powerful innovative teaching strategy in teaching and learning process. A study which was done in Malaysia showed that students positively perceive the use of case study as a teaching strategy. They further agreed to use the same method in the future (Iahad, Mirabolghasemi, Mustaffa, Latif and Buntat, 2013).

Similarly, an American study proved case study as more powerful than traditional lecture-based learning in that it provides students with additional skills beyond those gained from the lecture-based class. Moreover, it prepares students for the real business world (Pilato and Ulrich, 2014). Additionally, this study is supported by the one which was conducted in Saudi Arabia where students' feedback indicated that the case study teaching method could be used as alternative to lecture-based teaching.

This study showed that nursing students find interactive case discussion more interesting and educationally stimulating than lectures (Majeed, 2014).

In Nigeria, a study conducted by Alam, Oloruntegbe, Oluwatelure, Alake and Ayeni (2010) revealed that case study stimulate higher order thinking and communication skills in learners. In Kenya a study conducted by Muraya and Kimamo (2011) revealed that the use of case studies enhances students' performance and interests towards the subject. A study conducted in KwaZulu-Natal demonstrates that use of case study provide students with an opportunity to achieve and assimilate knowledge to use in their professional careers (Habasisa and Hlalele, 2014).

Even though the use of case study in teaching and learning has more advantages, it does have some limitations. According to Popil (2011), it is not easy and it takes a lot of time to develop cases and it needs educators who have good questioning skills. Moreover, it may be frustrating for students who are used to traditional teaching methods. Similarly, in South Africa, Habasisa and Hlalele (2014) state that teachers' lack of experience in using case studies could be a major obstacle. Further, it is time consuming and needs a skilled educator in constructing and presenting an appropriate case-based challenge.

2.3.7 Role play as an innovative teaching strategy

The demand for higher education institutions to include active learning methods in the classroom has resulted in the introduction of role play as one of the innovative teaching strategies (DeNeve and Heppner, 1997). Role play is defined as an innovative classroom technique in which students take on the roles of participants in a situation. It is a teaching technique that is more focused on active rather than passive learning (DeNeve and Heppner, 1997). The same authors further explain that, role play

enhances students' awareness of their feelings as well as those of others. Additionally, it encourages student's ability to work in groups. Similarly, Luca and Heal (2006) argue that teamwork can be improved through role-playing. Furthermore, students often enjoy playing active roles rather than being passive learners. Based on the above statements, it is clear that role play encourages deep learning than surface learning.

The above information is supported by a study which was done in England on medical students by Nestel and Tierney (2006). Their study was exploring students' experiences on the use of role play with the aim of producing guidelines for maximising the benefits of role-play within the learning context. The study found that students appreciated role play in the acquisition of communication skills. Guidelines for effective role play include sufficient preparation, alignment of roles and tasks with level of practice, structured feedback guidelines and acknowledgement of the importance of social interactions for learning (Nestel and Tierney, 2007).

Role-play is used as teaching technique that assists in the gaining of knowledge, attitudes and skills in different disciplines and with students of different ages, business and human resources. Nestel and Tierney (2007), define role play as type of simulation that focuses attention on the interaction of people with one another. It stresses the duties performed by different people under different circumstances.

Role play has been identified as one of the innovative teaching strategies that encourage the development of communication skills, helping with relationship, interaction, empathy and ethics of care. It is regarded as a learning method based on experience (Riera, Cibanal and Mora, 2010). A Spanish study by Riera, Cibanal and Mora (2010) to assess role-playing as a methodology in the teaching and learning

process for a nursing degree found that role play is an imperative and effective teaching technique in nursing. It provides students with an opportunity to deal with care situations from an individual and realistic perspective, and helps them to cope with anxiety, doubts and fears.

Students also recognised team work in role-playing as a positive aspect in their learning process (Riera et al., 2010). This was supported by Manzoor, Mukhtar and Hashmi (2012) on medical students' perspectives about role play. They found that role play is the most productive teaching technique. Students said that it enhances the knowledge of the subject and also assisting developing clinical skills. Participants found role play quite fascinating and they agreed that it enhances their communication skills. They recognized role play as appropriate way of adult learning. Some participants admitted that it improved their communication skills and it also encourage the development of critical thinking skills (Manzoor, Mukhtar and Hashmi, 2012).

According to Manzoor, Mukhtar and Hashmi (2012), the reason of introducing role pay as one of innovative teaching strategies is to develop students' skills in dealing with difficult situations which they may encounter when they start their careers in real society. Furthermore, role plays are constructed and implemented on the basis of Knowles' adult learning principles, which focus on students' need to know, self-directed learning and a problem centred approaches. Manzoor, Mukhtar and Hashmi (2012) further explained that, role play could be used to improve cognitive, psychomotor skills and affective domains in students.

The above information was supported by Rao and Stupans (2012), who argue that role play could be an effective teaching method in addressing Bloom's taxonomy, cognitive, affective and psychomotor domains of learning. For example, knowledge is

acquired (cognitive domain) if observation of others is involved, including the understanding and assimilation of that information. Practical skills (psychomotor skills) are achieved through repeated role-plays and feedback. Attitude (affective domain) is achieved through spontaneous emotions (Rao and Stupans, 2012).

Role play can be a useful teaching method in psychiatry nursing, if roles are properly planned and developed on the basis of meeting the course objectives. This is supported by a study which was conducted by Dawood (2013), on nursing students' perceptions about role-play as a teaching strategy in psychiatric nursing. The results of this study proved role play as powerful teaching method in psychiatric nursing. Students appreciated the value of role play in improving their communication skills, and provided them with an opportunity to integrate the theory and practice of psychiatric nursing. Furthermore, it empowered them to cope with anxiety, fears, doubts before encountering them in a real life situation. Students also appreciated active participation, creativity and team work during role pay (Dawood, 2013).

Similarly, a study on the effects of applying role playing on nursing students conducted in Iran by Vizesfar, Dehghanrad, Magharei and Sobhani (2016) revealed that role playing as innovative teaching method enhances student learning more than the lecture method. It is a type of teaching method where students are actively involved in their learning and it improves team work, communication and critical thinking skills (Vizesfar et al., 2016). The results of this study further proved role play as a powerful technique in harmoniously integrating cognitive and psychomotor systems of students.

Role play is an effective technique in the development of cultural competence because students act out different roles in given scenarios. Students could also experience how people from different cultures react in specific situations. Moreover, participants may

get an opportunity to practise nursing intervention skills required for responding to culturally diverse patients (Shearer and Davidhizar, 2003). This is supported by Qing (2011) who argues that role play is a useful and unique teaching strategy to teach cultural competence as it prompts students to develop interpersonal skills required to communicate with patients from diverse backgrounds.

Although many beneficial outcomes are observed in student learning when using role play as a teaching method, there are also some limitations and obstacles that may be encountered. Rao and Stupans (2012), reported reluctance of students to participate in role-plays. This was supported by Subhan (2014), who also reported reluctance of students to participate. Furthermore, educators have to allocate time for developing scenarios and the method may frustrate those educators who enjoy to be in control of the learning context. Generally, role play can be a waste of time if it is not properly planned (Subhan, 2014).

2.3.8 The portfolio as an innovative teaching strategy

There has been a rise in the use of teaching portfolios in higher education institutions including nursing. According to Harris, Dolan and Fairbairn (2001), the reason why portfolios were introduced was the need to communicate the theory-practice gap and to present nursing students with the skills to maintain a professional profile upon registration.

Furthermore, Harris et al. (2001), defined portfolio as a report that gives an impression of an individual's experience in a developmental situation. In support of this definition, McMullan, Endacott, Gray, Jasper, Miller, Scholes and Webb (2003), defined a portfolio as substantial evidence of what someone has achieved. Harris (2001) asserts that the portfolio could present a coherent presentation of previous learning and

experiences that may be treated as evidence of appropriateness for entry into educational courses or new job posts. Similarly, McMullan, Endacott, Gray, Jasper, Miller, Scholes and Webb (2003) view portfolios as a means of assessment and accreditation of prior learning. However, the same authors further explain that a portfolio is far more than a document presenting only proof of what has been achieved before but it is a dynamic document of growth and professional change.

According to Tiwari and Tang (2003), portfolio assessment begun with experts' collections of their works, and have long been used to demonstrate competencies. The same authors further explain that the portfolio was introduced as a substitute and more reliable assessment practice and it have become a common substitute to the traditional assessment techniques. In portfolio assessment, students are expected to produce selected evidence to show that learning relevant to the course objectives has occurred. Moreover, they are also expected to rationalise selected portfolio items with reference to the course objectives (Tiwari and Tang, 2003). This is in line with constructivist theories, which advocate that learning has to be constructed by learners themselves.

Students are actively involved in the process of planning for an assessment which involves among other things gathering, combining and organising feasible relevant items to provide evidence of achievement. Tiwari and Tang (2003) believe that learning is enhanced during the preparation of assessment because students are encouraged to reflect on their experience and they also identify their learning needs (Tiwari and, 2003). In support of the above statement McMullan et al. (2002) explained that a portfolio is more placed on experiential learning, where students diligently participate. He further emphasized that the portfolio promotes learning, as it brings together theory (reflection/conceptualization) and practice (experience/testing it out).

Similarly, Lumina (2005), suggests that portfolios can help students to reflect on their learning in a way that could complement student learning.

The study that was conducted by Tiwari and Tang (2003) in Hong Kong, to evaluate the effectiveness of portfolio assessment in student learning, revealed that students supported the use of portfolios in assessment. This was so because the process of preparing portfolios produced positive academic and affective outcomes. In that, it complemented the quality of learning. A prior study by Harris, Dolan and Fairbairn (2001) on the value of portfolio in student's assessment had shown that students value the introduction of portfolios as it is useful in assisting students learning and growth and it also has the ability to allow students to connect clinical experiential learning with theoretical learning.

Literature has reported that portfolios have many advantages. Some of these include providing teachers with the opportunity to treat the student, group, or community as an individual, each with its own characteristics. Portfolios function as a tool for addressing the weaknesses of traditional assessment (Sewell, Marczak and Horn, 2001). Harris, Dolan, and Fairbairn (2001), who state that portfolios have the capacity to facilitate students as autonomous learners by inspiring them to be responsible for their own learning, also support this. The same author further explained that portfolio could be used for the development of reflective skills. Other scholars such as Tiwari and Tang (2003) argue that portfolios compliment student learning during the process of preparing for assessment. This is because students would be actively involved during that process. Despite the above mentioned advantages, the portfolio has some limitations.

According to (Harris et al., 2001), it can take a lot of time for teachers to prepare and assess the contents of a portfolio. It is also not easy to analyse it since it is a form of qualitative data. Harris et al. (2001) further explained that portfolios are considered as less reliable than more quantitative assessment such as test scores.

The portfolio is one of the innovative teaching strategies that are currently used in South African education. Students are asked to gather, analyse and select the representative sample of their work which is related to their course for assessment purposes (Nicolaidis, 2012). They are required to collect, maintain and submit a personal portfolio in accordance with prescribed guidelines, accompanied by a reflective diary of approximately 500-1000 words. Portfolios encourage self-directed learning and improve the quality of student learning (Nicolines, 2012).

2.4 Factors influencing adjustment to the use of innovative teaching strategies

According to Fairchild (2003), orientation programmes for postgraduate learners can help them predict problems that may arise during the course. The same author further explains that orientation programmes can also help students connect with one another and create social support networks. This view is supported by Littlefield and Keillor (2012) who argue that it is imperative to create a link between the world postgraduate learners know and the academy he or she is about to enter by introducing and orientating new students to the specific institution.

Adult learners consider themselves as responsible for their lives. They need to be recognised and treated as capable and self-directed individuals. Therefore, educators need to create environments where adults develop their latent self-directed learning skills (Ota, DiCarlo, Burts, Laird and Gioe, 2006). The same authors further explain that adult students want to learn what will help them perform duties or handle problems

they may encounter in everyday life and those present in the context of application to real-life. Similarly, Doherty (2012) suggests that adults should be treated like adults, and they ought to benefit from authentic examples of skills they can use in real life. The author further explained that educators should reassure postgraduate students that they will not be judgemental of their life experiences or their perspectives. As such, they will be evaluated only on their mastery of the content.

According to Jarvis (2004), facilitating learning is one of the factors that may influence postgraduate students to adjust to the use of innovative teaching strategies. Educators should facilitate learning by creating an environment in which learning occurs and should seek to guide the students through the learning process. The same author further suggests that educators should present students with a problem requiring a solution and encourage reflection on it (Jarvis, 2004). Hardin (2008) who argues that postgraduate students appreciate instructors who adopt the role of facilitator or resource person rather than lecturer supports this view. Further, they appreciate practical course work.

Furthermore, Tight (2002) argues that the specific character of problem-based learning which makes it so well suited to adult students is the focusing of the learning process on the identification, exploration, and attempted resolution of realistic problem. He further explains that an instructor can involve adult students in relevant problems and give them responsibility over their own learning by a variety of ways such as:

- a) presenting a problem as a simulation of professional practice or a real-life situation;
- b) making them identify their own learning needs;

- c) appropriate use of available resources;
- d) re-applying new information to the initial problem as well as
- e) evaluating their learning process.

This view is supported by Hardin (2008) who asserts that institutions should use multiple methods of instruction including experiential learning and problem-based techniques for adult students in order to connect curricular concepts to useful knowledge and skills. According to Rubenson (2011), teachers should empower learners by sharing power and involving them in decision making. Peri-Chen, Tsai, Finger, Chen and Yeh (2007) encourage that postgraduate learner's courses should be flexible enough to balance their jobs, family, and work-related activities. This is in line with Doherty (2012) who argues that educators should be efficient with lessons and activities. Furthermore, teachers should balance instructional time and lab time in order to give the students an opportunity to do homework in class which will provide them with an opportunity of accomplishing all requirements on time. The author further explained that teachers should allow a limited number of late assignments to maintain flexibility, accountability and expectation of exceptional work which aid in the adjustment to the use of innovative teaching strategies in higher education (Doherty, 2012).

A study conducted by Pei-Chen, Tsai, Finger, Chen and Yeh (2008) to investigate factors affecting students' adjustment to the use of e-Learning revealed that learner computer anxiety, teacher's attitude toward e-learning, a-Learning flexibility, perceived ease of use, diversity in assessments and e-Learning course quality are the crucial factors affecting learner's adjustment to the use of e-Learning.

As such, they recommended that in order to make e-Learning more enjoyable, students should be assisted by building their confidence in using computers, which can be achieved by a fundamental computer course (Pei-Chen, Tsai, Finger, Chen and Yeh, 2008). This is in line with the views of Hardin (2008) who asserts that institutions should help postgraduate students by using comprehensive academic and student support system in order to strengthen students' capacities to become self-directed learners. Such a system may include support on the use of computers.

On the other hand, a quantitative study conducted by Yadegaridehkordi, Iahad and Baloch (2013) revealed that perceived mobility value is a more significant factor affecting postgraduate adjustment to the use of e-Learning. Other factors included perceived ease of use, attitude toward using, perceived usefulness, and prior use of e-Learning were also accepted as contributory factors for e-Learning adjustment.

A study conducted by Parsons and Blake (2004) states that peer support contributes to students' success. On a similar note, a study conducted by Carter, Cushing and Kennedy (2009) revealed that peer support is important and it is an efficient way to assist all students to learn.

2.5 Barriers among postgraduate learners in using innovative teaching strategies in higher education

A study conducted by Barrow, Lyte and Butterworth (2002) revealed that the majority of students found problem-based learning frustrating due to the requirement on the side of students to direct their own learning. Some also reported that scenario and the role of the teacher was unclear. This is in line with the results of O'Shea's (2003) study which revealed that students experience apprehension over the introduction of problem-based learning (PBL) and report the need for an orientation to the concept.

Furthermore, students may find it very difficult and stressful to adjust to self-directed learning. In addition, they may require guidance and support (O'Shea, 2003).

Additionally, the above results were also supported by a study which was conducted by Rakhudu (2011) which revealed that PBL is both challenging and demanding due to the fact that students have to gather information on their own. Participants also reported shortage of resources in the library to support PBL and work overload of students.

A qualitative study conducted by Lekalakala-Mokgele (2010) revealed that traditionally trained facilitators make it difficult for students to adjust to the use of innovative teaching methods. Reasons included that educators are not adequately prepared in using innovative teaching methods, fear of loss of control of the classroom becomes a challenge for students, in that traditionally trained facilitators find it difficult to allow students to take charge of their own learning and working in a self-directed manner (Lekalakala-Mokgele, 2010).

Similarly, Subhan (2014) argues that South African teachers dominate classroom teaching. Furthermore, they enjoy to teach the way they were taught and they put little emphasis on the construction of knowledge and the development of thinking skills.

A study conducted by Ibrahim and Silong (2000) on the barriers to self-directed learning among postgraduate students revealed that technology, lack of computers, lack of students support services and poor orientation are some of the barriers to self-directed learning. The authors recommended that students should receive orientation at the beginning of the course. This will assist them to plan and develop a course of study. The same authors further recommend that it is imperative for facilitators to provide a good technological support.

The above results coincide with those of Baharudin et al. (2013) who revealed that lack of student support services, low self-esteem, poor language abilities, computer illiteracy, the ability to access and understand information and critical and reflection skills are among the many types of barriers to self-directed learning.

Butler and Sellbom (2002) revealed that lack of technology, lack of time to learn, lack of support on the use of technology and ambivalence that using technology matters are among the barriers to adoption of technology among postgraduate students. The same authors further explained that some faculty are unable to use technology. This is in line with the study conducted by (Irinoye et al., 2013) which revealed that unreliable network connections, inadequate number of computers, and poor computer skills are among barriers to adoption of technology among students in higher education.

Similarly, Baharudin, Murad and Mat (2013), study revealed that literacy and computer related skills, language problems, the ability to access information and critical reflected skills are among the barriers to adoption of technology among postgraduate nurses. These challenges make it difficult for postgraduate nurses to adjust to the use of innovative teaching strategies (Baharudin et al., 2013). Furthermore, a study conducted by Hardin (2008) revealed that direct instruction or lecturing is a barrier to postgraduate learning. Postgraduate students prefer practical learning. The author further explains that they value learning that is relevant to their goals; hence, it is imperative that they receive immediate feedback concerning progress. Schmidt, Wagner, Smeets, Keemink and Van der Molen (2015) who suggest that lectures are poor in the promotion of critical thinking support this view. The authors further explain that student engagement is low and the attendance of lectures tends to be low.

2.6 Conclusion

This chapter has highlighted the knowledge base on the phenomena under study. The literature review focused on learning theories underpinning the use of innovative teaching strategies in higher education, such as behaviourism, cognitivism, and constructivism. Furthermore, it also focused on innovative teaching strategies used in higher education, factors influencing adjustment to the use of innovative teaching strategies in higher education amongst postgraduate nursing students, as well as barriers on adjustment to the use of innovative teaching strategies among this group. The next chapter describes the research method that was used in this study.

CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Introduction

According to Grove, Burns and Gray (2012), research methodology is defined as the process or plan for conducting the specific steps of the study. This chapter covers research approach, design, population, sampling, data collection, data analysis and ethical consideration.

3.2 Research paradigm

According to Guba (1990), research paradigm is a belief system that guides the way we do things, or more formally establishes a set of practices. The author further explained that paradigms guide how we make decisions and carry out research. Additionally, Michel (2008) definition of a paradigm reveals how research could be affected and guided by a certain paradigm by stating that paradigms are patterns of beliefs and practices which regulate inquiry within a discipline by offering lenses, frames and processes through which investigation is accomplished.

Guided by objectivity, this study adopted a positivist paradigm. The positivist paradigm arose from the philosophy identified as logical positivism and is based on rigid rules of logic and measurement, truth, absolute principles and predictions (Michel, 2008). The positivist paradigm believes that there is a fixed, and orderly reality that can be objectively studied (Polit and Beck, 2004).

3.3 Research Approach

A quantitative approach guided by the traditionalist positivist paradigm was adopted in this study. Quantitative research is a systematic process of obtaining formal objective data to describe variable and their relationships (Grove et al., 2012). A quantitative approach was adopted in this study because of its systematic and logical nature. It was therefore found appropriate in this study that intended to explore the perceptions of postgraduate nursing students on adjustment to the use of innovative teaching strategies in higher education without any interference from the researcher and for objectivity. Quantitative research methods focus on measuring a range of social and individual objects, events and processes (Polit and Beck, 2004).

3.4 Research Design

Research design is defined as a blueprint for conducting a study with a maximum control over factors that may interfere with the validity of the findings (Grove et al., 2012). On the other hand, Parahoo (2014) and Adam and Expert (2008) defines research design as a plan that describes how, when and where data are to be collected and analysed. A non-experimental, exploratory-descriptive design was used in this study. A descriptive exploratory design is employed when little is known about the topic, and it provides information about the phenomenon as it naturally occurs (Polit and Beck, 2004).

The descriptive exploratory design was selected for this study in order to explore the students' perceptions on adjustment to the use of innovative teaching strategies at the selected nursing campus. The exploratory descriptive design is viewed as suitable for this study because according to the researcher's knowledge, the perceptions of postgraduate nursing students on adjustment to the use of innovative teaching

strategies have not been documented before, particularly at the selected campus. More importantly, the study also intended to uncover ways to improve the process of teaching and learning by exploring perceptions of postgraduates nursing students to the use of innovative teaching strategies in higher education. In this study an exploratory, descriptive design was appropriate to explore and describe perceptions of postgraduate nursing students regarding the use of innovative teaching strategies in higher education.

3.5 Research setting

Setting is defined as a physical location and conditions in which data collection takes place in a study (Polit and Beck, 2008). This study was conducted in a natural setting where the respondents study, namely one of the University of KwaZulu-Natal's College of nursing campuses situated in the eThekweni district. This particular campus is designated to offer post-basic programmes because it is considered affluent in human and material resources and can fulfil the needs of the post-basic students. The school falls under the College of Health and the Faculty of Health Sciences. It offers both undergraduate and postgraduate studies in nursing. Undergraduate studies include Bachelor of Nursing (entry to nursing) while postgraduate studies include Honours, Coursework Masters, Masters by Research and Ph.D in Nursing.

3.6 Population

Population is defined as the entire set of individuals or objects having some common characteristics that are of interest to the researcher (Polit and Beck, 2010). The population for this study comprised 60 postgraduate nursing students. This study targeted Ph.D, Masters and Honours nursing students.

3.7 Sampling technique

A sample is defined as a subset of the population that is selected for a study. Sampling is defined as a selected group of people, events, behaviours or other elements with which to conduct a study (Grove et al., 2012). In this study, a none probability convenience sampling technique was used because of the limited number of postgraduate nursing students, especially for the quantitative aspect of the study which required many respondents. In convenience sampling, the researcher simply includes available participants into the study until they have reached desired sample size (Grove, Burns and Gray, 2012).

3.8 Data collection instrument

Data was collected through a structured and ordered self-reporting questionnaire (see appendix 1). According to Grove, Burns and Gray (2012: 425), "questionnaire is a printed self-report form designed to elicit information that can be obtained through the written responses of the subjects". The information obtained through a questionnaire is similar to that obtained by an interview, but the questions tend to have less depth. Most of the items in the instrument that was used in this study were adapted from Nkwanyana's (2012) data collection instrument. Nkwanyana's tool was adapted to suit the objective of this study. Her study focused mainly on exploring the views of adult learners about their learning in higher education whereas this present study is exploring postgraduate learner's perceptions on adjustment to the use of innovative teaching strategies in higher education.

When drafting a questionnaire, themes within the questionnaire, objectives of the study and concepts from the conceptual framework were taken into consideration. Respondents were given a minimum of 20 minutes to complete questionnaires. The advantage for using a structured questionnaire is that through systematised questions,

the researcher is able to obtain similar answers from the respondents (Saunders, 2011). Another advantage is that confidentiality would be ensured by encouraging the participants not to write their names on the questionnaires. A structured questionnaire was chosen because subjects feel a greater sense of anonymity and are more likely to provide honest answers (Grove et al., 2012). This is often the case especially where the researcher is not present during the administering of the questionnaire. The researcher was not present when participants completed the questionnaires for this study.

3.9 Data collection process

According to Grove, Burns and Gray (2012: 691), data collection is defined as “a precise, systematic gathering of information relevant to the research purpose or the specific objectives, questions, or hypotheses of a study”. After securing permission from the university authorities, the researcher approached study respondents during lunch breaks. The researcher approached some of the respondents as groups or individually to request them to participate in the study by completing the questionnaires.

The researcher started by introducing himself, explaining the purpose of the study and responding to the potential respondents' questions and areas of clarification regarding the study. The researcher explained that participation was voluntary, and respondents were not forced to participate. The researcher gave instructions for the respondents in the form of a letter and consent form for reading and signing. The researcher spent some time explaining how to complete the questionnaire to the respondents because spoiled questionnaires are a waste and it is unethical to dispose of questionnaires with errors which could have been avoided by the researcher.

3.10 Reliability and validity of the instrument

Reliability and validity serve as a means of ensuring the rigour of the research process and research findings (Burns and Susan, 2005). The validity of an instrument determines the extent to which it actually reflects or is able to measure the constructs being examined (Grove, Burns and Gray, 2012). Validity of a new instrument can be achieved by referring to literature pertaining to the topic or by consulting an expert in the content area to examine the items to check whether they adequately present hypothetical content in the correct proportion (Burns and Grove, 2009).

Content validity of the instrument was ensured through consultation with experts in the nursing field regarding innovative teaching strategies in nursing education, postgraduate nursing students, research and statistics. These responses gave the researcher an opportunity to determine whether the instrument is user-friendly and whether the questions asked in the instrument are clear (Polgar and Thomas, 2013). Reliability of an instrument refers to the capacity of measurement to produce consistent results (Grove, Burns and Gray, 2012). In this study, the reliability of the instrument was determined by using the test-retest method. The instrument was given to same participants on two occasions within a period of two weeks and then examining their responses on similarities.

3.11 Ethical considerations

The researcher presented the research proposal to the School of Nursing's Research Committee to ensure that ethical issues were adequately addressed. The proposal was then sent to the University of KwaZulu-Natal Humanities and Social Sciences Research Ethics Committee for ethical clearance. Ethical clearance was secured from the University Research Ethics Committee before obtaining permission from the Head of the Nursing Department to conduct this

study. The approval from the Humanities and social sciences research ethics committee was submitted to the Head of the Nursing Department as part of the process for securing permission to use the campus as a research setting and to have access to students studying at this university.

Permission to conduct the study was obtained from the Dean and Head of the School of Nursing And Public Health. Researchers have a duty to treat all respondents with dignity and to reduce anxiety or discomfort (Connelly, 2014).

Respondents were provided with a written explanation of the purpose of the study, the nature and the procedure of the study and their expected roles as respondents of this study. Informed consent involves voluntary participation of the respondents. The principles of autonomy and fairness were upheld in that those who wished to withdraw could do so during any stage during data collection process without facing any consequences.

Respondents were assured that they would not be coerced to continue and that they would not be disadvantaged in any way either by the researcher or by the outcome of the study. The respondents were also assured that they would be used only for research purposes. Anonymity and confidentiality was maintained during the analysis and the final reporting of this study. Confidentiality was observed in that the study respondents were given assurance of confidentiality which was coupled with the anonymity principle.

The questionnaire did not require the name of the university or that of the respondent. The signed consent forms were separated from the completed data collection instruments to ensure that there is no link between these two. The

names of the respondents were not used on the questionnaires; numbers were assigned to each questionnaire.

3.12 Data analysis

Data analysis is defined as the process of systematically applying statistical/or logical techniques to describe and illustrate, condense and recap, and evaluate data (Shamoo and Resnik, 2009). In this study data was analysed using quantitative data analysis methods SPSS (Statistical Package for the Social Sciences) version 23.0 for windows. Descriptive statistics that describe one version at a time was used, that is the mean, median, and mode. The standard deviation as stated in (Polit and Beck, 2008) was also established.

3.13 Data management

All data collected will be used for the purpose of this study and possible publication in accredited journals. Hard copy completed questionnaires and computer data will be kept confidential, under lock and key. Data was stored during the course of the study on a computer which had a code of access only known by the researcher. Completed questionnaires will be shredded after a period of five years and data stored on the computer will be erased from both the programme files and the recycle bin.

3.14 Dissemination of the findings

A hard copy of the findings of this study will be presented to the University of KwaZulu-Natal, where this study was conducted. The researcher and supervisor will publish the findings in an accredited scientific nursing journal.

CHAPTER FOUR

PRESENTATION OF FINDINGS

4.1 Introduction

This chapter presents the findings of the study whose aim was to explore and describe postgraduate nursing students' perceptions on adjustment to the use of innovative teaching strategies in a selected private nursing college in KwaZulu-Natal. Statistical package for the Social Sciences (SPSS) version 23.0. Descriptive statistics were used to summarize categorical and numerical data. Pearson's chi-square test was used to test for association between respondents' demographic variables and different teaching strategies used in higher education institution. Fisher's exact test, Pearson correlation, Kruskal- Wallis test and Mann-Whitney U test were performed to test for association between respondent's different demographic variables and perception of influencing factors to the use of innovative teaching strategies. The result is significance if the probability of occurrence (P-value) is equal to or less than 0,05 level. With a confidence interval of 95%.

4.2 Sample realization

Sixty postgraduate nursing students participated in this research. Out of the sixty (60) self-structured questionnaires distributed, 51 were returned making a returned rate of 91% which according to Polit and Beck (2004) is an acceptable response. The researcher personally presented questionnaires to the respondents. According to (Polit and Beck, 2004) personal presentation of questionnaires to individual respondents is found to have a positive effect on the rate of questionnaires returned.

4.3 Social demographic characteristics

The respondents' social demographic variables that were collected included age, gender, ethnic group and the type of degree.

4.3.1 Age of the participants

Figure 4.1 below shows that the majority of the respondents (51%: n=26) were aged between 36-45 years, followed by the 26-35 years 27.5 % (n=14). The above 45 years comprised (19.6 % n=10), and only (2% n=1) were aged 25 years and below.

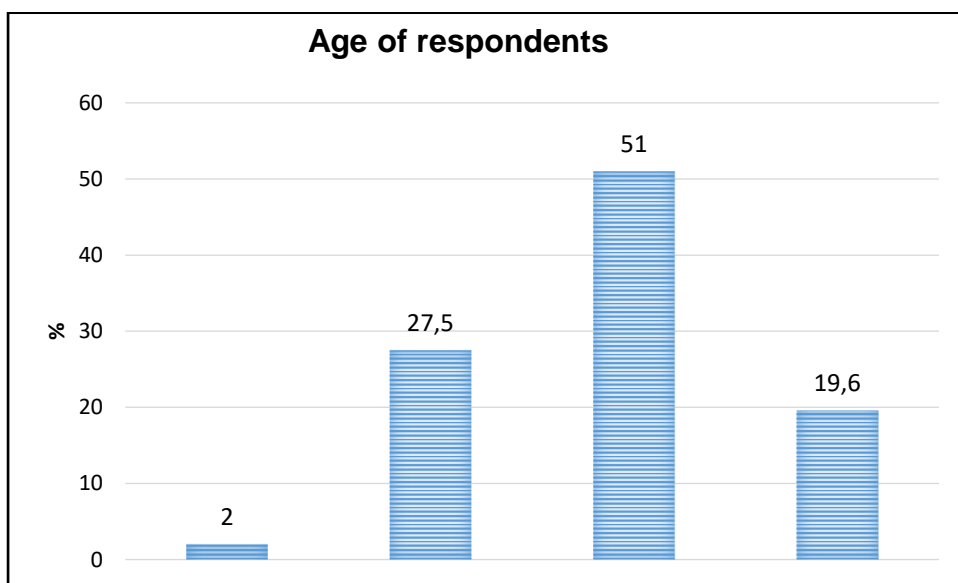


Figure 4.1: Ages of the study respondents

4.3.2 Gender of the study respondents

The results displayed in figure 4.2 showed that the majority of the respondents (88%: n=44) were females. Only (12% n=6) were males.

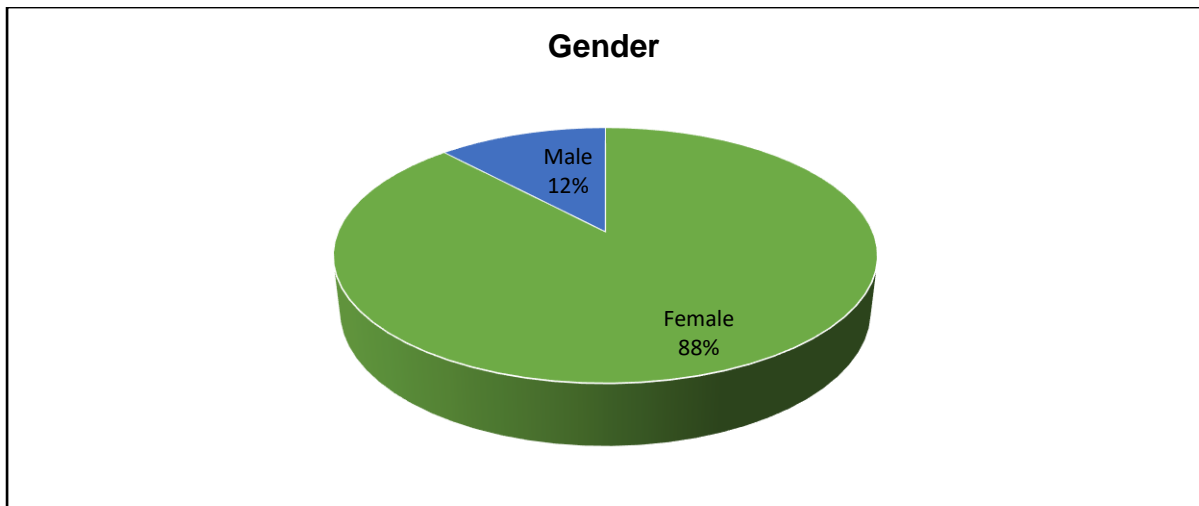


Figure 4.2: Gender of the respondents

4.3.3 Ethnic group

The results displayed in figure 4.3 showed that the majority of the respondents (88% n=44) were blacks, followed by (10% n=5) who were Indians. Only (2% n=1) were whites.

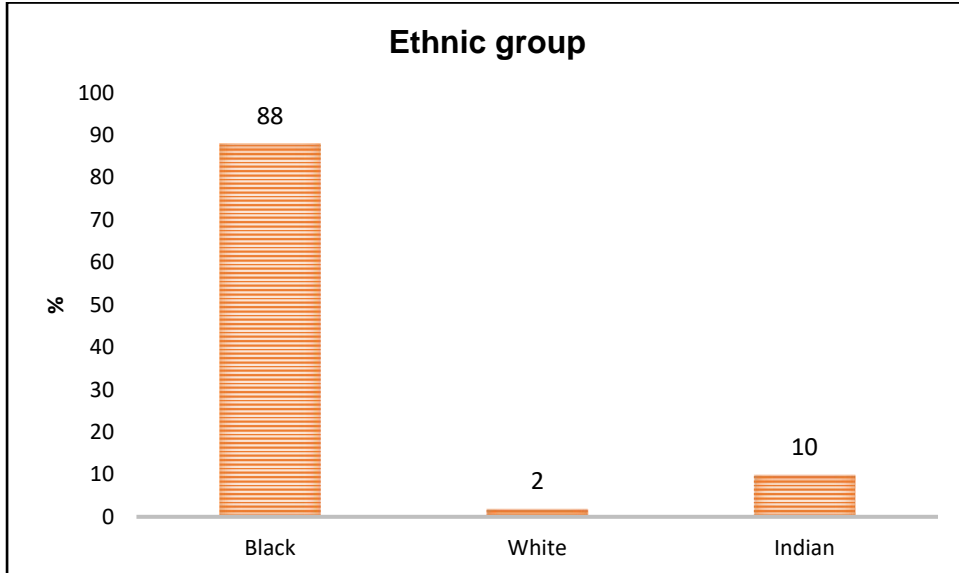


Figure 4.3: Ethnic groupings

4.3.4 Type of degree

The results displayed in figure 4.4 showed that the majority of respondents (60.8% n=31) were doing Honours, followed by masters (25.5% n=13). Only 13.7% n=7 were doing Ph.D.

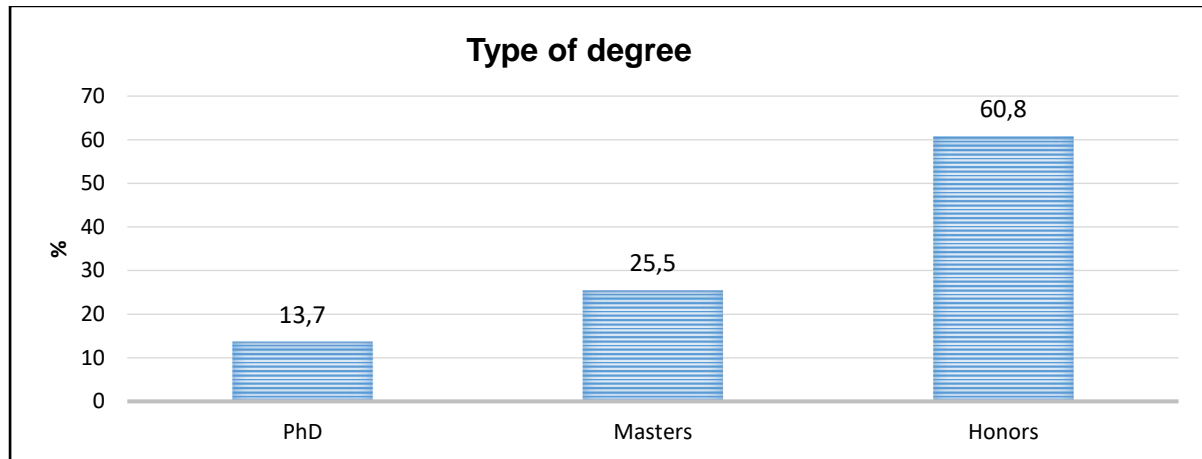


Figure 4.4 Level of Study

4.3.5 Gender and age

A cross tabulation (Table 4.1) was performed to compare the respondents' gender with age. The results of this study indicate that males are younger than females. The analysis shows that the majority of females (52.3% n=23) were 36-45, followed by 22.7% n=10 above 45, with none of them below 25 years. The majority of males (50.0% n=3) were between 36-45 years, with (16.7% n=1) below 25 years, with none of them above 45 years. Fisher's exact test shows no significant relationship between gender and age; Fisher's value=5.740, df=0 and P-value=0.112.

Table 4.1: Cross tabulation of gender and age

Gender		Age				Total
		25 years and below	26-35	36-45	>45	
Female	n	0	11	23	10	44
	%	0.0%	25.0%	52.3%	22.7%	100.0%
Male	n	1	2	3	0	6
	%	16.7%	33.3%	50.0%	0.0%	100.0%
Total	n	1	13	26	10	50
	%	2.0%	26.0%	52.0%	20.0%	100.0%

4.3.6 Type of degree and age

A cross tabulation (table 4. 2) was performed to compare type of degree with age. The results of this study show that Honours students are younger than Ph.D and Masters students. The analysis shows that the majority of Ph.D students (42.9 % n= 3) were aged between 36-45 years, followed by (28.6 % n=2) who were between 26-35 and 28.6% n=2 above 45 years, with none of them below 25 years. The majority of Masters nursing students (53.8 % n=7) were aged between 36-45 years. Followed by (30.8 % n=4) above 45 years, 15.4% were between 26-35 years. None of them below 25 years. The majority of Honours nursing students (51.6% n=16) are aged between 36-45 years. Followed by (32.3% n=10) between 26-35 years, (12.9% n=4) above 45. With (3.2 % n=1) below 25 years of age. Fisher's exact test shows no significance relationship between type of degree and age. Fisher's value =4.412, df 0 and p-value 0.702.

Table 4.2: Cross tabulation between type of degree and age

Type of degree		Age				Total
		25 years and below	26-35	36-45	>45	
PhD	n	0	2	3	2	7
	%	0.0%	28.6%	42.9%	28.6%	100.0%
Masters	n	0	2	7	4	13
	%	0.0%	15.4%	53.8%	30.8%	100.0%
Honours	n	1	10	16	4	31
	%	3.2%	32.3%	51.6%	12.9%	100.0%
Total	n	1	14	26	10	51
	%	2.0%	27.5%	51.0%	19.6%	100.0%

4.3.7 Gender and type of degree

A cross tabulation (table 4.3) was performed to compare gender with a type of degree. The analysis shows that the majority of females (65.9% =29) are doing Honours. It also shows that the majority of males (50.0% n=3) are doing Master's degrees. Fisher's exact test shows no significant relationship between gender and type of degree. Fisher's value=3.067, df = 0 and p-value 0.189.

Table 4.3: Cross tabulation between gender and type of degree

Gender		Type of degree			Total
		PhD	Masters	Honours	
Female	n	6	9	29	44
	%	13.6%	20.5%	65.9%	100.0%
Male	n	1	3	2	6
	%	16.7%	50.0%	33.3%	100.0%
Total	n	7	12	31	50
	%	14.0%	24.0%	62.0%	100.0%

4.4 Postgraduate nursing students' perceptions of innovative teaching strategies used in higher education.

The questionnaire contained 9 (nine) items to assess postgraduate nursing students' perceptions of innovative teaching strategies used in higher education. Using a Likert scale from 1 meaning strongly disagree (SD) to 5, meaning strongly agree (SA). Due to low observations on the response options, especially on strongly agree and agree, the results were collapsed into three categories, with the 'strongly disagree' and 'disagree' categories being combined as 'disagree', and the 'strongly agree and 'agree' categories being combined as 'agree'. Thus there are three categories that will be reported namely disagree, neutral and agree.

The findings displayed in (table 4.4) below indicate that a variety of innovative teaching strategies are used in higher education. The problem-based learning (PBL) method appeared to be the most-used teaching method with (85.4% n=41) of the respondents

agreeing with the use of this method. The PBL was followed by the use of technology as a teaching strategy (82.4 n=42). It appeared that the portfolio is also used by the largest percentage in higher education, with (73.5% n=36) of the respondents who agreed with the use of this method. Case study is another innovative teaching method which is mostly used in higher education (81, 3% n=39) as compared to (6.3% n= 3) who disagreed.

The results of this study further revealed that (67.3 % n=33) of the respondents agreed that lecture method is used in higher education institutions as compared to (16.3% n= 8) who disagreed, (16.3 % n=8) were neutral, with a mean score of 3.73. With regards to the use of problem-based learning as a teaching strategy in higher education (85.4% n= 41) agreed with the statement compared to (4.2 % n=2) who disagreed, (16.3 %) were neutral, with a mean score of 0.94. With regards to the use of community-based learning as a teaching strategy in higher education (62.5 % n=30) agreed as compared to (8.3 % n=4) who disagreed, (29.2 %) were neutral, with a mean score of 1.17.

A large percentage of the respondents (81.3% n=39) agreed that case study is used as innovative teaching strategy as compared to (6.3% n=3) who disagreed, (12.5% n=3) were neutral, with a mean score of 4.13. Only (82.4% n=42) agreed with the use technology as innovative teaching strategy in higher education as compared to (5.9% n=3) who disagreed, (11.8% n=6) were neutral. The results of this study further revealed that (66.7 % n=32) agreed that simulation is used as innovative teaching strategy in higher education institution as compared to (10.4 % n=5) who disagreed, only (22.9 % n=11) were neutral, with a mean score of 3.85. Only (60.4% n=29) agreed with the use of role play as innovative teaching strategy as compared to (10.4 % n=5) who disagreed with this statement, (29.2 % n=14) were neutral, with a mean score of 3.69.

Additionally, with regards to the use of portfolio as an innovative teaching strategy in higher education (73.5 % n=36) agreed, only (6.1 % n= 3) disagreed, 20.4 % n=10 were neutral, with a mean score of 4.02.

Table 4.4: Teaching strategies used in higher education institution

Item	Disagree		Neutral		Agree		M	SD
	n	%	n	%	n	%		
Lecture method	8	16.3	8	16.3	33	67.3	3.73	1.27
Problem-based learning	2	4.2	5	10.4	41	85.4	4.19	.94
Community-based learning	4	8.3	14	29.2	30	62.5	3.90	1.17
Case-studies	3	6.3	6	12.5	39	81.3	4.13	1.00
Technology	3	5.9	6	11.8	42	82.4	4.25	1.01
Simulation	5	10.4	11	22.9	32	66.7	3.85	1.09
Role play	5	10.4	14	29.2	29	60.4	3.69	1.06
Portfolios	3	6.1	10	20.4	36	73.5	4.02	1.03

4.4.1 Influence of demographic characteristics on perceptions of teaching strategies used in higher education for post graduate nursing students.

Cross-tabulation was done for the social demographic variables and perceptions of teaching strategies to determine if any of the social demographic variables (which are: ethnic group, age, gender and type of degree) had influence on the respondents' perception of teaching strategies used in higher education.

4.4.2. Lecture method and type of degree

Cross tabulation was done to determine whether respondents' type of degree had an influence on students' perceptions of the lecture method as a teaching strategy used in higher education. Cross tabulation indicates that the higher the degree the lower the

perception on the use of the lecture method in higher education. Results show that participants who were doing honours had higher perception (69.7% n=23) on the use of the lecture method as compared to Masters nursing students who showed lower perceptions (15.2% n=5). Similar results were found in Ph.D students (15.2% n=5). Fisher's exact test showed a significant relationship between the type of degree and the lecture method; Fisher's exact value =8.73, df =0 and p – value=0.040.

Table 4.5: Cross tabulation between the lecture method and type of degree

Lecture method		Type of degree			Total
		Ph.D	Masters	Honours	
Disagree	n	0	5	3	8
	%	0.0%	62.5%	37.5%	100.0%
Neutral	n	2	3	3	8
	%	25.0%	37.5%	37.5%	100.0%
Agree	n	5	5	23	33
	%	15.2%	15.2%	69.7%	100.0%
Total	n	7	13	29	49
	%	14.3%	26.5%	59.2%	100.0%

4.4.3 Correlation between teaching strategies and respondents demographic variables

Table 4.6 below show correlation that was done between the demographic variables and the different teaching strategies. The Pearson correlation test indicated a positive relationship between the age and problem- based learning. This was statistically significant with a p-value of = 0,010. It also indicated a positive relationship with community based- learning and this was also statistically significant with the p-value of 0.044.

Table 4.6 Correlation between teaching strategies and respondents demographic variables

		Age	Gender	Ethnic group	Type of degree
Lecture method	Pearson Correlation	-.272	.000	-.022	.139
	Sig. (2-tailed)	.058	1.000	.882	.341
	N	49	48	48	49
Problem-based learning	Pearson Correlation	.367*	.135	.146	-.179
	Sig. (2-tailed)	.010	.366	.327	.223
	N	48	47	47	48
Community-based learning	Pearson Correlation	.292*	.080	.008	-.281
	Sig. (2-tailed)	.044	.595	.958	.053
	N	48	47	47	48
Case-studies	Pearson Correlation	.138	.173	-.012	.013
	Sig. (2-tailed)	.350	.244	.939	.932
	N	48	47	47	48
Technology	Pearson Correlation	.078	.161	.038	-.167
	Sig. (2-tailed)	.586	.264	.792	.243
	N	51	50	50	51
Simulation	Pearson Correlation	.179	-.218	-.004	.050
	Sig. (2-tailed)	.222	.141	.977	.736
	N	48	47	47	48
Role play	Pearson Correlation	.105	-.275	.219	.105
	Sig. (2-tailed)	.479	.061	.139	.478
	N	48	47	47	48
Portfolios	Pearson Correlation	.095	-.214	.075	-.087
	Sig. (2-tailed)	.514	.145	.611	.553
	N	49	48	48	49

Correlation is significant at the 0.05 level (2-tailed).

Correlation is significant at the 0.01 level (2-tailed)

4.6 Factors influencing adjustment to the use of innovative teaching strategies among postgraduate nursing students.

The questionnaire contained eleven items to assess postgraduate nursing students' perceptions on factors influencing their adjustment to the use of innovative teaching strategies, using a scale from 1 meaning strongly disagree (SD) to 5, meaning strongly agree (SA). Due to low observations on the response options, especially on strongly agree and agree, the results were collapsed into three categories, with the 'strongly disagree' and 'disagree' categories being combined as 'disagree', and the 'strongly agree' and 'agree' categories being combined as 'agree'. Thus there are three categories that are reported on, namely disagree, neutral and agree.

Results of this study showed that the most perceived factor influencing students' adjustment to the use of innovative teaching strategies is scenarios and problem-based situations. In response to the statement "Scenarios and problem-based situations provide postgraduate learners with educationally-relevant problems" (94.0% n=47) agreed with this statement. This was followed by lecturer being efficient with lessons and activities (91.8% n=45). Additionally, lecturer not judgemental of one's life experiences (88.2% n=45) was another most perceived influencing factor. Students being empowered to discover their own potential (84.3% n=43) was also perceived as the most influencing factor.

Table 4.7 below indicate that (64.0 % n=32) agreed that they are well orientated in the programme, (24.0% n=12) disagreed, whereas (12.0% n=6) were neutral, with a mean of 3.58. The results revealed that the majority (84.3% n=43) of respondents agreed that they are empowered to discover own potential, (11.8% n=6) were neutral, whereas (3.9% n=2) disagreed, with a mean of 4.06. The majority (88.2% n=42) agreed that the lecturers are not judgemental of one's life experiences. However,

(11.8% n=6) disagreed, giving a mean of 4.35. To ensure good academic progress, postgraduate nursing students need to be supported with technology. The results of this study revealed that the majority (83.3% n=40) agreed that they are supported with technology, whereas (10.4% n=5) were neutral, only (6.3% n=3) disagreed, giving a mean score of 4.19. The results of this study revealed that the majority (91.8% n=45) of the participants agreed that lecturers are efficient with lessons and activities, but (8.2% n=4) were neutral, with none disagreed, giving a mean of 4.22.

Table 4.7: Factors influencing adjustment to the use of innovative teaching strategies among postgraduate nursing students.

Item	Disagree		Neutral		Agree		M	SD
	n	%	n	%	n	--%		
Was oriented well in the programme	12	24.0	6	12.0	32	64.0	3.58	1.21
Empowered to discover own potential	2	3.9	6	11.8	43	84.3	4.06	.88
Lecture not judgemental of one's life experiences	0	0	6	11.8	45	88.2	4.35	.69
Supported with technology	3	6.3	5	10.4	40	83.3	4.19	.93
Lecturer efficient with lessons and activities	0	0	4	8.2	45	91.8	4.22	.59
Get enough academic support	2	4.1	12	24.5	35	71.4	3.94	.89
Learning activities designed to assist adult learners in meeting learning goals	1	2.0	9	17.6	41	80.4	4.04	.79
Get enough encouragement from peers	3	5.9	9	17.6	39	76.5	3.88	.97
Adult classes are creative and interesting	7	13.7	8	15.7	36	70.6	3.71	1.12
Scenarios and problem-based situations provide postgraduate learners with educationally-relevant problems	0	0	3	6.0	47	94.0	4.38	.60
Small groups assigned to work on case scenarios can find the experience stimulating	3	6.0	8	16.0	39	78.0	4.08	1.01

The results of this study revealed that the majority (71.4% n=35) of the respondents agreed that they get enough academic support, (24.5% n=12) were neutral, only (4.1%

n=2) disagreed, with a mean score of 3.94. The results of this study revealed that the majority of the participants (80.4% n=41) agreed that learning activities designed to assist adult learners in meeting learning goals influence their adjustment to the use of innovative teaching strategies, whereas (2.0% n=1) disagreed (17.6 % n=9) were neutral, with a mean score of 4.04. The results of this study revealed that the majority of the respondents (76.5% n=39) agreed that they get enough encouragement from peers. However, (5.9% n=3) disagreed, only (17.6% n=9) were neutral, giving a mean score of 3.88. The results of this study shows that the majority of the participants (70.6% n=36) agreed that adult classes are creative and interesting. However, (13.7% n=7) disagreed, (15.7% n=8) were neutral, with a mean score of 3.71.

The results of this study revealed that the majority (90.0% n=47) of respondents agreed that scenarios and problem-based situations provide postgraduate learners with educationally- relevant problems, with none disagreed, only (6.0% n=3) were neutral, with a mean score of 4.38. Additionally, the results of this study revealed that the majority (70.0% n=39) of respondents agreed that small groups assigned to work on case scenarios can find the experience stimulating. However (6.0% n=3) disagreed, (16.0% n=8) were neutral, giving a mean of 4.08.

4.5.1 Overall scores on perception of factors influencing postgraduate nursing students' adjustment to the use of innovative teaching strategies.

As previously discussed the respondents were asked to rate their level of perceptions on factors influencing their adjustment to the use of innovative teaching strategies on a five point Likert scale. Due to low observations on the response options, especially on strongly agree and agree, the results were collapsed into three categories, with the 'strongly disagree' and 'disagree' categories being combined as 'disagree', and the

'strongly agree and 'agree' categories being combined as 'agree'. Thus there are three categories that are reported namely disagree, neutral and agree.

The findings in table 4.8 below show the overall scores on respondents' perception of influencing factors to the use of innovative strategies in higher education institution. The findings indicate that respondents had high perceptions (83.3% n=35) of the influencing factors whereas (16.7% n=7) had moderate perception, with none having low perception.

Table 4.8 overall scores on perception of influencing factors

Perception of influencing factor	Score	n	%
Low perception	11-30	0	0
Moderate perception	31-40	7	16.7
High perception	41-55	35	83.3
Total	55	42	100.0

4.5.2 Distribution of influencing factors

Descriptive statistics showed that the minimum score was 36 and the maximum score was 56. Mean score was 44.6 and standard deviation (Std. Dev) =4.839. This is indicated by the Histogram below (Figure 4.5).

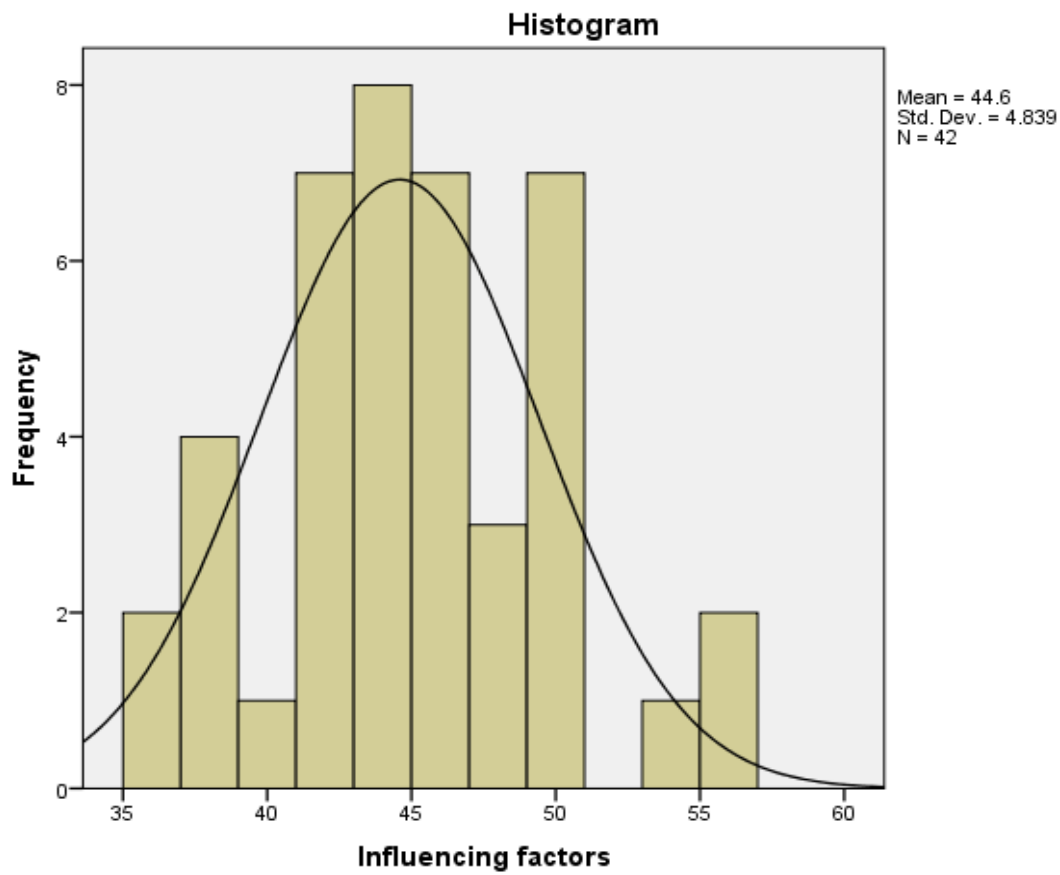


Figure 4.5 Distribution of influencing factors

4.5.3 Influence of social demographics on perceptions of influencing factors

Cross-tabulation was done for the social demographic variables and perceptions of influencing factors to determine if any of the social demographic variables (which are: ethnic group, age, gender and type of degree) had influence on the respondents' perception of influencing factors.

4.5.4 Ethnic groups and perception of influencing factors

Correlation was done to determine if ethnic group has influence on perception of influencing factors. Table 4.9 revealed that blacks had higher perceptions (88.6% n=31) of the factors influencing their adjustment to the use of innovative teaching strategies as compared to the Indians (60.0% n=3) and it was statistically significant. Fisher's exact test shows significant relationship between ethnic group and perception of influencing factors. Fisher's value 6.30, df 0, p-value 0.051.

Table 4.9 Cross tabulation of ethnic groups and perception of influencing factors

Ethnic group		Perception of influencing factors			Total
		Low perception	Moderate perception	High perception	
Black	n	0	4	31	35
	%	0.0%	11.4%	88.6%	100.0%
White	n	0	1	0	1
	%	0.0%	100.0%	0.0%	100.0%
Indian	n	0	2	3	5
	%	0.0%	40.0%	60.0%	100.0%
Total	n	0	7	34	41
	%	0.0%	17.1%	82.9%	100.0%

Fishers exact value 6.30, df 0, p-value 0.051

4.5.5 Other demographic variables and perception of influencing factors

Cross tabulation was done to determine if other demographic variables such as age, gender and type of degree has influence on the perception of influencing factors. No significant relationship was found.

Table 4.10 Other demographic variables and perception of influencing factors

	Test	Value	df	p-value
Age	Fishers exact	5.518	0	0.100
Gender	Pearson chi-squared	1.31	1	0.567
Type of degree	Fishers exact	0.261	0	1.000

4.5.6 Interrelationships between demographic variables and perception of influencing factors

Non-parametric tests (table 4.10 below) were performed to test if there is an association between the perception of influencing factors and respondent's demographic variables. Kruskal-Wallis test was performed for age, ethnic group and type of degree. A significant relationship was found only with ethnic group: p-value

0.026, and no relationship was found with age: p-value =0.060. Mann-Whitney U test was performed for gender and no significant relationship was found, p-value was 0.832

Table 4.11 Interrelationship between demographic variables and perception of influencing factors

Kruskal- Wallis test (table 4.10 above) showed a significant relationship between ethnic group and perception of influencing factors: p-value =0.026. Ethnic group was found to have an influence on the perception of influencing factors to the use of innovative teaching strategies. Blacks were found to have a higher perception (86.6% n=31) of influencing factors. This was statistically significant.

	Test	p-value
Age	Kruskal-Wallis	0.060
Gender	Mann-Whitney U test	0.832
Ethnic group	Kruskal-Walls	0.026
Type of degree	Kruskal-Wallis	0.977

4.5.7 Correlation between individual influencing factors and demographic variables

Correlation was done (table 4.12 below) between individual influencing factors and the respondents' demographic variables. The Pearson correlation test show a positive relation between age and being empowered to discover own learning, with a p-value of =0.022. This was statistically significant. There was also a positive relation between ethnic group and scenarios and problem-based situations, with a p-value of =0,024. This was also statistically significant.

Table 4.12 Correlation between individual influencing factors and demographic variables

		Age	Gender	Ethnic group	Type of degree
Was oriented well in the programme	Pearson Correlation	.045	-.117	.106	.156
	Sig. (2-tailed)	.758	.422	.467	.280
	N	50	49	49	50
Empowered to discover own potential	Pearson Correlation	.321*	-.101	.147	-.184
	Sig. (2-tailed)	.022	.487	.307	.197
	N	51	50	50	51
Lecture not judgemental of one's life experiences	Pearson Correlation	.108	-.242	.032	.153
	Sig. (2-tailed)	.452	.090	.824	.283
	N	51	50	50	51
Supported with technology	Pearson Correlation	.009	.019	-.271	-.101
	Sig. (2-tailed)	.953	.897	.065	.494
	N	48	47	47	48
Lecturer efficient with lessons and activities	Pearson Correlation	.044	-.114	.111	.497**
	Sig. (2-tailed)	.765	.441	.451	.000
	N	49	48	48	49
Get enough academic support	Pearson Correlation	.201	.114	-.202	-.245
	Sig. (2-tailed)	.165	.441	.168	.090
	N	49	48	48	49
Learning activities designed to assist adult learners in meeting learning goals	Pearson Correlation	.159	.028	-.113	-.108
	Sig. (2-tailed)	.265	.850	.436	.450
	N	51	50	50	51
Get enough encouragement from peers	Pearson Correlation	-.036	-.021	-.097	-.045
	Sig. (2-tailed)	.802	.883	.502	.755
	N	51	50	50	51
Adult classes are creative and interesting	Pearson Correlation	.164	-.041	-.076	.051
	Sig. (2-tailed)	.250	.778	.601	.723
	N	51	50	50	51
Scenarios and problem-based situations provide postgraduate learners with educationally-relevant problems	Pearson Correlation	.081	.095	-.322*	.160
	Sig. (2-tailed)	.576	.514	.024	.267
	N	50	49	49	50
Small groups assigned to work on case scenarios can find the experience stimulating	Pearson Correlation	.029	.169	-.050	-.173
	Sig. (2-tailed)	.841	.247	.734	.230
	N	50	49	49	50

Correlation is significant at the 0.05 level (2-tailed).

Correlation is significant at the 0.01 level (2-tailed).

4.6 Perceived barriers among postgraduate learners in using innovative teaching strategies in higher education.

Table 4.13 below was used to identify the barriers among postgraduate learners in using innovative teaching strategies, the participants were asked to respond to various statements. The questionnaire contained ten items to assess postgraduate nursing students' perceived barriers in using innovative teaching strategies.

Regarding the participants' perceptions of barriers in using innovative teaching strategies, only (37.3% n=19) agreed that lectures conducted online is a barrier to the use of innovative teaching strategies, and (33.3% n=17) disagreed, (29.4% n=15) were neutral, giving a mean score of 3.08. On the other hand only (43.1% n=22) agreed that lack of immediate feedback concerning the progress is a barrier to the use of innovative teaching strategies, as compared to (27.5% n=14) who disagreed, and (29.4% n=15) were neutral, with a mean score of 3.10. Furthermore, the results of this study also revealed that only (22.0% n=11) of the respondents agreed that lack of opportunities to reflect on past experience is a barrier, as compared to (54.0% n=27) who disagreed, (24.0% n=12) were neutral, giving a mean of 2.46. The results of this study further revealed that more than a half of respondents, (58.2%) agreed that they prefer learning to be practical, as compared to (16.3%) who disagreed (2.4%) were neutral giving a mean of 3.47.

In addition, only (13.7% n=7) agreed that they do not go beyond what is learnt in class because of learning simply to pass, whereas (76.5% n=39) disagreed, (9.8% n=5) were neutral, giving a mean of 1.94. On the other hand (32.7% n=16) agreed that some teaching strategies are confusing, as compared to (53.1% n=26) who disagreed, (14.3% n=7) were neutral, making a mean of 2.63. On the other hand only (19.6% n=10) of respondents agreed that some lectures are unfriendly and inconsiderate

towards postgraduate students. Similarly, (19.6% n=10) were neutral. However, the majority (60.8 n=31) of respondents disagreed with this statement, giving a mean score of 2.5.

The results of this study further revealed that (45.1% n=23) of respondents agreed that poor level of orientation is a challenge to attend studies successfully. Similarly 45.1% n=23 disagreed, only 9.8% n= 5 were neutral, with a mean score of 2.90. On the other hand (33.3 n=17) of respondents agreed that equipment troubles causes a lot of frustrations whereas 41.2% n=21 disagreed with the statement, 25.5% n=13 were neutral, giving a mean of 2.84.

Table 4.13 Perceived barriers among postgraduate learners in using innovative teaching strategies in higher education

Item	Disagree		Neutral		Agree		M	SD
	n	%	n	%	n	%		
Most lectures conducted online	17	33.3	15	29.4	19	37.3	3.08	1.15
Lack of immediate feedback concerning progress	14	27.5	15	29.4	22	43.1	3.10	1.12
Not given time to reflect on past experience	27	54.0	12	24.0	11	22.0	2.46	1.13
Prefer learning to be practical	8	16.3	12	24.5	29	59.2	3.47	1.19
Postgraduate develop a learning preference for learning based on childhood patterns	17	33.3	20	39.2	14	27.5	2.84	1.22
Do not go beyond what's learnt in class because of learning simply to pass	39	76.5	5	9.8	7	13.7	1.94	1.21
Some teaching strategies are confusing	26	53.1	7	14.3	16	32.7	2.63	1.37
Some lecturers are unfriendly and inconsiderate towards postgraduate learners	31	60.8	10	19.6	10	19.6	2.54	1.33
Poor level of orientation is a challenge to attend studies successfully	23	45.1	5	9.8	23	45.1	2.90	1.39
Equipment troubles causes a lot of frustrations	21	41.2	13	25.5	17	33.3	2.84	1.30

4.6.1 Perception of barriers

Table 4.13 below shows that the majority (63.8% n=30) of respondents had moderate perception of barriers to the use of innovative strategies among postgraduate nursing students in higher education. The results of this study further revealed that (31.9% n=15) had low perception. Additionally, only (4.3% n=2) had high perceptions of respondents

Table 4.14 Perception of barriers

Perception of Barriers	Score	n	%
Low perception	10-25	15	31.9
Moderate perception	26-35	30	63.8
High perception	36-50	2	4.3
Total	50	47	100.0

4.6.2 Distribution of barriers

Descriptive statistics showed that the minimum score was 18 and the maximum score was 44. Mean score was 27. 81 and standard deviation (Std. Dev.) was 4.985, as indicated by histogram (figure 4.6).

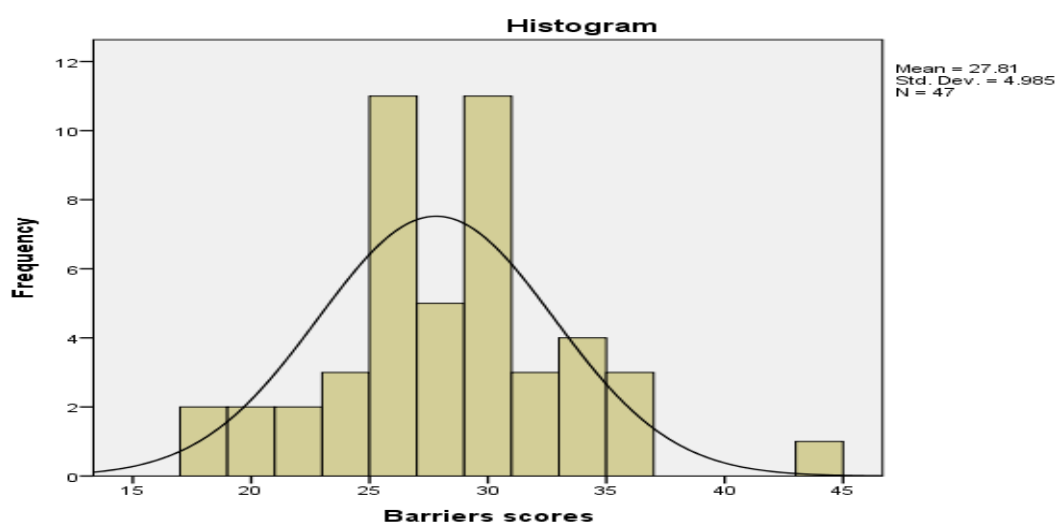


Figure 4.6 Distribution of barriers

4.6.3 Influence of demographics on respondents' perception of barriers

Cross-tabulation was done between demographic variables and barriers to determine if any of the social demographics had an influence on the respondents' perception of barriers. This section examined variables such as age, type of degree and ethnic group in relation to respondents' perceptions of barriers.

4.6.4 Cross tabulation between age and perception of barriers

Cross tabulation was done to determine whether respondent's age had influence on their perceptions of barriers. Table 4.15 below shows that participants above 45 years had higher perceptions of barriers (11.1% n=1) as compared to those who were aged between 36 and 45 and those below 25 years. This revealed that the higher the age of the participants the higher the perceptions of barriers but Fisher's exact test shows no significant relationship between the respondents' age and the perceptions of barriers. Fisher's value =5.38, df 0, p-value 0.653.

Table 4.15 Cross tabulation between age and perception of barriers

Age of respondents		Perception of barriers			Total
		Low perception	Moderate perception	High perception	
25 years and below	n	0	1	0	1
	%	0.0%	100.0%	0.0%	100.0%
26-35	n	4	8	1	13
	%	30.8%	61.5%	7.7%	100.0%
36-45	n	9	15	0	24
		37.5%	62.5%	0.0%	100.0%
Above 45		2	6	1	9
		22.2%	66.7%	11.1%	100.0%
Total	n	15	30	2	47
	%	31.9%	63.8%	4.3%	100.0%

4.6.5 Cross tabulation between type of degree and perception of barriers

Cross tabulation (table 4.16) was performed to determine whether respondents' type of degree had influence on the perception of barriers. The results revealed that the majority (71.4% n=5) of PhD students had low perceptions of the barriers, as compared to Masters and Honours students. This means that the higher the type of degree the lower the perception of barriers but it wasn't statistically significant. Fisher's exact test shows no significant relationship between the type of degree and the perception of barriers. Fisher's value = 6.36, df 0, p-value 0.123.

Table 4.16 Cross tabulation between type of degree and perception of barriers

Type of degree		Perception of barriers			Total
		Low perception	Moderate perception	High perception	
PhD	n	5	2	0	7
	%	71.4%	28.6%	0.0%	100.0%
Masters	n	3	7	1	11
	%	27.3%	63.6%	9.1%	100.0%
Honours	n	7	21	1	29
	%	24.1%	72.4%	3.4%	100.0%
Total	n	15	30	2	47
	%	31.9%	63.8%	4.3%	100.0%

4.6.6 Gender and ethnic group

Table 4.16 Gender and ethnic group

	Test	Value	df	p-value
Gender	Fishers exact	1.19	0	0.554
Ethnic group	Fishers exact	5.89	0	0.241

4.6.7 Interrelationships

Non-parametric tests performed

Non-parametric tests were also performed to test if there is an association between the perception of barriers and respondents' demographic variables. Kruskal Wallis test was performed for age, ethnic group and type of degree, and no significant relationship was found. With age: p-value =0.6118, with ethnic group: p-value =0.172 and with type of degree: p-value =0.059.

Mann-Whitney U test was performed for gender and no significant relationship was found-value = 0.397.

Table 4.18 Non-parametric tests performed

	Test	p-value
Age	Kruskal Wallis test	0.6118
Gender	Mann-Whitney U test	0.397
Ethnic group	Kruskal Wallis test	0.172
Type of degree	Kruskal Wallis test	0.059

4.6.8 Correlation of demographic variables and individual barrier items

Pearson correlation test was done (table 4.119 below) to test the relation between demographic variables and individual barrier items. The results revealed a significant relationship between age and the lack of immediate feedback concerning progress with a p-value of 0,021.

Table 4.19 correlation of demographic variables and individual barrier items

		Age	Gender	Ethnic group	Type of degree
Most lectures conducted online	Pearson Correlation	.167	-.009	.031	-.095
	Sig. (2-tailed)	.241	.951	.833	.507
	N	51	50	50	51
Lack of immediate feedback concerning progress	Pearson Correlation	.323*	-.287*	.202	-.025
	Sig. (2-tailed)	.021	.044	.160	.861
	N	51	50	50	51
Not given time to reflect on past experience	Pearson Correlation	.026	.085	.178	-.079
	Sig. (2-tailed)	.858	.564	.221	.587
	N	50	49	49	50
Prefer learning to be practical	Pearson Correlation	.238	-.064	-.301*	.042
	Sig. (2-tailed)	.100	.664	.038	.773
	N	49	48	48	49
Postgraduate develop a learning preference for learning based on childhood patterns	Pearson Correlation	-.012	-.207	.061	.189
	Sig. (2-tailed)	.932	.149	.674	.185
	N	51	50	50	51
Do not go beyond what's learnt in class because of learning simply to pass	Pearson Correlation	-.066	-.024	-.008	.192
	Sig. (2-tailed)	.644	.869	.955	.176
	N	51	50	50	51
Some teaching strategies are confusing	Pearson Correlation	.092	-.339*	.039	.294*
	Sig. (2-tailed)	.531	.018	.790	.041
	N	49	48	48	49
Some lecturers are unfriendly and inconsiderate towards postgraduate learners	Pearson Correlation	-.083	-.123	.098	.166
	Sig. (2-tailed)	.562	.394	.496	.244
	N	51	50	50	51
Poor level of orientation is a challenge to attend studies successfully	Pearson Correlation	.028	-.187	.027	-.200
	Sig. (2-tailed)	.844	.194	.852	.160
	N	51	50	50	51
Equipment troubles causes a lot of frustrations	Pearson Correlation	-.108	-.046	-.089	.248
	Sig. (2-tailed)	.450	.752	.537	.079
	N	51	50	50	51

*. Correlation is significant at the 0.05 level (2-tailed).

** . Correlation is significant at the 0.01 level (2-tailed).

4.7 Summary of the findings

This chapter presented the findings of a study aimed at exploring postgraduate nursing students' perceptions on adjustment to the use of innovative teaching strategies in a selected higher education institution in KwaZulu-Natal. A cross tabulation was performed to compare gender with age, and it was revealed that males were younger than females. The findings of this study reveal that a variety of innovative teaching strategies are used in higher education. The problem-based learning (PBL) appeared to be the most-used teaching method with (85.4% n=41) of the respondents agreeing with the use of this method.

The findings of this study further revealed that the most perceived factor influencing student's adjustment to the use of innovative teaching strategies is scenarios and problem-based situations. In response to the statement "Scenarios and problem-based situations provide postgraduate learners with educationally-relevant problems" (94.0% n=47) agreed with this statement. This was followed by lecturer being efficient with lessons and activities (91.8 n=45). Additionally, lecturer not judgemental of one's life experiences (88.2% n=45) was another most perceived influencing factor. The findings revealed that participants had high perception of influencing factors. Furthermore, ethnic group was found to have an influence on the perception of influencing factors. Findings in this study further revealed poor level of orientation as a moderate barrier to the use of innovative teaching strategies among postgraduate nursing students. The other moderate barrier that was identified was the lack of immediate feedback by educators concerning students' progress. The findings of this study further revealed that the respondents had a moderate perception of barriers to the use of innovative teaching strategies. Moreover, the study identified that respondents' age had influence on the perception of barriers. It was found that

respondents above 45 years of age had higher perception of barriers. This showed that the higher the age of the participant the higher the perception of barriers.

CHAPTER FIVE

DISCUSSION, CONCLUSIONS AND RECOMMENDATIONS

5.1 Introduction

This chapter presents the discussions of findings, recommendations, limitations and conclusion. To reiterate, the purpose of the study was to explore and describe postgraduate nursing students' perceptions on adjustment to the use of innovative teaching strategies in higher education. The research objectives were: (a) to describe innovative teaching strategies used in higher education (b) to determine factors influencing adjustment to the use of innovative teaching strategies among postgraduate nursing students, (c) to identify barriers among postgraduate nursing students in using innovative teaching strategies in higher education.

The findings are discussed in relation to the research and the conceptual framework used in this study as well as the literature and previous studies on this topic. A quantitative exploratory and descriptive design was used to conduct the research. A questionnaire was used as a data collection tool. Utilising the survey for its exploratory purpose allowed the researcher to obtain information relating to the perceptions held by postgraduate nursing students with regards to their adjustment to the use of innovative teaching strategies in higher education. A non-probability convenient sampling technique was used to obtain a sample of sixty postgraduate nursing students who are studying in a selected higher education institution. Only fifty one of the sixty in the sample returned the questionnaires.

5.3 Recommendations

In line with the findings of the study, the following recommendations are made for nursing education, nursing practice, policy makers and research:

5.2 Discussion and the findings

The purpose of this study was to explore postgraduate nursing students' perceptions on the adjustment to the use of innovative teaching strategies in higher education. The research objectives were to: (a) describe innovative teaching strategies used in higher education among postgraduate nursing students; (b) explore factors influencing adjustment to the use of innovative teaching strategies among postgraduate nursing students; (c) explore perceived barriers among postgraduate nursing students in using innovative teaching strategies.

This chapter presented the major findings from the study in relation to the conceptual framework and research objectives. The discussion is supported by relevant literature. This chapter also discusses the limitations and the implication of these on nursing education. The study outlines a number of recommendations for nursing education, nursing service and policy makers.

5.2.1 Innovative teaching strategies used in higher education

Regarding the perceptions of postgraduate nursing students on innovative teaching strategies used in higher education, the findings of this study showed that a variety of innovative teaching strategies are used in higher education. The majority of the respondents (85%) agreed to the use of problem-based learning as an innovative teaching strategy in higher education, as opposed to (4.2%) who disagreed. Similarly, a study conducted by Saalu, Abraham and Aina (2010) indicated that respondents favoured problem-based learning over traditional learning methods.

Respondents reported that problem-based learning (PBL) sessions presented more learning fun, was useful in encouraging team work and the acquisition of communication skills and enhanced critical thinking and reasoning skills as compared

to traditional learning methods. Similarly, a study conducted by Othman and Shalaby (2014) indicated that respondents considered PBL as a powerful teaching strategy as it is useful in construction of their professional knowledge, develop their problem solving skills, enhanced their self-directed learning skills. However, a study conducted by Hung (2009) differs by stating that PBL is not an effective method because it places less emphasis on direct instruction of students. Moreover, students have to collect information on their own and it is expensive in that it needs more educators and time to conduct the course. Similarly, a study conducted by Othman and Shalaby (2014) revealed that respondents reported heavy workload and time consumption as one of the flaws of the PBL method.

The findings of this study showed that technology is the second most used innovative teaching strategy in higher education. The majority of the respondents (82.4%) agreed to the use of technology as an innovative teaching strategy in higher education. This is in line with the view by Axley (2008) who asserts that the use of technology as an innovative teaching strategy in health care is no longer optional. As early as the 1990s, nursing education did begin to include technology into the teaching and learning process as power-point presentations started replacing the overhead projector.

Axley (2008) further explains that nursing education managers continue to support ongoing faculty development in the area of distance education and the use of technology in the teaching and learning process. Similarly, Al-Fahad (2009) asserts that courses using a variety of media are being offered to students in an effort to serve the educational needs of the increasing population due to the rapid development of technology.

The study by Al-Fahad (2009) in Saudi Arabia, indicated that mobile learning is an effective tool in improving communication and learning. Similarly, a study by Phillippi (2011), argues that the smartphone is a popular accessory already in the pocket of many nursing students. It was found that smartphones promote-self-directed learning and encourage students to reach out for accurate information without stigma (Phillippi and Wyatt, 2011).

Furthermore, a study conducted by Chipps (2010) to review and evaluate the current use of video-conference education for nurses revealed that in the light of saving time and money, video-conferencing can be used to teach specialist nursing courses to rural areas. On a similar note, Halili, Sulaiman and Rashid (2014), assert that video-conferencing technology minimizes time and costs saving between remote areas and improves access to learning.

The findings in this study showed that case study is the third most used innovative teaching strategy among postgraduate nursing students in higher education. The majority (81.3%) respondents agreed with the use of this teaching strategy. This is in line with the study which was done by Iahad, Mirabolghasemi, Mustaffa, Latif and Buntat (2013) where respondents perceive the use of case study as innovative teaching strategy positively and agreed to use the same method in the future. Similarly, a study by Ulrich (2014) showed that case study is a powerful teaching method than traditional lecture-based method in that it provides students with additional skills beyond those gained from the lecture based class. Additionally, a study by Majeed (2014) showed that case studies can be used as an alternative to lecture-based teaching. This study showed that respondents find interactive case discussion more interesting and educationally stimulating than lectures.

However, according to Popil (2011), it is not easy and it takes a lot of time to develop cases and it needs educators who have good questioning skills. Similarly, Habasisa and Hlalele (2014) state that it is time consuming and needs a skilled educator in constructing and presenting an appropriate case-based challenge.

The findings in this study further showed that portfolios are another innovative teaching strategy which is used in higher education. The majority (73.5%) of the respondents agreed with the use of this method. This is in line with the study which was done by Harris, Dolan and Fairburn (2001) which indicated that respondents value the introduction of portfolios since they are useful in assisting students to learn and grow and it also has the ability to allow students to connect clinical experiential learning with theoretical learning.

Similarly, a study by Tiwari and Tang (2003) showed that respondents supported the use of portfolios in assessment since the process of preparing portfolios produced positive academic and effective outcomes. Additionally, Nicolines (2012) asserts that the portfolio encourages self-directed learning and improves the quality of student learning.

Findings in this study further indicated that the majority (67.3%) of the respondents agreed to the use of a lecture method as a teaching strategy in higher education. Similarly, a study conducted by Sajjad (2010) indicated that the respondents rated the lecture method as the best teaching method. The reasons mentioned include that it saves time and the teacher provides all information related to the topic and students listen attentively to the lecturer.

Additionally, a study by Covil (2016) indicates that respondents learn a great deal through the lecture method and they are of the view that their retention of the material will be long-lasting.

However, a study by Soltani, Naderi and Zare (2012) indicates respondents prefer small-group learning methods over lecturing. Similarly, study findings by Jahari (2013) indicate that medical students earn higher examination scores in student-centred teaching methods compared with the lecture method. Furthermore, Schmidt, Wagner, Smeets, Keemink and Van der Molen (2015) assert that lectures are poor in the promotion of critical thinking.

Findings of this study further indicated that the majority of respondents (66.7%) agreed to the use of simulation as an innovative teaching strategy in higher education. These findings are supported by Weaver (2011) who argued that simulation as an innovative teaching strategy presents opportunities for interactive learning that can be used in any nursing course. The author further explained that it mirrors the clinical environment and mimics patients' responses in a safe environment without the risk to patients. Similarly, Murphy, Hartigan, Walshe, Flynn and O' Brien (2011) argue that simulation facilitates active application of learning and participation in nursing activities as well as a deeper understanding of care in a safe environment.

Findings of this study indicated that the majority (62.5%) of the respondents agreed to the use of community-based education as an innovative teaching strategy in higher education. These findings are in line with the views of Ndateba, Mtshali and Mthembu (2015) who asserted that community-based education (CBE) provides opportunities for students to learn in situations similar to those in which they might work later in their professional lives. Ndateba et al. (2016), further explained that CBE may equip

students with transferable core competencies such as leadership skills, the ability to work in teams, and the skills to interact with community. On a similar note, Mtshali and Gwele (2015) assert that CBE offers opportunities for the development of leadership skills and facilitates an understanding of different personalities that may be encountered when working with others.

Findings of this study further indicated that the majority (60.4%) of the respondents agreed to the use of role play as an innovative teaching strategy. This is in line with the results of the study conducted by Riera, Cibanal and Mora (2010) which found that role play is an imperative and effective teaching technique in nursing.

Respondents in this study recognized team work in role playing as positive aspect in their learning. Similarly, results of a study by Manzoor, Mukhtar and Hashmi (2012) indicated that role play is the most productive teaching technique. Respondents said that it enhances the knowledge of the subject and also assists them in developing clinical skills.

5.2.2 Factors influencing adjustment to the use of innovative teaching strategies

About (64.0%) of the respondents agreed that they are well orientated in the programme. This is congruent to a study conducted by Fairchild (2003) which states that orientation programmes for postgraduate learners can help them predict problems that may arise during the course. Additionally, a study conducted by Keillor and Littlefield (2012) states that it is imperative to create a link between the world postgraduate students know and the academy he or she is about to enter by introducing and orientating new students to the specific institution.

Findings in this study further showed that the majority (84.3%) of respondents are empowered to discover own potential. This is supported by the views of Rebenson

(2011) who asserts that teachers should empower learners by sharing power and decision making roles with their students.

Furthermore, findings in the current study indicated that about (88.2%) of respondents agreed that the lecturers are not judgemental of one's life experiences. This is supported by the study conducted by Doherty (2012) which suggested that educators should reassure postgraduate students that they will not be judgemental of their life experiences and they will be evaluated only on their mastery of the content.

About (83.3%) of respondents agreed that they are supported by technology. This is in line with a study conducted by Pei-Chen, Tsai, Finger, Chen and Yeh (2008) which states that in order to make e-Learning more enjoyable, students should be assisted by building their confidence in using computers, which can be achieved by a fundamental computer course. Similarly, a study by Harding (2008) states that institutions should help postgraduate students by using comprehensive academic support in order to strengthen their capacities to become self-directed learners, which include support on the use of computers.

The results of this study further revealed that the majority (71.4%) of respondents agreed that they get enough academic support. This is supported by a study conducted by Harding (2008) which stated that institutions should help postgraduate students by using comprehensive academic and student support system.

Findings further showed that the majority (91.8%) of respondents agreed that lectures are efficient with lessons and activities. This is supported by a study conducted by Doherty (2012) stating that educators should be efficient with lessons and activities. Findings in this study further showed that the majority (80.4%) agreed that learning activities designed to assist adult students in meeting learning goals influence their

adjustment to the use of innovative teaching strategies. This is in line with a study conducted Peri-Chen, Tsai, Finger, Chen and Yeh (2007) which states that postgraduate learners course should be flexible enough to balance their jobs, family, and work related activities.

Additionally, a study by Doherty (2012) states that, lecturers should balance instructional time and lab time in order to give students an opportunity to do homework in class to provide with an opportunity of accomplishing all requirements on time. The author further explained that teachers should allow a limited number of late assignments to maintain flexibility, accountability and expectation of exceptional work.

The findings in this study further revealed that the majority (76. 5%) of respondents agreed that they get enough encouragement from peers. These findings are in line with a study conducted by Parsons and Blake (2004) which states that peer support contributes to students' success. On a similar note, a study conducted by Carter, Cushing and Kennedy (2009) states that peer support is important and it is an efficient way to assist all students to learn.

Findings in this study further revealed that the majority (90. 0%) agreed that scenarios and problem-based situations provide postgraduate students with educationally relevant problems. This is supported by a study by Jarvis (2004) which states that educators should present students with a problem requiring a solution and encourage reflection on it.

Additionally, a study by Harding (2008) states that institutions' faculty should use multiple methods of instruction including experiential learning and problem-based techniques for adult students in order to connect curricular concepts to useful knowledge and skills.

5.2.3 Barriers among postgraduate students in using innovative teaching strategies

Findings in this study revealed that lecturing or direct instruction is a barrier to adjustment to the use of innovative teaching strategies, as more than half of respondents (59. 2%) agreed to the statement that postgraduate students prefer learning to be practical. These findings are similar to a study conducted by Harding (2008) which revealed that direct instruction or lecturing is a barrier to postgraduate learning. The author further stated that postgraduate students prefer learning that is practical and they value learning that is relevant to their goals, hence it is imperative that they receive immediate feedback concerning progress.

Schmidt, Wagner, Smeets, Keemink and Van der Molen (2015) who suggest that lectures are poor in the promotion of critical thinking support the above view. They further explained that student engagement is low and the attendance of lectures tends to be low (Schmidt, Wagener, Smeets, Keemink and van der Molen, 2015). However, this contrasts with a study by Covill (2011) which indicated that respondents believe that they learn a great deal with a lecture method and they are of the view that their retention of the material will be long-lasting.

Additionally, a study by Marmar (2014) indicated that respondents prefer the lecture method to active learning methods. Reasons included are that; teacher provides all information related to topic, it is a time saving method, and students listen lecture attentively and take notes.

A study conducted by Ibrahim and Silong (2000) revealed that technology, lack of computers, lack of students' support services and poor orientation are some of the barriers to the use of innovative teaching strategies. This is similar to a study by

Baharudin, Murad and Mat (2013) which revealed that lack of students' support services, computer illiteracy, the ability to understand and access to information are among the barriers to the use of innovative teaching strategies in higher education.

In addition, a study by Irinoye, Fakunle and Mtshali (2013) indicates that an inadequate number of computers and poor computer skills are among the barriers to adoption of technology among postgraduate nursing students which makes it difficult for them to adjust to the use of innovative teaching strategies in higher education. However, the present study had different findings as only (37.3%) of respondents who perceived lectures conducted online as a barrier. Findings in this study further revealed poor level of orientation as a moderate barrier to the use of innovative teaching strategies among postgraduate nursing students as about (45.1%) of respondents agreed with this statement. These findings are consistent with a study conducted by Ibrahim and Silong (2000) which revealed that poor orientation is one of the barriers to the use of innovative teaching strategies.

The other moderate barrier that was identified was the lack of immediate feedback concerning progress, as 43.1% of the respondents in the present study agreed with this statement. This is congruent to a study by Harding (2008) which stated that postgraduate students value learning that is relevant to their goals, hence it is imperative that they receive immediate feedback concerning their progress.

The rankings of the barriers in this study differs from most of the previous studies that ranked teaching strategies that are confusing as one of the major barriers (O'Shea et al., 2003; Rakhudu et al., 2011) as respondents in the present study did not perceive these as a major barriers. The other striking finding in the present study is that there were many neutral responses on the items on the barriers scale.

The findings in the present study further revealed that the majority (63. 8%) of respondents had moderate perception of barriers, (31. 9%) had low perception and only (4.3%) had high perceptions. Additionally, cross tabulation was performed to determine whether respondents' type of degree had an influence on the perception of barriers. The results revealed that the majority (71. 4%) of PhD respondents had low perceptions of the barriers. This means that the higher the type of degree the lower the perception of barriers, but it wasn't statistically significant.

5.3.1 Nursing education

1. The present study demonstrated poor level of orientation as the main barrier to the use of innovative teaching strategies among postgraduate nursing students in higher education. Therefore, it is imperative for nursing education institutions to orientate postgraduate students at the beginning of the course.
2. The present study also indicated lack of immediate feedback concerning progress as another barrier. Therefore, it is highly recommended for nurse educators to provide immediate feedback to postgraduate students since they value learning that is relevant to their goals.
3. The present study further revealed that postgraduate nursing students prefer active learning methods to traditional learning methods. Therefore, it is recommended for institutions and lectures to use active learning methods (including experiential and problem-based methods).
4. Nursing schools must set up academic and students support systems in order to strengthen their capacity to adjust to the use of innovative teaching strategies. These include helping students build confidence in using computers which can be achieved by a fundamental computer course, language workshops for students with low proficiency levels in English with the objective

to help them to improve their language skills which are very important as postgraduate students.

5. Flexible curriculum programs for postgraduate nursing students that include allowance of a limited number of late assignments to maintain flexibility, accountability and expectation of exceptional work.
6. Teachers should empower learners by sharing power and decision making roles with their students. Furthermore, they should reassure postgraduate students that they will not be judgemental of their life experiences and they will be evaluated only on their mastery of the content.
7. Educators should take a proactive approach to uncovering barriers to the use of innovative teaching strategies among postgraduate learners rather than waiting for an exit interview.
8. Educators should design a program for peer support services.
9. Nursing education should support faculty development in the use of innovative teaching strategies which include the use of technology in the teaching and learning process.
10. To create a postgraduate nursing students office to meet the needs of postgraduate students.

5.3.2 Nursing service

11. To put in place strategies of supporting nursing education institutions in implementing the use of innovative teaching strategies in the clinical area by buying necessary equipment.

12. To conduct workshops for preceptors on how to use innovative teaching strategies in the clinical area.

5.3.3 Policy makers

13. To revise the policy regarding postgraduate nursing students' orientation and academic support services in higher education.

14. To put in place strategies to support nurse educators regarding the use of innovative teaching strategies.

5.4 Recommendations for further research

15. A mixed methodological approach to these research issues would provide an in-depth exploration into the postgraduate nursing students' perceptions on adjustment to the use of innovative teaching strategies in higher education.

16. To explore barriers to the use of innovative teaching strategies in higher education among postgraduate nursing students.

17. To explore nurse educators' perceptions on adjustment to the use of innovative teaching strategies in higher education.

18. The study should be replicated at other institutions in order to determine if study results are similar or new research findings emerge that may reveal additional information on postgraduate nursing students' perception on adjustment to the use of innovative teaching strategies in higher education. This will confirm the generalizability of the results to a broader population.

5.5 Limitations of the study

The sample size was small when compared to other studies. This undermines the researcher's ability to make generalizations from the sample to the population being

studied. Data collection was confined to postgraduate nursing students and did not include nurse educators. Such information may have added clarity on the factors influencing postgraduate nursing students' adjustment to the use of innovative teaching strategies as well as clarity on barriers to the use of innovative teaching strategies among postgraduate nursing students in higher education.

The other limitation is that this study was conducted at only one institution and therefore the results need to be interpreted with caution and not to be generalized to the whole population of postgraduate nursing students in South Africa.

5.6 Conclusion

This chapter presented the findings of a study aimed at exploring postgraduate nursing students' perceptions on adjustment to the use of innovative teaching strategies in a selected higher education institution in KwaZulu-Natal. The findings of this study revealed that the majority of respondents were predominantly females, blacks and honours nursing students.

A cross tabulation was performed to compare gender with age, and it was revealed that males were younger than females. The findings of this study reveal that a variety of innovative teaching strategies are used in higher education. The problem-based learning (PBI) appeared to be the most-used teaching method. The PBL was followed by the use of technology as a teaching strategy. It appeared that portfolios are also used by the largest percentage in higher education.

The findings of this study further revealed that the most perceived factor influencing student's adjustment to the use of innovative teaching strategy is scenarios and problem-based situations. In response to the statement "Scenarios and problem-based situations provide postgraduate learners with educationally-relevant problems"

(94. 0% n=47) agreed with this statement. Lecturer being efficient with lessons and activities followed this.

Additionally, lecturer not judgemental of one's life experiences was another most perceived influencing factor. Students being empowered to discover their own potential were also perceived as the most influencing factor. The findings revealed that respondents had a high perception of influencing factors. Furthermore, ethnic group was found to have an influence on the perception of influencing factors but it wasn't statistically significant.

Findings in this study further revealed poor level of orientation as a moderate barrier to the use of innovative teaching strategies among postgraduate nursing students. The other moderate barrier that was identified was the lack of immediate feedback by educators concerning students' progress.

The findings in this study also indicated that the respondents had moderate perceptions of the barriers. Additionally, cross tabulation was performed to determine whether respondent's type of degree had influence on the perception of barriers. The results revealed that the majority of Ph.D respondents had low perceptions of the barriers, as compared to Masters and Honours students. This means that the higher the type of degree, the lower the perception of barriers but it wasn't statistically significant.

It is the researcher's view that orientation of postgraduate students be done at the beginning of the course. Furthermore, students' support systems should be put in place in order to strengthen their capacity to adjust to the use of innovative teaching strategies. These include support on the use of computers which can be achieved by a fundamental computer course.

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APPENDIX 1: DATA COLLECTION INSTRUMENT

EXPLORING POSTGRADUATE NURSING STUDENTS' PERCEPTIONS ON ADJUSTMENT TO THE USE OF INNOVATIVE TEACHING STRATEGIES IN A SELECTED HIGHER EDUCATION INSTITUTION IN KWAZULU NATAL.

Ethical clearance number: HSS/1480/016M

Annexure 1: Student Questionnaire

Study Tittle: Exploring Postgraduate Nursing Students' Perceptions on Adjustment to the Use of Innovative Teaching Strategies in a Selected Higher Education Institution in KwaZulu-Natal.

Section A: Demographic Data

Instruction: Please fill in the correct information in the box provided by putting a tick or cross

1. Age in years

25 years and below	
26-35 years old	
36-45	
Above 45 years old	

2. Gender

Female	
Male	

3. Ethnic group

Black	
White	
Indian	
Coloured	

4. Type of a degree you are pursuing.

PHD	
Masters by Research	
Coursework Masters	
Honours Degree	

Section B

Instructions: For each of the questions indicate your answer by putting a tick or cross in the appropriate column.

Key: 1-Strongly disagree 2 Disagree 3-Neutral 4 Agree 5-Strongly agree

A. Teaching strategies used in higher education

Statements	Strongly disagree	Disagree	Neutral	Agree	Strongly agree
1.Lecture method					
2. Problem-based learning					
3. Community-based learning					
4.Case-studies					
5.Technology					
6. Simulation					
7.Role play					
8. Portfolios					

B. Factors influencing adjustment to the use of innovative teaching strategies

Statements	Strongly disagree	Disagree	Neutral	Agree	Strongly agree
10. I was orientated well in the programme					
11. I am empowered to discover my potential.					
12.The lecturer is not judgemental of my life experiences					
13. I am supported with technology					
14. The lecturer is efficient with lessons and activities.					
15. I get enough academic support					
16. Learning activities are designed to assist adult learners in meeting their learning goals.					
17. I get enough encouragement from peers.					
18. Adult classes are creative and interesting.					
19. The use of scenarios and problem-based situations provides postgraduate learners with educationally-relevant problems.					
20. Small groups assigned to work on case scenarios can find the experience stimulating.					

C.Barriers among postgraduate learners in using innovative teaching strategies

Statements	Strongly disagree	Disagree	Neutral	Agree	Strongly agree
21. Most lectures are conducted online.					
22. There is a lack of immediate of feedback concerning my progress.					
23. I am not given time to reflect on my past experience.					
24. I prefer my learning to be practical.					
25. Postgraduate develop a preference for learning that is based on childhood learning patterns.					
26. I do not go beyond what I learn in class because I am simply learning in order to pass.					
27. Some teaching strategies are confusing to me.					
28. Some lecturers are unfriendly and inconsiderate towards postgraduate learners.					
29. Poor level of orientation has been a challenge to attend my studies successfully.					
30. Equipment troubles caused a lot of frustrations					

Thank you very much for your participation.

APPENDIX 2: INFORMATION DOCUMENT

Study title: EXPLORING POSTGRADUATE NURSING STUDENTS' PERCEPTIONS ON ADJUSTMENT TO THE USE OF INNOVATIVE TEACHING STRATEGIES AT A SELECTED HIGHER EDUCATION INSTITUTION IN KWAZULU NATAL

Dear Nursing students

INTRODUCTION

I, Mr. S.B. Ngema, a student at University of KwaZulu Natal doing Masters in Nursing Education. As part of my studies at the University I am required to conduct a study in an area of my interest. My study is **Exploring Postgraduate Nursing Students' Perceptions on Adjustment to the Use of Innovative Teachings Strategies at a selected Higher Education Institution in KwaZulu Natal.**

I am requesting your participation in this study because you meet the criteria of the people who are eligible to participate in the study. The purpose of the study is to explore and describe postgraduate nursing student's perceptions to the use of innovative teaching strategies in higher education. This is to identify challenges faced by postgraduate nursing students in adjusting to the use of innovative teaching strategies in higher education.

The study findings may help to influence nurse educators to develop curriculum that accommodate postgraduate nursing students in higher education, influence nurse educators to use innovative teaching strategies in higher education. Findings from this study may also help nurse educators to identify barriers among postgraduate nursing students in using innovative teaching strategies in higher education. The findings of the study may also help in the development of nursing curriculum for the better performance of nursing practice. Findings from this study may assist in providing policy makers in higher education with scientific evidence on how to address the factors influencing postgraduate nursing students' adjustment to use innovative teaching strategies. The findings from this study could also enlighten policy makers on innovative teaching strategies used in higher education, thus helping them in planning the budget properly for buying necessary equipment.

Please note that there are no incentives for the participation.

If you agree to participate, you will be provided with a structured questionnaire and requested to complete it upon your voluntary agreement to participate in the study.

The researcher will liaise with your academic director to complete the questionnaire during lunch time. Completing the questionnaire will take a minimum 20 minutes of your lunch time. Your information will be treated with utmost confidentiality. Any personal information will not be disclosed unless required by law. Your names will not appear anywhere in the questionnaire or the study findings. You are requested not to put your names on the questionnaires provided. There are no expenses involved because the study will be conducted during usual school days at lunch time.

You are welcome to ask any questions if you don't understand what is expected of you. You are free to participate or not to participate in this study. You are free to withdraw from the study at any stage without repercussions. There will be no risks attached to your participation. The results of the study will be made available to you on completion of this study

Thank you for your time and cooperation

Yours sincerely

Signature.....

Mr S.B Ngema

Date.....

Contact detail of the researcher for more information

Mr. S.B Ngema

Contact number: 0825184719

Email:siphongema2016@gmail.com

Supervisor contact detail

Mrs. Makhosi Dube

Howard college campus

School of Nursing and Public Health

4TH Floor Desmond Clarence Building

4041 Durban. South Africa

Email: dudeb@ukzn.ac.za

Contact number: 031 260 2494

HSSREC Research Office: Mariette Snyman

Contact number: 031- 2608350

Email: snymanm@ukzn.ac.za

APPENDIX 3: INFORMED CONSENT TO PARTICIPATE IN RESEARCH

Consent to participate in research

Dear Nursing students

I, Mr. S.B Ngema, a student at the University of KwaZulu Natal, doing Master's in nursing education. As part of requirements to fulfil this qualification I am expected to conduct a study in an area of my interest.

The title of the study is: **Exploring Postgraduate Nursing Students' Perceptions on Adjustment to the Use of Innovative Teaching Strategies in a Selected Higher Education institution in KwaZulu Natal.**

You have been asked to participate in a research study on: Exploring postgraduates nursing students' perceptions on adjustment to the use of innovative teaching strategies in higher education.

The purpose of the study is to explore and describe postgraduate nursing students' perceptions on adjustment to the use of innovative teaching strategies in a selected higher education institution in KwaZulu Natal. You will be required to fill out a questionnaire which will take you about 20 minutes to complete.

You have been informed about the study by: Mr S.B Ngema- contact 0825184719, Email: siphongema2016@gmail.com , you may contact me at any time if you have any question about the research.

You may contact the researcher's supervisor- Mrs. Makhosi Dube- contact number +27312602497, Email: dubeb@ukzn.ac.za

You may contact HSSREC Research office- Mariette Snyman contact number 031-2608350, Email: snymanm@ukzn.ac.za

Your participation in this research is voluntary and you will not be penalised if you refuse to participate or decide to withdraw at any time.

If you agree to participate, you will be given a signed copy of this document and the participant information sheet, which is written summary of the research.

The research study including the above information has been described to me orally. I understand what my involvement in the study means and I voluntarily agree to participate. I have been given opportunity to ask questions that I might have for my participation in the study.

Signature of participant.....

Date.....

APPENDIX 4: ETHICAL CLEARANCE FROM THE UNIVERSITY OF KWAZULU-NATAL HUMANITIES AND SOCIAL SCIENCES ETHICS COMMITTEE.



25 August 2016

Mr Siphon B. Ngema (SN 216075468)
School of Nursing and Public Health
College of Health Sciences
Howard College Campus
UKZN
Email: siphongema2016@gmail.com

Dear Mr Ngema

RE: PERMISSION TO CONDUCT RESEARCH

Gatekeeper's permission is hereby granted for you to conduct research at the University of KwaZulu-Natal (UKZN), towards your postgraduate studies, provided Ethical clearance has been obtained. We note the title of your research project is:

"Exploring postgraduate nursing students' perceptions on adjustment to the use of innovative teaching strategies in a selected higher education institution".

It is noted that you will be constituting your sample by handing out questionnaires to postgraduate nursing students on the Howard College Campus.

Please ensure that the following appears on your questionnaire/attached to your notice:

- Ethical clearance number;
- Research title and details of the research, the researcher and the supervisor;
- Consent form is attached to the notice/questionnaire and to be signed by user before he/she fills in questionnaire;
- gatekeepers approval by the Registrar.

Data collected must be treated with due confidentiality and anonymity.

You are not authorized to contact staff and students using 'Microsoft Outlook' address book.

Yours sincerely


MR SS MOKOENA
REGISTRAR






Office of the Registrar

Postal Address: Private Bag X54001, Durban, South Africa

Telephone: +27 (0) 31 260 8005/2206 Facsimile: +27 (0) 31 260 7824/2204 Email: registrar@ukzn.ac.za

Website: www.ukzn.ac.za



Founding Campuses:  Edgewood  Howard College  Medical School  Pietermaritzburg  Westville

APPENDIX 5: A LETTER REQUESTING PERMISSION TO CONDUCT RESEARCH AT THE UNIVERSITY OF KWAZULU-NATAL

The Academic Leader

Discipline of Nursing Howard College Campus

Durban 20141

20.09.2016

Dear Prof

Re: Application for permission to conduct research at university of KwaZulu-Natal

I Siphon Bhukumuzi Ngema currently a Course Work Masters student in Nursing Education at the University of KwaZulu-Natal humbly request your permission to conduct a research project.

The Title of my study is: Exploring Postgraduate Nursing Students' Perceptions on Adjustment to the Use of Innovative Teaching Strategies in a selected Higher Education Institution in KwaZulu-Natal.

I would like to commence data collection process in September 2016. This will be done at convenient times during lunch breaks and tea times. The target group for my study is all Masters', Course work Masters' and Bachelors of Honours nursing students.

Data collection process will behold confidentiality, anonymity, informed consent and freedom of choice.

Hoping that my request will meet your favourable considerations.

Yours Faithfully

Siphon B. Ngema

Student no: 216075468

Cell no: 0825184719

APPENDIX 6: PERMISSION FROM THE SCHOOL OF NURSING AND PUBLIC HEALTH TO CONDUCT RESEARCH



25 August 2016

Mr Siphon B. Ngema (SN 216075468)
School of Nursing and Public Health
College of Health Sciences
Howard College Campus
UKZN
Email: siphongema2016@gmail.com

Dear Mr Ngema

RE: PERMISSION TO CONDUCT RESEARCH

Gatekeeper's permission is hereby granted for you to conduct research at the University of KwaZulu-Natal (UKZN), towards your postgraduate studies, provided Ethical clearance has been obtained. We note the title of your research project is:

"Exploring postgraduate nursing students' perceptions on adjustment to the use of innovative teaching strategies in a selected higher education institution".

It is noted that you will be constituting your sample by handing out questionnaires to postgraduate nursing students on the Howard College Campus.

Please ensure that the following appears on your questionnaire/attached to your notice:

- Ethical clearance number;
- Research title and details of the research, the researcher and the supervisor;
- Consent form is attached to the notice/questionnaire and to be signed by user before he/she fills in questionnaire;
- gatekeepers approval by the Registrar.

Data collected must be treated with due confidentiality and anonymity.

You are not authorized to contact staff and students using 'Microsoft Outlook' address book.

Yours sincerely


MR SS MOKOENA
REGISTRAR






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