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EDUCATIONAL PRACTICES FOR PROMOTING STUDENT NURSES' CLINICAL REASONING SKILLS

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Philosophiae Doctor in Nursing Science**

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DECLARATION

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I, Angeline van Wyngaarden, declare that EDUCATIONAL PRACTICES FOR PROMOTING STUDENT NURSES' CLINICAL REASONING SKILLS, is my own work and that all sources that have been used or quoted have been indicated and acknowledged by means of complete references. I further declare that this work has not been submitted for any other degree at any other institution.

Angeline van Wyngaarden

Date

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ABSTRACT

Background: Clinical reasoning is the ability to reason as a clinical situation changes and is an essential component of competence in nursing practice. However, some traditional teaching and learning strategies do not always facilitate the development of the desired clinical reasoning skills in nursing students.

Problem statement: Nurse educators at a military nursing college in Gauteng are predominantly utilising traditional teacher-centred teaching and learning strategies. The concern is that if students are predominantly taught by means of traditional teacher-centred strategies this may not contribute to the development of the desired clinical reasoning skills required for nursing practice. To improve educational practices to promote the development of student nurses' clinical reasoning skills, the researcher conducted an action research study.

Aim: The aim of the study was to facilitate a process of change towards improving educational practices in order to promote the development of undergraduate student nurses' clinical reasoning skills.

Methodology: Action research was used to conduct the research study by means of three phases. During Phase 1: the Baseline phase, data was collected by means of unstructured interviews with nurse educators and head of departments to explore and describe the challenges experienced by nurse educators in utilising alternative educational practices. During Phase 2: the Action Research Process phase, an action research group was established to co-construct an action plan to address the identified challenges. Four action research cycles each comprising four steps, namely plan, act, observe and reflect was implemented. Phase 3, the Evaluation of the Action Research Process phase, evaluated the outcomes of the action research process by means of the World Café data collection method. Qualitative data from Phase 2 was analysed using the steps outlined in Saldaña (2013). The activities conducted during the action research group workshops were recorded and minutes were kept. Data from the World Café was analysed using the creative hermeneutic data analysis method as suggested by Boomer and McCormack (2010).

Findings: The challenges encountered by nurse educators were explored and the following four main themes emerged: educational practices; clinical learning environment; military

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learning environment; and role players in the teaching and learning environment. The challenges were prioritised by the action research group into four strategies: teaching, learning and assessment strategies; the clinical learning environment; continuous professional development; and support and selection of students and nurse educators. An action plan was co-constructed during Phase 2 by the action research group participants. The project was evaluated by the action research group as successful. The action research process contributed to the professional development of the nurse educators and resulted in the utilisation of more student-centred teaching, learning and assessment strategies.

Conclusions: An action plan was developed to improve educational practices at the South African Military Health Service Nursing College. The researcher also developed a conceptual framework to promote clinical reasoning skills. Addressing nurse educator challenges in collaboration and empowering them with the means, opportunity and skill to utilise student-centred teaching and learning strategies may contribute to the development of undergraduate student nurses' clinical reasoning skills.

Key words: Clinical reasoning, nurse educators, undergraduate student nurse, educational practices

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LIST OF ACRONYMS AND ABBREVIATIONS

ARG	Action research group
CCTDI	California Critical Thinking Disposition
CPD	Continous professional development
CSW	Conventions of Service Writing
DoD	Department of Defence
DoH	Department of Health
DTI	Diagnostic Thinking Inventory
GOC	General Officer Commanding
HEI	Higher education institution
HoD	Head of department
HSRT	Health Science Reasoning Test
LCJR	Lasater Clinical Judgement Rubric
LEP	Learning event plan
NEI	Nursing education institution
OC	Officer Commanding
OPT	Outcome-Present State-Test
PICD	Participant information and consent document
PoE	Portfolio of evidence
PPP	PowerPoint presentation
QA	Quality assurance
R48	Clinical health assessment treatment and care diploma
R254	One-year midwifery diploma
R425	Four-year comprehensive nursing programme
SAMHS	South African Military Health Service
SANC	South African Nursing Council
SANDF	South African National Defence Force
SCT	Script Concordance Test
VP	Virtual patients

1: ORIENTATION TO THE STUDY

“Do what you can, with what you have, where you are.”

-Theodore Roosevelt-

1.1 INTRODUCTION

Nurses worldwide are increasingly being autonomous, responsible and accountable for patient care and must therefore be able to reason clinically (Simmons 2010:1152). The healthcare environment continues to change and evolve and as such is obligated to adopt, adapt to and advance new nursing skill competencies; however, the essential characteristics of nursing remain unchanged (Shellenbarger and Robb 2015:79). Clinical reasoning is a crucial component of competence in nursing practice, yet current teaching and learning strategies do not always facilitate the development of the required level of clinical reasoning skills (Levett-Jones, Hoffman, Dempsey, Jeong, Noble, Norton, Roche and Hickey 2010a:515). Nurses with effective clinical reasoning skills will provide professional and safe patient care that will have a positive influence on patient outcomes (Levett-Jones, Sundin, Bagnail, Schumann, Taylor and Wink 2010b:15).

According to Benner, Sutphen, Leonard and Day (2010:85) and Rischer (2013:para. 10), the essence of clinical reasoning is the ability of the nurse to reason or think as the situation changes to accurately identify and manage patient conditions while taking into account the context as well as the concerns of the patient and that of the family. Benner, et al. (2010:85) and Rischer (2013:para. 10) suggest that nurse educators make four shifts in their thinking about nursing education. One of these is to move from placing the emphasis on critical thinking to emphasising clinical reasoning and multiple ways of thinking. Simmons (2010:1155) explains clinical reasoning is context-dependent and domain-specific; it incorporates knowledge unique to nursing within a specific practice setting.

In the opinion of Mthembu, Mtshali and Frantz (2014:1796) the traditional mode of teaching and learning has been an accepted practice because of the customs and culture of teaching for both educators and students. Ellis (2016:66) explains in nursing education this traditional

mode of teaching and learning in the classroom focused on teacher-centred strategies consisting mostly of the lecture mode of information transfer while, on the other hand, the students learn by merely memorising incontestable facts and standard problems (Mthembu, et al. 2014:1796). Various authors including Schweisfurth (2011:426), Mthembu, et al. (2014:1796) and Ellis (2016:66) advocate for a move towards student-centred teaching and learning strategies.

Nurse educators play a crucial role in the development of student nurses' clinical reasoning skills and should therefore identify and implement student-centred teaching and learning strategies that will promote clinical reasoning skills (Banning 2008a:181; Chilemba and Bruce 2015:e55; Ellis 2016:66). The aim of the study was to facilitate a process of change towards improving educational practices in order to promote the development of undergraduate student nurses' clinical reasoning skills.

1.2 BACKGROUND AND RATIONALE

The goal of teaching student nurses is to ensure the students will be able to provide quality nursing care to patients (de Swardt 2013:1). A challenge identified in nursing education is teaching undergraduate student nurses to think critically and reason clinically (Bland, Rossen, Bartlett, Kautz, Carnevale and Benfield 2009:14; Shellenbarger and Robb 2015:79). Being a learnt skill, clinical reasoning calls for active involvement in practice and deliberate reflection on activities performed. Nurse educators must assist student nurses at undergraduate level to develop critical thinking and clinical reasoning skills (Levett-Jones, et al. 2010b:15). Clinical reasoning requires both problem-solving and critical thinking skills in order for the nurse to accurately diagnose and manage patient conditions (Speicher, Bell, Kehrhahn and Casa 2012:130). In addition, Levett-Jones, et al. (2010b:19) point out that competent, safe and professional practice does not only require psychomotor and affective skills but also thinking skills. Effective clinical reasoning skills are important to prevent harm to the patient and possible patient mortality (Levett-Jones, et al. 2010b:19). Furthermore, Simmons (2010:1152) indicates clinical reasoning enables nurses to make decisions, often independently. Therefore, utilising effective teaching strategies to develop student nurses' clinical reasoning skills is vital for improving the quality of nursing care (Harmon and Thompson 2015:64).

Traditionally, clinical reasoning skills are taught in clinical practice during student nurses' exposure to several learning opportunities. However, nurse educators should identify and utilise teaching and learning activities that bring clinical reasoning to the classroom; therefore, they have to provide student nurses with more opportunities for exposure to clinical reasoning (Gierach and Evenson 2010:228). Student nurses must be engaged in the learning process in which classroom and clinical content is linked because in this way they learn how to manage complex clinical scenarios effectively (Shellenbarger and Robb 2015:79). According to Benner, et al. (2010:6), nurse educators need to be supported and revitalised to teach more effectively, particularly with regard to integrating clinical and classroom teaching. Bringing the clinical environment closer to the classroom is necessary to close the gap that exists as far as integrating theory and practice is concerned (Gazarian and Pennington 2012:215). Traditional nursing programmes are characterised by classroom teaching where students are tasked with learning large amounts of content often by means of PowerPoint lectures. For these reasons, nurse educators are challenged to engage students with clinical realities to stimulate thinking (Fahlberg, Rice, Muehrer and Brey 2014:85-86).

Benner, et al. (2010:14) assert nurse educators must refrain from only using teacher-centred teaching and learning strategies by engaging student nurses in authentic clinical learning experiences in which it is expected from them to learn using their knowledge and practice to think in changing situations for the good of the patient. The traditional approach to teaching encourages rote learning where students are passive receivers of content. This approach to learning does not encourage clinical reasoning and students are not able to apply the knowledge learnt in different situations (Chabeli 2010:2). In fact, Shellenbarger and Robb (2015:80) state teacher-centred strategies lead to bored and under stimulated students. These authors advocate for the use of innovative teaching strategies.

According to Waltz, Jenkins and Han (2014:392), the educational approach in nursing and other health professions at the beginning of the 21st century was predominantly teacher-centred as evidenced by the use of traditional teaching strategies like lectures, lecture discussions and seminars. However, as the years elapsed steadily educators began to use more student-centred teaching strategies such as group work, reciprocal learning, role-playing and case-based learning. Waltz, et al. (2014:392) note nurse educators found limited evidence regarding the use and effectiveness of active learning in nursing and other health professions. McKee and Billman (2011:21) posit nurse educators are not prepared to use

time-consuming student-centred teaching strategies. They resort to teaching student nurses the way they were taught, namely using teaching strategies such as the lecture method, memorisation, quizzes and examinations. Shellenbarger and Robb (2015:79) argue that nursing education needs to shift from a teacher-centred, content-laden classroom approach to teaching and learning strategies that cultivate clinical reasoning.

Student-centred teaching is an umbrella framework embedded in constructivism and includes various teaching and learning strategies (Schweisfurth 2011:426; Ellis 2016:66). Constructivism refers to students actively engaging in the process of discovering knowledge by working through problems, issues and scenarios which help them to develop clinical reasoning (Chilemba and Bruce 2015:e55; Ellis 2016:66). Central to student-centred teaching is the principle that educators must design curricula and course content based on the students' needs, abilities and learning styles. Educators must engage students in active collaborative learning as it promotes students' self-efficacy and responsibility for learning (Slavich and Zimbardo 2012:571). Student-centred teaching encompasses principles of adult learning to help develop self-efficacy and enhance critical thinking (Ellis 2016:67). In addition, adult students expect to be treated like adults and generally want to be active participants in their learning; an adult being "a person who is fully grown and developed" (Soanes and Stevenson 2006:18). Adult learning (or andragogy) is the art and science of helping adults to learn (McKee and Billman 2011:21).

Although McKee and Billman (2011:21) advocate for the use of more interactive, student-centred adult methods of teaching, they also point out many nurse educators still do not have any knowledge of these methods or the skills to effectively implement these teaching strategies. Fahlberg, et al. (2014:92) provide evidence that nurse educators have to develop new teaching skills such as team building, facilitation skills, group facilitation, group management and strategies on how to address students' complex questions. In addition, nurse educators need to become comfortable with teaching among the students rather than in front of them. The role of an educator should be that of a facilitator utilising various student-centred teaching strategies to encourage students to play an active role in their learning (Slavich and Zimbardo 2012:573).

From the above discussion, it is clear clinical reasoning skills are essential skills that can be taught and learnt through the utilisation of student-centred teaching and learning strategies.

According to Shellenbarger and Robb (2015:79), student nurses just start out on their career as healthcare professionals and are therefore novice thinkers. Hence, student nurses need assistance with applying theoretical knowledge to specific clinical situations, and nurse educators have a responsibility to facilitate the development of clinical reasoning skills in the classroom environment.

1.3 PROBLEM STATEMENT

The researcher is the Quality Assurance Manager at the South African Military Health Service (SAMHS) Nursing College in Gauteng where this study was conducted. In her role as quality assurance manager, she conducts various visits to the classrooms and audits at the nursing college as part of monitoring and evaluation. During one such audit conducted in preparation for an accreditation site visit by the South African Nursing Council (SANC), the researcher observed that most nurse educators involved in the four-year comprehensive nursing programme were using formal lecture methods either through lecture-based presentations or straight from the text book.

An outcomes-based curriculum is used at the nursing college and nurse educators are encouraged to utilise innovative and creative teaching and learning strategies. Although policies and guidelines are in place, gaps exist with regard to the use of teaching and learning strategies. In assessing the learning event plans of various nurse educators and observing nurse educators when teaching, the researcher noticed lecture-based presentations was the norm. Teacher-centred strategies such as lecturing are, however, not the preferred method to use because they do not stimulate clinical reasoning. When questioned regarding this, the nurse educators responded that lecture-based presentations allow them to cover the content. During the researcher's informal discussions with some nurse educators, they shared their concerns about the students' inability to think critically and apply theoretical knowledge within different clinical situations. Student satisfaction surveys indicate student nurses reported "learning is not interesting" and "lecturers should prepare properly before coming to class as many lecturers read from the text books and use old yellow discoloured handouts". One student's feedback was that "lecturers must be taught how to use technology" (SAMHS Nursing College 2014:5).

The newly appointed nurse educators raised concerns about being mentored by older and more experienced nurse educators who did not utilise innovative and creative teaching strategies. These new nurse educators indicated the older and more experienced nurse educators were unsure of how to develop and implement effective teaching strategies. All nurse educators complained that an increased workload and time constraints force them to resort to formal lectures and PowerPoint presentations because it was the only way they could manage time to cover the learning outcomes. All nurse educators were aware of the latest trends in nursing education but they shared they had not been involved in the implementation of changes. They also raised problems concerning the unavailability of resources such as access to the Internet and other teaching aids like teaching videos/DVDs/CDs, flip charts and models and information technology (IT) equipment to plan and implement student-centred strategies.

The challenge for nurse educators at the nursing college is to develop teaching and learning strategies that enhance student nurses' clinical reasoning skills. The limited use of innovative methods such as case studies and scenarios during classroom teaching as well as when the nurse educators assess students, further contribute to this underemphasising of the enhancement of clinical reasoning skills (Chilemba and Bruce 2015:e56). The concern is that if nurse educators predominantly utilise educational practices that fail to promote clinical reasoning, the students not only fail to develop the needed skills to think in clinical situations but also to apply the knowledge they learnt (Chilemba and Bruce 2015:e59; Shellenbarger and Robb 2015:79).

Literature on clinical reasoning provides evidence that lecture-based teaching does not enhance the development of clinical reasoning skills (Gazarian and Pennington 2012:210; Allen 2013:3). There is an urgent call for introducing student-centred teaching and learning strategies at the nursing college. This need stems from the realisation that the current predominantly teacher-focused educational practices do not promote student nurses' clinical reasoning skills. The critical question to be considered is how can educational practices be improved to promote the development of undergraduate student nurses' clinical reasoning skills. As the researcher's interest in this topic grew, she felt compelled to conduct an action research study with a core group of volunteers consisting of nurse educators and heads of departments (HoDs), with the intent to improve educational practices and promote the development of student nurses' clinical reasoning skills.

1.4 RESEARCH QUESTION

The research question was derived from the problem statement.

How can educational practices be improved to promote the development of undergraduate student nurses' clinical reasoning skills?

1.5 AIM AND OBJECTIVES

The aim of the study was to facilitate a process of change towards improving educational practices in order to promote the development of undergraduate student nurses' clinical reasoning skills.

To achieve the aim of the study, three research objectives were formulated.

- To explore and describe the challenges experienced by nurse educators in utilising educational practices that promotes the development of undergraduate student nurses' clinical reasoning skills.
- To co-construct an action plan to improve educational practices to promote the development of undergraduate student nurses' clinical reasoning skills.
- To evaluate the outcomes of the action research process.

1.6 SIGNIFICANCE

As a researcher, I wanted to embark on a research project that would not result in another thesis, model or theory simply being shelved for academic purposes. From the outset of the study, I was aware that nurse educators should modify their teaching and learning strategies for the benefit of the student. My goal was to change the situation and provide practical

solutions to the problems. Action research afforded me the opportunity to work and collaborate with the nurse educators and HoDs to improve our educational practices.

The purpose of action research is to solve practical problems and facilitate change (Given 2008:4). My endeavour with the study was to identify innovative teaching strategies that would add to the existing body of knowledge on clinical reasoning and student-centred teaching. The intent was for nurse educators to generate their personal theories of practice by reflecting on and evaluating their own educational practices thereby engendering the growth and development of the nursing college.

The action research process would contribute significantly to the professional development of the nurse educators. Through the action research process nurse educators would receive professional development sessions on various student-centred teaching strategies such as unfolding case studies, inquiry-based teaching, case-based teaching, clinical ward rounds and appreciative feedback. Nurse educators would be able to understand their educational practices through reflection and use this learning to co-construct an action plan to address challenges to improve their practices. The co-constructed action plan could succeed in offering practical solutions to the challenges experienced by nurse educators. In addition, the action research process could provide opportunities for nurse educators to work together as a team, improving communication, cooperation and collaboration among them.

It was foreseen the study would highlight the positive effects of providing nurse educators with the means, opportunity and skills to utilise educational practices that would contribute to the development of student nurses' clinical reasoning skills. Students who are encouraged to think critically can reason clinically and will become professionals with adequate clinical reasoning skills. Nurses with adequate clinical reasoning skills can provide quality nursing care.

1.7 CONCEPTS CLARIFICATION

The concepts in this study were used as clarified below.

1.7.1 CLINICAL REASONING

Clinical reasoning is the cognitive and metacognitive process used for analysing knowledge relative to a clinical situation or specific patient (Gaba 2015:53). According to Speicher, et al. (2012:130), clinical reasoning is “the practitioner’s ability to assess patient problems or needs and analyze data to accurately identify and frame problems within the context of the individual patient’s environment”. Benner, Hughes and Sutphen (2008:3) state “clinical reasoning stands out as a situated, practice-based form of reasoning that requires a background of scientific and technological research-based knowledge about general cases”.

Various definitions of clinical reasoning that closely compare to the aforementioned ones are found in literature. According to Tanner (2006:204), Levett-Jones, et al. (2010b:15), Harmon and Thompson (2015:64), and Simmons (2010:1152), the terms ‘clinical reasoning’, ‘clinical judgement’, ‘problem solving’, ‘decision-making’ and ‘critical thinking’ are often used interchangeably. However, Victor-Chmil (2013:34) claims these terms are not precisely the same and encourages researchers to be aware of the importance of understanding the differences.

For the purpose of this study the researcher applied the definition of clinical reasoning as given by Levett-Jones, et al. (2010b:15), namely clinical reasoning is “a process by which nurses collect cues, process the information, come to an understanding of a patient’s problem or situation, plan and implement interventions, evaluate outcomes, then reflect on and learn from the process”.

1.7.2 NURSE EDUCATOR

According to the South African Nursing Council (SANC) (Regulation 118 of 1987:1), a nurse educator is a registered nurse with an additional qualification in nursing education. For the purpose of this study, the term ‘nurse educator’ refers to a registered nurse with an additional qualification in nursing education and employed at the SAMHS nursing college. She or he is involved in the facilitation of students enrolled for the four-year comprehensive nursing programme.

1.7.3 UNDERGRADUATE STUDENT NURSE

Kotze, Armstrong Geyer, Mngomezulu, Potgieter and Subedar (2008:187) define a student nurse as a person “who enters the basic nursing education programme, and has successfully completed 12 years of schooling, meets the entrance requirements for higher education at an approved school of nursing”. Van Niekerk (2002:12) cites Hornby, Cowie and Windsor-Lewis’ (1975) description of a student as “a person who is studying at a college or university”.

For the purpose of this study the term ‘undergraduate student nurse’ refers to a student who is registered at the SANC for the four-year comprehensive nursing programme (SANC Regulation 425 of 1985:1) and studying at the SAMHS nursing college

1.7.4 EDUCATIONAL PRACTICES

Kemmis, Wilkinson, Edwards-Groves, Hardy, Grootenboer and Bristol (2014:26) explain education as follows:

Education is the process by which children, young people and adults are initiated into forms of understanding, modes of action, and ways of relating to one another and the world, that foster (respectively) individual and collective self-expression, individual and collective self-development and individual and collective self-determination, and that are, in these senses, oriented towards the good for each person and the good for humankind (Kemmis, et al. 2014:26).

Practice is explained by Kemmis, et al. (2014:31) in the following way:

a form of socially established cooperative human activity in which characteristic arrangements of actions and activities (doings) are comprehensible in terms of arrangements of relevant ideas in characteristic discourses (sayings), and when the people and objects involved are distributed in characteristic arrangements of relationships (relating’s), and

when this complex of sayings, doings and relating's 'hangs together' in a distinctive project (Kemmis, et al. 2014:31).

For the purpose of this study, 'educational practices' are policies, programme approaches, teaching and learning strategies as well as individual goal-directed activities performed by nurse educators during the education and training of student nurses requiring technology, knowledge and skills to promote student nurses' clinical reasoning skills.

1.8 PHILOSOPHICAL ASSUMPTIONS

The research question or objective determines the choice of research paradigm and methods (Williamson, Bellman and Webster 2012:33). According to McNiff and Whitehead (2011:45), a paradigm is a set of ideas or theories appropriate to a specific context. Polit and Beck (2012:11) state a paradigm is a worldview. Koshy (2010:1) explains a paradigm as the collection of assumptions and beliefs guiding a researcher to conduct the research and interpret the findings. According to Polit and Beck (2012:11), paradigms are often characterised in terms of the way they respond to basic philosophical questions such as, 'what is the nature of reality?' (the ontology) or 'what is the relationship between the researcher and those being studied?' (the epistemology). McNiff and Whitehead (2011:45) discuss three paradigms, namely technical, interpretive and critical theoretic research. Polit and Beck (2012:11) initially describe only two broad paradigms, namely positivism and constructivism, but then add two further paradigms, namely the transformative paradigm which involves critical theory research, and the pragmatism paradigm which involves mixed methods research. Although McNiff and Whitehead (2011) and Polit and Beck (2012) refer to the three or four paradigms by different names, it essentially means the same. Each of these paradigms has different views about the nature of knowledge, how it is acquired, and how it is used.

In the positivist paradigm (technical), it is assumed that reality is objective and natural phenomena are regular and orderly (Polit and Beck 2012:22). Determinism is the related assumption underpinning the positivist paradigm; it is the belief that phenomena are not haphazard but originate from a cause and is associated with quantitative research (Polit and Beck 2012:22). Quantitative research is a very objective type of scientific inquiry where the

researcher attempts to be detached from the actual subjects (Tomal 2010:3). The results can be generalised and replicated in similar situations (McNiff and Whitehead 2011:45). Furthermore, a positivist worldview is not appropriate within social contexts where people will most likely not behave the way the researcher would like them to, because people challenge power relationships and make their own choices (McNiff 2013:46).

In the constructivist or naturalistic paradigm, the assumption is that reality is not fixed but a construction of human minds (Polit and Beck 2012:22) with multiple constructed realities (Burns and Grove 2011:73) and is associated with qualitative research (Polit and Beck 2012:22). Qualitative research is more naturalistic, emergent and case-oriented with the researcher being much more involved in the study (Tomal 2010:3). Every human being constructs knowledge from his or her experience through social interaction – the emphasis here is on understanding phenomena (Given 2008:116). Qualitative research is referred to by McNiff and Whitehead (2011:46) as interpretive research with the aim of understanding what is going on in social situations and to negotiate meanings; however, external researchers do the interpretations.

The transformative paradigm, better known as critical theory, seeks not just to study and understand society but rather to critique and change society or envision new possibilities (de Vos, Strydom, Fouché and Delport 2011:9; Polit and Beck 2012:506). Critical theory provides the framework as both a philosophy and a method for approaching research as fundamentally political and concerned with change (de Vos, et al. 2011:9). The aim of critical research is to integrate theory and practice thereby empowering people to become aware of contradictions and disparities in their beliefs and social practices and they become inspired to change them (Polit and Beck 2012:506). The focus of the critical paradigm is on transforming human beings and their environment by being personally involved in actions that would change their circumstances (de Vos, et al. 2011:9).

Pragmatism is “often seen as the practical philosophy in which truth is not seen as an absolute but a movable and usable construct for understanding the nature of reality” (Given 2008:672). The pragmatism paradigm is associated with mixed methods research. Pragmatist researchers consider the research question as driving the inquiry thus viewing the questions asked more important than the methods used. According to Polit and Beck (2012:604) “pragmatism as the word suggests, is practical, whatever works best to arrive at

good evidence is appropriate". The pragmatist is concerned with finding a solution to the problem and as such seeks a direct solution and enters the field of inquiry with a practical problem-solving attitude (Given 2008:675).

The fundamental question that arises is which paradigm then best describe action research. According to Tomal (2010:10), action research, although different from both quantitative and qualitative research, shares characteristics of both. However, action research aims to solve a problem in an efficient and feasible manner within the context of the study. Williamson, et al. (2012:36), agree action research differs from quantitative and qualitative research because the researcher is an equal participant and, together with the actual participants, in action research they are all co-researchers. According to Williamson, et al. (2012:27), philosophically action research has been linked to the work of critical theorists who sought to change social and economic relations with overtly political action. Although McNiff and Whitehead (2011:47) confirm action research developed from critical theory, they claim it has moved beyond critical theory. These authors argue that critical theory aims only to understand a situation to change it whereas action research is additionally concerned with the action of "how can it be changed" (McNiff and Whitehead 2011:46). Although critical theory works within the broad context of social science, it does not claim to be educational. Expounding on this view, McNiff (2013:50) writes the aim of critical theory is to critique and not to initiate or manage change as is the case in action research.

Some researchers place action research within the pragmatic paradigm by suggesting action research could be integrated with other methods. However, McNiff and Whitehead (2011:48) dispute this suggestion by insisting action research is not as much a method as literature on mixed methods suggests, but a methodology. Action research as a methodology takes a different stance from other research methodologies because action research generates a different theory. Action research generates living theories while social science research generates propositional theories (McNiff and Whitehead 2011:49).

Koshy (2010:22) writes about discussions held with his students who placed action research within a constructivist methodology because they felt they were constructing their own meanings and understandings throughout their study. Arguing that action researchers are actively engaged in a process of construction, Koshy's (2010:23) stance is that action researchers are active social constructivists because they develop their understanding from

communicating with people in their educational setting. Lincoln (2001) cited in Koshy (2010:23) states “there are several profound and sympathetic connections between constructivist inquiry and action research”. According to McNiff (2013:48), the interpretive worldviews acknowledge the contributions of participants but the researcher mostly interprets the data, generates the research and owns the research whereas in action research living theories are generated in collaboration with the participants. McNiff (2013:49) expounds on the researcher’s engagement by explaining in the interpretive view of research there is little difference between the positioning of the researcher and the participants, as is the case in traditional empirical research, and the form of theory remains conceptual; the researcher generates a theory about an external situation.

Williamson, et al. (2012:36) note action research has been described as a “new paradigm” focusing on participation and change. Action research is a specific method of conducting research with the aim of improving practice (Koshy, Koshy and Waterman 2011:11). Some experts claim action research is located in the participatory worldview and it is unique because it is context-bound and involves action designed to change local situations (Koshy, et al. 2011:13). This participatory worldview is described in depth by Reason and Bradbury (2000:para. 34) as an emergent worldview with the defining characteristic that it is participatory. In this regard Reason and Bradbury (2000:para. 34) state:

our world does not consist of separate things but relationships we co-author. In a participatory worldview humans and communities are placed as part of their world, embodied in their world and co-creating their world. A participatory perspective encourages us to be situated and reflexive, to be clear about the perspective from which knowledge is created, to see inquiry as a process of coming to know, serving the democratic, practical ethos of action research (Reason and Bradbury 2000:para. 34).

Williamson, et al. (2012:37) interpret the involvement of the researcher and collaboration with participants to change their social worlds, as positive. For this reason, they accept the notion that action research can be viewed as a new paradigm. According to McNiff and Whitehead (2011:50), action research is “about to ride the crest of a wave: not quite there yet but about to reach its zenith”. They propose action research has its own criteria and standards and is fully acknowledged as a coherent research methodology, but holding it back are the differences of opinions and debates among action researchers themselves. McNiff (2013:51)

points out that “action research is about putting ideas into action, not only talking about them” and doing so in relation with others. She states action research allows one to work with people on a real life basis where knowing becomes a real life practice; in her interpretation “living the theory in action”.

Some authors like Koshy, et al. (2011:13), McNiff and Whitehead (2011:50) and McNiff (2013:36, 39) suggest action researchers should position themselves within a worldview which they feel is compatible with their values, beliefs and convictions. My own opinions have been influenced by the work of Koshy, et al. (2011), McNiff and Whitehead (2011) as well as McNiff (2013). I am committed to the ideal that nurse educators must be treated as professionals and equals who can contribute positively towards improving their own educational practices. In this study, I involved the nurse educators to co-construct an action plan by generating, sharing and constructing knowledge in the form of a co-constructed action plan to address practical concerns. The nurse educators were encouraged to reflect on their own practices, evaluate it and implement actions to address any shortcomings. Because I am a strong believer in the power of participation, I fully agree with the reasoning of Williamson, et al. (2012:45) and that of Reason and Bradbury (2000:para. 34) that action research can be characterised as a “new paradigm” outside the traditional arguments concerning qualitative and quantitative research. Action research is about generating new knowledge as well as changing practice with the emphasis on participation. For me as an educator as well as a researcher it was important for the nurse educators to know there is much we do not know and do not understand. Acknowledging this ‘not knowing and not understanding’ would provide the foundation for developing an awareness of ‘what can be done once understood’ and heighten the motivation ‘to do it now that it is understood’.

Three types of assumptions, namely ontological, epistemological and methodological further highlight the philosophical assumptions.

1.8.1 ONTOLOGICAL ASSUMPTIONS

Ontology asks the question: ‘What kinds of things exist in the world?’ (Williamson, et al. 2012:33). Ontology is the study of “being” and is linked to values (McNiff and Whitehead 2011:27). Agreeing that ontology is used to designate the theory of ‘being’, Koshy, et al. (2011:14) expounds on this theory of ‘being’ as the development of strategies which can

illuminate the components of peoples' social reality. Within action research, this reality is socially constructed and not external and independent (Koshy, et al. 2011:14). Action researchers believe that all people are equal and should enjoy the same rights and entitlement. She further explains action researchers believe people can create their own identities, have capacity for creativity and have different opinions and values. Action researchers try to find ways of living together despite differences and see things from others' perspective (McNiff 2013:27).

Next, a summary of the ontological assumptions according to McNiff and Whitehead (2011:30) is provided as well as an indication of how it was applied to this study.

- Action research is value-laden and morally committed. This is different from traditional research where the research can be value free. Because this study involved a core group of nurse educators and HoDs collaborating as active participants, each participant's values would have an influence on the study. Therefore, at the beginning of the action research study we conducted a value and role clarification and set the ground rules (refer to Section 5.3.2.2).
- Action research aims to understand what 'I/we' are doing, and not only what 'they' are doing; it is research with people and not on people. From the outset of the study, the opinions of the nurse educators were sought and each opinion valued; the nurse educators were thus involved in the co-construction of the action plan right from the start.
- Action researchers perceive themselves in relation with one another in their social contexts. Research cannot be studied in a value-free way because researchers as well as participants have their own values. Working together as a team on this project contributed to the success of the action research process. During every workshop, the participants in the action research group were urged to participate. Giving each participant a voice added value to the co-constructed action plan.

At the time of study, the nurse educators at the nursing college where the study was conducted were my colleagues with whom I had professional relationships. We all formed part of the academic team and as such I, as action researcher, positioned myself from an insider's perspective. It is my belief that as professionals we were all capable of contributing to the success of the study and, ultimately, the organisation. In any organisation, each person has a contribution to make and therefore I support participatory management. In this

study the nurse educators described what educational practices existed in their nursing education fraternity as well as their challenges.

A value clarification was conducted with the action research group and a set of shared values was clarified (refer to Section 5.3.2.2) to assure participants were committed to the study. The participants were encouraged to share their views and make their own decisions based on how they perceived their reality within their working environment. The researcher and nurse educators held action research group workshops to co-construct an action plan to improve educational practices to promote the development of clinical reasoning skills.

1.8.2 EPISTEMOLOGICAL ASSUMPTIONS

Epistemology asks the question: ‘How is it possible to gain knowledge of the world?’ (Williamson, et al. 2012:33). Epistemology is the name given to the study of ‘what’ we know and ‘how’ we come to know it (McNiff 2013:28). For traditional researchers knowledge is certain and can be discovered through scientific means. However, for an action researcher the nature of knowledge and that which constitutes knowledge (the ‘what’ and the ‘how’) are different. What people say and how we interpret what they do and say are important for knowledge creation in action research (Koshy, et al. 2011:14).

People can generate their own knowledge through their experiences of living and learning; importantly, knowledge is constantly evolving, it is never complete (McNiff 2013:29). For an action researcher working within a social context the knowledge generated is based on the observation of behaviours and responses from participants, students, colleagues as well as personal interpretations; hence, this knowledge is not certain (Koshy 2010:25). In the opinion of McNiff (2013:29), action researchers see knowledge “as something they do, a living process”.

Following are the epistemological assumptions of action research according to McNiff and Whitehead (2011:33) and how it was integrated in this study.

- In action research the object of enquiry does not relate to other people, but to the ‘I’ in relation with other ‘I’s. The action research group participants were encouraged during each workshop to participate and reflect on their educational practices, and on how they could make a difference within their specific situation.

- Knowledge is uncertain. Answers are created through negotiation; often answers cannot be negotiated, so people must learn to live with the situation. One of the sayings we often used during our workshops was, we will never all agree but 'WE CAN' live with it.
- Knowledge belongs to the individual and can be subjective and biased. Active participation was encouraged during all the workshops as well as the sharing of ideas and practice wisdom.

I am convinced knowledge can be created by all people. We will never reach a point in our lives where we cease to learn. I therefore agree with McNiff (2013:30) that knowing is never complete, we continuously learn as a situation changes; we learn and create new knowledge and therefore knowing is emergent. In this study, we addressed the challenges identified by the nurse educators themselves, by reflecting on our educational practices, by looking at our specific situation within the military context. We co-constructed an action plan by generating, sharing and constructing knowledge based on our real life experiences. The data collected was more subjective; therefore, the challenges and insights of the nurse educators were unique and personal in nature. The nature and scope of new knowledge shared and generated during the action research process was created and generated through collaboration, participation and negotiation.

1.8.3 METHODOLOGICAL ASSUMPTIONS

Methodologies refer to the way research is conducted (McNiff and Whitehead 2011:34). Action research involves the investigation of some component of the social system that is composed of humans engaged in interaction (Koshy, et al. 2011:13). According to McNiff (2013:30), action researchers regard learning and experience as a process involving people who negotiate choices about who they are as individuals and within a group. The aim is not to reach consensus but to understand each other's differences. McNiff (2013:30) furthermore writes she sees her work as embodied within herself, and in her relationship with others.

The main methodological assumptions of action research as observed by McNiff and Whitehead (2011:34) are summarised next.

- Action research is conducted by practitioners who regard themselves as agents with an agent being someone who acts and brings about change (McNiff and Whitehead 2011:34). Action researchers do not do research on others but on themselves and with others (McNiff and Whitehead 2011:36). Furthermore, McNiff (2013:5) points out that 20 years ago, it would have been unusual for academics to study their own practice; however, these days it is normal and even expected.
- The methodology is open-ended and developmental (McNiff and Whitehead 2011:34). Within action research the aim is not to expect to find certain answers or closure (McNiff and Whitehead 2011:35).
- The aim of the research is to improve learning with social intent (McNiff and Whitehead 2011:34). According to McNiff (2013:24), action research involves learning in and through action and reflection, and is conducted in a variety of contexts. Change is understood as people improving learning to improve practices (McNiff and Whitehead 2011:36).

I maintain that people exist within different social contexts; we have relations with our colleagues, our family and friends. Our actions, what we learn and experience is because of these relationships. Although we do not always share the same opinion, we can agree to accept each other for who we are as well as for the unique contribution each of us make towards the relationship. We must learn to live with each other so that we can work together towards improving our lives.

In this study the nurse educators acted by working together through negotiation and understanding. Together we formed part of the academic team. Like a family consisting of different people each with their own ideas and opinions, we had to learn to tolerate each other by accepting our differences and similarities. All members of the action research group were given equal opportunity to share and contribute to the discussions. At the start of the workshop, members agreed on core values, mutual respect, equal participation and collaboration and as such created a psychological safe environment. Through collaboration and participation nurse educators were empowered and emancipated via the process of gaining knowledge and learning, which forms part of action research, to co-construct an action plan to improve their educational practices.

1.9 THEORETICAL FRAMEWORK

Zuber-Skerritt (1992:9) suggests action research is not only an alternative to advancing knowledge but is a more effective way of improving learning and teaching practice. Zuber-Skerritt and Perry (2002:173) argue that action research is one way of conducting research within a learning organisation that can benefit the organisation and add to the body of knowledge. The traditional spiral of action research cycles as explained by Zuber-Skerritt (1992:11) was used as the theoretical basis of the present study. The framework helped the researcher to understand how best nurse educators can work together in collaboration to improve their educational practices (Refer to Figure 1.1).

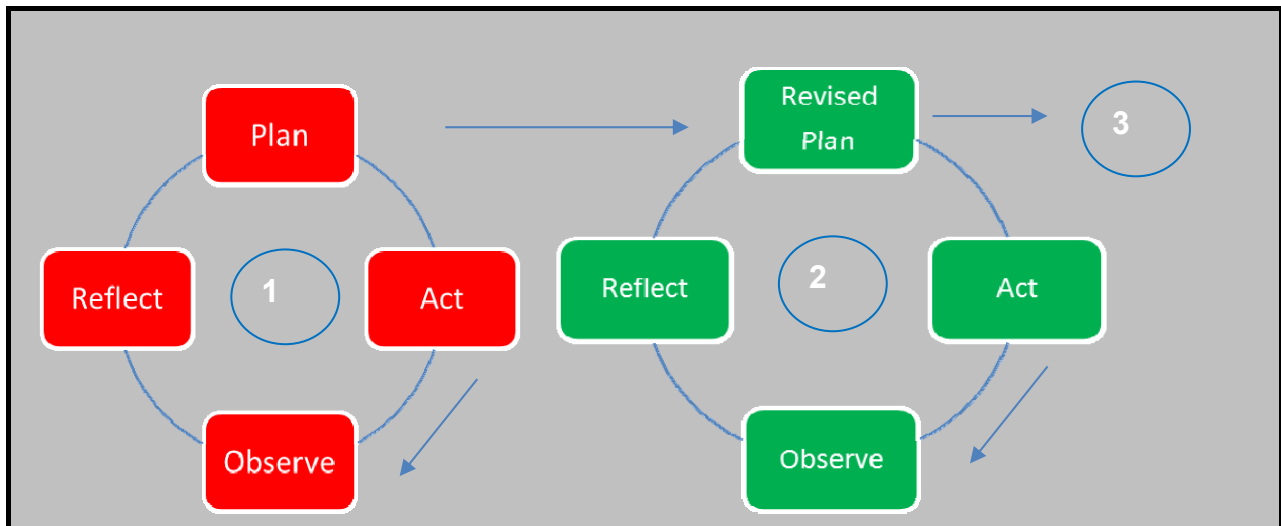


Figure 1.1 Traditional spiral of action research cycles (Zuber-Skerritt 1992:11)

Zuber-Skerritt (1992:11) explains the plan includes problem analysis and strategic planning; action refers to the implementation of the plan; observation includes an evaluation and self-evaluation of the action and, lastly, reflection means reflecting on the evaluation and the whole action research process which may lead to a revised plan resulting in a new cycle of plan, act, observe and reflect. Action research is a collaborative, critical and self-critical inquiry by practitioners into a major problem, concern or issue in their own practice. They own the problem and feel responsible and accountable for solving it through teamwork and by following a cyclical process of plan, act, observe and reflect (Zuber-Skerritt 1996:3).

The following principles of action research (Zuber-Skerritt 1992:12) formed the theoretical base for this study.

- **Practical.** The results and insights gained from the research are of not only theoretical importance, but also lead to practical improvements.
- **Participative and collaborative.** The researcher is not an outside expert conducting research with participants, but a co-worker doing research with and for the people concerned with the problem and its actual improvement.
- **Emancipatory.** The approach is not hierarchical; all people concerned are equal participants contributing to the research.
- **Interpretive.** The research results in solutions based on the views and interpretations of the people involved in the research.
- **Critical.** The participants change their environment and they themselves are changed in the process.

Four action research cycles were implemented during Phase 2 of the study. Each cycle consisted of four steps: plan, act, observe and reflect. The four cycles are written up in detail in Chapter 5. The evaluation of the action research process is discussed in Chapter 6.

1.10 DELINEATION

The focus of the study was to facilitate a process of change towards improving educational practices at the SAMHS nursing college in Gauteng, one of the nine provinces of South Africa. The nurse educators involved with the four-year comprehensive nursing programme were included as change can best be initiated when those involved are part of the process (Mackay, Brown, Joyce-McCoach and Smith 2014:282).

This study consisted of three phases. In Phase 1 the challenges the nurse educators experienced regarding the facilitating of clinical reasoning skills were explored and described. During Phase 2 a core group of nurse educators and HoDs who had volunteered to participate in the study (the action research group) co-constructed an action plan to address the identified challenges from Phase 1 by means of four action research cycles. In Phase 3 the outcomes of the action research process were evaluated by means of the World Café data collection method with the action research group only. Although the study was

limited to one nursing college, action research is not concerned about relating the findings to other settings; it is concerned with improvements within the context of the study (Tomal 2010:11).

1.11 RESEARCH SETTING

The setting for this study remained the same throughout the study. The study was conducted at the SAMHS nursing college, a military organisation. The nurse educators and students are employed by the South African National Defence Force as permanent force members. The nursing college provides for the education and training of student nurses utilised by the South African National Defence Force as professional nurses and enrolled nurses at its various military healthcare facilities.

According to Stratford and Collins (1994:viii) the first “military nurses” in South Africa provided service during the Zulu War (1877-1879), but it was only in 1914 after the declaration of World War I that an organised Military Nursing Service was established. The training of nurses in the military was only provided in 1945 when the SANC approved 1 Military Hospital as a training school (Stratford and Collins 1994:119). Unfortunately, by 1955 the school was forced to close due to not meeting the minimum requirements as stipulated by the SANC (Stratford and Collins 1994:121). Only again in 1969 did the authorities grant the training of nursing assistants in the hospital and in 1972 approval was given for the three-year Diploma in General Nursing to be offered at 1 Military Hospital (Stratford and Collins 1994:144).

In 1984 a historic change in the nursing college system took place when nursing colleges became autonomous. Affiliated to universities by means of a memorandum of agreement nursing colleges were recognised as post-secondary educational institutions. On 1 January 1985, the nursing college was established as the Medical Service Nursing College in affiliation with the University of South Africa (Stratford and Collins 1994:146). It was later renamed the South African Military Health Service (SAMHS) Nursing College. Through its liaison with other healthcare and educational organisations, the nursing college has finally placed military nursing training on the map. It is the only military nursing college in South Africa (Stratford and Collins 1994:146).

Currently the nursing college offers three programmes: the four-year Comprehensive Nursing Diploma (general, psychiatric and community) and midwife (SANC R425:1985), the Diploma in Clinical Health Assessment, Treatment and Care (SANC R48:1982), and the one-year course for a Diploma in Midwifery (SANC R254:1975). At the time of the study, 40 nurse educators were employed at the nursing college and 360 nursing students were enrolled for all the programmes mentioned. The theoretical component of the programmes offered is provided at the nursing college and works according to a block system. In a block system, students attend classes for four to five weeks at a time and thereafter is placed in the clinical areas for another four to five weeks throughout the academic year. The clinical component of the nursing students' training takes place at various military healthcare facilities as well as SANC approved public healthcare facilities.

Nursing students are recruited from the military skills development programme. This programme recruits candidates from 18 to 22 years of age to undergo one year military training before they may continue with their nursing training. Military training is important prior to their nursing training for proper induction and orientation in the military environment that has its own unique culture, rules and regulations. Students and nurse educators employed by the South African National Defence Force are uniformed members and are soldiers as well as nurses. I started my nursing career in the military as a student nurse in 1990. After graduating, I worked and specialised as a neonatal nurse at 1 Military Hospital. In 2001 I began my career as a nurse educator at the SAMHS nursing college and was subsequently promoted to my current position as Quality Assurance Manager. It was in this managerial capacity that I started to identify gaps in our educational practices and forthwith set out to work together with the nurse educators to improve our situation and to produce competent, independent, and safe nursing practitioners.

As the Quality Assurance Manager I am not directly involved in teaching and learning of undergraduate students. However, I am directly involved with the training of nurse educators related to policies, standard working procedures and guidelines. I conduct quality assurance workshops in collaboration with the academic staff and provide guidance and support to nurse educators on education, training and development. During these workshops and training sessions, I encourage maximum participation and nurse educators are accustomed to me. My direct involvement with the nurse educators as explained justified my decision to include nurse educators in the action research process. My decision not to include students

was based on my belief that they have voiced their concerns with the teaching and learning offered at the nursing college through the student satisfaction surveys (refer to Section 1.3). However, I do acknowledge that their inclusion in the action research process would have added value to the study (refer to Section 7.6.2.3).

To overcome my 'power' relationship with the nurse educators the ARG members unanimously agreed to address each other by their first names and to attend the workshops in civilian attire. This was to ensure members felt comfortable with each other and was a preventative measure to make sure members with lower ranks did not feel threatened to participate by senior members. It was important to create a non-threatening, non-hierarchical and psychological safe environment to encourage participation, collaboration and mutual respect among the ARG members. This was implemented with success as evident by the ARG members feedback and active participation by all (refer to Section 6.6.1).

1.12 ROLE OF THE RESEARCHER

As an action researcher, one needs to provide clarity on one's role as researcher and one's positionality (McNiff 2013:104). As previously stated, I am an employee of the nursing college where the study was conducted and have professional relations with the participants. Hence, this action research study was conducted from an insider's perspective (refer to Section 1.8.1). It was my responsibility to develop the proposal, obtain ethical approval from applicable institutions and to complete the thesis. My role as the researcher during Phase 1 was to collect and analyse the baseline data to achieve objective one. Participants were neither involved in the data collection nor the data analysis; however, the baseline data was necessary to inform Phase 2. The nurse educators' contribution during Phase 1 consisted of them participating in an in-depth interview conducted by myself.

In Phase 2 the participants were fully involved in the action research process. During this Phase I shared literature on clinical reasoning, adult learning and student-centred teaching strategies with the action research group. The participants could now work together in the action research group to address the challenges identified during Phase 1. Findings of Phase 1 was shared with the action research group (refer to Section 5.2.2). As a member of the action research group, I fully participated together with the participants in Phase 2 and we

made use of an external facilitator to facilitate the action research group workshops. This allowed me to fully participate in the discussions to co-construct an action plan and thus achieve objective two. I facilitated the monitoring and feedback meetings with the action research group held weekly at the nursing college. In addition, I facilitated the quality assurance workshops that involved all academic staff. Phase 3 involved evaluating the outcomes of the action research process. The action research group participated in the World Café data collection process. I was part of the World Café and had a voice together with that of the action research group participants.

1.13 RESEARCH DESIGN

According to Polit and Beck (2012:741), the research design is the overall plan for addressing the research question. An action research approach was deemed the best research design for this study since it involved collective, self-reflective inquiry by the participating nurse educators to improve the delivery of education and training by determining how educational practices should be changed to promote undergraduate student nurses' clinical reasoning skills. According to Reiersen, Hvidsten, Wighus, Brungot and Bjork (2013:295), action research is often used in the field of education and is considered to be a suitable approach for sustainable change.

Action research is a process by which change is achieved and new knowledge about a situation is generated; it is difficult to change a situation without understanding it more fully and when understanding a situation better, opportunities for change emerge (Williamson, et al. 2012:3). The strength of action research lies in its focus on generating solutions to practical problems and its ability to empower practitioners through engagement with research and the subsequent implementation plan (Meyer 2000 cited in Koshy, et al. 2011:2).

Zuber-Skerritt (1992:11) describes action research by using the acronym CRASP:

Critical (and self-critical) collaborative enquiry by

Reflective practitioners being

Accountable and making the results of their enquiry public,

Self-evaluating their practice and engaging in

Participative problem-solving and continuous professional development.

1.14 METHODS

Action research is an emergent design and this reflects the researcher's desire to base the inquiry on the realities and viewpoints of the participants (Polit and Beck 2012:487). This action research study consisted of three phases: Phase 1 the Baseline, Phase 2 the Action Research Process and Phase 3 the Evaluation of the Action Research Process. The Action Research Process phase comprised of four action research cycles each consisting of four steps: plan, act, observe and reflect. Refer to Table 1.1 for a summary of the research methods.

Table 1.1 Summary of the research methods

	PHASE 1 BASELINE	PHASE 2 ACTION RESEARCH PROCESS	PHASE 3 EVALUATION OF THE ACTION RESEARCH PROCESS
Research objectives	To explore and describe the challenges experienced by nurse educators in utilising educational practices that promote the development of undergraduate student nurses' clinical reasoning skills.	To co-construct an action plan to improve educational practices to promote the development of undergraduate student nurses' clinical reasoning skills.	To evaluate the outcomes of the action research process.
Population	Nurse educators and nursing college management involved in the four-year comprehensive nursing programme (26).	Nurse educators and nursing college management involved in the four-year comprehensive nursing programme (26).	Nurse educators and nursing college management involved in the four-year comprehensive nursing programme (26).
Sampling	Purposive sampling was used. Sixteen nurse educators with at least	Action research group comprising nurse educators, Head of	Action research group comprising nurse educators, Head of

	PHASE 1 BASELINE	PHASE 2 ACTION RESEARCH PROCESS	PHASE 3 EVALUATION OF THE ACTION RESEARCH PROCESS
	two nurse educators from each year group (16).	Departments and the researcher involved in the four-year comprehensive nursing programme (11).	Departments and the researcher involved in the four-year comprehensive nursing programme (11).
Data collection	Unstructured interviews.	Action research group workshops.	The World Café data collection method.
Data analysis	Content and thematic analysis.	Writing up the action research process.	Hermeneutic data analysis.
Rigour	Quality indicators: validity, reflexivity, confirmability, credibility, dependability and transferability.	Quality indicators: validity, reflexivity, confirmability, credibility, dependability and transferability.	Quality indicators: validity, reflexivity, confirmability, credibility, dependability and transferability.

The context and the population used in the study remained the same throughout the research process. However, the sampling, data collection, data analysis and the sharing of data differed from phase to phase. Consequently, they are outlined under each phase (Refer to Chapter 3).

1.15 QUALITY INDICATORS

Koshy, et al. (2011:120) explain quality indicators are terms used in action research. They state although action research is a unique approach, the researcher still needs to validate the findings. Validity refers to the accuracy of what is collected; in other words, the objectivity of the findings or decisions (Koshy, et al. 2011:120). Coghlan and Brydon-Miller (2014:690) assert rigour in an action research study depends on the four qualities of trustworthiness, namely credibility, transferability, dependability and confirmability. The quality indicators of both Koshy, et al. (2011:120) and Coghlan and Brydon-Miller (2014:690) are briefly discussed, in Sections 1.15.1 to 1.15.5.

1.15.1 REFLEXIVITY

Reflexivity is the awareness of how researchers have affected a study and can affect the validity of the data presented (Koshy, et al. 2011:121). Reflexivity is broadly described by Given (2008:747) as “qualitative researchers’ engagement of continuous examination and explanation of how they have influenced a research project”. I explained my past experiences and values in an attempt to clarify how they could possibly have influenced the study. In addition, I kept a personal journal to record my personal reflections and comments regarding the research process.

1.15.2 CONFIRMABILITY

According to Babbie and Mouton (2001:278), confirmability is the degree to which the findings are the product of the focus of the inquiry and not the biases of the researcher. I kept an adequate audit trail as advised by Lincoln and Guba (1985 cited in Babbie and Mouton 2011:278) to ensure that the conclusions, interpretations and recommendations can be traced to their sources and are supported by the study. In case audits need to be conducted all unprocessed notes, voice recordings, raw data, field notes and documents related to the themes, categories and subcategories were kept as evidence. Coghlan and Brydon-Miller (2014:691) also assert research documentation must be present and available for audit purposes. The researchers’ own journals are important in the research database for confirmability (Coghlan and Brydon-Miller 2014:691). I kept a personal reflective journal throughout the entire action research study to document the process and my personal ideas and reflections.

1.15.3 CREDIBILITY

Credibility in a study is the extent to which the research methods engender confidence in the truth of the data and the researcher’s interpretation of the data (Polit and Beck 2012:196). To ensure credibility in this study the data was collected from nurse educators by making use of multiple data collection methods, namely in-depth interviews and action research group workshops. All transcribed data from the interviews and the minutes kept of the action research group meetings were confirmed with the participants as a true reflection of what

had transpired. According to Koshy, et al. (2011:121), feedback is important in action research so that participants can reflect on the findings and establish the next plan of action.

Spending adequate time with the verbatim transcripts assured prolonged engagement during the data analysis process. The co-supervisor verified the data analysis process and inter-coder reliability was ensured throughout the analysis by conducting first and second cycle coding. A summary of the challenges identified (refer to Annexure B7) was submitted to the participants for member checking to validate the findings. According to Coghlan and Brydon-Miller (2014:690), there are a few unique ways for action researchers to achieve credibility. Sufficient time commitment and the demonstration of a useful solution are some ways of achieving credibility. The multiple iterative action research cycles and rich sources of data also added to the credibility of this action research study (Coghlan and Brydon-Miller 2014:690). The study consisted of a collaborative phase of six months whereby the nurse educators and HoDs participated in four action research cycles to address their educational challenges by co-constructing an action plan.

1.15.4 DEPENDABILITY

Dependability is achieved through the rigorous iterating action research cycles and moves beyond the actions to become a documented operating solution (Coghlan and Brydon-Miller 2014:691). The study must provide evidence that if it were to be repeated with similar respondents and in a similar context, the findings would be similar. The techniques used to demonstrate credibility is usually enough to demonstrate dependability too (Babbie and Mouton 2001:278).

1.15.5 TRANSFERABILITY

Babbie and Mouton (2001:277) explain transferability is the extent to which the findings can be applied in other contexts or with other respondents. Koshy (2010 cited in Koshy, et al. 2011:33) argues that the action researcher does not set out to generalise data, but to generate knowledge based on one's own situation. However, the findings could be applicable to those interested in similar circumstances. The aim of this study was not to transfer the findings but to improve educational practices at the nursing college. The results can therefore

not be generalised, but other nurse educators could replicate the study and generate similar outcomes (Koshy 2010:25). The improved change will be filtered through to the rest of the nursing college. Coghlan and Brydon-Miller (2014:691) state the research results must provide sufficient documentation of the setting to enable others to compare it to a future setting so that actions or theory may be adjusted to suit their circumstances. A detailed description of the present research setting was provided. (Refer to Section 1.11).

1.16 ETHICAL CONSIDERATIONS

Polit and Beck (2012:152) refer to the Belmont Report (1976) which articulates three primary ethical principles on which research must be based, namely beneficence, respect for human dignity, and justice. The researcher adhered to these principles and ensured that no harm was done to participants by providing them with sufficient and relevant information. Voluntary participation was emphasised throughout the study process and the participants signed informed consent for each phase of the study.

1.16.1 BENEFICENCE

The research was conducted once the proposal had been approved by the Research Ethics Committee of the Faculty of Health Sciences of the University of Pretoria (protocol number: 84/2015) (refer to Annexure A2) and permission had been obtained from the Department of Defence (DoD) to conduct research at the nursing college (refer to Annexures A1, A3 and A4). The principle of beneficence requires of the researcher to look after the well-being of the participant who has the right to protection from discomfort and harm (Brink, van der Walt and van Rensburg 2012:35). Participants were made aware that their input into this action research study would require time and effort, but at the same time the benefit of improved practice was highlighted.

1.16.2 RESPECT FOR HUMAN DIGNITY

The researcher made sure the participants could participate in this action research study without “subtle exploitation” or fear of retribution by arranging an introduction session with the academic staff. Members were informed of the project and requested to complete a form

(refer to Annexure B3) to indicate their interest. Only members who indicated interest in participating were approached for participation. Informed consent addresses the principle of respect for human dignity. Participants are autonomous and have the right to decide whether to participate or decline participation (Brink, et al. 2012:35). All the participants willingly made the decision to participate in this study. They received a participation information and consent document (PICD) for every phase of the study (refer to Annexures B4 and C4). In addition, the researcher reminded them before every phase that participation was voluntary, and they could choose not to participate at any stage and withdraw from the study (Refer to Section 3.4.6). The PICD stated the purpose of the study, the reason why the participants had been invited to join, the duration of the action research study, their roles in the study process as well as the benefits and possible disadvantages for joining the project.

1.16.3 JUSTICE

The principle of justice includes the participants' right to fair selection and treatment as well as privacy (Brink, et al. 2012:36-37). All academic staff was addressed during the launch of the study. Although purposive sampling was used to select nurse educators involved in the four-year comprehensive nursing programme, all academic staff benefitted from the training and implementation activities proposed by the action research group (ARG).

The researcher listened to the voices of all participants and the need for mutual respect was stressed. Honesty in the report writing was assured by asking the participants to read all minutes taken as well as the transcribed interviews. Nurse educators, irrespective of the programmes they offered, were invited to attend any formal professional development sessions arranged by the ARG to afford all nurse educators the opportunity to benefit from these training sessions.

Because the action research study was carried out as a small-scale project taking place within the working environment of the researcher and the participants, special care was taken during data collection and the dissemination of the findings. However, it will be difficult to guarantee participants will not be recognised because specific nurse educators were targeted for this study; targeting was done according to the level they were teaching at the time of study. Nurse educators were made aware that confidentiality during the action research group workshops could not be ensured.

The ARG was given the choice either to be known as co-researchers or to remain anonymous; they all indicated willingness and eagerness to be known as research participants. All members signed consent forms (refer to Annexure E3) to be known as participants as well as to permit photos to be taken and used in the thesis and the action plan, on the acknowledgement page as well as on the nursing college pamphlet 'The Lamp'. The ARG was informed that the researcher will write up the thesis and will be awarded with the degree. However, they will have an opportunity to co-author an article on the action research process during which they participated actively in co-constructing the action plan. Furthermore, all data was stored in a secure place to ensure confidentiality.

1.17 LAYOUT OF THE STUDY

The study is divided into seven chapters.

Chapter 1: Orientation to the study

This chapter introduces clinical reasoning and the background to the problem statement. It further describes the research aim, objectives, concept clarification and significance. The three types of assumptions, namely ontological, epistemological and methodological are discussed to provide an explanation of the philosophical assumptions the study was based on. A brief overview of the research design and methods is provided. In addition, the quality indicators which include trustworthiness are outlined as well as the ethical considerations.

Chapter 2: Literature review

Chapter 2 discusses literature on three phenomena, namely andragogy, clinical reasoning and educational practices. A conceptual framework developed by the researcher is presented and explained.

Chapter 3: Research design and methods

This chapter discusses the research design and methodology used for this study. Phases 1, 2 and 3 are briefly introduced to the reader.

Chapter 4: Baseline (Phase 1)

Chapter 4 discusses the sampling, data collection, analysis and interpretation of the data obtained from the interviews conducted with nurse educators during Phase 1. The literature control and a discussion of the findings are outlined.

Chapter 5: Action research process (Phase 2)

This chapter provides a detailed explanation of the action research process, Phase 2, of the study and includes the composition of the action research group, the various action research workshops held, and the four action research cycles. The final action plan is presented as well as the process that followed to co-construct the action plan.

Chapter 6: Evaluation of the action research process (Phase 3)

Chapter 6 discusses Phase 3 of the study. It includes the World Café approach which was utilised for the evaluation of the outcomes of the action research process.

Chapter 7: Conclusions, recommendations and limitations

This chapter concludes the study by providing a brief overview of the study that includes the conclusions, recommendations as well as the limitations of the study.

1.18 CONCLUSION

Chapter 1 introduced the study to the reader. It outlined the background to and rationale for the study, the research problem, the theoretical foundation and paradigm together with a clarification of the concepts. A brief overview of the research design and methodology and research setting was given. A description of the quality indicators and the ethical considerations was provided. Finally, the outline of the thesis was presented according to the seven chapters. Chapter 2 is dedicated to an in-depth review of available literature on adult learning, clinical reasoning and educational practices.

2: LITERATURE REVIEW

“...the answers you get from literature depend on the questions you pose.”

-Margaret Atwood-

2.1 INTRODUCTION

In this chapter, literature consulted on three phenomena, namely adult learning, clinical reasoning and educational practices is presented and discussed. Chapter 2 therefore serves three purposes. In the first place, it is a presentation and discussion of adult learning and andragogy. Secondly, it is an in-depth description of clinical reasoning. In the third place, it is an investigation of educational practices that may influence clinical reasoning skills and an exploration of various teaching and learning strategies.

The researcher conducted an extensive electronic search of the literature utilising search engines such as the EBSCO Host Research databases, CINAHL, Science Direct and Google Scholar. The search terms used in different combinations were: adult learning/andragogy, clinical reasoning, student-centred teaching and learning strategies, nursing curriculum and nursing education which revealed a vast number of articles. Relevant articles were identified and cited throughout this chapter.

2.2 ADULT LEARNING (ANDRAGOGY)

“...the art and science of helping adults learn...”

-Malcolm Knowles-

Crookes, Crookes and Walsh (2013:239) as well as Daily and Landis (2014:2066) cite Malcolm Knowles (1984) who defines andragogy as “the art and science of helping adults learn”. The adult learning theory or andragogy is based on six assumptions (refer to Section 2.2.3). The perception is that adult students, thus including nursing students, are more motivated to learn when the learning will help them to perform tasks or deal with problems in their work. They also learn most effectively when knowledge is presented in the context of

application to real life situations (Burke, Barker and Marshall 2012:52). When teaching adults, it is important for the educator to recognise the essential characteristics of adult students and how these characteristics define their learning priorities and activities (Mahan and Stein 2014:141). Modern day students are typically non-traditional; they come from diverse cultural backgrounds and require teaching and learning strategies that focus on skill attainment to reinforce critical thinking and problem-solving (Stanley and Dougherty 2010:379).

2.2.1 HISTORICAL OVERVIEW

Between the 7th and 12th centuries, pedagogy was the only model of assumptions related to learning as well as student characteristics on which educators could base their teaching practices. Pedagogy evolved from the monastic schools of Europe and came to dominate secular schools and universities as these started to appear towards the end of the 12th century (Knowles 1970:40). The term pedagogy derives from two Greek words: paid meaning 'child' and agogus meaning 'leader of' – thus, literally meaning leader of child which translates into the “art and science of teaching children” (Ozuah 2005:83). Pedagogical assumptions about learning and students originated from observations made by monks when teaching young children relatively simple skills (mostly reading and writing) (Knowles 1970:40). The first assumption made related to the dependent personality of the student; by implication, a student could not know his or her own learning needs. The second assumption was that learning needed to be subject-centred. The third assumption emphasised extrinsic motivation as the most important driving force for learning. Therefore, students had to be motivated by rewards and punishment; this assumption was therefore embedded in the praise versus penalty tenet. The final assumption of pedagogy was that any prior experience of the student was irrelevant, the educator need not consider the student’s prior experience (Ozuah 2005:83). With the spreading of elementary schools throughout Europe and North America later during the 18th and 19th centuries, pedagogy was adopted, adapted and reinforced because it was the only educational model at the time (Knowles 1970:40; Ozuah 2005:83) and was fundamentally a teacher-centred model (Ozuah 2005:83).

The term ‘andragogy’ was originally formulated by the German teacher, Alexander Kapp, in 1833 (Nikolova, Zafirova-Malcheva, Stefanova and Boytchev 2013:156). The terminology never quite caught on until 1926 when Eduard Lindeman wrote extensively about andragogy

(Ozuah 2005:83). Andragogy, meaning ‘man’, is contrasted with pedagogy, meaning ‘child’ and *agogus* meaning ‘leading’ (Knowles 1973:43). Crookes, et al. (2013:239) refer to Knowles’ (1984) suggestion that andragogy is “the art and science of helping adults learn”. Several adult learning theories originated from within the organisational development field in the 1950s and 1960s as organisational development practitioners created new learning models because traditional higher education pedagogical models did not work well in the working environment (Kenner and Weinerman 2011:88).

Beginning in 1959, Malcolm Knowles expanded on the work of Eduard Lindeman. Extensive work by Knowles and other educators resulted in the development of new assumptions about adult students (Ozuah 2005:83). Pedagogy and andragogy are not mutually exclusive paradigms. Andragogy contains an appreciation and acceptance of pedagogy, which is an appropriate approach in situations where adult students are truly dependent and have no relevant prior experience (Ozuah 2005:84). As early as 1970, Knowles acknowledged that concepts of andragogy were applicable in the education of children. He wrote that andragogy is simply another model of assumptions about students used alongside the pedagogical model of assumptions applied within a given situation (Knowles 1970:43). However, practitioners of andragogy would gradually move students away from the dependency of pedagogy towards increasing autonomy and self-direction (Ozuah 2005:84).

2.2.2 ADULT LEARNING THEORIES

Several learning theories described in literature may help to understand aspects of adult learning (Ozuah 2005:85). According to Ozuah (2005:85), the five main theories are the behavioural theory, cognitive theory, constructivist theory, developmental theory, and the humanistic theory. These five learning theories are briefly discussed in Sections 2.2.2.1 to 2.2.2.5.

2.2.2.1 Behavioural theory

The goal of learning is a change in observable behaviour (Ozuah 2005:85). According to Palis and Quiros (2014:115), stimuli in the environment can produce changes in behaviour. The behavioural theory prescribes the educator writes the learning objectives, provides the

stimulus, asks for student responses, and provides reinforcement to adult students. The educator is therefore in control of the learning process (Ozuah 2005:85).

2.2.2.2 Cognitive theory

With the cognitive theory, learning focuses on mental and psychological processes and the perception and processing of information, and not on behaviour (Palis and Quiros 2014:115). The goal of cognitive theory is the acquisition of usable knowledge and problem-solving expertise (Ozuah 2005:85). Cognitive theories consider learning and thinking as social activities taking place in a community and influenced by the situation at hand (Palis and Quiros 2014:115). The educator attempts to connect new concepts to old ones and is concerned with the thought process of the student (Ozuah 2005:85).

2.2.2.3 Constructivist learning theory

Learning is the acquisition of a shared understanding and the development of the process of knowledge acquisition. The educator together with students develops the objectives and grounds the learning in practical experiences (Ozuah 2005:85). In the constructivists' view, students generate knowledge and meaning best when they have experiences that lead them to realise how new information fits into their current understanding of a concept or idea; this theory is at the heart of all active student-centred learning (Slavich and Zimbardo 2012:572). Constructivists agree the student, rather than the educator is central to creating knowledge and gaining knowledge is an active process (Botma, Brysiewicz, Chipps, Mthembu and Phillips 2014:16-17).

2.2.2.4 Developmental theory

The goal of learning is the achievement of each student's maximum potential. The learning objectives are based on norms, appropriate behaviours, and skills or knowledge for specific levels or stages of development. The educator determines the student's stage and responds appropriately (Ozuah 2005:85).

2.2.2.5 Humanistic theories

Humanistic theories centre on the student. These theories focus on an individual's potential for self-actualisation, self-direction and internal motivation (Palis and Quiros 2014:115). Based on the assumption that inherently people have a natural tendency to learn, the goal of humanistic theories is to satisfy the students' need for professional and personal growth (Ozuah 2005:85). It includes the explanation of adults' motivation and disposition to learning as well as self-directed learning – the suggestion that students can plan, conduct and assess their own learning (Palis and Quiros 2014:115).

Each of the learning theories has some applicable position in adult education. For example, the humanistic theory lends itself to problem-based learning and self-understanding whereas behaviourism seems to be more relevant in the teaching of practical, specific skills (Ozuah 2005:86). Andragogy is clearly the best known of these theories (Ross-Gordon 2011:28.; Goddu 2012:170). Malcom Knowles is credited for bringing this theory to attention in North America – though he acknowledged its previous European origins – and it is one of the most enduring and widely cited theories of adult learning (Ross-Gordon 2011:28). In spite of the differences between the various learning theories, several areas of agreement exist. Ozuah (2005:86) mentions some examples: the significance of having clear goals and objectives, the progression of learning from simple to more complex and abstract, active student participation, and the importance of reinforcement and feedback. Daily and Landis (2014:2065) state although many models to explain adult learning exist, the best known is andragogy as described by Malcolm Knowles and which is based on five assumptions.

2.2.3 ASSUMPTIONS OF ANDRAGOGY

According to Applin, Williams, Day and Buro (2011:130), adult education literature suggests adult students are self-directed, problem-centred, and filled with a sense of need to learn useful information. In 1973 Malcolm Knowles argues in his book, the adult learner: a neglected species, that the andragogical theory is based on at least four assumptions that differ from pedagogy, namely changes in self-concept, the role of experience, readiness to learn, and orientation to learning (Knowles 1973:45-48). A fifth assumption added later gave rise to Knowles' (1980:58) view that adult learning is characterised by the five assumptions as discussed in Sections 2.2.3.1 to 2.3.3.5.

2.2.3.1 Self-direction

Adults are capable of self-direction (Knowles 1980:58; Nikolova, et al. 2013:156), take responsibility for their own actions, and resist having information imposed on them (Kenner and Weinerman 2011:88). In the opinion of Palis and Quiros (2014:116), educators should help their adult students to become self-directed students. They point out that adults possess the self-concept to take responsibility for their own decisions and their own lives and are therefore capable of self-direction. As a person matures, his or her self-concept moves from a dependent personality to that of a more self-directed personality (Daily and Landis 2014:2065).

2.2.3.2 Need to learn

Adults need to recognise the purpose of learning or the need to learn (Knowles 1980:58). According to Knowles (1980:58), adults will learn when they are ready. Adults have specific learning needs generated by their social roles and life events (Nikolova, et al. 2013:157). Palis and Quiros (2014:115) refer to Knowles' (1973) statement that adults need to know why they need to learn something before undertaking to learn it. Adults need to know how learning will be conducted, what learning will occur, and why learning is important. The readiness of an adult to learn is closely related to the development tasks of their social role and they need to know why they need to learn something (Daily and Landis 2014:2065). According to Mahan and Stein (2014:141), it is important when teaching adults to recognise their state of readiness to learn and their willingness to accept responsibility for learning as well as for generating valuable goals for their own learning.

2.2.3.3 Life experiences

Adults learn from their own life experiences (Knowles 1980:58; Nikolova, et al. 2013:156). They have an extensive depth of experience that serves as a critical component in the foundation of their self-identity (Kenner and Weinerman 2011:88). According to Boctor (2013:97), the educator is more the facilitator of learning than the one with all the knowledge. Considering this, the author suggests that nurse educators should empower adult students during the learning process and not expect them to take a passive role. An adult

accumulates a growing reservoir of experiences, which is a rich resource for learning (Daily and Landis 2014:2065).

2.2.3.4 Task, problem or inquiry-centred

Adults learn best if learning is task, problem or inquiry-centred (Knowles 1980:58). In other words, adults want to apply what they learn – whether it is a new skill or the acquisition of new knowledge (Nikolova, et al. 2013:156). The literature review conducted by Crookes, et al. (2013:242) corroborates the notion that adult nursing students need to be taught in a way that emphasises the practical use of the information they accumulate in the classroom so that they can become more engaged with the content. Adults will learn more effectively when new knowledge, skills, attitudes and values are presented in the context of their application to real life situations (Palis and Quiros 2014:116). As people mature, there is a change from future application to immediate application (Daily and Landis 2014:2065).

2.2.3.5 Motivation

Adults are motivated to learn by growth, accomplishment, curiosity and self-esteem (Knowles 1980:58). In the opinion of Boctor (2013:96), nurse educators must be challenged to use teaching strategies that maintain adult students' motivation to learn. The most potent motivations are internal rather than external (Daily and Landis 2014:2065). Effective educators of adults create a learning environment supportive to adult students; it should invite these students to engage with the content in ways that are meaningful and lead to intellectual and professional growth (Mahan and Stein 2014:142).

2.2.4 BEST PRACTICES FOR TEACHING ADULTS

Rosenstock (1921 cited in Nikolova et al. 2013:156) state adult education requires special educators, particular methods and a specific philosophy and refer to these special requirements collectively by using the term andragogy. Modern concepts of adult learning imply the role of the educator is not to transmit knowledge but to facilitate learning, encourage spontaneity, and engage in mutual inquiry. The adult learning theory holds that people learn new knowledge and skills most effectively when it is presented in the context of the application of new knowledge to real life situations. It proposes that because learning

cannot be separated from the context in which it is used, the best time to learn anything is when the material is immediately useful (Kassirer 2010:1119). The adult learning theory theorises that learning is best accomplished by repeated and deliberate exposure to real cases (Kassirer 2010:1118) in an authentic context (Postma and White 2015:75).

In teaching adults, seven key premises exist to guide adult teaching practices. Mahan and Stein (2014:142) report these premises are derived from the observations of researchers like Knowles (1970 cited in Mahan and Stein 2014:142) and Vella (2008 cited in Mahan and Stein 2014:142) who analysed the responses of adults in learning situations, explored their motives and reflections, and observed the most effective learning environments for adults. Table 2.1 provides a summary of the seven premises and practices to guide adult teaching.

Table 2.1 Summary of premises and practices in teaching adult students

PREMISE	PRACTICE
Adults bring what they have to the learning experience – they are all different; they are able and ready to work.	<ul style="list-style-type: none"> • Ask questions about their knowledge of the content. • Observe their knowledge/skills. • Listen to them define their ability.
Adults are accountable for their own learning. They choose to learn or not learn.	<ul style="list-style-type: none"> • Begin instruction with a problem relevant to the adult students. • Use stories to illustrate the importance of the problem.
Adults prefer to learn ‘here and now’. They prefer to apply new concepts immediately.	<ul style="list-style-type: none"> • Design collaborative, problem-solving activities as part of the learning process. • Suggest ways for new ideas to be used.
Adults learn best when they integrate learning with the rest of their lives.	<ul style="list-style-type: none"> • Have adult students do the work of learning. • Develop learning tasks not teaching tasks.
Adults learn best when fully engaged: motivation, attachment and emotions are important in the learning.	<ul style="list-style-type: none"> • Utilise combinations of the <i>Four Learning Tasks</i> in teaching and learning approaches: <ol style="list-style-type: none"> (i) Inductive tasks: clarify present understanding and issues with new content. (ii) Input tasks: address new content/tasks

PREMISE	PRACTICE
	<p>through discussion, dialogue, problem-solving and reflection.</p> <p>(iii) Implementation tasks: use new concepts/skills in a learning environment in meaningful activities.</p> <p>(iv) Integration tasks: apply what has been learnt to life and work – often after the teaching/learning activity.</p>
<p>Adults bring expectations of the educator to the encounter.</p>	<ul style="list-style-type: none"> • Devote time to understand the adult students' needs. • Create a collaborative learning climate.
<p>Adults learn to change, improve and develop new skills. The adult student should leave the learning encounter different for the effort.</p>	<ul style="list-style-type: none"> • Ask students what they have gained from the learning activity. • Survey students after the activity to assess knowledge gained or new behaviour acquired through the learning encounter.

Mahan and Stein (2014:143)

Cadorin, Suter, Dante, Williamson, Devetti and Palese (2012:153) state adult learning principles are becoming more popular in the education of healthcare professionals. Stacey, McGarry, Aubeeluck, Bull, Simpson, Sheppard, et al. (2014:147) mention it has been noted that adult students learn best by doing; they prefer group work, are self-motivated and respond better to student-centred teaching and learning strategies that encourage deep learning. Botma, et al. (2014:12) advocate for the use of the principles of andragogy and propose strategies that will enhance learning which they cite from Riggs (2010). In addition, they point out that present day adult students prefer informal learning environments, are self-directed and responsible, and learn best when practical application is encouraged. Table 2.2 provides a summary of the strategies to enhance learning based on the adult learning principles and adult student characteristics.

Table 2.2 Strategies to enhance learning

STUDENT CHARACTERISTICS	STRATEGIES
Contribute ideas.	<ul style="list-style-type: none"> • Encourage sharing of own ideas and experiences.
Use different learning styles.	<ul style="list-style-type: none"> • Identify and provide opportunities for visual, auditory and kinaesthetic adult students.
Prefer an informal atmosphere.	<ul style="list-style-type: none"> • Formal learning environment is discouraged. • Use smaller classroom settings.
Make learning self-motivated.	<ul style="list-style-type: none"> • Determine adult students' own outcomes and develop strategies to help them reach outcomes.
Accomplish self-directed and responsible learning.	<ul style="list-style-type: none"> • Enquire about adult students' experiences of what works and what does not.
Bring a wealth of knowledge to the learning setting.	<ul style="list-style-type: none"> • Incorporate experiences of adult students from the onset. • Allow adult students to contribute from their wealth of knowledge. • Allow for sharing personal stories of experiences.
Learn best when practical application is encouraged.	<ul style="list-style-type: none"> • Plan activities for learning sessions. • Make activities as authentic as possible.
Need to relate learning to the knowledge they already have.	<ul style="list-style-type: none"> • Implement knowledge already in place. • Build following knowledge on existing foundations.

Botma, et al. (2014:11)

According to Ellis (2016:67), student-centred teaching encompasses the principles of the adult learning theory to help develop self-efficacy and enhance critical thinking skills. This agrees with the statement of Applin, et al. (2011:129) that teaching strategies must be aligned with teaching and learning principles associated with adult education. Student-

centred teaching guides adult students to construct understanding using an interactive, social context and assists them with discovering content through actively processing it by using critical thinking and reflection (Ellis 2016:67). In student-centred teaching educators take into account the students' needs, abilities, interests and learning styles by making them active learners and giving them autonomy and control over content, learning methods and pace of study. For this reason, it encourages adult students for taking responsibility for learning and achieving skills to manage their own learning goals (Slavich and Zimbardo 2012:586). Some student-centred teaching and learning strategies include group work, role-play, class presentations, reflective journaling, case studies, debates, flipped classroom (Ellis 2016:67) class activities and fieldwork (Slavich and Zimbardo 2012:586).

In summary, nursing students are adult students involved in nursing programmes that require both a theoretical and clinical component and their skills far exceed the memorisation of facts and mere regurgitation of content. They should be lifelong learners who engage in reflective practice, self-critique, self-direction and who are able to synthesise information, apply knowledge and reason clinically (Botma, et al. 2014:21). Hence, nurse educators must utilise student-centred teaching and learning strategies based on the principles of adult learning to promote the development of adult student nurses' clinical reasoning skills.

2.3 CLINICAL REASONING

“...thinking that guides practice...”

-Joan Rogers-

The development and importance of clinical reasoning skills in nursing education cannot be over-emphasised. Nurses must have the ability to reason in clinical situations in order to provide optimal nursing care. Nursing students have to be assisted throughout their education and training to develop the needed clinical reasoning skills. Therefore, nurse educators must understand the importance of clinical reasoning and utilise teaching and learning approaches that will aid nursing students in the process of developing clinical reasoning skills (Levett-Jones, et al. 2010a:515).

2.3.1 HISTORICAL OVERVIEW

Clinical reasoning is not a new skill. In medical sciences, research on clinical reasoning has been conducted for decades. In the early 1970s two research groups in the United States of America (USA), one at the Michigan State University and the other at the McMaster University, started doing observational studies directed at understanding clinical problem-solving (Norman 2005:419). According to Harmon and Thompson (2015:64), during the 1960s clinical reasoning skills were incorporated into nursing education with the introduction of the nursing process. Khatami, MacEntee, Pratt and Collins (2012:1121) note at the beginning of the 1980s a growing interest emerged especially among nurses, occupational therapists and physiotherapists to interpret clinical reasoning.

Over the next few years, discussions on the topic seemed to dwindle; then, in recent years interest in clinical reasoning intensified in nursing education. In their book *Educating Nurses: A call for radical transformation*, Benner, et al. (2010:85) suggest to nurse educators to make four mind shifts in their thinkings about nursing education. Firstly, to shift the focus from covering decontextualised knowledge to emphasising teaching for a sense of salience, situated cognition and action in particular situations. Secondly, shifting from a sharp separation of clinical and classroom teaching to an integrated classroom and clinical teaching manner and, thirdly, making a shift from placing emphasis on critical thinking to an emphasis on clinical reasoning and multiple ways of thinking. Finally, to make a shift from emphasising socialisation and role taking to instead focus on formation (Benner, et al. 2010:82-7). They also lay a clear foundation for what must be done to change the paradigm of nursing education which has not kept up with the need to prepare student nurses to “think like a nurse” in clinical practice by emphasising clinical reasoning (Rischer 2013:para. 2). Hence, clinical reasoning is considered to be an essential component of competence and the importance for nurse educators to utilise teaching and learning approaches that encourage the development of clinical reasoning skills is stressed (Banning 2008a:181; Levett-Jones, et al. 2010a:515).

2.3.2 DEFINING CLINICAL REASONING

Banning’s (2008a:177) short and concise definition of clinical reasoning sums it up as “the process of applying knowledge and expertise to a clinical situation to develop a solution”.

However, various different definitions of clinical reasoning are found in the literature. According to Benner, et al. (2010:85), clinical reasoning is the ability to reason as the clinical situation changes by taking into account the context and concerns of the patient and the family. Simmons (2010:1155) explains clinical reasoning is context-dependent and domain-specific, incorporating knowledge unique to nursing within a specific practice setting. According to Rischer (2013:para. 10), the essence of clinical reasoning is the ability of the nurse to reason or think as the situation changes while Benner, et al. (2008:89) state “clinical reasoning stands out as a situated, practice-based form of reasoning that requires a background of scientific and technological research-based knowledge about general cases”. Clinical reasoning stands at the core of the medical profession and is defined as the set of complex thought- and decision-making processes underlying clinicians’ choices and actions in problem-solving contexts (Audétat, Lubarsky, Blais and Charlin 2013b:42). The stance of Delany and Golding (2014:1) is that clinical reasoning is fundamental to all forms of healthcare practices and involves gathering information as well as deciding on actions specific to the patient’s circumstances; it combines cognitive strategies such as analysis and problem-solving.

In the literature the terms ‘clinical reasoning’, ‘clinical judgement’, ‘problem-solving’, ‘decision making’ and ‘critical thinking’ are often used interchangeably (Norman 2005:418; Levett-Jones, et al. 2010a:516; Victor-Chmil 2013:36; Harmon and Thompson 2015:64). Clinical reasoning is the way clinicians think about problems they deal with in clinical practice (Elstein and Bordage (1991) cited in Levett-Jones, et al. 2010a:516). It involves clinical judgements (deciding what is wrong with the patient) and clinical decision making (deciding what to do). Clinical reasoning is dependent upon a critical thinking disposition and is influenced by a person’s attitude, philosophical perspective and preconceptions (Levett-Jones, et al. 2010b:15). It is the understanding of Victor-Chmil (2013:36) that critical thinking means “the cognitive processes used for analysing knowledge based on evidence and science”. In her view as well as that of Benner, et al. (2008:2) critical thinking is a key skill or process integral to clinical reasoning. However, it is the opinion of Alfaro-Lefevre (2013:8) that there is a slight difference on how nurses use these terms as shown below.

- **Critical thinking** is a broad term and includes reasoning both inside and outside of the clinical setting. Clinical reasoning and clinical judgement are key pieces of critical thinking in nurses.

- **Clinical reasoning** is a specific term and usually refers to ways of thinking about patient care issues (determining, preventing and managing patient problems). For reasoning about other clinical issues, for example, teamwork, collaboration and streamlining workflow nurses usually use the term ‘critical thinking’.
- **Clinical judgement** refers to the result (outcome) of critical thinking or clinical reasoning – the conclusion, decision or opinion made.

Figure 2.1 illustrates the differences between critical thinking, clinical reasoning and clinical judgement.

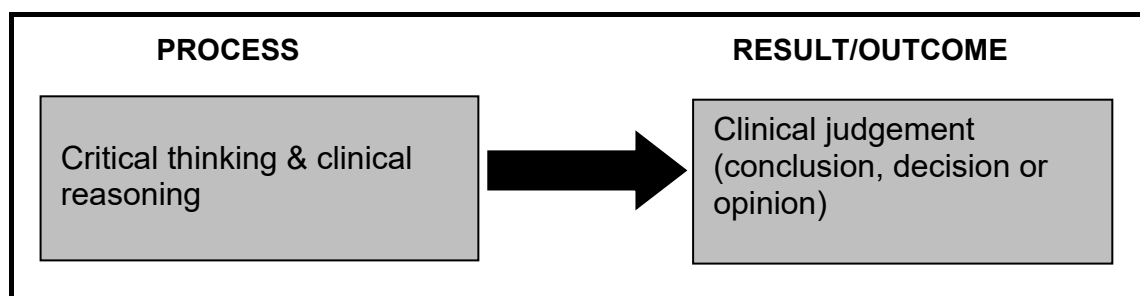


Figure 2.1 Differences between critical thinking, clinical reasoning and clinical judgement (Alfaro-Lefevre 2013:13)

2.3.3 VALUE OF CLINICAL REASONING

Gazarian and Pennington (2012:210) suggest nurses need to be educated differently in order to practice to their full potential in an increasingly difficult work environment. The healthcare environment can be chaotic and complex; nurses are responsible for the patients’ safety as they move through healthcare encounters (Jensen 2013:23). “Failure to rescue” which is defined as the mortality of patients who experience a hospital-acquired complication, is directly related to the quality of nursing care and nurses’ clinical reasoning skills (Levett-Jones, et al. 2010a:516). Therefore, a vital skill nurses need to have for safe patient care is the ability to reason clinically (Jensen 2013:23). Nurse educators must provide learning experiences that will ensure students do not only use and apply knowledge but also think in the complex, high-risk practice environment (Gazarian and Pennington 2012:210).

Present day healthcare necessitates the effective use of clinical reasoning especially for complex situations while the ability to make clinical decisions is vital to achieve positive

patient outcomes (Forsberg, Ziegert, Hult and Fors 2014:538). As the acuity of hospitalised patients and the prevalence of chronic illness increase, so does the need for nurses who are able to think clinically and make sound clinical judgements that support the complex care needs of patients (Lasater 2011:86). Improving the quality of nursing care depends in part on improving the decision and judgement skills of nurses and their clinical reasoning ability (Thompson and Stapley 2011:882). Utilising teaching strategies designed to expose students to clinical situations may aid in closing the gap between education and practice (Gazarian and Pennington 2012:212). In fact, Lasater (2011:86) raises two very important questions, namely ‘are there ways to educate nurses so they are better prepared for practice?’ and ‘how can nurse educators foster better clinical thinking?’

2.3.4 THE CLINICAL REASONING CYCLE

The clinical reasoning cycle model developed by Levett-Jones, et al. (2010a:517) is illustrated in Figure 2.2. It highlights the ongoing and cyclical nature of clinical interventions and the importance of evaluation and reflection. There are eight main steps in the clinical reasoning cycle, namely look, collect, process, decide, plan, act, evaluate and reflect. However, it is important to note the steps merge and the boundaries between them are often unclear. It is also important for students to learn to recognise, understand and work through each step rather than make assumptions about patient problems and initiate interventions which have not been adequately considered.

According to Levett-Jones, et al. (2010b:15), “clinical reasoning is a process by which nurses collect cues, process the information, come to an understanding of a patient’s problem or situation, plan and implement interventions, evaluate outcomes, then reflect on and learn”. The clinical reasoning cycle has application for classroom teaching and provides a structure that links well with problem-based and inquiry-based learning. The steps in the cycle are appropriate for self-directed learning and can be used to develop case studies (Levett-Jones, et al. 2010a:516). Clinical reasoning is a dynamic process and nurses often combine one or more steps or move back and forth between them before reaching a decision, taking action and evaluating outcomes (Levett-Jones, et al. 2010b:15). According to Forsberg, et al. (2014:538) the clinical reasoning cycle is dependent on a critical thinking approach and is influenced by attitudes and philosophical perspectives. Each step of the clinical reasoning cycle as presented in Figure 2.2 is briefly discussed in Sections 2.3.4.1 to 2.3.4.8.

Bearing in mind the eight main steps of the clinical reasoning cycle of Levett-Jones, et al. (2010a:517), Step 1 (look) is situated at the top of the circle and presented as Consider the patient in the colour red. Clockwise, Step 2 (collect) is Collect cues/information in an orange colour and followed by Step 3 (process) noted as Process information in yellow. This is followed by Step 4 (decide) as Identify patient problems/issues in green. In the middle at the bottom of the circle, Step 5 (plan) in turquoise is to Establish goals/s. Moving up on the left hand side the light blue colour refers to Step 6 (act) meaning Take action with Step 7 (evaluate) or Evaluate outcomes in dark blue above it. Finally, Step 8 (reflect) is indicated in purple and represents Reflect on process and new learning.

2.3.4.1 Consider the patient (Step 1)

In Step 1 (look), information about the patient including contextual facts is described (Hoffman, Dempsey, Levett-Jones, Noble, Jeong, Hunter, et al. 2011:588). The recognition of cues is the fundamental basis of clinical reasoning. Cues are identifiable physiological or psychological changes experienced by the patient, perceived through history or assessment in relation to a specific body of knowledge and philosophical beliefs (Levett-Jones, et al. 2010a:517).

2.3.4.2 Collect cues/information (Step 2)

In the second step (collect), cues or information about the patient are collected, then reviewed with recalled knowledge (Hoffman, et al. 2011:588). Cues also refer to available patient information such as handover reports, patient history forms, patient charts, results of investigations, and nursing and medical assessments. Nursing students need help and must be assisted to understand how to pay attention to relevant cues, how cues shape clinical decisions, and the connection between cue collection and patient outcomes (Levett-Jones, et al. 2010a:517). This step requires that students view past and current patient charts as well as the patient history and collect information about the patient (Hoffman, et al. 2011:590).

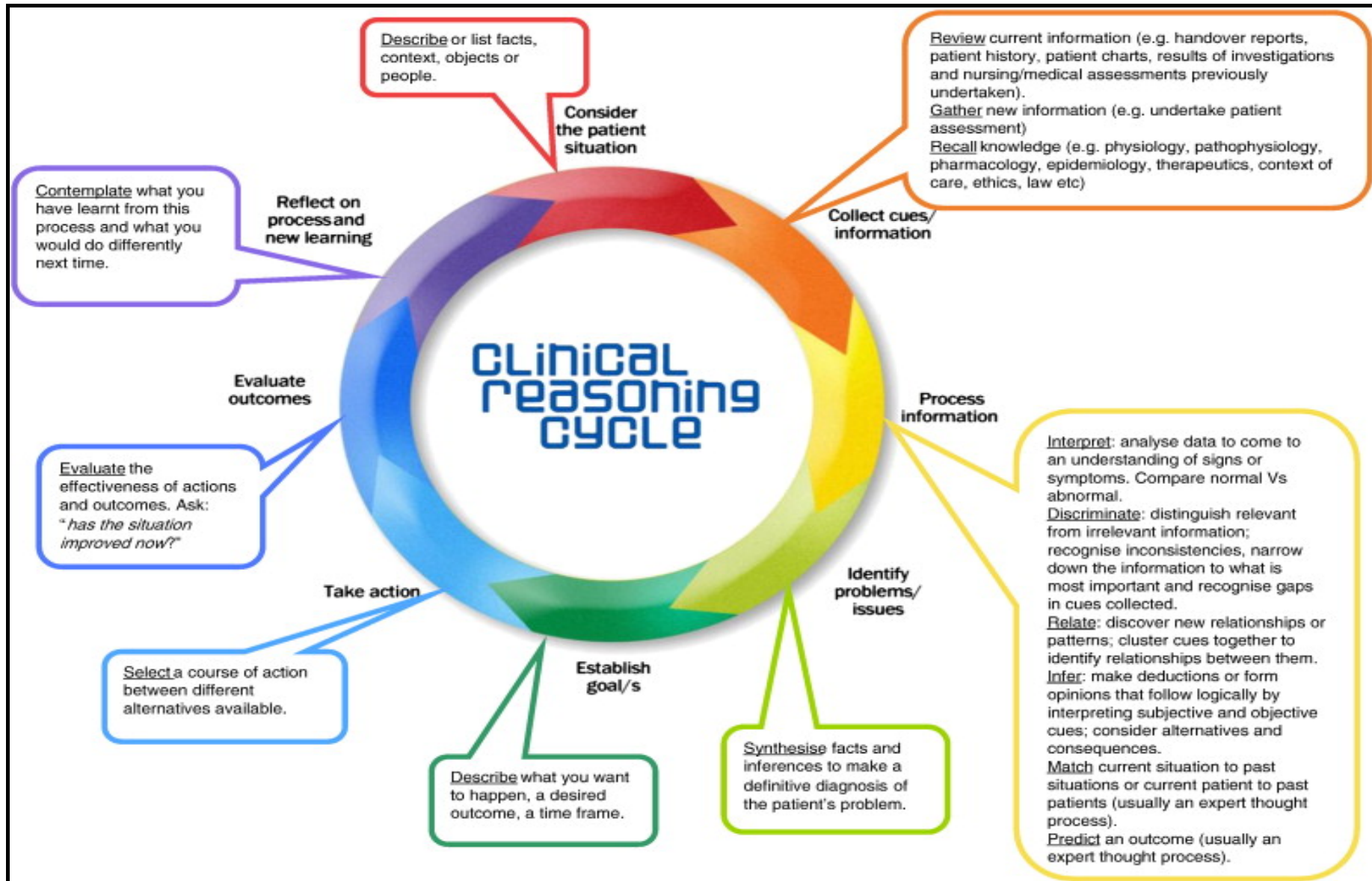


Figure 2.2 Clinical reasoning cycle with descriptors by Levett-Jones, et al (2010a:517)

2.3.4.3 Process information (Step 3)

The third step (process), is the processing of information and consists of reasoning skills such as discriminating, relating, inferring, interpreting and predicting to process the cues collected (Hoffman, et al. 2011:588).

2.3.4.4 Identify patient problems/issues (Step 4)

Step 4 (decide) involves identifying patient issues or problems (Hoffman, et al. 2011:588). Nursing students need to learn how to identify and prioritise patients in need of immediate care. They also need to be taught how to synthesise facts to make a definitive nursing diagnosis, identify clinically at-risk patients and how to select a course of action (Levett-Jones, et al. 2010a:518).

2.3.4.5 Establish goals (Step 5)

Step 5 (plan) involves the setting of goals for care (Hoffman, et al. 2011:588). It describes what the nurse wants to happen, the desired outcome and a timeframe (Levett-Jones 2009:7).

2.3.4.6 Take action (Step 6)

The sixth step (act) means taking action. This involves implementing nursing interventions (Hoffman, et al. 2011:588). Nursing action is defined by Levett-Jones, et al. (2010a:517) as the behaviour following on from a judgement or decision. The nurse selects a course of action between the different alternatives available (Levett-Jones 2009:7).

2.3.4.7 Evaluate outcomes (Step 7)

The seventh step (evaluate) involves evaluating the outcomes of the implemented actions (Hoffman, et al. 2011:588). Nurses evaluate the effectiveness of the outcomes and actions (Levett-Jones 2009:8).

2.3.4.8 Reflect (Step 8)

The last step, Step 8 (reflect), includes reflection-on-action (Hoffman, et al. 2011:588). Nurses contemplate what they have learnt from this process and what they could have done differently (Levett-Jones 2009:8).

2.3.5 TYPES OF CLINICAL REASONING

Different types of clinical reasoning were identified in occupational therapy literature, namely narrative, interactive, procedural, pragmatic and conditional reasoning (Neistadt 1996:677). Although this is not a recent study, I recognised the relevance of the different types of clinical reasoning and its applicability to nursing education and therefore decided to include this work in the review. The different types of clinical reasoning are discussed in Sections 2.3.5.1 to 2.3.5.5.

2.3.5.1 Narrative reasoning

Narrative reasoning deals with the patient's story and focuses on the process of change needed to reach an imagined future. Asking students to write narratives about a patient will help students appreciate that we all live and create our own life stories every day and those life stories can change and be altered unexpectedly by illness or disability (Neistadt 1996:677). Narrative reasoning outcomes are the result of the communication of the therapist with all involved parties (Ryan and Gorman 2014:19). In addition, Hess and Ramugondo (2014:235) state narrative reasoning is using one's own belief and assumption to understand, interpret, and encourage a patient or client to revise their life stories positively in spite of challenges. This reasoning helps students understand the perspective of a problem and expectations for treatment as perceived by the patient (Khatami, et al. 2012:1121).

2.3.5.2 Interactive reasoning

Interactive reasoning deals with how patients' conditions or diseases affect them and focuses on the patient as a person. It also deals with the therapeutic relationship the therapist forms with the patient and his or her caregivers. Students can use journals and reflective papers to become aware of their feelings as well as the capabilities and the feelings of their patients

(Neistadt 1996:677). Situated in a practice setting, clinical reasoning occurs within social relationships or situations involving the patient, family, community and the team of healthcare providers (Benner, et al. 2008:3). According to Ryan and Gorman (2014:19), interactive reasoning is the decisions made about the style of interpersonal communication approaches. It requires therapists to be aware of how their feelings and actions may impact on their patients or clients (Hess and Ramugondo 2014:235).

2.3.5.3 Procedural reasoning

Procedural reasoning entails identifying problems and implementing care strategies via systematic gathering and interpreting of patient data. It typically involves hypothesis generation and testing. Giving students case studies and questioning students will help to teach them procedural reasoning (Neistadt 1996:677). It further involves decisions about tests, measures or interventions (Ryan and Gorman 2014:19).

2.3.5.4 Pragmatic reasoning

Neistadt (1996:677) states pragmatic reasoning considers the treatment environment, the therapist's values, knowledge, abilities and experience. Eva (2005 cited in Norman 2005:423)_emphasises that reasoning ability is not a "trait" that can be assigned to an individual. Indeed, the context within which a problem is addressed has a major impact on the accuracy of the decisions reached. Pragmatic reasoning addresses the context as well as the therapist's competency and ability (Hess and Ramugondo 2014:235).

2.3.5.5 Conditional reasoning

Conditional reasoning engages ongoing revision of treatment to meet the patient's needs and focuses on the patient (Neistadt 1996:677). It takes into account the "whole condition" of a patient or client (Hess and Ramugondo 2014:235). This helps students to explore the source of problems, envision the problems that could arise in the future, and evaluate the possible outcomes of their selected intervention (Khatami, et al. 2012:1121).

2.3.6 THINKING STRATEGIES UTILISED DURING CLINICAL REASONING

To fully understand clinical reasoning, it is necessary to explore several existing types of reasoning and the processes of cognition and metacognition involved in reasoning. Reasoning involves intellectual ability, drawing conclusions, forming judgements and making inferences based on evidence, education and experience (DeBourgh 2008:77). In the opinion of Audétat, et al. (2013b:42), clinical reasoning requires a range of cognitive, metacognitive, emotional, and reflective thinking as well as relational skills. As stated by Banning (2008a:178), clinical reasoning depends on the development of cognition and metacognition. The development of good thinking habits, which support clinical reasoning, is embedded in skills which nurse educators can teach to promote students' ability to clinically reason. In addition, students need to master the cognitive and metacognitive thinking skills that support clinical reasoning (Kuiper, Pesut and Kautz 2009:76).

2.3.6.1 Cognition and metacognition

Simply put, metacognition is “thinking about thinking” (Banning 2008a:178) or the “process of thought” (DeBourgh 2008:77) and cognition is “thinking” (Banning 2008a:179). Both are linked to the process of clinical reasoning. Metacognition refers to higher order thinking processes that involve the active control of cognitive (thinking) processes (Banning 2008a:178). According to Kassirer (2010:1122), metacognition is a method of introspection in which one is supposed to contemplate or reflect on one's own thinking.

2.3.6.2 Dual process theory

Clinical reasoning is based on the “dual process theory”, a mixed cognitive model of clinical reasoning involving both analytical (hypothetical-deductive) and non-analytical (pattern recognition) or intuitive processes (Kassirer 2010:1119; Audétat, Laurin, Sanche, Béïque, Fon, Blais, et al. 2013a:e984; Postma and White 2015:79). The dual-process theory largely stems from work done in the mid-1990s in the field of cognitive psychology and, according to this approach, two cognitive systems are used to reason: an intuition system and analytical system (Pelaccia, Tardif, Tribby and Charlin 2011:2).

- ***Intuition system***

The first system, “intuitive” (also referred to as “tacit” or “experiential”) by Pelaccia, et al. (2011:2) is a reflex system of which the trigger occurs in automated mode. The intuitive component is instinctual and reflexive, requires no input from the analytical system and responds to domain relevant stimuli. The intuitive component is characterised by first impressions, quick pattern recognition, and rapid responses to information (Kassirer 2010:1120). It uses information that is readily available, in particular visual, and operates on the principle of recognition (Pelaccia, et al. 2011:2). Intuition seems to be effortless and autonomous, requires little or no awareness or active thought, can be influenced by affect and emotions, and is activated in conditions of considerable uncertainty (Kassirer 2010:1120). In the medical literature, intuition is sometimes compared with “gut feelings” (Pelaccia, et al. 2011:2).

In practice, experienced nurses engage in clinical reasoning periods during each encounter with a patient. Experienced nurses may enter a patient’s room and immediately collect data, draw conclusions and implement appropriate nursing actions. Because of experienced nurses’ knowledge, skill and experience they may appear to perform these processes in a way that seems automatic or instinctive and they may find it difficult to verbalise their thinking and explain cognitive processes that seem tacit and implicit. This automatic or instinctive processing is believed to occur as memory retrieval becomes faster from repeated practice (Levett-Jones, et al. 2010a:516). The exclusive use of non-analytical methods may not be beneficial as it could lead to misconceptions and misdiagnosis if alternatives are not considered (Postma and White 2015:79).

- ***Analytical system***

Pelaccia, et al. (2011:2) describe the second system as “analytical”, “deliberate” and “rational”. The analytical components are deliberate study problem-solving processes that consciously and mindfully consider alternatives and options. The analytical component requires considerable cognitive work, is slower than the intuitive component and is solidly based on science, logic, inference, causality, probabilistic associations, and decision making (Kassirer 2010:1120; Pelaccia, et al. 2011:2). In the view of Postma and White (2015:79), the analytical process of hypothetical-deductive reasoning is hypothesis driven: hypotheses are either accepted or rejected in the thinking process which in any case requires forward and

backward thinking. It can therefore be stated both analytical and non-analytical cognitive strategies must be developed for effective clinical reasoning.

2.3.7 EVALUATING CLINICAL REASONING

Evaluating nursing students' use of clinical reasoning skills can be challenging, especially in actual patient care situations (Jensen 2013:23). According to Rochmawati and Wiechula (2010:245), it is difficult to determine a causative link between the educational strategies used to develop clinical reasoning on the one hand and improved patient outcomes on the other. However, a range of measures has been used to investigate the impact of these educational strategies. Various measures or means to evaluate clinical reasoning are briefly discussed in Sections 2.3.7.1 to 2.3.7.4.

2.3.7.1 Script Concordance Test

Lubarsky, Charlin, Cook, Chalk and van der Vleuten (2011:330) write the Script Concordance Test (SCT) was originally developed for use in medical education. In confirmation, Lubarsky, Dory, Duggan, Gagnon and Charlin (2013:184) ascertain the SCT is extensively used in medical schools to evaluate the clinical reasoning skills of medical students. Dawson, Comer, Kossick and Neubrandner (2014:281) concede the SCT is a relatively new concept in nursing education. In fact, current literature evidences to date the SCT has only been utilised by Deschênes, Charlin, Gagnon and Goudreau (2011:381) and Dawson, et al. (2014:281) and both research teams validated its use in nursing education. Piovezan, Custódio, Cendoroglo, Batista, Lubarsky and Charlin (2012:1946) and Lubarsky, et al. (2013:184) concur that the SCT is an assessment tool designed to evaluate clinical data interpretation that is an important element of clinical reasoning under uncertainty. Fournier, Demeester and Charlin (2008:2) agree with the previous authors but add the SCT can be used to evaluate clinical reasoning by comparing the responses of examinees with those of experts.

In the view of Duggan and Charlin (2012:1), although quite a new tool, the SCT is designed to evaluate a specific but an important element of clinical reasoning, namely clinical data interpretation. Agreeing with the view of Duggan and Charlin (2012:1), Piovezan, et al. (2012:1947) opine the SCT may be useful for monitoring and evaluating script development

and clinical reasoning in situations that may be encountered in real life practice. The SCT scores are meant to measure the degree of concordance between the performance of examinees and that of the reference panel, which is a group of experts on the related content measured (Charlin, Gagnon, Lubarsky, Lambert, Meterissian, Chalk, et al. 2010:181). In an SCT, examinees are presented with brief clinical scenarios followed by a series of questions looking for judgements about diagnostic possibilities or management options when new elements of information are provided (Lubarsky, et al. 2013:184). The SCT is based on script theory from cognitive psychology and is a method for evaluating reasoning under ambiguous situations (Piovezan, et al. 2012:1946).

Dawson, et al. (2014:281) conducted a tool validation study with the purpose of providing additional evidence of the validity and reliability of utilising the SCT in nursing education to measure clinical reasoning skills. Internal consistency was evaluated by using Cronbach's alpha. It was found to be 0.855 which met the reliability factor of >0.80 . Pearson's coefficient for the strength between items measured 0.90 and was found to be >0.50 indicating the strength between associations was high. The *t*-test comparison of the means revealed a significant difference in the means between the panels' and the students' score. Dawson, et al. (2014:281) concluded in their findings that the SCT provides a reliable, standardised and easy way to administer a method of evaluating clinical reasoning in nursing students.

2.3.7.2 Lasater Clinical Judgement Rubric

The Lasater Clinical Judgement Rubric (LCJR) is an objective measure of nursing students' clinical reasoning skills (Jensen 2013:23). The LCJR was developed by Lasater (2007 cited in Lasater 2011:87) and was based on Tanner's (2006) Clinical Judgement Model which outlines the process of clinical reasoning and clinical judgement (Jensen 2013:23). The LCJR serves as a tool to help educators foster the development of clinical judgement (Lasater 2011:87).

2.3.7.3 California Critical Thinking Disposition Inventory and the Health Science Reasoning Test

The California Critical Thinking Disposition Inventory (CCTDI) measures respondents' attitudes towards the use of knowledge and their disposition towards critical thinking (Paans,

Sermeus, Nieweg and Van Der Schans 2010:236). It contains 75 declarative statements which can be completed in 20 minutes (Rochmawati and Wiechula 2010:245). The Health Science Reasoning Test (HSRT) evaluates the reasoning capacity of healthcare and nursing professionals (Paans, et al. 2010:236). Various studies show a sufficient degree of validity and reliability for the CCTDI. Reliability was quantified by Cronbach's alpha and was 0.90 for the entire instrument (Paans, et al. 2010:236). The CCTDI has seven subscales: truth-seeking, open mindedness, analyticity, systematicity, critical thinking, self-confidence, inquisitiveness and cognitive maturity (Rochmawati and Wiechula 2010:245). The HSRT can be used to determine students' reasoning skills. According to Paans, et al. (2010:237), various studies show a sufficient degree of validity and reliability for the HSRT. Overall, the reliability quantified by Cronbach's alpha was 0.81.

2.3.7.4 Diagnostic Thinking Inventory

The Diagnostic Thinking Inventory (DTI) is an instrument designed to quantitatively measure diagnostic ability (Findyartini, Hawthorne, McColl and Chiavaroli 2016:para. 10) and to determine the level of expertise of clinical reasoning (Rochmawati and Wiechula 2010:245). It consists of 41 questions and can be divided into two subscales: flexibility in learning and structure of memory (Rochmawati and Wiechula 2010:245; Findyartini, et al. 2016:para. 10). The reliability of the DTI was 0.84 when it was tested for physiotherapy students (Rochmawati and Wiechula 2010:245). According to Findyartini, et al. (2016:para. 10), the DTI results reflect students' level of expertise in diagnostic reasoning, which is part of clinical reasoning.

2.4 EDUCATIONAL PRACTICES

“If a student can't learn the way we teach, maybe we should teach the way they learn.”

-Ignacio Estrada-

Skilled nursing practice requires thinking skills for clinical reasoning and decision making; hence, the development of thinking skills is essential in nursing education because it prepares students to use thinking and problem-solving skills to analyse situations and make decisions relevant to patient care (Marchigiano, Eduljee and Harvey 2011:144). Nurse educators need to focus on content that will meet the challenges new graduates encounter,

the new ways of learning and new ways of actively engaging students. These educators are encouraged to move away from content-driven curricula and integrate innovative student-centred teaching and learning strategies as no singular teaching strategy will address the learning needs of every student (Murphy, Hartigan, Walshe, Flynn and O'Brien 2011:e142). Teaching and learning strategies must also be aligned with teaching and learning principles associated with adult education (Applin, et al. 2011:129). This section will address the challenges experienced by nurse educators and the different teaching and learning strategies.

2.4.1 CHALLENGES EXPERIENCED BY NURSE EDUCATORS

The challenges nurse educators experience in using teaching and learning strategies that promote clinical reasoning skills in nursing education are outlined briefly. Horsfall, Cleary and Hunt (2012:930) are of the opinion that the limited willingness, commitment and determination of nurse educators to reflect critically on the educational practices utilised is widespread and problematic. Their opinion is confirmed by the similar but more recent stance of Botma, et al. (2014:16) who state a change in the attitude of the educator is required. This change of attitude is not only a concern regarding the educator's teaching method or strategy but includes the reflection on one's own pedagogy that provides the foundation for effective teaching processes and authentic teacher confidence (Horsfall, et al. 2012:931). According to Palese, Saiani, Brugnolli and Regattin (2008:1285), very little is known about the complexity of teaching strategies because they are made up of several components. They quote examples such as the educators' questioning abilities, the value of the setting, the impact of the environment, the expertise of the educator, and the impact of the faculty's or department's philosophy of learning. Moreover, teaching strategies cannot be standardised but depend on multiple factors which are difficult to control and further hampers the utilisation of teaching and learning strategies that promote clinical reasoning.

According to Benner, et al. (2010:14) and Rischer (2013:para. 4), the problem lies within the classroom. These authors are of the opinion that nurse educators cover too much theory content not contextualised to practice. Lecture-based learning does not engage students with clinical realities and classroom theory is fragmented and poorly integrated with clinical practice (Rischer 2013:para. 5). The emphasis on teaching more and more content in the classroom instead of focusing on applying acquired knowledge in practice is perceived by

both Del Bueno (2005:281) and Allen (2013:3) as a problematic issue associated with lecture-based learning. Benner, et al. (2010:14) advocates for nurse educators to refrain from utilising only lecture-based learning; they encourage educators to engage students in clinic-like learning experiences in which it is expected of student nurses to learn to use knowledge and practice to think about changing situations for the good of the patient. Audétat, Dory, Nendaz, Vanpee, Pestiaux, Perron, et al. (2012:216) state clinical reasoning is the cornerstone of medical competence. These authors further claim educators find it difficult to deal with their dual roles, namely that of being clinicians as well as educators. Their findings revealed educators encountered the following barriers: how to manage clinical reasoning difficulties, failure to document poor performance, and the absence of remediation options (Audétat, et al. 2012:217).

In the South African context, students admitted into nursing programmes face numerous challenges. According to Lack and Bruce (2014:157), many nursing students are from previously disadvantaged backgrounds. These students' cultural circumstances have had a negative impact on their exposure to scientific terminology and their general reading and writing skills are poorly developed; therefore, these students require a great deal of academic support (Lack and Bruce 2014:157).

2.4.2 TEACHING AND LEARNING STRATEGIES

According to Levett-Jones, et al. (2010a:516), clinical reasoning requires a different teaching and learning approach than the approach used when learning routine nursing procedures. It requires a structured educational model and active engagement in deliberate practice as well as reflection on activities designed to improve performance. Nurse educators must stay abreast with the ever-changing clinical environment and must therefore adapt their teaching and learning approaches in both the classroom and the clinical settings by utilising innovative teaching strategies (Allen 2013:3). Clinical reasoning is fundamental to nursing practice; however, clinical reasoning is difficult for the educator to teach and for nursing students to learn because it is complex, tacit and invisible to students (Delany and Golding 2014:1). As pointed out by Brandon and All (2010:89) as well as Stanley and Dougherty (2010:380), many nurse educators continue to teach in the same way they themselves were taught. They simply continue to rearrange the same content-laden material, which they present to students using the traditional lecture-based method.

The most common teaching strategy used in adult education programmes is a lecture and it is widely used to deliver the theoretical component of nursing education. Although the lecture method is as effective as other methods in teaching information, it is ineffective to stimulate higher order thinking (Clynes 2009:22). Observing educators in classrooms, (Benner, et al. 2010:65) discovered they rely heavily on automated presentation software and the use of lecture-based strategies; experiential learning was mostly absent. The situation does not favour the development of students' clinical inquiry skills and their ability to use knowledge in specific clinical situations (Benner, et al. 2010:65). Although clinical reasoning is an important skill for nurse practitioners, there is limited evidence to support methods of teaching and learning to develop this particular skill in nurses (Banning 2008b:8). Despite limited evidence and the difficulty in teaching clinical reasoning, different teaching and learning approaches can be utilised by nurse educators to promote the development of clinical reasoning skills. These are briefly discussed in Sections 2.4.2.1 to 2.4.2.10.

2.4.2.1 Think-aloud approach

The think-aloud approach is a qualitative tool utilised to access cognitive processes used in clinical reasoning and prompts students to verbalise their thoughts as they problem-solve a case study or interpret a statement (Banning 2008a:180; Gierach and Evenson 2010:229). Process-oriented teaching and learning strategies are constructive teaching and learning approaches that can be used to develop clinical reasoning. Process-oriented teaching and learning approaches emphasise the importance of using cognitive methods of instruction such as cognitive processing and cognitive development to educate students for capability rather than competence; both of these are fundamental to the process of clinical reasoning (Banning 2008b:10). The think-aloud approach is a method of describing cognitive processes using verbalisation (Forsberg, et al. 2014:539).

Delany and Golding (2014:2) describe a similar approach they call "making thinking visible". It involves identifying and then repackaging the thinking steps used by experts when they engage in clinical reasoning into "thinking routines". Three pedagogical principles support this approach. The first recognises that reducing complex expert thinking to a thinking routine that a student can use, is a form of simplification of knowledge to reduce the cognitive work of clinical reasoning. Secondly, students can be effectively facilitated to learn by participating in the daily activities of professionals which is thus also a form of professional socialisation.

The third principle described by Delany and Golding (2014:2) is that when educators think about their own thinking, they are engaging in reflective and metacognitive thinking and this assists them to develop an understanding of their own clinical reasoning prior to teaching others. Forsberg, et al. (2014:538) collected data by means of the think-aloud approach in their descriptive qualitative study investigating how experienced paediatric nurses reason. They reported the think-aloud approach seemed to work as an effective way to gain access to the nurses' cognitive processes used in clinical reasoning.

2.4.2.2 Case studies

Educational practices should promote clinical reasoning skills through situated cognition; this means knowing is inseparable from doing and learning occurs in context (Allen 2013:1). Clinically derived case studies must be used to engage students. According to Rischer (2013:para. 5), between 50-75% retention occurs as higher level thinking takes place. Students actively participate, experience and construct or apply the knowledge. According to Adejumo, Fakude and Linda (2014:1695), case-based learning is an andragogical approach that examines contextualised questions based on real life problems or cases. The use of case studies in the classroom provides realistic problems to promote critical thinking and develop clinical reasoning (Flood and Robinia 2014:329).

According to Postma and White (2015:75), making use of standardised case studies in the classroom exposes all students to a specific, interesting case allowing them to systematically develop competence in clinical reasoning. The case study is like a snapshot of a scenario during a specific period in time where you are asked to evaluate that snapshot and answer certain questions (Malesela 2009:2). To summarise, a case study is a tool that can be utilised by nurse educators to engage students in reflective discussion thereby encouraging higher order thinking and problem-solving (Malesela 2009:2). Nurse educators may make use of real life cases or scenarios and teach students to analyse the patient's situation by following the steps proposed in the clinical reasoning cycle of Levett-Jones, et al. (2010a). (Refer to Figure 2.2). Malesela (2009:1) conducted a study that revealed using a case study as a teaching strategy increased critical thinking, theory-practice integration, and growth in presentation skills.

Having students work through a scenario or case study enables them to apply classroom concepts to practice situations (Flood and Robinia 2014:329). Case studies should be selected according to the cognitive level of the students and should be organised in the same chronological sequence as the events had originally unfolded in real life. The educator who selects the case should be aware of the teaching goal and should modify the case study to achieve that specific goal (Kassirer 2010:1121). Good case studies are constructed to be realistic, relevant, challenging, engaging, educational and when working with inexperienced undergraduate students, teaching and learning should commence with simpler cases (Postma and White 2015:75). Case studies encourage students to work through problem situations. It offers an opportunity to discuss real life situations in a safe environment and stimulates one's ability to think critically because patients offer no concrete answers (Lin, Han, Pan and Chen 2015:150). Rischer (2013:para. 7) and Benner, et al. (2010:31) advocate for the use of active teaching and learning approaches encouraging nurse educators to "shift from a focus on covering decontextualised knowledge to an emphasis on teaching for a sense of salience". This can practically be done through clinically derived case studies which brings clinical realities to the classroom (Rischer 2013:para. 7).

Lin, et al. (2015:150) conducted a study showing that using real life case studies is an effective strategy to bridge the gap between learning in the classroom and the clinical setting. According to Potgieter (2012:6), using case studies is one way of implementing constructivism in nursing education. As students work through case studies, they gain an understanding of the difficulties in caring for diverse patients and demonstrate an increase in knowledge, clinical skills and confidence. In addition, Yoo and Park (2015:166) state case-based learning is an interactive, student-centred teaching and learning strategy that draws on real life situations to promote authentic learning.

2.4.2.3 Reflective self-regulated learning

Effective and efficient clinical reasoning is a consequence of intentional reflection supported by self-reflection (Kuiper, et al. 2009:76). Figure 2.3 illustrates a model of reflective self-regulated learning in nursing developed by Kuiper, et al. (2009:77). The model describes self-regulation as a dynamic process that includes the observations of behaviours and self-regulation of reactions to make self-judgements of competence and areas for the improvement of clinical reasoning. The process of self-regulated learning promotes the

mastering of metacognitive or reflective thinking, which is a key ingredient in the development of clinical reasoning (Kuiper, et al. 2009:78). The self-regulatory strategies are those that students use to monitor, control and regulate cognition or thinking as well as to promote academic behaviour. Helping students develop metacognitive or reflective thinking fosters the self-confidence needed for the rapid making of decisions (Kuiper, et al. 2009:78). The three types of self-regulation support the development and acquisition of higher order thinking skills such as interpretation, analysis, inference, explanation and evaluation (Kuiper, et al. 2009:77). (Refer to Figure 2.3).

A brief discussion of each of the three types of self-regulation follows.

- **Behavioural self-regulation** or self-monitoring includes the sub-processes of self-observation, self-reaction and self-judgement. Self-monitoring refers to paying deliberate attention to the behaviour used to attain goals and motivates improvement in learning.
- **Metacognitive self-regulation** or self-evaluation includes the sub-processes of goal setting, self-efficacy, knowledge use and thinking strategies. Self-evaluation is a key component of reflection, which influences critical thinking and the development of clinical reasoning skills.
- **Environmental self-regulation** of skills, activities, physical context and the relationship with the preceptors, staff and patient is necessary to determine the context of clinical reasoning.

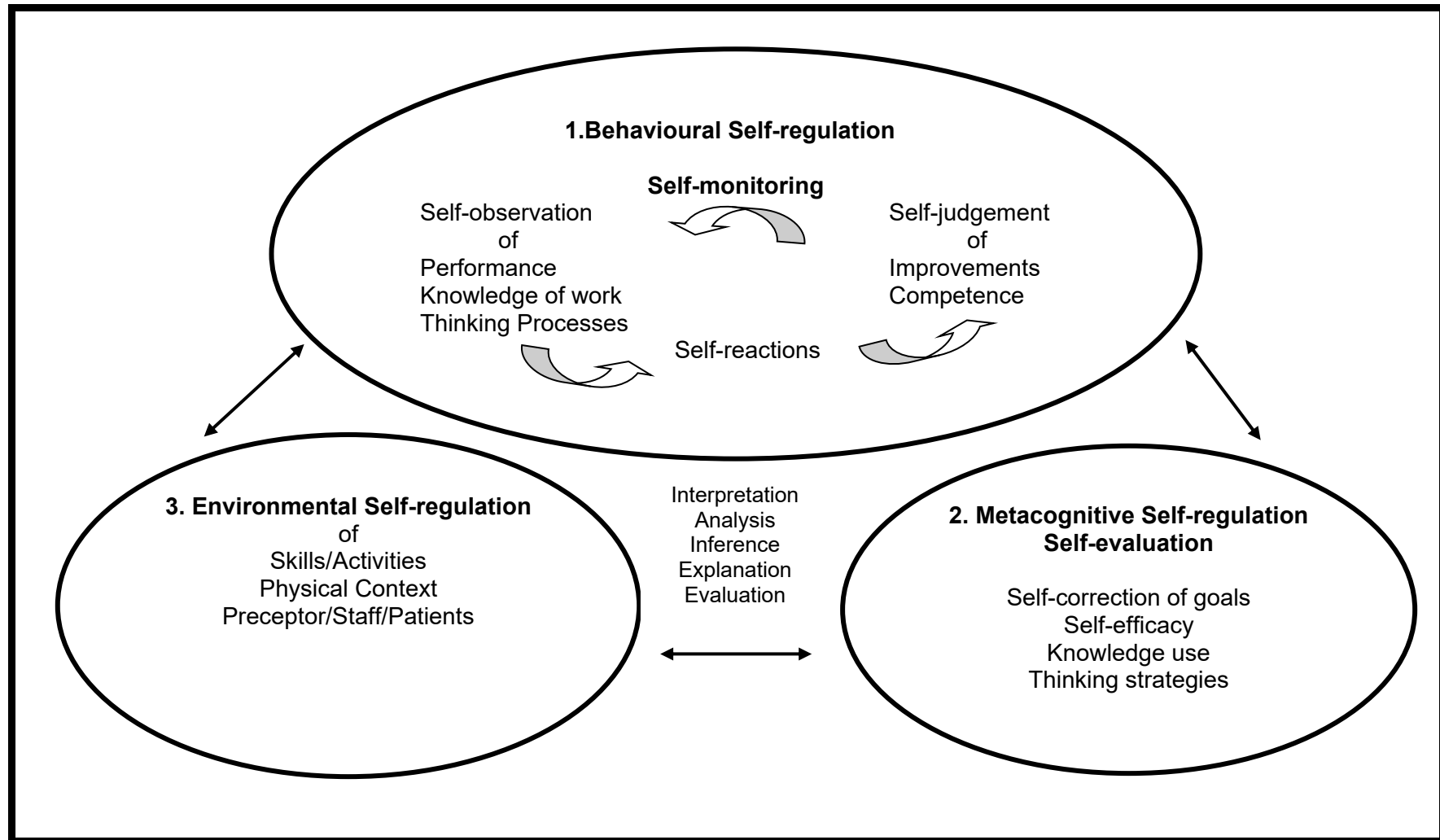


Figure 2.3 Reflective Self-Regulated learning in nursing (Kuiper, et al. 2009:78)

2.4.2.4 Reflection

Reflection is an activity involving thinking about an event, analysing what occurred, and trying to get meaning from the experience (Rochmawati and Wiechula 2010:245). In the opinion of Lasater (2011:89), nursing as well as other professions have long recognised the value of reflection in learning. Written reflection is commonly done through journaling and nurse educators must encourage students to keep clinical journals and request them to write narratives on their clinical encounters with patients (Rochmawati and Wiechula 2010:245). Writing a reflection written after students have had a clinical practice experience is a strategy to help students process their experiences and learn from them (Lasater 2011:89). The reflective process can be implemented by writing or verbalising what students have seen, done, felt and thought during their clinical learning episode (Rochmawati and Wiechula 2010:245).

Students must be given opportunities in the classroom to reflect on events from their clinical placement experience and engage in a metacognitive (thinking about one's thinking) process. By teaching students to reflect on practice and identifying clinical reasoning errors, they come to realise that nurses can learn from their errors and improve their practice (Levett-Jones, et al. 2010b:16). Nurse educators are aware at times guided reflections are often the best tool to implement to stimulate the level of learning students have to develop (Lasater 2011:89). When students are continually encouraged to reflect, they develop metacognitive abilities and become critical thinkers who are able to check, monitor and constantly evaluate the accuracy of the reasoning process. Palese, et al. (2008:1287) state reasoning accuracy is defined as having no errors and being correct or deviating only slightly but within acceptable limits from the standard. Rochmawati and Wiechula (2010:245) suggest reflective practice is a method to be used by educators to improve students' clinical reasoning and judgement, reduce clinical errors and develop expertise.

2.4.2.5 Clinical post-conferences

Clinical post-conferences are a designated time for students to share knowledge gained through clinical experiences with fellow students and nurse educators. Post-conference is a time when students actively reflect and apply problem-solving techniques to synthesise clinical learning. The intentions of these conferences are to facilitate learning and stimulate

students' critical thinking skills while applying theory to practice (Megel, Nelson, Black, Vogel and Uphoff 2013:525). Post-clinical conferences provide opportunities for students and educators to discuss clinical experiences and case studies, share information, analyse problems, clarify relationships, vent feelings and identify further problems (Potgieter 2012:5). Clinical post-conferences typically focus on students' analysis of their clinical experiences. Nurse educators must utilise these post-clinical conferences to ask students stimulating questions to facilitate critical thinking thereby encouraging students to reason clinically (Megel, et al. 2013:525). They conducted a study on the perceptions of students and educators regarding clinical post-conferences and found both groups consider this learning environment as important and it ought to be enriched by the educators (Megel, et al. 2013:525). Hence, an inquiring mind, critical thinking, and problem-solving skills are developed (Potgieter 2012:6).

2.4.2.6 Virtual learning environment

Flood and Robinia (2014:329) state video clips and photographs can be useful for portraying applications of theoretical concepts. They illustrate this by providing the following example. During a class on postoperative care, showing a short video on patient controlled analgesic devices can provide a link between conceptual knowledge, clinical skills, and bedside technology. The importance of reflective activities such as using short video clips from websites like TED Conferences, can be helpful in engaging students to contemplate holistic nursing interventions (Flood and Robinia 2014:329). Another classroom strategy suggested by Flood and Robinia (2014:329) is to use samples of electronic medical records to highlight practice relevant to a specific topic, for example, documenting assessment data, analysing vital sign trends or reviewing prescribed medication orders.

A further example of a virtual learning environment is virtual patients. Forsberg, et al. (2014:538) describe it as interactive screen-based computer simulations of real life clinical scenarios for the purpose of healthcare and medical training, education or assessment. Virtual patients simulate the encounter between a healthcare professional and a patient. Educators can use this teaching and learning approach for determining the students' learning ability as well as the assessment of students. Forsberg, et al. (2014:538) conducted a descriptive qualitative study with the aim of investigating how experienced paediatric nurses reason regarding virtual patient cases and how they make clinical decisions. They

discovered virtual patients seem to be a possible model for assessing the clinical reasoning process as well as for making clinical decisions, but how to score and grade such examinations need further research.

2.4.2.7 Concept-based learning

Content overload has led to nurse educators supporting concept-based learning that will help students to gain a deep understanding of major nursing concepts (Allen 2013:1). Rischer (2013:para. 3) is of the opinion that nurse educators have a responsibility to emphasise what content is most relevant so students can acquire deep learning of what is essential. According to Charlin, Lubarsky, Millette, Crevier, Audétat, Charbonneau, et al. (2012:455), concept maps are graphic tools for organising and representing knowledge. Chabeli (2010:1) identified concept mapping as a stimulating learning strategy to facilitate critical thinking by encouraging students to connect new knowledge to their prior learning, and to give students an opportunity to gain further, wider and more varied knowledge of a number of concepts in a short time period. The implementation of concept mapping includes assimilating new concepts in circles or boxes, creating hierarchical arrangements between concepts and sub-concepts, and identifying relationships between concepts and sub-concepts which can be connected with lines or linking words (Charlin, et al. 2012:455).

Concept mapping encourages nurses to think independently and to find connections between different concepts, giving them more confidence in implementing their knowledge in clinical work (Lin, et al. 2014:2). It is a teaching strategy for students to develop clinical reasoning skills (Rochmawati and Wiechula 2010:245). Concept mapping as a reflective learning tool assists students to analyse textbooks and didactic knowledge critically and to plan and evaluate individualised care (Lin, et al. 2014:2). The shift from a content-laden curriculum to teaching key concepts allows students to focus on need-to-know or essential content that will be applicable to nursing (Stanley and Dougherty 2010:380). A qualitative study conducted by Lin, et al. (2014:2) revealed an emphasis on the teaching-learning strategies concept mapping, questioning and real life case studies demonstrated a connection between critical thinking, care knowledge, skills and perceptions.

2.4.2.8 Outcome-Present State-Test Model

The Outcome-Present State-Test (OPT) model of reflective clinical reasoning provides a framework for teaching clinical reasoning skills to nursing students. The OPT model is a structure or blueprint that helps students organise the thinking involved in clinical reasoning (Kuiper, et al. 2009:3; Harmon and Thompson 2015:64). The OPT model of clinical reasoning provides a structure for linking nursing diagnoses, interventions, and outcomes and promotes the organisation of patient needs and nursing care around a key issue (Bland, Rossen, Bartlett, Kautz, Carnevale and Benfield 2009:14; Harmon and Thompson 2015:64). In utilising the OPT model, the patient scenario/story serves as the foundation for a complex uncertain problem and is the stimulus for the clinical reasoning task. Once the essential elements of the patient's scenario/story are written by the students on the OPT model worksheet, the next step in the reasoning process is to map out and visually represent the relationships between medical and nursing diagnoses using a reasoning web which is a teaching learning tool similar to concept mapping.

As students think, reason, and explain the relationships between nursing problems and nursing care needs, they draw a map by sketching lines of association. As they draw these lines, they must verbalise and explain why the diagnoses are related or not to one another. The reasoning process used to understand the cues from the patient's story and the relationships that emerge, reveals a focus problem. The nursing diagnosis with the most "connections" emerges as the priority problem. The thinking involved in making clinical judgements involves metacognitive awareness, critical, creative, systems and reflective thinking (Kuiper, et al. 2009:4). The OPT model was utilised by Bland, et al. (2009:14) to evaluate the effectiveness of this teaching strategy among undergraduate psychiatric nursing students. The authors found there were significant improvements in the students' ability to assess the patient's condition and highlight key nursing issues. The students were able to reflect on their clinical experiences and put their thoughts into words. However, Bland, et al. (2009) recommend for further research to be conducted to compare the OPT model with standard nursing care plans used in nursing education.

2.4.2.9 Questioning

DeBourgh (2008:77) emphasises the use of classroom response systems and high-level questioning to enhance student participation and feedback even in larger size classes. Using questioning, nurse educators can provide classroom environments that encourage reasoning instead of recall (DeBourgh 2008:77; Russell, McWilliams, Chasen and Farley 2011:13). New technology known as “I-clickers” or “audience polling systems” and interactive boards are growing in popularity. Although very expensive, they provide nurse educators with a valuable teaching aid that increases student interaction and provides immediate student feedback (DeBourgh 2008:77; Russell, et al. 2011:13). Classroom technology such as I-clickers is a tool that nurse educators can use to engage students in meaningful learning and has the potential to improve practice. Nurse educators can select or create questions to promote synthesis and the application of complex concepts that help students to develop advanced reasoning skills (Flood and Robinia 2014:329). In the absence of interactive boards and I-clickers nurse educators can utilise questioning throughout their teaching session just as effectively. Asking simple questions that require reflective thinking is one way to promote clinical reasoning (Lim 2011:53).

The educator must pose questions that help students to associate ideas and feelings about things that happen, to integrate aspects, ask questions to validate knowledge generated from the practical experiences, and make the students aware of what they have learned (Palese, et al. 2008:1286). Using questioning enables nurse educators to clarify misconceptions immediately thereby enhancing comprehension (Flood and Robinia 2014:329). Questioning provides opportunity and encourages students to think about issues intensely and broadly. Lin, et al. (2014:4) assert asking questions is fundamental to enabling students to advance their thinking. Chamberland, Mamede, St-Onge, Setrakian, Bergeron and Schmidt (2015:193) provide evidence that self-explanation is an effective technique to help students learn clinical reasoning. Its impact is increased by combining examples of the student’s self-explanations and prompts. Self-explanation is an active learning process that consists of generating explanations to oneself (questioning oneself) when working through learning material (Chamberland, et al. 2015:194).

2.4.3 CURRICULUM

According to Uys and Gwele (2005:1), curriculum refers to planned learning experiences that the educational institution intends to provide for its students. Three broad streams of educational philosophy underpin curricula choices and decisions, namely the conservative, the progressive and the radical views as well as three distinct and conflicting approaches to the curriculum, which are: content-driven, process-based and outcomes-based (Uys and Gwele 2005:2;13). In the opinion of Allen (2013:3), the ever-increasing knowledge explosion contributes to nursing curricula that are loaded with content, leaving nurse educators with large amounts of information to deliver resulting in content-driven curricula. Botma, et al. (2014:4) state in the global health profession, health education has been called to redress curricula to cope with the health challenges of the 21st century. Botma, et al. (2014:4) therefore propose for curricula to be directed towards effective teaching and learning strategies that engage the student in deep and active learning.

The majority of South African students who enter nursing programmes are from previously disadvantaged groups. They received 12 years of schooling, which has indoctrinated them in the educational behaviourist theory moulded in the traditional lecture-based, content-orientated learning background. The skills required for problem-based learning such as communication, teamwork, critical thinking, decision making, problem-solving, self-directed learning and a motivation to learn are lacking in these students (Lack and Bruce 2014:157). A change from content-driven curricula towards student-centred teaching and learning strategies will require extensive empowerment of nurse educators. A paradigm shift from behaviourism to constructivism is the key to the transformation of nursing education in developing countries because a completely different skill set is required (Botma 2014:23). Since knowledge and clinical decision-making skills are recognised as essential professional competencies, it is important that educators design learning experiences that address these learning needs (Botma, et al. 2014:16).

Constructivism is a theory founded on observation and scientific studies on how people learn. The major theme is that learning should be an active process in which students construct new ideas or concepts based on their current or previous knowledge (Brandon and All 2010:90; Potgieter 2012:5). Learning is a process of discovery; new constructs are formed through assimilation and accommodation. Hence, this type of learning is more

meaningful than merely memorising facts (Potgieter 2012:5). In addition, constructivism underscores the principles of active learning, and combines cognitive and adult learning theories (Brandon and All 2010:90; Potgieter 2012:5). The educator becomes a facilitator and coach recognising the student's prior knowledge and experiences and guides students through teaching strategies such as experiments, problem solving, reflective exercises, concept mapping, collaborative learning and discussions to create more knowledge and understanding (Brandon and All 2010:90; Potgieter 2012:5).

Mitchell, Jonas-Simpson and Cross (2013:32) report amongst others, authors like Benner and colleagues (2010), Bevis and Watson (1989), Hills and Watson (2011), Hartrick (1999) and Diekelman (1988) encourage nurse educators to move from a behaviourist viewpoint to teaching and learning that is emancipatory with teaching strategies that are empowering and context-dependent with a shift to more participatory and student-centred curricula. The curriculum provided should be embedded in a sound teaching and learning philosophy as well as learning theory to provide guidance for the development of teaching and learning strategies (Botma 2014:24). According to Botma, et al. (2014:5), curricula of all health professions should address the following concepts: diversity, evidence-based practice, quality care and patient safety, critical thinking, clinical reasoning and clinical judgement.

2.5 CONCEPTUAL FRAMEWORK

The researcher developed a conceptual framework for promoting clinical reasoning skills based on the literature review conducted. Figure 2.4 provides a schematic summary of the literature reviewed. This conceptual framework allowed the researcher to internalise the vast amount of literature regarding adult learning, clinical reasoning and educational practices. The researcher also identified a need to illustrate the different variables that may have an influence on the development of clinical reasoning skills. Polit and Beck (2012:722) describe conceptual frameworks or models as “interrelated concepts or abstractions put together in a rational and often explanatory order to explain relationships among them”. The conceptual framework described in this chapter is preliminary and the relationship between concepts and how they are related are discussed and applied to the context of the study in Chapter 7 (refer to Section 7.2.3).

The researcher perceives nursing students as adult students encompassed within the teaching and learning environment. To promote the development of clinical reasoning skills, nurse educators must utilise adult learning principles when facilitating adult nursing students. These students come to the learning environment with their own experiences, prior learning and motivations to learn. Educators and students encounter various challenges that will have an influence on the teaching and learning environments. The curriculum utilised plays a pivotal role in the teaching and learning strategies used by educators. A constructivist paradigm was identified as the most suitable for student-centred teaching. The development of clinical reasoning skills is dependent on the various student-centred teaching and learning strategies utilised by educators as identified in the literature review. Examples include case-based learning, questioning, reflective learning, clinical post-conferences, and so forth. Students' ability to think and reason and their thinking strategies are influenced directly by the way in which they are taught and how they learn.

This conceptual framework illustrates the influence that the learning environment (which consists of the adult student, educators, challenges, curriculum, teaching and learning strategies as well as thinking strategies) has on the student's development of clinical reasoning skills (Refer to Figure 2.4).

2.6 CONCLUSION

The present literature review has contributed to deepening the understanding of adult learning clinical reasoning as well as teaching and learning strategies. It became clear from the literature reviewed no one 'best' teaching strategy exists and therefore nurse educators must utilise several innovative student-centred teaching and learning strategies to develop students' clinical reasoning skills. This chapter also reviewed the origins of pedagogy and andragogy. Andragogy is a more appropriate educational paradigm for adult students such as nurses. Nurse educators should make every effort to support and direct students towards autonomy and self-directed learning. In Chapter 3 the research design and methodology is presented and described in depth.

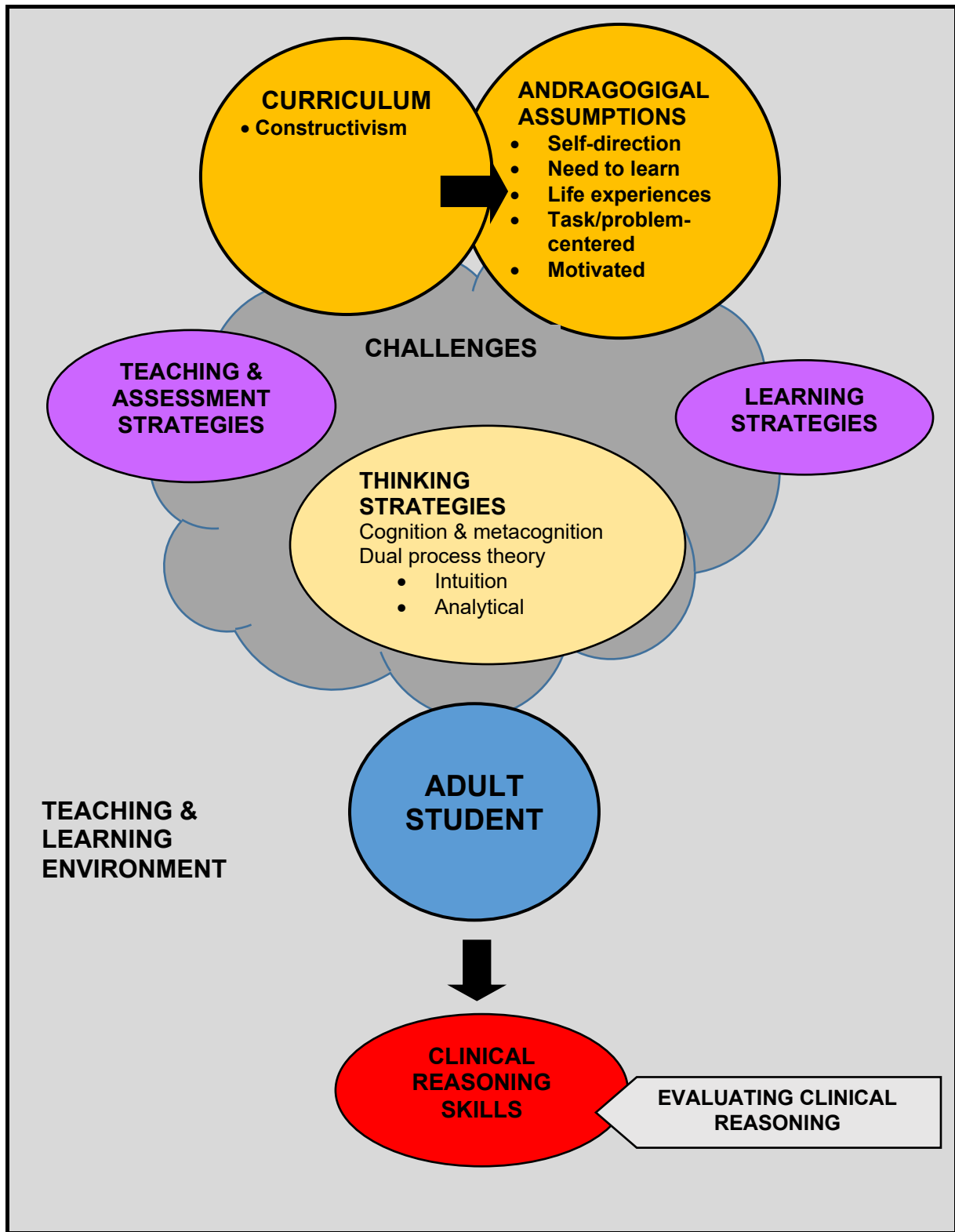


Figure 2.4 Conceptual framework for promoting clinical reasoning skills

3: RESEARCH DESIGN AND METHODS

“Tell me and I forget, teach me and I may remember, involve me and I learn.”

-Benjamin Franklin-

3.1 INTRODUCTION

In Chapter 2 an in-depth discussion of the literature was provided and discussed. This chapter describes the research design and methodology. A brief introduction is provided for Phase 1, the Baseline phase, Phase 2, the Action Research Process phase, and Phase 3, the Evaluation of the Action Research Process phase.

3.2 RESEARCH AIM AND OBJECTIVES

The aim of the study was to facilitate a process of change towards improving educational practices in order to promote the development of undergraduate student nurses' clinical reasoning skills. To achieve the aim of the study three research objectives were formulated. Firstly, the researcher explored and described the challenges experienced by nurse educators in utilising educational practices that promote the development of undergraduate student nurses' clinical reasoning skills. Secondly, an action plan was co-constructed by the action research group to improve educational practices to promote the development of undergraduate student nurses' clinical reasoning skills. Finally, the outcomes of the action research process were evaluated.

3.3 RESEARCH DESIGN

The research design refers to the way in which a research idea is transformed into a research project or plan guiding the researcher to perform the research project in practice (Given 2008:761). According to Polit and Beck (2012:58), the research design is the overall plan for obtaining answers to the research questions, and is the architectural backbone of the study. Action research was used to answer the research question: 'How can educational

practices be improved to promote the development of undergraduate student nurses' clinical reasoning skills?'

In this action research, a group of nurse educators interested in improving their educational practices to promote the development of undergraduate student nurses' clinical reasoning skills carried out a process of change collaboratively. The main attraction of action research in this study was that the researcher had the opportunity to work with nurse educators in a non-hierarchical and non-exploitative way to attempt to resolve the challenges they experienced in their practice with the purpose to promote the development of undergraduate student nurses' clinical reasoning skills.

3.4 ACTION RESEARCH

Research is a form of disciplined enquiry leading to the generation of knowledge (Koshy 2010:1). According to Given (2008:4), the knowledge generated from action research has a direct and ongoing impact on changing practice. The knowledge research generates is derived from a range of approaches, action research being one of these approaches (Koshy 2010:1). Action research is a flexible research methodology uniquely suited to researching and supporting change (Given 2008:4). According to Koshy (2010:1), action research is a specific method of conducting research by professionals and practitioners with the ultimate aim of improving practice. McNiff (2013:24) confirms action research is a powerful form of educational research because it has to do with improving learning, and improving learning has to do with educational, personal and professional growth. Koshy (2010:2) defines action research as an enquiry undertaken with rigour and understanding to constantly refine practice. The emerging evidence-based outcomes contribute significantly to the researching practitioner's continuing professional development.

Action research is where practitioners are involved in research in their own practices (do research with the researcher), which is different from traditional forms of social research where a researcher does research on practitioners (McNiff and Whitehead 2011:8). Social scientists stand outside a situation asking, 'what are those people doing' whereas action researchers see themselves as part of the context and asking, 'how can we improve our

practice' (McNiff and Whitehead 2011:8). Expounding on the action research enquiry, Grundy and Kemmis (1988 cited in Zuber-Skerritt 1996:3) state,

Action research is research into practice, by practitioners, for practitioners. In action research, all actors involved in the research process are equal participants, and must be involved in every stage of the research. The kind of involvement required is collaborative involvement. It requires a special kind of communication which has been described as 'symmetrical communication', which allows all participants to be partners of communication on equal terms. Collaborative participation in theoretical, practical and political discourse is thus a hallmark of action research and the action researcher. (Grundy and Kemmis 1988 cited in Zuber-Skerritt 1996:3)

Zuber-Skerritt and Perry (2002:173) refer to the definition of Altrichter, et al. (2002) that emphasises three key aspects of action research. It is a group of people working together, involved in the cycle of planning, acting, observing and reflecting on their work more deliberately and systematically than usual and producing a report of that experience. Cresswell (2012:577) states action research provides an opportunity for educators to critically reflect on their own practices. Tomal's (2010:14) explanation that researchers oftentimes choose to use action research to improve their practices because it is a systematic process of solving educational problems, reiterates the nurse educators' commitment to improve the situation in their work context. Action research is thus more concerned with improvement within the study context (Tomal 2010:14).

3.4.1 HISTORICAL OVERVIEW OF ACTION RESEARCH

The work of Kurt Lewin, a Jewish refugee from Nazi Germany (1946), is generally regarded as a major landmark in the development of action research as a methodology (Given 2008:4; Koshy 2010:3). Susan Noffke (1997 cited in McNiff and Whitehead 2011:41; McNiff 2013:56) tells how the work of John Collier, who was the Commissioner of Indian Affairs of the United States of America (USA) from 1933 to 1945, may be regarded as the first identifiable starting point for action research. Collier was committed to develop 'community' in relation to the education and social contexts of Native Americans. Kurt Lewin worked as a social psychologist in the USA (McNiff and Whitehead 2011:41) and shared the same interests as

Collier but from the perspective of industrial contexts and how participation in decision making could motivate people (McNiff and Whitehead 2011:41) and lead to enhanced productivity (McNiff 2013:56). Although Lewin's work was located in the industrial and organisational settings, the relevance of his ideas was also recognised for educational contexts (McNiff 2013:57). Lewin's work was followed by that of Stephen Corey as well as other American researchers in the education domain who applied the methodology in researching educational issues (Koshy 2010:3). In 1953 Stephen Corey's book, 'action research to improve school practices' became highly influential (McNiff and Whitehead 2011:41; McNiff 2013:57).

Koshy (2010:3) writes in Britain, the origins of action research can be traced back to the Schools Council's Humanities Curriculum Project (1967-72) which emphasised the reconceptualisation of curriculum development. Koshy (2010:3) and McNiff (2013:57) identify Lawrence Stenhouse as the most widely known promoter of action research in the United Kingdom (UK). Stenhouse's (1975 cited in Koshy 2010:3) seminal work, 'an introduction to curriculum research and development' added to the appeal of action research for studying the theory and practice of teaching and developing the curriculum (Koshy 2010:3). Stenhouse saw teaching and research as closely related, and called on teachers to reflect on and evaluate their practices (McNiff 2013:58). For Stenhouse (1983 cited in Koshy 2010:3), action research was about emancipation and intellectual, moral and spiritual autonomy. Following this project and extending Stenhouse's ideas, Elliot and Adelman (1976 cited in Koshy 2010:3) examined classroom practice by conducting action research that, according to McNiff (2013:59), brought about renewed interest in educational action research.

Furthermore, there is also the participatory research movement supported by Stephen Kemmis and Robert McTaggart at Deakin University in Australia (Koshy 2010:3). Kemmis (1986 cited in McNiff 2013:63) based his ideas on the original conceptualisations of Lewin but was also significantly influenced by the critical theory of Jürgen Habermas and others. Kemmis' work is particularly significant for understanding the socially and politically constructed nature of educational practices and together with Wilf Carr (1986 cited in McNiff 2013:63) he has encouraged the use of the term 'educational action research' (McNiff 2013:63). Action research is now widely accepted as a form of professional learning across the professions, with potential for contributing to new forms of theory generation (McNiff and Whitehead 2013:43).

Given (2008:5) informs in the mid-1980s a debate transpired in the USA and other countries relating to the boundaries between action research and practitioner research since for the latter the purpose of a research study was to deepen understanding and enrich the educators' learning rather than to bring about intentional change. Cresswell (2012:577) summarises the development of action research into three stages. The first stage developed in order to address societal issues, the second stage revolved around practice involving practitioners to find solutions to their own problems. The third stage, which is also the most recent, involves participation and emancipation. This stage is community-focused with groups assuming responsibility for their own emancipation and change.

3.4.2 ACTION RESEARCH APPROACHES

McNiff and Whitehead (2011:10) provide an explanation of the different approaches to action research by comparing it to a family. They observe the action research family has been around for many years; in fact, it dates back to the 1930s. As often happens in a family, different family members have different opinions and interests; some have developed their own terminology and some have formed breakaway groups. Similarly, during the eighties action research was divided into two broad groups that were then again subdivided. The first group was formed by researchers John Elliot, Stephen Kemmis and Clem Adelman who believed the proper way to do research was for an external researcher to watch and report on what other practitioners were doing and was referred to as interpretive action research (McNiff and Whitehead 2011:11). The second group, founded by Jack Whitehead, was self-study action research also referred to as first-person action research, living theory action research or just plain action research. The belief of this second group was that practitioners could offer their own explanations for what they were doing (McNiff and Whitehead 2011:11).

In modern times, however, Cresswell (2012:579) identifies two types of action research. Firstly, practical action research that involves a small-scale research project, narrowly focuses on a specific problem or issue, and is undertaken by individual teachers or teams within a school with the purpose to research a specific school situation to improve practice. Secondly, participatory action research (PAR) which, according to this author, has a long history in social inquiry involving communities, industries and organisations outside of education. Participatory action research has a social and community orientation and an emphasis on research that contributes to emancipation or a change in society.

Coghlan and Brydon-Miller (2014:233) state:

action research is a term used to describe a family of related investigative approaches that integrate theory and action, with the goal of addressing important organisational, community and social issues together with those who experience them. (Coghlan and Brydon-Miller 2014:233)

The action research approach selected for the present study was the traditional spiral of action research cycles as explained by Zuber-Skerritt (1992:11) in Section 1.9. (Refer to Figure 1.1). The present study was context bound and took place within an educational setting with the aim of improving educational practices. The study offered a means of combining the generation of knowledge with the professional development of the nurse educators through their participation as co-researchers (Given 2008:4).

3.4.3 ACTION RESEARCH CYCLES

Regardless of the approach, action research is generally described as a process composed of different steps that are continually in interrelation. Lewin (1946 cited in McNiff 2013:56) developed the theory that action research is a spiral of steps involving planning, fact-finding and execution which eventually transpired as an action-reflection cycle of planning, acting, observing and reflecting (McNiff 2013:56). Action research involves a spiral of self-contained cycles of planning a change, acting and observing the process as well as the consequences of the change and then reflecting on these processes and consequences; then re-planning, acting and observing, reflecting again and again towards better understanding of the situation and improved action implementation (Koshy 2010:4). These repetitive steps have been expressed differently by different authors, from Stringer's (2007 cited in Coghlan and Brannick 2010:4) simple look, think, act to French and Bell's (1999 cited in Coghlan and Brannick 2010:4) more complex action research organisational development framework involving iterative cycles of joint action planning, feedback, further data gathering, diagnose and action.

Several other cycles exist denoting many similarities but no single cycle is recommended for researchers. An action researcher should adopt the cycle which suits his or her purpose best or adapt it to fit the purpose (Koshy 2010:4). The most basic of the action research models as Costello (2011:8) explains, is the plan, act, observe and reflect which has its origins in the

work of Kurt Lewin (1946 cited in Costello 2011:9). In fact, Norton (2009 cited in Costello 2011:9) takes an interesting stance on the basic systematic model by proposing a change in the order of the processes and suggests for researchers to observe or notice that something is wrong (observe), plan a course of action (plan), carry out the change (act), and see what effect their change has made (reflect). Norton (2009 cited in Costello 2011:9) is of the opinion that you should first observe that there is a problem then plan, act and reflect as opposed to that of plan, act, observe and reflect explained by Zuber-Skerritt (1992) and Kurt Lewin (1946).

For the present study, the traditional spiral of action research cycles with the steps plan, act, observe and reflect in this order explained by Zuber-Skerritt (1992:11) was utilised as the theoretical framework that guided the action research study as described in Chapter 1. (Refer to Section 1.9). Although I initially decided to use the basic action research cycle proposed by Zuber-Skerritt (1992) with the steps plan, act, observe and reflect this original approach was altered by the collective of fortuitous. I found that although we went through each step they did not occur in a specific sequence (Refer to Section 5.2.2, for an explanation of what transpired in the present study).

3.4.4 CHARACTERISTICS OF ACTION RESEARCH

Despite the differences identified within the different action research approaches, they all have similar characteristics. These characteristics are summarised in Sections 3.4.4.1 to 3.4.4.5.

3.4.4.1 A practical focus

Cresswell (2012:586) states the aim of action research is to address an actual problem in an educational setting. Similarly, Koshy (2010:33) asserts action research generally involves the identification of practical problems in a specific context and an attempt is made to seek and implement solutions within that context. McNiff (2013:23) further adds action research is a name given to a way of looking at one's practice and, as Koshy, et al. (2011:2) mention, generating solutions to practical problems.

3.4.4.2 Own practices

Action researchers are interested in examining their own practices rather than studying someone else's practices and they therefore engage in participatory or self-reflective research (Cresswell 2012:586). It is a practical way of researching own practices and providing evidence to show in what way the practice has improved (McNiff 2013:23). Action research is a method used for improving practice, it is situation based and context specific (Koshy, et al. 2011:2).

3.4.4.3 Collaboration

Collaboration is another common characteristic among the many action research approaches. Action researchers collaborate with others and often involve co-participants in the research (Cresswell 2012:586). They work with rather than on the participants (Koshy 2010:33). The early view of Zuber-Skerritt (1992:11) that action research is participative and collaborative involving co-workers doing research with and for the people still manifests today in the collaborative approach active researchers such as Koshy, et al. (2011:3) have. Williamson, et al. (2012:8) also confirm action research is a collaborative, democratic process; there is active participation amongst those who experience the situation in working towards a solution.

3.4.4.4 Dynamic process

Followers of action research engage in a dynamic process involving repetition of activities such as a spiral of activities (Cresswell 2012:586). Action research as explained by Koshy (2010:33) is a cyclical process that takes shape as knowledge emerges and is based in evaluative practice that alternates between action and critical reflection. It works through a cyclical four-step process of planning, acting and evaluating the action leading to further planning and so forth (Coghlan and Brannick 2010:4). In addition, action research is a sequence of events and an approach to problem solving (Williamson, et al. 2012:8).

3.4.4.5 Plan of action

Action researchers formulate an action plan to address the problem (Cresswell 2012:587). In the opinion of Zuber-Skerritt (1992:11), the results of action research are not based on right and wrong answers to the research questions, but are solutions based on the views of those involved in the enquiry. Action research can involve problem-solving if the solution to the problem leads to the improvement of practice (Koshy 2010:2). Action research is about research in action rather than about action (Williamson, et al. 2012:8) and findings will emerge as action develops (Koshy, et al. 2011:3).

3.4.5 VALUE AND LIMITATIONS OF USING ACTION RESEARCH

Several authors agree that action research supports practitioners in improving practice; action research produces practical knowledge and understanding of the problem and working towards practical outcomes (Zuber-Skerritt 1992:15; Koshy, et al. 2011:2; Williamson, et al. 2012:52). According to McNiff and Whitehead (2011:14), just like any other research the purpose of action research is to generate knowledge, which feeds into theory. However, action research generates a special kind of knowledge that provides claims to improving one's practice. As stated by Williamson, et al. (2012:52), action research is much more than a tool; it is a philosophical approach to change. Koshy, et al. (2011:3) add that action research is situation-based and therefore context specific. It develops reflection based on interpretations. Lastly, action research findings will emerge as action develops and these findings are not conclusive or absolute. The aim of action research is to improve professional practice, raise standards of service provision and ultimately improve the quality of life for individuals and communities (Williamson, et al. 2012:52).

According to Koshy (2010:25) it is difficult to list many disadvantages when compared to the advantages of professional development and improving practice. However, action research is described by some as a soft approach and advocates that the parameters of the study are defined at the start. For the present study, the parameters were described in Chapter 1 (refer to Section 1.10). In addition, Koshy (2010:25) highlights the issue of ethical considerations which are of significance in action research. These ethical considerations were addressed in the present study refer to Section 1.16 as well as Section 3.4.6. Koshy, et al. (2011:33) add that a potential limitation is the generalising of findings beyond the local situation and can be

time consuming for little gain. In the present study time constraints as well as members work responsibilities which took precedence over the action research workshops was a concern. Minutes were kept for all the workshops as well as the monitoring and feedback meetings held and were distributed to all ARG members to keep all members updated on the progress of the action plan. The findings and lessons learnt are equally important to the academic community as they are to the SAMHS nursing college the transferability was discussed in Chapter 1 (refer to Section 1.15.5).

Williamson, et al. (2012:43) discuss three key areas of concern which should be taken into consideration by action researchers such as interpersonal and organisational concerns as well as political disagreements. For the present study, interpersonal and organisational conflicts were applicable however political disagreements as discussed by Williamson, et al. (2012:43) was not perceived as a concern. At the interpersonal level, there may be conflicts between the group members these were addressed by good facilitation skills, working towards consensus and setting ground rules (Williamson, et al. 2012:44), this was facilitated by the external facilitator (refer to Chapter 5). Organisational conflicts may be experienced when trying to implement changes in practice (Williamson, et al. 2012:44), these were addressed by asking permission verbally and in writing from the principal of the nursing college. Meetings were held with the management cadre as well as quality assurance workshops with all academic staff with the aim of keeping them informed, seeking their advice and buy in (refer to Chapter 5).

3.4.6 SPECIFIC ETHICAL CONSIDERATIONS

In the opinion of McDonnell and McNiff (2016:50) all educational research should be conducted within an ethic of respect for the person, knowledge, democratic values, the quality of educational research, and academic freedom. Anonymity is an issue in action research because people may wish to be recognised for their contributions and this could be perceived as unethical if their identities are unknown (McNiff 2013:113). Williamson, et al. (2012:150) concur by stating action research is a journey of participation, reflection and action, where informed consent is a more difficult concept than in other research approaches. The action research group participants in the present study wished to be known as participants. They all willingly signed informed consent and all gave permission for their identities to be made public (Refer to Annexure E3).

Respecting participants' wishes to withdraw from the action research project is important and documenting the reason for withdrawal is crucial (Williamson, et al. 2012:155-6). In the present study one action research group participant withdrew due to attending a three-month military course.

Cresswell (2012:588) documents the following as special ethical concerns that may arise in action research: the close relationship between the researcher and the participants in action research means that data collection cannot be coercive. Continually renegotiate the purpose of the study, consider how the results will be used, and involve participants in as many phases as possible. In the present study participants were fully involved during Phases 2 and 3 (refer to Section 1.12). He also stresses the issue of voluntary participation and that participants can withdraw from the study without being penalised. Furthermore, he advocates that the dual role of the educator as the researcher and the sensitivity it takes to engage in action research must be acknowledged. Refer to Section 1.16 for the application of ethical considerations in the present study.

3.5 RESEARCH METHODS

Research methods are the techniques researchers use to structure a study, collect data and analyse information systematically (Polit and Beck 2012:741). Research methods are the tools or techniques with which researchers collect their data (Given 2008:516). The action research study consisted of three phases: Phase 1 the Baseline, Phase 2 the Action Research Process and Phase 3 the Evaluation of the Action Research Process. The Action Research Process phase consisted of four action research cycles each consisting of four steps: plan, act, observe and reflect. The context (refer to Section 1.11) and the population remained the same throughout the study. However, the sampling, data collection and data analysis are outlined under each phase. Phase 1, the Baseline phase is outlined in Chapter 4; Phase 2, The Action Research Process phase will be discussed in Chapter 5 and Phase 3, the Evaluation phase in Chapter 6.

3.5.1 POPULATION

The population is the “entire aggregation of cases the researcher is interested in” (Polit and Beck 2012:273). The target and accessible population for this action research study were nurse educators and head of departments (HoDs) involved in the education and training of students registered for the four-year comprehensive nursing programme.

3.5.2 GAINING ACCESS

At the time of the study I worked (and am still working) at the nursing college as the quality assurance manager therefore gaining access posed no problem for me. According to Williamson, et al. (2012:68), literature implies there is a better chance for achieving success in terms of the study outcomes if the action researcher is an insider. In my case, however, gaining the interest of the academic staff, the management cadre, was a challenge due to academic staff members’ busy schedules and participants’ core functions. I requested permission from the principal of the SAMHS nursing college to conduct an action research study. I submitted a formal letter requesting permission (refer to Annexure B1) and made an appointment to explain the intended action research study. The principal voiced her concern with the time required from participants and requested that no impact be made on their core function. A formal invitation (refer to Annexure B2) was extended to all academic staff during a general staff meeting. All academic staff members were invited to attend an information session during which the action research study was officially launched.

After ethics approval was obtained from the Research Ethics Committee of the Faculty of Health Sciences of the University of Pretoria (refer to Annexure A2) and 1 Military Hospital Ethics Committee (refer to Annexure A3), the researcher invited all academic staff to attend an information session. The invitation included the agenda for the information session. The information session took place after a quality assurance workshop held on 29 June 2015. The researcher used the opportunity to introduce the action research study to the academic staff. The researcher prepared a short PowerPoint presentation outlining the aim and objectives of the study. Two short video clips were showed to introduce clinical reasoning and emphasise the importance of clinical reasoning skills.

During this information session, the researcher informed prospective participants about the action research study, the aim, research question and objectives. The researcher discussed the participation information and consent document (PICD) and a copy was distributed to each member. (Refer to Annexure B4). She then explained to prospective participants what their role would be in the proposed action research study. In addition, the researcher had prepared a handout (refer to Annexure B3) on which members could indicate their interest in taking part in the interviews (Phase 1) and/or the action research group (Phase 2). A sealed container was available at the door and as members left the venue they placed the completed handout in the container.

3.6 PHASE 1: BASELINE

During Phase 1 the researcher collected data to inform Phase 2 of the study. The researcher set out to achieve objective 1.

Objective 1

To explore and describe the challenges experienced by nurse educators in utilising educational practices that promotes the development of undergraduate student nurses' clinical reasoning skills.

Participants who indicated interest during the information session described in Section 3.5.2 was invited to attend a face to face interview with the researcher. At the nursing college 16 unstructured interviews were conducted. The interviews were audio-recorded with the permission of the participants and transcribed verbatim. All transcripts were analysed following the steps outlined in Saldaña (2013:2-183). The challenges described by the participants were audio-recorded and used to inform Phase 2 of the study. The entire Phase 1 including the sampling, data collection and data analysis is explained and discussed in Chapter 4.

3.7 PHASE 2: ACTION RESEARCH PROCESS

During Phase 2 the action research group (ARG) was established to achieve objective 2. This phase followed the cyclic approach of action research and consisted of four action research cycles.

Objective 2

To co-construct an action plan to improve educational practices to promote the development of undergraduate student nurses' clinical reasoning skills.

Participants were selected from the list of interested candidates recruited to form part of the ARG during the information session explained in Section 3.5.2. The ARG attended five workshops during which they co-constructed an action plan to address the challenges explored during Phase 1. The entire Phase 2 consisting of four action research cycles each with the steps plan, act, observe and reflect is discussed in Chapter 5.

3.8 PHASE 3: EVALUATION OF ACTION RESEARCH PROCESS

During Phase 3 the action research process was evaluated to achieve objective 3. The purpose of evaluating the study was to assess the success of the project and to inform further implementation. Kolb (1984 cited in Partridge 2015:para. 1) states reflecting on “processes and experiences can help conceptualise issues and further develop future action”. The action research process was evaluated using the World Café data collection method (World Café, 2016:paras. 3-7).

Objective 3

To evaluate the outcomes of the action research process.

Phase 3 consisted of three activities. Activity 1: Questions; Activity 2: Drawings; and Activity 3: Words. Phase 3 and the World Café data collection method are described in Chapter 6.

Refer to Figure 3.1 for a schematic presentation of the research process.

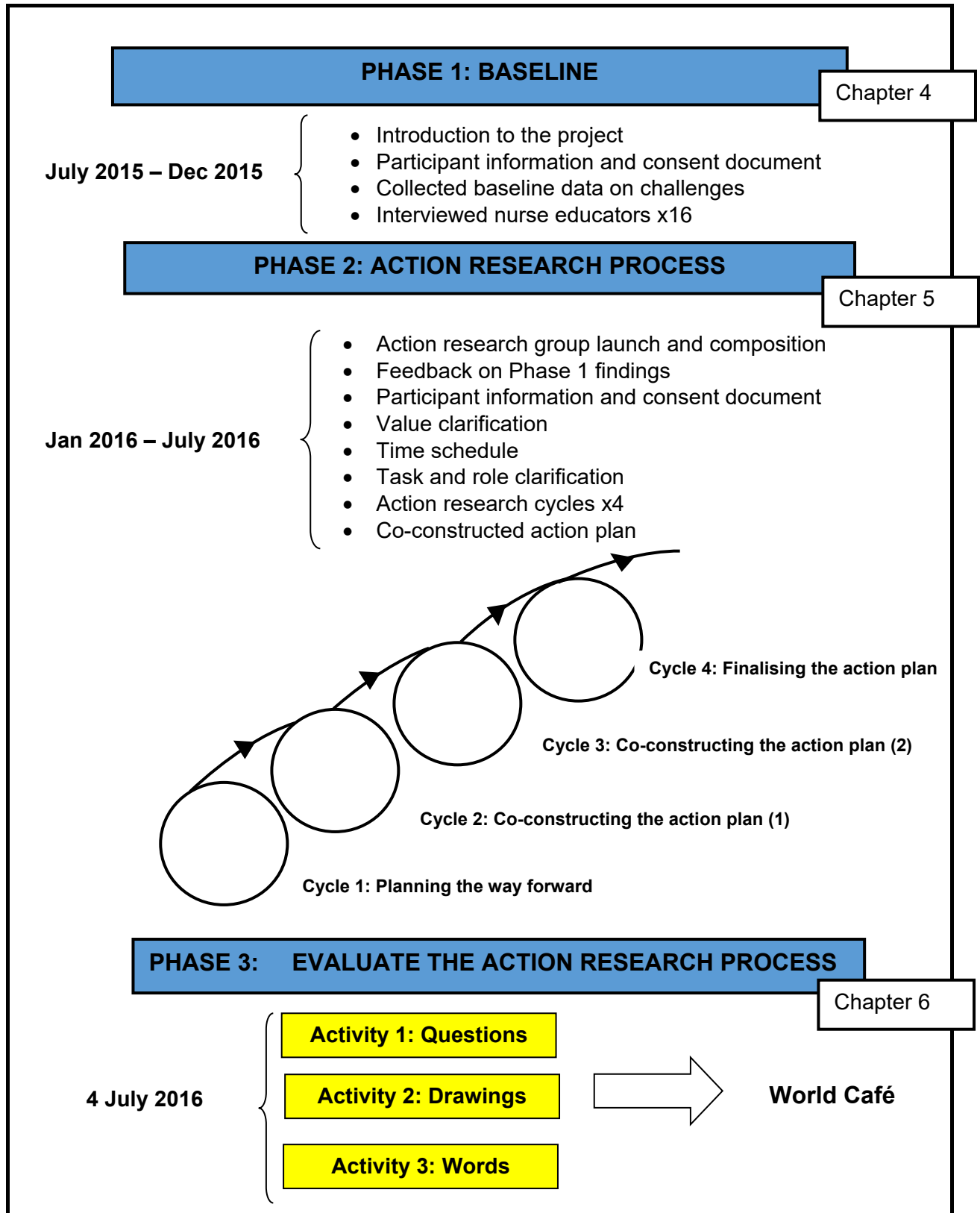


Figure 3.1 Schematic presentation of the research process

3.9 CONCLUSION

In this chapter the research design and methods utilised in this study were described. Phase 1 is discussed in detail in Chapter 4 and Phase 2 is described in Chapter 5. Phase 3 is described and presented in Chapter 6. The next chapter, Chapter 4, provides an in-depth discussion of Phase 1 supported by literature and followed by a discussion of the findings.

4: BASELINE (PHASE 1)

“Problems are only opportunities in work clothes.”

-Henry Kaiser-

4.1 INTRODUCTION

Chapter 3 provided a description of the research methodology, design and methods utilised in this study. This chapter discusses and presents Phase 1 comprising the sampling, data collection, data analysis, literature control and discussion of the findings.

4.2 RESEARCH METHODS

During Phase 1 the researcher collected data to inform Phase 2 (refer to Chapter 5) of the study. The researcher therefore set out to achieve objective 1 in this phase.

Objective 1

To explore and describe the challenges experienced by nurse educators in utilising educational practices that promotes the development of undergraduate student nurses' clinical reasoning skills.

This phase followed a descriptive qualitative research approach. Polit and Beck (2012:505) refer to the many qualitative studies that do not have formal names as “descriptive qualitative studies”. Neergaard, Olesen, Andersen and Sondergaard (2009:1) state “descriptive qualitative follows the tradition of qualitative research; in other words, it is an empirical method of investigation aiming to describe the participant’s perception and experience of the world and its phenomena”.

Although this was an action research study, Phase 1 was characterised as descriptive qualitative because this part of the study required a straight description of the phenomena (Sandelowski 2000:334) such as the challenges experienced by nurse educators in the

present study. The aim was merely to explore and describe the challenges experienced by the nurse educators which would be addressed in Phase 2 of the action research process. Phase 1 therefore presents a comprehensive summary of the challenges experienced by nurse educators in utilising educational practices that promote student nurses' clinical reasoning skills which, according to Polit and Beck (2012:505), is what descriptive qualitative studies tend to do – comprehensively summarise phenomena or events. Sandelowski (2000:335) describes descriptive qualitative as a valuable method by itself and claims researchers can utilise descriptive qualitative as a method with confidence and in good conscience.

4.2.1 SAMPLING

Non-probability purposive sampling was used to select nurse educators and heads of departments (HoDs) to be interviewed by the researcher. The researcher selected participants who were the most knowledgeable about the research phenomenon and could articulate and explain nuances (Brink, et al. 2012:139). As researcher, I sought to explore the challenges experienced by nurse educators and therefore nurse educators were selected as participants who could share their personal experiences. The HoDs were nurse educators before and some are still facilitating and assessing students. They also supervise nurse educators and would therefore have the required information on challenges experienced by their subordinates. The inclusion criteria were nurse educators and HoDs involved in the education and training of students registered for the four-year comprehensive nursing programme as well as nurse educators and HoDs who had indicated interest to participate during the launch of the study.

A total of 18 nurse educators and HoDs met the inclusion criteria; however, the sample size was based on data saturation and for Phase 1 it was 16 and comprised of four HoDs and 12 nurse educators. Although 18 participants met the inclusion criteria only 16 interviews were held because a point was reached where no new valuable information was collected. The researcher held 16 interviews before reaching data saturation; this was when the data collected by the researcher yielded no new information. Dworkin (2012:1319) defines saturation as “the point at which the data collection process no longer offers any new or relevant data” and adds the comment that most scholars argue that saturation is the most

important factor to think of. The sample size in qualitative research methods are smaller than that used in quantitative research methods because qualitative research methods focus on gathering in-depth understanding of the phenomenon under study (Dworkin 2012:1319).

4.2.2 DATA COLLECTION

Data was collected by means of unstructured interviews with nurse educators who volunteered to participate and had signed the informed consent forms (refer to Annexure B4). Interviews were conducted with 16 participants regarding the challenges they experience in utilising educational practices that enhance student nurses' clinical reasoning skills.

4.2.2.1 Interviews

Qualitative research interviews involve gathering information and facts the researcher is interested in (Rowley 2012:261). In qualitative research interviews, open-ended questions are used to elicit stories and learn about meanings, emotions, experiences, and relationships that cannot easily be observed (Fryer, Mackintosh, Stanley and Crichton 2012:23; Rossetto 2014:2). Interviews are the most frequently used method of collecting data in qualitative research (Jamshed 2014:87) and indeed the most common method used by action researchers (Koshy, et al. 2011:109). It generates in-depth personal accounts of participants' experiences and their interpretation of them (Doody and Noonan 2013:28-29). Interviews afford the researcher the opportunity to understand what the participants mean by what they say (Fryer, et al. 2012:23) because as an interviewer, the researcher engages "in active, supportive listening that involves paraphrasing and probing to develop rapport and encourage in-depth discussion" (Rossetto 2014:2).

There are different types of interviews to choose from and all are classified according to their level of structure (Rowley 2012:262). These include structured, unstructured and semi-structured interviews (Doody and Noonan 2013:28). Table 4.1 provides a summary of the advantages and disadvantages of interviews as a method of collecting data.

Table 4.1 Advantages and disadvantages of interviews

ADVANTAGES	DISADVANTAGES
<ul style="list-style-type: none"> • They are useful to gain insight and context. • They help participants describe what is important to them. • They are useful in generating quotes and stories. • They enable the researcher to develop a rapport with the participants. • They give the researcher the opportunity to observe as well as listen. • They enable more complex questions to be asked. • The researcher can explain the purpose of the research and answer any questions participants may have about the study. • The researcher can probe the participants' responses and seek further clarification. • Participants can seek clarification of a question. • They help the participants to give detailed responses. • The researcher can explore participants' reasons for acting in a certain way or their interpretations of events. • They are more appropriate for certain 	<ul style="list-style-type: none"> • They may seem intrusive to the participants. • They are time-consuming, not only in terms of conducting them but also in relation to arranging them, travelling to the venue, post-interview transcription and analysis of the data. • They can be expensive compared with other methods. • Interviews on a personal and/or intimate subject can evoke strong feelings and these feelings need to be handled with great sensitivity by the researcher. • They are susceptible to bias, which may include: <ul style="list-style-type: none"> (i) the participants' desire to please the researcher; (ii) saying what they think/feel the researcher wishes to hear such as giving an official point of view rather than their personal view; (iii) the desire to create a good impression may lead to participants not answering honestly; (iv) there is a tendency to say something rather than nothing if a participant cannot answer a question or has nothing to say on a topic;

ADVANTAGES	DISADVANTAGES
<p>groups such as those with reading or writing difficulties.</p> <ul style="list-style-type: none"> • Interviews can be rewarding for participants as they stimulate self-exploration and discovery. • The personal benefit for a participant is telling his or her own story. 	<p>(v) the researcher's views can influence the participants' responses by expressing surprise or disapproval.</p>

Doody and Noonan (2013:29)

As the researcher, I gave special attention to the aspects addressed in the next section to overcome some of the disadvantages of unstructured interviews.

I scheduled all interviews personally with the participants in our workplace at a time and venue convenient for them. Neither the participants nor I was required to travel to the venue and I could easily contact them in their offices. The participants were nurse educators who knew me well and were used to collaborative and participative quality assurance workshops where members were encouraged to share their opinions. I had a relaxed and supportive relationship with the nurse educators because of my role as quality assurance manager. I made a point of reminding the participants that participation was voluntary and I only approached those who indicated interest during the launch of the study to participate in the interviews.

4.2.2.2 Unstructured interviews

Data was collected by means of unstructured interviews with nurse educators who met the inclusion criteria and gave informed consent. The issue of confidentiality and anonymity of the data was discussed with each participant before conducting the interview. According to Rowley (2012:263), the length of the interview and the number of interviews that need to be conducted depend on the research questions and research strategy. The most important factor that must be borne in mind is that the interviews must generate sufficient interesting findings. For this reason the researcher cannot set a precise time limit. Yet, according to Rowley (2012:263) a good rule of thumb for new researchers is to aim for 12 interviews of

approximately 30 minutes or six to eight interviews of about an hour each (Rowley 2012:263). However, Dworkin (2012:1319) addresses the question, 'how large does my sample size have to be?' She explains that although some experts avoid this topic, most authors recommend anywhere from 5 to 50 participants as adequate. Numerous factors must be taken into consideration such as the quality of the data, the scope of the study, nature of the topic, the amount of useful information obtained from each participant and the research design (Dworkin 2012:1320).

A pilot interview was conducted with one nurse educator who was not involved with the four-year comprehensive nursing programme. This interview helped the researcher to determine and overcome practical issues, for example, where to place the audio recorder to ensure the participant's voice could be heard clearly and to ensure privacy to prevent any interruptions during the interviews. It further made the researcher aware of her shortcomings as an interviewer and she subsequently did additional research on interviewer skills to be fully prepared for the main interview sessions. The pilot interview was audio-taped with signed consent from the participant, and was approximately 20 minutes in duration. After listening to the recording several times the researcher transcribed the recording verbatim. The transcript was shared with an expert at the University of Pretoria for critique and input to further refine the researcher's interview skills. The researcher received additional valuable advice on interviewing skills but there was no need to adjust the interview guide. The data collected from this interview was not included in the data analysis process and the particular nurse educator did not participate in the main interviewing process.

The researcher conducted 16 interviews during Phase 1 with four HoDs and 12 nurse educators from 2 July 2015 to 3 August 2015. The dates and times for the interviews were negotiated with each participant individually to guarantee minimal disruption to their programmes. All interviews were conducted in an office at the nursing college to ensure easy accessibility and availability for the participants. A 'Do not disturb' board was secured on the closed door and the landline telephone was disconnected. The seating arrangements were made so that the researcher and the interviewee would face each other. Two chairs were placed opposite each other with a table next to the chairs. The researcher checked that the audio recorder worked and had extra batteries and switched off her cellular phone. These preparations were done before each interview to enable participants to share their experiences in a conducive environment. In general, the interviews took place in a relaxed

but professional atmosphere. In spite of the mentioned preparations made before the interviews and the fact that the researcher requested each participant before her or his interview to set their cellular phones on the silent mode, interruptions did occur. Two of the participants answered phone calls and there was a knock once on the door that was ignored. However, the researcher could return the participants to the interview context by repeating the words or ideas discussed before the interruptions. The duration of the interviews varied between 20 and 90 minutes.

An unstructured interview starts with a broad open question concerning the area of study with subsequent questions dependent on the participant's responses (Doody and Noonan 2013:28) and encouraging the participant to talk around a specific theme (Rowley 2012:262). In the view of Jamshed (2014:87) unstructured interviews are essentially conversations, though with several special features: it has a purpose and the conversation is fairly structured. The researcher began the interview with a broad question and subsequent questions were guided by the participant's response to the broad question:

Describe the challenges that you are experiencing in utilising educational practices to promote clinical reasoning amongst the students.

Although unstructured interviews are non-directive and flexible, the researcher did follow an interview guide (refer to Annexure B5) comprising themes rather than specific questions. This enables the participant's thoughts and interests to be explored in depth; in turn, it generates rich data (Doody and Noonan 2013:29). Every interview was audio-taped with the permission of the participants (refer to Annexure B4). Handwritten notes during the interview are generally unreliable and the researcher might miss some key points. Recording of the interview makes it easier for the researcher to focus on the interview content and the verbal prompts (Jamshed 2014:87). The researcher kept notes during and after each interview to record the participant's non-verbal communication. The researcher also kept a reflective journal for every interview which served as a record of her own personal reflections, ideas and experiences.

According to Koshy, et al. (2011:114), the use of a research diary or a personal reflective journal is a helpful method for recording information during an action research study. It helps

the researcher to keep a record of what happens; why and where the researcher's ideas evolved from and of the research process itself. It is where researchers account their reflections and write personal commentaries on their feelings (Koshy 2010:91; Koshy, et al. 2011:115). Diaries are valuable sources of data because they show developments in the action and in the thinking and theorising that took place (McNiff 2013:108). The reflective process involved in writing a diary can also contribute to the professional development of the researcher (Koshy, et al. 2011:115).

Most of the participants shared freely. In fact, the researcher found it difficult to interrupt some participants and therefore allowed them to express themselves. She wanted to avoid the possibility of participants feeling offended if interrupted which could result in them not sharing their true feelings and opinions. This also contributed to the lengthy interviews held. On the other hand, it encouraged in-depth conversations and generated vast amounts of data.

Several factors contributed to the good responses of the participants. Firstly, the researcher only approached participants who indicated that they were interested in participating. In fact, some participants voiced what brought on their interest and willingness to participate in the study was their belief that it was 'a good idea'. Secondly, the researcher approached every participant individually for a convenient date and time and she was flexible in accommodating the participants. Finally, the researcher was known at the nursing college and was an insider working as the quality assurance manager and therefore participants felt comfortable with the researcher who facilitated their responses.

4.3 DATA ANALYSIS

All data collected during the 16 unstructured interviews were audio-taped with the permission of the participants and transcribed verbatim. The qualitative data was analysed for content using coding such as descriptive, in vivo, holistic and sub-coding. Data analysis was conducted according to the steps outlined in Saldaña (2013:2-183). The stepwise approach is summarised below:

- The researcher organised and prepared the data for analysis. She read through the transcribed texts, made corrections, added notes from the notes kept after every interview and clarified the text. Unique military terms were clarified.
- She read through all the data. The researcher listened to the audiotapes and went through the transcribed texts to ensure the correctness of the transcriptions.
- The transcribed texts were copied into a table with four columns. Column 1 contained all notes (which clarified or stated what the participant was saying or reflected the researcher's thinking). Column 2 comprised of the verbatim transcription. In column 3 the codes were listed and in column 4 the emerging categories were written down.
- The text was divided into sections or paragraphs that fitted together.
- The researcher started on a detailed analysis using the coding process. The first cycle of coding was done by reading the transcripts and highlighting important concepts or sentences.
- Codes were indicated in column 3 by means of descriptive (topic) coding, in vivo (literal or verbatim) coding and holistic coding with sub-coding being used later (refer to Annexure B6).
 - (i) Descriptive coding (topic coding)
Analysing the basic topics that emerged from the data (Saldaña 2013:88).
 - (ii) In vivo coding (literal or verbatim coding)
Refers to a word or phrase from the actual language found in the data (Saldaña 2013:91).
 - (iii) Holistic coding
To grasp basic themes or issues in the data by absorbing them as a whole rather than by analysing them line by line. This is applicable when the researcher already has a general idea of what to investigate in the data or to chunk the text into broad topic areas (Saldaña 2013:142).
 - (iv) Sub-coding
A sub-code is a second-order tag assigned after a primary code to detail or enrich the entry, for example, assessment strategies – moderation (Saldaña 2013:77).
- Emergent categories were noted but by no means were these final (first cycle coding).

- An analytic memo was kept for every interview. Analytic memos are like researcher journal entries, a place to “dump your brain” (Saldaña 2013:41). Memos were kept on the researcher’s thinking; writing; even more thinking; and keeping record of the researcher’s thinking while coding the transcripts.
- During second cycle coding the researcher went back to all 16 transcripts to finalise the codes and to begin with the process of clustering the codes into subcategories and categories which were then developed into four main themes.

The co-supervisor verified the data analysis process and inter-coder reliability was assured throughout the analysis by conducting first and second cycle coding. To assess the rigour of the coding process, a summary (refer to Annexure B7) of the themes, categories and subcategories were submitted to the participants for member checking and to validate the findings. The participants were asked to provide their comments on the handouts that the researcher later collected and reviewed. There was overwhelming agreement among the participants that the themes, categories and subcategories captured the content discussed during the interviews.

4.4 OVERVIEW OF RESEARCH FINDINGS

Four main themes and 12 categories with their subcategories emerged from the data analysis process. The challenges encountered by nurse educators were classified under the following four main themes:

Theme 1: Educational practices

Theme 2: Clinical learning environment

Theme 3: Military learning environment

Theme 4: Role players in the teaching and learning environment

The schematic presentation for the main themes, their categories and subcategories is summarised and presented in Figure 4.1. Each theme, category and subcategory is discussed thoroughly in Sections 4.4.1 to 4.4.4. A mind map summarising the categories and subcategories for each theme precedes every discussion (refer to Figures 4.2 to 4.5).

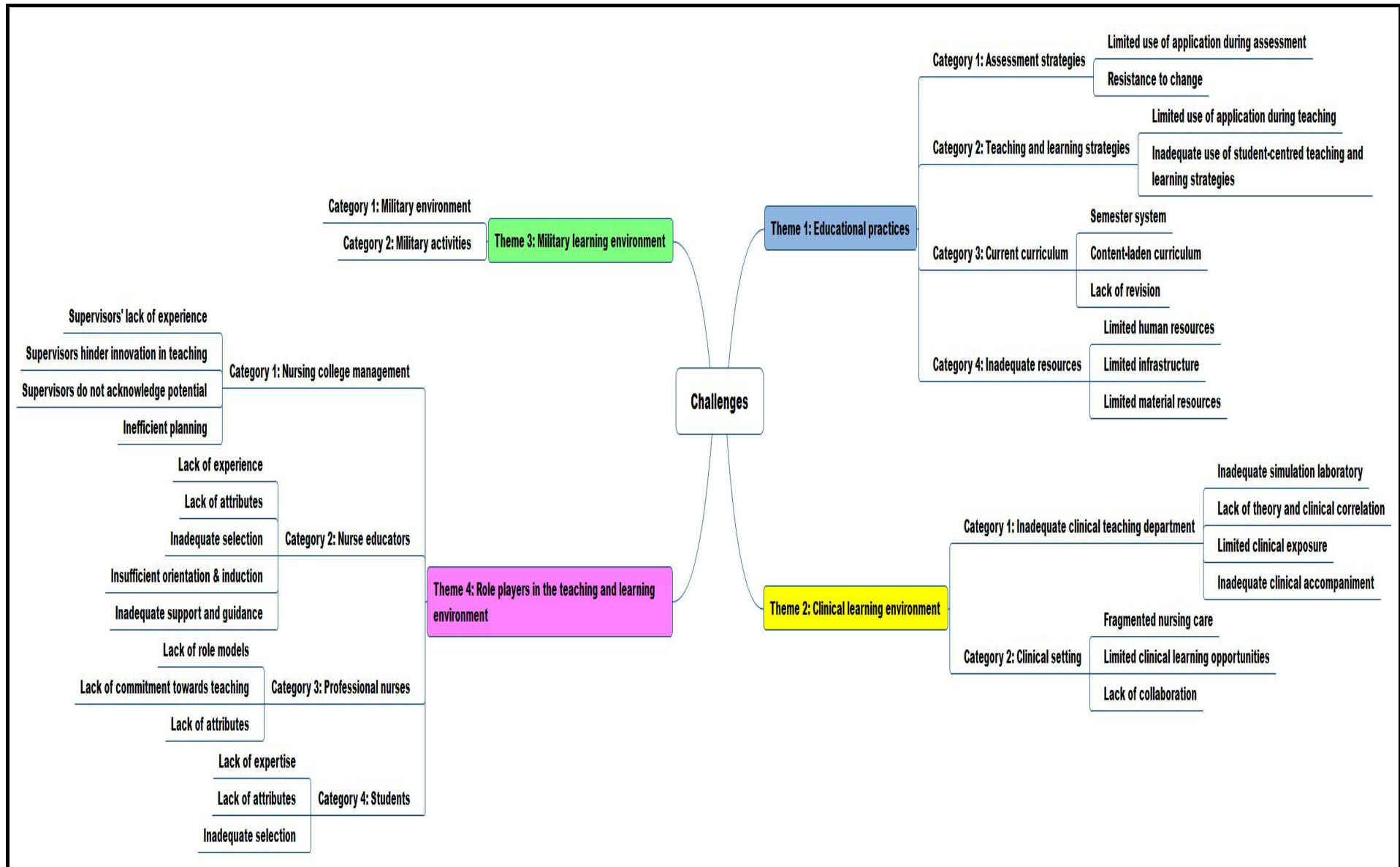


Figure 4.1 Schematic presentation of the challenges experienced by nurse educators in developing student nurses' clinical reasoning skills

4.4.1 THEME 1: EDUCATIONAL PRACTICES

During the interviews, educational practices emerged as a main theme. Four categories were derived from the data under which the challenges could further be classified into categories, namely assessment strategies, teaching and learning strategies, current curriculum, and inadequate resources.

These categories are in line with the clarification of the concept educational practices in Chapter 1 and support the theme educational practices. Refer to Section 1.7.4 where it is written: ‘for this study educational practices were policies, programme approaches, teaching and learning strategies as well as individual goal-directed activities performed by nurse educators during the education and training of student nurses requiring technology, knowledge and skill to achieve positive student outcomes’.

Figure 4.2 shows a summary of the challenges experienced by nurse educators under the theme educational practices.

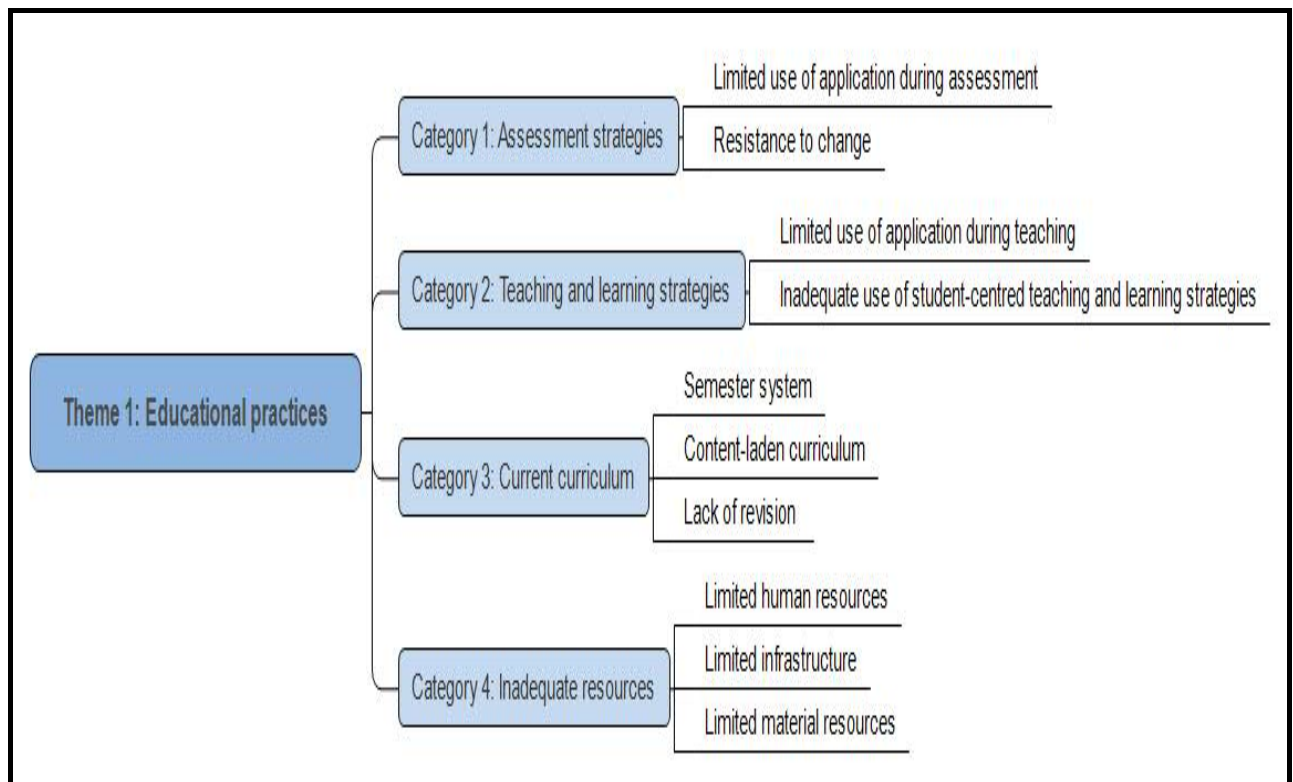


Figure 4.2 Theme 1: Educational practices

Each category and its subcategories are discussed as related to the findings. A discussion will follow at the end of each category providing a brief literature control and discussion for that category.

4.4.1.1 Category 1: Assessment strategies

The participants pointed out assessment strategies currently utilised at the nursing college are mostly content driven. The participants were concerned that, if students are assessed on content directly from the textbooks only, they are not encouraged to think, reason and apply their knowledge in different clinical situations. Two participants expressed their concern regarding this aspect as follows:

I have observed that on assessment most of the time they [nurse educators] give them the things that are just summarised on tables in the textbook. The student doesn't learn; you know or information that you got from the practice that is relevant. [P13]

We [nurse educators] just want to push the information and finish with our content. So they [students] end up memorising what we teach them. [P10]

In Category 1: Assessment strategies, two subcategories emerged, namely limited use of application during assessment, and resistance to change. Each subcategory is discussed separately.

Subcategory A: Limited use of application during assessment

A challenge identified by the participants was the nurse educators' non-utilising of application questions when compiling assessments. They reported limited use of scenarios and case studies as key obstacles to applying theoretical knowledge in the clinical setting:

From my experience as an HoD I have actually seen that most of the lecturers [nurse educators] they give student[s], especially when they asses students, they give them precisely what they are going to ask ... that is the most worrying thing that I see our students not going to be that competent. ... they [nurse educators] don't

just use application ... they [students] actually won't have enough knowledge to can apply in clinical setting. [P13]

The participants' honesty during the interviews demonstrated their awareness of their shortcomings and their ability to reflect on their own practices as evidenced by the following quote from a nurse educator:

I think as lecturers [nurse educators] we can like starting to review our questioning. Then even starting to give activities where, like you can make scenarios where the student has to see for themselves or where you test how are they going to manage this situation if this situation appears. [P5]

Another participant explained nurse educators who do use scenarios continue to ask factual questions with no need for application from the student:

Even you will find that people [nurse educators] who are writing the scenarios in an examination paper, why do they write a scenario there when they are going to ask the students to explain the signs and symptoms of hypertension? [P3]

The same participant elaborated on her aforementioned comment by emphasising nurse educators are encouraging students to regurgitate knowledge that requires no rational thought. She was of the opinion that using problem-based questioning could promote clinical reasoning:

They [students] will fall back to only the knowledge that they have. Okay a high intake of salt ... that is just regurgitation. This is what is a problem, where problem-base[d] come[s] in. You will actually, I think, be able to ... eliminate this. I don't know, I don't know. [P3]

One participant was worried about the large amounts of content students have to cope with as it encourages rote learning and leads to lack of theory and clinical integration:

But to me the content is so much that they [students] become confused and then they just cram it. They don't understand the content properly. They are just working

for the test in order to pass. Hence, when they go to the clinical area it is a difficult. ... they have forgotten totally of what they have been taught in the class. [P9]

What also came forward from the interviews were that real (human) patients are not used during clinical assessments; therefore, students' ability to clinically reason within different situations are not assessed. One participant was worried about the fact that nurse educators mostly use simulation as the only means of clinical summative assessments. This participant spoke about doing summative assessments on real patients. Some participants argued there were not enough patients to do assessments on real cases; however, from this specific participant's experience some opportunities were available as indicated in her statement:

I was told there is no learning opportunities for our students. Students cannot do examination here [at the hospital]. But in any case, we had the most interesting cases in the hospital while I was told there was nothing. [P3]

Subcategory B: Resistance to change

Some of the participants shared they were perturbed by resistance to change. When nurse educators attempt to utilise innovative assessment methods with the aim of testing the students' ability to think and reason, some of the internal moderators (who are also HoDs) do not support their efforts. Two participants had the following to say on this aspect:

As a lecturer you set, you teach the student and then you set a test or even exam. Then you will find that now when you take for moderation, the moderator wants to change your question to put it the way she wants it. But it is not what you want. I want to test their [students'] thinking. [P4]

My HoD is rather close-minded. She is not open to these different strategies ... because as she said she has this big file, and this is how I asked it ten years ago. You must ask the questions like that. [P7]

To the contrary, according to another participant, resistance to change is not isolated to the HoDs but also include nurse educators themselves. One manager commented on the unwillingness of nurse educators to utilise application questions:

The moment you start to say, well let's try and do application, then you sort of get that resistance, you can see that people [nurse educators] they look in the book, they take the box, then they ask questions relating to that box that are highlighted or not. But you can get your own example; not necessarily the example that is in the book, something that you saw clinically or something that the student told you they have seen clinically and then you use that in your application. [P12]

Discussion: The majority of the participants reported current assessment strategies only assess the students' knowledge of the content with limited use of application questions. In the present study participants mentioned students use "rote learning" to memorise and "regurgitate" the content. Gul, Khan, Ahmed, Cassum, Saeed, Parpio, et al. (2014:38) point out that nurse educators use factual and lower level questioning which does not promote critical thinking or clinical reasoning while Kantar (2014:790) mentions nurse educators rarely assess past the analysis level. In Schweisfurth's (2013:264) view, assessment strategies should be meaningful to the student; assessments must contribute to the student's learning and not be purely content-driven or based on rote learning. According to Gul, et al. (2014:38), research evidence suggests a direct relationship between the types of questions posed by nurse educators and the students' ability to develop critical thinking. The findings from the present study are similar to that of Wu, Heng and Wang (2015:549) who state traditional assessments do not provide clear indicators of students' problem-solving, reasoning and critical thinking skills.

The limited use of case studies and scenarios during assessment was another concern raised by the participants. According to the findings of a study conducted by Raurell-Torredà, Olivet-Pujol, Romero-Collado, Malagnon-Aguilera, Patiño-Masó and Baltasar-Bagué (2015:34), case-based learning improves the patient assessment skills of undergraduate nursing students thereby preparing them for clinical practice. These findings concur with those of Wu, et al. (2015:549) that the use of authentic assessments with a case approach provided clarity for their participating students' learning goals as it built their confidence and developed their knowledge, skill competencies and critical thinking skills. If students are not assessed on application and are only expected to reproduce the content, they will not develop deep learning and the ability to reason in different situations.

Participants in this study reported resistance to change as a hindrance to adopting more innovative forms of assessment. Deneen and Boud (2014:577) also found the greatest hindrance to achieving change in assessment within the higher education context is resistance among nurse educators. The findings of Kunnari and Ilomäki (2016:173) reveal resistance to change hinders innovation by highlighting unwillingness to change as well as the attitudes of the “older generation” as major hindrances. Similarly, the findings from the present study showed supervisors encourage nurse educators to assess rote learning. One of the nurse educators commented on how her supervisor told her to assess students as she had done for the past “ten” years (refer to second quote [P7] under Subcategory B: Resistance to change).

4.4.1.2 Category 2: Teaching and learning strategies

Most participants described various innovative teaching and learning strategies, for example, role-play, group discussions, field trips, poems and case-based learning that they thought would promote the students’ development of clinical reasoning skills. According to some participants, although nurse educators are aware of some innovative teaching and learning strategies, they are not utilising them effectively:

So during that period is when I am integrating problem-solving techniques. I normally give the students a scenario. [P7]

Like if you say everybody [students] must have their phone. Take them out, it is your right today to have a phone in the class, because you are going to use this phone now ... and then Google let’s go to ... they will be Googling different things at the same time. You know, if they are actively involved in this thing they will never forget it. [P8]

I believe that if we can encourage critical thinking on our learners, which can be applied by using the problem-solving method whereby our student can be given opportunity to use the simulation room ... the learning can be through simulation. ... we can also use the scenarios. With the scenarios they can role play the scenarios and they can even ... do the poetry because I once used it. [P10]

I am doing the cell, isotonic solutions, hypertonic and whatever, so I must take them to the wards and say now you have got the vaculitres. ... so they can relate them from the class to the practical field. [P11]

In Category 2: Teaching and learning strategies, the following subcategories emerged: limited use of application during teaching and inadequate use of student-centred teaching strategies. Each subcategory with its supporting quotes is discussed separately.

Subcategory A: Limited use of application during teaching

The participants were of the opinion that teaching and learning strategies utilised by nurse educators do not encourage the development of critical thinking and clinical reasoning skills. Two of the participants explained it as follows:

You [nurse educators] can increase the clinical reasoning of the student. Using things like the clinical examples is one of the things that we could be using as educators or the educators could be using. But we tend to be bookworm orientated. [P12]

What I have observed in the four year [fourth-year] students is that perhaps they have not been exposed. At this level one would expect them to kind of run through scenarios with you and be able to a certain extent have analytical thinking. I think perhaps earlier on in the curriculum that was not installed or that was not stimulated. [P2]

Another participant felt strongly nurse educators should make use of practical examples in the classroom so that students are able to correlate the theory taught in the classroom with the clinical situation:

When you [nurse educators] teach I think we need to be more practical. So I think we need to do more practical examples in class, yes. [P11]

One participant shared her distress about nurse educators who are not teaching principle encroachment which enables students to apply the same principles of care in different clinical situations:

Do we teach people what we call in Afrikaans “beginself oorskryding” [principle encroachment]? Do we teach them ... to actually take one principle and apply it in different other situations, more complicated situations? [P3]

Subcategory B: Inadequate use of student-centred teaching strategies

The participants reported nurse educators do not utilise student-centred teaching strategies. One participant admitted to utilising traditional teaching strategies:

I feel as that our learners [students] they are unable to apply what we teach them. I still blame us [nurse educators] because we are using a traditional way of teaching. [P10]

Some participants indicated nurse educators utilise lecturing by means of PowerPoint as the only teaching and learning strategy that focuses on content with limited use of scenarios, case studies and clinical examples:

There is this stereo type of lecturing [referring to PowerPoint] in our institution where ... I don't know. Maybe it is how we socialise our lecturers [nurse educators]. Most of them [nurse educators] it is about the PowerPoint; it is a norm. It is seen that there are those that I feel if I can take a PowerPoint away from them it is like I have disarmed them. [P1]

The participants highlighted the lack of time as a major challenge. According to them, due to the time issue nurse educators revert to utilising traditional teaching methods which do not encourage student interaction:

Sometimes you get criticised for using the other methods. Like if you will need more time for that, then you get criticised that you wasted time doing one, two, three, doing the role-plays, whereas you should have just facilitated and finished the content ... I tried one, but the time was not enough. [P10]

We [nurse educators] are looking at the time that I must have finished this, regardless of whether the student they understand or not. [P16]

Discussion: Inadequate use of case-based learning and application in classroom teaching were revealed by the participants as contributing to the students' lack of clinical reasoning skills. According to Raurell-Torredà, et al. (2015:34), case-based learning allows the student to feel more connected to reality thus allowing her or him to decide how to plan and deliver patient care. It also promotes student autonomy, decreases the theory-practice gap and increases student motivation and interest. Participants from this study were mostly utilising the traditional lecture mode of teaching. Chilemba and Bruce's (2015:e56) stance is that traditional lecturing may be suitable for teaching factual and foundational topics; however, it does not equip nurses with the clinical skills they need to provide safe and quality care in an ever-changing healthcare system. Rischer (2013:paras 5-6) argues that lecture-based learning does not engage students with clinical realities. The authors add classroom theory is fragmented and poorly integrated with clinical practice.

The findings from this study revealed nurse educators are predominantly utilising teacher-centred teaching strategies which require limited student interaction and participation. Chilemba and Bruce (2015:e56) state student-centred teaching strategies enhance the development of a variety of learning styles and empower students as it encourages participation within the learning process. Student engagement and active participation promote the development of critical thinking, clinical reasoning, clinical judgement, decision making, problem-solving and self-awareness necessary in practice settings (Chilemba and Bruce 2015:e56; Gaba 2015:60). The findings from a study by Ellis (2016:69) reveal nurse educators believe that student-centred teaching enhances learning, and students are better equipped to apply theory to practice. However, these beliefs have a poor influence on their actual implementation of student-centred teaching. Ellis (2016:69) concedes it is possible for nurse educators to see the value in student-centred teaching and even describe themselves as student-centred; however, barriers may be influencing their actual utilisation.

Almost all participants in the present study were able to describe different student-centred teaching strategies. Conversely, they also made it very clear that insufficient time and content-driven curricula prevent them from incorporating student-centred teaching. Similarly, Ellis (2016:69) found nurse educators often feel overwhelmed with the content, and therefore hesitate to incorporate student-centred teaching strategies. Some examples of student-centred teaching strategies mentioned by the present study participants include case studies, videos, poems, role-play, group work, questioning, problem-based learning, field trips, and

simulation. Gaba (2015:60) adds concept mapping, think-aloud approach and portfolios to this list. While Kantar (2014:790) mentions unfolding case studies, inquiry-based learning and project-based learning and advocate teaching for higher-order thinking.

4.4.1.3 Category 3: Current curriculum

From participants' accounts, the current curriculum utilised for the four-year comprehensive programme does not encourage the development of critical thinking and clinical reasoning skills:

So in that way we are failing them [students] because they can't think critically. We [nurse educators] are just feeding them with information. Also the way that the programmes are put it is time constrained. We don't have enough time so that they can go out, they can apply it, they can think critically. We just want to push the information and finish with our content. So they end up memorising what we teach them. [P10]

In Category 3: Current curriculum, three subcategories were associated with it, namely the semester system, content-laden curriculum, and the lack of revision.

Subcategory A: Semester system

The participants emphasised the current curriculum used at the nursing college consists of two semesters. They were of the opinion this semester system is taking up time that could be better utilised for clinical exposure:

I said our students need to go to the clinics because of this ... semester system which somewhere, somehow it takes our clinical month. Our semester takes our clinical month. Our curriculum is taking the clinical ... exposure. [P1]

The other thing is clinical exposure. Because of this semester [semester system] they must go to the clinics, they must go where and where. So at the end of the day their clinical exposure is also very limited, if we can break this semester thing. [P9]

Another concern raised was the time spent on compiling two sets of summative assessments. According to the participants, this time could be spent more wisely, for example, on the clinical accompaniment of students:

Examinations are twice a year. It is taking our time for clinical accompaniment. [P9]

The semester system it limits you because now there are these exams that come somewhere in the middle. Now everything stops and you do this. Now it is very limiting, because if you look in that, in those [that] time, you could be getting a lot of time either in the clinical or even in theory. [P12]

Subcategory B: Content-laden curriculum

The participants pointed out that the current curriculum is content-laden and nurse educators are concerned that they will not cover the content; they therefore opt to use teacher-centred teaching strategies to save time. A participant simply stated ‘our curriculum it is congested.’ [P10] while two others also voiced concern about this:

I think our programme is so congested. We are rushing on time more than on the content. We are not looking at the content, we are looking at the time that I must have finished this, regardless of whether the student they understand or not. [P12]

Do we really fulfil from there on what we are supposed to do, or it is [is it] just a matter of giving a lot of theory in class and assume it must go out there and they must go and apply [the theory to practice]? [P3]

Subcategory C: Lack of revision

Revision of the curriculum emerged as the third subcategory. Participants were upset because the curriculum has not been revised and current trends in nursing and nursing education is at present not incorporated in the curriculum. In this regard, a participant made the following statement:

From a community perspective that the new changes are not really accommodated in our curriculum. We haven’t had any revision concerning that. [P15]

Another participant explained she would like to revise the curriculum so that she could spend more time on current issues in nursing practice:

Yes, so you would want to emphasise on some outcome so you can say. 'no let us put this in here and then deal with this in detail', because this is what brings problem in the clinical [setting]. [P5]

However, she was experiencing resistance from her HoD when making suggestions to revise the outcomes:

The management feels that whatever they have put in the outcome it is enough. So, they don't consider even your suggestions. So as time goes on, you don't even suggest anymore. You just give the student what the management gives you to. [P5]

Discussion: The participants argued that the semester system used at the nursing college with two examination periods (mid-year and end of year) was taking up essential clinical exposure time. Rozmus, Jones, Meyers, Hercules and Schumann (2014:66) conducted a randomised control trial to compare a traditional nursing curriculum based on students taking didactic and clinical courses concurrently to a new Pacesetter curriculum where the majority of the clinical education was moved to the final semester. The findings of their study revealed no negative impact on student learning, but improved clinical competency when using the new Pacesetter curriculum.

Participants from this study identified the current curriculum as content-laden. Agreeing with them, Rischer (2013:para. 4) and Benner, et al. (2010:14) sees the origin of the problem as the classroom. They believe nurse educators cover too much theory content which is unfortunate because it is not contextualised to practice. Del Bueno (2005:281) also states a highly probable cause of the theory-practice gap challenging nursing students is the emphasis on teaching more and more content rather than focusing on applying the knowledge. Allen (2013:3) agrees by adding content overload is a major challenge experienced in nursing education. Due to the ever-increasing knowledge explosion which is producing nursing curricula loaded with content, it leaves nurse educators with large amounts of information to deliver.

The participants emphasised the lack of revision of the current curriculum as a concern in incorporating current health trends. Armstrong and Rispel (2015:5) support this by asserting nursing curricula are unresponsive to changes in disease burden and in the health system.

Hence, the authors' stance is that revision is required so that curricula are more appropriate for the population and health system needs of South Africa.

4.4.1.4 **Category 4: Inadequate resources**

In Category 4: Inadequate resources, the subcategories limited human resources, limited infrastructure and limited material resources emerged. The participants were convinced that the inadequacy of resources were important influential factors in the teaching and learning environment.

Subcategory A: Limited human resources

The participants perceived a lack of human resources as a challenge interfering with student learning and highlighted staff shortages in various domains. The participants expressed their concern with the shortage of nurse educators in the clinical learning environment. They were also of the opinion that the professional nurses do not fulfil their teaching roles:

I think lack of having preceptors or clinical sisters in the clinical field is [are] a problem also because it seems the sisters in the units they don't care, as long they are there to work. So lack of clinical personnel for clinical accompaniment is a very good, is a challenge. [P9]

But our problem is that we lack. Because with us is the challenges of shortage [of nurse educators]. [P14]

Due to the shortage of staff as lecturers you will find that we don't have enough lecturers to do the clinical accompaniment. [P10]

One of the participants became agitated because they as nurse educators were required to follow a certain specific writing style. In her opinion, a nurse educator's task was not to concentrate on following language rules that took up a lot of time, but to teach and educate. She therefore inadvertently advocated for a typist who knew the language style and rules to type the nurse educators' work. According to her, not having a designated typist had a huge influence on her time management and ability to plan for innovative teaching strategies. This is what she said:

They have got typists there [hospital]. Yes. I took my letter I went to the typist. I did not even talk to the typist. Then you put your letter there, the way you have drafted it. Tomorrow when you come you find it ... it is perfect. Now if it is practical in [the hospital] why can't we have it? That is going to ease a lot of ... instead of troubling yourself with that CSW [Conventions of Service Writing that is the guideline according to which all documentation must be written in the military] you can think more innovative ways of teaching your student... It takes us three days sometimes just to draft this CSW things. [P8]

Several of the participants raised their concern about the absence of a simulation laboratory assistant. Currently, the simulation laboratory is not coordinated by anyone specific and this poses many challenges of which a major challenge is that the simulation laboratory is not accessible to students to practice clinical skills:

I think we should make more use of our simulation lab, like other colleges when they will say there is somebody that is allocated to simulation lab, then the students, during their free periods whatever, they can come [and] practice. [P11]

The one thing that we can improve is to get maybe a clinical ... preceptor [simulation laboratory assistant] in our simulation lab like other institutions [P1]

Subcategory B: Limited infrastructure

The participants indicated the limited infrastructure as a challenge interfering with their teaching role and hindering the development of students' clinical reasoning skills. They mentioned classrooms, the simulation laboratory, and the library as areas of concern.

The participants' accounts highlighted that the classrooms are not conducive for learning and are not therapeutic learning environments:

I think personally I do have challenges in terms of trying to facilitate the clinical reasoning skills in the classroom. I think first of all we do not have the required infrastructure. For me as a nurse educator to enhance learning and to create a

therapeutic learning environment, it starts with the classroom environment ... I don't think our classroom environment provides that therapeutic touch. [P2]

The classroom I would say it is not conducive for learning. We need to be really honest. It is not conducive for learning. [P12]

Two participants were unhappy about the absence of air-conditioning in the classrooms as it creates an environment not conducive to learning:

There is no circulation of air because we don't have air-conditioning and the like. I think for the number of students we are having we need some sort of ventilation in the classroom. [P2]

It is cold now, though we don't have air-conditioning or something. [P5]

One participant made it clear the simulation laboratory did not meet the needs of the students. The theoretical block programmes did not make allowance for breaks during which the students could utilise the simulation laboratory (although not up to standard) to practice their skills:

You know, we don't have breaks whereby they can utilise our simulation room, which is not up to standard. [P16]

It became evident from the different interviews that all the participants thought the library facilities did not contribute towards the students' learning progress. They mentioned access, old sources and space as challenges:

I think we sort of lack resources you know. If there was the [a] library with computers, we would say, 'okay let's, let's go for ten minutes or something ... get me this', and you know, you sort of involve them [students]. Even our library I have seen we have got very old books. [P6]

Even the facilities on our side, I will say the library, it is not sufficient. [P10]

Subcategory C: Limited material resources

The participants indicated limited material resources as a challenge that interferes with student learning. The majority of the participants voiced their concern regarding the unavailability of technology, especially the Internet, teaching aids/resources, and transport. They were of the opinion that limited resources have a significantly negative influence on utilising student-centred teaching and learning strategies.

One participant shared she had a problem concerning the unavailability of the Internet. This participant used non-verbal communication [raising her voice and gesticulating with her arms] to get her point across. She made valid comments about the fact that not having access to the Internet is a huge obstacle in student-centred learning when we live in a time where technology plays a vital role on all levels of education, learning and teaching:

What is a sore thumb for me, what is standing out like a sore thumb is our access to [the] Internet. How do we research? How do we equip ourselves with new development in our subject field if we don't have Internet? Where do we download articles from? Where do we download images from, you know, when you want to add that to your presentation or where you want to download clips from the Internet and play it to the students? How do we do that without Internet access? I think that is a great challenge for me. In our institution unfortunately technology is non-existent. [P2]

Another participant also demonstrated her frustration with the unavailability of the Internet to prepare for class:

We can't interact as we want to, like giving them [students] some activities that are done on the Internet. That is a problem with [the] Internet. Because you want to give knowledge that is updated not the old knowledge or when you were still a sister in the ward you used to do [this or that]. You want to check the new developments in your department so that you can keep your student informed. [P5]

Yet another participant explained that she had to utilise her own Internet after hours to prepare for class.

So to show them these different types of wounds I had to go home, download it from there [the Internet] and come back and integrate it into the lesson. [P7]

The majority of the participants shared their reasons for utilising teacher-centred strategies. According to them, they believed the unavailability of teaching aids and resources had a significant influence on their choice of teaching strategies as verified in the following quotes:

When you teach and the students they can hear this person as you are in a movie or something. You know, like when you go to the symposiums and all that, these things are there. Then you learn faster and better. You know, you can't just be taught by reading. You must use all these, you know, senses of hearing, you know, interaction with the lesson. [P8]

The type of desks rather doesn't allow one ... that you can perhaps have different teaching methods. The other day I was actually commenting to them and I said, 'shoo for higher education institution our equipment are not up to scratch, our classroom is not up to scratch. [P2]

So at the end you are reverting back to the old style of teaching where you are physically just talking and there is no real participation from the students because there is no interactivity with the videos and those types of things. [P15]

I didn't have this flipchart. The whiteboard in class, we cannot use it, because we don't have a whiteboard cleaner. [P7]

On the contrary, one participant believed the nurse educator is the most important teaching aid and should improvise with scarce resources:

Who and what is the biggest training aid that you can get; [it] is the human being standing in front of the class. [P3]

In addition, they shared a lack of transport contributes to inadequate clinical accompaniment. Two of the participants had the following to say:

If I were to refer to the clinical or simulation, besides the clinical out there, those also have got an effect even if you have to go there because of the transport issue. [P12]

So normally we absent ourselves because of transport issues [transport from the nursing college to the various clinical facilities]. [P16]

Discussion: The participants in this study reported a shortage of staff as a challenge and an obstacle in teaching students effectively. Hebenstreit (2012:300) echo the present findings by pointing out that a shortage of nurse educators and the consequent increasing workloads complicate the balancing of teaching, scholarship, continuing education and service, and is an immense concern. Armstrong and Rispel (2015:5) also identify the shortage of nurse educators in South Africa as a significant challenge.

In the present findings, the participants listed three learning environments not conducive to learning: the classroom facilities, library and the simulation laboratory. The obstructive environments had a negative influence on students' learning and nurse educators' choice of teaching strategies. The findings support that of Schweisfurth (2011:427) who confirms classroom realities in developing country contexts, limited material and human resources, cultural diversity, and power relations create challenges for student-centred teaching.

Furthermore, the participants indicated limited material resources – specifically access to the Internet – created additional teaching and learning difficulties. A study conducted by Kujan, Hasan, Nasog, Badawi, Hanouneh and Nassani (2015:269) to determine learning barriers among dental and nursing students evidenced that more than three-fourths of the total respondents reported the unavailability of Internet connection is a learning barrier impacting highly on the students' work delivery and learning process. Participants from the present study explained they were forced to revert to teacher-centred strategies due to the classroom layout and unavailability of material resources. Ellis (2016:69) also reports having access to resources or the power to change things has an influence on the use of innovative teaching strategies among nurse educators.

Further proof of nurse educators' experiencing the lack of access to resources as a huge challenge in the teaching and learning domain is found in studies conducted by Hebenstreit (2012:300) and Gul, et al. (2014:46). Even so, Gul, et al. (2014:46) posit that with deeper reflection and discussion on the identified barriers as well as training on student-centred teaching strategies, nurse educators could realise that these should not prevent them from changing their educational practices. Importantly though is that Gul, et al. (2014:46) agree

with Hebenstreit (2012:300) who maintains that educators need time and resources to plan, be creative and implement new ideas. Moreover, Chilemba and Bruce (2015:e59) found that inadequate literary and Internet resources at the nursing education institution (NEI) used in their study raised immense concerns among the participants. With the nurse educators at the NEI not having access to information technology (IT) because it was unavailable, they could not stay updated on current issues, trends and developments in their field of work. Consequently, the students whether by right or not questioned the educators' expertise and resourcefulness.

4.4.2 THEME 2: CLINICAL LEARNING ENVIRONMENT

The clinical learning environment emerged as a second theme under which the challenges experienced by nurse educators were classified. See Figure 4.3 for a summary of the challenges experienced by nurse educators. Two categories emerged, namely inadequate clinical teaching department and the clinical setting.

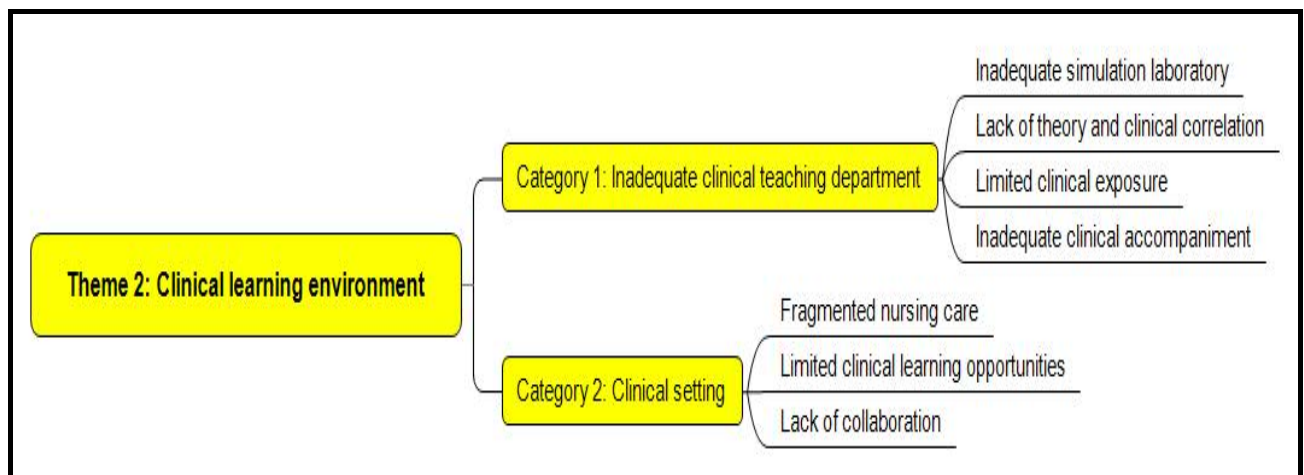


Figure 4.3 Theme 2: Clinical learning environment

Each category and its subcategories are discussed as related to the findings. A discussion follows at the end of each category providing a brief literature control and discussion for that category.

4.4.2.1 Category 1: Inadequate clinical teaching department

In Category 1: Inadequate clinical teaching department, the subcategories inadequate simulation laboratory, lack of theory and clinical correlation, limited clinical exposure, and inadequate clinical accompaniment emerged. The participants felt these aspects were influential in promoting the development of students' clinical reasoning skills. One of the participants believed the clinical teaching department is vital for student support:

I still maintain clinical teaching department is a department that must be there and people must do it. [P1]

Another participant agreed and said:

You know, with me I think, you know, getting the clinical department which will be fully supportive to student. I think that could, you know that could settle some problems. [P6]

Subcategory A: Inadequate simulation laboratory

In the subcategory, inadequate simulation laboratory, the participants were upset because nursing students are not able to practice their clinical skills within a simulated environment:

We need to have a simulation lab which is effective in the colleges where the students, if they were taught something and they don't have enough practice in their clinical area, they can still come and do it in the lab. [P1]

I think we should make more use of our simulation lab. [P11]

No dedicated assistant was allocated to the simulation laboratory (refer to Section 4.4.1.4) and this situation caused many problems, particularly the cleaning and organising of the environment and assisting the nurse educators and students. On the other hand, the available resources are not fully utilised: as confirmed by two participants:

We have things like manikins or models or posters or anything, but those are things that are not actually utilised. The little that we have we are not utilising. [P12]

So the resources in that, the resources are there, but they are not used accordingly.
[P16]

According to the participants, nurse educators lack experience, knowledge and computer literacy in utilising the simulation equipment:

Nobody has come and say, 'can I have ... that one, I want to utilise it in class ... But we have some of the things, even those that we have are not utilised. Some of them they are still in the boxes. That links up to the experience that I have mentioned. If you are not experienced enough, probably to you it doesn't click that you, those things can be utilised. I think one other measure. We have, to be honest, very older people [nurse educators] that are not, you know, IT ... computer literate. Because if we look at those manikins they are nice sophisticated manikins you have to operate this thing, but people don't literally get into it, because now it is this thing we have to use, this tablet and what and what. Even though you give some people some sort of, I would say some sort of in-service possibly, it is what I know I can tell everybody, but come next year when the things have to be used, you still have to go back and show them this is how you start the machine. Nobody takes that time and say, let me go and practice this so that by the time the students are coming I am competent.
[P12]

Okay, recently we [nursing college] bought some models né ... models in the midwifery section né. Okay we [nurse educators] did lack knowledge how to use those models, but there was no follow-up that can we really practice again so that the student can utilise the models. [P16]

A participant questioned the use of expired resources for training and the practice of telling students to imagine a particular item or situation instead of arranging and making sure the simulated environment resembles the real situation as closely as possible:

Now maybe because of limited resources or I do not know, but these days we [nurse educators] make a lot of assumptions. Now you are saying to this person [student] who is a neophyte assume that this thing is the correct thing. Then you let the person do that assumption. Now when you go back to the ward and then the person made an assumption of an expired IV and put it on the patient, you said the people

do not care or they are a medical legal risk. But you started it [By using expired resources in the training of students in the simulation laboratory]. That person [student] has been assuming throughout his training. [P12]

Subcategory B: Lack of theory and clinical correlation

The subcategory, lack of theory and clinical correlation, was a concern for almost all participants. According to them, students are unable to apply the theory taught within the classroom in the clinical setting. This perceived lack of theory and clinical correlation is influential in the development of students' clinical reasoning. The participants made the following statements:

I do think the students struggle to relate a theory with practice. [P7]

So I think that collaboration [referring to theory and clinical correlation] is not there ... it is actually almost, almost non-existent right. [P2]

The problem that we have encountered né [interjection, to confirm] ... with the student, they take two things né... theory they separate it from clinical, from practical. They cannot integrate. [P16]

The participants felt the nursing college and the various clinical settings must work together to help students to integrate the theory and clinical:

We should take hands ... theory and clinical personnel and create that bond of strength and understanding so that what we ... have imparted here, the personnel in the clinical area can follow through on that ... where the students can have an environment where they can apply the clinical reasoning skills that they were taught in the classroom setting. [P2]

Then you go through to the ward. What do we [nurse educators] do? Do we really fulfil from there on what we are supposed to do, or it is just a matter of giving a lot of theory in class and assume it must go out there and they [students] must go and apply? [P3]

Yes, because we are training them so that they can work in clinical realistically. So I think we must put more emphasis on especially helping them to integrate the theory in practice, you know. [P5]

Subcategory C: Limited clinical exposure

Limited clinical exposure emerged as a third subcategory According to the participants, another challenge having an effect on the development of students' clinical reasoning skills is the lack of clinical exposure:

So they don't get enough clinical. The other thing is clinical exposure. I think we just allocate them for two, three weeks or a month maybe in a year, because the other time they must go to ...Then the period, the timeframe for them in the clinical [is short]. Because almost, it is almost a week or two. [P9]

In psychiatry field only, our students need to be exposed to chronic in psychiatry conditions. They need to be exposed to acute psychiatry conditions. They need to be exposed to community psychiatry clinics [talking louder and slower]. Forensic, they [students] need to be exposed in a forensic environment like Weskoppies. That is why our nurses, they are good in theory. It doesn't give them enough exposure to the clinical. [P1]

One participant, who stated the clinical exposure of the students is problematic, also admitted the situation had improved since the allocation of students at Department of Health (DoH) hospitals:

I would say ... in a way [clinical exposure is lacking], because especially before ...,the students went to Kalafong and so on we did not have much of exposure for them ... I think going to Kalafong then it has led to the improvement of their clinical practice. [P6]

Subcategory D: Inadequate clinical accompaniment

The participants reported students require more supervision and nurse educators are not fulfilling their clinical accompaniment role. They explained the shortage of both clinical preceptors and nurse educators is not helping the situation:

So what I think, I have realised that accompaniment is very much important whereby these students should be followed on [an] every day basis. [P4]

So clinical accompaniment is a problem, especially when you start from the first year, they [students] ... they need a lot of orientation and induction into the clinical area in order to correlate their theory and practice. So lack of clinical personnel for clinical accompaniment is ... is a challenge. [P9]

You will find that we don't have enough lecturers [nurse educators] to do the clinical accompaniment. [P10]

Do we really follow up? I mean and if we are really honest, the follow-up of the student in the clinical areas has not been quite constant. [P12]

Because according to them [students] they don't get much support in the clinical area due to the fact that they don't have ... Well it might be that they are shortage of staff and the nurses in the hospital are so busy that they can't really attend to the students. It might be from our side that due to the pressures of work here we don't really follow them up as it should be. [P7]

The participants indicated nurse educator support, guidance and availability as inadequate although it is essential since it has a significant influence on the development of students' clinical reasoning:

I still believe that there must be a mentorship, a continuing mentorship, and also the clinical preceptors in each and every ward ... Yes I believe that we will improve their thinking. [P10]

But I don't think our students got enough follow up, enough mentoring, enough at the clinical ... They just need to be guided and directed, you know. [P11]

Discussion: A study conducted by Killam and Heerschap (2013:688) confirms students experience frustration and discomfort due to limited practice time in the simulation laboratory. In fact, these authors add students expect direct feedback on performance and if it is not forthcoming, it leaves them frustrated and feeling as though they had learnt nothing. In the present study a similar concern was the limited practice time spent in the simulation

laboratory; but, the findings also revealed there was limited access to the simulation laboratory which was a problematic issue for both students and nurse educators alike.

A particular upsetting issue for both the researcher and participants was the absence of an authentic clinical learning environment. Kujan, et al. (2015:269) state an unauthentic simulation laboratory is an immense learning barrier. They add a realistic environment offering high-fidelity simulation enhances opportunities for optimal learning. Topping, Bøje, Rekola, Hartvigsen, Prescott, Bland, et al. (2015:1112) assert effective simulation-based training requires a multiskilled nurse educator who needs to draw on extensive knowledge, behaviours, and skills as well as portray conduct acquired from both nursing and education.

The majority of participants in the present study experienced theory and clinical correlation as an extremely problematic issue. They found students have difficulty integrating theory within the clinical settings. This is confirmed by Holland (2015:90) who states despite much planning and effort from nurse educators, a continuous gap remains between theory and clinical correlation which results in students experiencing feelings of conflict, confusion and disillusionment. This author's stance on the theory-practice gap is that there is a continued need for strong clinical placements to support the application of theoretical knowledge into practice (Holland 2015:90). The findings of the present study verify Holland's (2015:90) stance as participants also emphasised the importance of nurse educators and professional nurses working together. Participants in the present study agreed with the participants in a study done by Killam and Heerschap (2013:688) who were disconcerted with the short clinical placements. Students in Killiam and Heerschap's (2013) study perceived that short placements impeded on their skill development while participants from the present study indicated that short placements impede on the development of students' clinical reasoning skills.

In addition, many of the participants shared they were worried about the lack of clinical accompaniment and student support. Similar findings emerged from a study conducted by Kgafela (2013:129) in that nursing students perceived inadequate support and clinical accompaniment from nurse educators as major obstacles in their learning. Armstrong and Rispel (2015:5) also found a lack of supervision and mentoring was a critical aspect which negatively influenced students' learning in clinical settings. The present findings are also consistent with the findings of Baraz, Memarian and Vanaki (2015:3) who discovered

students expressed the incompetency of nurse educators and the non-supportive learning environment as the most important challenges in clinical learning.

4.4.2.2 Category 2: Clinical setting

In Category 2: Clinical setting subcategories included fragmented nursing care, limited clinical learning opportunities, and lack of collaboration. The participants agreed the clinical setting plays a pivotal role in the development of the students' clinical reasoning skills. The words of one participant summarises the participants' consensual agreement that students' clinical reasoning skills are not promoted in the clinical setting: "I do not see that manifesting in the practice, you know, the clinical reasoning skills." [P2]

Subcategory A: Fragmented nursing care

This subcategory dealt with the influence of the care models used in the different clinical settings. In the participants' view, students should render holistic care as this will help them to see the bigger picture and to identify any abnormalities or changes in their patient's condition. One participant explained it as follows:

If you are going to the wards, the students are being assigned to the sluice for the day. People are being assigned to vital ops [vital signs] for the day, theatre preparations for the day, meals and medication for the day. Let the students do holistic nursing care ... I am concerned because we are fragmenting a patient into different tasks which is assigned to different people. They do not get the holistic picture of the patient. [P3]

Subcategory B: Limited clinical learning opportunities

Limited clinical learning opportunities emerged as a subcategory. Students need to be provided with meaningful learning opportunities and be afforded opportunities to practice clinical skills. A participant voiced her concern that some clinical facilities do not perform routine clinical procedures even though they are training hospitals:

At [Hospital 1] vulva swabbing is being done routinely né [interjection, to confirm] ... whereby you find that at [Hospital 2] post-natal ward the student don't have even apparatus to do that procedure. [I am] quite concerned about that, whereby now

procedures that this students have got to learn and get skill from. Those procedures are important ... they ought to be performed so that the students can learn what we have taught them in the class. [P4]

Subcategory C: Lack of collaboration

In the subcategory 'lack of collaboration', the participants viewed the availability of the DoH management guidelines and collaboration as an important aspect in the clinical learning environment of the student. Nurse educators must be aware of the current changes in the DoH's policy and benchmark with DoH clinical facilities as verified by the following quotes:

I think if maybe we were to go in par with the Department of Health ... benchmark and find out ... whereby now somebody from the college can ... maybe ... be taken out né [interjection, to confirm] ... to go and meet with those people so that we can get whatever new information that comes in. Then it comes and spread the information to us so that we can ... bring it down to our students. [P4]

So that is also a challenge, is the fact that we may be not collaborating with the Department of Health. [P8]

The participants' accounts further highlight the absence of collaboration and communication between the nurse educators and the professional nurses. Two participants shared the following:

So I think that collaboration is not there. It is not there. If it is there ... it is actually almost ... almost non-existent, right? [P2]

Then there is not that intense communication between us and the sisters in those institutions. [P16]

Discussion: Participants in the present study revealed fragmented nursing care models implemented at the clinical settings as detrimental to the students' ability to develop clinical reasoning skills. For this reason, students are unable to nurse patients holistically and see a comprehensive picture of the patient. Participants also voiced their concern with limited clinical learning opportunities and its effect on students' learning. A study conducted by de

Swardt (2013:93) found that professional nurses assign fragmented tasks to students, which result in students not understanding comprehensive patient care. In addition, students from de Swardt's study complained of limited learning opportunities and expressed their frustration and boredom (de Swart 2013:93). The findings of the present study concur with those of Kgafela (2013:126) who found that students wished for exposure to sufficient learning opportunities because to them it felt as if their expectations were not being met.

A study conducted by Kujan, et al. (2015:269) revealed barriers to learning exist within the clinical setting. These barriers included a lack of learning opportunities available in the clinical setting and the influence of nurse educators on student learning. Participants from the present study also found the lack of collaboration as a challenge. They elaborated on collaboration with the Department of Health and the clinical setting to augment students' clinical experiential learning through collaborative efforts. Killam and Heerschap (2013:690) agree collaboration is essential and that nurse educators must cultivate good relationships with managers and professional nurses. Leonard, McCutcheon and Rogers (2016:150) confirm the aforementioned and state when there is collaboration between all stakeholders, a better chance exists for students to have a positive learning experience within the clinical setting. De Swardt (2013:95) and Kgafela (2013:125) concur what is needed is a much closer and more cooperative relationship between professional nurses and nurse educators.

4.4.3 THEME 3: MILITARY LEARNING ENVIRONMENT

Military learning environment emerged as a fourth theme under which the challenges experienced by nurse educators were classified. See Figure 4.4 for a summary of the challenges experienced by nurse educators. Two categories emerged: military environment and military activities.

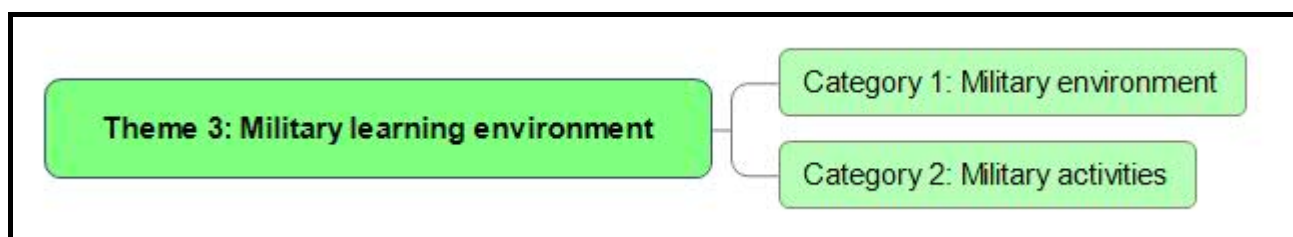


Figure 4.4 Theme 3: Military learning environment

Each category is discussed and related to the findings and supportive literature.

4.4.3.1 Category 1: Military environment

Participants believed the military environment prevents nurse educators from utilising innovative student-centred teaching and learning strategies. They felt that such beliefs were detrimental in promoting the development of students' clinical reasoning skills. One participant described her frustration with the Conventions of Service Writing (CSW) and the long cumbersome processes in the military that delays her from planning and arranging more innovative and creative teaching and learning strategies:

But here in the military you will have to fill this form and the form goes to the GOC [General Officer in Command] and the GOCs might like it or might not like it. By the time you get there, you even, you [are] now discouraged to do these things ... you know red tape, red tape, red tape everywhere. The forms and writing all those CSW is going to come here ten times to my HoD and then he is going to take it to the OC [Officer in Command] and then it is going to come back ten times from her before it goes to the GOC. By the time it is approved, you understand ... instead of troubling yourself with that CSW, you can think more innovative ways of teaching your student that one or two days. It takes us three days sometimes just to draft this CSW thing. [P8]

A frustrated participant shared her dissatisfaction with the short notice rotation system. This occurs when a nurse educator is transferred to another department to stand in for a nurse educator who has been summoned at short notice for a military course lasting anywhere between three to six months. The stand-in educator is then left on his or her own to prepare appropriate and relevant learning material in a short space of time. Consequently, the stand-in goes to class without having had sufficient preparation time and therefore he or she resorts to lecturing:

In a sense that you know when some ... because of this military activity when people [nurse educators] are going for courses then you sort of have to [stand in] ... it is [a] short notice of time to [prepare and deliver] within a week. [P6]

In fact, one participant elaborated on her experiences at various DoH clinical settings where patients refuse to be nursed by ‘soldiers’. Military students wear their military camouflage uniform with white jackets. The same participant further commented these incidents are affecting the students’ self-confidence and having an influence on their work-based learning:

After finishing with that one you go to what, what, then they [student] say the patient is now refusing. Patients influence each other. I don’t know is it the uniform, or they are scared of them because of they are soldiers. That is the other problem that we have experienced. ... maybe it is the uniform, although they [nurses] put the coat on. But it seems, I don’t know whether they don’t trust them or what, and shame it makes a problem to them [students] also. ... it affects their self-esteem” [P9]

One participant in particular described her concern with nepotism in the military. She indicated that high-ranking officers would instruct the nursing college to select students in spite of the fact that they do not meet the selection criteria: Following is her verbatim statement regarding this aspect:

You know that comes and [it is] the pity that come [comes with] a nepotism that ... no nepotism because of whoever is a child of this particular person, even though he doesn’t have the requirement we have to take this person and forgetting and compromising our standard as a nursing college. That is why we found ourselves in such a mess at nursing college. ... I have experienced that, I have been there. I have experienced it in a way that there is even a lot of external intervention. Interference, not intervention. The interference where people from, you know, with ranks will come in and say this is my child. You are intimidated because in the military is this rank thing. [P14]

Discussion: Participants in this study indicated the military environment has an effect on their choice of teaching strategies. They explained nurse educators are often withdrawn from their current duties to attend military courses on short notice. The remaining nurse educators have minimal time to prepare and the decision to then lecture instead of incorporating various student-centred teaching strategies is often the only alternative on short notice. Abd El-Aziz and Ahmed’s (2009:125) study revealed high level of stress among nurse educators from the military nursing school regarding work shifts versus military training for parades and

ceremonies. Participants also shared their frustration with long cumbersome processes within the military. An example mentioned was being sent on a field trip. Approval has to be obtained from different designated people of rank in the military hierarchy and getting the approval takes valuable time; time which they could have utilised better such as preparing innovative student-centred teaching strategies. The inadequate use of student-centred teaching strategies and its effect on the teaching and learning environment was discussed under Theme 1: Educational practices.

In addition, some patients from civilian hospital settings refuse military healthcare personnel to provide nursing care and perform clinical procedures on them. According to the participants, this is detrimental to the students' self-confidence and competency. One suggestion was this negative attitude could be attributed to the military uniform that the patients do not associate with nursing. Lekalakala-Mokgele and Caka (2015:4) also found that wearing a military uniform when allocated to public hospitals was perceived as obstructive to learning. By comparison, nursing students from public nursing colleges wear nurses' uniforms whereas the uniforms worn by student nurses from the SAMHS nursing college resemble those of soldiers and not of professional nurses. According to Caka and Lekalakala-Mokgele (2013:3), military nursing students face greater challenges as they must deal with two demanding professions, that of a soldier as well as a nurse. Nepotism discouraged the participants and they had a lot of reservations about it. They felt nepotism was wrong because it could jeopardise the patients' safety if a person who is not dedicated to serve as a nurse, is learning to work as a nurse. This issue distressed the participants and they voiced it as a major concern to them. They felt it was unethical as they described how higher-ranking officers instruct the nursing college to accept candidates to the nursing programmes who do not meet the admission requirements; hence, this action additionally contributes to substandard education, training and development.

4.4.3.2 Category 2: Military activities

No subcategories were classified under Category 2: Military activities. Some participants voiced their concern with military activities causing unplanned interruptions with their teaching programme as well as student allocation. The participants were perturbed because they felt the students were missing out on experiential learning opportunities. The participants expressed their concerns as follows:

Okay, the other problem that I have ... it is about the military procedures that are actually infringing into our ... for instance, time table in class students can be extracted from class to go and practice for whatever reason it is required ... I feel it is so unfair because the time allocated for the periods, it has to comply with the SANC requirement for the competency of the students who most of the time it is wasted. It is taken for military activities. Like the parade for five days you know. [P15]

You know, you come to work, you plan, you plan that you are going to do one, two, three, but because we are in the military there are other activities which are involved in the military that will, I can say that will might even disturb your programme. [P16]

The other thing is this non-academic intervention. ... periods like this thing that maybe they must start with the drill or is the sports day. ... something that was not even planned; they just interrupt. Then you must make plans for that and see that you give them ... maybe assignment or class work so that they can cope ... it is a challenge. [P8]

Yes, then the other thing maybe is because in our institution we have other activities that are not academically and our learners has to do those activities ... sometimes you plan ahead and then ... it happened to me yes, for a visit. I planned for a visit, but it had to be cancelled because the students that were supposed to go there, they were supposed to participate in a military activity. ... student[s] end[ed] up not going there because we couldn't get another date thereafter. [P10]

One participant elaborated on the effect of military interruptions on students' clinical placements. Because clinical slots are allocated to the nursing college at set times it is not possible to re-allocate the students and for that reason students miss out on clinical experiential learning opportunities.

Then it is just that you know the periods of time that you have and also the interruptions. The military things that must be done and all those things, it plays a big role at times when you have to do things. Like for example, the clinical areas. It is external stakeholders. It is set slots. But when we have things like parades and

those type of things where they have to be for three days, you cannot place them again for those three days to go back and get that experience again. It is done. It is a DC [detached college] and ... they lose those hours. You cannot put it back, because when I have to go back to the drawing board and see where can I place the students sometimes. [P15]

Discussion: The majority of the participants voiced their frustrations with regard to activities unique to the military because it caused unplanned interruptions to their educational programme. As a result, students missed important experiential learning opportunities as well as clinical exposure. According to Caka, Van Rooyen and Jordan (2015:s193), student nurses from the SAMHS nursing college attend military parades, they are trained in military discipline and protocols, and throughout their training period students are fulfilling both nursing and military duties. This is also true for nurse educators employed by the SAMHS nursing college who have to fulfil their nursing as well as military roles.

Caka, et al. (2015:s193) found military student nurses do not have adequate placement opportunities because they are constantly removed from the allocated clinical areas to fulfil military duties. Limited clinical exposure and the lack of clinical learning opportunities were discussed under Theme 2: Clinical learning environment, Categories 1 and 2. The concern with military versus educational training is the nurse educators' feelings of helplessness and having no control over the situation simply because they had no choice than to fulfil both roles professionally and to the best of their ability. The military environment is autocratic and perceived by nurse educators as very much power-and rank-orientated.

Caka and Lekalakala-Mokgele (2013:3) also report on how rank insignia denote that orders are given according to the military hierarchical structure and not necessarily nursing ranks. Nurse educators are frustrated with the turn of events – especially in cases where students are instructed to be released to attend military parades or various deployments without having any say in the matter. According to the participants, they are then compelled to revert to teacher-centred teaching strategies to cover the content and make up for the time lost.

When students are withdrawn from clinical settings, nurse educators are often not able to re-allocate the students because the nursing college competes for slots with other NEIs. Consequently, students miss important experiential learning opportunities. This perceived

autocratic organisational culture as well as the term ‘rankism’ and its effect on student-centred teaching are discussed under Theme 4: Role players in the teaching and learning environment, Category 1.

4.4.4 THEME 4: ROLE PLAYERS IN THE TEACHING AND LEARNING ENVIRONMENT

The participants described challenges experienced with different role players involved in the teaching and learning environment. (Refer to Figure 4.5 for a summary of the challenges experienced by nurse educators under the theme role players in the teaching and learning environment). They also elaborated on the different attributes required for effective education, training and development of the student. Four categories emerged from the data and the challenges were further classified into nursing college management, nurse educators, professional nurses, and students.

Each category is discussed and related to the findings and supportive literature.

4.4.4.1 Category 1: Nursing college management

In Category 1: Nursing college management, the subcategories that emerged were supervisors’ lack of experience; supervisors hinder innovation in teaching; supervisors do not acknowledge potential; and inefficient planning.

One participant voiced that learning opportunities are “not happening here because of restrictions based on power invested in the ... some of the leaders.” [P1]

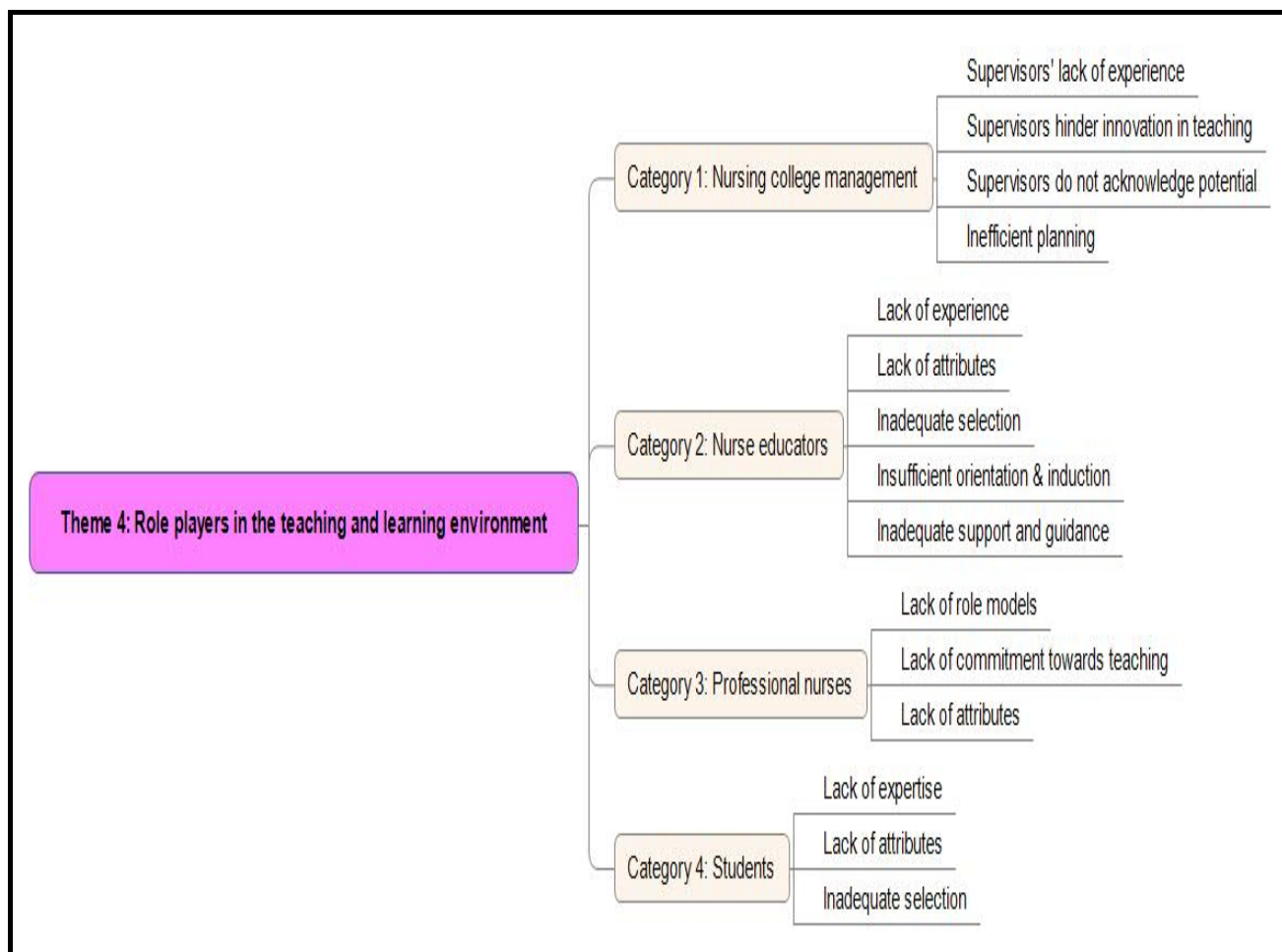


Figure 4.5 Theme 4: Role players in the teaching and learning environment

Subcategory A: Supervisors' lack of experience

Participants perceived that some supervisors get promoted because of seniority and not their potential as managers. According to the participants, being promoted are not based on qualifications or teaching experience but years of employment:

Sometimes you will find that not only a lecturer can lack, can ... educational experience. Even the HoD can based on the very thing that people are not appointed because of ... we are promoted because according to when did you come [start working here]. [P1]

We really need to promote people that we see these are the people that are really going to contribute to this little structure that we have to build. Whenever, just to come to bring change and to bring positive things. That is my take on this. [P14]

Subcategory B: Supervisors hinder innovation in teaching

As the researcher, I was not expecting supervisors playing a role in the facilitation of clinical reasoning in the manner explained by the participants. The participants in this study indicated some supervisors hindered innovation in teaching, for example, they did not even consider nurse educators' ideas. The concern is that nurse educators will give up trying and just revert to traditional teaching methods which do not encourage student participation as explained in the next three quotes:

and when you come up with suggestions, not necessarily to shoot them down immediately, but maybe to talk? So they don't consider even your [nurse educators'] suggestions. So as time goes on, you don't even suggest anymore. You just give the student what the management gives you. [P5]

Sometimes you get criticised for using the other methods. [P10]

Participants believed a supervisor should be a role model by setting an example. A participant summed up this belief by making a straightforward statement, "we lack role models in this college. [P14]

Subcategory C: Supervisors do not acknowledge potential

The perception of the participants that supervisors did not acknowledge their potential as nurse educators links directly to the previous subcategory. The participants' potential and expertise in their field were apparently not acknowledged or appreciated by the supervisors and it therefore affected their self-esteem and motivation:

Do you know that your [nurse educators'] input doesn't count? [P1]

Because if you don't acknowledge them [nurse educators] the way they are, they are so productive and bring so many things. When they do their work, it is up to standard. Why don't we [supervisors] acknowledge them [nurse educators]? [P14]

Another participant who was a newly appointed nurse educator felt strongly that management did not listen to any of her suggestions; any suggestions she made were pushed aside and deemed insignificant:

From the management ... because as new lecturer half the time you are crushed with any suggestions. [P5]

Subcategory D: Inefficient planning

The participants indicated a lack of planning by management as a further challenge. One participant stated some of the nurse educators are moved around from one subject to another at short notice. Due to time constraints, the nurse educators are then unable to prepare for class and resort to traditional teaching strategies to cover the content. She said the following:

I think the major challenge that I have experienced here is I would say lack of planning. You want to do your best. So, so jumping, you know in the eleventh hour, then it is frustrating. You will get used to it, but if there is a way that could be, that such could be done better, then it will be, it will be better. [P6]

Discussion: Of major concern was the fact that nurse educators experienced supervisors as hindering innovation and the use of student-centred teaching. The same concern is addressed in two other categories in this study. In Theme 1, Category 1: Assessment strategies nurse educators state supervisors instruct them to formulate questions in the same way it had been done for many years before. In Category 3: Curriculum participants expressed their disappointment with supervisors prohibiting them from revising the curriculum to incorporate current trends in the field.

If supervisors require nurse educators to follow orders, it means nurse educators are not required – or even expected – to think (Goosen 2015:5). The findings from the present study are supported by Kunnari and Ilomäki (2016:168) who state educators need support from colleagues and supervisors as well as a stimulating environment that encourages innovation. In the military context, the supervisors have higher ranks than the nurse educators and this perceived power relationship could be problematic within a higher education context. Schweisfurth (2011:428) reviewed literature on student-centred teaching in developing

country contexts. He points out that in some cultures student-centred teaching implementation is problematic. He describes the culturally appropriate distance between authorities and educators as well as between educators and students which, although locally seen as respectful, could pose problems within a student-centred teaching environment. This power or ranking culture is not only seen in some schools as reported by Schweisfurth (2011:428), but even more so within the military where lower ranking officials are expected to be obedient and not to question authority. Equally important is the clinical setting where Goosen (2015:5) observed nurses were confronted on a daily basis with 'rankism'. 'Rankism' is a term created by Robert Fuller (2009 cited by Goosen 2015:5) and basically refers to the inappropriate use of one's rank or power. Goosen (2015:5) clarifies that rank does not make one person superior to another; rank is not objectionable, only the misuse of it is.

The participants were of the opinion that their supervisors were not experienced in nursing education or in leadership skills and they often lacked the technological skills needed for the 20th century; they referred to supervisors as "close minded". According to Patterson and Krouse (2016:76), supervisors who do accept formal leadership roles are in these positions with insufficient leadership education or experience. This is disheartening since academic leadership affects nurse educator satisfaction, retention, and the overall health of the working environment. In addition, Patterson and Krouse (2016:81) ascertain leaders must create environments conducive to innovation and change.

4.4.4.2 Category 2: Nurse educators

In Category 2: Nurse educators, the subcategories lack of expertise, lack of attributes, inadequate selection, insufficient orientation, and inadequate support and guidance emerged. The participants felt that these aspects were influential in promoting the development of students' clinical reasoning skills.

Subcategory A: Lack of expertise

In this subcategory, the participants voiced their views on the level of knowledge, skill and experience required by nurse educators to teach the students. They indicated that nurse educator expertise has an influence on the students' skill attainment and described it as follows:

your [nurse educator] knowledge, and then we look at the skill and in which manner you can actually help the student to develop that skill. How are you actually going to teach the student if you do not have yourself a very deep understanding of this subject, the subject content and of the patient? How are you going to do that? But you need to have knowledge before you can go and stand there. The person who is integrating that theory with the clinical, needs to have that ability [to do it]. If you do not have it, I am sorry. You can either learn from other people to master that skills, but if you do not have it you are lost. [P3]

I think on the other hand, I think it is also the, I would say the experience in sort of teaching or in when we are imparting the, the knowledge. [P12]

Some of the participants opined the nurse educator should possess both theoretical and clinical subject knowledge. Participants also stated nurse educators without limited or no clinical experience will teach from the textbook thus compromising application and therefore the development of clinical reasoning:

It is people [nurse educators] who must understand that you do not only have a role in the class, that you have to have the background and you have to have an understanding of the clinical which is happening on the other side. [P3]

You know who don't have clinical experience, but they will come to be lecturers [nurse educators] ... With such a lecturer [nurse educator] you will get what she gets from the book. [P1]

Participants further saw nurse educators' lack of computer skills as a challenge that has a negative influence on utilising innovative and creative teaching strategies as described in the following two quotes:

I was just wondering why people [nurse educators] here; because there are people [nurse educators] in this college who are not computer literate. [P7]

We [nurse educators] know that we are old, we have got a challenge with the, with the IT system. So there is only one way you will know the IT system if you, if you practice it. [P12]

Subcategory B: Lack of attributes

The participants' accounts highlighted that nurse educators should foster attributes such as passion, caring and a positive attitude because it is expected from them. One of the participants commented:

Is the educator, really interested in what I am doing. Is education really my passion? ... [nurse educators] should have or should possess the passion for what they are doing. [P3]

This participant was passionate about this issue and talked about it for some time. She further explained.

This is why I say if you do not really have the passion; if you do not really care, there is nothing that you can do. You can have the best mentors; you can have the best preceptors. You can have whatever if you do not have the care and the passion, you can forget about it. [P3]

Another participant felt strongly that without caring, a nurse would never possess clinical reasoning:

I think clinical reasoning skills is [are] encompassed in... in caring. [P2]

Subcategory C: Inadequate selection

Inadequate selection emerged as a subcategory. According to the participants, the type of nurse educators selected did not portray any interest or passion for nursing education thus influencing students' clinical reasoning skills. The majority of the participants felt the nurse educators' interest was focused on the regular working hours and the fact that they were relieved from patient care. In this regard, the following three comments were made:

So my concern is passion. My concern is do we really know who we appoint as nurse educators, because it is special people. ... or do we just appoint people as lecturers because it is nice hours? [P3]

I still maintain the calibre of the person that we recruit will play a role in the clinical development of the student. [P1]

I think 90% of nurses they love nursing education because all of us I think we are tired of the bedside nursing. [P14]

Another key point highlighted during the interviews was that newly recruited nurse educators have limited to no teaching experience, and are therefore unable to execute their teaching roles:

Do we really, we interview people ... do we really put them through a quick practical, come give us a ... just quickly prepare a lecture plan, quickly prepare this and this and that so that I can see to what extend do you actually have mastered the ... the quality of teaching, clinically as well as theoretically. [P3]

The institutions where we train professionals to be nurse educators I think also they need to be looked into. The type of nurse educators that we are producing. [P14]

Subcategory D: Insufficient orientation and induction

Almost all participants maintained the orientation and induction at the nursing college is insufficient and as such contributes towards substandard teaching and learning environments:

To orientate your ... new lecturers [nurse educators] when they come in. Give them a full orientation so that they ... know what to do. But you know you sort of learn things by ... you learn them by chance. [P6]

Orientation and induction programme we don't have that... [Tapping on the table with her fingers]. [P8]

Even the orientation is fragmented. [P14]

One participant in particular was upset about the Conventions of Service Writing (CSW) that are guidelines on how to compile written communication within the military:

I think the orientation would help with that. As well as CSW because when you are in the hospital, here we are only writing on the patient's charts. [P7]

A participant shared her negative experience because of insufficient orientation by explaining that, as a new nurse educator, she was treated unprofessionally and disrespectfully. Nurse educators feel demotivated and not prepared to implement student-centred teaching strategies that are time consuming. The following quote illustrates her discontent:

You are treated like you don't know anything. Just because you are not orientated ... that people who are new in the college are being treated like they are people who are like everything is deleted in their brains. [P8]

Subcategory E: Inadequate support and guidance

In the subcategory, inadequate support and guidance, participants expressed the view that management provided inadequate support and guidance to the nurse educators. In the opinion of the participants, nurse educators need encouragement as well as good mentors to motivate the use of student-centred teaching and learning strategies. They shared their views as follows:

We lack mentoring in this college. We lack supporting our [nurse educators]. [P14]

So if it, the management will somehow support you, or even guide you. Not just crush you, no you can't do this and that. It is just that you just need that little bit of support and guidance maybe. [P5]

You know I need a mentor, you know I am not sure ... [P8]

I think even the lecturer they need support and encouragement to use the very same methods [teaching strategies]. [P10]

I think the lecturers if they are properly guided ... if they are properly guided as to what is required they will be able to impart things HoDs [supervisors], we should really support them [nurse educators]. [P13]

You need to sort of mentored up to be this person that we call a nurse educator. [P14]

Discussion: Participants were worried about nurse educators' expertise and experience. They believed the 'calibre' of the nurse educator has an influence on the students' development of clinical reasoning. Similarly, Armstrong and Rispel (2015:7) state nurse educator preparedness is one of the major educational issues in South Africa that needs to be urgently addressed. These authors acknowledge the constraints within the nurse educators' working environment that include staff shortages, a heavy workload, inadequate professional development, and outdated knowledge and skills; however, they still question the quality of nurse educators. The findings from the present study also support the reasoning of Gul, et al. (2014:38) that developing the student's ability to think critically is influenced by the nurse educators' competence and approach to teaching.

Furthermore, the findings of an investigation did by Baraz, et al. (2015:3) on the learning challenges nursing students experienced in clinical environments evidenced that students perceive nurse educators as incompetent and non-supportive. Considering the aforementioned findings of Baraz, et al. (2015), Chilemba and Bruce (2015:e59) advocate for staff development in student-centred teaching so that nurse educators can implement and promote active learning with confidence, competence and self-efficacy. Participants in the present study also reasoned that nurse educators require support and guidance as well as adequate orientation and induction. This confirms the call of Gul, et al. (2014:46) for the formal and structured training of nurse educators in empirical critical thinking and teaching strategies known to promote critical thinking and clinical reasoning.

The participants from the present study lacked clinical experience and the participants reasoned nurse educators require recent clinical experience to facilitate theory and clinical integration. There is compelling evidence from various previous research studies supporting the notion that nurse educators require recent clinical experience (Brennan and Hutt 2001:183; Armstrong and Rispel 2015:5; Topping, et al. 2015:1108). Conversely, Leonard, et

al. (2015:150) state there appears to be a lack of evidence to support the theory that spending time in clinical practice is associated with the development of the nurse educators' competence in either nursing or teaching practice. These authors posit that just having the knowledge and skills to teach and support students' learning do not necessarily equate with clinical knowledge. In this regard, Sayers, Salamonson, DiGiacomo and Davidson (2015:48) argue a reasonable expectation would be to require from nurse educators speciality education that is at least at master's degree level.

The participants in this study highlighted the lack of computer literacy as a serious concern. In their opinion, nurse educators need to be able to utilise technology and should be skilled therein. Button, Harington and Belan (2014:1321) reviewed literature on E-learning and information communication technology in nursing education and discovered students and nurse educators had low levels of skill in computer use, information literacy and nursing informatics. Clinical reasoning is dependent on the latest and most current information available on the patients' condition; thus, being able to search for information online is an essential and critical skill.

Considering the current participants' perceptions, ideas and opinions contained in the verbatim quotes, they recognised the need for the effective selection of nurse educators with both clinical and teaching experience. They voiced in their experience nurse educators are not passionate about teaching and are doing it possibly for the regular hours and money. The perceived lack of caring was also highlighted; uncaring educators will influence students thus creating a vicious circle of uncaring behaviour. Killam and Heerschap (2013:687) echo these findings and add if nurse educators "just do it for the money and they're not really interested", learning will suffer. Kunnari and Ilomäki (2016:167) identified educator motivation and interest as part of the foundation for changing teaching practices within higher education institutions (HEIs). During my literature review on clinical reasoning, I did not come across this link between caring, passion and clinical reasoning. However, I do agree with the participants' accounts. Caring and passionate nurse educators will go the extra mile and will demonstrate exemplariness in their own teaching and actions towards students and patients.

4.4.4.3 Category 3: Professional nurses

In Category 3: Professional nurses, the subcategories lack of role models, lack of commitment towards teaching and lack of attributes emerged. The participants felt that these aspects were influential in promoting the development of students' clinical reasoning skills. The following quote supports 'professional nurses' as a category derived from the transcribed data obtained from the unstructured interviews.

I think the setting in the clinical areas contribute a lot to our students' clinical reasoning skills. [P2]

Subcategory A: Lack of role models

The participants stated a professional nurse should be a role model by setting an example because students imitate their actions. One participant summed it up as follows:

I also think there should be role models in the clinical areas. Perhaps that is lacking. There should be mentorship in the clinical areas. That is lacking. I think that is why we visualise and we see what we see in the clinical area, because of a lack of mentorship; perhaps of a lack of leadership. I think they follow what they are being modelled for by our professional practitioners in the clinical environment. [P2]

However, in the opinion of some of the other participants nursing is not a calling for all professional nurses as the two following statements indicate:

We [professional nurses] can just do it for money even [P5]

Because, you know with nursing it must be from the heart. Like you know, I will just say me as a midwife, I don't expect a woman to be pregnant for the whole, for forty-two weeks and then get out of the hospital without a baby. Or get out of the hospital without being able to care for this baby because of my negligence; that I don't [want]." [P6]

Subcategory B: Lack of commitment towards teaching

Highlighting the lack of commitment towards teaching demonstrated by professional nurses in the different clinical settings, the participants shared they perceived this lack of commitment as a challenge:

Now the challenge that we are having ... the teaching role of the clinical teachers is now diminishing. They [professional nurses] are not involved in the teaching of the students like they used to be in the past when I was training. [P1]

When I ask the sisters [professional nurses] why are the students so far away or blah, blah, then the sister will say, 'no it is the college's responsibility'. They [professional nurses] don't do their educational function of follow up. [P11]

Because according to them [students] they don't get much support in the clinical area... Well, it might be that they are shortage of staff and the nurses in the hospital are so busy that they can't really attend to the students. [P7]

The sisters [professional nurses] they mentally, or they have got this attitude of saying they are there to work, not to teach. [P16]

Surprisingly, one participant had just the opposite opinion. According to her, professional nurses are fulfilling their teaching role at some of the clinical settings:

Like those sisters [professional nurses], they are really teaching our students. [P4]

Subcategory C: Lack of attributes

According to the participants, professional nurses lack attributes such as caring and passion. One participant felt strongly that if professional nurses lack caring, they cannot be expected to have clinical reasoning skills.

But when it comes to the caring aspect. I think caring is that golden thread that runs through the theory to the clinical. That aspect is lacking completely. So if somebody lacks caring, how do you expect this person to have clinical reasoning skills, right? [P2]

What can I say? Nursing is mine, and it must be ours. So the more a lot of people [professional nurses] are passionate [her voice grew louder] about it I feel our, our profession can be taken to another level. [P5]

Clinical sister [professional nurse] in the clinical field is a problem also because it seems the sisters in the units they don't care for [training] as long they are there to work. [P9]

Discussion: The present study participants perceived professional nurses as unsupportive and not committed to their teaching role. They seemed to blame professional nurses for the students' inability to reason clinically and integrate theory and clinical. These findings support those of de Swardt (2013:75) as well as Kgafela (2013:138-139) who both found some professional nurses lack commitment in teaching and in supporting students. In the study conducted by de Swardt (2013:92), students found it difficult to integrate theory and clinical because they were afraid to ask the professional nurse questions. The findings of the present study support that of Killam and Heerschap (2013:689) who state professional nurses have an ethical obligation to support students in the clinical setting. However, some participants from the present study shared in their view professional nurses are not role models. If professional nurses fail to fulfil the part of a role model to students as the participants stated, the harsh reality is that nurse students are indeed exposed to uncaring behaviour in the clinical setting and this may deeply scar their learning and future working experience.

Participants further questioned the behaviour of professional nurses and regarded them as lacking in attributes such as caring and passion for the profession. Role modelling by professional nurses is regarded as vitally important since students imitate and learn from professionals as reported by de Swardt (2013:92) and Kgafela (2013:103). Expounding on the ideal that professional nurses must be role models, Baraz, et al. (2015:8) add professional nurses have to support and guide students through effective communication and the provision of psychosocial positive learning environments.

4.4.4.4 Category 4: Students

In Category 4: Students, the lack of expertise, lack of attributes and inadequate selection emerged as subcategories. The participants felt that students play a crucial role in their own training and consequently in the development of clinical reasoning skills.

Subcategory A: Lack of expertise

In the participants' view, students lack basic theoretical knowledge and as a result they are unable to identify abnormalities. Participants shared their concern regarding the students' inability to reason and to provide justification for their actions. They were also of the opinion that clinical reasoning requires a good knowledge base:

But the challenges that I have identified in all my teaching experience, our student[s] they lack that foundation. That foundation of sort of ... standing on it, reasoning on it, challenging things that are wrong. The other thing that I have found very, very frustrating is our student[s] cannot reason. They cannot reason, they cannot give motivation of things. They cannot give rationale. They just give vague statement when you ask the student ... for example, if you can say, 'why are you putting the patient in a semi-fowlers position', the student will say the book says that. [P14]

I think clinical reasoning boils down to having good knowledge, a body of knowledge of what you are supposed to do. [P3]

They [students] don't take them too seriously. They don't like think deeper about the vital signs. So I think if maybe students can be made aware that they are actually the ones who are in charge of a patient. [P8]

One participant shared the concerns raised by professional nurses in the clinical setting. According to her, some of the professional nurses find students are unable to identify abnormalities in patients' conditions and as such these abnormalities are not reported and patients suffer:

But what she picked up is that the basic knowledge lack. Students are unable to identify abnormalities ... that didn't even stroke [strike] the mind of the student. The student didn't report it. So this is the things that is [are] worrying me. [P3]

Another concern raised by the participants is that English is a second language for many of the students and they therefore do not have the essential necessary language comprehension skills to engage with the content and explain their learning:

So the first thing ... in the class, the problem is our students self, most of them they don't understand English properly. [P9]

They [students] find it hard to express themselves [in English] when you read, when you mark their tests. [P6]

Furthermore, a participant pointed out that the students are not competent and as a result have poor self-confidence. This lack in self-confidence is detrimental to students' work-based learning and consequently their development of clinical reasoning skills:

Our student[s], I don't know what it is, but most of them they are not so ... they are not so competent enough ... so ours they don't have that self-confidence. [P9]

Subcategory B: Lack of attributes

Most participants perceived students as irresponsible as evidenced by students' tardiness. Students have a tendency of absenting themselves from the clinical setting as well as taking long lunch breaks away from the ward or unit. They also miss out on experiential learning opportunities because of their late-coming:

Students they are very much playful; with a lot of absenteeism. So our challenges ... is the students themselves. [P4]

But the problem is their late-coming. Because most of the time you will find that they have already done the round ... During the report taking that is where they do the informal teaching. [P9]

Our student[s] [do] not really taking part in report taking. Because mostly the clinical side is complaining of late coming. [P11]

According to some of the participants, students are seemingly not passionate about nursing and lack essential caring attributes. Yet, one participant asserted without caring there cannot be clinical reasoning skills and nurse educators have a responsibility to incorporate caring within their teaching. These views were voiced as follows:

Because it is a very few students that you would see that this person is passionate and wants to know and understand even more ... because, you know with nursing it must be from the heart. [P5]

Our students, in my opinion, they lack that aspect of caring, right. I think they do have the knowledge of nursing clinical procedures. I am supposed to do one, two and three, but when it comes to the caring aspect ... I think caring is that golden thread that runs through the theory to the clinical. So if somebody lacks caring, how do you expect this person to have clinical reasoning skills, right? ... We [nurse educators] can bring the aspect of caring into our lectures and I think it should feature in different subjects throughout. ... I don't think they have been exposed to caring enough to know what it is. Because there is a link between clinical reasoning skills and caring you know. [P2]

We don't select people [students] that have the love, the passion for the profession itself. [P14]

In addition, many of the participants indicated students do not take responsibility for their own learning. Students expect to be spoon-fed with information and the answers with no real effort from their side and, according to the participants, this is why students are unable to think critically:

Then at the same time they are not enthusiastic to learn, eager to learn, to think critically, you know. Most of the student[s] ... especially this poor one [poor students], they don't come for the remedial. [P9]

I don't know is it the calibre of students that we have now ... it looks like they are not committed. [P5]

But there is some of the student they feel that they need to be spoon-fed. Then they will need information from you. They don't study, then they will want the PowerPoint from you. Things like that. [P10]

What I have seen, the students themselves, they really don't study that hard. ... [they] don't come when you ask them to come for remedial. [P11]

Subcategory C: Inadequate selection

Almost all participants inferred that the majority of the students do not want to be in nursing. They reasoned the inadequate selection of students was to be blamed for this occurrence. According to the participants, students use nursing as a means of gaining access to the military – mostly for the salary and as a stepping-stone to other career possibilities:

Does that student want to be in nursing? Am I only here to have a stepping-stone in the military. So we have those challenges that we are actually not training people here who are just [voice became louder and slower to emphasise the words] interested in the nursing profession. But we are training people here who are here for only making a living and be able to support my [his/her] family. [P3]

It is like you know when you, you don't have a passion. You are just here to get money and make sure that you pass in future. [P5]

I sometimes think maybe it has got something to do with selection or what. [P6]

Maybe the selection also comes in, the scoring ... All the students that we take are with the exact number of scoring that we want. Because you know we are not fully involved in the selection and what? But I think some of the students, even the interest, the choice of career, maybe some chose nursing because they will get paid. [P11]

Discussion: Participants described students as lacking in clinical reasoning skills. According to them, this could be attributed to students' perceived lack of knowledge. The participants described students as unable to identify cues in patients' conditions and therefore students do not respond to impending patient fatalities. Student participants from the study conducted by Killam and Heerschap (2013:688) strongly agreed that knowledge gaps related to core sciences and their consequent inability to think critically are detrimental to patient care. In addition, participants from the present study voiced their concern that students are unable to challenge professional nurses. De Swardt (2013:75) and Kgafela (2013:139) also found students encounter resistance when questioning professional nurses and they are therefore often afraid to ask questions. This implies a critical risk aspect because students may then perform nursing interventions without supervision.

Participants from this study identified English, which is a second language for the majority of these students, as a learning barrier. Kujan, et al. (2015:269) found illiteracy in English affect students' academic learning. These authors furthermore state language barriers can minimise the degree of motivation from educators to students that may affect learning. In addition, the findings from the present study showed students lack self-confidence and this perceived lack of self-confidence jeopardises their development of clinical reasoning skills.

According to the participants, students are irresponsible which is apparent from their tardiness, unwillingness to take responsibility for their own learning as well as their obvious disinterest in nursing which has a grave influence on their learning and level of competence. De Swardt (2013:94) found that professional nurses accuse students of poor time management and absenteeism from the clinical setting. These findings concur with those of Gallo (2012:66) who conducted a literature review on what she refers to as "incivility". Incivility is associated with a variety of undesirable behaviours of which tardiness and student inattentiveness are only two of the many irresponsible behaviours characteristic of many students. According to Gallo (2012), incivility leads to a weakened learning environment. The current participants were also unhappy about students' late-coming and absenteeism in the clinical setting. According to them, students who come late are losing out on important experiential learning opportunities of which clinical ward rounds are an important learning activity. These findings concur with the findings of Ibrahim and Qalawa's (2016:119) descriptive comparative study which reveal that not only does disruptive, at-risk behaviours in the classroom and the clinical area compromise the learning environment, but the students

are unable to provide safe, quality patient care. Ibrahim and Qalawa (2016:120) further found that uncivil student behaviour interferes with academic achievement; it also leads to the portrayal of a negative ethical image of nursing students whose behaviour should, in fact, be the epitome of ethical behaviour.

Participants expressed their concern with students' lack of essential caring attributes and placed some of the blame on the lack of role models, career choice and the lack of caring incorporated within the curriculum. De Swardt (2013:94) states professional nurses believe some students choose a nursing career for reasons other than the desire to care and help the sick. The author further confirms students confessed that nursing was their second choice as a career. However, a study conducted by Murphy, Jones, Edwards, James and Mayer (2009:254) indicates upon entering the profession, nursing students exhibit caring attributes but the educational process seem to reduce their caring behaviours. Nurse educators need to ask themselves what role they play in the students' caring disposition. According to Mikkonen, Kyngäs and Kääriäinen (2015:669), nurse educators should be encouraged to place a greater emphasis on the principle of empathy and caring in nursing. This plea for caring was supported by some participants in the present study who pronounced nurse educators need to incorporate caring into their teaching practices.

The participants also raised the issue of the selection of student nurses at the nursing college. They challenged the selection process by stating students are not interested in nursing and are only in it for the money or for using a nursing qualification to further their careers in other fields. The participants stated the selection process must be revised to select students who portray attributes such as empathy, caring and passion. This statement confirms Armstrong and Rispel's (2015:7) interpretation that the recruitment and selection of prospective nursing students account for some of the problems experienced in nursing today. Hubbard (2015:e3) critically reviewed and applied behavioural science theories and techniques to address student selection. She argues there is a strong case against using only interviews as the singular deciding factor for selection; attributes such as integrity, empathy and team awareness need to be included and considered as well.

It became evident to me that caring and passion were important attributes for all role players in the learning environment – the supervisors, nurse educators, professional nurses and the students themselves. An interesting finding was the participants' belief that if a nurse 'does

not care', it cannot be expected of him or her to have clinical reasoning skills. As a researcher, I decided to explore this statement for its authenticity. According to Alpers and Chen (2014:99), without passion there is no purpose; nursing would be without an ontology and the nursing profession extinct. The authors also provide the following description of caring which they view as:

the overarching outcome that is based on our ability and choice to speak for those who cannot speak for themselves (courage); to start everyday actively choosing to be a nurse (commitment); to use our best knowledge, skills, and abilities to be proactive instead of reactive (anticipation); to always put the needs of our patients first (selflessness); and to strive for excellence by constantly evaluating ourselves and constructing the best and most comprehensive plan of care for every patient (idealism). (Alpers and Chen 2014:99)

Clinical reasoning was explored in depth in Chapter 2. The description I considered most appropriate and relevant for the current exploration is that of Benner, et al. (2010:85) who describe clinical reasoning as “the ability to reason as a clinical situation changes, taking into account the context and concerns of the patient and the family”.

However, the definition of clinical reasoning by Levett-Jones, et al. (2010:15) noted in Chapter 1 was also useful in the current exploration. These authors define clinical reasoning as “a process by which nurses collect cues, process the information, come to an understanding of a patient’s problem or situation, plan and implement interventions, evaluate outcomes, then reflect on and learn from the process”.

When comparing the above description and definition some similarities are noticeable. For example, the approach of caring in both which refers to constructing the best and most comprehensive plan for each patient by us as nurse educators to constantly evaluate ourselves. The term ‘clinical reasoning’ is described and defined as taking the patient’s situation into account when planning and then implementing nursing care which must then be evaluated and reflected upon. In both the description and definition, nurses portray caring attributes by using the best knowledge, skills and abilities to care for patients and to prevent abnormalities. Clinical reasoning enables nurses to do precisely that as illustrated by the

following statement from Benner, et al. (2008:3): “clinical reasoning stands out as a situated, practice-based form of reasoning that requires a background of scientific and technological research-based knowledge about general cases”. Therefore, it would not be wrong then to theorise that clinical reasoning skills are influenced by nurses’ caring disposition. Levett-Jones, et al. (2010:15) comes close to this theory with the statement that clinical reasoning is dependent upon a critical thinking disposition and is influenced by a person’s attitude, philosophical perspective and preconceptions. However, in my opinion as well as that of the participants, caring and passion play a fundamental role in clinical reasoning.

4.5 SUMMARY OF THE FINDINGS

The findings were categorised into four themes that are individually summarised next. Out of the 16 interviews conducted, four were HoDs and 12 were nurse educators. However, the term ‘nurse educator’ used in the summaries refers to all participants inclusively.

4.5.1 THEME 1: EDUCATIONAL PRACTICES

Four categories emerged under Theme 1: Educational practices, namely assessment strategies, teaching and learning strategies, curriculum and inadequate resources.

Nurse educators in this study utilised lower cognitive level questioning strategies that require students to memorise and regurgitate facts with little need to demonstrate their ability to think and apply knowledge. Another concern highlighted is the resistance to change from both the nurse educators and the internal moderators regarding the use of innovative, student-centred teaching and assessment strategies. Participants were exceptionally honest by admitting teaching and learning strategies utilised by nurse educators are teacher-centred and do not encourage active student involvement. Evidently utilising teacher-centred strategies does not encourage the development of students’ clinical reasoning skills.

In this study, participants were of the opinion that the curriculum currently followed influences the teaching and learning environment. The time spent on compiling two sets of summative assessments negated additional fruitful planning and the creation of innovative ideas to make learning more student-centred. The current curriculum is so congested and content-laden; it

does not encourage deep learning. Furthermore, the lack of curriculum revision stood out as a concern during the interviews. Participants all agreed the scarcity of resources has a profoundly negative influence on the teaching and learning environment and the nurse educators' as well as the students' ability to utilise educational practices that will promote students' clinical reasoning skills. Access to and the availability of resources definitely influenced nurse educators' choice of teaching and learning strategies.

4.5.2 THEME 2: CLINICAL LEARNING ENVIRONMENT

Under Theme 2: Clinical learning environment two categories emerged from the findings, inadequate clinical teaching department and the clinical setting.

The findings suggest students are exposed to limited practice time in the simulation laboratory and they therefore do not get opportunities to practise their clinical skills in a safe, non-threatening environment. Furthermore, participants believe the simulation laboratory is inaccessible and inadequate for training purposes. This perceived absence of an authentic clinical learning environment is detrimental to the students' development of clinical reasoning skills. Participants highlighted the integration of theory and clinical as a hindrance to students' learning and application of theoretical knowledge within different clinical situations. In addition, participants reported that short clinical placements affected the students' learning. Also, fragmented nursing care models used by professional nurses where students are not afforded the opportunity to render comprehensive nursing care inhibited learning. Participants were concerned about the limited clinical learning opportunities and routine clinical procedures not performed in some clinical settings because it resulted in students not being exposed to these experiential learning opportunities. Lastly, the participants believed collaboration with the DoH for networking and benchmarking purposes would assist them to stay abreast of current trends in nursing and nursing education. They also stated good relationships and collaboration with professional nurses are of utmost importance in order to contribute to a positive clinical learning environment.

4.5.3 THEME 3: MILITARY LEARNING ENVIRONMENT

Under Theme 3: Military learning environment, two categories emerged, military environment and military activities.

The findings revealed in the opinion of participants the military environment with its power- and rank-orientated culture poses a problem for the implementation of student-centred teaching and learning strategies. The autocratic organisational structure characterised by micromanagement and red tape is not making matters any easier for nurse educators to plan for active and innovative teaching and learning strategies. Students miss experiential learning opportunities due to unplanned interruptions attributed to the attendance of compulsory military activities. Nepotism posed a problem and was addressed by the participants. Teaching-learning constantly creates knowledge, understanding and new ways of providing comfort and quality care to patients. The participants felt strongly that students who show no interconnectedness with colleagues, the nursing environment or patients and who demonstrate indifference and disinterest in nursing as a career, should not be enrolled in the four-year comprehensive nursing programme even if they were related to high-ranking family members.

4.5.4 THEME 4: ROLE PLAYERS IN THE TEACHING AND LEARNING ENVIRONMENT

Under Theme 4: Role players in the teaching and learning environment, four categories emerged. The challenges were further classified into four different types of role-players within the teaching and learning environment, namely nursing college management, nurse educators, professional nurses and students.

Career choice manifested as a major concern. Participants believed nursing as well as nursing education should be a calling. They highlighted attributes they felt all nurses should possess and specifically mentioned passion for nursing and teaching. A significant finding was that participants believed caring is encompassed in clinical reasoning. They indicated nurse educators should place greater emphasis on teaching the concept of caring and should do so throughout the curriculum.

What also stood out from the data was that supervisors are hindering the utilisation of student-centred teaching and assessment strategies. In addition, participants shared their frustration with supervisors' inadequate expertise, poor leadership skills and lack of support and guidance. Furthermore, supervisors' lack of acknowledging achievement and creating environments that encourage innovation and change is an obstacle to the teaching-learning environment. The participants felt nurse educators lack expertise in teaching, specifically with regard to student-centred approaches. They were further unified in their belief that nurse educators require recent clinical experience to encourage the use of case-based teaching and learning. The findings revealed that professional nurses are not committed to teaching and their behaviour is not exemplary. Moreover, students were portrayed as irresponsible and prone to tardiness and uncivil behaviour.

Expressing their concern with students' inability to apply theoretical knowledge, their dire lack of sound reasoning and constructive decision making, the participants identified a lack of knowledge, self-directedness and taking responsibility for their own studies as possible causes of students' failure to emerge as educated, ethical, responsive and intelligent knowledge-guided professional nurses.

4.6 CONCLUSION

In this chapter the qualitative data of Phase 1 which reflected the challenges experienced by nurse educators in utilising educational practices that promote the development of student nurses' clinical reasoning skills, was analysed, presented and discussed thoroughly. Phase 2 of the study is presented and described in Chapter 5. It involves the co-construction of an action plan to address some of the challenges identified in Phase 1.

5: ACTION RESEARCH PROCESS (PHASE 2)

“Change is hard at first, messy in the middle and gorgeous at the end.”

-Unknown-

5.1 INTRODUCTION

Chapter 4 presented and discussed the qualitative data of Phase 1. It reflected the challenges experienced by nurse educators in utilising educational practices that promote the development of student nurses' clinical reasoning skills. Chapter 5 describes Phase 2 of the study. The findings from Phase 1 were used to co-construct an action plan to address some of the challenges explored. During Phase 2 the action research group (ARG) was established to achieve objective 2, the co-construction of an action plan to improve educational practices to promote the development of undergraduate student nurses' clinical reasoning skills.

This phase followed the cyclic approach of action research and consisted of four action research cycles (refer to Figure 5.1). The action research cycles are discussed as well as the process followed to co-construct the action plan. This phase was characterised by collaboration, participation and inclusion of the nurse educators and nursing college management.

5.2 LAUNCH OF ACTION RESEARCH PROCESS

The composition of the action research group and the launch of this collaborative phase are discussed under the following two headings: composition of the action research group and planning of the action research group process.

5.2.1 COMPOSITION OF ACTION RESEARCH GROUP

An invitation (refer to Annexure C1) was extended to all nurse educators and HoDs involved in the four-year comprehensive nursing programme who indicated interest during the launch

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of the study to be co-researchers (refer to Section 3.5.2). The sample size was 11 participants and included representatives from the nursing college management, nurse educators and the researcher. Table 5.1 provides an overview of the composition of the action research group (ARG) and their biographical data. The ARG members decided to name the group the 'Change Champions'. (From here onwards they will simply be referred to as the Change Champions.)

Table 5.1 Composition of the ARG and biographical data

CHARACTERISTIC	ITEM	FREQUENCY	TOTAL
POSITION	Head of Department	4	11
	Nurse educator	6	
	Researcher	1	
SEX	Male	1	11
	Female	10	
AGE IN YEARS	30 – 39	2	11
	40 – 50	4	
	> 50	5	
CLINICAL EXPERIENCE IN YEARS	6 – 10	3	11
	11 – 15	2	
	> 15	6	
NURSING EDUCATION EXPERIENCE IN YEARS	< 5	3	11
	6 – 10	4	
	11 – 15	0	
	> 15	4	
HIGHEST QUALIFICATION IN NURSING	Diploma	1	11
	Degree	9	
	Master's degree	1	

5.2.2 PLANNING OF ACTION RESEARCH PROCESS

The ARG was invited (refer to Annexure C1 for the invitation) to attend an opening workshop on 25 January 2016. (Refer to Annexure C3 for the programme). During the preparation

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phase, refreshments were arranged, the venue was secured, the external facilitator was confirmed, and the file folders (consisting of the programme, participation information and consent document, proposed time schedule, handout of Phase 1 findings, and a small token of appreciation and personalised nametags) were compiled. The workshop began with an introduction of the external facilitator. The researcher introduced herself and the participants to each other. All members were requested to use the name tags provided. The external facilitator was an outsider. Therefore, objectivity was assured and I was provided with an opportunity to gain confidence in facilitating workshops and for having a voice during the workshops.

I began with a PowerPoint presentation which included the aim and objectives of the study, an introduction to clinical reasoning and a summary of Phase 1 findings. Some literature reviewed by the researcher was also shared with the ARG. Members were requested to sign the participant information and consent document (PICD) (refer to Annexure C4) before we continued with the value and beliefs as well as role clarification and ground rules. The ARG members unanimously agreed to address each other by their first names and to attend the workshops in civilian attire. This was to ensure members felt comfortable with each other and was a preventative measure to make sure members with lower ranks did not feel threatened to participate by senior members. It was important to create a non-threatening, non-hierarchical and psychological safe environment to encourage participation, collaboration and mutual respect among the ARG members.

The ARG planned the way forward and the planning was a collaborative process. We reached consensus on the number of workshops, time schedule (refer to Annexure C5) and the future monitoring and feedback meetings that would be held. A total of six 8-hour workshops were planned and conducted with the ARG from 25 January to 4 July 2016. During this first workshop (Cycle 1: Planning the way forward), the ARG planned the workshops and monitoring and feedback meetings. The aim of this workshop was also to reach consensus on the priority challenges to address. Two workshops (Cycle 2 and Cycle 3: Co-constructing the action plan) focused on identifying activities to address the challenges and were held over a period of two months. The fourth and fifth workshops (Cycle 4: Finalising the action plan), were conducted to finalise and approve the final draft action plan. The last workshop (workshop 6) was held to evaluate the action research process and is

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discussed in Chapter 6. Refer to Figure 5.1 for a schematic presentation of Phase 2 and the action research cycles.

Each cycle followed the steps of plan, act, observe and reflect but the steps did not occur in a sequence. The process was haphazardous. At times we planned, reflected on that plan, would act by adding our activities to the plan, sit back and observe, would revise again after some deliberation but each workshop and meeting followed a different sequence. McNiff (2013:67) reports action research is a systematic process consisting of the different steps, but she does not see the process as sequential or necessarily rational. It is possible to begin at one place and end up somewhere unexpected. Heyns (2008:164) conducted an action research study, and similarly found the series of steps, and cycles used in the action research for a practitioners' project involved holistic and flexible rather than separate entities. The action research process of the present study proved to be a classical example of what Jean McNiff and Tanya Heyns discovered.

Although the aim of Phase 2 was to co-construct an action plan to address the challenges identified during Phase 1, some of the activities identified were also implemented. These activities are referred to as spin-offs and include meetings, professional development sessions, the compilation of guidelines, and brainstorming sessions with all academic staff. Each cycle with its workshop, its reflection, the monitoring and feedback meetings, and spin-offs will be discussed separately.

Each cycle is discussed under the following headings:

- Action research steps: plan, act, observe and reflect summarised for each cycle.
- Workshop
 - Aim of the workshop.
 - Activities that took place during the workshop.
 - Outcome/s of the workshop.
 - Reflection of the ARG members and my personal reflection.
- Monitoring and feedback meetings that took place after the workshop.
- Spin-offs or some actions that were implemented after the workshop.

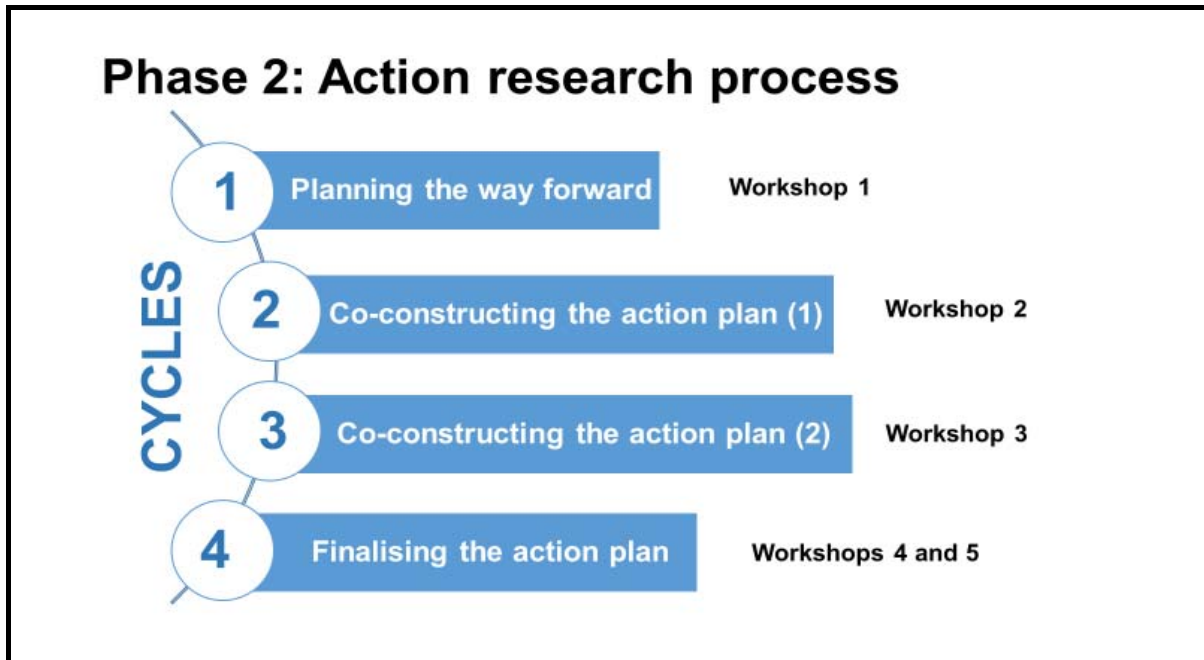


Figure 5.1 Phase 2: Action research process

5.3 CYCLE 1: PLANNING THE WAY FORWARD

Cycle 1 began with the first workshop which describes how the action research process was launched and how the action research group planned the way forward. Cycle 1 consisted of workshop 1 and included the three monitoring and feedback meetings as well as the spin-offs from this workshop.

5.3.1 ACTION RESEARCH STEPS

Table 5.2 provides a summary of the action research steps that took place during Cycle 1.

Table 5.2 Cycle 1

CYCLE 1: PLANNING THE WAY FORWARD	
Time frame	25 January 2016 to 22 February 2016
Aim	The aim of this workshop was to launch the action research process and plan the way forward.
Composition	Cycle 1 consisted of workshop 1, three monitoring and feedback meetings and the spin-offs from this workshop.

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STEPS	PLAN	ACT	OBSERVE	REFLECT
Activities	<p>Four strategies were agreed on by the ARG to co-construct an action plan.</p> <p>The ARG planned the way forward.</p> <ul style="list-style-type: none"> • Time schedule • Providing feedback to the academic staff during management meetings as well during as the quality assurance meetings. • Attend weekly monitoring and feedback meetings. • ARG must identify activities to address the four strategies. • Introduce continuous professional development (CPD) and 	<p>Members returned to their daily tasks and discussed the action research study with colleagues.</p> <p>Feedback was given to the principal, the academic staff and the management cadre as planned.</p> <p>Monitoring and feedback meetings took place as planned.</p> <p>Arrangements were made for workshop 2.</p> <p>Introduction to CPD was provided to academic staff.</p> <p>Academic staffs' learning needs were identified.</p>	<p>The ARG observed throughout the workshop. During silent reflection and group work, the ARG was required to think and look at the challenges presented and prioritise the most important ones.</p> <p>ARG members also observed during the monitoring and feedback meetings that were held weekly. Members had to look at current practices and think of how these could be improved.</p> <p>Members were asked to think about activities to address the challenges.</p>	<p>Reflection began during the workshop when the ARG was asked to indicate the most and least liked aspects of the workshop.</p> <p>Reflection also took place during the monitoring and feedback meetings when members brainstormed ideas and reflected on current practices.</p> <p>Reflection occurred continuously: during and after the workshops, the meetings as well as the quality assurance workshops.</p>

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STEPS	PLAN	ACT	OBSERVE	REFLECT
	<p>identify the learning needs during the quality assurance workshop.</p>			

5.3.2 WORKSHOP 1

Workshop 1 was held on 25 January 2016 and formed part of Cycle 1 of the action research process. The workshop was attended by 10 of the 11 Change Champions. An attendance register was circulated to document proof of attendance by the Change Champions (refer to Annexure C2). The member who could not attend this workshop expressed interest and commitment to join the next meeting.

5.3.2.1 Aim

The aim of this workshop was to launch the action research process and plan the way forward.

5.3.2.2 Activities

All members were welcomed to the launch of the action research project. I presented an overview of the action research study including the background, research problem, question, aim and objectives. A brief explanation of the research design and clinical reasoning was provided as well as relevant literature reviewed. Finally, the findings of Phase 1 were shared with the Change Champions (refer to Annexure C6). The participant information and consent document (refer to Annexure C4) was discussed and members willingly signed voluntary consent before commencing with the next activity. All members and the external facilitator, my co-supervisor, Dr Isabel Coetzee, was introduced. She then took over as facilitator to facilitate the workshop.

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We reached consensus on the following ground rules set out below.

- Psychological safe space. Members felt they needed to feel comfortable to share their opinions. All information would be treated as confidential and the opinion of all members would be respected. All members would attend the workshops in their civilian attire.
- Everyone's voice was important. Members felt that all present had to get an opportunity to participate and contribute to the discussions.
- Remain objective (discuss issues). It was explained that when challenges are discussed, members would discuss the topic at hand and not personalise any of the suggestions made or opinions given.
- Active participation. All members were required to actively participate in the exercises and discussions.

The external facilitator conducted an exercise with the ARG to divide us into two diverse groups. Puzzle pieces of two different animals were distributed randomly and all members with the same animal pieces formed a group. This exercise was also an icebreaker; it provided for some fun and created a relaxed atmosphere. We were requested to reflect silently on the findings from Phase 1.

A handout had been prepared for each member (refer to Annexure C6 for a summary of Phase 1 findings). Members were asked to read through the challenges and reflect on the challenges they felt were critical to address. Members were allowed to reflect for about 20 minutes. After individual reflection, the groups were requested to look at the challenges together and identify those they felt were challenges they could address and which would make a difference. It was emphasised that these should be challenges that the nursing college had control over. Members were also asked to write down the challenges they as a group identified onto flip charts. After about 30 to 45 minutes, the group members were requested to give feedback to the entire group.

Chapter 5: Action research process (Phase 2)



Photo 5.1 Change Champions at work

(Photos taken and used with the permission of the participants)

After the feedback session, the external facilitator facilitated a session during which the Change Champions prioritised the challenges into four main strategies. Consensus was reached on the four priority challenges to be addressed and they would be referred to as the 'four strategies' from then onward. Members were then asked to work in their groups and identify possible activities for the four strategies. The two groups worked together for about 30 – 45 minutes to identify some activities that might address the four strategies. Feedback was then given by the two groups. The Change Champions agreed on the activities to be added to the action plan. This was just the start of identifying the activities for the action plan; it was explored further during the remaining workshops.

Chapter 5: Action research process (Phase 2)

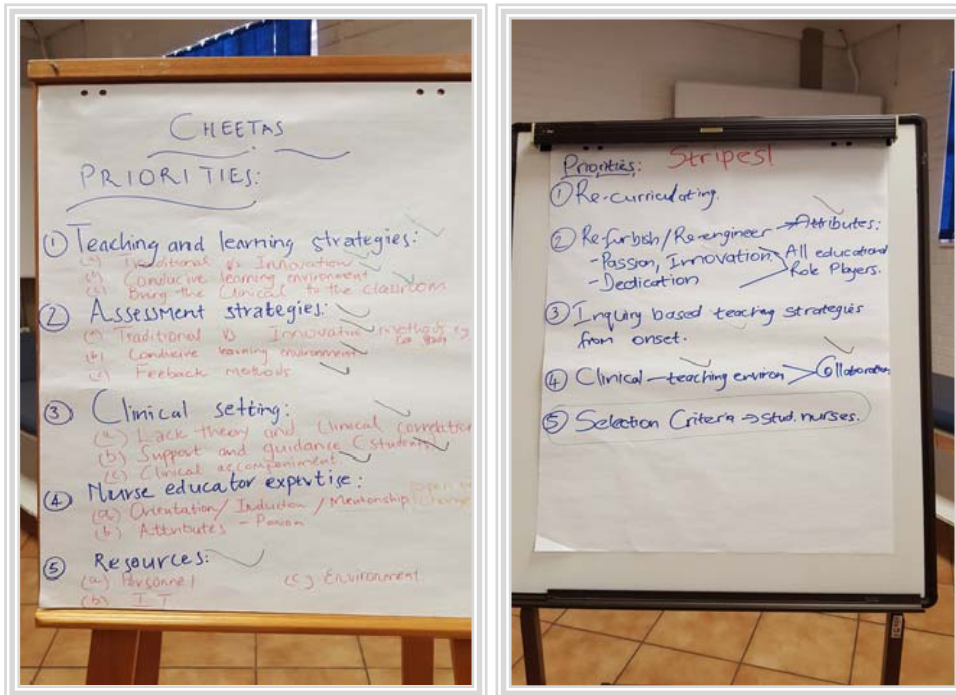


Photo 5.2 Group feedback

We discussed the way forward and reached consensus on the following aspects.

- The time schedule (refer to Annexure C5) for the remaining five workshops and the monitoring and feedback meetings.
- Values, beliefs and roles were clarified and consensus was reached to respect each others values and beliefs in accordance to the organisations values and philosophy. The responsibilities of the members were discussed and members were allocated to the four different strategies.
- Communication: It was agreed that a WhatsApp group would be created for communicating dates and reminders to all Change Champions.

5.3.2.3 Outcome

The main outcome of this workshop was the consensus reached on the four strategies as well as the plans identified for the way forward. The Change Champions identified four strategies based on the findings from Phase 1 to address and co-construct an action plan. The four strategies identified are shown in Figure 5.2.

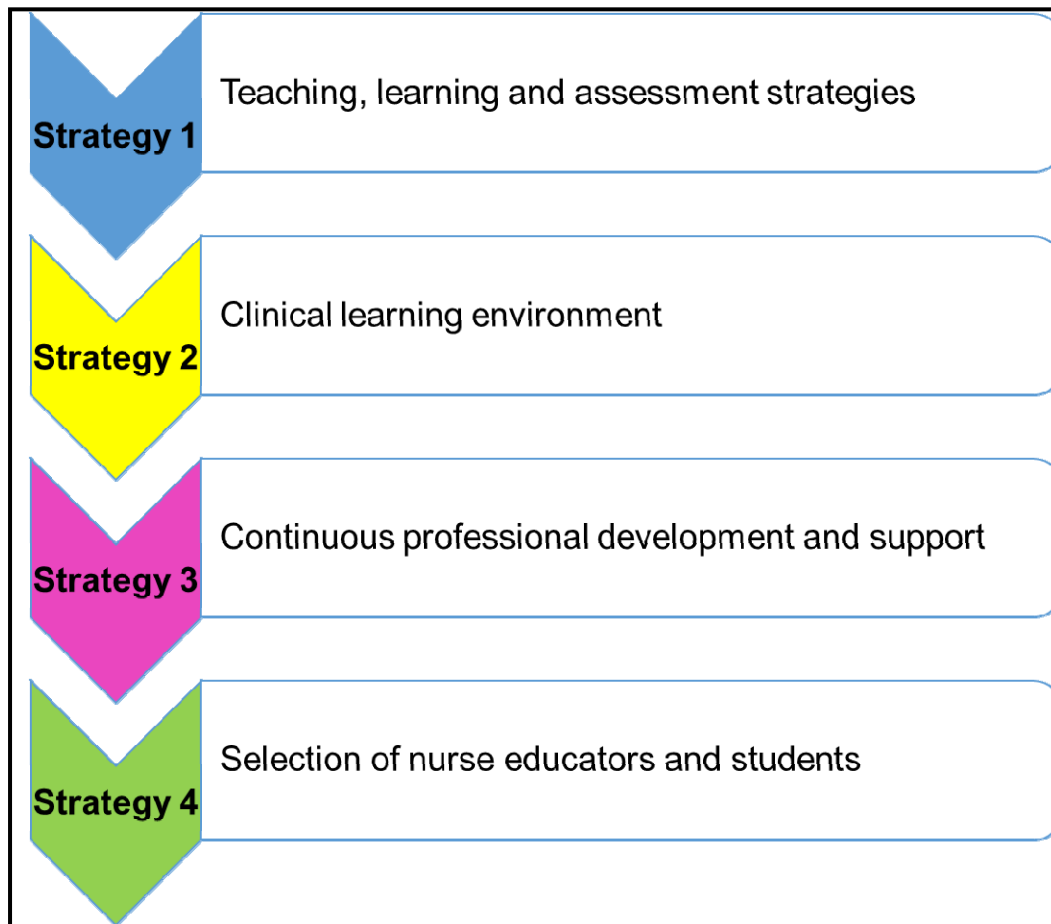


Figure 5.2 Four strategies identified by the Change Champions

Each Change Champion was allocated to a strategy. Each strategy was represented by either two or three members. Consensus was also reached on some activities to be addressed.

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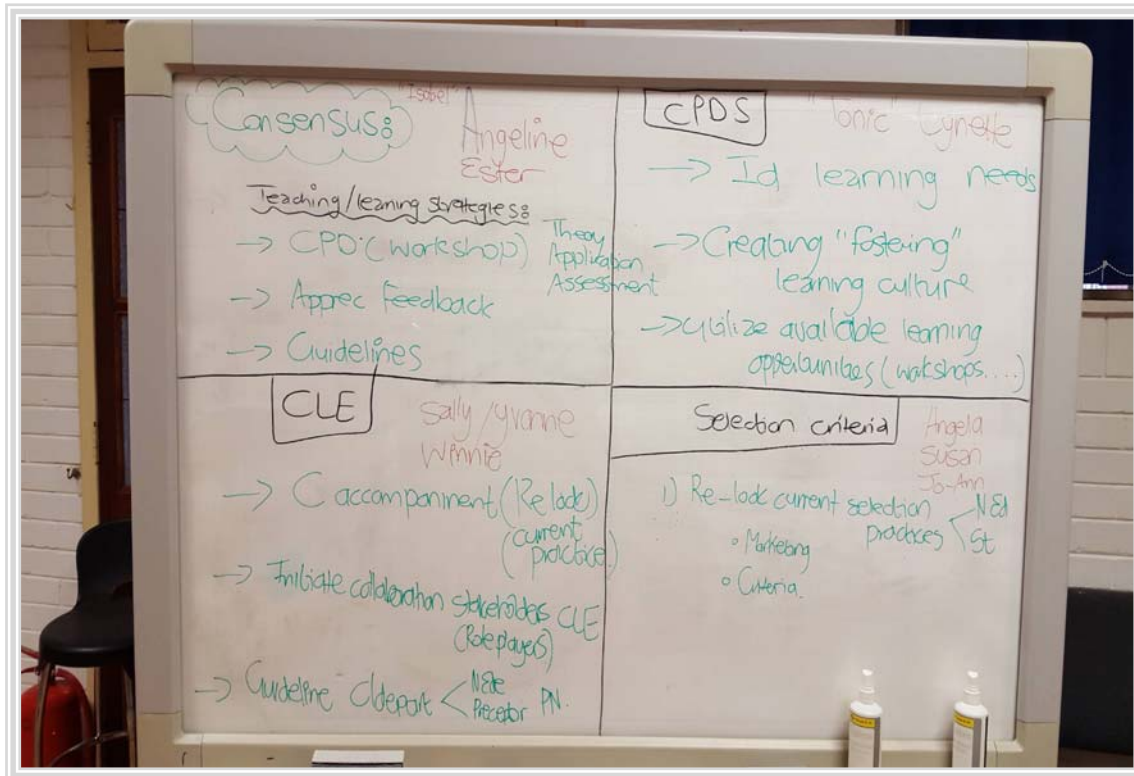


Photo 5.3 Consensus reached on the four strategies and activities

Teaching and learning strategies

- In-service training workshops must be arranged on different student-centred teaching and learning strategies.
- In-service training must be arranged on appreciative feedback.
- Guidelines must be compiled on different student-centred teaching and learning strategies that promote the development of clinical reasoning skills.

Continuous professional development (CPD) and support

- Identify nurse educators' learning needs.
- Creating and fostering a learning culture.
- Utilise available learning opportunities; nominate nurse educators to attend professional development courses already provided by the SAMHS as well as attending workshops or seminars arranged by the Department of Health.

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Clinical learning environment	Selection criteria
<ul style="list-style-type: none"> • Re-look the current practices of clinical accompaniment. • Initiate collaboration with stakeholders within the clinical learning environment (role players). • Compile guidelines for the clinical learning department – specifically addressing the role of the nurse educator, clinical preceptors and the professional nurse. 	<ul style="list-style-type: none"> • Re-look current selection process for both nurse educators and students. • Look at the current marketing strategies utilised by the SAMHS. • Revise the selection criteria for both the nurse educator and the student.

Vignette 5.1 Consensus reached on the four strategies and activities

5.3.2.4 Reflection

The Change Champions were given an opportunity to reflect on the workshop. I kept a reflective journal and after each workshop, I wrote down reflective notes.

- ***Change Champions***

The Change Champions were requested to reflect on the ‘liked least’ and ‘liked most’ aspects of the workshop. Table 5.3 provides an overview of the ‘liked least’ and ‘liked most’ as identified by the Change Champions.

Table 5.3 Reflection on workshop 1

LIKED LEAST	LIKED MOST	LESSONS LEARNT
<ul style="list-style-type: none"> • Time management: long sessions without breaks. • Arriving late due to work-related responsibilities and then missing out. • Temperature (hot). 	<ul style="list-style-type: none"> • Facilitator expertise. • Learnt and gained a lot. • Positivity. • Collaboration and participation. • Atmosphere was conducive and safe. • Practice wisdom. 	<ul style="list-style-type: none"> • Time keeping. • Consider the air-conditioning. • Post a message on the WhatsApp group to remind members of the next meeting and attire. • Remember to give

Chapter 5: Action research process (Phase 2)

LIKED LEAST	LIKED MOST	LESSONS LEARNT
	<ul style="list-style-type: none"> • Empowerment. • Interaction. • Willingness portrayed to go the extra mile. 	<p>feedback to the nursing college management after each workshop.</p>

- ***Personal reflection***

Initially I was concerned about the attendance of members but in the end, all but one attended. However, this specific participant indicated interest and was included in the monitoring and feedback meetings that followed. Another member was late due to work-related responsibilities. However, she joined us before breaking for tea and did not miss much activity. She shared she would have wanted to be present from the start. Fortunately, being part of the nurse educator corps at the nursing college I knew work responsibilities took priority and I was therefore quite prepared that at times all the members would not be able to attend due to work-related duties.

Two members arrived in uniform which made them stand out among the others. The invitation read the dress code was civilian wear and I should have approached these two members individually and reminded them that attendance had to be in civilian clothes. It was important for all members to be dressed in civilian clothes so that everybody, irrespective of rank, would feel they were on an equal level and would feel safe to voice their opinions honestly and truthfully.

Everyone's willingness and eager participation surprised me. Due to the emergent nature of action research, I was not sure what to expect and which direction the workshop or project would go, but I was hoping that the group would be enthusiastic and identify challenges we could address. I believed we should address our teaching and learning strategies and look at incorporating more student-centred strategies, and was therefore pleased when one of the strategies did indeed include teaching and learning strategies. The workshop was successful and met my expectations more than I had anticipated.

I was pleased with the priorities identified by the Change Champions. In my opinion, the particular identified priorities were ones we could address ourselves to make a difference. Members eagerly volunteered to be a champion for the four priorities.

5.3.3 MONITORING AND FEEDBACK MEETINGS

Monitoring and feedback meetings were held after each workshop with the aim of monitoring the activities of the Change Champions as well as receiving feedback. In addition these meetings were arranged to allow members to reflect on the activities and also to be reminded of the tasks that had to be executed before the next scheduled workshop. These meetings took place weekly or in some cases every second week. The duration of these meetings varied between one to two hours. Minutes were kept for each meeting (refer to Annexure C8) as well as an attendance register (refer to Annexure C7). After workshop 1 we held three monitoring and feedback meetings as discussed next.

5.3.3.1 Monitoring and feedback meeting 1

This meeting took place on 1 February 2016. Five Change Champions attended. It was during this meeting that the ARG members agreed on the name “Change Champions” and the slogan, ‘We are the champions of change’. The time schedule was once again perused and final approval was given. I gave feedback on the meeting I had with the principal. The purpose of my meeting with her was to keep her informed on the progress of the project. The principal expressed her support and verbalised her excitement with the four strategies identified. We then brainstormed and discussed the activities identified for each strategy during workshop 1. During our discussion on the four strategies, we would reflect on current practices and debate on how to improve our circumstances. Minutes were kept for this meeting and new ideas and suggestions were recorded in writing.

During workshop 2 we provided feedback to all Change Champions and added the activities to our action plan. The member who was unable to attend Workshop 1 joined us for this first monitoring and feedback meeting. After the meeting, I briefed this member on what had transpired during workshop 1. The member received the compiled package and I discussed the PICD with him. He gave informed consent voluntarily and signed an informed consent form. This member was then allocated to Strategy 1.

5.3.3.2 Monitoring and feedback meeting 2

This meeting was attended by eight Change Champions and was held on 8 February 2016. We discussed the arrangements required for workshop 2. Thereafter, we worked through the previous minutes and added ideas or suggestions that emerged. During workshop 2 we provided feedback to all Change Champions and added the activities to our action plan.

5.3.3.3 Monitoring and feedback meeting 3

This meeting took place on 15 February 2016 and was attended by six Change Champions. During this meeting, it was confirmed that the arrangements were in place for workshop 2. We worked through the previous minutes and included new ideas or suggestions to be finalised during workshop 2.

5.3.4 SPIN-OFFS

During a management meeting held on 9 February 2016, I gave feedback to the nursing college management on the progress of the action research process. I elaborated on the challenges explored during Phase 1 and the aim of Phase 2. The four strategies prioritised during the ARG workshop were discussed. Members voiced their interest and support and stated it was their belief the project was of value to the nursing college. A handout (refer to Annexure C10) was prepared to provide information and the time schedule of the action research workshops. The rest of the academic staff would receive feedback during the quality assurance meetings scheduled monthly. The aim of keeping all academic staff informed was to obtain their buy-in, support and input and motivate them to want to take part in the planned activities.

A quality assurance workshop was scheduled for 22 February 2016 with all academic staff. The aim of the workshop was to provide feedback to the academic staff on the progress of the action research project and to obtain buy-in and support. During this workshop the four identified strategies were introduced. The focus for this workshop was on Strategy 3: Continuous professional development (CPD) and support. The allocated Change Champion for this strategy presented a PowerPoint presentation on CPD. The Change Champion distributed a pamphlet on CPD and requested academic staff to identify their learning needs

based on the Competencies for a Nurse Educator advocated by the SANC (SANC 2014:1-8). An enclosed box was provided for staff to submit their learning needs anonymously. The learning needs would be analysed by the ARG during the next Change Champion workshop.

5.4 CYCLE 2: CO-CONSTRUCTING THE ACTION PLAN (1)

Cycle 2 consisted of workshop 2, the two monitoring and feedback meetings held after workshop 2 and the spin-offs related to this workshop.

5.4.1 ACTION RESEARCH STEPS

Table 5.4 provides a summary of the action research steps that took place during Cycle 2.

Reminder. The steps of each action research cycle are flexible, evolving and is not sequential or rational.

Table 5.4 Cycle 2

CYCLE 2: CO-CONSTRUCTING THE ACTION PLAN (1)	
Timeframe	7 March 2016 to 29 March 2016
Aim	To co-construct the action plan.
Composition	Cycle 2 consisted of workshop 2, the two monitoring and feedback meetings held after workshop 2 and the spin-offs related to this workshop.

Steps	PLAN	ACT	OBSERVE	REFLECT
Activities	The ARG planned the activities to be added to the action plan by going back to daily tasks and sharing and discussing the action plan with colleagues and friends.	Members returned to their daily tasks and discussed the action research study with colleagues and friends. Feedback was given to the academic staff	The ARG observed throughout the workshop. During silent reflection and group work the ARG was required to THINK about the challenges presented, look at	Reflection took place during the workshop when the ARG was asked to indicate the “most liked” and “least liked” aspects of the workshop. Reflection also

Chapter 5: Action research process (Phase 2)

Steps	PLAN	ACT	OBSERVE	REFLECT
	<p>The ARG planned for the values and beliefs clarification workshop and teambuilding exercise.</p> <p>The ARG also planned for the next workshop.</p> <p>The ARG planned to give feedback to the management cadre on progress made.</p> <p>The ARG planned to attend the monitoring and feedback meetings.</p> <p>The ARG planned the article for The Lamp.</p>	<p>and the management cadre as planned.</p> <p>Monitoring and feedback meetings took place as planned.</p> <p>Arrangements were made and in place for the next workshop.</p> <p>An article was written for The Lamp</p>	<p>current practices and come up with plans for what?.</p> <p>ARG members also observed during the monitoring and feedback meetings held weekly.</p> <p>Members were asked to think about activities to address the challenges.</p>	<p>took place during the monitoring and feedback meetings. During these meetings members brainstormed ideas and reflected on current practices and how best to address the challenges.</p> <p>Reflection occurred continuously; during and after the workshops and the meetings</p>

5.4.2 WORKSHOP 2

This 8-hour workshop took place on 7 March 2016. An attendance register was kept. Of the 11 Change Champions eight attended. The external facilitator facilitated the workshop with my assistance.

5.4.2.1 Aim

The aim of this workshop was threefold. Firstly, to give feedback on the progress made by the Change Champions. Secondly, to observe and plan or revise activities and, thirdly, to analyse the data collected during the quality assurance workshop and identify academic staff learning needs.

5.4.2.2 Activities

All members were welcomed to the second workshop. Feedback was given on the quality assurance workshop (refer to Section 5.3.4). The decision was made by all to prioritise the list of topics for professional development needs as recorded by the academic staff during the quality assurance workshop (refer to Section 5.3.4). A list of topics was identified by distributing the different collected papers from the academic staff to each Change Champion as well as to the external facilitator. Each member then got an opportunity to share the topics identified by going around in a circle. A member volunteered to go first and thereafter the remaining members followed clockwise. The topics and their frequencies were recorded on the whiteboard by the researcher until all topics were exhausted (Refer to Vignette 5.2 for a list of the learning needs identified by the academic staff). It was then agreed that we should silently reflect on the list of learning needs and after lunch had been served, we would agree on three topics to be arranged for providing professional development sessions to the academic staff.

Chapter 5: Action research process (Phase 2)

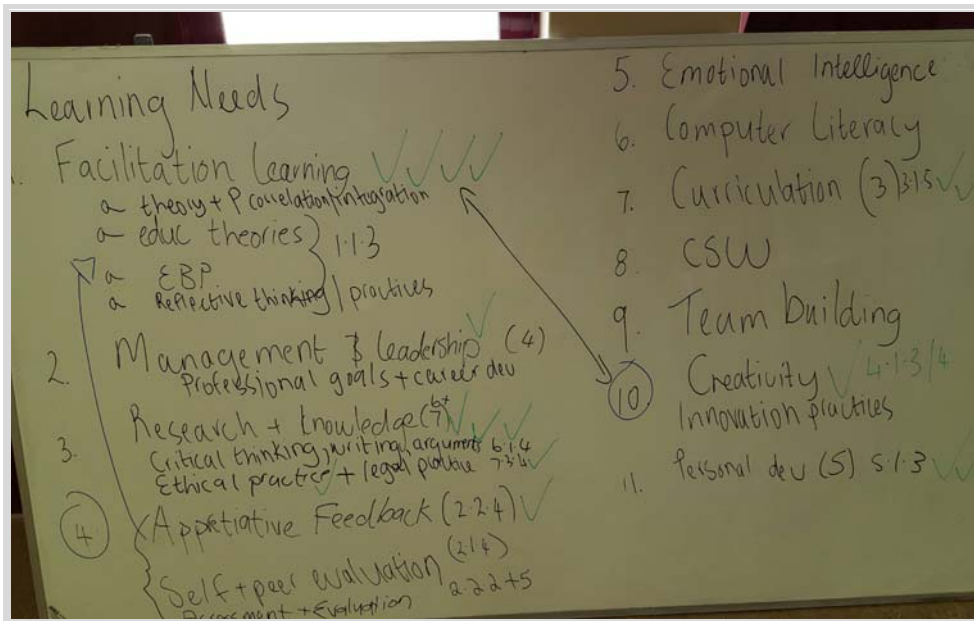


Photo 5.4 List of learning needs identified by academic staff

Learning needs			
1	Facilitation of learning <ul style="list-style-type: none"> Theory/practice correlation/integration Educational theories Evidence-based practice Reflective thinking/practices 	6	Computer literacy
2	Management and leadership <ul style="list-style-type: none"> Professional goals and career development 	7	Curriculum development
3	Research and knowledge <ul style="list-style-type: none"> Critical thinking, writing arguments Ethical and legal practice 	8	Conventions of Service Writing (CSW)
4	Appreciative feedback Self-evaluation and peer evaluation Assessment and evaluation	9	Creative innovative teaching and learning practices
5	Emotional intelligence	10	Personal development

Vignette 5.2 List of learning needs identified by academic staff

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A Change Champion from each strategy had the opportunity to give feedback. During this feedback session, all members were involved in a brainstorming session and they could add more activities if they chose to (refer to Table 5.5). I gave feedback from the two monitoring and feedback meetings held after workshop 1 and the suggested activities from these meetings were added to the action plan.



Photo 5.5 Change Champions at work

(Photos taken and used with the permission of the participants)

5.4.2.3 Outcomes

Two outcomes, namely activities for the four strategies and learnings needs, were achieved in this workshop.

- **Activities for the four strategies**

The Change Champions identified the following activities for each strategy:

Table 5.5 Activities identified for each strategy

Strategy 1	Strategy 2	Strategy 3	Strategy 4
Teaching, learning and assessment strategies	Clinical learning environment	CPD and support	Selection of nurse educators and students
Provide training on different teaching and learning strategies, e.g.	<i>Clinical accompaniment:</i> Compile a guideline for fixed clinical	Identify learning needs of academic staff.	<i>Selection:</i> Relook the current selection process.

Chapter 5: Action research process (Phase 2)

Strategy 1	Strategy 2	Strategy 3	Strategy 4
<p>Teaching, learning and assessment strategies</p> <p>enquiry-based and unfolding case studies.</p> <p>Provide training on innovative and creative assessment strategies.</p> <p>To arrange a training session on appreciative feedback.</p> <p>To compile guidelines on the shredding of assessment papers.</p> <p>Compile a booklet/guideline on teaching, learning and assessment strategies and appreciative feedback linking it to clinical reasoning.</p> <p>Compile different unfolding case studies.</p> <p>To think on how resourceful we can be.</p>	<p>Clinical learning environment</p> <p>accompaniment programme. Possibly incorporate it into the current standard working procedure.</p> <p><i>Collaboration:</i> Initiate collaboration with the stakeholders in the clinical learning environment.</p> <p>Ensure that nurse educators are aware of training sessions offered by the DoH.</p> <p>Theory and clinical nurse educators to work together.</p> <p><i>Clinical teaching department:</i> Guidelines for the clinical teaching department.</p> <p>Resuscitate the clinical ward rounds.</p> <p>Initiate the implementation of clinical conferences.</p> <p>Investigate the possibility of a journal club.</p> <p>Provide first aid and resuscitation revision in each year group.</p>	<p>CPD and support</p> <p>Conduct a skills audit of personnel members.</p> <ul style="list-style-type: none"> To link it to the SANC nurse educator competencies. PMDS/KRAs <p>Implement CPD points</p> <ul style="list-style-type: none"> Compile a file for academic staff. <p>Arrange computer courses.</p> <p>Utilise available learning opportunities.</p> <p><i>Orientation and induction:</i> Compile an induction and orientation programme.</p> <ul style="list-style-type: none"> Compile a tick sheet. <p>Incorporate computer literacy.</p>	<p>Selection of nurse educators and students</p> <p>To address the concern identified with the APS/selection criteria.</p> <p>Possibility of psychometric testing/essay.</p> <p><i>Marketing:</i> Relook the current marketing practices.</p> <p>Consider the following: Marketing/info pamphlets.</p> <ul style="list-style-type: none"> Electronic version Face/student <p>Visit schools/festivals.</p> <p>Initiate scholar programme.</p> <p>Student surveys.</p> <ul style="list-style-type: none"> Senior groups. Experience of process. <p>Interview guide.</p> <ul style="list-style-type: none"> Empathy testing/scenarios. Emotional intelligence. Ethical judgement – evidence (nursing). Community or homebased care. <p><i>Nurse educators:</i></p>

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Strategy 1 Teaching, learning and assessment strategies	Strategy 2 Clinical learning environment	Strategy 3 CPD and support	Strategy 4 Selection of nurse educators and students
	<p><i>Simulation laboratory:</i> Identify/allocate responsible person.</p> <p>Utilise the simulation laboratory – not only during OSCE and demonstrations. Join rooms – larger area.</p> <ul style="list-style-type: none"> • Smart boards • Use in classroom <p>Arrange in-service on new manikins/smartboards.</p> <p>Students must practice on manikins.</p> <p>Theory and clinical nurse educators to investigate the clinical learning outcomes.</p> <p>Consider how best to utilise what is available in the simulation laboratory.</p>		<p>Information booklet for prospective candidates.</p> <p>Revise the interview guide.</p> <ul style="list-style-type: none"> • Job description. • Scenarios. • Nurse educator – qualities/not charm. <p>Involve in the selection panel: line/staff/managers. Provide evidence of competence.</p> <ul style="list-style-type: none"> • LEP/PPP <p>Retaining nurse educators.</p> <p>Reflection on the entire process.</p> <p>Compile a SWP regarding the entire process at the nursing college for both nurse educators and students.</p> <p>Provide training on the process.</p>

- **Learning needs**

Consensus was reached by the Change Champions to focus on three of the learning needs identified. The remaining topics would be submitted to the professional development coordinator of the nursing college to utilise for scheduled professional development sessions. Refer to Photo 5.6 for the list of the three learning needs that would be addressed by the Change Champions.

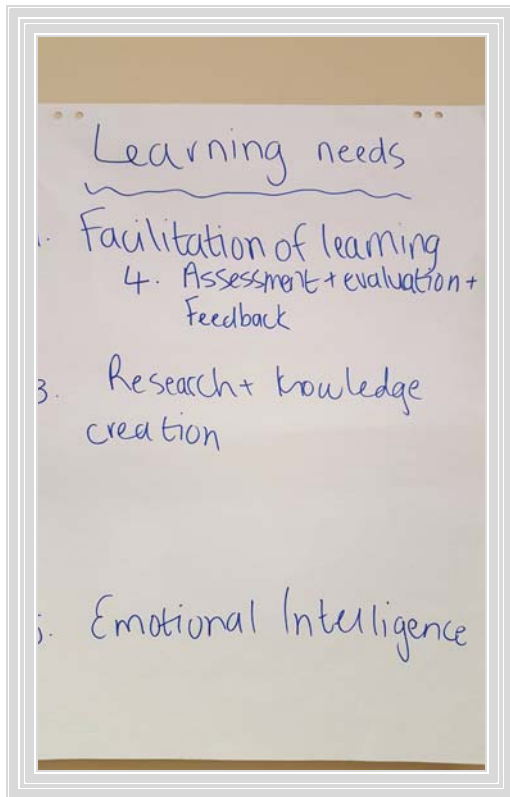


Photo 5.6 List of learning needs to be addressed by the Change Champions

5.4.2.4 Reflection

The following was reflected by the Change Champions and the researcher.

- **Change Champions**

The Change Champions were requested to reflect on the 'liked least' and 'liked most' aspects of the workshop. Table 5.6 provides an overview of the 'liked least' and 'liked most' as identified by the Change Champions.

Table 5.6 Reflection on workshop 2

LIKED LEAST	LIKED MOST	LESSONS LEARNT
<ul style="list-style-type: none"> • Air conditioning: cold. • All members could not attend due to work-related 	<ul style="list-style-type: none"> • Workshop was interesting; I was not bored. • Refreshments and gifts 	<ul style="list-style-type: none"> • Continue the feedback sessions with the management cadre and academic staff.

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LIKED LEAST	LIKED MOST	LESSONS LEARNT
responsibilities.	were appreciated. <ul style="list-style-type: none"> • Knowledge gained. • Input from all; brainstorming which helped to trigger ideas. • Venue. • Conducive atmosphere; stimulated critical thinking. • Facilitators catered for all. • Positive attitude, willingness and eagerness to participate. 	<ul style="list-style-type: none"> • Continue with communication on the WhatsApp group to remind members of meetings and workshops as well as preparation required.

- **Personal reflection**

It was my belief that the workshop was successful. Members interacted and participated actively. I was concerned that we would run out of time as this was a long session, but we managed to complete the activities on time. The workshop was well supported and the attendance was more than satisfactory. We addressed the important issues and came up with realistic plans that we could address whilst keeping in mind the clinical reasoning of the students. However, I felt I could improve my own facilitation skills. The support from the external facilitator was helpful and boosted my confidence in own capability to facilitate a workshop. I was impressed with the progress made by the Change Champion from Strategy 3: CPD and support. By the end of the workshop we had managed to identify learning needs as determined by the academic staff themselves, so if we focused on these topics we were confident that it would benefit the nursing college.

5.4.3 MONITORING AND FEEDBACK MEETINGS

Two monitoring and feedback meetings took place after workshop 2. The duration of these meetings were between one and two hours each. I kept the minutes for each meeting. The aim of these meetings was to allow members to reflect on the activities as reminders of the activities that had to be executed before the next scheduled workshop.

5.4.3.1 Monitoring and feedback meeting 1

Four Change Champions attended this meeting, held on 22 March 2016. We discussed the arrangements required for a values and beliefs clarification workshop and teambuilding exercise. Feedback was given on the meeting held with the nursing college management and the principal to keep them updated on the progress made by the ARG. It was confirmed that the list of learning needs had been submitted to the professional development coordinator as agreed by the Change Champions during workshop 2. The arrangements for workshop 3 were planned. We then turned our attention to the minutes of the previous meeting and added additional ideas or suggestions as we discussed the minutes. During workshop 3 we would provide feedback to all Change Champions and add the activities to our action plan.

5.4.3.2 Monitoring and feedback meeting 2

This meeting took place on 29 March 2016 and was attended by four Change Champions. It was confirmed that the arrangements for workshop 3 were in place. We went through the previous minutes including any ideas or suggestions as we went along to be finalised during workshop 3. It was also during this meeting that the Change Champions decided to write an article for the nursing college magazine, The Lamp.

5.4.4 SPIN-OFFS

During the second monitoring and feedback meeting, the Change Champions decided to write an article for the nursing college magazine, The Lamp. The article was compiled by the researcher and was circulated among the Change Champions for their input. The final article was submitted to the editor of the magazine for publication (Refer to Annexure C9).

Chapter 5: Action research process (Phase 2)

I gave feedback to the nursing college management on the progress of the action research group and the outcomes of workshop 2. I included the initiative to write an article for The Lamp in my feedback session. The idea of arranging a values and beliefs clarification workshop and team building exercise was supported by the management. The principal requested for the arrangements to be conducted by the social committee of the nursing college.

5.5 CYCLE 3: CO-CONSTRUCTING THE ACTION PLAN (2)

Cycle 3 consisted of workshop 3, the one monitoring and feedback meeting which took place after workshop 3, and the spin-offs from this workshop.

5.5.1 ACTION RESEARCH STEPS

Table 5.7 provides a summary of the action research steps that took place during Cycle 3.

Reminder. The steps of each action research cycle are flexible, evolving and is not sequential or rational.

Table 5.7 Cycle 3

CYCLE 3: CO-CONSTRUCTING THE ACTION PLAN (2)	
Time frame	4 April 2016 to 18 April 2016
Aim	To co-construct the action plan.
Composition	Consisted of workshop 3, one monitoring and feedback meeting which took place after workshop 3 and the spin-offs from this workshop.

Steps	PLAN	ACT	OBSERVE	REFLECT
Activities	The ARG planned the activities to be added to the action plan. The ARG planned for the values and	Members returned to their daily tasks and discussed the action research study with colleagues and friends.	The ARG observed throughout the workshop. During silent reflection and group work, the ARG was	Reflection took place during the workshop when the ARG was asked to indicate the “least liked” and “most liked”

Chapter 5: Action research process (Phase 2)

Steps	PLAN	ACT	OBSERVE	REFLECT
	<p>beliefs clarification workshop and teambuilding exercise which had been postponed.</p> <p>The ARG also planned for the next workshop.</p> <p>The ARG planned to give feedback to the management cadre on progress made.</p> <p>The ARG planned to attend the monitoring and feedback meetings.</p> <p>Plans and activities were constantly revised.</p> <p>Planned for the quality assurance workshop during which the following would be addressed:</p> <ul style="list-style-type: none"> • CPD guidelines. 	<p>Feedback was given to the academic staff and the management cadre as planned.</p> <p>Monitoring and feedback meetings took place as planned.</p> <p>Arrangements were made and in place for the next workshop.</p> <p>In-service training on unfolding case studies and clinical reasoning took place.</p> <p>Guidelines were compiled on CPD implementation.</p>	<p>required to think and reflect on the challenges presented and to look at current practices.</p> <p>ARG members also observed during the monitoring and feedback meetings that were held weekly.</p> <p>Members were asked to think about activities to address the challenges.</p> <p>We could see the positive reaction of the academic staff during the training session. It was very well received.</p>	<p>aspects of the workshop.</p> <p>Reflection also took place during the monitoring and feedback meetings. During these meetings members brainstormed ideas and reflected on current practices and how to best address the challenges.</p> <p>Reflection after the in-service training session took place. The feedback from academic staff was overwhelmingly positive.</p> <p>Nurse educators expressed their gratitude and requested similar training sessions.</p>

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Steps	PLAN	ACT	OBSERVE	REFLECT
	<ul style="list-style-type: none"> Teaching and learning strategies to promote clinical reasoning. Unfolding case studies. 			

5.5.2 WORKSHOP 3

This eight-hour workshop took place on 4 April 2016. An attendance register was circulated for members to sign. Of the 11 members, seven attended. The external facilitator was unable to attend this workshop and therefore I facilitated this workshop by myself. One member had been selected for a three-month military course and did not attend the remainder of the workshops.

5.5.2.1 Aim

The aim of this workshop was to give feedback on progress made by the Change Champions and to reflect, observe and plan/revise activities for our action plan.

5.5.2.2 Activities

All members were welcomed to the workshop. Feedback was given on the article for The Lamp (refer to Section 5.4.4) and the article was approved by all members. Each Change Champion was afforded the opportunity to provide feedback on their strategy. During this feedback session, all members could make any additions or revisions to the planned activities. Feedback was given from the monitoring and feedback meetings and the activities suggested were added to the action plan.

Chapter 5: Action research process (Phase 2)



Photo 5.7 Change Champions at work

(Photos taken and used with the permission of the participants)

The Change Champions reached consensus on additional activities (refer to Table 5.8). The additional activities were added to the action plan. Members were given time to silently reflect on the action plan. Thereafter, members worked together within their different strategies.

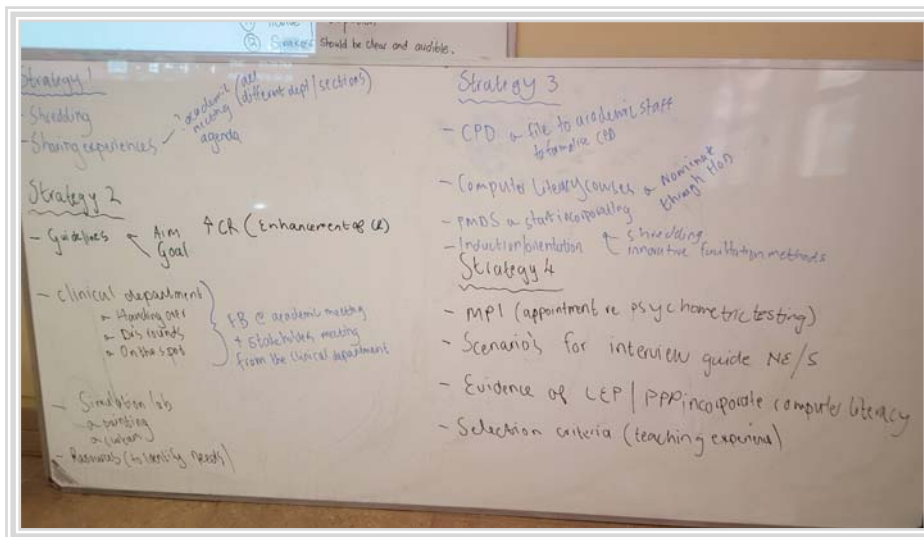


Photo 5.8 List of additional activities

5.5.2.3 Outcomes

The Change Champions identified additional activities for each strategy as shown in Table 5.8.

Table 5.8 Additional activities identified for each strategy

Strategy 1	Strategy 2	Strategy 3	Strategy 4
<p>Teaching, learning and assessment strategies</p> <p>Shredding of assessment papers – continue with the guidelines.</p> <p><i>Sharing experiences:</i> During the next academic meeting initiate the concept of sharing experiences/best practices.</p>	<p>Clinical learning environment</p> <p><i>Guidelines for the clinical department:</i> Aim and objectives. Improve clinical reasoning.</p> <p><i>Clinical department:</i> Handover ward rounds. Doctors' ward rounds. On-the-spot rounds.</p> <p><i>Simulation laboratory:</i> Revamping, painting and curtains.</p> <p><i>Resources:</i> Identify needs</p>	<p>CPD and support</p> <p><i>CPD:</i> Compile a file to formalise CPD.</p> <p><i>Computer literacy courses:</i> Nominate academic staff through their HoDs.</p> <p>Start incorporating the following in the PMDS:</p> <ul style="list-style-type: none"> • Shredding. • Innovative facilitation methods. <p>Look at the induction and orientation of nurse educators.</p>	<p>Selection of nurse educators and students</p> <p>Consult with MPI regarding psychometric testing.</p> <p>Compile scenarios for the interview guide for nurse educators and students.</p> <p>Evidence of teaching experience.</p> <ul style="list-style-type: none"> • LEP • PPP • Computer literacy. <p>Selection criteria.</p> <ul style="list-style-type: none"> • Teaching experience

5.5.2.4 Reflection

The following was reflected by the Change Champions and the researcher.

- **Change Champions**

The Change Champions were requested to reflect on the 'liked least' and 'liked most' aspects of the workshop. Table 5.9 provides an overview of the 'liked least' and 'liked most' as identified by the Change Champions.

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Table 5.9 Reflection on workshop 3

LIKED LEAST	LIKED MOST	LESSONS LEARNT
<ul style="list-style-type: none"> • None 	<ul style="list-style-type: none"> • Venue was pleasant. • Refreshments were delicious. • Knowledge gained during the workshop was 'liked most'. • Atmosphere was comfortable and encouraged teamwork. • Team spirit and the willingness and positive attitude of the members. • Facilitation of the session. • Sharing of information and ideas. 	<ul style="list-style-type: none"> • To arrange for the same venue for the next workshop. • Continue the feedback sessions with the management cadre and academic staff. • Continue with communication on the WhatsApp group to remind members of meetings and workshops as well as preparation required.

- ***Personal reflection***

My supervisor and co-supervisor was unable to attend so I facilitated the workshop by myself. Initially, I felt a little nervous but as we progressed I became more self-confident. The action plan was evolving satisfactorily and was advancing after each workshop. I could detect how the activities and brainstorming of ideas were improving. Although some members were participating more than others, that was expected because I know some individuals are by nature more reticent than others. I was satisfied because I felt the workshop went well. Members' interaction and participation was increasing with every workshop. Attendance was not as high as I had anticipated; however, I gradually realised the smaller, more intimate group binned and worked together well which aided to the process of consensus and discussion. We addressed the important issues and came up with realistic plans we could address whilst keeping in mind the clinical reasoning of the students. All members were respectful towards each other and gave valid feedback. Interestingly, members seemed to feel more at ease to share and their honesty, although surprising, I

appreciated. As for myself, I felt more comfortable this time around but knew I could still better my facilitation skills.

5.5.3 MONITORING AND FEEDBACK MEETINGS

We were only able to meet once due to the Easter holidays. Most members were on vacation leave during this period. An attendance register and minutes were kept by myself for the one meeting held.

5.5.3.1 Monitoring and feedback meeting 1

The meeting was held on 14 April 2016 and five Change Champions attended. We had to rearrange the values and beliefs clarification workshop and team building due to a flag hoisting parade. Plans were made for workshop 4. We went through the previous minutes including and revising any ideas or suggestions as we went along which would be finalised during workshop 4. All members were also reminded of the planned quality assurance workshop scheduled for 18 April 2016.

5.5.4 SPIN-OFFS

A scheduled quality assurance workshop with all academic staff was held on 18 April 2016. An attendance register was kept. The workshop started by providing feedback on the action research project and progress made. The guidelines for CPD implementation was then finalised. The Change Champion went through the guidelines and members asked questions for clarification purposes. She handed out a file to each member to keep as a portfolio of evidence (PoE).

Thereafter, I presented clinical reasoning. Randomly, I just started with the member to my left and clockwise asked each member what they thought clinical reasoning was and whether it could be taught. Members just gave verbal answers, no documentation was kept. I then showed a video about a mother who had lost her healthy 15-year-old son due to nurses' lack of thinking, clinical reasoning and ability to challenge the medical practitioners. Afterwards we had a discussion on how making use of similar videos could be utilised as teaching aids for teaching and learning strategies.

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Linking it to clinical reasoning, another Change Champion gave a presentation on unfolding case studies. He had drafted examples on how it could be used to guide the students to think and reason. He gave each member a handout and used PowerPoint slides. Members then had time to debate on the benefits and possibility of using unfolding case studies in their teaching.

The workshop was closed by challenging members as follows:

- Nurse educators were challenged to utilise at least one of these teaching and learning strategies during the next theoretical block and increase their use of student-centred strategies gradually.
- All HoDs were challenged to provide feedback to the nurse educators regarding the content of the workshop as a reminder of the commitment made and to also provide feedback to nurse educators who were unable to attend.
- All nurse educators were challenged to share initiatives/achievements/best practices during the academic meeting.
- The idea or suggestion was also considered to arrange a team building exercise to paint the simulation laboratory and fix the available curtains; hence, utilising available resources.

5.6 CYCLE 4: FINALISING THE ACTION PLAN

Cycle 4 consisted of workshops 4 and 5, the two monitoring and feedback meetings which took place after workshop 4, and the spin-offs that occurred after workshop 5.

5.6.1 ACTION RESEARCH STEPS

Table 5.10 provides a summary of the action research steps that took place during Cycle 4.

Reminder. The steps of each action research cycle are flexible, evolving and is not sequential or rational.

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Table 5.10 Cycle 4

CYCLE 4: FINALISING THE ACTION PLAN	
Timeframe	25 April 2016 to 4 July 2016
Aim	To finalise and approve the action plan.
Composition	Workshop 4 and 5; the two monitoring and feedback meetings following workshop 4, and the spin-offs that occurred after workshop 5 all formed part of Cycle 4.

Steps	PLAN	ACT	OBSERVE	REFLECT
Activities	<p>Monitoring and feedback meetings were planned.</p> <p>The ward round was planned.</p> <p>The in-service training on inquiry-based teaching was planned.</p> <p>Planning of the draft action plan.</p>	<p>Monitoring and feedback meetings took place as planned.</p> <p>The ward round took place as planned.</p> <p>In-service training on inquiry-based teaching took place as planned.</p> <p>The draft action plan was distributed as planned.</p>	<p>The ARG observed throughout the two workshops. During silent reflection and group work the ARG was required to think about the challenges presented, look at current practices and identify activities.</p> <p>ARG members also observed during the monitoring and feedback meetings which were held weekly.</p> <p>Members were asked to look at the draft action plan and provide input.</p>	<p>Reflection took place during the workshop when the ARG was asked to indicate the “liked least” and “liked most” aspects of the workshop.</p> <p>Reflection also took place during the monitoring and feedback meetings. During these meetings members brainstormed ideas and reflected on current practices and how best to address the challenges.</p> <p>Reflection after the professional development sessions took</p>

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Steps	PLAN	ACT	OBSERVE	REFLECT
			<p>We could see the positive reaction of the academic staff during the training sessions. It was well received and appreciated.</p>	<p>place. The feedback from the academic staff was overwhelmingly positive. Nurse educators expressed their gratitude and requested similar training sessions.</p>

5.6.2 WORKSHOP 4

This eight-hour workshop took place on 25 April 2016. An attendance register was kept. Of the 11 members seven attended. My co-supervisor was the facilitator during this workshop and it was attended by my supervisor, Dr Ronell Leech.

5.6.2.1 Aim

The aim of this workshop was twofold. Firstly, to introduce a team building exercise and, secondly, to provide feedback on the four strategies and adapt the action plan.

5.6.2.2 Activities

All members were welcomed to the workshop. The facilitator, my co-supervisor began the workshop by showing a video clip on creating workplace culture. Thereafter, each member was requested to silently reflect on the 'I feel', 'I imagine' and 'I hear' in relation to the video clip. Each member, including my supervisor and co-supervisor, was given an opportunity to share their thoughts and their reflections with the entire group. All members were then requested to give feedback or input which they all did.

The Change Champions agreed on some additional activities to be added to the action plan (refer to Table 5.11). The Change Champions planned to finalise the action plan during

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workshop 5. I was requested and agreed to compile the draft action plan and to include all the activities we had agreed on during the past four workshops as well as the monitoring and feedback meetings. I undertook to make sure each member would receive a copy in time for everybody to peruse the plan, make amendments and finalise the activities before the next scheduled workshop.

The way forward was discussed and consensus reached on the following dates:

- Values and belief clarification with all academic staff was planned for 20 May 2016.
- At the next feedback and monitoring meeting on 5 May 2016 the draft action plan would be ready and copies would be handed out for input.
- The next workshop was scheduled for 23 May 2016 during which the action plan would be finalised and approved. My supervisor, Dr Ronell Leech, would facilitate a team building exercise with the Change Champions.
- The last workshop was scheduled for 4 July to evaluate the project.



Photo 5.9 Change Champions at work

(Photos taken with the permission of the participants)

5.6.2.3 Outcome

The Change Champions identified the following additional activities for each strategy:

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Table 5.11 Additional activities identified for each strategy

Strategy 1	Strategy 2	Strategy 3	Strategy 4
Teaching, learning and assessment strategies	Clinical learning environment	CPD and support	Selection of nurse educators and students
To arrange the workshop on appreciative feedback.	Initiate the implementation of clinical conferences. Investigate the possibility of a journal club.	Computer course was arranged and two members would be attending. <i>Induction and orientation:</i> To compile a tick sheet and revise the current SWP.	To work on a video clip to introduce military nursing to prospective candidates.

5.6.2.4 Reflection

The following was reflected by the Change Champions and the researcher.

- **Change Champions**

The Change Champions were requested to reflect on the 'liked least' and 'liked most' aspects of the workshop. Table 5.11 provides an overview of the 'liked least' and 'liked most' as identified by the Change Champions.

Table 5.12 Reflection on workshop 4

LIKED LEAST	LIKED MOST	LESSONS LEARNT
<ul style="list-style-type: none"> • Noise of the air conditioning. • Sound quality of the video clip was poor. 	<ul style="list-style-type: none"> • Knowledge gained was perceived as the 'liked most'. • Atmosphere was conducive for sharing, team work and learning. • Team spirit of all members was very 	<ul style="list-style-type: none"> • To arrange for a technician for the smart board and the sound bar. • Continue the feedback sessions with the management cadre and academic staff. • Continue with

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LIKED LEAST	LIKED MOST	LESSONS LEARNT
	<p>positive.</p> <ul style="list-style-type: none"> • Willingness and positive attitude. 	<p>communication on the WhatsApp group to remind members of meetings and workshops as well as preparation required.</p>

- **Personal reflection**

I felt the workshop was a huge success. Members actively interacted and participated with great enthusiasm. The exercise was an excellent beginning to the workshop. It was motivational and inspiring. I could see the action plan was near to being finalised and was excited about it. With each workshop, we had been deliberating on less and less issues. Additions to and revision of the activities also became lesser with every workshop. This illustrated to me and all members how the action plan had evolved over the course of the project. I was almost certain that we would manage to finalise and approve the action plan during the last workshop left.

5.6.3 MONITORING AND FEEDBACK MEETINGS

Two monitoring and feedback meetings took place after workshop 4, these two meetings took place two weeks apart. The duration of these meetings were between one and 2 hours. As usual, I kept the minutes for each meeting. The aim of these meetings was to allow members to reflect on the activities and be reminded of the activities to be executed before the next scheduled workshop.

5.6.3.1 Monitoring and feedback meeting 1

The meeting was held on 5 May 2016 and six Change Champions attended. Plans were made for the values and beliefs clarification workshop and team building exercise. Arrangements were also made for workshop 5. We went through the previous minutes including and revising any ideas or suggestions as we went along. These would be finalised

during workshop 5. No meeting was held with the nursing college management due to the postponement of the management cadre meeting.

5.6.3.2 Monitoring and feedback meeting 2

The meeting was held on 19 May 2016 and six Change Champions attended. The values and beliefs clarification workshop and team building exercise had to be postponed due to a last-minute meeting that the principal was expected to attend. Plans were finalised for workshop 5. As we proceeded working on the minutes of the previous meeting we included and revised additional ideas or suggestions that arose. These would be finalised during workshop 5. A cover page for the action plan, consisting of a collage of all the photos taken during the workshops was proposed. The members were extremely excited and it was agreed to finalise the decision during workshop 5. A copy of the first draft action plan (refer to Annexure D1 for the firstdraft including the Change Champions input) was handed out to all members one week before the next scheduled workshop. The Change Champions were requested to peruse the action plan, make notes on the document and present input, changes and suggestions at the next workshop.

5.6.4 WORKSHOP 5

This eight-hour workshop was also part of Cycle 4 and took place on 23 May 2016. An attendance register was kept. Of the 11 members eight attended. Both the supervisor and co-supervisor also attended the workshop.

5.6.4.1 Aim

The aim of this workshop was to finalise and approve the action plan as well as to introduce some team building exercises which could also be used by the members with their students or colleagues.

5.6.4.2 Activities

All members were welcomed to workshop 5. The aim of the final workshop was to finalise the action plan. My supervisor, Dr Ronell Leech, began the workshop with a team building exercise, the square puzzle exercise. Thereafter, the Change Champions reflected on the exercise. Members showed their enthusiasm and excitement throughout the exercise which was well received and facilitated. My co-supervisor, Dr Isabel Coetzee, then facilitated a short 'get to know each other better exercise'. All the exercises demonstrated throughout the day can be used with students and nurse educators. This formed part of the professional development of the nurse educators. It was fulfilling to experience the positive energy and be part of the stimulating and interesting debates and discussions that the exercises elicited in us all.



Photo 5.10 Change Champions at work

(Photos taken with the permission of the participants)

Next, the Change Champions were given the opportunity for silent reflection on the action plan which had been handed out to each a week before the workshop. After silent reflection, the ARG was requested to work in their different strategy groups and share their suggestions for input on the action plan. Feedback was given per strategy and these were reflected on flip charts. We continued to suggest changes, make changes and suggest and make corrections until the Change Champions indicated their satisfaction with the final product. This exercise took us about 3 hours to finalise.

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The Change Champions agreed to continue with the plans discussed (refer to Section 5.6.3.2) to develop a collage of all the photos taken during the action research process and utilise the collage as a cover page for the action plan. A Change Champion volunteered to arrange for a photographer to take photos of all the members during workshop 6 as well as to develop the cover page as agreed by all Change Champions (Refer to Annexure D3 for the final cover page).

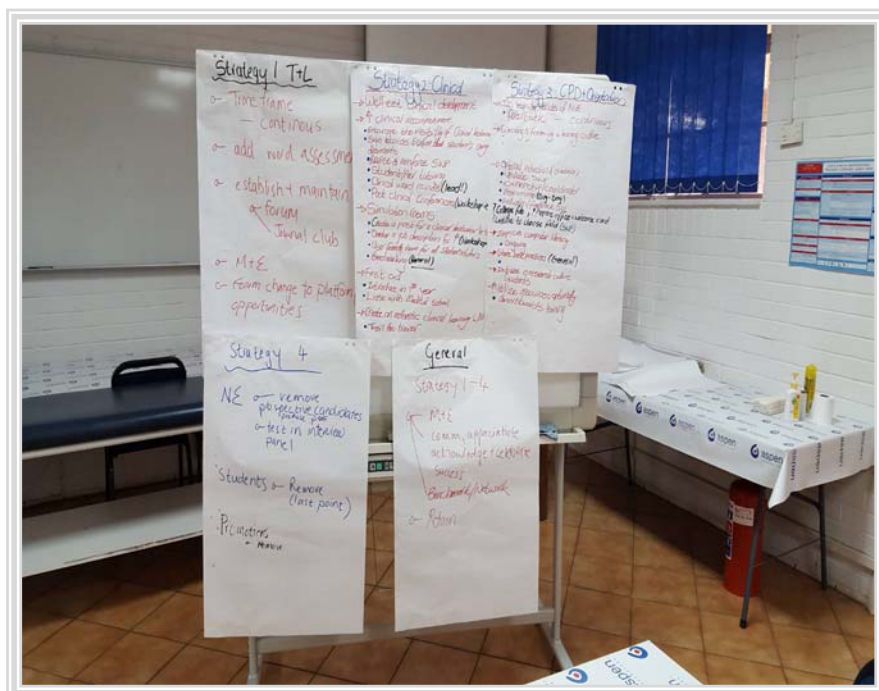


Photo 5.11 Input for the action plan

5.6.4.3 Outcome

The outcome of this workshop was the co-constructed action plan (refer to Table 5.13). Both my supervisor and co-supervisor gave input and suggestions; these were considered and discussed among all and were included in the action plan (refer to Annexure D2). The proposed action plan was then distributed to all the Change Champions as well as the supervisor and co-supervisor for their approval. During Workshop 6: The World Café, all the Change Champions gave their final approval. All Change Champions expressed their satisfaction with the final action plan. The supervisors made minor changes which were corrected. View Table 5.13 for the final, approved action plan.

Table 5.13 An action plan to improve educational practices

AN ACTION PLAN TO IMPROVE EDUCATIONAL PRACTICES				
Strategy 1: Teaching, learning and assessment strategies				
Goal	Objectives	Actions	Time frame	
			Short term (0 – 6 months)	Long term (6 – 12 months)
Quality educational practices	Facilitation of student-centred teaching and learning practices	Professional development of nurse educators pertaining to the following: <ul style="list-style-type: none"> ○ Facilitation skills ○ Student-centred teaching and learning practices ○ Compiling and utilising unfolding case studies ○ Inquiry-based teaching and learning practices ○ Interactive boards as a facilitation tool ○ Creativity workshops to stimulate creative and critical thinking 		√
		Compile guidelines for nurse educators on teaching and learning practices that develop critical thinking and clinical reasoning.		√
		Utilise resources optimally: <ul style="list-style-type: none"> ○ Encourage the creative use of available resources ○ Provide training and continuous support on the following: <ul style="list-style-type: none"> ➤ interactive smart boards, and ➤ advanced simulation equipment for facilitation purposes ○ Utilise manikins and simulation equipment in the classrooms 	√	
		Incorporate the clinical reasoning cycle in the curriculum from the first year onwards and adapt it according to the cognitive level of the students.		√

Strategy 1: Teaching, learning and assessment strategies (continue)

Goal	Objectives	Actions	Time frame	
			Short term (0– 6 months)	Long term (6 – 12 months)
Quality educational practices	Incorporate innovative assessment and feedback practices	Nursing college management to provide continuous guidance and support to nurse educators.	√	
		Monitor and evaluate the implementation of student-centred teaching and learning practices.	√	
		Professional development of nurse educators pertaining to the following: <ul style="list-style-type: none"> ○ Innovative assessment and feedback practices <ul style="list-style-type: none"> ➤ Case studies/scenarios ➤ Portfolios/assignments based on real cases ○ Unfolding case studies as an assessment strategy ○ Appreciative feedback 	√	
		Compile guidelines for nurse educators on innovative assessment and feedback practices that measure critical thinking and clinical reasoning skills.		√
		Utilise resources optimally: <ul style="list-style-type: none"> ○ Encourage the creative use of available resources ○ Provide training and continuous support on the following: <ul style="list-style-type: none"> ➤ interactive smart boards and ➤ advanced simulation equipment for assessment purposes 	√	
		Nursing college management to provide continuous guidance and support to nurse educators.	√	
		Monitor and evaluate the implementation of innovative assessment and feedback practices.	√	

Strategy 1: Teaching, learning and assessment strategies (continue)

Goal	Objectives	Actions	Time frame	
			Short term (0– 6 months)	Long term (6 – 12 months)
Quality educational practices	Inspire reflective conversations	Establish and maintain platforms/opportunities for nurse educators to share achievements, experiences and best educational practices.	√	
		Establish journal clubs to encourage evidence-based practices and conversations.	√	
		Encourage benchmarking and networking with other nursing education institutions to inspire conversation and sharing of experiences.	√	
		Communicate, appreciate, acknowledge and celebrate successes.	√	√

Strategy 2: Clinical learning environment

Goal	Objectives	Actions	Time frame	
			Short term (0 – 6 months)	Long term (6 – 12 months)
Promote a conducive clinical learning environment	Effective clinical department	Establish a clinical department: <ul style="list-style-type: none"> ○ Involve all role-players in the establishment of the department to ensure buy-in and cooperation ○ Develop a mission statement and aim for the department ○ Compile guidelines on the running of the department 		√
		Utilise resources optimally: <ul style="list-style-type: none"> ○ Ensure adequate staffing of the clinical department ○ Compile job descriptions applicable to clinical educators 	√	
	Enhance clinical accompaniment	Professional development of nurse educators pertaining to the following: <ul style="list-style-type: none"> ○ Clinical accompaniment of students ○ Mentorship and preceptorship ○ Peer coaching 	√	
		Revise the standard working procedure on clinical accompaniment including the following: <ul style="list-style-type: none"> ○ Structured clinical accompaniment plan and programme ○ Monitoring and evaluation system for the clinical accompaniment of students ○ Peer coaching 	√	

Strategy 2: Clinical learning environment (continue)

Goal	Objectives	Actions	Time frame	
			Short term (0 – 6 months)	Long term (6 – 12 months)
Promote a conducive clinical learning environment		Utilise resources optimally: <ul style="list-style-type: none"> ○ Encourage the creative use of available resources ○ Ensure adequate clinical nurse educators and preceptors 	√	
		Monitor and evaluate the implementation of the standard working procedure.	√	
	Facilitation of student-centred teaching, learning and assessment practices	Professional development of nurse educators pertaining to the following teaching and learning practices: <ul style="list-style-type: none"> ○ Clinical ward rounds ○ Clinical post-conferences 	√	
		Reintroduce clinical ward rounds and clinical post-conferences as teaching and learning practices.	√	
	Efficient simulation laboratory	Initiate a project to upgrade the simulation laboratory.		√
		Utilise resources optimally: <ul style="list-style-type: none"> ○ Encourage the creative use of available resources ○ Ensure that necessary equipment and resources are available ○ Provide adequate staffing of the simulation laboratory 	√	
		Extend the availability and accessibility of the simulation laboratory to allow students opportunities to practise their clinical skills.	√	

Strategy 2: Clinical learning environment (continue)

Goal	Objectives	Actions	Time frame	
			Short term (0 – 6 months)	Long term (6 – 12 months)
Promote a conducive clinical learning environment		Professional development of nurse educators pertaining to the following: <ul style="list-style-type: none"> ○ How to utilise simulation to develop students' clinical reasoning skills ○ Manikins and simulation equipment ○ Interactive boards 	√	
		Create an authentic clinical learning environment in simulation.		√
		Encourage benchmarking and networking with other nursing education institutions.	√	
	Improve collaboration with clinical facilities	Initiate collaboration with stakeholders in the clinical learning environment.	√	
		Host quarterly clinical meetings with clinical facilities.	√	√
		Encourage teamwork and collaboration between theoretical and clinical educators.	√	√
		Ensure availability of clinical learning outcomes to all clinical facilities.	√	

Strategy 3: Continuous professional development (CPD) and support

Goal	Objectives	Actions	Time frame	
			Short term (0 – 6 months)	Long term (6 – 12 months)
Create workplace culture that supports CPD	Identify learning needs of nurse educators	Conduct a skills audit to identify learning needs.	√	
		Analyse the learning needs according to the findings.	√	
		Provide in-service training, training, workshops and professional development on the identified needs.	√	
	Create and foster a learning culture	Professional development of nurse educators pertaining to the following: <ul style="list-style-type: none"> ○ CPD and the accumulation of CPD points ○ Provide continuous guidance and support 	√	
		Compile guidelines on CPD points.	√	
		Compile a CPD file for each nurse educator with the following: <ul style="list-style-type: none"> ○ Index, CPD booklet and guidelines 	√	
		Implement CPD points.	√	
		Provide opportunities for nurse educators to accumulate CPD points.	√	
		Encourage membership of Nursing Education Association (NEA) and Sigma Theta Tau International (STTI), the Honour Society for Nursing.	√	
		Link CPD to the performance management and development system (PMDS).	√	
		Improve computer literacy	Identify and nominate members to attend courses to improve computer skills.	√
	Arrange computer training annually.		√	
	Evaluate the effectiveness of the training.		√	
	Ensure that new members are nominated to attend as soon as possible.		√	

Strategy 3: Continuous professional development and support (continue)

Goal	Objectives	Actions	Time frame	
			Short term (0 – 6 months)	Long term (6 – 12 months)
	Initiate and maintain a research culture	Establish journal clubs.	√	
		Encourage members to join Nursing Education Association (NEA) novice initiatives.	√	
		Encourage attendance of other nursing education institutions' research days and host own research days.	√	
		Encourage a research culture among nurse educators and students.	√	

Strategy 4: Selection of nurse educators and students

Goal	Objectives	Actions	Time frame	
			Short term (0 – 6 months)	Long term (6 – 12 months)
Recruit quality nurse educators and students	Recruit nurse educators	Assess and revise current recruitment practices.		√
		Develop effective recruitment material: <ul style="list-style-type: none"> ○ Create an information booklet for prospective candidates ○ Create a nursing college website 		√
		Recruit from within the military (internal sources).	√	
	Select nurse educators	Assess and revise the current selection practices.		√
		Compile guidelines on the entire selection process.		√
		Create a video clip to provide candidates with information on the nursing college as well as military expectations.		√
		Revise the interview guide: <ul style="list-style-type: none"> ○ Include simulation questions and ask behavioural questions which require the candidate to give specific job-related examples of their experience and knowledge ○ Focus on nurse educator qualities 		√
		Involve nurse educators, head of departments and managers in the interview committee.		√
		Professional development of nurse educators pertaining to: <ul style="list-style-type: none"> ○ The selection process and interviewing skills 		√
		Monitor and evaluate the selection process.		√

Strategy 4: Selection of nurse educators and students (continue)

Goal	Objectives	Actions	Time frame	
			Short term (0 – 6 months)	Long term (6 – 12 months)
Recruit quality nurse educators and students	Promote the professional socialisation of nurse educators	Revise the standard working procedure on the professional socialisation of newly appointed nurse educators including the following: <ul style="list-style-type: none"> o Induction and orientation programme o Include military aspects 		√
		Identify a responsible person/process owner to facilitate the process.		√
		Monitor and evaluate the professional socialisation of nurse educators.		√
	Retain nurse educators	Conduct values and beliefs clarification workshops to encourage teamwork.	√	
		Arrange team building workshops biannually.	√	
		Create opportunities for social interaction.	√	
		Acknowledge educators' achievements and appreciate good initiatives.	√	
		Encourage and support further studies.	√	
		Enhance professional development opportunities.	√	
		Provide continuous guidance and support.	√	
	Recruit students	Develop effective recruitment material: <ul style="list-style-type: none"> o Create recruitment pamphlets and create a nursing college website 		√
		Visit schools and distribute recruitment material.		√
		Initiate a scholar programme at 1 Military Hospital.		√
Conduct surveys with current students to assess and revise current selection processes and implement improvement strategies.			√	

Strategy 4: Selection of nurse educators and students (continue)

Goal	Objectives	Actions	Time frame	
			Short term (0 – 6 months)	Long term (6 – 12 months)
	Select students	Revise the interview guide: <ul style="list-style-type: none"> ○ Include simulation questions and ask behavioural questions which require the candidate to give specific job-related examples of their experience and interest in nursing. ○ Include empathy, emotional intelligence testing and ethical judgement questions. 		√

5.6.4.4 Reflection

The following was reflected by the Change Champions and the researcher.

- **Change Champions**

The Change Champions were requested to reflect on the 'liked least' and 'liked most' aspects of the workshop. Table 5.13 provides an overview of the 'liked least' and 'liked most' as identified by the Change Champions.



Photo 5.12 Change Champions' reflection

Table 5.14 Reflection on workshop 5

LIKED LEAST	LIKED MOST	LESSONS LEARNT
<ul style="list-style-type: none"> • Environment: cold • Lack of breaks • Technology 	<ul style="list-style-type: none"> • Activities • Positive participation • Constructive positive criticism illustrating the maturity of participants 	<ul style="list-style-type: none"> • Exercises like those illustrated by the supervisors provide opportunities to get to know our colleagues

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LIKED LEAST	LIKED MOST	LESSONS LEARNT
	<ul style="list-style-type: none"> • Team work • Enjoyed squares exercise • Contribution and participation • Evolving action plan • Refreshments 	<p>better and should be encouraged to be used frequently.</p>

- **Personal reflection**

My interpretation was that the workshop was very well received and extremely successful. Members interacted and participated zealously during the workshop and I attributed it to the fact that we were finally at the point where our hard work and dedication to the project were about to bring forth success. I became more positive as I witnessed the progress made with every workshop. By taking the decisive step to actually develop the action plan, the development thereof over time had taken me as well as the nurse educators on a personal journey of self-discovery and self-growth. On a professional level I could feel and see how the ARG members, including myself, became more empowered as our knowledge expanded and learning increased. I believe we all knew we were indeed 'Champions of Change' who in some way contributed positively to help nurse educators to teach student nurses how to reason clinically. It was clear that although working hard, the Change Champions had great fun with the exercises and it convinced me that we should introduce and use such exercises more often among ourselves as well as with the students.

5.6.5 SPIN-OFFS

A clinical ward round was facilitated by my co-supervisor at 1 Military Hospital on 13 June 2016. She demonstrated how students and nurse educators could use the ward round as a teaching and learning strategy. She engaged the students throughout the session. The ward round was attended by four nurse educators, two HoDs and nine students as well as members of quality assurance department of the hospital. This session was experienced by the students and the nurse educators as meaningful and valuable. They indicated their satisfaction with the demonstration and indicated that it must be implemented regularly and

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used as a teaching and learning strategy. One student said, “I only realised today how blood pressure controls it all”.

A professional development session was presented on 24 June 2016 by my co-supervisor on inquiry base teaching and appreciative feedback. Again, the session was well received and successful. Nurse educators shared their gratitude during the presentation and also afterwards. Members were interested and actively participated in the discussions and asked many relevant questions. My co-supervisor illustrated how nurse educators could gradually incorporate these strategies into their current PowerPoint presentations but stressed the importance of not giving the students the answers.

5.7 SUMMARY OF THE ACTION RESEARCH PROCESS

The workshops, the monitoring and feedback meetings as well as the spin-offs for this study are summarised in Table 5.15. The times the researcher spent with the Change Champions is also indicated. At the end, the Change Champions had succeeded, by means of four action research cycles, to co-construct an action plan which can be utilised and implemented to improve educational practices in order to promote student nurses’ clinical reasoning skills.

Table 5.15 Time engaged with the action research process

NO	ACTIVITY	DATE	HOURS
1	Launch of the AR study	29 June 2015	2
2	Workshop 1: Launch of the AR process	25 January 2016	8
2.1	Monitoring and feedback meeting 1	1 February 2016	2
2.2	Monitoring and feedback meeting 2	8 February 2016	2
2.3	Monitoring and feedback meeting 3	15 February 2016	2
2.4	Quality Assurance Workshop	22 February 2016	6
3	Workshop 2: Co-constructed action plan	7 March 2016	8
3.1	Monitoring and feedback meeting 1	22 March 2016	2
3.2	Monitoring and feedback meeting 2	29 March 2016	2
4	Workshop 3: Co-constructed action plan	4 April 2016	8
4.1	Monitoring & feedback meeting 1	14 April 2016	2

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NO	ACTIVITY	DATE	HOURS
4.2	Quality Assurance Workshop	18 April 2016	6
5	Workshop 4: Co-constructed action plan	25 April 2016	8
5.1	Monitoring and feedback meeting 1	5 May 2016	2
5.2	Monitoring and feedback meeting 2	19 May 2016	2
6	Workshop 5: Co-constructed action plan	23 May 2016	8
6.1	Clinical ward round	13 June 2016	4
6.2	In-service training	24 June 2016	4
7	Workshop 6: World Café	4 July 2016	6
TOTAL			84

5.8 CONCLUSION

In this chapter Phase 2 of the study was described which explained the action research process. The four cycles, five workshops and their monitoring and feedback meetings were discussed in detail as well as the outcomes reached for each workshop. In Chapter 6 Phase 3 of the study which focuses on the evaluation of the action research process is discussed and presented.

6: EVALUATION OF ACTION RESEARCH PROCESS (PHASE 3)

“There is nothing more powerful than a community engaged in conversation
in relation to what it cares about.”

-Juanita Brown-

6.1 INTRODUCTION

Chapter 5 provided a detailed description of the action research process which consisted of the four cycles that was implemented to co-construct an action plan. Chapter 6 is dedicated to Phase 3 of the study and an evaluation of the action research process is presented. The World Café approach was used to evaluate the worth of the action research journey. The World Café approach, the preparation, implementation, harvesting of information as well as the data analysis are discussed.

6.2 PARTICIPANTS

The action research group (ARG) members (the Change Champions) were invited to attend the World Café (refer to Annexure E1 for the invitation). In total, 10 members were invited. Of these, eight members (this included the researcher) attended. The researcher had a voice and participated in the evaluation of the action research process.

6.3 DATA COLLECTION

The action research process was evaluated by means of the World Café data collection method.

6.3.1 THE WORLD CAFÉ

According to Farr (2013:para. 2) the World Café approach was first developed in the early 1990s by Juanita Brown (Brown and Isaacs 2004 cited in Farr 2013:para. 2) and has become popular as a data collection method (Partridge 2015:para. 2). Juanita Brown used the World Café method in different settings and was able to develop a resource guide providing information on how to plan and implement the method (Farr 2013:para. 2). The World Café is explained by several authors as “an innovative approach to facilitate large group conversations around a topic of mutual interest with the intention of collecting knowledge and information through discussion, conversations and shared listening” (Farr 2013:para. 2; Partridge 2015:para. 2). Expounding on this unique concept, Preller, Affolderbach, Schulz, Fastenrath and Braun (2014:6) who cited from *The World Café* (2016) indicate that David Isaacs was a co-founder of the World Café and explain it consists of groups of participants that engage in conversations that are unrestrained and interactive. According to Brown and Isaacs (2005:3-4), David Isaacs was the co-founder of the World Café. In their book, *The World-Café: shaping our futures through conversations that matter*, Brown and Isaacs describe in a story telling manner how they happened to stumble upon this innovative approach of sharing ideas.

The name ‘World Café’ is used to “invoke the metaphor of the world being a café – a place to discuss challenging topics where it is safe to voice your opinion and listen to others.” (Necochea and Cline 2008 cited in Partridge 2015:para. 6). The aroma of coffee, soothing music and café styled table settings is purposefully created to enhance the capacity to “dialogue” in a relaxed and familiar environment (Fouché and Light 2010:7). To arouse images of a café, tables often have checked tablecloths covered with large pieces of paper to allow for drawing or writing and vases with flowers. A centrepiece is sometimes used to enhance a café ambiance (Bradbury 2015:214). The World Café is “a simple yet powerful conversational process that helps groups of all sizes to engage in constructive dialogue, to build personal relationships, and to foster collaborative learning” (Tan and Brown (2005:83). According to Fouché and Light (2010:7), for those who participate in the World Café it offers a conversational process that enables them to engage in constructive dialogue around specific and critical questions.

Chapter 6: Evaluation of the Action Research Process (Phase 3)

The researcher selected the World Café approach because of its reported reputation as being consistent with forms of action research. The World Café relies on an appreciation of local knowledge and engagement with co-researchers (Bradbury 2015:212). Contributions from all connected groups and individuals are encouraged; consequently, diverse ideas and knowledge are shared globally (Farr 2013:para. 3). The World Café is participative because participants are invited to take ownership; to participate in making meaning of the questions which form the basis of the World Café. It is a form of meeting, of collaborative inquiry that can serve as a rich resource for action research which is in essence a participatory worldview (Bradbury 2015:212). Allowing the participants to have conversations with each other in a relaxed atmosphere encourages openness and honesty in evaluating the true worth of the action research study. The World Café is an ideal setting as it makes provision for participants to work in a relaxed, social-like atmosphere in a non-judgemental, safe and conversational environment in which the participants can feel comfortable (Partridge 2015:para. 10).

In the World Café approach, four to five participants sit across a table, facing each other so that all can participate equally in the conversation process (World Café 2008 cited in Preller, et al. 2014:6). According to Brown and Isaacs (2005 cited in Partridge 2015:paras 14-16), one of the participants is a fixed “table host” who remains at the same table throughout all the conversation processes. Brown and Isaacs (2005) further suggest the ideal is that the mixing of participants consists of only three conversation rounds of 20 minutes each. The host’s role is to “retain and share the content of each conversational round” with every new group that arrives at his or her table (Preller, et al. 2014:7). Simply put, the World Café approach can be described as a kind of round robin approach except that the members in a group do not literally share knowledge or ideas in turn against each other, but in turn against the same table hosts who accumulate, retain and share what transpires.

Seated at their different tables, all the participants are then invited to discuss the same specific question for about 20 minutes after which they are requested to move to the next table “progressing through several conversation rounds with additional questions” (World Café 2008 cited by Preller, et al. 2014:7). This process ensures participants are given the opportunity to share and express their ideas, suggestions and views with the wider café group. “Each table move ensures that participants are with a new group of people so each round should enable deeper explorations of the questions and raise new questions.”

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(Partridge 2015:para. 16). At the end of the three table rounds, the host of each table gives feedback of the findings to the whole World Café group (Brown and Isaacs 2005 cited in Partridge 2015:para. 17). This provides an opportunity for debate and further understanding amongst all participants resulting in the development of knowledge.

6.3.2 WORLD CAFÉ PRINCIPLES

The World Café is designed on the following seven integrated principles (Fouché and Light 2010:8; Gilson 2015:68; World Café 2016;).

6.3.2.1 Set the context

The café host (the researcher) must consider the reason for bringing the participants together, and what needs to be achieved. The host must create the purpose and limits of the meeting, for example, who should be part of the conversation, what themes or questions will be most relevant (Fouche and Light 2010:8; World Café 2016). The researcher used the World Café approach to evaluate the action research study. The researcher, her supervisor and co-supervisor were the hosts at the two tables.

6.3.2.2 Create hospitable space

It is important to create an inviting, safe and welcoming environment. In the hope that when participants feel comfortable they are able to be themselves, and their best creative thinking, speaking, and listening abilities come to the fore. The researcher created a creative invitation (refer to Appendix E1) and the physical set-up was arranged to contribute to creating a welcoming and relaxed café atmosphere (Fouche and Light 2010:8; World Café 2016).

6.3.2.3 Explore questions that matter

If the questions that are asked are compelling enough and attract the attention and interest of the participants, they will share their knowledge by having meaningful conversations (Fouche and Light 2010:8; World Café 2016). To encourage creativity and in-depth conversations around the issue at hand the questions that are formulated must be open-ended, well

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thought out and intentional, (Gilson 2015:68). The researcher formulated questions that were relevant to the action research group. The following two questions were explored:

- What was the 'worth' of the action research process, personally and professionally?
- How did the action research process change your educational practices?

6.3.2.4 Encourage everyone's contribution

Most people do not only want to participate, they actively want to contribute towards making a difference. The host therefore needs to invite full participation by respecting each participant's unique contribution. The host must encourage everyone to contribute their ideas and perspectives. This is done by allowing everyone who wants to voice an opinion, share an idea or contribute towards the topic to do so and by attentively listening to him or her (Fouche and Light 2010:8; World Café 2016). At the start of the World Café approach, the researcher began with welcoming the participants in a warm and friendly way. She then introduced the process, set the context and explained the ground rules ('café etiquette') (Farr 2013:para. 8; World Café 2016). The groups comprised of two groups of four participants that rotated between tables with a fixed host. The small groups contributed to participants having equal opportunity to be part of the conversations.

The following three ground rules ('café etiquette') were accepted by the participants.

- All participants have the right to express an opinion
- Listen to each other
- Share information

6.3.2.5 Cross-pollinate and connect diverse perspectives

The host must facilitate conversational rounds and ask participants to change tables between rounds; this allows for cross-pollination and the sharing of ideas which could lead to

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surprisingly new insights (Fouché and Light 2010:8; World Café 2016). The host remains behind and shares the highlights of the conversation held with previous participants with the next group of participants. This rotation from one table to the next ensures that everyone is part of the conversation. One of the distinguishing characteristics of the World Café approach is the movement of participants between tables where they meet new people and actively contribute to each other's thinking and more thinking (Fouché and Light 2010:8; World Café 2016). The researcher and her two co-hosts at the tables made sure the conversations of the previous group were clearly and accurately shared with the newcomers and then invited them to add to the conversation.

6.3.2.6 Listen together for patterns and insights

It is important to encourage listening during the conversations and is referred to as 'shared listening' (World Café 2016). By means of this shared listening and paying attention to themes, patterns and insights, which begin to emerge with each conversation, we are able to make connections and explore underlying assumptions (Bradbury 2015:212; Fouche and Light 2010:8; World Café 2016).

6.3.2.7 Share collective discoveries

The last phase of the World Café, known as the 'harvest', involves making this "pattern of wholeness visible" to all participants in the café (World Café 2016). The hosts' final task is to make sure that the knowledge shared between the groups is displayed collectively at the end of the proceedings. They therefore need to allow participants to have a few minutes for silent reflection on the patterns, themes and questions or conversation experienced in the small group conversations before requesting them to share the collected data, knowledge with the larger group (Fouche and Light 2010:8; World Café 2016). The 'harvest' session in the present study was audio-recorded and photographs were taken with the permission of the participants.

6.4 WORLD CAFÉ PROCESS

The final workshop, workshop 6, was held on 4 July 2016 from 08h30 to 13h30. The aim of this workshop was to evaluate the action research process. The World Café process is discussed under the following headings:

- Preparation phase
- Opening phase
- Implementation phase
- Closing phase

6.4.1 PREPARATION PHASE

The Change Champions were all invited to the World Café. I created an invitation (refer to Annexure E1) with a coffee café theme with the aim of encouraging maximum participation. The venue was arranged on the nursing college premises to ensure easy access for the participants. The dress code was semi-formal to create a relaxed atmosphere. The venue was arranged in a café style with two tables in the centre of the room. The tables were covered with checked tablecloths each with a flower arrangement as a centrepiece. Tables with refreshments consisting of mainly cakes, tarts and pies stood in one corner. Coffee machines were brewing to make sure the Change Champions were greeted with the aroma of freshly filtered coffee. Soft music was playing in the background which further contributed to the relaxed, conversational environment created so that the participants could feel comfortable and safe. Both tables were stocked with paint, crayons, flip chart paper and notebooks for the planned activities.

My co-supervisor, Dr Isabel Coetzee, was the facilitator for this workshop with my supervisor, Dr Ronell Leech, and I being the table hosts. Eight Change Champions attended the workshop and they were seated four at a table (Refer to Annexure E2 for the attendance register).

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Photo 6.1 Venue with tables arranged in café
(Photos taken with the permission of the participants)

6.4.2 OPENING PHASE

The facilitator welcomed all participants and emphasised the aim of the workshop, which was to evaluate the worth of the action research journey. She confirmed permission from the participants to take photographs and audio recordings during the workshop and also permission to use the photographs in the thesis. No objections were raised and all participants signed informed consent (refer to Annexure E3). The activities planned for the morning was explained so that the participants knew what to expect. The morning was divided into three sessions each session consisting of an activity. Each activity formed part of the overall aim to evaluate the worth of the journey. The ground rules ('café etiquette') were accepted by all members as explained in Section 6.3.2.4.

6.4.3 IMPLEMENTATION PHASE

The facilitator introduced the three activities for the workshop. To answer the two main questions in order to reach objective 3: to evaluate the action research process, each activity built on the previous one. The three activities are discussed in Sections 6.4.3.1 to 6.4.3.3.

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6.4.3.1 Activity 1: Questions

Four participants were seated at each of the two tables. The four participants at each table received one question. The host read the question to the participants requesting them to silently reflect on it and make notes for themselves. After about 10 minutes, the participants were requested to share their notes with each other one by one. Each participant was given equal opportunity to share his or her thoughts and reflections and they were allowed 30 minutes for discussions. The host at each table wrote down the participants' words verbatim onto the flip chart paper provided. Thereafter, the participants rotated to the other table and were asked the second question. The same reflection, sharing and discussion procedure followed. This time the table host shared the input from the previous group to allow for cross pollination. The following two questions were addressed, 'What was the worth of the action research process, personally and professionally?' and 'How did the action research process change your educational practices?' The participants' conversations were captured visually on flip charts and taped to the wall for discussion by the full group later.

6.4.3.2 Activity 2: Drawings

Participants were invited for refreshments and were requested to peruse the flip charts, to reflect silently and discuss the captured findings informally among themselves. After the tea break, we continued with activity 2. The facilitator briefed the participants on activity 2. They were requested to draw a picture that visually reflected the 'worth of the journey' for them. The hosts reminded them that participation from all was vital to the exercise. Participants reflected on the information they had already shared on the flip charts during activity 1 to assist them with activity 2. They could use the paint, crayons, and felt-tipped pens available on the table to draw on the flip chart paper. Participants had 40 minutes to execute this task. The flip charts with the pictures were taped to the wall to be discussed later. Each group was given an opportunity to discuss their drawing while the other group was asked to reflect on the following: 'I feel', 'I hear' and 'I imagine' with regard to the presenting groups' drawing. After each group's presentation, all the participants shared their reflections.

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Photo 6.2 Change Champions working on their drawings
(Photos taken with the permission of the participants)



Photo 6.3 Change Champions presenting their drawings
(Photos taken with the permission of the participants)

6.4.3.3 Activity 3: Words

The facilitator briefed the participants on the final activity. The two groups were asked to look at the findings on the flip charts as well as the two pictures drawn and identify statements or words which best described their journey as a Change Champion. Initially participants were requested to reflect silently and write down the words that came to mind. Thereafter, the

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participants shared their statements or words with their group and were requested to reach consensus on the words they as a group felt summarised the worth of the journey for them. After reaching consensus, the host for each group wrote down the words on strips of flip chart paper. The words were then shared with the larger group. Participants packed the words out on the floor and moved them around to organise them into themes and categories, discussing different options, and revising their stacking order until we reached consensus and satisfaction on the identified themes and categories.



Photo 6.4 Change Champions organising their words into themes and categories (Photos taken with the permission of the participants)

6.4.4 CLOSING PHASE

The facilitator thanked all participants for their active participation and willingness to share their experiences of their journey. The workshop was ended with participants sharing the aspects they “liked least” and “liked most” (refer to Table 6.1). The researcher used this opportunity to express her thanks and appreciation to the Change Champions. The researcher handed over a small token of appreciation to each of the participants and the action research project was formally closed. The action plan would, however, only be implemented the following year during the quality assurance workshops with the entire nursing college.

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Table 6.1 Reflection on workshop 6

LIKED LEAST	LIKED MOST	LESSONS LEARNT
<ul style="list-style-type: none"> That it was the last workshop. 	<ul style="list-style-type: none"> Sharing of ideas. Variety of activities, exciting, got the 'creative juices' flowing. Professionalism. The realisation that we cannot do it alone. Relationships, bonding among the ARG members. Growth and development. Creativity, fun. 	<ul style="list-style-type: none"> Activities and exercises help to get people excited and get them to participate. This is a method that could be used in our monthly quality assurance workshops.

6.5 DATA ANALYSIS

Data from the larger group feedback was audio recorded with the permission of the participants. Drawings and flip charts were photographed with the permission of the participants. The data was analysed by means of a creative hermeneutic data analysis approach. Boomer and McCormack (2010:638) describe this approach as “the hermeneutic analysis of multiple data sets in groups that brings together hermeneutics, staged facilitation and creativity”. According to McCance, Gribben, McCormack and Laird (2013:6), this approach to data analysis reflects Gadamer’s (1993) philosophical perspective on hermeneutics, and the use of the arts to support new ways of working and learning. During the analysis paint, pictures, flip charts and words were used to make meaning of the data and provide an evaluation of the action research process by creative means. The creative hermeneutic data analysis method and steps as suggested by Boomer and McCormack (2010:644) was used to analyse the data.

- Data was collected by means of the World Café approach to evaluate the action research process.

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- The participants were seated at two tables. Two questions were asked; one at each table. The data collected was captured on flip charts and displayed on the wall.
- Each group was asked to create a visual image illustrating the worth of the action research journey by drawing their own picture.
- The participants per group shared their story and relating it to what their picture represented. The remaining group members were asked to reflect on the story told and share their reflections with the larger group.
- Using the captured answers from the two questions asked, the creative image as a centrepiece as well as the captured stories, statements or words which illustrate the worth of their journey, were developed by the participants within the two groups. Participants were asked to discuss their words and create shared words that everybody agreed on. Each word was written on pieces of flip chart paper.
- Every group then presented one or more of the identified themes to the entire group by packing them out on the floor, moving them around and organising them. Through discussion consensus was reached on the final themes (and categories).
- Once consensus had been reached, photos were taken to provide evidence of the final themes and categories.

6.6 DISCUSSION OF FINDINGS

The findings are discussed under the three activities.

6.6.1 ACTIVITY 1: QUESTIONS

The participants described the worth of the journey under professional and personal worth. Professionally the participants shared the action research project was seen as a journey towards excellence. They described action research as an excellent methodology that helped them to reflect on their values and beliefs. It gave them perspective and rekindled their commitment.

This 'fresh approach' (as they called action research) encouraged group involvement through cooperation, sharing of ideas and the delegation of tasks. One participant said the following: "It gave me hope to see that there is a lot that we can do to improve by working together and

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supporting each other.” They described how teamwork was enhanced and how they discovered that working together as a team can lead to a comprehensive product (an action plan to address challenges).

All the participants shared that the action research project brought about professional growth and development. They explained how, with every workshop and training session, their knowledge improved via sharing their practice wisdom and best practices with each other. For some, the role of the nurse educator was highlighted. They mentioned how the action research project resulted in improved practices and specifically referred to the CPD guidelines that were compiled and the learning needs survey conducted that led to members attending computer courses. They further included the reflection on current selection processes; the professional development received on various student-centred teaching and learning strategies that promote clinical reasoning and critical thinking such as unfolding case studies, video clips, clinical ward rounds, inquiry based teaching and appreciative feedback.

On a more personal level the participants described how the action research project taught them about self-evaluation and reflection on their own educational practices and made them realise that they should implement student-centred teaching and learning strategies. “It made me realise to use other strategies”, one participant said. Another acknowledged that “it made me look at my own practices”, while a third participant admitted “it made me question my own practices”.

The action research process was professionally conducted and stimulated the participants’ own reasoning skills. Participants verbalised participating in the action research project made them feel “special” to be part of a group that was effecting change. They experienced the whole action research process as motivating. According to one participant, she “was not aware you can approach research in this way where you work together to solve problems”. One participant’s reaction was of significance because it conveyed a message concerning some senior nurses’ superior attitudes. She said she was in awe of the process because it was “non-threatening, I felt free to speak”.

Most of the participants explained how the process enhanced their communication skills, their interpersonal relationships and their self-confidence. The process also improved some

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participants' patience, tolerance and it taught them about constructive criticism. One participant said having participated in the action research project "re-ignited" her passion for nursing. Participation also encouraged some participants to further their studies. A participant explained the worth of the journey as follows: "I think it is fair to say that we have waited for an experience like this for 20 years to bring people to the table to work together."

The second question was asked to determine how the action research process changed the participants' educational practices. The participants elaborated on how the action research process helped them to utilise different teaching and learning strategies that were more student-centred and how it encouraged their clinical reasoning and critical thinking. "It changed my educational practices to be more student focused" and "that we should not give them [students] the answers" were but two of the responses. Another participant explained it as follows: "It helped me to reflect on my own educational practices to improve, to move from a lecture approach to a developmental approach." A participant confirmed how the project helped her to be more of a facilitator than a teacher. Theory and practice correlation was encouraged and made easier through critical thinking. A particular significant statement made was that "the action research process made me to change the format of assignment[s] to make it more practical to incorporate activities to stimulate the students' reasoning skills".

One participant indicated how her opinion on clinical accompaniment changed as "it made me realise how important it is that I must be there to support and guide and direct them [students]". Others explained the project made them realise how they could utilise the available resources more effectively. According to the participants, it also resulted in improved communication and collaboration with the clinical facilities. Because of the action research project, participants realised the value of thinking: to think out of the box; to broaden their horizons; and to think creatively. Participants stated they believed honest reflection was one of their shortcomings as an institution. Honest reflection is vitally important because an institution cannot strive towards change if they do not admit they have challenges. The participants ended the discussion by agreeing "change starts within".

6.6.2 ACTIVITY 2: DRAWINGS

Participants were requested to draw a picture that visualises the worth of the journey for them. They worked in two groups and then presented their picture to the larger group. The

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first group compared the action research project to that of taking a road trip together. They described their journey as starting in the dark. They saw people standing around confused, demotivated and without knowing which direction to take. They asked themselves, 'why am I here?' Then the critical thinking/reasoning bus came along and inside they saw knowledge, growth, reasoning and maturity. It was an empowerment bus. The empowerment bus stopped and they got in. Unfortunately, the road was bumpy and full of potholes and they again asked themselves, 'should we get off at the next stop?' However, they did not get off. They had a change of attitude; there was hope, the sharing of ideas, group cohesion, communication, interpersonal relations and teamwork. They then finally reached their destination; together, happy, smiling, empowered and they could now hear laughter and see the light.



Photo 6.5 Change Champions' drawing by group 1
(Photos taken with the permission of the participants)

The other group was then given the opportunity to share their thoughts on this drawing. One participant said she could see the confusion, loss of direction and not knowing what to do at the beginning when standing in the dark. Another commented she saw the road was bumpy, but it was a personal choice to stay on the bus and to continue to wherever the bus was going because it was at least moving forward towards something. A further comment was

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made that the drawing depicted a journey, but it was not known that it would become a journey of “knowing that we can see the growth, see the journey of improvement”.

The second group depicted their journey as a relay race. Explaining that winning the race was dependent on the various team members and their ability to work together within a team, the group said they were unsure where to start; all they knew was that change starts within. To be able to win a race, a person needs to exercise. They explained that to succeed at the action research project they had to share ideas, integrate knowledge, and have mutual goals. They had to take the education, training and development environment as well as the available resources into consideration throughout their “race”. For them the action research process was like a relay race where they needed each other to succeed. “We attended the various workshops, involved other stakeholders to reach our main goal which was to promote students’ clinical reasoning and critical thinking skills. At the end of the race, we succeeded and there is elation and celebration. We then reflected on our accomplishments and planned to improve our performance for the next race. A celebration of our successes.”



Photo 6.6 Change Champions’ drawing by group 2
(Photos taken with the permission of the participants)

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The other group members reflected on the drawing and said that they saw teamwork and collaboration throughout the action research process. One participant said that she saw personal growth in reaching a goal and teamwork in celebrating together. They shared their thoughts on seeing group effort, progress made with the support, and guidance and direction offered throughout the action research process.

The main message here was that the action research process was a journey taken by a group of educators working together as a team utilising each other's strengths to reach mutual goals. The participants saw the action research process as doing research with people instead of on people which illustrates exactly what action research is about.

6.6.3 ACTIVITY NUMBER 3: WORDS

For the last activity of the day the participants were requested to identify statements or words which described the 'worth of the journey' for them. They were required to reach consensus as a group. The words were packed out on the floor and moved around until they all reached consensus on the themes and categories which best described their journey. Photo 6.7 illustrates the final product as identified by the participants.



Photo 6.7 Final themes and categories
(Photos taken with the permission of the participants)

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Figure 6.1 is a mind map that was compiled by the researcher to schematically illustrate the different themes and categories, identified by the participants who used statements or words that best described the journey for them, more clearly.

6.7 SUMMARY OF FINDINGS

All the participants evaluated the action research process as positive and inspiring. The entire process was perceived as valuable; a “fresh approach” they said. The participants felt special and honoured to be included as participants in this study. Personal and professional empowerment, growth and development was reported as an outcome of the action research process. They elaborated on how teamwork, active participation and involvement of each action research group member contributed to the success of the project. The project also helped them gain knowledge and expertise through sharing practice wisdom and best practices. The action research process helped to build personal relationships and foster collaborative learning through collaborative engagement. A message which stood out was that ‘change starts within’. Finally, the project managed to change their educational practices to stimulate students’ critical thinking and clinical reasoning skills.

6.8 CONCLUSION

Phase 3 of the study, the evaluation of the action research process, was addressed in this chapter. The World Café data collection method was explained and the evaluation of the action research process and findings were described according to this method. Chapter 7 concludes the action research study by providing a discussion on the conclusions, recommendations and limitations of the study.

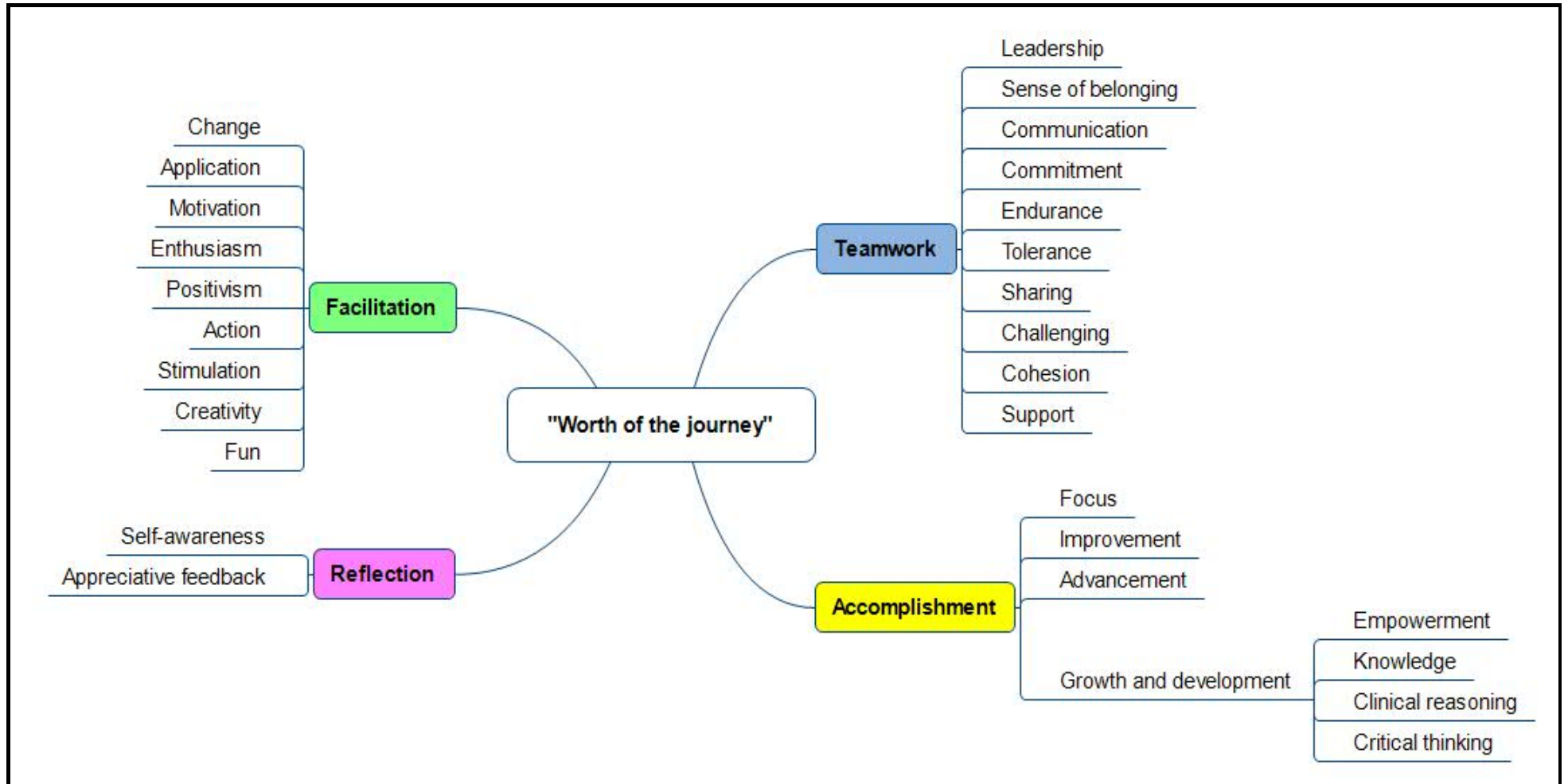


Figure 6.1 Schematic representation of the themes and categories illustrating the 'worth of the action research journey'

7: CONCLUSIONS, RECOMMENDATIONS AND LIMITATIONS

“Nothing endures but change.”

-Heraclitus-

7.1 INTRODUCTION

Chapter 7 provides the conclusion to the action research study conducted to answer the research question, ‘How can educational practices be improved to promote the development of undergraduate student nurses’ clinical reasoning skills?’ This chapter presents the conclusions, recommendations and limitations of the study. The overall aim of this study was to facilitate a process of change towards improving educational practices in order to promote the development of undergraduate student nurses’ clinical reasoning skills. To achieve this aim the study was conducted in three phases. The following research objectives were formulated and achieved:

Phase 1: Baseline

To explore and describe the challenges experienced by nurse educators in utilising educational practices that promote the development of undergraduate student nurses’ clinical reasoning skills.

Phase 2: Action Research Process

To co-construct an action plan to improve educational practices to promote the development of undergraduate student nurses’ clinical reasoning skills.

Phase 3: Evaluation of the Action Research Process

To evaluate the outcomes of the action research process.

7.2 CONCLUSIONS

To conclude I would like to provide a summary of the action research study and an overview of the content of the different chapters before focusing on the objectives reached.

7.2.1 SUMMARY OF ACTION RESEARCH STUDY

In Chapter 1 the reader was introduced to the study. I provided an introduction and background to the problem. The concern at the nursing college was students' inability to clinically reason. Another concern was that nurse educators are predominantly utilising traditional teacher-centred teaching and learning strategies which do not encourage the development of clinical reasoning skills. Our students are placed at clinical facilities where it is reported that they are unable to THINK like a nurse. The question was raised what we as nurse educators can do to improve the situation. I then embarked on this action research study because I wanted our situation to change for the better. By doing research with people instead of on people seemed to me to be the best solution to our current problem. I wanted to find out from the nurse educators why they do not utilise educational practices that stimulate clinical reasoning and what are the challenges they face which prevent them from using these practices.

After gathering data on nurse educator challenges by means of unstructured interviews, I wanted us to work together on the identified challenges to plan and identify actions which may address them. I provided an in-depth discussion on the philosophical assumptions of my study in Chapter 1 and claimed that my study falls within a new paradigm, a participatory worldview that falls outside that of the qualitative and quantitative paradigms. The theoretical framework which guided the study was the traditional action research cycle of Zuber-Skerritt (1992). The underlying principles of action research (refer to Section 1.9) such as practical, participative, collaborative, emancipatory, interpretive and critical was incorporated throughout the action research process. The ARG members all had a voice they collaborated and participated actively in co-constructing the action plan to address their challenges. The action research process addressed practical issues which concerned them directly. The ARG members worked within a psychological safe space encouraging power sharing as equal participants contributing to the action research process. By no means did we make any

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claims that clinical reasoning will improve through this study. But, we were saying and hopeful that by means of our improved educational practices we may play an important role in the students' development of clinical reasoning skills.

In Chapter 2, I conducted a literature review on adult learning, clinical reasoning and educational practices. The most read and used theory of learning is that of Malcolm Knowles (1970), the andragogy theory, which claims that adults learn differently from children. The theory is built on the assumption that teaching and learning should be student-centred. Nursing students are adults and their need for learning is intrinsic in nature; they need to be involved in their own learning. Reviewing the literature on the different adult learning principles I came to the realisation that it is not much different from those advocated for clinical reasoning. The literature explained that student-centred teaching and learning strategies stimulate the development of clinical reasoning skills. The curriculum utilised by the nursing college should be based on constructivism which focuses on student-centredness. For me it all boils down to student-centred teaching, learning and assessment strategies. The amount of literature was vast on the topics mentioned and I created a conceptual framework to provide order and make sense of the literature to explain the concepts and their possible relationships. I asked myself, if the literature is replete of what should be done then why are we not doing it. This led me to find out from the nurse educators themselves to achieve objective 1, which was to explore and describe the challenges experienced by nurse educators in utilising educational practices that promote students' clinical reasoning skills.

Chapter 3 described the research design and methodology. I provided literature on action research where I also explained that the action research cycle of Zuber-Skerritt (1992) was used in my study. Phase 1 was described in depth and I conducted 16 unstructured interviews with the nurse educators and HoDs. It was apparent that they have numerous challenges of which some have a direct and others an indirect influence on clinical reasoning. The nurse educators shared their stories with me, some elaborately and others more to the point, however, these conversations yielded an enormous amount of data which was analysed, and discussed in detail in Chapter 4. After analysing the data and having explored and described the challenges, I was then able to establish the action research group. The group consisted of a representative group of nurse educators and HoDs who volunteered to be part of the action research process. The action research group met for five

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workshops to implement four action research cycles, each consisting of the steps, plan, act, observe and reflect to co-construct an action plan. The idea was that the nurse educators and HoDs themselves plan and decide on how to address the challenges. I believe strongly that we have a better chance at success if we involve those that are directly affected.

Although the objective was to co-construct an action plan which was achieved, we also implemented various planned activities. The entire action research process was written up in Chapter 5. The process would not be complete without evaluating the success of the action research project. I decided to conduct a World Café data collection approach to evaluate the project. Workshop 6, the World Café was written up in Chapter 6. The action research group was very positive and the evaluation of the action research process was a huge success. From this action research project, it became clear that it is not enough to ‘preach’ student-centredness but it is also important to work together to bring about the needed change in our educational practices. This change is a long process and will not happen overnight. It is foreseen that the action plan will be implemented in 2017 as part of a quality improvement initiative.

7.2.2 OBJECTIVES

The research objectives of this study were achieved. In Sections 7.2.2.1 to 7.2.2.3 the research objectives and their application in this study are discussed by addressing the major findings of the study.

7.2.2.1 Objective 1

Unstructured interviews were held with nurse educators to explore and describe the challenges experienced by nurse educators in utilising educational practices that promote the development of undergraduate student nurses’ clinical reasoning skills. The data analysis of the findings revealed the challenges experienced by the nurse educators which makes it difficult for them to utilise student-centred teaching and learning strategies in order to promote student nurses’ clinical reasoning skills. Four main themes emerged under which the challenges were classified. The conclusion for objective 1 is according to these four themes.

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- **Theme 1: Educational practices**

- (i) Nurse educators are predominantly utilising traditional teaching, learning and assessment strategies which do not stimulate the development of student nurses' clinical reasoning skills.
- (ii) Resistance to change is a hindrance to adopting more innovative and creative student-centred teaching, learning and assessment strategies.
- (iii) Nurse educators utilise lecturing in order to cover the content produced by the congested curriculum.
- (iv) The curriculum has not been revised and therefore current health trends are not addressed.
- (v) A shortage of nurse educators, clinical preceptors and support staff such as simulation laboratory coordinator and typists, is a challenge.
- (vi) Inadequate infrastructure such as the simulation laboratory, library and classrooms has an influence on students' learning and nurse educators' choice of teaching strategies.
- (vii) The absence of internet facilities and insufficient technology has a grave influence on the teaching and learning environment.
- (viii) Nurse educators are forced to resort to teacher-centred strategies due to the inadequate simulation laboratory, library and classroom layout and unavailable resources.

- **Theme 2: Clinical learning environment**

- (i) Limited access to the simulation laboratory and practice time in the simulation laboratory contributes to the absence of authentic clinical learning environments.
- (ii) Students are unable to integrate theory and practice and as such their clinical reasoning development is affected.
- (iii) Short clinical placements impede on the development of clinical reasoning skills.
- (iv) The lack of clinical accompaniment and support is a challenge and students are deprived of the required support and guidance needed for clinical reasoning and competence.
- (v) Fragmented nursing care models contribute to students' perceived inability to reason clinically.

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- (vi) Limited clinical learning opportunities also contribute to the perceived lack of students' clinical reasoning skills.
- (vii) A lack of collaboration with the clinical facilities and the Department of Health is a challenge.
- **Theme 3: Military learning environment**
 - (i) Short notice to attend military courses for nurse educators forces the remaining nurse educators to resort to lecturing to cover the content.
 - (ii) The long cumbersome processes to obtain approval for field trips hinder innovative and creative teaching strategies.
 - (iii) The military uniform worn for clinical placements at public clinical facilities portray military nursing students as soldiers causing patients to reject students and it affects their competence and self-confidence.
 - (iv) Military unique activities such as parades, deployments, sporting events and military functions cause unplanned interruptions in the educational programme and students are losing out on important experiential learning opportunities.
 - (v) The perceived autocratic-, power- and rank-oriented military culture contributes to the nurse educators' frustration and feelings of hopelessness in a situation they have no control over. Nurse educators are compelled to resort to teacher-centred strategies to make up for the time lost.
- **Theme 4: Role players in the teaching and learning environment**

Four different role players have an influence on the teaching and learning environment, namely the management of the nursing college, the nurse educators, the professional nurses and the students.

 - (i) Management of the nursing college
 - The HoDs hinder innovation and the use of student-centred teaching and learning strategies by resisting change advocated by the nurse educators.
 - The management of the nursing college does not acknowledge good performance hence nurse educators are demotivated.
 - The management of the nursing college lacks leadership skills as well as nursing education experience and expertise and as such newly

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appointed nurse educators do not receive the required support and guidance in student-centred teaching and learning strategies.

(ii) Nurse educators

- Nurse educator preparedness, expertise and experience have an influence on students' clinical reasoning skills.
- Nurse educators require knowledge and expertise in student-centred teaching and learning strategies.
- Nurse educators lack clinical experience and consequently they are unable to support students with theory and practice integration.
- Nurse educators lack computer skills required for effective implementation of innovative and creative student-centred teaching strategies.
- Nurse educators lack essential attributes such as a passion for nursing and nursing education.
- Nurse educators are perceived as uncaring.

(iii) Professional nurses

- Professional nurses are unsupportive and non-committed to their teaching role.
- Professional nurses' behaviour is not exemplary and they are poor role models for student nurses.
- Professional nurses lack essential attributes such as passion and caring.

(iv) Students

- Students lack clinical reasoning skills which could be attributed to their perceived lack of knowledge.
- Students are unable to approach professional nurses for support and guidance.
- Students are battling with English and as such have difficulties with learning.
- Students lack self-confidence which jeopardises their development of clinical reasoning.

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- Students' tardiness, unwillingness to take responsibility for their own learning as well as their obvious disinterest in nursing have a serious impact on their learning and consequent competence.
- Students lack essential attributes such as caring and passion for nursing.
- Clinical reasoning is encompassed in caring.
- Student selection is a challenge; students are not interested in nursing.

This objective was achieved. Nurse educators shared their experiences and various challenges were identified and discussed.

7.2.2.2 Objective 2

Objective 2 was to co-construct an action plan to improve educational practices to promote the development of undergraduate student nurses' clinical reasoning skills. This was achieved. The outcome of this phase was the action plan co-constructed by the action research group by means of four action research cycles. Each action research cycle consisted of the steps, plan, act, observe and reflect. Outcomes for each cycle of this phase yielded the following findings.

- **Cycle 1**
 - (i) Four strategies were identified based on the findings from Phase 1 to address and co-construct an action plan. The following strategies were identified:
 - teaching, learning and assessment strategies
 - clinical learning environment
 - continuous professional development (CPD) and support
 - selection of nurse educators and students
 - (ii) A start was made for the action plan; some activities were identified to address each strategy.
 - (iii) Continuous professional development (CPD) points according to the SANC requirements were introduced to the academic staff.
 - (iv) Learning needs analysis was conducted for the academic staff in order to base professional development sessions on the needs of the academic staff.

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- **Cycle 2**
 - (i) Consensus was reached to provide professional development on three of the learning needs identified. The remaining topics were submitted to the professional development coordinator of the nursing college to utilise for scheduled professional development sessions. The following three topics were identified:
 - facilitation of learning, assessment, evaluation and feedback
 - research and knowledge creation
 - emotional intelligence
 - (ii) An article was written and published in the nursing college magazine, The Lamp, to inform academic staff on the progress made by the action research group.
 - (iii) The action plan evolved; some more activities were identified to address each strategy.

- **Cycle 3**
 - (i) The action plan evolved; some more activities were identified and others revised in order to address each strategy.
 - (ii) The guidelines for CPD implementation were compiled.
 - (iii) CPD implementation was formally introduced.
 - (iv) Professional development sessions on clinical reasoning and student-centred teaching and learning strategies such as utilising video clips, real life case studies and unfolding case studies was provided to all the academic staff.

- **Cycle 4**
 - (i) The action plan was finalised and approved by the action research group. The final action plan was the main outcome of the action research process. Refer to Section 5.6.4.3 and Table 5.13.
 - (ii) A representative group of nurse educators and students received a demonstration and training session on the ward round. Nurse educators were shown how the ward round can be used as a teaching and learning strategy to promote clinical reasoning.
 - (iii) Academic staff received professional development on inquiry based teaching and appreciative feedback.

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Objective 2 was achieved. The action research group co-constructed an action plan to address the challenges identified in objective 1.

7.2.2.3 Objective 3

The objective was to evaluate the outcomes of the action research process. The action research process was evaluated using the World Café approach. The major findings of the World Café are addressed under the three activities conducted to evaluate the action research study.

- **Activity 1: Questions**

The worth of the action research process was evaluated. The major findings are addressed under professional and personal worth as well as how the action research process changed educational practices.

- (i) Professional worth

- The action research project was a journey towards excellence. An excellent methodology which helped the action research group to reflect on their values and beliefs to get renewed perspective and reinvigorate commitment.
- The action research methodology was described as a ‘fresh approach’ which encouraged group involvement and enhanced cooperation, sharing of ideas as well as the delegation of tasks among the members.
- Teamwork was enhanced and working together as a team led to a comprehensive product (an action plan to address challenges).
- The action research project brought about professional growth and development.
- The nurse educators’ knowledge improved by sharing practice wisdom and best practices with each other.
- The role of the nurse educator was highlighted.
- The action research project resulted in improved practices. For example, the CPD guidelines which were compiled; the learning needs survey conducted which led to members attending computer courses; and the reflection on current selection processes. Professional development received on various student-centred teaching and learning strategies

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that promote clinical reasoning and critical thinking such as unfolding case studies, video clips, clinical ward rounds, inquiry based teaching and appreciative feedback.

- (ii) Personal worth
 - Self-evaluation and reflection on own educational practices resulted in the implementation of more student-centred teaching and learning strategies.
 - The action research process was professionally conducted and stimulated reasoning skills.
 - The action research project was motivating and it enhanced communication skills, interpersonal relationships and self-confidence.
 - Improved patience, tolerance and constructive criticism.
 - Ignited a passion for nursing.
 - Encouraged further studies.
- (iii) How did the action research process change educational practices?
 - Nurse educators utilised different teaching and learning strategies that are more student-centred and encourages clinical reasoning and critical thinking.
 - Resulted in a mind-set move from being a teacher to being a facilitator.
 - Encouraged theory and practice correlation which was made easier through critical thinking.
 - Changed opinions on clinical accompaniment and realised the importance of student support and guidance.
 - Improved communication and collaboration with the clinical facilities.
 - Realised the value of thinking and creativity.

- **Activity 2: Drawings**

The 'worth of the journey' was visually presented in pictures drawn by the action research group. The major findings from the stories told in their picture are addressed.

- (i) The action research process was a journey of not knowing to a journey of knowing. Movement from a dark space to light.
- (ii) Personal and professional growth and improvement.
- (iii) A celebration of our successes.

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- (iv) Teamwork and collaboration throughout the action research process.
 - (v) The main message here was that the action research process was a journey undertaken by a group of educators working together as a team utilising each other's strengths to reach mutual goals.
 - (vi) The action research process involves doing research with people instead of on people.
- **Activity 3: Words**

Statements and words were identified to describe the action research process and provide clarity on the 'worth of the journey'. The major statements and words demonstrated what the action research journey meant for the participants. Teamwork stood out with words like communication, sense of belonging, and so forth. Facilitation was highlighted as important and included words such as motivation, enthusiasm, creativity and fun. Reflection and self-awareness stood out as the cornerstone of action research. Finally, the participants identified accomplishment. They felt they had improved and advanced because of the action research process. They believe that critical thinking and clinical reasoning was one of their accomplishments.

This objective was achieved. The action research group evaluated the outcomes of the action research process.

7.2.3 CONCEPTUAL FRAMEWORK FOR CLINICAL REASONING

In Chapter 2 (refer to Section 2.5) I compiled a conceptual framework based on the literature reviewed. However, after analysing the findings from the unstructured interviews as well as conversations held with the action research group an important determinant stood out that was not included in the original compiled conceptual framework based on literature. A major finding that emerged from this action research study was that essential attributes such as passion and caring inherent in the different role players have a significant influence on the development of students' clinical reasoning skills in the teaching and learning environment. A conceptual framework also summarises the content covered and findings of the action research study I am therefore compelled at this stage to revise my conceptual framework

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and add 'attributes' and other determinants as additional components to the conceptual framework.

The researcher perceives nursing students as adult students encompassed within the teaching and learning environment. At the start of the study my focus was on how to improve clinical reasoning within the classroom environment however, the findings from the unstructured interviews revealed the importance of the clinical environment on the development of clinical reasoning skills (refer to Section 4.4.2) and as such the theoretical as well as the clinical teaching and learning environment cannot be separated. Within the context of the present study, the military environment influences the teaching and learning environment of adult students as well as the nurse educators because they are both students and soldiers. This dual role creates challenges which influence the teaching and learning environment (refer to Section 4.4.3). The military environment is depicted as the outer part of the framework and within that is the theoretical and clinical teaching and learning environment represented by a broken line illustrating the influential relationship of the military environment on the teaching and learning environment of the student.

Within the teaching and learning environment various components influence the students clinical reasoning skills. These include the nurse educator and the student. Nurse educators' passion and motivation for teaching as well as their caring disposition may have an influence on the quality education and training provided (refer to Section 4.4.4.2). The same is true for the professional nurses providing support and guidance within the clinical learning environment (refer to Section 4.4.4.3). Students' passion for nursing and their caring attitude will also have an influence on their learning and competence (refer to Section 4.4.4.4). Hence, the component 'attributes' was added. These students come to the learning environment with their own experiences, prior learning and motivations to learn (andragogical assumptions). Educators and students encounter various challenges that will have an influence on the teaching and learning environments. Findings from the unstructured interviews held during Phase 1 revealed numerous challenges (depicted as the grey cloud in the background influencing the entire teaching and learning environment) experienced by nurse educators (refer to Chapter 4, Figure 4.1). The ARG members co-constructed an action plan to address some of these challenges (refer to Section 5.6.2.3).

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To promote the development of clinical reasoning skills, nurse educators must utilise adult learning principles when facilitating adult nursing students. The curriculum utilised plays a pivotal role in the teaching and learning strategies used by educators. A constructivist paradigm was identified as the most suitable for student-centred teaching as well as for teaching adult students. The development of clinical reasoning skills is dependent on the various student-centred teaching and learning strategies utilised by educators as identified in the literature review. Examples include case-based learning, questioning, reflective learning, clinical post-conferences, and so forth. In addition, the ARG members during the action research process discussed unfolding case-studies, video clips, appreciative feedback, ward round and simulation as essential teaching and learning strategies. Students' ability to think and reason and their thinking strategies are influenced directly by the way in which they are taught and how they learn. Various strategies are available to evaluate the clinical reasoning skills of students such as the SCT, LCJR, DTI, CCTDI and HSRT.

Finally, it is important to address the environment within which the nurse educator functions. The action research process as well as the evaluation of the project revealed nurse educators need for a supportive and encouraging environment. The principles of action research on which the study was based (refer to Section 1.9) was made known by the ARG members as essential in improving their practices. A participative and collaborative approach to solving practical issues (improving their educational practices) within a non-hierarchical non-threatening environment as well as involving all role players resulted in changed practices for the ARG members and they themselves changed in the process. Involving nurse educators in changes which concerns them and providing support and guidance is therefore a critical influential factor in the teaching and learning environment.

The revised conceptual framework illustrates the influence of the military environment on the theoretical and clinical teaching and learning environment, which consists of the adult student/soldier; nurse educators; challenges; the curriculum; student-centred teaching, learning and assessment strategies; thinking strategies as well as attributes such as passion and caring on the students' development of clinical reasoning skills.

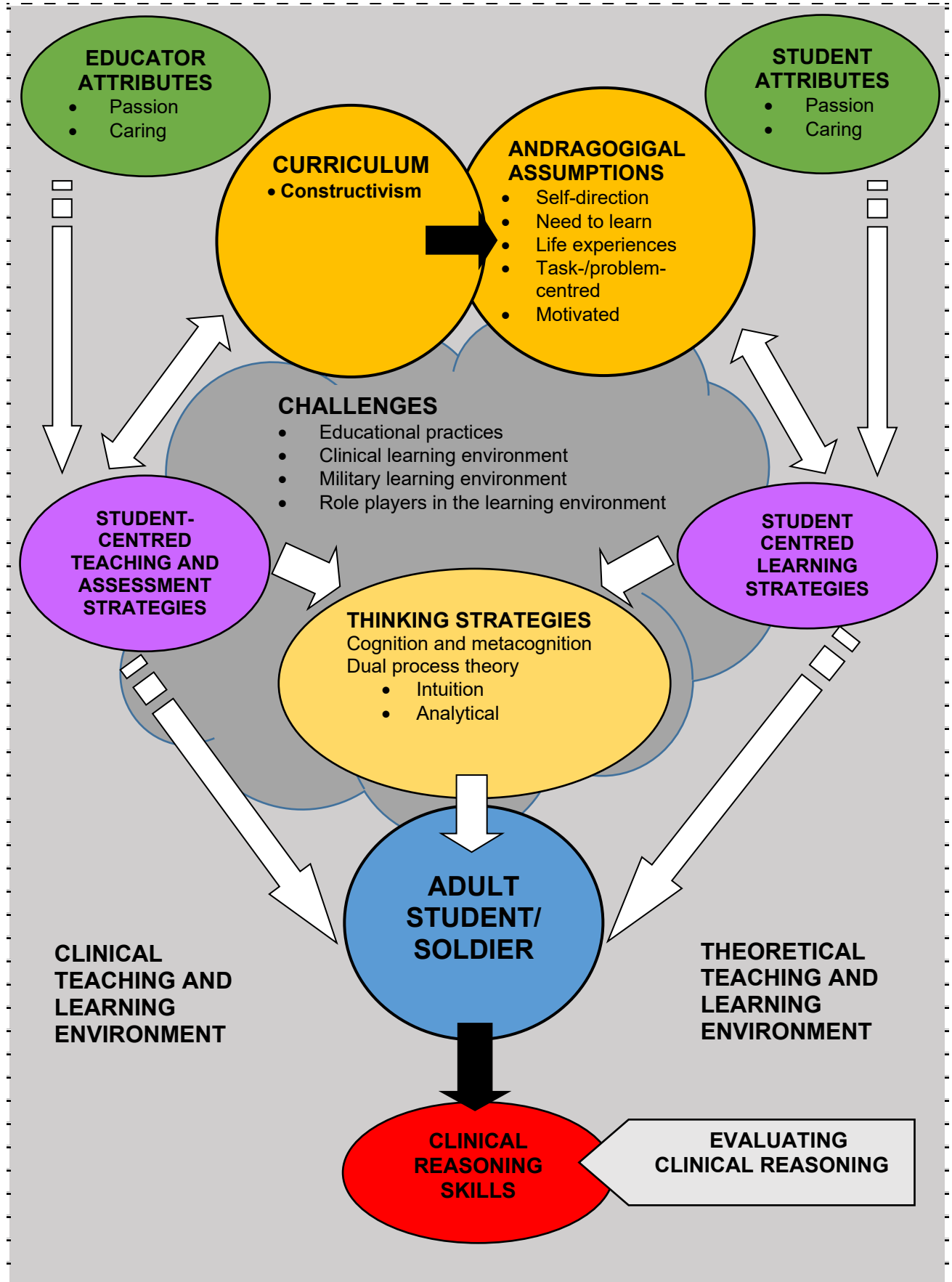


Figure 7.1 Conceptual framework for developing clinical reasoning skills

7.3 UNIQUE CONTRIBUTIONS OF STUDY

In my view the two main contributions of the study are the action plan to improve educational practices and the conceptual framework for promoting clinical reasoning skills. This action research study makes a unique contribution to the existing body of knowledge in nursing education, clinical reasoning and the methodology used. It provides an action plan to improve educational practices to promote student nurses' clinical reasoning skills. Although the challenges addressed were contextual in nature, the actions can be revised and/or adapted to suit other nursing education institutions experiencing similar challenges. The revised conceptual framework provides a framework for promoting clinical reasoning skills, but it may be utilised and revised or adapted as a framework to suit other nursing education institutions' needs. This study illustrates the success of using action research in nursing education and emphasises how teamwork, collaboration, involvement, active participation and empowerment can benefit the institution by improving their educational practices.

7.4 LIMITATIONS

In spite of the insightful findings, some limitations need to be noted.

- As the study was conducted at only one nursing college with a small number of participants, the findings may be used by other nursing education institutions, they must however consider their own setting and situation. Action research studies are small-scale studies conducted within a particular setting to improve practices within that context and are not concerned about relating the findings to other settings.
- In the present study, it stood out that teaching and learning should be student-centred however the student nurse was not included in the action research process which would have added value to the study.
- The research was conducted over a period of 18 months. The long-term objectives of the action plan could not be evaluated. The action plan will be implemented in 2017 as a quality assurance initiative.

7.5 RECOMMENDATIONS

The following recommendations are proposed for nursing education and training, the nursing college, practice and, lastly, recommendations for future research are made.

7.5.1 RECOMMENDATIONS FOR EDUCATION AND TRAINING

The following recommendations are made for nursing education and training.

- All nursing education institutions to adopt a curriculum based in constructivism which encourages student-centred teaching, learning and assessment strategies.
- The additional qualification in nursing education currently offered at universities in preparing nurse educators should be adapted to include a component focusing on student-centred teaching, learning and assessment strategies and critical thinking, clinical reasoning and clinical judgement. A greater emphasis should be placed on the clinical component of the qualification to ensure that nurse educators are ready for their teaching role.
- Courses, workshops or seminars should be offered to prepare nurse educators to utilise student-centred teaching, learning and assessment strategies.
- Courses, workshops or seminars should also be offered to prepare nurse educators on team building, facilitation skills, group facilitation, group management and group dynamics.

7.5.2 RECOMMENDATIONS FOR THE NURSING COLLEGE

The following recommendations are proposed for the nursing college.

- Include clinical reasoning and caring in the curriculum.
- Provide guidelines to nurse educators on facilitation and student-centred teaching, learning and assessment strategies that will stimulate clinical reasoning.
- Offer an induction, orientation and mentorship programme for newly appointed nurse educators.
- Empower and assist nurse educators to deal with the diverse challenges of the teaching and learning environment, for example, by clarifying values and beliefs, encouraging teamwork and helping nurse educators to deal with limited resources.

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- Help nurse educators to implement teaching, learning and assessment strategies that will enhance students' clinical reasoning skills. For example, offer professional development sessions or courses on the utilisation of diverse student-centred strategies.
- Reassess the current selection processes for nurse educators and students to attract candidates that are interested in nursing.
- Consider the adoption and implementation of the action plan. Develop a plan to implement and monitor the outcomes of the action plan. Identify key stakeholders that will support the implementation of the action plan. Assess and adjust the action plan as needed during the implementation thereof.

7.5.3 RECOMMENDATIONS FOR FUTURE RESEARCH

The researcher recommends that further research be conducted on the issues noted.

- Explore the possible relationship between caring and clinical reasoning.
- Evaluate the outcomes of the action plan after successful implementation.
- Identify a measuring tool to measure students' clinical reasoning skills over a period.
- Encourage other nursing education institutions to use action research to solve problems to improve their practice.
- Explore students' views on how they can best learn and develop their clinical reasoning skills.
- Conduct studies to identify a relationship between implementing student-centred teaching and learning strategies and actual improvement in students' clinical reasoning.

7.6 REFLECTIONS

This is my final personal reflection on my action research journey. My reflection begins from where I decided to enrol for a PhD up until I completed the study. I also deal with lessons learnt.

7.6.1 PERSONAL REFLECTION

After completing my master's degree in 2007, I was adamant to enrol for a PhD. Nursing education has been my passion ever since I started working as a professional nurse in a paediatric ward where I had to support and guide nursing students. It continued when I was transferred to the nursing college and ever since my passion for nursing education has grown and intensified. It is not surprising then that I chose to conduct a study in nursing education.

In 2013 my PhD journey started. It was a somewhat bumpy road at the beginning. I had to overcome many obstacles in my encounters with the various committees to obtain approval for the research proposal. However, this struggle proved to benefit me in the end. From the start, I was aware that nurse educators need to change the way they teach because students are not learning adequately from the traditional teaching strategies employed by the educators. Although I was initially unsure of exactly how I would approach my study, I decided to read up on current issues in nursing education at the time. The first book I read was that of Patricia Benner and colleagues, *Educating nurses: a call for radical transformation*. It was in this book that I read about clinical reasoning; my interest in the topic was instantaneous. As I continued reading more and more literature on the topic, I eventually reached a point where I knew what my own research topic would be.

After exploring various methodologies, from descriptive qualitative to grounded theory, I finally decided to use action research. My choice was based partly on my belief that nurse educators should be involved in management decisions that affect them directly. I also strongly believe that every problem has a solution and by working together, we can solve problems. I was introduced to action research when I attended a Santrust programme. This programme was established to assist nursing students who want to enrol for their doctoral degree (PhD). I was extremely fortunate to attend the programme that extended over a period of 18 months. I also read widely on action research and discovered that the paradigm embedded in action research suits my personality, values and beliefs.

Over time, my journey became a little smoother. At the nursing college, my colleagues are familiar with the fact that I facilitate the quality assurance workshops. In spite of my perceived good relationships with the nurse educators, I was concerned that they might not be

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interested in participating in this study, but they exceeded my expectations and voiced their excitement and enthusiasm.

The first phase of my study involved interviewing nurse educators. Although I conducted a pilot interview and received advice on how to improve my interviewing skills, I still had to conduct a number of interviews before I became comfortable with sitting in the interviewer's seat. Just like any other researcher, I too was worried that my interviews would not yield sufficient data, but this soon proved not to be the case. The data analysis was a mammoth task; I have never analysed qualitative data. I read the book by Johnny Saldaña, the coding manual for qualitative researchers, as if I was reading a storybook. I followed the steps discussed in his book meticulously and succeeded in coding the transcripts. So far, it was going well and I managed to explore and describe the challenges experienced by nurse educators and was ready to begin the second phase.

Starting with the action research process itself where we would establish an action research group to address the challenges, was at first daunting. My biggest obstacle was the buy-in from the principal and the vice-principals. My negotiating skills were tested many times but I managed to get approval for the 10 members as well as myself to attend the six workshops – although it was made clear that work responsibilities came first.

I was again fortunate in the sense that my co-supervisor offered to facilitate the workshops, this took a huge burden off my shoulders. At the outset of the action research process, I had no idea where it would take us. Action research did indeed prove to be emergent. I found this phase the most challenging. Working with people is never easy, everyone has different personalities, ideas, opinions and respecting each other is extremely important. During this process my own patience, endurance and tolerance were tested repeatedly.

Preparing for every workshop, arranging the workshops, the monitoring and feedback meetings as well as the spin-offs was extremely hard work and also time consuming. Reminding the Change Champions and posting messages; these constant reminders took a lot of planning and dedication but, despite all the hardships, the entire action research process was worth it. Using the World Café to evaluate the action research process was such a fresh, fun and new approach. The participants enjoyed it tremendously. Workshops can at times be boring and keeping their attention was vital. The different exercises managed

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to do just that. The evaluation was positive and the action research process a success and totally exceeded my expectations.

The feedback received on how the project changed educational practices was promising. Even if the change was small and involved a small group of nurse educators, I strongly believe that it will rub off on others. If some educators could change their teaching strategies from traditional lecturing methods to more student-centred teaching and learning strategies, others will soon follow and I believe this change may have an influence on the students' critical thinking and clinical reasoning skills. The overall aim of this study was to facilitate a process of change towards improving educational practices in order to promote the development of undergraduate student nurses' clinical reasoning skills. In my opinion we have partially met the aim within the time constraints of completing the thesis however, this is to be expected in such an ambitious project where change in educational practices is the focal point of the project. Bringing about change is a long process and it is foreseen that the action plan will be implemented as a quality improvement initiative in 2017 and form part of a post-doctoral project.

7.6.2 CRITICAL REFLECTION ON LESSONS LEARNT

I reflect on the lessons learnt under specific headings.

7.6.2.1 Topic and context

Clinical reasoning is old news for some First World countries such as the USA and the UK. However, South Africa is a Third World country where some nursing education institutions have not even heard of the word clinical reasoning. This was also true for the nurse educators in the present study where the term was mistaken for critical thinking and this misinterpretation had to be clarified. The action research methodology used was perceived as a 'fresh approach' and for some nurse educators it was the first time they have ever sat around a table to work together mutually to address their challenges. More studies on clinical reasoning in developing countries are needed because the context is different. Conducting action research studies adhering to the underlying principles (refer to Section 1.9) should be used more often to address practical issues in nursing education.

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7.6.2.2 Paradigm

This action research study falls within the participatory worldview; a new paradigm as described by various authors and discussed thoroughly in Chapter 1. A representative group of nurse educators and HoDs were included in the action research group. However, it would have been of value if all academic staff could have participated in the action research process. Due to work-related obligations, this was just not possible. Hence, all academic staff was invited to attend professional development sessions and quality assurance workshops during which guidelines were compiled so that they too could benefit from the study. It is envisioned that the action plan will be implemented in 2017 as a quality improvement initiative. Action research was used as the theoretical framework to guide the study. It would have been valuable to use a theoretical framework that was embedded in teaching and learning of adult students such as the theory of learning of Malcolm Knowles (1970), the andragogy theory, which claims that adults learn differently from children. Additionally, I could have asked the ARG members to select a framework which best suited our context.

7.6.2.3 Methodology

During the action research process the critical reflection of the participants would have added value to the evaluation and success of the project. I acknowledge that asking the ARG members to keep a reflective journal in addition to my own would have produced more information for critical discussions on Phase 2 and 3 of the study. Due to work-related responsibilities, it was not always possible for all the action research group members to attend the workshops. I believe it would have been of benefit if all could be present all the time. Because of the heavy workload and work schedule of the nurse educators, all planned activities, for example, the values and beliefs clarification workshop and team building exercise involving all academic staff as well as the simulation laboratory project did not materialise.

The action plan will however, be implemented in 2017 and responsible people will then be identified to continue with the plans. The research was conducted over a two-year period and therefore the long-term objectives could not be explored. The study only included nurse educators and HoD participants from the nursing college. The opinions of other role players such as the professional nurses, students, representatives from the affiliated university and

Chapter 7: Conclusions, recommendations and limitations

representatives from the SAMHS Directorate would have certainly added to the success of the study by contributing additional multiple perspectives to the action plan.

7.7 CONCLUSION

This chapter concludes the thesis. It addressed the conclusion, the recommendations made and the limitations of the study. A personal reflection of the researcher was included. The research question ‘How can educational practices be improved to promote the development of undergraduate student nurses’ clinical reasoning skills?’ was addressed. Finally, an action plan was developed to improve educational practices at the South African Military Health Service Nursing College. The researcher also developed a conceptual framework to promote clinical reasoning skills.

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ANNEXURE A: ETHICS

A1 Permission to conduct research at the SAMHS Nursing College

Telephone: (012) 674 6040
082 461 3887
Fax: (012) 674 6046
Enquiries: Maj A. van Wyngaarden
E-mail: annavwyngaarden@hotmail.com



UNIVERSITEIT VAN PRETORIA
UNIVERSITY OF PRETORIA
YUNIBESITHI YA PRETORIA



SAMHS Nursing College
Private Bag X 1022
Thaba Tshwane
0143
20 January 2014

REQUEST PERMISSION TO CONDUCT RESEARCH AT SAMHS NURSING COLLEGE: MAJ A. VAN WYNGAARDEN 89765663PE

1. I, 89765663PE, Maj A. van Wyngaarden would like to request permission to conduct an action research study at SAMHS Nursing College for the fulfilment of the degree Doctoral Philosophiae (PhD in Nursing Education) at the University of Pretoria. The project is conducted under the supervision of Dr R. Leech and Dr I. Coetzee.

2. Your written approval is required to be able to conduct research within the SAMHS Nursing College. The research I wish to conduct is entitled: *Enabling nurse educators to utilise educational practices that promote the development of pre-graduate nurses' clinical reasoning skills through an action research study.*

3. The main research question to be answered: Can a collaborative effort succeed in enabling nurse educators to utilise educational practices within the class room that promote the development of pre-graduate student nurses' clinical reasoning skills? The aim of the study is to enable nurse educators to utilise educational practices within the class room that promote the development of pre-graduate student nurses' clinical reasoning skills.

4. Upon completion of the study, I undertake to provide the Department of Defence and the Nursing College with a bound copy of the full research report. If you require any further information, please do not hesitate to contact me.

5. Your positive consideration will be highly appreciated.

Annawwyngaarden Maj

(A. VAN WYNGAARDEN)
HOD QUALITY ASSURANCE: MAJ

Approved/Not Approved

*Relevant to Nursing Colleges and
Nurse educators*

Dean Lt Col

(A. DEAN)
ACTING OFFICER COMMANDING SAMHS NURSING COLLEGE: LT COL

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REQUEST PERMISSION TO CONTINUE
 VAN WYNGAARDEN 89765663PE



UNIVERSITEIT VAN PRETORIA
 UNIVERSITY OF PRETORIA
 YUNIBESITHI YA PRETORIA

AMHS NURSING COLLEGE: MAJ A.

Approved/Not Approved

Recommended. To be tabled at the
SAMHS Ethics Committee at 1 Wind Hospital.

(P.J. OELOFSE)
 GOC MHTF: BRIG GEN

DISTR

For Action

GOC SAMHS Training Formation
 OC SAMHS Nursing College

For Info

Office of the SG
 Director Nursing

"Health Warriors Serving the Brave"
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A2 Ethical approval: Faculty of Health Sciences Research Ethics Committee

The Research Ethics Committee, Faculty Health Sciences, University of Pretoria complies with GCP guidelines and has US Federal wide Assurance
• FWA 00002567, Approved dd 22 May 2007 Expires 20 Oct 2016.
• IRB 0000 2235 IORG0001762 Approved dd 22/04/2014 and Expires 22/04/2017.

26/03/2015

**Approval Certificate
New Application**

Ethics Reference No.: 84/2015

Title: Educational practices to promote student nurses' clinical reasoning skills

Dear Angeline van Wyngaarden

The **New Application** as supported by documents specified in your cover letter dated 20/02/2015 for your research received on the 27/02/2015, was approved by the Faculty of Health Sciences Research Ethics Committee on its quorate meeting of 25/03/2015.

Please note the following about your ethics approval:

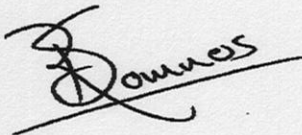
- Ethics Approval is valid for 2 years
- Please remember to use your protocol number (**84/2015**) on any documents or correspondence with the Research Ethics Committee regarding your research.
- Please note that the Research Ethics Committee may ask further questions, seek additional information, require further modification, or monitor the conduct of your research.

Ethics approval is subject to the following:

- The ethics approval is conditional on the receipt of 6 monthly written Progress Reports, and
- The ethics approval is conditional on the research being conducted as stipulated by the details of all documents submitted to the Committee. In the event that a further need arises to change who the investigators are, the methods or any other aspect, such changes must be submitted as an Amendment for approval by the Committee.

We wish you the best with your research.

Yours sincerely



Dr R Sommers; MBChB; MMed (Int); MPharMed.
Deputy Chairperson of the Faculty of Health Sciences Research Ethics Committee, University of Pretoria

The Faculty of Health Sciences Research Ethics Committee complies with the SA National Act 61 of 2003 as it pertains to health research and the United States Code of Federal Regulations Title 45 and 46. This committee abides by the ethical norms and principles for research, established by the Declaration of Helsinki, the South African Medical Research Council Guidelines as well as the Guidelines for Ethical Research: Principles Structures and Processes 2004 (Department of Health).

☎ 012 354 1677 ☎ 0866516047 ✉ deepeka.behari@up.ac.za 🌐 <http://www.healthethics-up.co.za>
✉ Private Bag X323, Arcadia, 0007 - 31 Bophelo Road, HW Snyman South Building, Level 2, Room 2.33, Gezina, Pretoria

A3 Ethical approval: 1 Military Hospital Research Ethics Committee

Tel: 012 314 0013
 Facsimile: 012 314 0013
 Enquiries: Prof / Lt Col
 M.K. Baker



1 Military Hospital
 Private Bag X1026
 Thaba Tshwane
 0143
 27 April 2015

CLINICAL TRIAL APPROVAL: “EDUCATIONAL PRACTICES TO PROMOTE STUDENT NURSES CLINICAL REASONING SKILLS.”

1. The 1 Military Hospital Research Ethics Committee (1MHREC) registered in South Africa with the National Health Research Ethics Council (NHREC) (REC-111208-019-RA) adhering to GCP/ICH and SA Clinical Trial guidelines, evaluated the above-mentioned protocol and additional documents.

2. The following members approved the study:

- a. Lt Col M.K. Baker: Neurologist, male, chairman 1 MHREC.
- b. Lt Col C.S.J. Duvenage: Specialist physician, female, member 1 MHREC.
- c. Lt Col S. Hassim: Medical Doctor, male, member 1 MHREC.
- d. Lt Col A.D. Moselane: Urologist, male, member 1 MHREC.
- e. Lt Col E.J. Venter: Periodontist, male, member 1 MHREC.
- f. Maj M.L. Kekana: Specialist physician, female, member 1 MHREC.
- g. DR T.J. Marè: Advocate, independent of the organization, male, member 1 MHREC.
- h. Mrs. C. Jackson: Layperson, independent of the organization, female, member 1 MHREC.

3. The following documents were evaluated:

- a. University of Pretoria Ethical Clearance Certificate
- b. Research Proposal
- c. Permission from SAMHS Nursing College
- d. Letter to Defence Intelligence
- e. Curriculum Vitae:
 - i. R. Leech
 - ii. I.M. Coetzee
 - iii. A. van Wyngaarden
- f. Acting OC support letter dated 23/09/2014
- g. Professional Indemnity and Needle stick Injury Insurance for Nursing Staff dated 13/03/2013
- h. South African Nursing Council 2015 Annual Practicing Certificate

4. The recommendations are: The study was ethically approved on 17 April 2015. The principal investigator, Maj A. van Wyngaarden, will be supervised by Dr R. Leech and Dr I. Coetzee. Report backs are to be made to the 1MHREC six monthly, in the event of any serious adverse events and on completion or termination of the study. Should publications result from the study the relevant manuscripts will also need to be approved by Military Counter Intelligence.

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5. The 1 MHREC wishes you



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A handwritten signature in black ink, appearing to read 'M.K. Baker'.

(M.K BAKER)

**CHAIRMAN 1 MILITARY HOSPITAL RESEARCH ETHICS COMMITTEE:
LT COL / PROF**

DIST

For Action

Maj. A van Wyngaarden

Health Warriors Serving the Brave
RESTRICTED



A4 Authority to conduct research in the Department of Defence



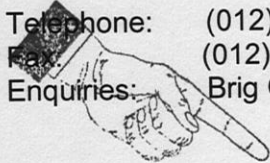
UNIVERSITEIT VAN PRETORIA
UNIVERSITY OF PRETORIA
YUNIBESITHI YA PRETORIA

Defence Intelligence

Department:
Defence
REPUBLIC OF SOUTH AFRICA

DI/DCIC/R/202/3/7

Telephone: (012) 315-0216
Fax: (012) 326-3246
Enquiries: Brig Gen M. Sizani



Defence Intelligence
Private Bag X337
Pretoria
0001
April 2015

SAHMS Nursing College (Maj A. van Wyngaarden)
Private Bag X1022
Thaba Tshwane
0143

AUTHORITY TO CONDUCT RESEARCH IN THE DEPARTMENT OF DEFENCE (DOD): MAJ A. VAN WYNGAARDEN

1. Request letter NURSCOL/R/89765663PE dd 27 March 2015 has reference.
2. Approval is hereby granted from a security perspective to Maj A. van Wyngaarden to conduct research in the DOD on the topic entitled **“Educational Practices to Promote Student Nurses Clinical Reasoning Skills”** for the fulfilment of the degree Doctoral Philosophiae (PhD in Nursing Education) at the University of Pretoria as requested
3. On completion the final research product must be submitted to Defence Intelligence (DI) Sub-Division Counter Intelligence (SDCI) for security scrutiny before it is released to any entity outside the DOD.
4. For your attention.


(G.S. SIZANI)

CHIEF DIRECTOR COUNTER INTELLIGENCE: MAJ GEN
KS/KS (Maj A. van Wyngaarden)



Lefapha la Boiphemelo . Umnyango wezokuVikela . Kgoro ya Tshireletso . iSebe lezoKhuselo . Department of Defence . Muhasho wa Tsiriledzo
UmNyango WezokuVikela . Ndzawulo ya swa Vusireheleri . Lehapha la Tshireletso . Departement van Verdediging . LITiko leTekuvikela

RESTRICTED



ANNEXURE B: PHASE 1

B1 Permission to launch the study

Telephone: (012) 674 6040
082 461 3887
Fax: (012) 674 6046
Enquiries: Maj A. van Wyngaarden
E-mail: annavwyngaarden@hotmail.com



SAMHS Nursing College
Private Bag X 1022
Thaba Tshwane
0143
27 June 2015

REQUEST PERMISSION TO LAUNCH AN ACTION RESEARCH STUDY: MAJ A. VAN WYNGAARDEN

1. The abovementioned refers.
2. I, 89765663PE Maj A. van Wyngaarden will be conducting a research study at SAMHS Nursing College for the fulfilment of the degree Doctoral Philosophiae (PhD in Nursing Education) at the University of Pretoria. The project is conducted under the supervision of Dr R. Leech and Dr I. Coetzee.
3. The study titled "Educational practices to promote student nurses' clinical reasoning skills" will aim to co-construct an action plan to improve educational practices in order to promote the development of undergraduate student nurses' clinical reasoning skills.
4. Action research will be used to conduct the research study by means of two phases. During phase one baseline data will be collected by means of unstructured interviews with nurse educators to explore and describe the challenges experienced by nurse educators in utilising alternative educational practices. During phase 2 an action research group will be established and focus groups will be held to co-construct an action plan. The study will benefit the Nursing College by means of active participation by nurse educators in addressing the current challenges experienced in utilising educational practices that promote clinical reasoning.
5. I would like to request permission to launch this study on 29 June 2015 after the Quality Assurance Workshop. The presentation will consist of a 10 minute video on clinical reasoning and a 10 minute presentation including question and answer session. This is only an information session and members will be requested to indicate their interest in participating (refer to attached invitation and form). Participation is voluntary and only interested members will be contacted by the researcher to secure appointments.
6. Your positive consideration will be highly appreciated.

A. van Wyngaarden Maj

**(A. VAN WYNGAARDEN)
HEAD OF DEPARTMENT QUALITY ASSURANCE SAMHS NURSING COLLEGE: MAJ**

Approved/Not approved Adherence to stipulated timeframes pls.

P.C. Letebele

**(P.C. LETEBELE)
OFFICER COMMANDING SAMHS NURSING COLLEGE: COL**

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B2 Invitation to participate in the study

INVITATION



All **NURSE EDUCATORS** and **MANAGERS** involved in the 4 year Diploma programme are invited to take part in an action research study.

Through collaboration and participation our educational practices can be improved to promote student nurses' clinical reasoning skills.

ESTABLISHING THE ACTION RESEARCH GROUP

Place: Conference Terrapin

Time: 09h00

Date: To be confirmed

The aim of this proposed study is to facilitate a process of change towards improving educational practices in order to promote the development of undergraduate student nurses' clinical reasoning skills.



B3 Interest form

EDUCATIONAL PRACTICES TO PROMOTE CLINICAL REASONING SKILLS

Please indicate your **interest** in participating in the action research study. Your participation will be highly appreciated. Place the completed form in the box provided or hand back to the researcher by 2 July 2015.

Participation is voluntary. If you indicated your interest you will be contacted by the researcher to secure an appointment.

Name:	
Surname:	
Cell phone number:	
Unstructured Interview:	Yes / No
Action Research Group:	Yes / No
Signature:	

Thank you

Angeline van Wyngaarden



B4 PICD: Phase 1

Participant information leaflet and informed consent

Phase 1 (Nurse Educators)

TITLE OF THE STUDY

Educational practices for promoting student nurses' clinical reasoning skills.

Dear Participant,

You are invited to participate in the action research study that will be conducted at the nursing college where you are working over a period of eighteen months. This information leaflet contains information that will help you understand your role in the study. If there is any need for further clarification, please feel free to contact the researcher, Angeline van Wyngaarden, at any time.

1. The nature and purpose of this study

Safe patient care relies on nurses having the ability to clinically reason. Clinical reasoning depends on the development of critical thinking skills. Nurses need critical thinking and clinical reasoning skills to perform their daily functions in practice. Nurse educators need to invest in teaching and learning approaches that enhance clinical reasoning skills of student nurses.

The aim of this proposed action research study is to facilitate a process of change towards improving educational practices in order to promote the development of undergraduate student nurses' clinical reasoning skills. The purpose of action research is to solve practical problems and facilitate change in practice.

In order to achieve this aim, the following objectives are proposed:

To explore and describe the challenges experienced by nurse educators in utilising educational practices to promote the development of undergraduate student nurses' clinical reasoning skills.

To co-construct an action plan to improve educational practices to promote the development of undergraduate student nurses' clinical reasoning skills.

2. Explanation of procedures

You as a nurse educator involved in the R425 programme are requested to participate in a collaborative effort to contribute to the development of skills, innovation and self-efficacy of nurse educators at the nursing college.

To obtain base-line data the researcher will perform an **in-depth interview** with you to explore and describe the challenges experienced by nurse educators in utilising educational practices to promote the development of undergraduate student nurses' clinical reasoning skills.

3. Risk and discomfort involved

There is a risk involved in this study that the nursing college might be identified during the examination and publishing of articles from the study. However your identity as a participant will be kept confidential. Your input into this action research study will also require some of your time and effort.

4. Benefits of the study

Your educational practices with regards to the facilitation of student nurses will be developed enabling you to utilise educational practices to promote the development of undergraduate student nurses' clinical reasoning skills.

5. Your rights as a participant

Your participation in this study is entirely voluntary. You can refuse to participate or stop at any time during the study without giving any reason or penalty.

6. Ethical approval

The Faculty of Health Sciences' Research Ethics Committee at the University of Pretoria, 1 Military Hospital Ethics Committee and the Nursing College has given written approval for this study.

7. Additional information

If you have any questions about the research you are welcome to contact the Research Ethics Committee Faculty of Health Sciences University of Pretoria's Office:

Tel: 012 354 1330 or 012 354 1677

Fax: 012 354 1367

Email: manda@med.up.ac.za

Email: deepeka.behari@up.ac.za

If you have any questions about your participation in this study, you should contact the researcher, Angeline van Wyngaarden

Work telephone: 012 674 6040

Cell phone: 082 462 3887

Email address: annavwyngaarden@hotmail.com

Alternatively you may contact my supervisor Dr R. Leech at:

Work telephone: (012) 354 2129

Email address: Ronell.leech@up.ac.za

8. Compensation

Your participation is voluntary. No compensation will be given for your participation.

9. Confidentiality

Your input into this research will be kept confidential. Results will be published and presented in such a manner that you as a participant will remain anonymous.



Consent to participate in this study

Phase 1 (Nurse Educator)

Informed consent

Your participation in this research is subject to reading and accepting the above information and signing the informed consent document below. A copy of the signed consent document will be given to you.

I confirm that the person asking my consent to take part in this study told me about the nature, process, risks, discomforts and benefits of the study. I have also received, read and understood the above written information regarding the study. I am aware that the results of the study, including personal details, will be anonymously processed into research reports. I am participating willingly. I have had time to ask questions and have no objections to participate in the study. I understand that there is no penalty should I wish to discontinue with the study and my withdrawal will not affect me in any way.

Participant's name: (Please print)

Participant's signature: Date.....

Witness name: (Please print)

Witness signature: Date.....

Investigator's name(Please print)

Investigator's signature Date.....



B5 Interview guide



Interview guide (Phase 1)

Date: _____

Participant: _____

Aspects	Description
Welcome the participant and introduce yourself.	
Discuss the PICD with the participant.	
Obtain permission for audio recording.	
Broad question: Describe the challenges that you are experiencing in utilising educational practices to promote clinical reasoning amongst the students?	
Sub-sequent questions will be guided by responses to the broad question.	
Thank the participant.	



B6 Example transcript and coding

NOTES	TRANSCRIPT	CODES	EMERGENT CATEGORIES
<p>Greeting</p> <p>Informed consent</p> <p>Q: Challenges experienced by NE</p>	<p><u>INTERVIEWER</u>: All right. Good morning Lynette.</p> <p><u>INTERVIEWEE</u>: Good morning Angeline.</p> <p><u>INTERVIEWER</u>: Thank you so much for attending this session and giving up your time for this interview. We are colleagues, so can, is it okay if I call you Lynette?</p> <p><u>INTERVIEWEE</u>: Yes, no problem.</p> <p><u>INTERVIEWER</u>: You are welcome to call me by my name. Lynette we have discussed the informed consent and you have given me your consent then to...</p> <p><u>INTERVIEWEE</u>: That is correct.</p> <p><u>INTERVIEWER</u>: ...to participate. I just want you to understand that it will be anonymous. When we have transcribed the information nowhere will it be shown that information came from you at any stage of the study okay?</p> <p><u>INTERVIEWEE</u>: I understand.</p> <p><u>INTERVIEWER</u>: I have also obtained your consent then to record. I also just want to indicate that I might be taking some field notes in between.</p> <p><u>INTERVIEWEE</u>: Okay.</p> <p><u>INTERVIEWER</u>: It is just so that I can maybe remember if I need to ask you a follow up question.</p> <p><u>INTERVIEWEE</u>: You are welcome.</p> <p><u>INTERVIEWER</u>: So the broad question, what I basically would like us to discuss is I would like you to tell me the challenges that you are experiencing as a lecturer here at this nursing college, or what the lecturers are</p>		

NOTES	TRANSCRIPT	CODES	EMERGENT CATEGORIES
<p>She talks about the challenges and says that we need to look at the NE & the student</p>	<p>experiencing, seeing that you are also an HOD, but you are also a lecturer because you also go to class. Those challenges that you experience, in maybe enhancing or trying to get the students to think critically and to develop clinical reasoning.</p> <p><u>INTERVIEWEE</u>: Okay. I think there is two basic things that we need to take into consideration very seriously. Number one is the tutor or the lecturer. Number two is the student.</p> <p><u>INTERVIEWER</u>: Okay.</p> <p><u>INTERVIEWEE</u>: Both of them should have or should possess the passion for what they are doing. Along with that your knowledge, and then we look at the skill and in which manner you can actually help the student to develop that skill.</p> <p><u>INTERVIEWER</u>: Okay.</p> <p><u>INTERVIEWEE</u>: So to a great extend I want to say it is twofold. One the educator, really interested in what I am doing. Is education really my passion? If education is my passion, is it only a matter of teaching theory, or is it also clinical and theory correlation in the class as well as in the clinical practice?</p>	<p>“twofold”</p> <p>“Passion” (NE & S) “Knowledge” (NE) “Skill” (NE)</p> <p>“twofold” “Interest” (NE) “Passion” (NE) “T & C correlation”</p>	<p>NE attributes NE expertise</p> <p>NE attributes</p>
<p>She talks about the student & career choice</p>	<p>Number two then the student. Does that student want to be in nursing? Am I only here to have a stepping stone in the Military to the next whatever to become a modo [this is a term used in the military to refer to a person you is transferring from the SAMHS (South African Military Health Service) or</p>	<p>Career choice (S)</p>	<p>Student selection</p>

NOTES	TRANSCRIPT	CODES	EMERGENT CATEGORIES
	<p>Nursing], go to dental services or to be lucky to become an Assistant Pharmacist, whatever, whatever? So we have those challenges that we are actually not training people here who are just (louder and slower to emphasise) interested in the nursing profession. But we are training people here who are here for only making a living and be able to support my family in a very rural area where there is actually nothing for them. There is a high rate of unemployment. There is a high rate of violence. There is a high rate of drug abuse and people come... I think it is, we can actually, you cannot actually blame the MSD programme, Military Skills and Development programme ...</p> <p><u>INTERVIEWER</u>: Ja [Yes].</p> <p><u>INTERVIEWEE</u>: ...that was an initiative to actually help South Africa with this unemployment, high unemployment rate that we have amongst our youth. But I mean, what did it now created for the different professions? People are coming in with very high scores, M scores. What do they call it lately?</p> <p><u>INTERVIEWER</u>: APS [Admission Point Score].</p> <p><u>INTERVIEWEE</u>: APS scores. Then they are qualified to study for nursing, but they actually wanted to become engineers or whatever. So ja [Yes], instead of then settling for nursing and going the four year way and see to it that they can actually school themselves into something, a diploma, even if it is caring for another human being. They become negative. They get involved in all other things because they are not heart and soul in what they do. They blame and shame the world instead of taking responsibility. I have an opportunity to do something. The reason why I say that; I didn't want to</p>	<p>"Interest" (S) Career choice (S) "making a living" "MSD programme" Career choice (S) "Interest" (S) "Negative" (S) Passion (S) "taking responsibility" (S)</p>	<p>Student selection Student selection Student attributes Student attributes</p>

NOTES	TRANSCRIPT	CODES	EMERGENT CATEGORIES
<p>PBL (?CR)</p> <p>She mentions this but immediately starts talking about Learning opportunities</p> <p>She talked about doing summative assessment on real patients some NE were negative and said there are not enough patients to do assessment on real cases however from her experience there was</p>	<p>become a nurse, but while I was studying I fell in love with my profession and I am still thirty five years later the same passion for nursing. So it is a twofold.</p> <p><u>INTERVIEWER</u>: Okay.</p> <p><u>INTERVIEWEE</u>: The other thing... You have spoken about the clinical...</p> <p><u>INTERVIEWER</u>: The clinical reasoning.</p> <p><u>INTERVIEWEE</u>: ...reasoning. What about applying the principals of problem based learning in the classroom as well as in the clinical setup?</p> <p><u>INTERVIEWER</u>: Ja [Yes].</p> <p><u>INTERVIEWEE</u>: You have, you have the wonderful opportunity. I once went to 1 Military Hospital. I was told there is no learning opportunities for your students. Your students cannot do examination here. It was the last group that I had in 2008. It wasn't true. I went there. We had the most wonderful opportunities there for our final, for the first year basic health assessment and treatment which means you do a head to toe inspection on a patient. You determine all the areas where nursing care is being needed, where a patient is, is self-caring and so forth with regard to his hygiene, whatever. It is fine, but you mention that the patient can get up himself, go to the bathroom, have a shower, what, what, what. But in any case we had the most interesting cases in 1 Military Hospital while I was told there was nothing (louder). Only from that sixty four group of students that 2008, Okay, it is a few moons ago. But in 2008 where I was told that sixty four students will not be able to do their</p>	<p>T & L strategies - PBL</p> <p>Assessment strategies - real patients</p>	

NOTES	TRANSCRIPT	CODES	EMERGENT CATEGORIES
<p>ample opportunities.</p> <p>?CR (student able to distinguish between quality of care and intensity of care)</p> <p>In my opinion she is talking about the students who are unable to reason in the clinical situation.</p>	<p>practical's in 1 Military Hospital there was only one patient utilized twice by two students. So we have wonderful opportunities.</p> <p>Are we talking here about quality of care, or are we talking here about intensity of care? If you talk about quality of care, if you had a cut on your finger and you have, you need a little band-aid, the quality for me putting that, cleaning that wound, even if it is with ordinary soap and water if there is nothing else, or a little bit of salt water or whatever and put the band-aid, that is quality of care. The intensity of care means that you don't, you do not only have a cut on your finger. But you need to be triage in casualty and you need to go through to a medical ward for a cardiovascular problem or whatever. The intensity of caring.</p> <p><u>INTERVIEWER</u>: Okay.</p> <p><u>INTERVIEWEE</u>: People do not teach. Do we really teach quality care and the difference between quality and intensive, intensity of care; because that is where the problem lies.</p> <p><u>INTERVIEWER</u>: Okay.</p> <p><u>INTERVIEWEE</u>: We had a problem where a student was reported. I asked the question in the clinical setup very recently. Do you feel that our students are on the same level as students from other colleges? This person said it is very difficult to go and discriminate and say do they have the same quality of theoretical knowledge than others in other colleges. But what she picked up is that the basic knowledge lack, because a woman with pre-eclampsia</p>	<p>Students lack basic knowledge</p>	

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<p>?CR this is CR this is precisely what we expect from the students.</p> <p>Now she starts talking about principles & application.</p> <p>NE should teach only the principles and how to apply these in different situations.</p>	<p>who's blood pressure was 160/110. Blood pressure in, I think it was, she said in, it was in a matter of one hour's time that woman's blood pressure went down to 100/60. Nobody reported it. It was a Military student working with that patient. Her concern was that the student didn't even take cognisance of the fact that this was the blood pressure, this is now. This person is not in pre-eclampsia anymore. This could be an indication of bleeding. That didn't even stroke the mind of the student. The student didn't report it. So this is the things that is worrying me.</p> <p><u>INTERVIEWER</u>: That is clinical reasoning.</p> <p><u>INTERVIEWEE</u>: Do we teach people what we call in Afrikaans beginsel oorskryding [principle encroachment]? Do we teach them...</p> <p><u>INTERVIEWER</u>: Principal...</p> <p><u>INTERVIEWEE</u>: ...to actually take one principal and apply it in different other situations, more complicated situations?</p> <p><u>INTERVIEWER</u>: I hear.</p> <p><u>INTERVIEWEE</u>: That is my concern. I say again, there is two factors involved for me. One is the educator. Do we really, we interview people, and I am very sorry to say this, you are not allowed to tape this I think. We interview people for...</p> <p><u>INTERVIEWER</u>: It is confidential. [I am finding it difficult to interrupt her, she</p>	<p>Lack CR (S)</p> <p>Student cannot reason</p> <p>T & L strategies - principle encroachment (take principle & apply in different situations)</p> <p>NE selection</p>	

NOTES	TRANSCRIPT	CODES	EMERGENT CATEGORIES
<p>She is relating a story to illustrate that NE are educators because of various reasons and that passion is not the main</p>	<p>is very vocal]</p> <p><u>INTERVIEWEE</u>: ...becoming educators. Do we really put them through a quick practical, come give us a... You know, say okay you have to do the quality assurance, just quickly prepare a lecture plan, quickly prepare this and this and that so that I can see to what extend do you actually have mastered the, the quality of teaching, clinically as well as theoretically. Do we do that, or do we just appoint people as lecturers because it is nice hours? Many moons ago Col [Colonel is the rank used in the Military for the Principal of the Nursing College] Rose did...</p> <p><u>INTERVIEWER</u>: I think that is a very, very good comment. [I am trying to get a word in however she just continues]</p> <p><u>INTERVIEWEE</u>: Many moons ago Colonel [Military rank used for the Principal of the College] Rose did a quick survey with us in the conference terrapin. Her question was why are you here. It was Delene van Dyk, myself, and it was Christa's previous colleague that...</p> <p><u>INTERVIEWER</u>: Nicky?</p> <p><u>INTERVIEWEE</u>: ...that went to... No that one is after her.</p> <p><u>INTERVIEWER</u>: Oh, no I don't their names.</p> <p><u>INTERVIEWEE</u>: ...who said that we are here because this is our passion. The rest of the people said I am here for the hours, I am here for the fact that I am off over weekends that I can plan my year according to my programme etc. I heard only three people out of approximately twenty four people saying I am here because I want to be here and I love what I am doing. That is something that we have to get back into nursing, is the passion for what we</p>	<p>"Passion" (NE)</p> <p>Career choice (NE)</p> <p>"Passion" (NE)</p>	<p>NE attributes</p> <p>NE selection</p>

NOTES	TRANSCRIPT	CODES	EMERGENT CATEGORIES
<p>driving force</p> <p>Again she is telling a story about students that cannot apply what they have learnt. They cannot reason re vital signs and what it means to the patient.</p> <p>?CR</p>	<p>are doing.</p> <p><u>INTERVIEWER</u>: Okay, I agree with you.</p> <p><u>INTERVIEWEE</u>: We should understand this care givers. You are working here with a person who is already, already compromised the moment I sign an admission, you are already compromised without any interference with your physical, psychological, social or emotional health. There was no interference yet. You were just admitted. There on admission it starts already there. Then you go through to the ward. What do we do? Do we really fulfil from there on what we are supposed to do, or it is just a matter of giving a lot of theory in class and assume it must go out there and they must go and apply? The other thing...</p> <p><u>INTERVIEWER</u>: Yes.</p> <p><u>INTERVIEWEE</u>: We must remember that you cannot... This I feel very strongly about. You cannot... Everybody will tell you that facilitation, clinical facilitation should happen next to the bed. I agree 100%, but without knowledge you cannot do that. You can teach somebody to take a blood pressure. You can take somebody from the street, you can tell them listen I want to teach you how to take with this baumanometer, with this stethoscope, I am going to teach you; or the dynamap or whatever. You must just push this button and just take the reading there. You can do that. But the person must understand what they are measuring. Why do we need... This is why it is called vital signs. Because it is the first indication that something is either</p>	<p>T & L strategies – content laden</p> <p>T & L strategies – lack application</p> <p>“Knowledge” (CR)</p> <p>Lack CR (S)</p>	

NOTES	TRANSCRIPT	CODES	EMERGENT CATEGORIES
<p>She is talking about the NC as a nice environment, no weekends no public holidays etc.</p>	<p>wrong with your patient, your patient is deteriorating, or your patient is fine and safe. I am concerned about that. It all boils down for me, as a Psych nurse, to passion.</p> <p><u>INTERVIEWER</u>: Okay.</p> <p><u>INTERVIEWEE</u>: I am sorry. People can feel whatever they want, I would say passion and are educators really educators or are they just here because it is nice hours to work, and you will be able to take your leave when your child is also on school holidays...</p> <p><u>INTERVIEWER</u>: Ja [Yes].</p> <p><u>INTERVIEWEE</u>: ...It is a nice environment. Ja [Yes], you have to go to the clinical, but you can get away with, with far less than what is actually expected of you, and you get away with that. You will get that some people are better clinical facilitators than theoretical facilitators. Then you will see that some people are much better theoretical facilitators than clinical facilitators. I don't know. Somewhere you have to marry the two, otherwise you are in big trouble.</p> <p><u>INTERVIEWER</u>: Ja [Yes] [to clarify that she feels that theory and clinical tutors should work together or that educators should be involved in both clinical and theory, but she answered it below before I asked].</p> <p><u>INTERVIEWEE</u>: If you are only a theoretical tutor who can convey theory, how are you actually going to teach the student if you do not have yourself a very deep understanding of this subject, the subject content and of the</p>	<p>"Passion"</p> <p>"Passion" (NE) Career choice (NE)</p> <p>Career choice (NE)</p> <p>NE skill, ability</p> <p>"Understanding" (NE)</p>	<p>NE expertise</p> <p>NE expertise</p>

NOTES	TRANSCRIPT	CODES	EMERGENT CATEGORIES
<p>She talks about Psychology and that some NE criticise them for teaching Psychology in the 1st stage</p> <p>?CR</p> <p>?CR</p>	<p>patient? How are you going to do that?</p> <p><u>INTERVIEWER</u>: Do you think we are lacking that here?</p> <p><u>INTERVIEWEE</u>: My concern is that we are very, very sharply criticised for having Psychology in the first stage where we teach the students about a patient has got emotions, a personality. There is certain specific personalities that you are going to deal with. Teach them communication skills so that they can do a basic admission interview and a discharge interview, etc. We are sharply criticised. But there we are teaching the student how to deal with another human being communication wise. It doesn't stop there. If you take Maslow, they do Maslow theory in... Some people will laugh because it is a very old theory and in the meantime there were a lot of comments on Maslow. But if you take Maslow's hierarchy of needs and you look at how they applied it in IGNS and now I come in Psychology and I apply it to a patient in a scenario. This is a seventy year old woman. She weighs 45kg, she is 170cm, which tells you immediately she is thin, she is bedridden etc. What complications will you expect? Then you tell them apply Maslow's hierarchy that you have also learned in the first semester in IGNS in Psychology to this patient. Go and apply from the first physiological level to the 6th transcendence level.</p> <p><u>INTERVIEWER</u>: And they do...?</p> <p><u>INTERVIEWEE</u>: They do okay.</p> <p><u>INTERVIEWER</u>: Okay.</p> <p><u>INTERVIEWEE</u>: They do okay, but you have to reinforce, reinforce, and</p>	<p>T & L strategies - communication skills</p> <p>T & L strategies - subject integration</p> <p>"Reinforce"</p>	

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	<p>reinforce it. Then for the first time, and this is what is my concern; it is not the first time that they are dealing with Maslow’s hierarchy of needs. But in Psychology we teach them to take that theory and apply it in general nursing science in the wards, because I want to see how you are you going to care for a patient from the physiological level. You need to know what is a physiological level, what is the needs, what does it involved, what should I do; safety security, love and belonging. It doesn’t mean you have to put your arms around the patient and kiss the patient every two hours you pass him or do his observations, whatever. It means that your patient must feel that this person cares for me. You can remember I told you I was there in that little passage awaiting a bed in another ward in one of the hospitals and I was lying there and everybody was very friendly to me who entered there and so forth, and my bed was plugged in and everything. So I could put myself up straight and lie down and whatever as I wished. But I had to phone and say just remember my Kefzol at 12:00. Your patient must feel he or she is part of that specific ward and is being cared for. The same with the level of self-image and self confidence in Maslow’s hierarchy. A patient who is not clean, a patient whose basic needs are not cared for, that patient will not experience that level of satisfaction. It will then definitely hampers him to reach the other higher levels.</p> <p><u>INTERVIEWER</u>: Ja [Yes].</p> <p><u>INTERVIEWEE</u>: You are not going to want to see your pastor as... I always explain to the students the moment they smell the food from the mess I lose them in class because they are hungry. It is a type of progression back to</p>	<p>T & L strategies - application</p> <p>“Caring”</p> <p>“Caring”</p>	

NOTES	TRANSCRIPT	CODES	EMERGENT CATEGORIES
<p>She refers to NEs as special people</p> <p>Q: Role modelling and mentoring</p>	<p>your very basic physiological need. No Major Lundie can stop talking because I am now hungry, I have smelled the food from the mess. If you are not hungry it will not bother you. But if you are hungry that will be what it is.</p> <p><u>INTERVIEWER</u>: Yes.</p> <p><u>INTERVIEWEE</u>: So my concern is passion. My concern is do we really know who we appoint as nurse educators, because it is special people. It is people who must understand that you do not only have a role in the class, that you have to have the background and you have to have an understanding of the clinical which is happening on the other side. Don't come and tell me and say to me that we don't have enough clinical opportunities in the hospitals, we have. We have more than enough clinical opportunities, even for basic nursing care. This is my concern. I am also concerned about the basics (louder) that is falling through. The physical basic care next to the bed of the patient. But you need to have knowledge before you can go and stand there. The person who is integrating that theory with the clinical needs to have that ability. If you do not have it, I am sorry. You can either learn from other people to master that skills, but if you do not have it you are lost.</p> <p><u>INTERVIEWER</u>: So you think that the lecturers can improve on that skill from role modelling and mentorship?</p> <p><u>INTERVIEWEE</u>: I think they can if they really, if they are really interested in what I do.</p> <p><u>INTERVIEWER</u>: Okay.</p> <p><u>INTERVIEWEE</u>: If they have a passion for what they are doing.</p>	<p>"Special people" (NE)</p> <p>"Understanding" (NE)</p> <p>"Knowledge"</p> <p>"Ability"</p> <p>"Skills"</p> <p>"Interest" (NE)</p> <p>"Passion" (NE)</p>	<p>NE attributes</p> <p>NE expertise</p>

NOTES	TRANSCRIPT	CODES	EMERGENT CATEGORIES
	<p><u>INTERVIEWER</u>: Ja [Yes].</p> <p><u>INTERVIEWEE</u>: We are sitting with a generation who is young. Basically in the Military to have a kind of salary and the life and the career and they are not very much interested in politics and so forth. They actually want a career, they want a house, they want a car, they want a family. This is why they are here for. Some of them care for their families at home, not everybody.</p> <p><u>INTERVIEWER</u>: Okay.</p> <p><u>INTERVIEWEE</u>: You must have the skill to grab, to try and grab that person, get hold of him or her and bring them to the profession and win them over for the profession. If you do not succeed in that, sorry to say that it is always the facilitator's problem, but it might have a very large influence. Mentoring and...(pause) I don't know Angeline. You can never expect from your children to walk a road to do the right things if you do not do it yourself. But for some people you can do it, but you will never be able to get them on that same level and to get them where you are. This is why I say we must go and look when we select educators. We have to look for our own. I agree there. But what was said the other day, people that we have trained...</p> <p><u>INTERVIEWER</u>: You mean... Oh, previous students of ours.</p> <p><u>INTERVIEWEE</u>: ...previous students of our own; so that we can teach them. If you talk about the preceptorship, if you talk about mentoring, if you talk about role modelling, then they must come to the nursing college, be in a clinical setup and see how you integrate your theory with your clinical. All of us went away of learning from somebody. I haven't even in my whole life, in</p>	<p>Career choice (NE)</p> <p>Skill (NE)</p> <p>Mentoring (NE)</p> <p>NE selection</p> <p>"Preceptorship" (NE)</p> <p>"Mentoring" (NE)</p> <p>"Role modelling" (NE)</p>	<p>NE support and guidance</p> <p>NE support and guidance</p>

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	<p>this approximately thirty five years of nursing, I have never come across one person who had all the qualities of a role model that a role model should have, but I have learned from different people, people with different skills. That is what is important. You need to learn from people.</p> <p><u>INTERVIEWER</u>: Okay.</p> <p><u>INTERVIEWEE</u>: But if you have people who are not interested in the wards and what they are doing, you have people at the nursing college in training who is not interested in what they are doing, I am afraid we are fighting a losing battle.</p> <p><u>INTERVIEWER</u>: So for you it all boils down to passion and for wanting to be [she continues talking difficult to interrupt to clarify].</p> <p><u>INTERVIEWEE</u>: Passion, wanting to be where you are, have that special ability or develop the ability and skill to be a good educator as well as a Clinical Facilitator because that is important. You can never, although we want the theory department and we want a separate clinical department, you can never separate the two from each other.</p> <p><u>INTERVIEWER</u>: Ja, ja [Yes,yes].</p> <p><u>INTERVIEWEE</u>: For me it was much better to have the student in class. I had my group and I followed my group through in the clinical practice. We all knew this was the clinical outcomes, this is how we are going to work, and this is the days in which we are going to be in the wards which was thrice a week. There were more than ample time to reach your student. Half an hour every fortnight was nothing. We reached that, far more than that with your clinical accompaniment. We worked very close together. But it takes really a special</p>	<p>“learn from people”</p> <p>“Interest” (NE)</p> <p>“Interest” (NE)</p> <p>“Passion” (NE)</p> <p>“Interest” (NE)</p> <p>“Ability” (NE)</p> <p>“Skill” (NE)</p> <p>T & C correlation</p> <p>“Special person” (NE)</p>	<p>NE support and guidance</p> <p>NE attributes</p> <p>NE attributes</p> <p>NE expertise</p>

NOTES	TRANSCRIPT	CODES	EMERGENT CATEGORIES
	<p>person who, who have that interest to be in the academic side or theory side and also mobile to go to the clinical institution and see that you...</p> <p><u>INTERVIEWER</u>: Ja [Yes].</p> <p><u>INTERVIEWEE</u>: ...build on what you have taught them in class. I don't know...</p> <p><u>INTERVIEWER</u>: Okay.</p> <p><u>INTERVIEWEE</u>: ...passion for me is very important, the ability to do that and a very, very deep knowledge and understanding of nursing.</p> <p><u>INTERVIEWER</u>: Okay.</p> <p><u>INTERVIEWEE</u>: It is actually nursing is not only a job. We know that.</p> <p><u>INTERVIEWER</u>: Ja, ja, ja [Yes, yes, yes].</p> <p><u>INTERVIEWEE</u>: We all want money. We have fought for that. We have prayed for that. We know that... But we know that there is a certain thing that goes along with nursing, and that is the passion to be there, to be a caregiver and to see this as a profession like the medical profession.</p> <p><u>INTERVIEWER</u>: Ja, ja [Yes, yes]. I would just like to follow up on... You mentioned you, you really think that problem based learning is really a method of enhancing or developing clinical reasoning students.</p> <p><u>INTERVIEWEE</u>: Yes, but...</p> <p><u>INTERVIEWER</u>: Do we utilize that here? Do you think the lecturers...? [P3 very talkative]</p> <p><u>INTERVIEWEE</u>: I think the people [nurse educators] do not understand the</p>	<p>"Interest" (NE)</p> <p>T & C correlation</p> <p>"Passion" (NE)</p> <p>"Knowledge" (NE)</p> <p>"Understanding" (NE)</p> <p>"Passion" (NE)</p> <p>T & L strategies - lack</p>	<p>NE expertise</p>

NOTES	TRANSCRIPT	CODES	EMERGENT CATEGORIES
<p>I followed up on PBL she mentioned earlier</p> <p>She says that NE do not understand PBL and then she explains PBL to me using an example</p>	<p>very basics of problem based learning. For instance if you give an example for the students in class, a patient is presenting with lower pelvic pain, say on the right side, whatever. Then they have to go and quickly go through okay is it, what type of pain is it, when did it start, how has it start, how is developing, and then what organs is in that area of the pelvic area and what can it be. If you teach them to go through this whole process of how do you... If a patient complain about chest pain, is it always cardiovascular or can it be pneumonia or can it be pleuritis or whatever? You have to go through all these things. So you have to look at the signs and symptoms thoroughly, then go and... But it must be a process that follows each other and it must be in minutes. We are not talking here about taking hours. But you have to take them first from the class through this problem and then they will start analyzing and becoming, I think masters to actually understand what problem solving is all about. With this saying... The problem that I said lower pelvic pain, is it a sharp pain, did it start recently or am I walking with this for a long time now. If you push down, if you are going to urinate or whatever, when is it more uncomfortable? You are, you are actually taking your student through a process of reasoning to come to the answer at the end.</p> <p><u>INTERVIEWER:</u> Ja [Yes].</p> <p><u>INTERVIEWEE:</u> It will take longer. It will take time. It will take patience in class to get there. But eventually you will get there. The OBE [Outcomes-based Education] is not the... You know, there is the content go and study, tomorrow you will come and... What I see in question papers what is a concern to me is if you ask them to describe signs and symptoms from certain</p>	<p>"Understanding" of PBL</p> <p>T & L strategies - PBL time consuming</p> <p>Patience (NE)</p>	<p>NE attributes</p>

NOTES	TRANSCRIPT	CODES	EMERGENT CATEGORIES
	<p>things; and I pick this up with the speciality subjects as Psychiatry, Midwifery and Community and General Nursing Science, they do not have a clue what is signs and symptoms oppose to what will the patient present with.</p> <p><u>INTERVIEWER</u>: Ja [Yes].</p> <p><u>INTERVIEWEE</u>: They do not see that. Why not? The patient is presenting with, in a scenario with this.</p> <p><u>INTERVIEWER</u>: Yes.</p> <p><u>INTERVIEWEE</u>: They cannot answer that question.</p> <p><u>INTERVIEWER</u>: Why do you think so?</p> <p><u>INTERVIEWEE</u>: Not according to... You must go there and you have to go and ask, okay the signs and symptoms of high blood pressure. They do not answer that. Even you will find that people who are writing the scenarios in an examination paper, why do they write a scenario there when they are going to ask the students to explain the signs and symptoms of hypertension. If you have got the scenario there of a woman who is forty eight years old, she has been treated for hypertension for the past three years, acute hypertension for the past or severe for the past three years, this is a medication, there is now a relapse, she need to be reassessed in the hospital. Admit her, put her through a battery of test to see what is going on, what is now having influence on her hypertension. But in the meantime what do you think, what do you see, what do you evaluate from your patient? No they don't do that. They will fall back to only the knowledge that they have. Okay a high intake of salt.</p> <p><u>INTERVIEWER</u>: In other words regurgitation</p>	<p>Lack CR (S)</p> <p>Assessment strategies – lack correct use of scenarios</p> <p>Assessment strategies – test knowledge</p>	<p>T L & A strategies</p>

NOTES	TRANSCRIPT	CODES	EMERGENT CATEGORIES
<p>Here I asked about resources she feels the NE is the best tool</p> <p>She is saying that NE must have the skill to facilitate they must do target analysis of the</p>	<p><u>INTERVIEWEE</u>: Ja [Yes], that is just regurgitation. This is what is problem, where problem base come in. You will actually, I think, be able to...</p> <p><u>INTERVIEWER</u>: Do you think we have it...</p> <p><u>INTERVIEWEE</u>: ...eliminate this. I don't know, I don't know. But this is...</p> <p><u>INTERVIEWER</u>: Ja [Yes], no, no, no that is fine. You are open to say how you feel. I was thinking with this problem based, do you think we have the tools for, for this? Would we be able to, for example if we...[She is so talkative again find it difficult to conclude my question]</p> <p><u>INTERVIEWEE</u>: Again, who is your biggest tool? We are talking about training aids, we are talking about having smart boards. We are talking about our light projector and laptops. We are talking about interactive study guides.</p> <p>Who and what is the biggest training aid that you can get; is the human being standing in front of the class.</p> <p><u>INTERVIEWER</u>: Very interesting yes.</p> <p><u>INTERVIEWEE</u>: Not with the handbook on the one arm and the learning outcome on the other arm, she must know, he must know what they are doing, where they are. Because... and also what is very important is go and look at your target group analysis. Go and look at who is your students, what is the level of your students, where is your students. When we had this large intake of staff nurses starting with a four year course, the staff nurses struggle. They really struggle to, to keep up with the four year course. One day I asked them why, why... No but they are slow. So I said to them yes you are slow, but you must remember you have already knowledge. Now that what I am</p>	<p>Assessment strategies - "Regurgitation"</p> <p>NE as tool</p> <p>Skill (NE)</p> <p>T & L strategies - target group analysis</p>	<p>NE expertise</p> <p>NE Expertise</p>

NOTES	TRANSCRIPT	CODES	EMERGENT CATEGORIES
<p>students</p> <p>She talks about the allocation models utilised in the wards which is detrimental to the students CR development. Students should be allocated patients and care for that</p>	<p>teaching you in class, you measure it against the knowledge that you already have. So it will take you longer than that little one who is going to grasp and just, like a parrot, just put it in the back of their head and then okay fine, emotion has got three components, whoala, whoala. There we will go. This person will sit there and he and she will try to measure the content that you have just explained to them amongst what they already know. So this is why they are slower. Then the next moment they did much better in IGNS. I said to them why do you do so poorly in IGNS, because you are already as staff nurses masters of IGNS. Some of you stand in for General Nurses, qualified General Nurses in the ward and now you come to the first and the second stage and you cannot pass your IGNS. Why? Because you have got the knowledge, but you must learn to put this knowledge on paper. You must learn to work with the knowledge that you have. So I think this is another thing. We do not teach the people to work. A reason for that I think is...</p> <p><u>INTERVIEWER</u>: Okay.</p> <p><u>INTERVIEWEE</u>: If you are going to the wards, the students are being assigned to the sluice for the day. People are being assigned to vital ops for the day, theatre preparations for the day, meals and medication for the day.</p> <p><u>INTERVIEWER</u>: Okay.</p> <p><u>INTERVIEWEE</u>: Why not? Why not? Let the students do holistic nursing care from bed one or from room one to room four. All the people in that ward will be assigned to a senior and a second and a junior student so that we can all work together in... Not, not I will be on wound dressings and you will</p>	<p>Clinical setting – lack “Holistic nursing care”</p>	<p>Nursing care models</p>

NOTES	TRANSCRIPT	CODES	EMERGENT CATEGORIES
<p>patient in totality.</p> <p>She explains fragmented care to me and relates a story of a student nurse that did not notice the patients comfort and blames task orientated care</p>	<p>quickly do... No. This is where students are rushing through vital signs. They do not properly take the pulse, they do not do the temperature. I saw that many times.</p> <p><u>INTERVIEWER</u>: In other words they don't think of what they have just done ne [affirmative]?</p> <p><u>INTERVIEWEE</u>: The patient is lying there so uncomfortable. I walked in, I have got an appointment with one of the students. I say the patient is uncomfortable, yes Major [rank used in the military for the HOD] I am waiting for you. It was an aseptic that we were supposed to do. I said no, no, no this patient in this ward is uncomfortable so let's quickly just help her. Then no, but my patient is waiting for us, he is sitting in the chair, he is waiting for us. These people will be fixed at 10:00. I said ja [Yes] but it is now 09:15. The patient is in pain, the patient is uncomfortable. Who is working in this area? Nobody is working in that area. There is people on vital signs. There is people on intake and output. So who is now going to actually attend to the patient's physical care if we fragment holistic patient care to certain tasks?</p> <p><u>INTERVIEWER</u>: Ja [Yes].</p> <p><u>INTERVIEWEE</u>: I don't agree with that. I have spoken to the applicable people...</p> <p><u>INTERVIEWER</u>: That is also very interesting.</p> <p><u>INTERVIEWEE</u>: ...many times about it where I was told the first stage student is not supposed to do a head to toe inspection. Why not? I can walk into a ward today and I can see immediately from six people lying there who is the one who is in pain, who is the one who is worrying and troubling. Most</p>	<p>Clinical setting - Task allocation</p> <p>Clinical setting - fragmented care</p>	<p>Nursing care models</p>

NOTES	TRANSCRIPT	CODES	EMERGENT CATEGORIES
	<p>probably who is the one with the liver problem, who is the one with the cardiovascular problem, because just by observing your patients. We want to teach our students that your eyes and your ear and your senses are the most important skills that you have and the most important instruments that you have in nursing.</p> <p><u>INTERVIEWER</u>: Yes. [she answers me before I get an opportunity to clarify or ask her to elaborate]</p> <p><u>INTERVIEWEE</u>: But what do we do? We fragment a patient into tasks. That one will be your intake and output. To whom must this patient say I am uncomfortable and I am in pain? The patient said to me Major [the rank used in the military for the HOD] I have reported it to three people already since 08:30. This is now 09:15. The student tells me the patient must wait until 10:00 because somebody will come and fix them just before, or before 10:00, 09:50 just before visiting hours 10:00 or 10:30. I cannot remember. I was so shocked. I said no the patient is in pain now. The patient is uncomfortable now. We address this now. We are not working towards certain tasks. She works with the patient holistically. So I am very, very concerned about that. I don't know how they do it recently in general nursing science. I have been out of general nursing science since 2009 I am concerned. Luckily in Psychiatry the students are being forced to look at the patient comprehensively.</p> <p><u>INTERVIEWER</u>: Okay.</p> <p><u>INTERVIEWEE</u>: From the physical part, from admission up until social, emotional, psycho... Emotional as well as physically although they can give</p>	<p>Clinical setting - fragmented care</p>	<p>Nursing care models</p>

NOTES	TRANSCRIPT	CODES	EMERGENT CATEGORIES
	<p>a little bit more attention to vital ops and so forth, specifically people on new treatment, anti-depressants and so forth. It might happen that it can influence their vital signs. So I will say we can work that in I think SANC [South African Nursing Council]... It was one of the things that SANC addressed when we were at the psychiatric institutions...</p> <p><u>INTERVIEWER</u>: Okay.</p> <p><u>INTERVIEWEE</u>: ...where our students is going to. They said. They want to see that at least once a day or twice a day that vital ops are being done.</p> <p><u>INTERVIEWER</u>: Oh all right.</p> <p><u>INTERVIEWEE</u>: Ja [Yes] but the patients goes to this Psychiatrist, the Psychiatrist quickly do the blood pressure because he is the one who is putting the patient on medication and so forth. So he is the one that wants to check. But it is better in the ward to have a routine vital observation round once or twice a day in Psychiatry as well. I am concerned because we are fragmenting a patient into different tasks which is assigned to different people. They do not get the holistic picture of the patient.</p> <p><u>INTERVIEWER</u>: Ja [Yes], and therefore they cannot necessarily have a query because they don't see it.</p> <p><u>INTERVIEWEE</u>: Ja, ja [Yes, yes]. Critical... You talk about critical reasoning or clinical reasoning. Another thing is that I like to point out in Psychology in the first stage to the students is you look at the patient and you have to... It is the platinum rule I want to say. Not how will Lynette feel in Angeline's shoes. How does Angeline feel in her shoes and Lynette in her own shoes?</p>	<p>Clinical setting - fragmented care</p> <p>Clinical setting – lack “Holistic nursing care”</p>	<p>Nursing care models</p>

NOTES	TRANSCRIPT	CODES	EMERGENT CATEGORIES
<p>Putting yourself in the patients shoes</p> <p>Talks about teaching students to take the history of the patient into consideration getting to know your patients well.</p>	<p>I can never imagine me in your situation and you can never imagine yourself in my situation. That is the platinum rule.</p> <p><u>INTERVIEWER</u>: Okay.</p> <p><u>INTERVIEWEE</u>: Where this patient is coming from? Now we are doing a discharge and we give the medication to the patient and you say to the patient... Even military patients... I am very, very serious. Military patients; you say okay this is your medication, you are going to take it three times a day or thrice a day. It depends on the language the patient is speaking, you are going to explain to them that with each meal you are going to take this tablet. There are patients who get one meal in twenty four hours. How are you going to explain to that patient to take this medication three times daily with meals?</p> <p><u>INTERVIEWER</u>: It becomes difficult.</p> <p><u>INTERVIEWEE</u>: It becomes difficult. Know your patient, what is the background of your patient. This is why I say they can reason with me as far as they can. We can go from here to wherever, Timbaktu and back. I say it all depends on passion. It all depends on your interest and it all depends on what do you really care about the human being that is sitting in front of you. Do you really care about people? Do you really care about this person sitting here. Where is he coming from? That patient coming on in a trolley in casualties, quickly and the nurse is talking on her cell phone with her boyfriend, making a date for tonight... That patient who is in need of oxygen and feels uncomfortable. I saw with my own mother when she was hospitalised the last time when she was severely ill they... The two young</p>	<p>"Passion" (S)</p> <p>"Interest" (S)</p> <p>"Caring" (S)</p>	<p>Student attributes</p>

NOTES	TRANSCRIPT	CODES	EMERGENT CATEGORIES
<p>According to this participant you can be mentored but if you as NE are not passionate about what you are doing you can forget about it.</p>	<p>people were talking about their dates the previous evening and I, I didn't go brag and say I am also a nurse and so forth. I didn't want to do that because that normally... This is a problem. Why should I hide it? I should be proud to go there. Not to threaten people. You must be able to do your job. I shouldn't be a threat to you. You must be able to do, to do your job. You are too afraid to walk in there with your uniform so people can say ahhh her daughter is a nurse and she is going to throw around herself here and she is going to order us around. It is not like that. It is actually very sad. My mother just sighed, and I showed them with my hand please go and talk... Later on I went to them and say my mom is not interested in your talk. She is dying, she knows she is dying. She is not interested to hear what you are talking and laughing about. We have to take that in consideration.</p> <p><u>INTERVIEWER</u>: Ja [Yes] of course.</p> <p><u>INTERVIEWEE</u>: Not because she is my mother. But even if she was your mother that I was actually treating there as a nurse, you take these things into consideration. We take so many things for granted. The respect... This is why I say if you do not really have the passion, if you do not really care, there is nothing that you can do. You can have the best mentors, you can have the best preceptors. You can have whatever if you do not have the care and the passion, you can forget about it.</p> <p><u>INTERVIEWER</u>: That is so true.</p> <p><u>INTERVIEWEE</u>: We can't forget it. Ange, it is sad but it is true. We will most probably not be able to see this through, but it is sad. But it is true. If you do</p>	<p>"Passion" (NE) "</p>	

NOTES	TRANSCRIPT	CODES	EMERGENT CATEGORIES
<p>She talks about assessment on real patients.</p>	<p>not have the passion... I saw that with students of mine. I can just tell you quickly, we had a first year student a few years when Tracy and myself were busy with an examination, this comprehensive, basic assessment of the patient. Head to toe inspection and tell us what will you do as a first stage student caring for this patient? I don't want to know what the doctor will do, but some of them were so sharp they took the medical file and they said they are on this and this and this medication and so forth. So that was your candidates who got distinctions. But what we wanted to see is will you be able as a first stage student, a first year student to manage a patient basically, to understand. The patient is lying there, there is an infusion. There is a catheter, urinary catheter and all the basic things. While we were standing there the women got... I don't know if she got antibiotics just before that. Then she got a reaction on that. She has started having a rash and she started to become very uncomfortable and reddish. The student was an old Staff Nurse. She stopped the procedure just there, her examination and she said sorry Major I need to attend to this patient she is having an anaphylaxis on the medication that we have given to her. She stopped there and she went, she got the sister, they phoned the doctor, they came back, they give her all the medication that she needed and the patient was better. They gave her a bit of oxygen just to support her and get her calm and calculated. Again when the patient was lying there and she said sjoe I feel much better, the students said can we now, can I now continue with my procedure? We said no, we are done thank you.</p> <p><u>INTERVIEWER:</u> Ja [Yes] that is fantastic.</p>	<p>t</p> <p>NA</p>	

NOTES	TRANSCRIPT	CODES	EMERGENT CATEGORIES
	<p><u>INTERVIEWEE</u>: Because we saw that she could do without going through our own little instrument, we could see that this, this woman thoroughly observed her patient. She saw there was a problem. She knew this women got her medication about fifteen or twenty minutes before and this patient is getting a reaction on the medication and she immediately responded on that. They were immediately ready to actually prevent this patient from going in anaphylactic shock. That is all I want to see. When we said to her no we are done thank you she said no but, but I didn't do my... We said you did your examination now. No but I didn't... Yes you did your examination thank you, because we could see.</p> <p><u>INTERVIEWER</u>: Ja, ja [Yes, yes].</p> <p><u>INTERVIEWEE</u>: If a nurse can do that... Even if she is a staff nurse now, first year nurse, that is what we want to see.</p> <p><u>INTERVIEWER</u>: Yes, yes.</p> <p><u>INTERVIEWEE</u>: So Ange I don't know if I have answered your questions, but...</p> <p><u>INTERVIEWER</u>: You have thank you.</p> <p><u>INTERVIEWEE</u>: ...I am a Psych nurse and they say all Psych nurses are cracked and that, thank God that is where the light shines through. For me it is about the passion, the caring. Do you really want to be here? Are you really prepared to walk the extra mile to teach the student how to take the theory to the clinical and understand what you are doing?</p> <p><u>INTERVIEWER</u>: Ja [Yes]. (She summed it up herself)</p>	<p>NA</p> <p>“Passion” (NE)</p> <p>“Caring” (NE)</p> <p>“Interest” (NE)</p>	

NOTES	TRANSCRIPT	CODES	EMERGENT CATEGORIES
<p>Ending the interview</p> <p>Thanking the P3</p>	<p><u>INTERVIEWEE</u>: I think clinical reasoning boils down to having good knowledge, a body of knowledge of what you are supposed to do... We teach... I always tell the students you must remember we teach you approximately 200% of content. We only test 100% in a question paper because we cannot include everything that we taught you in a semester in a question paper. We can just cover as much as we can for that hundred marks. If you get fifty, you only know a quarter of what you are supposed to know, not half, a quarter. So ja [Yes] I think if I answered your questions okay?</p> <p><u>INTERVIEWER</u>: Yes, thank you so much Lynette for your time, I really do appreciate it. Yes we are done if you feel there is nothing more...</p> <p><u>INTERVIEWEE</u>: No I am fine.</p> <p><u>INTERVIEWER</u>: ...you want to share with me.</p> <p><u>INTERVIEWEE</u>: I think on the academic side you can go and reason about a lot of other academic things. But I think for me it lies in the passion and in the skill.</p> <p><u>INTERVIEWER</u>: The skill of the nurse educator?</p> <p><u>INTERVIEWEE</u>: The skill of nurse educator and how does she, or is she able to actually take the student where the student is and bring the student to the body of knowledge and then take them through to the clinical where they can actually apply what they have learned.</p> <p><u>INTERVIEWER</u>: Ja [Yes], thank you so much Lynette.</p> <p><u>INTERVIEWEE</u>: You are welcome.</p> <p><u>INTERVIEWER</u>: Thanks.</p>	<p>"Knowledge" (CR)</p> <p>"Passion"</p> <p>"Skill"</p> <p>T & C integration / correlation</p>	

Data analysis process (cycle 2)

I started cycle 2 analysis by following the steps below:

1. Read through the transcript and changed the codes to codes used in the last few analysis for consistency (checking that the same codes are used to explain the same content throughout the transcripts).
2. As I read through and I think of a possible category I added it in the 4th column.
3. Deleted codes I thought was unnecessary or combined codes to reduce the number of codes.

Analytic memo

I am finding it much easier to identify codes that are similar and therefore can be reduced to one code used throughout all the interview transcripts. I am also able to identify text that is not applicable and therefore need not be coded.



B7 Summary of the findings for member checking

Telephone: 012 674 6040
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Enquiries: Maj A. van Wyngaarden



Nursing College
Private Bag X 1022
Thaba Tshwane
0143
9 November 2015

MEMBER CHECKING: INTERVIEWS HELD WITH NURSE EDUCATORS REGARDING CHALLENGES EXPERIENCED IN UTILISING EDUCATIONAL PRACTICES THAT PROMOTE STUDENTS CLINICAL REASONING SKILLS

1. Please give feedback regarding the above directly on the table attached. The table provides a summary of the challenges identified during the in depth interviews held with Nurse Educators by Maj van Wyngaarden.
2. Peruse the table attached and indicate directly on the table if you are in agreement by ticking the different sub-categories. Please add anything that you feel was not included and should be addressed. Please indicate your feedback directly on the attached table in different colour pens and sign the last page. Hand back to Maj van Wyngaarden by **27 November 2015**.
3. Your cooperation will be highly appreciated.

(A. VAN WYNGAARDEN)
HOD QUALITY ASSURANCE SAMHS NURSING COLLEGE: MAJ



Summary of the challenges experienced by nurse educators in utilising educational practices that promote the development of student nurses' clinical reasoning skills

Themes	Categories	Sub-categories
Educational practices	Assessment strategies	Lack application <ul style="list-style-type: none"> Limited use of scenarios and case studies Resistance to application
		Internal moderators <ul style="list-style-type: none"> Old school Resistance to change
		Lack assessment on real patients <ul style="list-style-type: none"> Simulation used for clinical formative and summative assessments
	Teaching & learning strategies	Lack application during teaching <ul style="list-style-type: none"> Limited use of scenarios and case studies
		Utilising traditional teaching strategies
		Lack innovative teaching strategies <ul style="list-style-type: none"> Lack knowledge and expertise Lack time Lecturing using PowerPoint is the norm
	Curriculum	Semester system <ul style="list-style-type: none"> Loosing clinical exposure due to two examination periods per year Time consuming
		Content laden <ul style="list-style-type: none"> Time consuming
		Standardisation <ul style="list-style-type: none"> Third year congested, limited clinical exposure of students
		Lack revision <ul style="list-style-type: none"> Current issues not incorporated
	Inadequate resources	Limited human resource <ul style="list-style-type: none"> Clinical preceptors Nurse educators Typist Skills lab assistant
		Limited infrastructure <ul style="list-style-type: none"> Classrooms Simulation laboratory Library
		Limited resources <ul style="list-style-type: none"> Technology Teaching aids Transport



Themes	Categories	-categories	
Clinical learning environment	Inadequate clinical teaching department	Inadequate simulation laboratory	
		Lack of theory & clinical correlation	
		Limited clinical exposure	
		Inadequate clinical accompaniment	
		Fragmented nursing care	
	Clinical setting	Routine clinical procedures not performed	
		Lack DOH collaboration	
		Inadequate simulation laboratory	
Role-players in the teaching and learning environment	Management	Supervisors lack teaching experience	
		Supervisors hinder innovation in teaching	
		Supervisors do not acknowledge potential	
		Insufficient communication	
		Lack of planning	
	Nurse educators	Expertise <ul style="list-style-type: none"> Lack experience in teaching Lack knowledge in teaching Lack ability and skill Lack computer literacy Limited clinical experience 	
		Attributes <ul style="list-style-type: none"> Lack passion Lack caring Negative attitude 	
		Selection, retention & attrition <ul style="list-style-type: none"> High attrition Lack interest Calibre Career choice 	
		Inadequate orientation	
		Support & guidance <ul style="list-style-type: none"> Lack mentorship, role-models and leadership 	
		Professional Nurses	Lack role models
			Lack of commitment towards teaching
	Lack caring		
	Lack passion		
	Inadequate student support		



Themes	Categories	-categories
	Students	<p>Expertise</p> <ul style="list-style-type: none"> • Lack reasoning ability • Lack analytical thinking • Lack English literacy <p>Attributes</p> <ul style="list-style-type: none"> • Lack responsibility and accountability • Low self-esteem <p>Selection, retention & attrition</p> <ul style="list-style-type: none"> • Calibre of student • No interest in nursing • Career choice <p>Support & guidance</p> <ul style="list-style-type: none"> • Lack support and supervision from the nurse educators and the professional nurses
Military learning environment	Military environment	Military environment does not acknowledge potential
		<p>Student selection</p> <ul style="list-style-type: none"> • MSD programme selects students not interested in nursing • External interference with student selection
		<p>Cumbersome process in the military hinders the use of innovative teaching strategies</p> <ul style="list-style-type: none"> • CSW (Conventions of service writing) poorly understood
	Military activities	<p>Unplanned interruptions in the block programmes</p> <ul style="list-style-type: none"> • Nurse educators fall back on traditional lecture method to cover the content <p>Students loose experiential learning opportunities</p>



ANNEXURE C: PHASE 2

C1 Invitation to the action research group



C2 Attendance register workshop 1



ATTENDANCE REGISTER



Action Research Group Workshop no 1: 25 January 2016

No	Name & Surname	Contact number	E-mail address	Signature
1	Luvone Luvone	0828257617	ajelo@gmail.com	<i>[Signature]</i>
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10	A. Van Wyngaarden	0824613887	annawynngaarden@etnet.net	<i>[Signature]</i>
11				
12				
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14				
15				



C3 Programme workshop 1



C4 PICD: Phase 2

Participant information and informed consent document

Phase 2 (ARG)

TITLE OF THE STUDY

Educational practices for promoting student nurses' clinical reasoning skills.

Dear Participant,

You are invited to participate in the action research study that will be conducted at the nursing college where you are working over a period of eighteen months. This information leaflet contains information that will help you understand your role in the study. If there is any need for further clarification, please feel free to contact the researcher, Angeline van Wyngaarden, at any time.

1. The nature and purpose of this study

Safe patient care relies on nurses having the ability to clinically reason. Clinical reasoning depends on the development of critical thinking skills. Nurses need critical thinking and clinical reasoning skills to perform their daily functions in practice. Nurse educators need to invest in teaching and learning approaches that enhance clinical reasoning skills of student nurses.

The aim of this proposed action research study is to facilitate a process of change towards improving educational practices in order to promote the development of undergraduate student nurses' clinical reasoning skills. The purpose of action research is to solve practical problems and facilitate change in practice.

In order to achieve this aim, the following objectives are proposed:

To explore and describe the challenges experienced by nurse educators in utilising educational practices to promote the development of undergraduate student nurses' clinical reasoning skills.

To co-construct an action plan to improve educational practices to promote the development of undergraduate student nurses' clinical reasoning skills.

2. Explanation of procedures

You as a Nurse Educator or Manager involved in the R425 programme are invited to participate in a collaborative effort to contribute to the development of skills, innovation and self-efficacy of nurse educators at the nursing college.

You are requested to volunteer to be part of the **action research group (ARG)** and a co-researcher. To actively participate to co-construct an action plan and take part in the two action research cycles. You will be part of focus group interviews together with other co-researchers. The focus group interviews will be digitally recorded and transcribed after the focus group. Focus group interviews will be organised with you after consultation with management as to ensure that your services are not interrupted. Meetings will be organised to gather information, to identify actions that could be taken to improve educational practices. We will together co-construct an action plan to utilise the ideal educational practices that promote the development of clinical reasoning skills within the classroom.

3. Risk and discomfort involved

There is a risk involved in this study that the nursing college might be identified during the examination and publishing of articles from the study. However, your identity as a participant will be kept confidential. Your input into this action research study will also require some of your time and effort.

4. Benefits of the study

Your educational practices with regards to the facilitation of student nurses will be developed enabling you to utilise educational practices that promote the development of undergraduate student nurses' clinical reasoning skills. In addition, your knowledge of the research process will deepen as you as participants will be actively engaged in the research process.

5. Your rights as a participant

Your participation in this study is entirely voluntary. You can refuse to participate or stop at any time during the study without giving any reason or penalty.

6. Ethical approval

The Faculty of Health Sciences' Research Ethics Committee at the University of Pretoria, 1 Military Hospital Ethics Committee and the Nursing College has given written approval for this study.

7. Additional information

If you have any questions about the research you are welcome to contact the Research Ethics Committee Faculty of Health Sciences University of Pretoria's Office:

Tel: 012 354 1330 or 012 354 1677

Fax: 012 354 1367

Email: manda@med.up.ac.za

Email: deepeka.behari@up.ac.za

If you have any questions about your participation in this study, you should contact the researcher, Angeline van Wyngaarden

Work telephone: 012 674 6040

Cell phone: 082 462 3887

Email address: annavwyngaarden@hotmail.com

Alternatively, you may contact my supervisor Dr R. Leech at:

Work telephone: (012) 354 2129

Email address: Ronell.leech@up.ac.za

8. Compensation

Your participation is voluntary. No compensation will be given for your participation.

9. Confidentiality

Your input into this research will be kept confidential. Results will be published and presented in such a manner that you as a participant will remain anonymous.

Consent to participate in this study

Phase 2 (ARG)

Informed consent

Your participation in this research is subject to reading and accepting the above information and signing the informed consent document below. A copy of the signed consent document will be given to you.

I confirm that the person asking my consent to take part in this study told me about the nature, process, risks, discomforts and benefits of the study. I have also received, read and understood the above written information regarding the study. I am aware that the results of the study, including personal details, will be anonymously processed into research reports. I am participating willingly. I have had time to ask questions and have no objections to participate in the study. I understand that there is no penalty should I wish to discontinue with the study and my withdrawal will not affect me in any way.

Participant's name: (Please print)

Participant's signature: Date.....

Witness name: (Please print)

Witness signature: Date.....

Investigator's name(Please print)

Investigator's signature Date.....

Consent for audio recording and taking of photographs

Audio recording and photograph consent

I _____ (Name and Surname) hereby give permission that the ARG workshops may be recorded and photos may be taken. The reasons and details were explained to me by the researcher.

Participant's name: (Please print)

Participant's signature: Date.....

Witness name: (Please print)

Witness signature: Date.....

Investigator's name(Please print)

Investigator's signature Date.....



C5 Time schedule

UNIVERSITEIT VAN PRETORIA
UNIVERSITY OF PRETORIA
UNIBESITHI YA PRETORIA

TIME SCHEDULE



No	Meetings	Date	Time
1	Action Research Group Workshop no 1 Establishing	25 January 2016	08h30 to 15h30
2	Monitoring and feedback contact meetings	Weekly Every Monday	13h30 to 14h30
3	Action Research Group Workshop no 2	4 March 2016	08h00 to 15h30
4	Action Research Group Workshop no 3	4 April 2016	08h00 to 15h30
5	Action Research Group Workshop no 4	25 April 2016	08h00 to 15h30
6	Action Research Group Workshop no 5	23 May 2016	08h00 to 15h30
7	Action Research Group Workshop no 6 Concluding and evaluating the project	4 July 2016	08h00 to 15h30



C6 Summary of Phase 1 findings



Summary of the challenges experienced by nurse educators in utilising educational practices that promote the development of student nurses' clinical reasoning skills

Themes	Categories	Sub-categories
Educational practices	Assessment strategies	Lack application <ul style="list-style-type: none"> Limited use of scenarios and case studies Resistance to application
		Internal moderators <ul style="list-style-type: none"> Old school Resistance to change
		Lack assessment on real patients <ul style="list-style-type: none"> Simulation used for clinical formative and summative assessments
	Teaching & learning strategies	Lack application during teaching <ul style="list-style-type: none"> Limited use of scenarios and case studies
		Utilising traditional teaching strategies
		Lack innovative teaching strategies <ul style="list-style-type: none"> Lack knowledge and expertise Lack time Lecturing using PowerPoint is the norm
	Curriculum	Semester system <ul style="list-style-type: none"> Loosing clinical exposure due to two examination periods per year Time consuming
		Content laden <ul style="list-style-type: none"> Time consuming
		Standardisation <ul style="list-style-type: none"> Third year congested, limited clinical exposure of students
		Lack revision <ul style="list-style-type: none"> Current issues not incorporated
	Inadequate resources	Limited human resource <ul style="list-style-type: none"> Clinical preceptors Nurse educators Typist Skills lab assistant
		Limited infrastructure <ul style="list-style-type: none"> Classrooms Simulation laboratory Library
		Limited resources <ul style="list-style-type: none"> Technology Teaching aids Transport



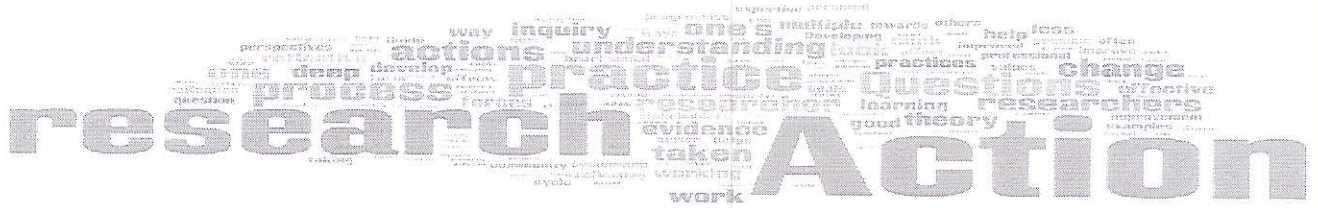
Themes	Categories	-categories	
Clinical learning environment	Inadequate clinical teaching department	Inadequate simulation laboratory	
		Lack of theory & clinical correlation	
		Limited clinical exposure	
		Inadequate clinical accompaniment	
		Fragmented nursing care	
	Clinical setting	Routine clinical procedures not performed	
		Lack DOH collaboration	
		Inadequate simulation laboratory	
Role-players in the teaching and learning environment	Management	Supervisors lack teaching experience	
		Supervisors hinder innovation in teaching	
		Supervisors do not acknowledge potential	
		Insufficient communication	
		Lack of planning	
	Nurse educators	Expertise <ul style="list-style-type: none"> • Lack experience in teaching • Lack knowledge in teaching • Lack ability and skill • Lack computer literacy • Limited clinical experience 	
		Attributes <ul style="list-style-type: none"> • Lack passion • Lack caring • Negative attitude 	
		Selection, retention & attrition <ul style="list-style-type: none"> • High attrition • Lack interest • Calibre • Career choice 	
		Inadequate orientation	
		Support & guidance <ul style="list-style-type: none"> • Lack mentorship, role-models and leadership 	
		Professional Nurses	Lack role models
			Lack of commitment towards teaching
	Lack caring		
	Lack passion		
	Inadequate student support		



Themes	Categories	-categories
	Students	<p>Expertise</p> <ul style="list-style-type: none"> • Lack reasoning ability • Lack analytical thinking • Lack English literacy <p>Attributes</p> <ul style="list-style-type: none"> • Lack responsibility and accountability • Low self-esteem <p>Selection, retention & attrition</p> <ul style="list-style-type: none"> • Calibre of student • No interest in nursing • Career choice <p>Support & guidance</p> <ul style="list-style-type: none"> • Lack support and supervision from the nurse educators and the professional nurses
Military learning environment	Military environment	Military environment does not acknowledge potential
		<p>Student selection</p> <ul style="list-style-type: none"> • MSD programme selects students not interested in nursing • External interference with student selection
		<p>Cumbersome process in the military hinders the use of innovative teaching strategies</p> <ul style="list-style-type: none"> • CSW (Conventions of service writing) poorly understood
	Military activities	<p>Unplanned interruptions in the block programmes</p> <ul style="list-style-type: none"> • Nurse educators fall back on traditional lecture method to cover the content <p>Students loose experiential learning opportunities</p>



C7 Attendance register monitoring and feedback meeting 1



M & E no 1: 1 February 2016

No	Name & Surname	Contact number	E-mail address	Signature
1	N.Y. Mokoena	0843182128	y.mokoena@yokoena.com	<i>[Signature]</i>
2	M.A. MARIKATA	082 333 2847	melu449@gmail.com	<i>[Signature]</i>
3	S.B. Ebane	074 9606862	esther.ebane@gmail.com	<i>[Signature]</i>
4	S. COETZEE	082 815 8858	sekie.c@gmail.com	<i>[Signature]</i>
5	A. Van Wyngaarden	0820613087	—	<i>[Signature]</i>
6				
7				
8				
9				
10				
11				
12				
13				
14				
15				



C8 Minutes monitoring and feedback meeting 1

ACTION RESEARCH GROUP MONITORING AND FEEDBACK MEETING 1: 22 MARCH 2016

GENERAL

No	Topics	Responsible person	Actions/Activities	Comments	D-date
1	Values and believe clarification WS (Teambuilding)	Angeline Isabel	Confirm the date and time	Date confirmed for 22 April 16 <ul style="list-style-type: none"> WS 08h00 until 12h30 Braai 12h30 onwards 	29/3/16
			Arrange a venue 08h00 to 12h30	PHC classroom was arranged	4/4/16
			Liaise with social committee <ul style="list-style-type: none"> Arrange a teambuilding braai 12h30 onwards 	Quote was obtained from Officer's Mess Confirm with the OC <ul style="list-style-type: none"> Who must attend what Acceptance of the quote To complete function form	
			Confirm with Isabel	Was confirmed Needs list <ul style="list-style-type: none"> Paint x4 groups Flip chart paper Prestik 	
2	Feedback to management cadre on WS 2	Angeline	Give feedback on WS 2 Confirm team building date	Feedback was given on 8/3/16 Date confirmed 22/4/16 Meeting was held with OC <ul style="list-style-type: none"> Gave her blessing to continue with CPD Learning needs list Team building 	8/3/16 22/3/16

No	Topics	Responsible person	Actions/Activities	Comments	D-date
3	Submit remaining learning needs list to in-service training coordinator	Angeline	Compile and submit learning needs list	Was compiled and submitted to Lt Col Lebea She will utilise these topics for in-service training sessions for the rest of 2016 and 2017.	4/4/16
4	Arrangements for workshop no 3 (4 April 2016)	Angeline	Arrange 1-yr Midwifery classroom Submit a memo to the roll call holder	Was done will confirm with Maj Cilliers. To ensure that members are accounted for we will start at 08h00 on the 4 April.	29/3/16 4/4/16

STRATEGY 1: TEACHING AND LEARNING STRATEGIES (Angeline & Mapuks)

No	Areas of improvement	Responsible person	Actions/Activities	Comments	D-date
1	WS on T & L strategies	Angeline	Provide training on different T & L strategies esp. enquiry based. Arrange a WS with Isabel on Enquiry-based. Arrange a WS with Mapuks on unfolding case studies	Liase with Lt Col Lebea list of topics for in-service training. Possible date 18 March. In process. Possible date 20 June. In process	4/4/16 4/4/16 4/4/16
2	Assessment strategies	Angeline & Mapuks	Provide training on innovative and creative assessment strategies. To arrange a WS on appreciative feedback	To be confirmed with Isabel	4/4/16

No	Areas of improvement	Responsible person	Actions/Activities	Comments	D-date
			Shredding <ul style="list-style-type: none"> NC initiative To compile guidelines 	An Information session was held with academic staff on 30/3/16 In process	4/4/16
4	Guidelines	Angeline	Compile booklet/guideline on T & L strategies and assessment strategies and appreciative feedback linking it to CR.	Arrange brainstorming session during a QA WS (July/August). In process	22/8/16
		Mapuks	Compile unfolding case studies.	In process	20/6/16
5	Resources	Mapuks	How resourceful can we be? To emphasise to academic staff to utilise what we have	To think about activities to address this area. Was emphasised by the OC in various meetings	4/4/16

STRATEGY 2: CLINICAL LEARNING ENVIRONMENT (Sally, Yvonne & Winnie)

No	Areas of improvement	Responsible person	Actions/Activities	Comments	D-date
1	Clinical accompaniment.	Sally	Relook current practices/SWP	Compile a guideline for fixed CA programme possibly incorporate into the current SWP. In process.	4/4/16 or 25/4/16

“We are the Champions of Change”

No	Areas of improvement	Responsible person	Actions/Activities	Comments	D-date
2	Collaboration	All	<p>Initiate collaboration with the stakeholders in the clinical learning environment.</p> <p>Ensure that NEs are aware of WS or training sessions offered in DOH</p> <p>Theory and clinical NEs to work together</p>	<p>A stake holders meeting was arranged for 6 April by Vice Principal Clinical.</p> <p>Is done by Lt Col Lebea</p> <p>In process</p>	29/3/16
3	Clinical teaching department	All	Guidelines re the clinical teaching department.	To think about activities to address this area.	4/4/16 or 25/4/16
4	Teaching learning strategies.	<p>All</p> <p>All</p> <p>Sally</p>	<p>Resuscitate the clinical ward rounds.</p> <p>Initiate the implementation of clinical conferences.</p> <p>Investigate the possibility of a journal club</p> <p>Provide first aid and resuscitation revision in each year group.</p>	<p>Input was given to look into resuscitating the clinical ward round.</p> <p>In process</p> <p>One article was given to all re clinical conference</p> <p>Relook first aid and resuscitation within the curriculum.</p>	4/4/16 or 25/4/16
5	Simulation laboratory	All	Identify/allocate responsible person	In process	4/4/16 or 25/4/16

“We are the Champions of Change”

No	Areas of improvement	Responsible person	Actions/Activities	Comments	D-date
			<p>To utilise the sim lab not only during OSCE and demonstrations</p> <ul style="list-style-type: none"> • Join rooms larger area <ul style="list-style-type: none"> ○ Smart boards ○ Use in class room • Arrange in-service on new manikins / smartboards • Students must practice on manikins 		
6	Clinical learning outcomes	All	<p>T & C NEs to get together to investigate the clinical learning outcomes</p> <p>Look into theory and clinical NEs to work together</p>	In process	4/4/16 or 25/4/16
7	Resources	All	How best can we utilise what we have in the simulation laboratory.	In process	4/4/16 or 25/4/16

No	Areas of improvement	Responsible person	Actions/Activities	Comments	D-date
3	Learning opportunities.	All	Utilise available learning opportunities.	Computer literacy already addressed	4/4/16 or 25/4/16
4	Induction and orientation.	Ester	<p>Compile an Induction and Orientation programme.</p> <p>Compile a tick sheet.</p> <ul style="list-style-type: none"> Incorporate computer literacy 	<p>Ester compiled a draft induction programme/time table and gave each a copy for input. Ester will give feedback on 4/4/16.</p> <p>In process.</p>	4/4/16 or 25/4/16
5	Resources	All		To think about activities to address this area.	4/4/16 or 25/4/16

STRATEGY 4: SELECTION OF NURSE EDUCATORS AND STUDENTS (Susan, Angela & Joanne)

No	Areas of improvement	Responsible person	Actions/Activities	Comments	D-date
1	Selection process	Susan	<p>Relook the current selection process.</p> <p>To address the concern identified with the APS / selection criteria with Lt Dicks</p> <p>Psychometric testing/ essay??</p>	<p>Susan gave feedback on the current selection processes. Fixed external process</p> <p>In process</p> <p>In process</p>	4/4/16 or 25/4/16
2	Marketing & recruitment (S)	Angela and Joanne	Relook the current marketing practices.	Was done	4/4/16 or 25/4/16

“We are the Champions of Change”

No	Areas of improvement	Responsible person	Actions/Activities	Comments	D-date
			Look into the following: <ul style="list-style-type: none"> • Marketing/info pamphlets <ul style="list-style-type: none"> ○ Electronic version ○ Face/student • Visit schools/festivals. • Initiate scholar programme • Student survey <ul style="list-style-type: none"> ○ Senior groups ○ Experience of process • Interview guide <ul style="list-style-type: none"> ○ Empathy testing / scenarios ○ EI ○ Ethical judgement • Evidence (Nursing) <ul style="list-style-type: none"> ○ Community or homebased care 	In process.	
3	Marketing, recruitment & selection (NE)	Angela and Joanne	Look into the following: <ul style="list-style-type: none"> • Information booklet for prospective candidates • Revise the interview guide <ul style="list-style-type: none"> ○ Job description ○ Scenarios ○ NE qualities / not charm • Involve line/staff/managers in the selection panel • Provide evidence of NE competence <ul style="list-style-type: none"> ○ LEP / PPP 	In process	4/4/16 or 25/4/16

“We are the Champions of Change”

No	Areas of improvement	Responsible person	Actions/Activities	Comments	D-date
			<ul style="list-style-type: none"> Recruit your own Retaining NE Reflection on the entire process 		
4	Marketing, recruitment & selection (S & NE)	All	<p>Compile a SWP regarding the entire process at the NC for both S & NE.</p> <p>Training on the process</p>	In process.	4/4/16 or 25/4/16
5	Resources	All		To think about activities to address this area.	4/4/16 or 25/4/16

Thank you
Angeline (22/3/16)



C9 Article for 'The Lamp'

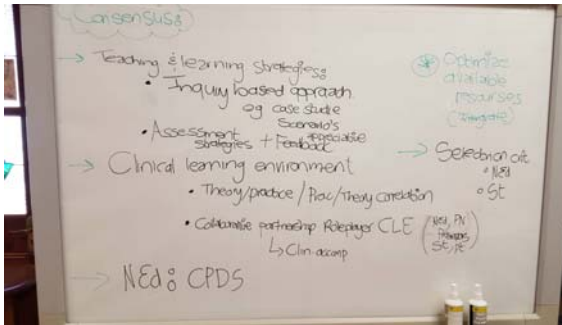


Interested **NURSE EDUCATORS** and **MANAGERS** involved in the 4-year Diploma programme were invited to take part in an action research study. Through collaboration and participation our educational practices can be improved to promote student nurses’ clinical reasoning skills.

The aim of the action research study is to co-construct an action plan to improve educational practices in order to promote the development of undergraduate student nurses’ clinical reasoning skills.

The action research group met for their first workshop on 25 January 2016. The aim of this workshop was to prioritise the challenges identified during Phase 1 of the study. The action research group was established and consensus was reached on the following four priority challenges:

- Strategy 1. Teaching, learning and assessment strategies.
- Strategy 2. Clinical learning environment.
- Strategy 3. Continuous professional development and support.
- Strategy 4. Selection of students and nurse educators.



The action research group will meet for another five workshops to co-construct an action plan for each of the four identified strategies.

By Maj A. van Wyngaarden



C10 Information letter to the nursing college management

Telephone: (012) 674 6040
 Facsimile: (012) 674 6046
 Enquiries: Maj A. van Wyngaarden



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 YUNIBESITHI YA PRETORIA



SAMHS Nursing College
 Private Bag X1022
 Thaba Tshwane
 0143
 9 February 2016

INFORMATION ON THE ACTION RESEARCH PROJECT

1. The action research group met for their first workshop on 25 January 2016. The aim of this workshop was to prioritise the challenges identified during Phase 1 of the study. The action research group was established and consensus was reached on the following four priority challenges:
 - a. Strategy 1. Teaching, learning and assessment strategies.
 - b. Strategy 2. Clinical learning environment.
 - c. Strategy 3. Continuous professional development and support.
 - d. Strategy 4. Selection of students and nurse educators.
2. Kindly refer to the attached minutes of the action research group meeting held on 1 and 8 February 2016. Members are allocated to the four different strategies to be addressed during the project.
3. The time schedule for the different workshops planned is included. Your positive consideration to allow members to attend will be highly appreciated.
4. Input from the remaining personnel members will be sought during the planned Quality Assurance Workshops for 2016. Please refer to the attached workshops dates for 2016.
5. Your continuous support is highly appreciated.

A. van Wyngaarden

(A. VAN WYNGAARDEN)
 HOD QUALITY ASSURANCE SAMHS NURSING COLLEGE: MAJ

Health Warriors Serving the Brave
 RESTRICTED



ANNEXURE D: ACTION PLAN

D1 Input ARG

Y.M.J.
S.C.G.

Educational Practices

Strategy 1: Teaching, learning and assessment strategies

Challenge	Objectives	Actions	Time frame	
			Short term (0-2 years)	Long term (2-5 years)
Utilise student centered teaching and learning strategies		Train educators on facilitation skills.		
		Train educators on utilising different student centered teaching and learning strategies.		
		Train educators on compiling and utilising unfolding case studies as a teaching and learning strategy.		
		Arrange in-service training on inquiry-based teaching and learning strategies.		
Utilise student centered assessment strategies		Incorporate the clinical reasoning cycle in the curriculum from the 1 st year onwards and adapt it according to the cognitive level of the students.	X	
		Compile guidelines for educators on teaching and learning strategies that develop critical thinking and clinical reasoning.	X	
		Provide continuous guidance and support.		
		Incorporate the utilisation of student centered strategies as a key performance area in the performance management and development system (PMDS) of educators.		
Utilise student centered assessment strategies		Train educators on how to compile and utilise unfolding case studies as assessment strategies.		
		Train educators on how to incorporate innovative assessment strategies.		
		Arrange in-service training on appreciative feedback.	X	
		Compile guidelines on "shredding" of assessment papers.	X	

where I did not work with our (X) - I feel it should be continuous (this was before we developed "establish" to "establish + maintain"

Chobli 3

Educational Practices (continue)

Strategy 1: Teaching, learning and assessment strategies

Challenge	Objectives	Actions	Time frame	
			Short term (0-2 years)	Long term (2-5 years)
Utilise student centered assessment strategies (Continue)		Implement "shredding" of summative assessments.		
		Compile guidelines for educators on assessment strategies that develop critical thinking and clinical reasoning.	X	
		Provide continuous guidance and support <i>add non-formal education assessment</i> .		
		Incorporate the utilisation of student centered strategies as a key performance area in the performance management and development system (PMDS) of educators. <i>maintain assessment system</i>	X	
Share best practices		Establish forums for educators to share achievements and experiences. <i>provide a platform</i>	X	
		Establish journal clubs to encourage evidence based practice. <i>provide a platform</i>	X	
		Encourage benchmarking and networking with other nursing education institutions (NEIs). <i>knowledge</i>		
		Communicate, appreciate and celebrate successes.		
Utilise resources optimally		Encourage creative use of available resources.		
		Provide training and continuous support on the recently purchased interactive smart boards.		
		Provide training and continuous support on the utilisation of available simulation equipment.		
		Utilise manikins and simulation equipment in the classrooms.		
		Arrange creativity workshops to stimulate creative & critical thinking.	X	

Clinical learning environment

Strategy 2: Clinical learning environment

Challenge	Objectives	Actions	Timeframe	
			Short term (0-2 years)	Long term (2-5 years)
Conducive clinical environment	Well established clinical department	Provide direction by developing a mission and aim for the department.	X	
		Compile guidelines on the running of the department.	X	
		Involve all role-players in the establishment of the department to ensure buy-in and cooperation.	X	
		Compile job descriptions applicable to clinical educators. <i>pre requisites</i>	X	
		Revise and compile key performance areas for clinical educators in their PMDS. <i>linked: write student learning or assessment using sim labs</i>	X	
		Encourage increased clinical accompaniment of students. <i>visibility of clinical education in clinical area as evidence</i>	X	
		Compile a structured clinical accompaniment plan and programme. <i>model to improve</i>	X	
		Revise the standard working procedure on clinical accompaniment. <i>peer feedback</i>	X	
		Implement and encourage student peer coaching. <i>peer feedback, spelling (wordbank)</i>	X	
		Establish and implement a monitoring and evaluation system for the clinical accompaniment of students. <i>Resuscitate the clinical ward rounds.</i>	X	
Utilise student centered teaching, learning & assessment strategies		Train educators on how to utilise the ward round as a teaching and learning strategy.		
		Implement post clinical conferences.		
		Arrange in-service training on post clinical conferences.		

check list

Clinical learning environment (continue)

Strategy 2: Clinical learning environment

Challenge	Objectives	Actions	Timeframe	
			Short term (0-2 years)	Long term (2-5 years)
Conducive clinic environment	Well established simulation laboratory	Initiate a project to upgrade the simulation laboratory.	X	
		Identify an applicable educator from the clinical department to manage the simulation laboratory. <i>(Create post)</i>	X	
		Extend the availability and accessibility of the simulation laboratory to allow students opportunities to practice their clinical skills.	X	
		Provide continuous guidance and support to educators to utilise the simulation laboratory.		
		Utilise the simulation laboratory to develop students clinical reasoning skills.		
		Initiate collaboration with stakeholders in the clinical learning environment.	X	
		Host biannual clinical meetings with clinical stakeholders.		
		Encourage team work and collaboration between theoretical and clinical educators.	X	
		Establish journal clubs to encourage evidence based practice.	X	
		Encourage benchmarking and networking with other NEIs.		
Clinical learning outcomes	Communicate, appreciate and celebrate successes.			
	Include first aid and resuscitation in the curriculum for each year group.	X		
	Revise clinical learning outcomes.	X		
	Provide guidance and support.	X		
	Ensure availability of clinical learning outcomes to all clinical stakeholders.	X		

Clinical learning environment (continue)

Strategy 2: Clinical learning environment

Challenge	Objectives	Actions	Timeframe	
			Short term (0-2 years)	Long term (2-5 years)
	Utilise resources optimally	Encourage creative use of available resources. Provide training and continuous support on the recently purchased interactive smart boards. Provide training and continuous support on the utilisation of available simulation equipment. Train educators on how to utilise the manikins.	X	

line again.



Role-players in the teaching and learning environment

Strategy 3: Continuous professional development and support

Challenge	Objectives	Actions	Timeframe	
			Short term (0-2 years)	Long term (2-5 years)
Enabling	Identify learning needs of nurse educators	Conduct a learning needs analysis.	X	
		Analyse the learning needs according to the findings.	X	
		Provide in-service training, training, workshops on the identified needs.		
		Conduct a skills audit.	X	
		Compile guidelines on CPD points.	X	
		Provide in-service training on CPD points.	X	
		Compile a CPD file with index, CPD booklet and guidelines for completion for all academic staff.		
		Implement CPD points.	X	
		Provide opportunities for members to accumulate CPD points.		
		Encourage membership of NEA and STTI.		
Enabling	Creating and fostering a learning culture	Provide continuous guidance and support.		
		Revise the standard working procedure on induction and orientation of newly appointed educators.	X	
		Compile an induction and orientation programme.	X	
		Compile a tick sheet to keep record of attendance.	X	
		Incorporate military aspects to be orientated on.	X	
		Identify a responsible person for workshops/process owners, QA.	X	
Enabling	Optimal induction and orientation			

line again ↓


Day to day performance, M&E, college file/learning.



Enabling

Role-players in the teaching and learning environment (continue)

Strategy 3: Continuous professional development and support

Challenge	Objectives	Actions	Timeframe	
			Short term (0-2 years)	Long term (2-5 years)
 Enabli	Improve computer literacy	Identify and nominate members to attend computer training courses.	X	
		Arrange computer training with SITTA annually.		
		Evaluate the effectiveness of the training.		
		Ensure that new members are nominated to attend as soon as possible.		
		Establish forums for educators to share achievements and experiences. - <i>forward</i>	X	
		Establish journal clubs to encourage evidence based practice.	X	
		Encourage benchmarking and networking with other nursing education institutions (NEIs).		
		Communicate, appreciate and celebrate successes.		
		Establish journal clubs	X	
		Encourage members to join NEA novice initiatives.		
Initiate a research culture		Encourage attendance of NEIs research days and host own research days.	X	
		Encourage a research culture. <i>could students also be incorporated?</i>		
		Utilise available learning opportunities.		
		Nominate members for ETD courses annually.		
Utilise resources optimally		Utilise educators themselves to provide in-service training on topics they specialise in.		

line again ↑

Role-players in the teaching and learning environment

Strategy 4: Selection of nurse educators and students

Challenge	Objectives	Actions	Timeframe	
			Short term (0-2 years)	Long term (2-5 years)
Quality nurse educators	Marketing & recruitment (nurse educators)	Relook the current practices.		
		Create an information booklet for prospective candidates.		
		Create a nursing college website.	X	
		Recruit from the military.		X
		Relook the current practices.		
		Create a video clip to provide candidates with information and military expectations.	X	
		Revise the interview guide:		
		<ul style="list-style-type: none"> o Include scenarios o Focus on educator qualities- 	X	
		Involve educators, head of departments and managers in the selection panel.	X	
		Prospective candidates to provide evidence on educator competencies.		
Compile guidelines on the entire selection process.	X			
Train all staff in the selection process (e.g. interviewing skills).				
Monitor and evaluate the process.				
Conduct values and belief clarification workshops to encourage team work.				
Arrange team building workshops biannually.				
Encourage participation in social functions.				
Retain nurse educators			X	

Handbook developed with prof. → Move to General.



Role-players in the teaching and learning environment (continue)

Strategy 4: Selection of nurse educators and students

Challenge	Objectives	Actions	Timeframe	
			Short term (0-2 years)	Long term (2-5 years)
Quality nurse students	Retain nurse educators (continue)	Acknowledge educator's achievements and appreciate good initiatives.		
		Encourage and support further studies.		
		Provide continuous guidance and support.		
		Communicate, appreciate and celebrate successes.		
		Promote educators based on qualification and skill.		
		Create marketing pamphlets.	X	
		Create a nursing college website.		X
		Visit schools and distribute marketing material.	X	
		Initiate a scholar programme at 1 Military Hospital.		X
		Conduct surveys with current students to evaluate current selection processes to implement improvement strategies.		
Marketing & recruitment (students)	Selection (students)	Revise the interview guide: <ul style="list-style-type: none"> ○ Include scenarios ○ Include empathy, emotional intelligence testing and ethical judgement questions 		
		Produce evidence of hospital, community or homebased care in the selection criteria.		



Quality nurse students

Spencer

→ take this out.



D2 Input supervisors

Educational Practices

Strategy 1: Teaching, learning and assessment strategies

Challenge	Objectives	Actions	Time frame	
			Short term (0-2 years)	Long term (2-5 years)
20021	<p>Facilitator</p> <p>Utilise student centered teaching and learning strategies</p>	<p>Train educators on facilitation skills.</p> <p>Train educators on utilising different student centered teaching and learning strategies.</p> <p>Train educators on compiling and utilising unfolding case studies as a teaching and learning strategy.</p> <p>Arrange in-service training on inquiry-based teaching and learning strategies.</p> <p>Incorporate the clinical reasoning cycle in the curriculum from the 1st year onwards and adapt it according to the cognitive level of the students.</p> <p>Compile guidelines for educators on teaching and learning strategies that develop critical thinking and clinical reasoning.</p> <p>Provide continuous guidance and support.</p> <p>Incorporate the utilisation of student centered strategies as a key performance area in the performance management and development system (PMDS) of educators.</p>		
	<p>Innovative</p> <p>Utilise student centered assessment strategies</p>	<p>Train educators on how to compile and utilise unfolding case studies as assessment strategies.</p> <p>Train educators on how to incorporate innovative assessment strategies.</p> <p>Arrange in-service training on appreciative feedback.</p> <p>Compile guidelines on "shredding" of assessment papers.</p>		

Train → Prof. Dev

Chiro

3

getalle van vaders

3

Educational Practices (continue)

Strategy 1: Teaching, learning and assessment strategies

Challenge	Objectives	Actions	Time frame	
			Short term (0-2 years)	Long term (2-5 years)
Utilise student centered, assessment strategies (Continue)		Implement "shredding" of summative assessments.		
		Compile guidelines for educators on assessment strategies that develop critical thinking and clinical reasoning. (Paddock session)		
		Provide continuous guidance and support.		
		Incorporate the utilisation of student centered strategies as a key performance area in the performance management and development system (PMDS) of educators.		
Share best practices		Establish forums for educators to share achievements and experiences.		
		Establish journal clubs to encourage evidence based practice.		
		Encourage benchmarking and networking with other nursing education institutions (NEIs).		
		Communicate, appreciate and celebrate successes.		
Utilise resources optimally		Encourage creative use of available resources.		
		Provide training and continuous support on the recently purchased interactive smart boards. effectively		
		Provide training and continuous support on the utilisation of available simulation equipment. eg - - -		
		Utilise manikins and simulation equipment in the classrooms.		
Arrange creativity workshops to stimulate creative & critical thinking.				

Professional Development
 ? Resources
 by eke
 by eke
 by eke

various training = Prof development

Nie spesifiek gevraagd nie. Gebruik swaak om te evalueer.

Professional Development = PD

Clinical learning environment

Strategy 2: Clinical learning environment

Challenge	Objectives	Actions	Timeframe	
			Short term (0-2 years)	Long term (2-5 years)
<p>Well established clinical department</p> <p>(? Resources)</p>	<p>Effective</p> <p>Well established clinical department</p>	<p>Provide direction by developing a mission and aim for the department.</p> <p>Compile guidelines on the running of the department.</p> <p>Involve all role-players in the establishment of the department to ensure buy in and cooperation.</p> <p>Compile job descriptions applicable to clinical educators.</p> <p>Revise and compile key performance areas for clinical educators in their PMDS.</p> <p>Encourage increased clinical accompaniment of students.</p> <p>Compile a structured clinical accompaniment plan and programme.</p> <p>Revise the standard working procedure on clinical accompaniment.</p> <p>Implement and encourage student peer coaching.</p> <p>Establish and implement a monitoring and evaluation system for the clinical accompaniment of students.</p> <p>Resuscitate the clinical ward rounds.</p> <p>Train educators on how to utilise the ward round as a teaching and learning strategy.</p> <p>Implement post clinical conferences.</p> <p>Arrange in-service training on post clinical conferences.</p>		

Advantages & strategies

PD

Conductive clinic

resources → lets work with resources
china such as human resources
equipment etc.

Elke strategy moet
PDR produce h5

Clinical learning environment (continue)

Strategy 2: Clinical learning environment

Challenge	Objectives	Actions	Timeframe	
			Short term (0-2 years)	Long term (2-5 years)
<p>Well established simulation laboratory</p> <p>Resources</p> <p>Effective</p>	<p>Improve collaboration with stakeholder in clinical</p> <p>Wie is die stakeholder?</p> <p>Assess</p> <p>Revis</p> <p>Clinical learning outcomes</p> <p>Wat doeromvent?</p>	<p>Initiate a project to upgrade the simulation laboratory.</p> <p>Identify an applicable educator from the clinical department to manage the simulation laboratory.</p> <p>Extend the availability and accessibility of the simulation laboratory to allow students opportunities to practice their clinical skills.</p> <p>Provide continuous guidance and support to educators to utilise the simulation laboratory. PD?</p> <p>Utilise the simulation laboratory to develop students clinical reasoning skills.</p> <p>Initiate collaboration with stakeholders in the clinical learning environment.</p> <p>Host biannual clinical meetings with clinical stakeholders. <i>annual</i></p> <p>Encourage team work and collaboration between theoretical and clinical educators.</p> <p>Establish journal clubs to encourage evidence based practice.</p> <p>Encourage benchmarking and networking with other NEIs.</p> <p>Communicate, appreciate and celebrate successes.</p> <p>Include first aid and resuscitation in the curriculum for each year group. <i>Re-assess annually</i></p> <p>Revise clinical learning outcomes. <i>clinical occupational</i></p> <p>Provide guidance and support</p> <p>Ensure availability of clinical learning outcomes to all clinical stakeholders.</p>		
<p>Conducive clinic</p>		<p>Provide clo to all clinical stakeholders</p>		



Clinical learning environment (continue)

Strategy 2: Clinical learning environment

Challenge	Objectives	Actions	Timeframe	
			Short term (0-2 years)	Long term (2-5 years)
	Utilise resources optimally	Encourage creative use of available resources. Provide training and continuous support on the recently purchased interactive smart boards. Provide training and continuous support on the utilisation of available simulation equipment. Train educators on how to utilise the manikins.		

Skulif na resources

mapped

Role-players in the teaching and learning environment (continue)

Strategy 3: Continuous professional development and support

Challenge	Objectives	Actions	Timeframe	
			Short term (0-2 years)	Long term (2-5 years)
Challenge 2 Improve computer literacy Share best practices <i>Leeds bespreek</i> Initiate a research culture Utilise resources optimally <i>Leeds bespreek</i>		Identify and nominate members to attend computer training courses.		
		Arrange computer training with SITA annually. ? SETA		
		Evaluate the effectiveness of the training.		
		Ensure that new members are nominated to attend as soon as possible.		
		Establish forums for educators to share achievements and experiences.		
		Establish journal clubs to encourage evidence based practice.		
		Encourage benchmarking and networking with other nursing education institutions (NEIs).		
		Communicate, appreciate and celebrate successes.		
		Establish journal clubs		
		Encourage members to join NEA novice initiatives.		
Encourage attendance of NEIs research days and host own research days.				
Encourage a research culture.				
Utilise available learning opportunities.				
Nominate members for ETD courses annually.				
Utilise educators themselves to provide in-service training on topics they specialise in.				

Bate verwaltig

S - Specific
 M - measurable
 A - Achievable
 R - realistic
 T - Time frame

Dependent → Actions
 Practice

Role-players in the teaching and learning environment

Strategy 4: Selection of nurse educators and students

Challenge no	Objectives	Actions	Timeframe	
			Short term (0-2 years)	Long term (2-5 years)
2	Marketing & recruitment (nurse educators)	Relook the current practices. <i>selection</i>		
		Create an information booklet for prospective candidates. <i>Assess & revise</i>		
		Create a nursing college website.		
		Recruit from the military.		
		Relook the current practices.		
		Create a video clip to provide candidates with information and military expectations.		
		Revise the interview guide:		
		<ul style="list-style-type: none"> ○ Include scenarios ○ Focus on educator qualities 		
		Involve educators, head of departments and managers in the selection panel.		
		Prospective candidates to provide evidence on educator competencies.		
		Compile guidelines on the entire selection process.		
		Train all staff in the selection process (e.g. interviewing skills).		
		Monitor and evaluate the process.		
		Conduct values and belief clarification workshops to encourage team work.		
		Arrange team building workshops biannually. <i>? activity</i>		
		Encourage participation in social functions.		
	Retain nurse educators			

Rewrite
 A Quality nurse e



"SMART" — objective

Role-players in the teaching and learning environment (continue)

Strategy 4: Selection of nurse educators and students

Challenge	Objectives	Actions	Timeframe	
			Short term (0-2 years)	Long term (2-5 years)
Retain nurse educators (continue) <i>DFE</i>		Acknowledge educator's achievements and appreciate good initiatives. Encourage and support further studies. Provide continuous guidance and support. Communicate, appreciate and celebrate successes. Promote educators based on qualification and skill.		
Retain students <i>DFE</i>		Create marketing pamphlets. Create a nursing college website. Visit schools and distribute marketing material. Initiate a scholar programme at 1 Military Hospital. Conduct surveys with current students to evaluate current selection processes to implement improvement strategies.		
Quality nurse educators <i>DFE</i>	Selection (students)	Revise the interview guide: <ul style="list-style-type: none"> ○ Include scenarios ○ Include empathy, emotional intelligence testing and ethical judgement questions Produce evidence of hospital, community or homebased care in the selection criteria.		



D3 Cover page for the action plan



① Involve stakeholders
- Identify - compare
- 20 people with knowledge/practice
- Be creative: try as many as building
- on own work (not a plan)
- In all teaching - a case study
- workshop (not) go with the video with
- teaching strategy
- Educator blogs can be added into
- subject: PBL to help each other
- Start from the learner to the teacher
- video as a case study/strategy
- Feedback should be incorporated
- (internal) also from the student
- side - but try to test
- Appreciative feedback

② Communicate first, e.g. focus on
- sharing from each other things
- sharing
- 20 shared workshops & experiences
- a change mindsets, e.g. course adaptation
- "chilled"
- 5. Respect each other
- 6. Feedback within dept (SUWOT
- analysis) = objectively

where representatives
- are present.
- problem solving
- notated
- working strategies
- etc.

AN ACTION PLAN TO IMPROVE EDUCATIONAL PRACTICES

"Change Champions"

2016



- Attend conferences + Seminars
- Media / social awareness
- Social interactions with other
- Make use each other
- Constructively
- Invite external stakeholders.



Consensus

- Teaching & learning strategies
 - Inquiry based approach
- eg case study
 - Assessment strategies + feedback
- Clinical learning environment
 - Theory/practice / Prac/theory creation
 - Collaborative partnership Roleplay CLE (MSJ, St-JK)

Optimize available resources (target)

Selection of MSJ St



ANNEXURE E: PHASE 3

E1 Invitation to the World Café

Smart casual

Venue: PHC Classroom

Time: 08h30 for 09h00

Date: 4 July 2016

Please join us to evaluate the
Action Research Project by means
of a World Café approach

Dear Change Champion





E2 Attendance register workshop 6



ATTENDANCE REGISTER



Action Research Group Workshop no 6: 4 July 2016

No	Name & Surname	Contact number	E-mail address	Signature
1	A.J.E. Lundie	0828257647	ajelundie@gmail.com	
2	A. V Myng oorden	0824615887	annammyngcoorden@hotmail.com	
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10				
11				
12				
13				
14				
15				



E3 Permission to use photographs

Consent for utilising photographs

Consent to utilise photographs

I _____ (Name and Surname) hereby give permission that the ARG workshop photos taken may be utilised for the cover page of the co-constructed action plan as well as within the dissertation. I also give my consent to have a portrait photo taken for the acknowledgement page, including a short introduction of my role at the nursing college and the action research study. The photos together with all other data will be stored with the University of Pretoria (Medical Campus), Department of Health Sciences. The reasons and details were explained to me by the researcher.

Participant's name: (Please print)

Participant's signature: Date.....

Witness name: (Please print)

Witness signature: Date.....

Investigator's name(Please print)

Investigator's signature Date.....



ANNEXURE F: LETTER OF EDITOR

Suzette M. Botes

FULL MEMBER: Professional Editors' Guild

5 December 2016

TO WHOM IT MAY CONCERN

I, Suzette Marié Botes (ID 5211190101087), confirm that I have edited the noted Philosophiae Doctor (Department of Nursing Science, University of Pretoria). However, the accuracy of the final work is still the student's own responsibility.

STUDENT:

Angeline van Wyngaarden

Student number:

20216760

TITLE:

EDUCATIONAL PRACTICES FOR PROMOTING STUDENT NURSES' CLINICAL REASONING SKILLS

The edit included the following:

- Structure of proposal
- Sentence construction
- Word choice
- Logic, relevance, clarity of work
- Style and content appropriateness
- Ethical considerations
- Consistency, appropriateness and accuracy (terminology; argument flow; spelling (UK/US); vocabulary; punctuation; table/figure headings and information displayed)
- Grammar accuracy (tenses; pronoun matches; word choice; etc.)
- Correct acronyms
- Making suggestions for text with unclear meaning
- Basic study layout, font, line spacing, numbering, etc.
- Check reference list against in-text sources
- Confirming that information in discussions correspond with results displayed in tables and figures

Suzette M. Botes (not signed – sent electronically)

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Aston University (UK)

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South African Civil Aviation Authority (SACAA)

Stellenbosch University (US)

Milk Producers' Organisation – Institute for Dairy Technology

Tshwane University of Technology (TUT)

University of Johannesburg (UJ)

University of Pretoria (UP)

University of South Africa (UNISA)