Guidelines for facilitators to implement the skills laboratory method at an undergraduate institution in the Western Cape

by

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DECLARATION

I declare that **Guidelines for facilitators to improve the comprehensive implementation of the skills laboratory method at an undergraduate institution in the Western Cape** is my own work and it has not been submitted for any degree or examination at any other university and that all the sources are indicated and acknowledged by means of complete references.

Nazmah Jansen November 2014

Signed …….

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ABSTRACT

The clinical **S**kills **L**aboratory **M**ethod (SLM) is currently utilised at some universities in South Africa. This is an innovative clinical teaching and learning strategy that allows learner nurses to set their own goals and take responsibility for their learning. In 2007, the method had been introduced to the new first-year learners and subsequently the second, third and fourth year student levels followed. The skills laboratory method consists of five phases: orientation, visualisation, guided practice, independent learning, and assessment. It allows learners the opportunity to observe, practise, and develop their clinical skills in a safe and risk-free environment. In addition, it might assist learners with developing their critical thinking, critical reasoning, and decision-making abilities. As a clinical facilitator at a university, the researcher observed that certain problems occurred in relation to the implementation of the phases.

The purpose of this study was to explore and describe learners' perceptions of the manner in which the facilitators implemented the SLM and to describe guidelines for facilitators to improve the comprehensive implementation of the SLM of an undergraduate nursing programme. A quantitative, explorative, and descriptive research design was used to investigate how learner nurses perceive the skills laboratory method and to what extent the phases of the method were implemented. The accessible population (N = 980) consisted of learner nurses who were enrolled for a Bachelor of Nursing degree at a university in the Western Cape Province.

In this study systematic stratified random sampling were used because class lists of all registered learner nurses from first to fourth year were available. The researcher identified every fourth learner (k = 4) of the four years respectively (n = 276). The researcher collected the data personally by means of a survey questionnaire with closed-ended questions that required responses to be indicated according to a 5-point Likert scale. It took approximately 15 - 20 minutes to complete the questionnaire.

Descriptive statistics and a factor analysis were performed to reduce the data with the purpose of making it more interpretable. Data was analysed with the assistance of a statistician who used the Statistical Package for Social Sciences Version 21 (SPSS). For interpretation purposes, the researcher presented the statistical information in tables and figures.

Twelve factors emerged from the factor analysis: (i) information received during orientation, (ii) introduction during orientation, (iii) orientation to resources in the skills laboratory, (iv)

facilitator interaction during visualisation, (v) progression of demonstrations, (vi) authenticity of simulation, (vii) progression of guided practices, (viii) facilitator feedback during guided practice, (ix) encouragement during independent practice, (x) support during independent practice, (xi) planning of assessments, and (xii) facilitator's role during assessments.

The findings indicated that although facilitators did implement the phases of the SLM, some facilitators omitted or did not fully adhere to all the steps in each of the five phases. Factors such as the information and organisation during the orientation phase, knowledge and behaviour of facilitators throughout the phases, teaching strategies used by facilitators during demonstrations, and feedback to learners during assessments required attention. Twelve guidelines were described from those findings with the aim of improving the comprehensive implementation of the SLM and it was recommended that facilitators implement those factors to ensure positive learning experiences for learner nurses.

The researcher ensured validity and reliability during the study and adhered to ethical considerations.

Keywords: Clinical facilitator, clinical skills, guidelines, learner nurse, nursing, perceptions, simulation, skills laboratory, skills laboratory method, undergraduate program.

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ABBREVIATIONS

AV	Audio-visual
DEAL	Describe, Examine, and Articulate Learning
HFPS	High-fidelity patient simulators
KMO	Kaiser-Meyer Olkin (test)
OSCE	Objective Structured Clinical Examination
PCA	Principal Component Analysis
SANC	South African Nursing Council
SDL	Self-directed learning
SLM	Skills laboratory method
SPSS	Statistical Package for Social Sciences
UCT	University of Cape Town
UWC	University of the Western Cape
WHO	World Health Organisation

CHAPTER 1
ORIENTATION TO THE STUDY

1.1 INTRODUCTION

Clinical teaching and learning are an important aspect of any nursing curriculum and is an important objective of preparing professional nurses for health care services. It is a necessary practice regulated by the South African Nursing Council (SANC) to ensure competent practitioners who are able to deliver quality care (White & Ewan, 1991:19). In literature, different clinical teaching methodologies exist and the preferred choice is determined by the teaching methodology of the institution. Educational approaches – such as experiential learning, adult education, and self-directed learning – and theories – such as cognitive, behaviourist, and humanistic theories – collectively add value to clinical teaching methods (Freeth & Fry, 2005:273; White & Ewan, 1991:20).

The clinical skills laboratory method is at the moment utilised by some of the universities in South Africa. It is an innovative clinical teaching and learning strategy which allows learners to determine their own goals and to take responsibility for their learning (Bradshaw & Lowenstein, 2011:229). This method, which has its theoretical foundation in experiential learning, contains elements of other adult learning approaches; such as self-directed learning and reflection (Freeth & Fry, 2005:273).

With the SLM, procedures are demonstrated in the skills laboratory, but in addition to purely focusing on practical skills, learners are afforded the opportunity to practise communication skills with the use of simulated patients. Furthermore, self-directed learning could take place in the skills laboratory and competencies may be assessed by using simulated scenarios. There is an agreement in literature that the use of a clinical skills laboratory creates a safe environment for learners; the laboratory allows room for trial and error without compromising patient safety (Morgan, 2006:155; Galloway, 2009:2; Maginnis & Croxon, 2010:2).

Morgan (2006:155) states that clinical laboratories provide a safe environment for learning communication and that it also enhances learners' interpersonal skills and psychomotor skills. Galloway (2009:2) mentions that the use of simulation enables learners to practise safely in an environment that allows for errors and personal growth. Maginnis and Croxon (2010:2) identify some skills that could be acquired in a skills laboratory lack emotional aspects of care.

Furthermore, they identify certain gaps that exist between clinical training in a laboratory and in the real setting. Literature establishes that students find it difficult to manage invasive procedures, such as inserting an intravenous infusion. While taking part in clinical training in a laboratory, learners focus on memorising technical aspects of a procedure as opposed to viewing the patient holistically (El Faki, 2010:133).

Traditionally, learners have been exposed to a clinical skills laboratory without simulation. In the clinical skills laboratory method, simulation is included by either using simulated patients for role play or high-fidelity patient simulators (HFPS). HFPS resemble mannequins but are more sophisticated due to their computerised functions; such as breathing, heart rate, heart rhythms, and other physiological functions (Bradshaw & Lowenstein, 2011:207). Simulated patients refer to real people who volunteer to role-play real patient scenarios. According to Campbell and Daley (2009:5), simulation complements existing nursing curricula in an integrated manner, while it relieves additional pressure, such as limited clinical sites. It is one of the reasons why the skills laboratory method has been implemented at a university in Cape Town (Jeggels, Traut & Kwast, 2010:51). In order to eliminate the gaps that might exist between real practice and laboratory training, simulation ought to be implemented by taking all the aspects of patient care into account; such as communication, patient safety, and problem solving (Campbell & Daley, 2009:16).

1.2 BACKGROUND TO THE PROBLEM

The clinical skills laboratory method is a learner-centred approach to teaching and has been adopted from the School of Nursing's international partners, i.e. Hogenschool, Arnhem and Nijmegen, and the University of Maastricht in the Netherlands. In 1974, the University of Maastricht established a medical faculty with problem-based learning as its methodology. The university aims at encouraging learners to formulate their own learning goals. The development of a skills laboratory method creates an environment where learners are able to prepare for the practical aspects of their profession. The method mainly aims at the enablement of learners to practise different tasks – from simple to complex – in a controlled and safe environment. Practise is meant to take place as often as required in order to acquire valuable knowledge and skills (Van Berkel, Sherpbier & Hillen, 2010:5). Various models of skills laboratory training exist and the skills laboratory method is only one of these models.

Since this method was new in South Africa, educators from a university in Cape Town went to Holland for training. In turn, they provided workshops and facilitated training to other staff members and clinical supervisors at a school of nursing in Cape Town. As a clinical supervisor, the researcher was included in the first orientation programme. Training was also provided to private adults who volunteered to be involved in the clinical skills laboratory method. In simulated scenarios, these individuals acted as simulated patients (Jeggels *et al*., 2010:54). At that time, this method of clinical teaching seemed like an optimal methodology.

In 2007, the method was introduced to the new first-year learner nurses and subsequently also to the second-, third- and fourth-year learners. The skills laboratory method consists of five phases: Orientation, visualisation, guided practise, independent learning, and assessment.

It was introduced to learners with the aim of:

- preparing learners for skills and procedures before they actively dealt with patients in clinical settings (Jeggels, 2008);
- enhancing learners' critical thinking and problem solving abilities;
- assisting learners with relating theory with practice, especially when learners had difficulties with integrating knowledge and psychomotor skills;
- encouraging and promoting self-directed learning; and
- adopting a more facilitative role for clinical supervisors (Jeggels *et al*., 2010:53).

1.3 RESEARCH PROBLEM

As a clinical facilitator at a university, the researcher observed that certain problems occurred in relation to the implementation of the phases.

- During the orientation phase, not all learners were attending the general orientation and subsequently were not informed about the skills laboratory method. They did not receive the provided workbooks that contained vital information.
- During visualisation, facilitators found the silent demonstration problematic, since learners attended sessions with no or little pre-knowledge.
- During guided practice, some learners were reluctant to participate and with bigger groups at some levels, individually guided practice could not occur.
- During independent learning, learners were not utilising the skills laboratory for self-directed practice sessions frequently enough, while some learners were complaining

about inadequate support and limited space to practise. Resources were not always available.

- During the assessment phase, methods of assessments and objectivity of facilitators appeared questionable.
- It appeared that facilitators were not fully implementing the guidelines in the phases of the clinical skills laboratory method.

Therefore, the following research questions were formulated:

- To what extent did clinical facilitators follow the principles in the phases of the skills laboratory method?
- How could facilitators improve the implementation of the skills laboratory method by addressing the learning needs of the learners?

1.4 PURPOSE OF THE STUDY

The purpose of this study was to describe guidelines for facilitators to improve the implementation of the skills laboratory method in an undergraduate programme.

1.5 OBJECTIVES

This study aimed at:

- exploring and describing the perceptions of learners about the implementation of the skills laboratory method by facilitators; and
- describing guidelines to facilitators for improving the comprehensive implementation of the clinical skills laboratory method.

1.6 CONCEPTUAL FRAMEWORK OF THE STUDY

Learning during adult education is mostly experiential (Hinchcliff, 2005:101). Learning mainly occurs as a result of experience (Quinn, 2001:62). The skills laboratory method is best associated with experiential learning and is implemented to ensure the development of critical thinking. To this end, problem solving approaches are adopted for teaching to become more learner-centred.

The skills laboratory method at the University of the Western Cape (UWC) has adopted this method and the phases of their conceptual framework consist of orientation, visualisation,

guided practice, independent practice, and assessment (Jeggels *et al*., 2010:54). During the *orientation* phase, learners are introduced to the skills laboratory method to raise their awareness about the valuable significance of clinical skills. Learners receive workbooks with learning outcomes, a complete description of all procedures, and also acquired pre-knowledge that is necessary for their preparation for each session (Jeggels *et al*., 2010:55).

Visualization occurs when learners are separated into small groups in the clinical laboratory and a silent demonstration of a particular skill is presented by supervisors with the purpose of exposing the learners to nursing procedures to gain insight. The silent demonstration involves the presentation of the skill or technique and how necessary equipment ought to be used. The demonstration might be executed by using a simulated patient, a mannequin, or a learner volunteer (Duvivier *et al*., 2011:2). During the demonstration, no communication is allowed. However, learners might *reflect* by questioning and giving their feedback at the end of the demonstration (Jeggels *et al*., 2010:55).

Oermann and Gaberson (2010:187) state that a demonstration enables students to use their visual senses while turning the visual stimulus into a mental image that reinforces the performed procedure. These mental images enable learners to practise particular skills. Before attending a demonstration, learners should have prerequisite knowledge about the purpose of the skills and should have mastered important theory that is required for performing a procedure. During *guided practice*, the clinical supervisor might re-demonstrate a skill and attend to any questions or feedback from the learners. They should then be able to perform and practise the skill in the presence and direct supervision of the supervisor. Such supervised practice enables learners to demonstrate their competence to the group or supervisor (Mellish, Brink & Paton, 2000:113). Guided practice might also occur at the clinical institution where learners are placed and the clinical educator might question learners while affording them the opportunity to identify any actions that they need to take. It adds value to the learners' skills development and enhances communication skills (Thistlethwaite & Ridgeway, 2006:4). After practising the procedure, feedback – *reflection* on their experience – is allowed by the simulated patient, group members, and the learner who practises the procedure / skill.

During *independent learning*, learners are motivated to practise independently in the skills laboratory with the purpose of attaining the course objectives and the necessary skills, attitudes, and behaviour. Learners decide when and how they are going to execute *independent learning*. They are able to utilise the skills laboratory and independently choose how they preferred to

practise. Visual recordings can be made while they are performing a procedure, viewed afterwards, and subsequently it would enable them to *reflect* on their performance. Learners might practise with peers and assess one another, since workbooks with adequate guidelines and assessment criteria are available. Adequate resources, including books, equipment, videos, simulated patients, HFPS, and computer programs are available for self-directed skills development (Jeggels *et al*., 2010:56).

Assessment of learners while using the skills laboratory method is based on competency that focuses on the mastering of summative and formative assessments. According to Jeggels *et al*. (2010:57), a need exists to integrate psychomotor, cognitive, and affective skills for realising competency-based assessment as opposed to evaluating each of these processes individually. Competence is defined by the World Health Organisation (WHO) as "knowledge, appropriate attitudes, and observable mechanical and intellectual skills which together account for the ability to deliver a professional service" (Hinchliff, 2005:146). The International Council for Nurses defines competence as "the skills and abilities to practise safely and effectively without the need for supervision". The skills laboratory method assessment emphasises teaching and learning while concentrating on knowledge, skills, attitudes, and abilities (Hinchliff, 2005:146).

The emphasis is on feedback sessions, including *reflection* after the assessment of each skills laboratory phase. Oerman and Gaberson (2010:68) say that while students are reflecting, they become aware of their learning and thinking. It enables them to recognise their learning needs and to keep on developing skills as part of their lifelong learning process.

1.7 Key concepts

Clinical skills laboratory: A well-equipped simulated nursing environment for learners of health care professions, where the use of equipment similar to a hospital environment with beds, technical apparatus, audio-visual learning equipment, and computer-aided instruction are used and where learners could learn to perform nursing skills by practising on one another or on manikins (Callara, 2008:123).

Simulated patient: An individual who is trained to act as a real patient in order to simulate a set of symptoms or problems. Also known as standardised patients (SPs) or simulated patients and are predominantly actors or role-players who add emotional intelligence to the training,

allowing learners to develop their clinical and interpersonal skills in a safe environment (Thistlethwaite & Ridgway, 2006:7; Wilson & Rockstraw, 2011:24).

Facilitator: A person who assists with achieving an outcome (like learning, productivity, and communication) and provides indirect or unobtrusive assistance, guidance, and supervision (Merriam Webster Dictionary, 2014). In this study, the term refers to a clinical facilitator and all educators involved in the SLM.

Learner nurse: A person who is being educated or trained in nursing and who had applied to the Nursing Council to be registered as a learner nurse or a learner midwife (Nursing Act, 2005:67).

Perceptions: Refers to understanding or interpretation of something; or the ability to see, hear, or become aware of something by means of the senses (Oxford Dictionary, 2014).

Guidelines: A principle that seeks to set standards or determine a course of action (Collins English Dictionary, 2003). In this study, guidelines include actions to assist facilitators with improving the implementation of the skills laboratory method.

1.8 RESEARCH DESIGN

A quantitative explorative descriptive research design was used to investigate the perceptions of learners about the skills laboratory method and to what extent the phases of the method were implemented. Quantitative research is a scientific research method that allows the objective gathering of data in an "organized, systematic and controlled manner" in order to generalise findings to a population / situation (Burns & Grove, 2005:23 & Boswell & Cannon, 2014:204). Exploratory research is used to explore and discover information and to establish what is happening in relation to the phenomena at that particular time (Offredy & Vickers, 2010:48). In this study, the phenomenon is the implementation of the phases of the skills laboratory method. Exploratory research must happen first for descriptive research to be effective (Lettyann, 2012). A researcher uses a descriptive design to gain more information about phenomena (Burns & Grove, 2001:249). It was useful in this study because it aimed at describe a phenomenon, how it was implemented, and how learner nurses perceived it.

1.8.1 Population

Polit and Beck (2014:177) define the population as the entire group of interest that the researcher intends to study. The population for this study was all learner nurses who were registered for the Bachelor of Nursing degree from first-year to fourth-year level at academic institutions in South Africa. The accessible population is defined as a portion of the entire population who is accessible to the researcher (Pilot & Beck, 2014:177). In this study, the accessible population included first- to fourth-year learner nurses for the Bachelor of Nursing degree at a university in the Western Cape Province (N = 980). These learner nurses were selected due to their exposure to the clinical skills laboratory method.

1.8.2 Sampling and sample

Sampling is defined as the process of selecting groups of people that represent the population for the purposes of conducting a study (Polit & Beck, 2014:178). In this study, the researcher used systematic stratified random sampling because of the availability of class lists of all registered learner nurses from first to fourth year were readily available. To ensure representativeness, a formula was used to calculate the sample size (Chapter 3).

1.8.3 Method

The researcher used a survey, with an instrument for obtaining data. A survey is a non-experimental data gathering technique when either questionnaires or interviews are used to obtain data. Information such as prevalence, distributions, and interrelations of variables could be obtained from the sample population by means of self-reporting (Brink, 2006:109; Polit & Beck, 2014:347).

1.8.3.1 The instrument

A questionnaire, which is an example of a self-report data collection instrument, was used to determine respondents' perceptions in this study. Written responses were obtained from respondents (Polit & Beck, 2014:347). Questionnaires could be used to obtain factual data about events, beliefs, attitudes, or opinions of respondents. Cost effectiveness is an advantage of a questionnaire; it is also more feasible to use in the instance of a large number of respondents. Confidentiality could be ensured and honesty from the respondents is more likely

to occur. Researcher bias is limited due to no direct interaction with respondents (Brink, 2006:153).

The Likert scale is a summated rating scale that is commonly used to determine opinions or attitudes. This scale was used in this study, since it was a more precise means of measuring the research phenomenon (Burns & Grove, 2001:434). Respondents in this study responded on statements providing a rating on a 5-point Likert scale: 1 – strongly disagree, 2 – disagree, 3 – uncertain, 4 – agree and 5 – strongly agree.

The researcher developed the administered survey according to three sections:

Section A of the questionnaire addressed the demographic details of the respondents; such as age, gender, year of study level, and previous exposure to the clinical skills laboratory method. Section B contained items about the five stages of the clinical skills laboratory method with the focus on the facilitator and Section C investigated the general perceptions of learners with regard to the SLM.

1.8.3.2 Data collection

Forty respondents of the accessible population completed the questionnaire during the pilot study and those respondents were not included in the main study. The purpose of the pilot was inter alia to either exclude or amend items in the data gathering instrument (Burns & Grove, 2001:20). The Senate Research Committee of the university where the study was conducted granted permission for the research project to take place and questionnaires were handed to learner nurses who completed them during the last 20 minutes of instruction time with the permission of lecturers. The instruction time referred to a period in which revision was conducted and time was available at the end of the period. An information sheet (Annexure A) and a written consent form were attached to the questionnaire (Annexure D) which explained the research topic and the purpose of the study. The researcher explained confidentiality and also informed respondents of their right to withdraw from the study. The researcher waited while the respondents were completing the questionnaire and they had placed the questionnaires in sealed envelopes before the researcher collected the envelopes. It took approximately 15-20 minutes to complete the questionnaire.

1.8.4 Data analysis

In order to analyse quantitative data, a researcher uses statistical principles for analysis. Data is analysed by using descriptive and inferential statistics. Descriptive statistics is used to analyse and summarise numerical data and to describe exactly what the data indicates (Trochim, 2006). Mean values and standard deviations are interpreted and data (number of responses per item) presented in tables and figures.

Inferential statics allows a researcher to assume or infer that certain characteristics may exist in a larger sample. Factor analysis is a multivariate correlation procedure that enables a researcher to group clusters of variables that are similar into one "factor" (Section 3.8.1). The aim of factor analysis in this study was to describe guidelines for facilitators to address the key factors (problems) identified in the factor analysis with the purpose of improving the implementation of the clinical skills laboratory method in an undergraduate nursing programme (Burns & Grove, 2001:533).

1.8.5 Validity and reliability

Validity refers to the degree to which an instrument accurately measures what it is intended to measure (Brink, 2006:167). Face validity refers to whether the instrument appears to measure the intended data collected (Grove, Burns & Gray, 2013:393). This is ensured by piloting an instrument. During this research project, the researcher piloted the questionnaire with a sample of the population to determine whether the content of the questionnaires was appropriate and whether' content were related to the phases of the clinical skills laboratory method. Content validity is related to whether the method of measurement includes all elements that are relevant to a study. Content validity was ensured by obtaining the necessary data from literature (with regard to the phases of the clinical skills laboratory method) and by consulting experts about the content (Grove *et al*., 2013:393). Construct validity is the degree to which the instrument is designed to measure the theoretical constructs or concepts and whether valid inferences are made. In order to ensure this, the researcher performed a factor analysis. *Reliability* is the reflection of how consistent and stable an instrument measures the phenomenon it intends to measure (Grove *et al*., 2013:389). Reliability was ensured by the construction of similar phrased statements in order to make sure learner nurses answered items consistently. In order to test homogeneity and internal consistency of items in the questionnaire, Cronbach's alpha (α) coefficient as statistical procedure was used (Grove *et al*., 2011:391).

1.8.6 Ethical considerations

The researcher ensured that the research was performed in an ethical manner. Ethical research is essential to generate sound results and in order to maintain ethical standards (Burns & Grove, 2005:181; Boswell & Cannon, 2014:84). The following ethical principles were adhered to in this study: The right to full disclosure and self-determination, the right to confidentiality and anonymity, the right to fair treatment, the right to freedom from harm and discomfort, and the right to informed consent (Burns & Grove, 2005:181).

The researcher obtained ethical approval from the Senate Research Committee of the University of the Western Cape with registration number 12/7/7 (Annexure E). Once clearance was obtained, the researcher requested permission to conduct the study (Annexure C) from the Head of the School of Nursing where the study was going to be conducted. Respondents could choose whether they wanted to participate in the study or not and were informed of their right to withdraw at any stage. The researcher ensured complete anonymity and confidentiality, since the study did not require any identifying criteria of respondents to be included in the study. Information provided by the respondents was not used against them in any way and the researcher made sure that the respondents were not exposed to any degree of harm. The numbered questionnaires did not reveal the name of any respondent. Respondents were not exposed to any degree of harm in this study. Chapter 3 contains more information the ethical principles that the researcher followed during this research project.

1.8.7 Significance of the research

The significance of this study was gaining insight in the extent to which the phases of the skills laboratory method were followed by clinical facilitators at a school of nursing at a university in the Western Cape Province and how it might influence learner nurses' and personnel's understanding of importance of the method. The findings would enable nurse educators to implement changes or to review the method when it becomes necessary.

CHAPTER 2
LITERATURE REVIEW

2.1 INTRODUCTION

A literature review is a "systematic, explicit, and reproducible method of identifying, evaluating and synthesizing [sic] the existing body of completed and recorded work produced by researchers, scholars, and practitioners" (Blaxter, Hughes & Tight, 2010:122). This literature review intended to provide the researcher and reader with current information about aspects related to:

- the development of the Skills Laboratory Method (SLM) in South Africa;
- theoretical foundations;
- the phases of the SLM: Orientation, visualisation, guided practice, independent practice, and assessment; as well as
- the role of the facilitator.

The researcher obtained and retrieved relevant literature from databases that included Science Direct, Academic Search Complete (Ebscohost), Cinahl Plus with full text, and Google scholar.

2.2 DEVELOPMENT OF THE SLM IN SOUTH AFRICA

In South Africa, with the transformation of nursing and the development of the different acts that guide the process, education and training has undergone significant changes. The Higher Education Act 101 of 1997 and the South African Qualifications Authority Act 58 of 1995 are two of the Acts that have a huge impact on clinical teaching and nursing education in general. Higher education institutions have implemented the objectives of these acts in order to ensure that teaching approaches are adopted to encourage the development of critical thinking by means of a problem-based approach to learning. In the spirit of these laws, nursing curricula have been changed from a content-based to an outcomes-based approach. In order to meet the needs of health care in South Africa, these changes are necessitated by nursing care in South Africa that is increasingly moving in the direction of primary health and community-based care (Nursing Strategy, 2008).

The importance of nursing education and the integration of theory and practice are re-emphasised to ensure quality nursing care and the improvement of skills and competencies of

nurses (Nursing Strategy, 2008). It is, therefore, mandatory that nursing educational institutions are able to prepare and empower graduates who are knowledgeable, able to practise independently, and capable of making sound clinical judgements (SANC, 2005). Based on these challenges in conjunction with other demands, such as the increase in student numbers and the resultant reduction in hospital beds for bedside clinical teaching, a natural migration to skills laboratory training occurs (Jeggels, *et al*., 2010:52).

Literature identifies skills laboratory teaching methodologies as ideal clinical teaching strategies (McCallum, 2007:825; Woolley & Jarvis, 2007:73; Cant & Cooper, 2010:3; McCaughey & Traynor, 2010:82; Lin, Chen, Choa & Chen, 2012:1; Houghton, Casey, Shaw & Murphy, 2012:29; Bloomfield, Cornish, Parry, Pegram & Moore, 2013:17). The SLM leads to many positive teaching outcomes but it remains the responsibility of everyone who is involved to ensure that all the necessary content for the skills laboratories in an undergraduate curriculum is complied with. It could enable educators to ensure the development of critical thinking, reflection, problem solving, and prevent learners from mastering technical skills only (Potgieter, 2010:4).

With proper facilitation and active participation, learners are able to learn in a risk-free environment where adequate time is allowed for collaboration and enquiry. Learner nurses are also able to practise new skills and facilitators, on the other hand, should be competent and appropriately trained and skilled to competently teach, discuss, question, and provide feedback without the constraints that are often experienced in clinical settings (Nursing Strategy, 2008; Bradshaw & Lowenstein, 2011:357).

In South Africa, limited literature about skills laboratory teaching methodologies is available. At the medical school at the University of Pretoria where skills laboratory training is used, there has been a specific need for small group teaching and for a shift in the teacher and learner paradigm due to diversity and large numbers of learners (Treadwell & Grobler, 2001:481). Clinical skills centres have been designed and implemented at the University of Cape Town (UCT) to operate as efficient learning environments where learners are able to benefit from modern educational aids and from structured support and learning facilitation (Faculty of Health Sciences, UCT, 2014). A learner-centred approach to clinical teaching, the SLM and simulation (Section 2.4), that focuses on learning outcomes, competencies, and the integration of theory and practice. The University of the Western Cape employs this approach to ensure learner nurses acquire the necessary regulated knowledge, skills, and behaviour to comply with

nursing practice guidelines (SANC, 2005; Meyer & Van Niekerk, 2008:25; Jeggels, *et al*., 2010:52).

Numerous studies abroad have been conducted with regard to teaching methodologies and simulation in skills laboratories. Clinical skills laboratories are widely recognised, and regarded as essential structures in nursing education. It provides learners with an authentic learning environment where they are able to practise safely (McCallum, 2007:825; Woolley & Jarvis, 2007:73; Cant & Cooper, 2010:3; McCaughey & Traynor, 2010:827; Lin, *et al*., 2012:1; Houghton, *et al*., 2012:29; Bloomfield, *et al*., 2013:1). Some studies, however, indicate that simulation in skills laboratories lacks realism and suggest that there are no concrete evidence that proves skills training in laboratories is effective (Bradley & Bligh 2005; Peeraer, Scherpbier, Remmen, De Winter, Hendrickx, Van Petegem, Weyler & Bossaert, 2007:2). Other studies hold the opinion that learning in a clinical skills laboratory cannot replace the learning experience during clinical placements. The exposure to learning opportunities in practice, on the other hand, is not always guaranteed (Houghton *et al*., 2012:30). Emphasis should rather be placed on exploring how the teaching in a skills laboratory could facilitate and prepare learner nurses for the learning in health care settings.

Nonetheless, studies based on learners' perceptions of clinical skills centres have concluded that learners favour the new skills laboratory training and believe that the transition from skills laboratory training to clinical practice contributes to efficient learning (Treadwell & Grobler, 2001:481; Peeraer *et al*., 2007:7). The use of high fidelity simulation in nursing is also regarded as a valid teaching / learning strategy because learners are confident, gain knowledge, and acquire critical thinking (Cant & Cooper, 2010:3). It is, however, nurse educators' responsibility to facilitate learning properly on order to assist learners with achieving the desired outcomes (Meyer & Van Niekerk, 2008:32; Billings & Halsteadt, 2013:9).

2.3 THEORETICAL FOUNDATION

Many interrelated theories of learning guide the SLM. The two most significant theories are the Adult Learning Theory by Malcolm Knowles (1990) and Experiential Learning by David A Kolb (1984).

2.3.1 Adult learning theory

Traditionally, adult learning in higher education has been content-based and teacher-centred. This has an undesirable effect on the teaching learning experience. Some characteristics of adult learners are that they are motivated and committed to learn, is able to reflect on past experiences, possess some degree of autonomy, and responsibility. Therefore, it is important to look at their learning needs to enhance the success of their educational experiences (Bankert & Kozel, 2005).

It is not necessary for the educator to assume responsibility for motivating an initiating learning but it is his or her responsibility to remove barriers and obstacles that prevent the learning process to take place meaningfully (Bastable, 2008:16). Some of these barriers include lack of time that might occur in the teaching environment or clinical area, lack of support from people involved in the teaching and learning process, and personal characteristics of learners; such as anxiety, language barriers, and an unwillingness to participate (Bastable, 2008:16). In order to mitigate these obstacles, Ewan and White (1997:98) emphasise the importance of facilitators to know their learners, identify their learning needs, treat them with respect, and value their views. In addition, Ramsden (1992) cited by Mckimm and Jollie (2007:6) identifies six principles for effective teaching that can be applied in higher education: "Teachers should have an interest in the subject and be able to explain it to others, there should be a concern and respect for students and student learning, appropriate assessment and feedback should be provided, there should be clear goals and intellectual challenges, learners should have independence and facilitators should be prepared to learn from students".

Knowles (1984), who is considered the father of adult learning theory, emphasises that adult learners are self-directed and that they are responsible for their own learning (Bradshaw & Lowenstein, 2011:294). Knowles' theory of andragogy states the following assumptions of adult learners, also known as the six principles that guide adult learning:

- Adult learners need to know why they should learn something,
- Adult learners learn by experience, it provides the basis for learning certain activities;
- Adults approach learning by solving problems and are not content orientated;
- Adults learn better if subject matter are of value and relevant to their work;
- Adults need to feel responsible and want to be active participants in their learning process; and

- Adults are motivated and respond to internal rather than external motivation (Nilsson & Stomberg, 2008:7; Bradshaw & Lowenstein, 2011:294).

2.3.2 Experiential learning

Learning in adult education is mostly experiential, since it is mainly the result of practice (Quinn, 2001:62; Hinchcliff, 2005:101). The SLM that is best associated with experiential learning has been implemented to ensure the development of critical thinking and problem solving approaches and was amended to make teaching more learner-centred. Kolb (1984) defines learning as "a process whereby knowledge is created through the transformation of experience". His experiential learning theory originates from a holistic model of the learning process and consists of a multi-linear model of adult development. These principles are consistent with what we know about the way in which we naturally learn, grow, and develop (Illeris, 2009:74). The theory is called "Experiential learning" to emphasise the central role that experience plays in the learning process. The learning cycle consists of four stages: (1) concrete experience, (2) reflective observation, (3) abstract conceptualisation, and (4) active experimentation (Figure 2.1).

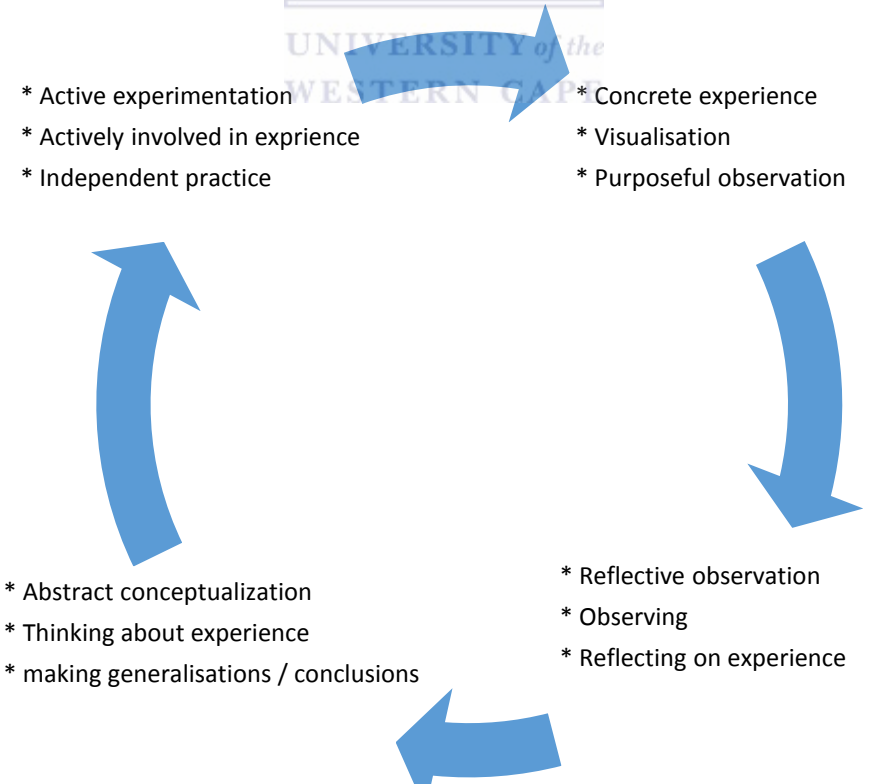

Figure 2.1: Kolb's process of learning (1984) (adapted for SLM)

2.3.3 Translating theory into the SLM

During concrete experiences, the learners immerse themselves into the new experience (Quinn, 2001:363). This corresponds to visualisation in the skills laboratory. The facilitator demonstrates a procedure silently (with little or no interaction) to the learners by using non-verbal communication and either a simulated patient or manikin. It makes the learning experience for the learner as real as possible. The facilitator could ask learners to observe purposefully, to follow their guidelines, and to make notes or write down questions for discussion. One other way would be to allow learners to watch a visual recording of the specific skill. As an adult, the learner has an awareness and a sense of self and includes all previous life experiences into the processes that are taking place. These factors enable learning to occur (Kahonen, 2007:2). Learners should be able to form mental images in order for them to reflect on their observations.

With reflective observation, the internalisation process begins. Learners internalise what has been learnt from the experience and gathers new information based on their perceptions (Davies, 2008:11). It is expected of learners to think carefully and consider what has been demonstrated. In order to reflect on their experience, facilitators may re-demonstrate the procedure and allow learners to reflect and give feedback. Facilitators discuss the procedure with the learners while following the sequence of the procedure and encourage learners to ask questions. Reflection plays an important part in bridging the gap between theory and practice. With reflection, new learning may occur that facilitates integration and application of new knowledge and skills (Kahonen, 2007:3).

Abstract conceptualisation occurs when learners are able to integrate theory, to grasp concepts, and make generalisations and draw conclusions with regard to specific procedures (Davies, 2008:11). Learning occurs when facilitators incorporate theory by discussing theoretical aspects related to the procedure. An adult learner should then control what is learnt by selecting new information and / or deciding how to put it into practice (Kahonen, 2007:3).

During active experimentation, learners decide to put what they have learnt into practice and the independent practice phase suits this process best. During this phase, the adult learner is a self-directed, self-motivated person who could act as an active participant in the learning process and takes responsibility for learning. The learner engages him / her in practising the skill and involves the "whole self" in the process of learning. It is the combination of reflection

an experience that results in learning and the outcomes of this experiential learning cycle is the acquisition of skills, knowledge, and professional development (Fowler, 2008:430).

2.4 THE PHASES OF THE SKILLS LABORATORY METHOD (SLM)

The original skills laboratory training method is a process that includes tutor (1) demonstration, (2) explanation of the demonstration, (3) practise under supervision with feedback and corrective techniques, (4) the practice of learners with simulated patients or with one another, and (5) the summary of the session during which learners are allowed to ask questions (Duvivier *et al*., 2011:2). This five stage process has been adapted into the following phases: Orientation, visualisation, guided practice, independent practice, and assessment (Jeggels *et al*., 2010:52).

2.4.1 Orientation

Orientation is defined as the "familiarisation of something" or as an "initial experience, an exposure that introduces one to something previously mysterious or unknown" (Oxford Dictionary 2014). In this context, it refers to introducing learner nurses to the SLM and all the phases thereof. It also includes orientating learners to different procedures.

Learners are introduced to the SLM during the general academic orientation and are introduced to all the phases and necessary concepts related to them (Jeggels *et al*., 2010:55). Course guides should be available in order for them to prepare for clinical demonstrations and they are informed of their responsibility to become independent learners. In addition, learners should receive an orientation to each specific skill in the context of their specific year of study. The question arises whether this orientation is effective and whether students find this helpful.

- **Significance of orientation**

Literature demonstrates that a proper orientation supports the effective recruitment and retention of staff; more so for new learner nurses at the beginning of their careers or when modular courses or procedures are introduced. It plays a significant role in the development, progress, and the socialisation of a student. It could provide a good framework to learners, especially with regard to their learning processes, outcomes, and expectations (Hassanien & Barber, 2007:41; Bonnel & Smith, 2010:22). Students entering higher education already have preconceived ideas and expectations of what they think higher education should be like but are

generally not well-informed about the specifics of any module of the course. They are, therefore, unaware of the demands of higher education; especially with regard to independent learning, workload, and availability of resources (Darlaston-Jones, Pike, Cohen, Young, Haunold & Drew, 2003:33). A study conducted by Hassanien and Barber (2007:35) reveals that induction programmes significantly enhance academic integration and impact on learners' retention of learning outcomes. They further state that an academic programme should aim at developing good interaction between learners and facilitators. Billing (1997) in Hassanien and Barber (2007:37) suggests that students should be presented with an "activity-based" induction. In other words, learners should be allowed to actively participate in their own orientation. Active participation is described as a process whereby those involved in the teaching and learning process is knowledgeable, use multiple teaching strategies, clearly communicates expectations and outcomes, and remain student-centred by including all students in active questioning and learning through discovery (Kelly, 2006:887).

One study indicates that students' expectations and what they are experiencing (reality) differ immensely (Darlaston-Jones *et al*., 2003:45). Students should be aware of the fact that they ought to be self-directed and take responsibility for their own learning but there is a lack of understanding of basic operations of a university, such as access to information and resources. Learners should identify the need to be more actively involved in their orientation and should expect that access to resources is available at times that are convenient to them (Darlaston-Jones *et al*., 2003:45). This indicates that various methods of innovation could be used to introduce students to new programmes.

In a study done by Charleston, Hayman-White, Ryan and Happel (2007:24) on the importance of effective orientation in an undergraduate nursing programme, they established that students either perceive the orientation period as either too short or too long and that the orientation is neither structured, nor very consistent. Students also acknowledge their need for individualised support during their orientation period (Canejo, 2009).

Literature concedes that successful orientation depends on different obligatory and interrelated factors; such as the timing, duration, content, topics, and activities. It requires the involvement of all stakeholders; such as academics, non-academics, and learners. In most studies, however, students regard orientation as a necessity because it assists them with the social integration into their new environments (Canejo, 2009).

Ultimately, successful orientation could reduce anxiety that is caused by being introduced to new clinical procedures or clinical practice in general (Charleston *et al*., 2007:28; Hassanien & Barber, 2007:44).

2.4.2 Visualisation

Sometimes, visualisation is also called observation and it is an essential and effective aspect of clinical teaching (Morris, 2007; Gaberson & Oermann, 2010:124). With the SLM, a facilitator demonstrates a specific skill in small groups of between eight and twelve learners with the advantage of allowing learners to actively participate (Quinn, 2001:354; Jeggels *et al*., 2010:56). Based on the type of scenario, the suggested maximum number of learners for a patient simulation demonstration is five learners (Hughes, 2008:234). Small group teaching could be perceived to benefit learners. However, small group teaching also has disadvantages, such as only some students engage in dialogue whilst others are excluded and some may also be unwilling to take part (Fürst, 2011:27). Nonetheless, small groups are desired in the SLM (Jeggels *et al*., 2010:55).

The facilitator demonstrates skills in the skills laboratory while adhering to common principles related to a demonstration (Mellish *et al*., 2000:111). These principles include the proper planning of the session, the determination of objectives, and the assurance that learners have the relevant pre-knowledge related to the objectives. Duvivier *et al*. (2011:2) refer to this pre-knowledge as "students' preparatory learning" and facilitators ought to commence a training session by discussing the fundamental theory about the procedure. Gaberson and Oerman (2009:82) state that teaching begins at the level of the learner which indicates that the learner's level of knowledge and experience is crucial in developing clinical competence. If the learner lacks pre-knowledge, the clinical instruction should remedy these deficiencies before the demonstration in order to assist learners in their learning. After the assessment of pre-knowledge, learners should then purposefully observe what is demonstrated and must be provided with clear guidelines to maximise their performance and enhance their critical thinking (Ewan & White, 1997:112; Morris, 2007). Some of the guidelines necessary for purposeful observation are to include telling learners what, who, how, and why to observe. The purpose of a demonstration in this phase is not to engage in a lengthy discussion (lecture-demonstration) but to complete the skill in sufficient time that would allow time for practice (Ahmed, 2008:101). Jeggels *et al*. (2010:53) refer to the purpose of a "silent demonstration" as allowing learners to gain insight and to visualise the entire execution of the procedure. Such a

silent demonstration could contribute to the enhancement of a realistic patient scenario. By demonstrating the procedure with simulated patients, learners are allowed to observe, get time to ask questions, feedback, and reflection. The advantage of a well-planned demonstration provides for observational learning to occur (Neeraja, 2011:211).

2.4.2.1 Learning through observation (visualisation)

Bandura's (1977) social learning theory, also known as the social cognitive theory, emphasises the role that observation plays in learning (modelling) (Sigelman & Rider, 2012:45). According to his theory, human beings learn by observing other people but it does not necessarily mean that a change in behaviour would occur. The role model as an influential person has to demonstrate to the learners the correct attitudes, values, ethics, communication skills, patterns of thinking, and behaviour. By observing a role model, learners not only develop their clinical skills but improve their own professional role as a nurse (Ramani & Leinster, 2008:357). It is therefore important that the facilitator of learning sets an example and demonstrates attributes; such as critical thinking, showing a caring attitude, and effective communication with patients.

Bandura (1977) states that environmental, personal, and behavioural factors influence human behaviour. A realistic learning environment can thus be set by incorporating these three factors into simulation with the purpose of enhancing skill acquisition. Simulation can assist in providing this realistic exposure for learners. In turn, information could be stored and coded cognitively and used as a guide for action (Rhodes & Curran, 2005:257). Bandura also emphasises that observation is the commencement of the learning process. From the learning process, expertise will only develop as a result of practice that is either externally or internally motivated (Rutherford-Hemming, 2012:132). Whilst the acquisition of technical skills is important, simulated patients and high fidelity patient simulators should be used for clinical teaching as an effort to integrate effective communication in addition to acquiring psychomotor, cognitive, and affective capabilities.

2.4.3 Simulation

Simulation has become an established teaching strategy that provides learners with an opportunity to actively participate in the demonstration of a clinical skill. Literature shows that learners and facilitators value demonstrations as one of the most valuable clinical teaching strategies. Although fairly new in South Africa, the use of simulation has been widely researched and has been found to be an effective teaching strategy that allows learners to

observe and practice realistic patient-nurse scenarios in a safe environment, without any risks to patients (McCallum, 2007:826; Jeggels *et al*., 2010:51; McCaughey & Traynor, 2010:828; Bland, Topping & Wood, 2011:664).

During the visualisation phase of the SLM, learners are provided with realistic patient demonstrations by utilising simulated (standardised) patients, or manikins ranging from low fidelity to high fidelity simulators, with the aim of allowing learners to immerse themselves into the scenario, compelling them to use their critical thinking, creative thinking, problem-solving, and decision-making abilities (Reilly & Spratt, 2007; Bambini, Washburn & Perkins, 2009:79; Jeggels *et al*., 2010:51; McCaughey & Traynor, 2010:827; Bland *et al*., 2011:664).

In one study 95% of 86 learners felt that simulation had positively influenced their clinical judgement whereas 98.6% felt that it increased their confidence while they were learning from their mistakes (McCaughey & Traynor, 2010:830). Other studies identify a need to increase the amount of simulation with the skills practised, and that learning on manikins is experienced differently from that on a 'real person' (Cant & Cooper, 2010:6; Maginnis & Croxon, 2010:5; Bland *et al*., 2011:664). To bridge the gap, the use of high fidelity simulators combined with creative thinking and teaching, the "realness" of the simulated experience could be enhanced (Bland *et al*., 2011:665). High fidelity simulators, however, seem to have the disadvantage of being very complex due to the nature of equipment and it requires time to learn. Educators are fearful and cautious of using this advanced technology (Reid-Searl, Eaton, Vieth & Happel, 2011:2753). Learners, however, prefer real patients or actors who role play because they are 'real' (Anderson, Aylor & Leonard, 2009; Reid-Searl *et al*., 2011:2753). Role play encourages communication and prepares learners for practice (Anderson *et al*., 2009). Essentially, the effectiveness and authenticity of simulation largely reflect the extent to which it is realistic and credible (Okuda *et al*., 2009:332).

In general, learners support the view that clinical laboratory classes prepare them for practice in the clinical setting (McCaughey & Traynor, 2010:831). The availability of equipment in the skills laboratory, as well as the teaching environment where simulation occurs, must be similar to those used in the hospital setting, because it influences the planning of scenarios (Edgecombe *et al*., 2013:3; Treadwell & Havenga, 2013:481). Simulation when properly constructed and facilitated is an effective learning strategy for achieving cognitive, psychomotor, and behavioural objectives (Anderson *et al*., 2009:597).

After visualising a procedure, the opportunity for guided practice occurs when learners get an opportunity to practise skills until they are competent while they are receiving immediate feedback.

2.4.4 Guided practice

Kolb (1984) states that learners' thoughts are formed and reformed by repeated learning experiences. In order for learners to develop expertise in the performance of a skill, repetitive practice is necessary. In other words, learning by observation as noted previously is not sufficient for learning to occur. During guided practice, the clinical facilitator conduct a repeat demonstration to reinforce the necessary information with regard to a skill and learners are then afforded the opportunity to practice under direct supervision (Oermann, Kardong-Edgren, Odom-Maryon, Halmark, Hurd, Rogers, Haus, McColgen, Snelsen, Dowdy, Resureccion, Keurchner, Lamar, Tennant & Smart, 2012:311).

The facilitator acts as a coach and learners perform the skills under direct supervision and guidance (Woolley & Jarvis, 2007:77). In their model for teaching and learning clinical skills, Woolley and Jarvis (2007) refer to this stage as "coaching". The learner should attempt to perform the task with assistance and guidance from the facilitator; it normally would occur in small groups that allow feedback and sharing of ideas amongst peers. In guiding learners, facilitators must be skilled and able to make sound judgements about a learner's performance. According to Oerman and Gaberson (2009:86), it is the responsibility of the facilitator to identify the learning needs of the learner, such as poor technique and lack of understanding. This identification augments constructive feedback between facilitator and learner. Learners must also be questioned during their guided practice with the purpose of encouraging critical thinking.

The attainment of competency in motor skills is a slow process and consequently learners should be motivated by explaining the benefits of engaging in deliberate practice (Liou, Chang, Tsai & Cheng, 2012).

Learning occurs through guided and independent practice (the next phase of the SLM) and learners will be able to master motor skills and perform it automatically without thinking about it (Oermann *et al*., 2012).

The SLM, therefore, allows for at least four primary clinical teaching goals to be attained:

- the correct execution of a skill;
- interaction with patients, specifically in terms of communication skills;
- the integration of knowledge and skills; and
- the interpretation of findings (Van Berkel *et al*., 2010:88).

2.4.5 Independent practice

The SLM as a learner-centred approach to teaching promotes independent practice and self-directedness. Self-directed learning is based on the principles of adult learning as stated by Knowles (1984) and the benefit thereof is lifelong learning (O'Shea, 2003:63). With SDL, learners are provided with their learning outcomes and objectives and they are responsible for planning their learning needs accordingly (Dent & Harden, 2009:169; Jeggels *et al*., 2010:59).

The aim of the independent practice phase is to promote self-directedness or independence as far as possible. This phase includes factors; such as increased confidence, autonomy, motivation and the development of skills for lifelong learning (Levett-Jones, 2005:364).

SDL is sometimes used synonymously with self-teaching or self-study but fail to identify that learners require continual support in order to become self-directed (Silen & Uhlin, 2008:462). The ability to practice independently requires that learners must become self-directed and must be encouraged by facilitators to do so.

O'Shea (2003) states that not all adult learners are self-directed. Learners who start studying nursing immediately after they have left secondary school are less inclined to self-direction compared to advanced learners. On the other hand, mature learners demonstrate that they prefer structured learning; probably not due to age but mostly due to their experience (O'Shea, 2003:65). Price-Miller (2010:23) reveals that learners do not understand their role as self-directed learners, they experience a lack of direction in terms of the curriculum, and they do not understand the concept, purpose, and nature of SDL.

The role that the facilitator plays in this phase of the SLM, therefore, is extremely important.

Facilitators should take into account the preferred learning styles of students while they are planning suitable methods for teaching (O'Shea, 2003:68). It is their responsibility to ensure that learners acquire self-directed learning skills and that a support system should be implemented to guide and engage learners during the SDL process (Price-Miller, 2010:23).

Effective facilitation depends on the support, encouragement, and understanding of facilitators. The encouragement to either practise independently or with peers in the clinical skills laboratory, or to make visual recordings for self-assessment purposes must be promoted (Jeggels *et al*., 2010:56).

Literature indicates that by increasing the use of audio-visual (AV) recording in order to practise and to provide feedback proves to be beneficial. Learners find AV recordings of their skills performance are valuable and it enables them to use the AV recordings for self-assessment. Further advantages of AV recordings are that learners demonstrate competency, improve their communication skills, are able to identify areas for improvement, and are motivated to learn (Houghton *et al*., 2012:32).

2.4.6 Assessment

The process of assessment requires information about students' learning, to judge performances, to determine competencies, and to arrive at decisions about learners. Primarily, SLM assessment focuses on outcomes, objectives, and competencies (Jeggels *et al*., 2010:56; Oermann & Gaberson, 2014:12).

The Nursing Act (No. 33 of 2005) defines a professional nurse as one who: "is educated and competent to practise comprehensive nursing, assumes responsibility and accountability for independent decision making in such practice…" In order to equip learners with the necessary skills, knowledge, and attitudes; assessments should be done to determine whether learners would be able to assume this role. The purpose of assessment in health care is to (1) drive student learning, (2) determine the competencies of future practitioners, (3) complete necessary competencies as determined by accrediting or qualifying bodies, and (4) identify underperformance and enable targeted remediation (Delaney & Malloy, 2009:149; Keating, Dalton & Davidson, 2009:14).

Wass, Van der Vleuten, Schatzer and Jones (2001:945) state that assessments should be appropriate, reliable, and valid in terms of what it seeks to measure. Much controversy exists in literature with regard to competency measurement. Different points of view are found in relation to the reliability and validity of assessment instruments and the grading of a competent learner (Levett-Jones, Gersbach, Arthur & Roche, 2011:65; Yanhua, Watson, 2011:832). Levett-Jones *et al.* (2011) advise that competence should be assessed by direct observation of nursing students in clinical placements. Assessment will then enable the facilitator a learning

opportunity to provide feedback about specific performances and to determine whether learners are achieving learning outcomes. Assessment, therefore, has a huge impact on learning because the development of a skilled practitioner is the bedrock of nursing education.

Various measures of assessing clinical competence exist (Fahy, 2011:43). According to Jeggels *et al*. (2010:57), the traditional clinical examination or Objective Structured Clinical Examination (OSCE) is not suitable for the SLM and subsequently an "integrated type of competency" should be implemented. In the latter, learners are assessed formatively in clinical placements under direct observation and assessed against a standard competency template that includes feedback and reflection (Dent & Harden, 2009:61; Jeggels *et al*., 2010:57).

OSCEs are an approach to objectively assess components of certain skills in a structured manner. These summative assessments are still preferred by some educational institutions, in particular to assess technical skills (Mitchell, Henderson, Groves, Dalton & Nulty, 2009:403). However, other aspects with regard to interpersonal skills and critical thinking may not be adequately assessed. Literature suggests that a variety of assessment methods should be used to adequately ensure the competency of learners (Mitchell *et al*., 2009:403).

2.4.6.1 The role of the facilitator as assessor in SLM

The assessment of clinical competencies of learners is an integral part of SLM. The facilitator plays a fundamental role in the success of students' learning experiences while enabling them to develop the required competencies (Fahy, 2011: 43). Neary (2000:6) states that it is assumed assessors have the ability to assess levels of standards and performances due to the fact that they are trained professionals. In her study, she identifies the need for practitioners to be prepared properly and to be assessed for the role of assessors and evaluators in the context of learning. Assessors should be able to facilitate learning, teach and assess learners, demonstrate a progression of achievement, develop their own professional and personal competencies, and develop their own skills in becoming reflective practitioners who demonstrate fitness to practice (Neary, 2000:6). Facilitators' ability to be objective and fair during assessment is crucial and can be attained by the involvement of two or more people during the assessment. This principle reduces the risk for potential bias and subjectivity (Fahy, 2011:43; Levett-Jones *et al*., 2011:65).

2.4.7 The value of feedback and reflection during the SLM

For the purpose of enhancing best practice, facilitators should consider core adult learning principles and provide opportunities for learners that allow them adequate time for reflection and feedback (Mckimm & Jollie, 2007:10).

2.4.7.1 Feedback

By comparing the different definitions found in literature, Van de Ridder, Stokking, McGaghie and Ten Cate (2008:189) define feedback in clinical education as "specific information about the comparison between a trainees' observed performance and a standard, given with the intent to improve the trainee's performance". In the case of the SLM, trainee refers to a learner. Feedback is provided by the learner, the facilitator, peers, and simulated patients. Feedback is continually provided during the phases of the SLM to give learners the opportunity to reflect on their experiences (e.g. the practising of a particular skill) with the purpose of identifying their learning needs. Such continual feedback augments the learning experience and motivates learners to become self-directed.

The major reasons for feedback are the advancement of learning, encouragement of learners to become actively involved in their learning, and the opportunity for learners to identify the strengths and weaknesses in their performance. Providing such feedback may lead to a behavioural change (Van de Ridder *et al*., 2008:189; Delaney & Molloy, 2009:128). Feedback is a fundamental aspect of any learning environment and is useful, especially during formative assessment (Hauer & Kogen, 2012:141). When facilitators neglect to provide feedback, learners would be unaware of their strengths and weaknesses and unable to pursue learning goals (Hauer & Kogen, 2012:141).

In studies that determined the effect of feedback during clinical teaching, learners felt that the relationship between them and their supervisors significantly influenced their learning (Delaney & Malloy, 2009:135; Embo, Driessen, Valcke, Cees & Van der Vleuten, 2010:266).

Learners perceived more and proper feedback from a supervisor who had a love for teaching. They felt that facilitators lacked competencies and suggested that facilitators should develop their own competencies with regard to adequate supervision, adequate feedback, and how to train and support learners (Embo *et al*., 2010:266).

On the other hand, facilitators often experience that feedback is one-directional in the sense that they are the "diagnosticians" instead of a two-way feedback process when learners also provide their input (Delaney & Malloy, 2009:135). This contradicts best practice of feedback that requires it to be a two-way process. Nevertheless, it suggests that educators and learners both contribute to a one-way feedback process because learners perceive educators to have a superior content knowledge and consequently they fear the prospect of being wrong. Clinical educators constrain the process by either not being competent enough to facilitate the learner's self-evaluation, or simply being inclined to diagnose rather than to engage in a collaborative process (Delaney & Malloy, 2009:139). Therefore, literature recommends that skills of providing and receiving feedback should be taught to learners early in their training and that educators become aware of the philosophy and skills that are required for providing and receiving feedback (Delaney & Malloy, 2009:142).

2.4.7.2 Reflection

Reflection is used in the learning process as a learning tool and for assessment purposes. It is a concept of learning and an "active, persistent, and careful consideration of any belief or supposed form of knowledge in the light of the grounds that support it and the further conclusions to which it tends" (Dewey, 1933:118). Boud, Keough and Walker (1985:18) define reflective practice as a "forum of response of the learner to (an) experience". Reflection, therefore, is concerned with reviewing the experience in one's mind, trying to explain what one has done and how one feels about it. It is often used after a guided practice and assessments (formative) in the SLM as a measure to determine learner's experiences regarding their overall performance. The outcome of reflection is learning and the ability to gain further knowledge (Molee, Henry, Sessa & McKinney-Prupis, 2010:239).

Many structured models of reflection exist and the use thereof may broaden one's understanding of what happened and what options is available should a similar situation arise. Gibbs's model of reflection (1998) entails asking the learner to describe the event (in this instance a specific skill) and their feelings associated with it. Positive events are evaluated and possible actions that may have been taken into account must be considered (Callara, 2008:286).

The Describe, Examine, and Articulate Learning (DEAL) Model of critical reflection for the assessment of student learning is grounded in the theoretical work of Bloom's *Taxonomy of Educational Objectives* (1956) and Paul and Elder's *Critical Thinking: Tools for Taking Charge*

of Your Professional and Personal Life (2002). The model is an assessment mechanism that seeks to evaluate critical reflection and critical thinking of learners (Bringle, Latcher & Jones, 2012:156).

The DEAL model is a three-step process that assists learners to (a) describe their experience, (b) examine this experience with regard to specified learning objectives, and (c) articulate learning. When using this model, learners could be asked specific questions to guide their reflections and it could be structured in accordance with skills acquisition. At first, learners are asked to provide detailed descriptions of their experiences and questions are asked, such as 'What did I do?', 'Why did I do it?', 'What did I use?', and 'How did I apply the skill?' In examining the experience, questions are asked, such as 'What did I learn?', and 'How did I specifically learn it?' The questions 'Why does this learning matter?', or 'Why is it significant?' allow learners to discover the meaning and the importance of the learning material. Lastly, learners should determine whether their learning needs have been met. Questions that would solicit this information are 'In what ways will I use this learning?', 'What goals shall I set in accordance with what I have learnt?', 'How would I improve my competencies?', 'What influences the quality of my learning?', or 'How do I improve the quality of my future experiences or service?' (Bringle, Latcher & Jones, 2012:156).

Researched evidence suggests that reflection could assist learners with learning from their experiences. It could improve the retention of knowledge and allow learners to increase clinical reasoning skills in practice (De Swardt, Du Toit & Botha, 2012; Molee *et al*., 2010:239). With an evaluation that is based on the DEAL model of reflection, learners are able to describe, identify, and explain their learning. However, they might be unable to evaluate what they have learnt and whether they are able to think critically (Molee *et al*., 2010:239). In another study, reflection seems to be significant, since it assists second year nursing students to clarify theoretical and practical experiences and affords them an opportunity to integrate theory and practice (De Swardt *et al*., 2012). De Swart *et al*. (2012) encourage the use of reflection in the education of nurses, since it develops learners' ability to establish what they know and how do they translate theory into practice in order to provide optimal nursing care. In order to allow learners to reflect on their learning, it remains the responsibility of the facilitator to guide and assess learners' reflection (Molee, 2010:253).

2.4.8 The role of the facilitator in SLM

"Learning is facilitated when a facilitator functions as a **guide by the side** rather than a **sage on the stage***"* (De Witt in Dent & Harden, 2009). When embracing a learner-centred approach that is associated with experiential learning, teaching should focus on providing learners with quality learning experiences. In clinical teaching, supervisors act as facilitators and learners are active participants in the teaching and learning process (De Villiers, Joubert & Bester 2004:83; Jeggels *et al*., 2010:58).

Different models of clinical supervision exist in nursing which include the preceptor model, facilitation / supervision model, combined facilitation-preceptorship model, and the mentorship model. Each of these models is described according to the relationship between learner and supervisor and the length of time of supervision. Learners indicate that they prefer the facilitator model, since it allows them to utilise their critical thinking skills with the assistance of their facilitators (Walker, Dwyer, Moxham, Broadbent & Sander, 2013:531).

Various authors state that clinical facilitation seem to be appropriate for the mere fact that educators should act as facilitators in the learning process by guiding learners through finding and interpreting information (Lambert & Glacken, 2005:664; Meyer & Van Niekerk, 2008:58). The researcher in this study, therefore, had decided to refer to the term facilitator for all educators involved in the SLM.

Sihlen and Murray (2004:847) define facilitators as people who do not solve problems but who guide learners to use effective problem solving methods. In order for learners to gain knowledge and skills in clinical practice, someone should be available to demonstrate how theoretical knowledge can be integrated with practice. When this does not occur, the opportunity for experiential learning might be lost or diminished (Lambert & Glacken, 2005:664). Much research has been conducted on teaching skills in clinical education. Irby *et al*. (1978) makes an important contribution that identifies seven features of effective clinical teaching: Knowledge and analytical ability, organisation and clarity of presentation, enthusiasm and clarity of presentation, group interaction skills, clinical supervision skills, clinical competence, and professionalism (Lambert & Glacken, 2005:664). These features are regarded as general clinical teaching characteristics and skills. However, the researcher in this study focused on facilitation with the purpose of identifying the specific skills that were necessary for a facilitator in a skills laboratory.

Duvivier *et al*. (2009:639) imply that the laboratory training of facilitators should focus on qualities competencies and strategies in order to equip them with the necessary skills. Some of the qualities facilitators with a passion for teaching should have are a good sense of humour, a clear idea about their own limitations, the ability to identify learners' limitations without being judgemental, and awareness of their responsibilities as role models. They should also have a thorough comprehension of the level of knowledge and experience of learners. Not only is knowledge of the curriculum vital but insight into the educational backgrounds of learners is also important.

Strategies necessary for facilitators are: To adapt the content of the training, the level of depth necessary for learners at a particular level of training, and to attend to the needs of any particular group by explicitly inviting learners to ask questions. Facilitators should provide feedback about skills acquisition in a stimulating way and try to encourage contextual learning by linking skills training to clinical situations. Facilitators should also "aim to develop students' ability to identify their own educational needs and to enable them to take appropriate actions to fulfil these needs" (Duvivier *et al*., 2009:639). Put differently, facilitators need to assist learners with becoming self-directed.

Facilitators should also allow learners to reflect on their learning experiences, since it augments learning. In addition, the researcher holds the opinion that facilitators should also become reflective practitioners and know how to encourage reflection (Duvivier *et al*., 2009:639).

The perceptions of learners and tutors and their views of effective facilitation are valuable to learners, since learners and tutors alike regard the above characteristics as essential (Steinert, 2004:291; Lambert & Glacken, 2005; Lekalakala-Mokgele, 2006; Kelly, 2007). Learners view facilitator knowledge as the most important aspect of clinical teaching, followed by feedback and communication. Learners regard the facilitator as knowledgeable when they are able to integrate theory and practice (Kelly, 2007). Learners also indicate that tutor characteristics, a non-threatening atmosphere, group interaction, clinical relevance and integration, as well as instructional material that encourage problem solving and thinking are important aspects of facilitation, especially when it happens in small groups (Steinert, 2004:291).

Facilitation have many benefits for facilitators and for learners, but some facilitators lack the required knowledge and experience at the beginning of facilitation and as a result they fear that they are wasting their time by not covering the necessary content. They feel a need for adequate

training and orientation. Facilitators are, however, able to actively involve learners in the learning process in order to promote self-directed learning while incorporating principles of adult learning into their teaching approach (Lekalakala-Mokgele, 2006).

2.5 CONCLUSION

The aim of this literature review was to explore and explain the concepts related to the SLM. Each of the phases of the SLM is explained and the roles of the learner and facilitator are described. It shows that when implemented accurately, learners should gain the necessary expertise and practice in a controlled and safe environment. The next chapter focuses on the research methodology of this study.

CHAPTER 3
RESEARCH METHODOLOGY

3.1 INTRODUCTION

Research methodology is defined as a "systematic way" of solving a problem. It essentially describes how a researcher goes about to answer the research questions or to predict phenomena (Rajaseka, Philominathan & Chinnathambi, 2013:1). This chapter aims at describing the research methodology of this study in order to provide an account of how the researcher went about to answer the research questions, as well as to explain the methods used during data collection and data analysis. The population, sampling, the instruments used to generate the data, data analysis, validity, reliability, and the considerations of ethical aspects are included. After careful consideration, the researcher applied a quantitative, exploratory, and descriptive research design.

3.2 RESEARCH DESIGN

A research design is a systematic and rigorous detailed plan that researchers adopt to obtain answers to relevant research questions (Kumar, 2005:84; Houser, 2012:33). It guides a researcher to plan and implement the study in a way that is most likely to achieve the intended goal (Polit & Beck, 2014:51). In this study, the researcher used a quantitative, exploratory and descriptive research design to explore and describe the perceptions of learner nurses with regard to the implementation of the SLM with the prospect of developing guidelines to improve its implementation.

3.2.1 Quantitative design

A quantitative design is a traditional research method rooted in the philosophical assumptions of positivism. The major assumption of positivism is that reality exists and that it can be measured and observed. Data is gathered, then analysed objectively and statistically in order to produce precise and generalizable findings (Houser, 2012:365; Polit & Beck, 2014:7). For this study, a quantitative design was chosen, since the researcher wanted to obtain learners' perceptions of their clinical teaching method with the aim of establishing whether the results could support current practice (Houser, 2012:369). Quantitative studies also assist researchers with drawing conclusions about a specific objective or intervention of a particular study (Houser, 2012:349).

3.2.2 Exploratory design

An exploratory design begins with a phenomenon of interest, an investigation of the full nature of the phenomenon, the way it manifests, and any other related factors (Polit & Beck, 2014:12). This research project met the criteria of an exploratory design and aimed at discovering how learner nurses perceived the implementation of the SLM (phenomenon of interest), and how it was implemented in the skills laboratory. Exploratory research also studies what has not been studied before and attempts to identify new knowledge, insights, and new meanings with the aim of exploring factors related to the topic (Polit & Beck, 2014:12).

3.2.3 Descriptive design

Descriptive research is conducted "to determine the attitudes, beliefs, opinions, behaviours and demographics of a study" (Polit & Beck, 2008:287). The objective of this descriptive study was to explore and describe the perceptions of learners about the implementation of the phases of the SLM by facilitators.

3.3 POPULATION

A population includes the entire group of individuals who meet the criteria in which the researcher is interested (Polit & Beck, 2014:178). In this study, the population was all the learner nurses in South Africa, receiving clinical training at an undergraduate nursing institution. The researcher did not have access to the whole population of interest and therefore decided to make use of the accessible population (Polit & Beck, 2008:338).

3.3.1 Accessible population

The accessible population is a portion of a population that the researcher had reasonable access to and who meets all the criteria of the population (Wood & Haber, 2006:263; Polit & Beck, 2014:178). The accessible population for this study was undergraduate learner nurses who were studying for a Bachelor of Nursing degree at a university in the Western Cape (N = 980).

3.3.2 Sampling

Sampling is defined as the process of selecting a number of individuals from the target population in such a way that these individuals represent all the characteristics of the target

population (Polit & Beck, 2014:180). In this study, respondents from the accessible population had to meet the selection criterion:

- A respondent had to be exposed to this clinical teaching strategy and should have experience similar learning experiences in the clinical skills laboratory that include all the different phases of the SLM.

Respondents could disclose first-hand information about their perception in relation to the implementation of the method based on a pre-set questionnaire. Respondents were also easily accessible and available and were therefore able to assist the researcher with valuable information that was of great assistance to develop possible and necessary changes in the guidelines for facilitators.

A probability (systematic stratified) sampling method was selected for this research project. With probability sampling, every member of a population has an equal chance to be included in a study while representativeness can be ensured (Pilot & Beck, 2008:340). Probability sampling enhances representation of the population and bias is reduced when subjects are randomly selected (Babbie, 2012:194). Systematic sampling is conducted when an ordered list of all members of the population is available. The process involves selecting every *k*th individual on the list, using a starting point selecting randomly (Polit & Beck, 2014:181). To ensure representativeness, the following formula was used to calculate the sample size:

$$n = \frac{N * Z^2_{\alpha/2} * p * q}{(N-1)d^2 + Z^2_{\alpha/2} * p * q}$$

Figure 3.1: Assumption of normality

Where:

N = total population;

n = sample size;

D = 0.05 margin error;

α = 0.05 level of significance;

p = probability of prevalence; and

p = 0.5 and q = 1 - p = 0.5 probability of prevalence.

Every fourth (k = 4) learner nurse at each level of the four year training programme was identified by the researcher until a satisfactory sample was obtained. In this study, systematic stratified random sampling was used due to the availability of class lists of all registered learner nurses from the first to the fourth year.

Table 3.1: Sampling Frame

	Population	Sample
First years	334	94
Second years	256	72
Third years	230	65
Fourth years	160	45
	N = 980	n = 276

3.4 METHOD

The researcher designed a survey that was used as an instrument for collecting data. Surveys are used to obtain information from respondents by means of a questionnaire. In this study, the researcher used a self-report method in which the respondents indicated their perceptions with pen and paper on a structured questionnaire (Houser, 2012:284).

The advantages of a survey are:

- It is flexible and broad, meaning it could be applied in many situations and focuses on a particular topic;
- Respondents remain anonymous and as a result they might respond more honestly;

- A standardised questionnaire for respondents eliminates researcher bias;
- It is also possible for a questionnaire to contain a large number of questions. The questionnaire in the study consisted of 76 items; and
- A larger sample size could be used to enhance representativeness (Houser, 2012:284).

The researcher was aware of some disadvantages a survey could have:

- Information could be superficial and do not delve deep into the understanding of human behaviour.
- Unreliable conclusions could be obtained due the misinterpretation of the questions; and
- Respondents might respond with answers that they assume would be acceptable (Houser, 2012:284).

Conducting a pilot survey with the instrument mitigated these disadvantages to a large extent.

The rationale for using a survey was based purely on its advantages, e.g. to reach a larger sample of the population and to determine the perceptions of learners with regard to a particular clinical method and not to delve deeply into their feelings about it (Polit & Beck, 2008:284).

3.4.1 DATA COLLECTION INSTRUMENT

The researcher used a self-administered structured questionnaire to obtain the data (Polit & Beck, 2008:325). A questionnaire is defined as a list of carefully designed questions with the view of eliciting responses from the chosen sample. A structured questionnaire with closed-ended questions was administered to respondents. The researcher constructed the questionnaire by reviewing the literature and consulting experts on the topic.

The questionnaire consisted of three sections that allow for responses on a five-point Likert scale: (1) = strongly disagree (SD), (2) = disagree (D), (3) = uncertain (U), (4) = agree (A), and (5) = strongly agree (SA). Closed-ended questions that determined the extent of agreement to questions were developed. The questionnaire consisted of 76 questions.

- Section A of the questionnaire contained biographical data; such as age, gender, mother tongue language, and the level of training that respondents were busy with.
- Section B consisted of questions pertaining to each of the phases of the skills laboratory. It intended to determine how learner nurses perceived the SLM and how facilitators

implemented the phases of the method: Orientation to the SLM, visualisation, guided practice, independent practice, and assessment.

- Section C consisted of general questions that sought to determine the general perceptions of the SLM. It aimed at determining how learners generally perceive the SLM (Table 3.2).

Table 3.2: Scale of the instrument

The skills laboratory method (SLM)	1 SD	2 D	3 U	4 A	5 SA
Orientation to the skills laboratory method The facilitator:					
encourages me to attend the orientation for the particular level of my training.					

3.4.2 Piloting of the instrument

The researcher designed and developed the questionnaire that was used in a pilot study to ensure that the instructions and items were clear. A pilot study, which is a small-scale study or trial run of the actual study, was conducted to determine the need for further development or refinement of the instrument (Kumar, 2005:10). A pilot study is an important aspect of a proper study design, since it increases the chances that the results of the main study would be more accurate (Van Teijlingen & Hundley, 2001:1). In the pilot study, the questionnaire was administered to 40 respondents who did not form part of the main study. The reasons for conducting a pilot study was to eliminate misinterpretation of questions in order to increase response rates, to identify possible weaknesses in measurement procedures (including instructions, time limits), and to identify whether questions were clear and to eliminate any ambiguity (Van Teijlingen & Hundley, 2001:1).

Learners were able to complete the questionnaire in an adequate amount of time (15 – 20 minutes) and their feedback suggests that the questions were clear and understandable. One adjustment was made on the instruction sheet to clarify that the facilitator in lieu of the SLM referred to all educators involved in the SLM and not only to clinical supervisors.

3.4.3 Data collection

The researcher arranged with individual class lecturers for time at the end of a period (was during a period of revision), to administer questionnaires to learner nurses. Data collection took place over two weeks and the researcher was able to reach all the classes. During each data collection session, the researcher was available to clarify any questions respondents might have had. The questionnaires, consent forms, and information sheets were handed to a total of 276 learners and the questionnaires took 15 - 20 minutes to complete. Learners were reminded that they participated voluntarily in the study and they were able to withdraw at any stage. Completed questionnaires were collected separately from consent forms and placed in sealed envelopes to ensure anonymity. Two hundred and seventy six (100.0%) respondents returned the completed questionnaires that would be kept in a locked cabinet for at least five years after the publication of the research results.

3.5 DATA ANALYSIS

Data was analysed statistically with the assistance of a statistician at a university in the Western Cape Province. The researcher and the statistician analysed the data with the assistance of the computer program Statistical Package for Social Sciences (SPSS) Version 21.

Descriptive statistics are essentially used to describe data that are numerical in nature and to describe the attributes and characteristics of the population that a researcher is interested in (Polit & Beck, 2014:215). Data was organised and summarised in an organised manner with the purpose of having meaning to readers of the research report and providing readers with a summary of the information based on the responses of the sample (Brink, 2006:170; Houser, 2012:312). Descriptive statistics include several types of measures. In this study, the researcher focused on measures of central tendency, namely the mean values and measures of variability which included standard deviations (Houser, 2012:314). The mean value ($\bar{x}$) determined the average of scores and the standard deviation (SD) indicated the distribution of responses in relation to the mean value (Brink, 2006:181). Information was presented in tables and figures.

Inferential statistics are used in addition to descriptive statistics when a researcher wants to achieve more than just describing data. It is used to ‘deduce or infer’ characteristics from the sample, allowing a researcher to make judgements or inferences from the data obtained from the respondents. Fundamentally, it is an analysis of the differences that occur between groups, samples, or populations either over time, or due to change (Polit & Beck, 2014:382). A factor

analysis was conducted in order to cluster and explain variables that were extracted from the study.

3.5.1.1 Factor analysis

Factor analysis is a multivariate statistical procedure that 'disentangles' interrelationships between items, identifies which items correlate more strongly with one another, and whether it has the same underlying construct (Polit & Beck, 2008:503). It is a 'data reduction' technique that takes large groups of variables and determine ways in which the data could be 'reduced' or summarised by using a small number of factors or components prior to analysis (Pallant, 2011:182).

Three steps were followed to conduct a factor analysis of the items in Section B of the questionnaire.

- **Suitability of data for factor analysis to proceed**

According to Pallant (2011), the sample size and the strength of the relationships among the variables are two issues that determine the suitability of the data for a factor analysis to proceed. The sample size should not be less 150 and the strength of the inter-correlation coefficient matrix amongst the items should be greater than 0.30 (Pallant, 2011:182).

The Kaiser-Meyer Olkin (KMO) test which measures the sampling adequacy and Bartlett's test of sphericity were two statistical tests generated by SPSS to determine whether those two requirements were met. The KMO normally ranges from 0 – 1 and a total above 0.6 is a suggested minimum (Kaiser, 1974 in Pallant, 2011:184). In this study, the sample consisted of 276 respondents and the KMO of all the variables ranged between 0.89 and 0.94 (Table 3.3). Bartlett's test for sphericity was used to examine the strength of the relationship between the variables; statistically $p < 0.05$ indicates a strong relationship (Tabachnick & Fidell in Pallant, 2011:184). If no relationship is found, there's no point in continuing with a factor analysis (Hintonn, Mc Murray, Cowsons & Brownlow, 2004:349). In this study, the Bartlett's test resulted in a significance of $p < 0.000$ which concluded that a relationship do exist between the variables. Since communalities were all above 0.3, it further confirmed that each item shared some common variance with other items, therefore, the researcher proceeded with factor analysis.

3.5.1.2 Factor extraction

Factor extraction involves using the smallest number of factors that is able to "best represent the interrelationships of the variables" (Pallant, 2011:185). The factor extraction method used in this study was the Principal Component Analysis (PCA) that analysed not only the common factor variances but all variances in the observed variables. The goal of factor extraction is to extract 'clusters' of items from the correlation matrix that correlated highly (Polit & Beck, 2008:487). These factors are termed principal components.

The Eigenvalue rule or Kaizer criterion was used to determine the number of factors that should be retained in this study (Pallant, 2011:185). The Eigenvalue rule requires that only factors with an Eigenvalue above 1.0 should be retained for the study. Eigenvalues of factors represent the amount of total variance explained by the factors. All Eigenvalues above 1 was retained (Table 3.3).

Table 3.3: Kaiser Meyer sampling adequacy and Bartlett's test of sphericity

Items	Kaizer Meyer Olkin (KMO)	Bartlett's test of sphericity			Components with Eigenvalues > 1
		Chi square	df	p-value	
Orientation	0.89	1564.51	78	0.000	3
Visualisation	0.91	1937.06	136	0.000	3
Guided practice	0.97	2924.87	105	0.000	2
Independent practice	0.93	2144.92	66	0.000	2
Assessment	0.94	3622.74	136	0.000	2

3.5.1.3 Factor rotation

A factor rotation was performed on the output in order to explain it in a more understandable way and to facilitate the interpretation of the factors (Polit & Beck, 2008:487). Varimax rotation results in a factor matrix and these values are called factor loadings. The aim of Varimax is to obtain factors with higher loadings on a particular factor. The items with higher

loadings on a particular factor were grouped together, since it represented a uniform attribute (Polit & Beck, 2008:463). All factor loadings higher or equal to 0.40 were considered significant. Orthogonal rotation (Varimax) calculated by SPSS, allowed for variables to be "clumped" together (or placed into components) and subsequently it enabled the researcher to identify and interpret these components. In this study, all factor loadings and the reliability of the factors after it was named were considered in the determination of which factors to retain. The principal component analysis revealed 12 clusters out of a total of 72 items that were extracted (Table 3.4).

Table 3.4: Factor names

Factor	Description of factor	Number of items	Questionnaire items
1	Information received during orientation	4	7, 8 ,9, 10
2	Introduction during orientation	5	1, 2, 3, 4, 5
3	Orientation to resources in SLM	4	6.1, 6.2, 6.3, 6.4
4	Facilitator interaction during visualisation	7	11, 12, 23, 24, 25, 26, 27
5	Progression of demonstration	7	13, 14, 15, 16, 17, 18, 19
6	Authenticity of simulation	3	20, 21, 22
7	Progression of guided practice	8	28, 29, 30, 31, 32, 33, 34, 35
8	Facilitator feedback during guided practice	7	36, 37, 38, 39, 40, 41, 42
9	Encouragement during independent practice	7	43, 44, 45, 46, 47, 48, 51
10	Support during independent practice	5	49, 50, 52, 53, 54
11	Planning of assessments	3	55, 56, 57
12	Facilitator role during assessments	14	58, 59, 60, 61, 62, 63, 64, 65, 66, 67, 68, 69, 70,71, 72

The internal consistency reliability test measures the degree to which all items in a measurement or test measure the same attribute. Cronbach's alpha coefficient (α) is the most common measure of internal consistency and the acceptable values for the Cronbach's that are considered to be showing internal consistency is above .700 (Houser, 2012:212). In this study,

all the items had a Cronbach's alpha coefficient of more than .700. The reliabilities of the twelve factors were determined by using the Cronbach's alpha (Table 3.5).

Table 3.5: Variables and factor table

Variables	Factor	Naming	No. Items	Cronbach's value(α)	Items	Mean($\bar{x}$)	SD	n
Orientation	1	Information during orientation	4	0.851	7	3.79	1.170	267
					8	3.73	1.180	267
					9	3.39	1.277	267
					10	3.63	1.161	267
	2	Introduction during orientation	5	0.786	1	3.81	1.082	267
					2	3.76	1.052	267
					3	3.91	.942	267
					4	3.83	1.030	267
					5	4.03	.979	267
	3	Orientation to resources in the skills laboratory	4	0.819	6.1	3.41	1.335	266
					6.2	3.54	1.198	266
					6.3	3.64	1.202	266
					6.4	3.64	1.135	266
Visualization	4	Facilitator interaction during visualisation	7	0.895	11	3.79	1.111	257
					12	3.79	1.110	257
					23	4.14	.892	257
					24	4.14	.908	257
					25	3.89	1.145	257
					26	3.89	1.025	257
					27	3.91	1.057	257
	5	Progression of demonstration	7	0.821	13	3.46	1.226	256
					14	3.93	1.036	256
					15	3.79	1.035	256
					16	3.83	1.078	256

Variables	Factor	Naming	No. Items	Cronbach's value(α)	Items	Mean($\bar{x}$)	SD	n
					17	3.27	1.272	256
					18	3.50	1.234	256
					19	3.55	1.220	256
	6	Authenticity of simulation	3	0.700	20	3.96	1.060	256
					21	4.08	.923	256
					22	3.67	1.093	256
Guided practice	7	Progression of guided practice	8	0.915	28	3.38	1.366	250
					29	3.39	1.385	250
					30	3.72	1.149	250
					31	3.66	1.216	250
					32	3.80	1.232	250
					33	3.66	1.219	250
					34	3.55	1.299	250
					35	3.56	1.304	250
	8	Facilitator feedback during guided practice	7	0.928	36	3.97	1..63	246
					37	3.94	1.060	246
					38	3.86	1.118	246
					39	3.40	1.257	246
					40	3.43	1.253	246
					41	3.67	1.249	246
					42	3.72	1.231	246
Independent practice	9	Encouragement during independent practice	7	0.917	43	3.87	.991	259
					44	3.76	1.084	259
					45	3.75	1.109	259
					46	3.83	1.132	259
					47	3.81	1.127	259

Variables	Factor	Naming	No. Items	Cronbach's value(α)	Items	Mean($\bar{x}$)	SD	n
					48	3.65	1.199	259
					51	3.86	1.099	259
	10	Support during independent practice	5	0.886	49	3.68	1.154	263
					50	3.80	1.099	263
					52	3.54	1.222	263
					53	3.63	1.249	263
					54	3.61	1.236	263
Assessment	11	Planning of assessments	3	0.852	55	3.82	1.047	265
					56	4.02	1.879	265
					57	3.91	1.053	265
	12	Facilitator role during assessments	14	0.962	58	3.83	1.184	233
					59	3.61	1.319	233
					60	3.61	1.303	233
					61	3.50	1.287	233
					61	3.39	1.395	233
					63	3.51	1.330	233
					64	3.67	1.272	233
					65	3.84	1.177	233
					66	3.81	1.155	233
					67	3.68	1.243	233
					68	3.62	1.288	233
					69	3.51	1.313	233
					70	3.57	1.265	233
					71	3.52	1.349	233

3.5.2 Development of guidelines

From the factor analysis, guidelines were described according to the two-step method of Muller (2001:204-205). In step one, each guideline indicated a rationale and motivation of the importance of the guideline that was supported by literature. Step two entailed writing specific actions for implementing the guidelines. Those actions addressed specific items or problems that were identified in each factor.

3.6 VALIDITY AND RELIABILITY

Reliability and validity are important criteria that are taken into account when evaluating an research instrument, in this case the questionnaire (Polit & Beck, 2008:457).

3.6.1 Validity

Validity refers to the assurance that an instrument measures what it intends to measure (Houser 2012:214). The degree to which an instrument either lacks or has validity is supported by evidence. The more evidence a researcher gathers the more confidence he or she would have that the instrument is valid. *Content validity* was concerned with the "subjective judgement about whether the measurement made sense". *Face validity* refers to whether it is likely that the instrument measures what it intends to measure (Houser, 2012:214).

In order to enhance content and face validity, the instrument was submitted to five educators who were knowledgeable about the SLM to evaluate the content of the questionnaire and to determine whether the necessary concepts were adequately covered. The main reason for establishing validity sought to determine whether the instrument was applicable and feasible.

The researcher welcomed suggestions and corrections that were raised by the experts. All the evaluators of the instrument agreed that it adequately covered all relevant aspects and phases of the SLM. Only minor adjustments were suggested; such as page numbering, headings, and a few ambiguous statements. In addition, the researcher also consulted a statistician to ensure that the instrument would not yield any statistical inaccuracies during data analysis.

3.6.2 Reliability

Reliability is a reflection on the consistency and stability in which an instrument measures the attributes it intends to measure (Polit & Beck, 2008:457). An instrument could be regarded as

reliable when it consistently and precisely (the degree of reproducibility) measure any given trait" (Houser, 2012:211).

Internal consistency of the questionnaire was measured by using Cronbach's alpha. One item was removed that influenced reliability of one of the sections in the questionnaire after the pilot study had been completed. The items were reduced from 77 to 76 (Table 3.5).

Cronbach's alpha estimates the extent to which the changes in one variable are associated with changes in another variable. The Cronbach's alpha also allowed the researcher to calculate the measurement error inherent to the instrument. The Cronbach's alpha (α) of the refined instrument was 0.98. An acceptable Cronbach's alpha is 0.7 and a higher value indicates a higher internal consistency (Houser, 2012:212). The general measurement error, therefore, was two per cent (Table 3.5).

This small percentage of measurement error indicated a stronger internal validity of the research study (Houser, 2012:211). To improve reliability, a large sample was selected (n = 276) in the main study with 76 items in the questionnaire. Some items across the three sections were constructed in more or less the same way in order to measure whether learner nurses had answered those items consistently.

Table 3.6: Reliability of items

Cronbach's alpha for the following variables	Pilot study	No of items	Administered (main) study	No of items
General Reliability	0.95*	77	0.98*	76
Orientation	0.87*	10	0.89*	10
Visualization	0.79*	17	0.91*	17
Guided Practice	0.86*	15	0.95*	15
Independent Practice	0.79	13	0.94*	12
Assessment	0.99*	17	0.96*	17
General Questions	0.91*	5	0.94*	5

*Cronbach's Alpha accepted

3.7 ETHICS

With the planning and implementation of research that either deals with human beings or human behaviour, a researcher needs to take great care in order to preserve the rights of respondents; i.e. the right to be informed of the procedure, potential risks of the study, their rights to be treated fairly and transparently, and their rights to withdraw from the study at any time without any consequences or questions asked (Houser, 2012:50). The researcher ensured that this study was conducted in an ethical manner by obtaining the consent from the institution involved and informed consent from respondents by adhering to ethical principles of respect for people, beneficence (do no harm), and justice (fairness) .

3.7.1 Ethical principle of respect for human dignity

The right to full disclosure and self-determination

An individual needs to be treated as an autonomous person who is capable of controlling and voluntarily participating in activities. When one applies this ethical principle to research, it would be improper to coerce members of the target population to participate, i.e. do not influence them by offering excessive rewards, preferential treatment, or by explicitly threatening them (Polit & Beck, 2008:170). The right to self-determination also means that individuals have a right to ask questions, to refuse to give information, and to withdraw from a study at any time (Polit & Beck, 2008:170). Full disclosure entails that the researcher fully describe the nature of the study, including any aspects that might lead to harm and any other potential risks. Respondents in this study were fully informed about the study that contained no risks, they were able to decide whether they would like to participate, and they understood the benefits to the study.

3.7.2 Ethical principle of beneficence

The right to freedom from harm and discomfort

This principle forces the researcher to diminish harm and to maximise benefits. The research project should not contain any threat or harm (non-maleficence) to respondents and should be intended to benefit either the individual respondent or other individuals (Polit & Beck, 2008:170). Polit and Beck (2008) state that the avoidance of physical harm is straightforward, but that psychological consequences should also be avoided. To this end, the researcher in this

quantitative study avoided the inclusion of personal and sensitive issues in the questionnaire. The only potentially sensitive question was whether learners had repeated a year of study. Learners, however, were aware of their right not to answer and were also aware that their information would be treated confidentially. There was no other means that allowed the researcher to identify whether a respondent had repeated a year of study. Since respondents completed the questionnaires anonymously, this item neither threatened nor harmed.

3.7.3 Ethical principle of justice

The right to fair treatment

This principle concerns the respondents' right to fair treatment and fairness in the distribution of benefit and burden (Houser, 2012:56). The selection of the respondents in this research study was purely based on the research requirement and did not target specific learners for inclusion (Polit & Beck, 2008:174).

The right to privacy

In order to keep research less intrusive than it might be perceived to be, respondents must be given the assurance that their information will be treated confidentially and anonymously. Anonymity is a secure means of maintaining confidentiality; it implies that any data that is received from respondents is protected and dealt with in the strictest confidence (Polit & Beck, 2008:174). Anonymity and confidentiality were ensured in this study, since the researcher requested respondents not to write down their names anywhere on the questionnaires. Consent forms were handed out separately that made respondents aware of confidentiality and were collected separately from the questionnaires. The respondents returned the questionnaires in closed envelops.

3.7.4 Permission to conduct the study

Before this research project commenced, ethical clearance was obtained from the:

- Senate Research Ethics Committee from a university in the Western Cape with Registration nr 12/7/7; and
- The Head of the School of Nursing at a university in the Western Cape.

3.7.5 Informed consent

Basic components of informed consent is information, comprehension, and voluntariness (the powers of free will) (Houser, 2012:56; Polit & Beck, 2008:176). Respondents in this study were given an understandable explanation of the study in written format, as well as verbally, explaining the benefit that they or future learners might experience as a result of the research findings. Respondents were informed that the study did not hold any risks to them, they were free to withdraw from the study at any time with no consequences, and they were assured of their anonymity and confidentiality at all times. A written consent form and information sheet were handed to respondents before completing the questionnaire. In order to ensure anonymity, the researcher collected the consent forms and questionnaires separately. Based on their understanding of the research risks and potential benefits, respondents were equipped to make an educated and informed decision whether to participate or not (Houser, 2012:57).

3.8 CONCLUSION

A quantitative, explorative, and descriptive design was followed in order to explore the perceptions of learner nurses with regard to the implementation of the SLM. The purpose of the study was to improve the guidelines for the implementation of the SLM. A 5-point Likert scale questionnaire was completed by each respondent and the descriptive and inferential data analysis was utilised, aided by the SSPS Version 21 computer program.

Chapter 4 focuses on the analysis of data, and the interpretation of results is supported by descriptive and inferential statistics.

CHAPTER 4
RESULTS

4.1 INTRODUCTION

The focus of this chapter is to interpret the data obtained in this study. Data was analysed with the assistance of a statistician who used the SPSS version 21.0 computer program. The findings in this chapter seek to achieve the first study objective: *To explore and describe the perceptions of learners about the implementation of the skills laboratory method by facilitators*. To conclude this objective, this chapter presents the descriptive statistics and factor analysis that were conducted.

The responses on the items varied, since a few of the items in the questionnaire were not answered. The missing data did not significantly interfere with the analysis process.

4.2 SECTION A

4.2.1 General characteristics of sample

A total of 276 questionnaires were administered to undergraduate learner nurses from first to fourth year levels registered at a university in the Western Cape. The sample included first-year (n = 94), second-year (n = 92), third-year (n = 65) and fourth-year (n = 45) learners. Table 4.1 reflects the total number of learner nurses from each year of study in order to indicate that the respondents from the four levels of training were fairly represented.

Table 4.1: Sample

Year of study	Population N = 980	Sample n = 276
First year	334	94
Second year	256	72
Third year	230	65
Fourth year	160	45

4.3 ANALYSIS OF DEMOGRAPHIC INFORMATION

Information with regard to respondents' gender, age, home language, and year of study was obtained from the respondents.

4.3.1 Gender of respondents (Item 1)

Figure 4.1 shows the gender distribution of the respondents (n = 276; 100.0%). The majority of the respondents (n = 228; 83.0%) were female while the male respondents were less than a fifth (n = 48; 17.0%). Nursing has always been considered as a female dominated profession; however, the numbers of males have increased over the past few years (Daily News, 2013).

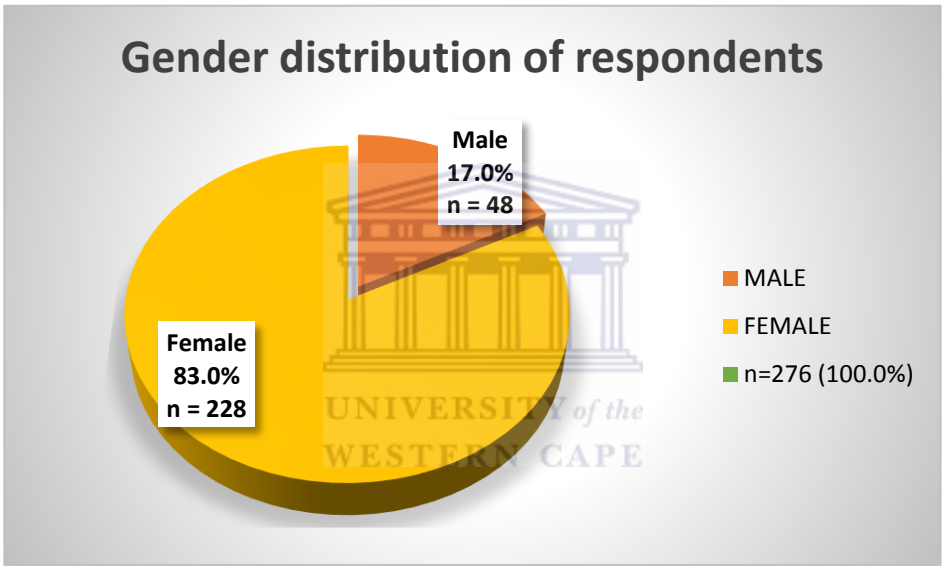

Figure 4.1: Gender distribution of respondents (n = 276) (Item 1)

The reason why there were fewer male learners could be attributed to men facing more barriers in nursing schools and factors; such as gender stereotyping, patient preferences, and public perceptions that deter men from entering the profession (Meadus & Twomey, 2007:14). Another study suggests that nursing education does not provide an optimal and conducive environment for attracting to and retaining men in the profession (O'Lynn, 2004:235).

4.3.2 Age (Item 2)

Table 4.2 indicates the age distribution of the respondents. From the responses, more than half (n = 151; 54.7%) of the (n = 276; 100.0%) respondents were above the age of 21years and

slightly less than half (n = 123; 45%) were either 22 years old or older. Two respondents (n = 2; 0.7%) did not indicate their age. The average mean age of learners was 21 years.

Table 4.2: Age distribution of the respondents (n = 276) (Item 2)

Age	Responses (n)	Percentage %
> = 19years	43	15.6
20 years	60	21.7
21 years	48	17.4
22 years	55	19.9
23 years	30	10.9
Above > 23	38	13.8
Age not indicated	2	0.7
Total	276	100.0

The age distribution of respondents compared well with the current age analysis of the South African Nursing Council (SANC) that indicates the current ages of learners registered for a four year degree are between 17 and 24 years old (SANC, 2013).

4.3.3 Home language (Item 3)

Figure 4.2 shows the home language of the respondents. Respondents were representative of all the 11 official languages in South Africa. It is a significant indication of the cultural diversity amongst learners at the university where the study was undertaken. Of the 276 (100.0%) respondents, 61 (22.4%) indicated they had more than one home language and these responses were included in the category of "different languages". Those respondents spoke more than one of the eleven official South African languages which included English, Afrikaans, isiXhosa, isiZulu, Sesotho, Setswana, SiSwati, Sepedi, isiVenda, Xitsonga, and isiNdebele.

The study sample also indicated their home language as the isiXhosa (n = 66; 23.9%), English (n = 71; 25.7%), Afrikaans (n = 40; 14.5%), isiZulu (n = 20; 7%) and other foreign languages (n = 18; 6.5%).

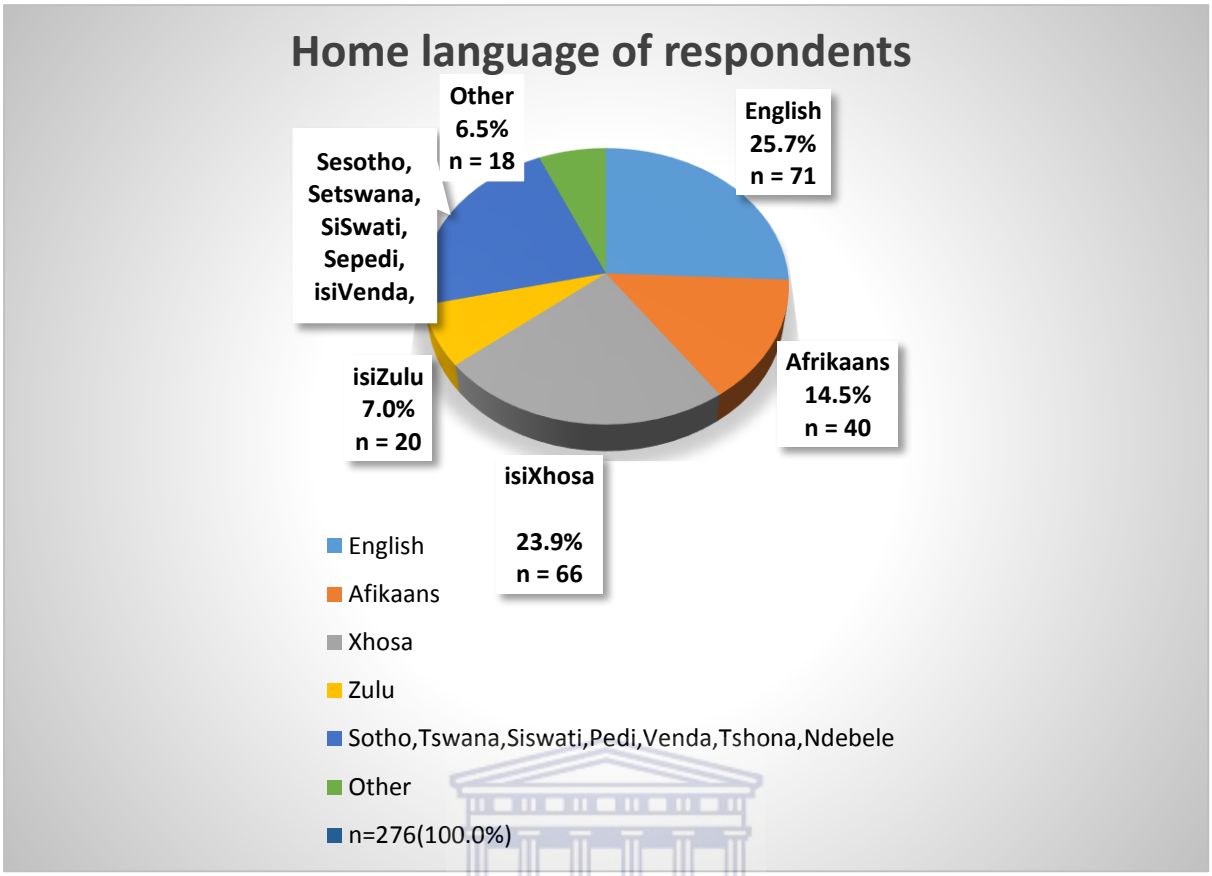

Figure 4.2: Home language of respondents (n = 276) (Item 3)

Language is indicated as a significant learning barrier for learners from diverse backgrounds (Johnston & Mohide, 2013:344). English was the primary language of instruction at the university where the study was conducted. Learners with English as an additional language could experience difficulty in the clinical environments, specifically in relation to terminology and generally in the way they expressed themselves. It was necessary for preceptors at a university in the United Kingdom to employ strategies that created a supportive environment; for example role-playing, changing the pace of communication, the avoidance of colloquialisms, and requesting learners to verify their understanding of the information provided (Johnston & Mohide, 2009:344).

4.3.4 Year of study (Item 4)

The majority of respondents were first year learner nurses (34.2%; n = 94), followed by second year learner nurses (26.8%; n = 65), third year learner nurses (23.6%; n = 65), and fourth year learner nurse (15.2%; n = 42). The results indicated a decline in the number of respondents as the programme progressed (Figure 4.3). One respondent did not respond to the item (0.4%; n=1).

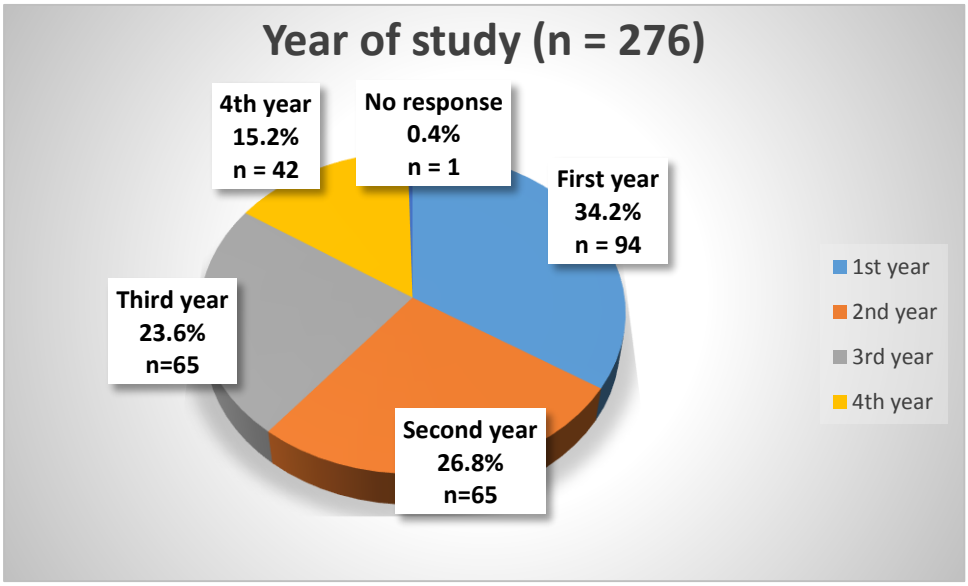

Figure 4.3: Year of study (n = 276) (Item4)

A study which assessed the level of competence amongst undergraduate nursing students indicated that only learners at the third year level of training were feeling more competent as their training were progressing. Learners at all other levels of training did not experience changes; however, first year learners felt the need for more supervision and guidance (Le Roux, 2008:77). The focus of this study was to develop guidelines for facilitators to improve the comprehensive implementation of the skills laboratory method, irrespective of a specific level of training.

4.3.5 Year of training repeated (Items 5 and 6)

Item 5 requested respondents to indicate whether they had repeated any year during the period of their study. Of the 276 (100.0%) respondents, 43 (15.8 %) indicated they had repeated a year of study.

Item 6 requested respondents to state the particular year of training that they had repeated. Of the 276 (100.0%) respondents, 18 (6.2 %) repeated their first year, 19 (6.9%) their second year; 1 (0.4%) the third year and 1 (0.4%) the fourth year. A total of 39 (13.9 %) respondents indicated the particular year level. Four (1.9%) of respondents that did not indicate the particular year of training that they had repeated.

Table 4.3: Year of training repeated

Year of training repeated	Number of respondents	Percentage (%)
First year	18	6.2%
Second year	19	6.9%
Third year	1	0.4%
Fourth year	1	0.4%
Missing responses	4	1.9%
Total	n = 43	15.8%

Learners seemed to struggle during their training (Crombie, Brindley, Harris, Marks-Maran & Thompson, 2013:1286). One of the factors that contribute to learners remaining in a programme is the quality of mentorship they receive during their training period. The support and encouragement learners receive from family, peers, as well as clinical and academic staff increase learners' resilience and, therefore, it seems to be an important motivational factor for learners who want to continue with their training (Crombie *et al*., 2013:1287).

4.4 SECTION B

A factor analysis was performed on Section B of the questionnaire. A factor analysis is a data reduction technique that reduces large groups of variables and determines ways in which data can be summarised by using a small number of factors or components prior to analysis (Pallant, 2011:182). The factor analysis revealed a total of twelve clusters (components) from the 72 items. These clusters were named (Table 4.4).

Table 4.4: Factor loadings and naming of factors

	Items in the questionnaire	Factor loadings and naming of components		
		Factor 1	**Factor 2**	**Factor 3**
		Information received during orientation	Introduction during orientation	Orientation to resources in skills laboratory
	Reliability analysis (Cronbach's alpha)	0.851	0.786	0.819
Orientation	Item 8	0.846		
	Item 7	0.816		
	Item 9	0.759		
	Item 10	0.674		
	Item 2		0.799	
	Item 3		0.701	
	Item 1		0.697	
	Item 5		0.629	
	Item 4	0.417	0.596	
	Item 6.1			0.862
	Item 6.2			0.758
	Item 6.4	0.509		0.601
	Item 6.3	0.517		0.584
	Eigenvalue	5.878	1.476	1.085
	% of variance explained	45.212	11.357	8.344
	Cumulative % of variance explained	45.212	56.569	64.913
		Factor 4	**Factor 5**	**Factor 6**
		Facilitator interaction during visualisation	Progression of demonstration	Authenticity of simulation

	Items in the questionnaire	Factor loadings and naming of components		
	Reliability analysis (Cronbach's alpha)	0.895	0.821	0.700
Visualisation	Item 25	0.839		
	Item 24	0.811		
	Item 26	0.794		
	Item 27	0.759		
	Item 23	0.738		0.433
	Item 12	0.459	0.441	
	Item 11	0.424		
	Item 17		0.741	
	Item 19		0.659	
	Item 15		0.655	
	Item 16		0.635	
	Item 18		0.623	
	Item 14		0.618	
	Item 13		0.529	
	Item 22			0.731
	Item 21			0.715
	Item 20		0.415	0.639
	Eigenvalue	7.155	1.574	1.179
	% of variance explained	42.088	9.258	6.936
	Cumulative % of variance explained	42.088	51.346	58.283
		Factor 7	**Factor 8**	
		Progression of guided practice	Facilitator feedback during guided practice	

	Items in the questionnaire	Factor loadings and naming of components		
	Reliability analysis (Cronbach's alpha)	0.915	0.928	
Guided practice	Item 35	0.803		
	Item 33	0.795		
	Item 34	0.783		
	Item 31	0.777		
	Item 32	0.774	0.424	
	Item 29	0.729		
	Item 30	0.636		
	Item 28	0.575		
	Item 38		0.807	
	Item 41		0.797	
	Item 39		0.776	
	Item 42	0.403	0.758	
	Item 40		0.749	
	Item 37	0.503	0.719	
	Item 36	0.602	0.620	
	Eigenvalue	8.966	1.287	
	% of variance explained	59.775	8.578	
	Cumulative % of variance explained	59.775 0.915	68.353 0.928	
		Factor 9	**Factor 10**	
		Encouragement of independent practice	Support during independent practice	
	Reliability analysis (Cronbach's alpha)	0.917	0.886	
Independent	Item 46	0.84		

	Items in the questionnaire	Factor loadings and naming of components		
practice	Item 47	0.839		
	Item 48	0.803		
	Item 45	0.748		
	Item 44	0.745		
	Item 51	0.605	0.56	
	Item 43	0.565		
	Item 53		0.843	
	Item 52		0.81	
	Item 54	0.479	0.695	
	Item 49		0.691	
	Item 50	0.581	0.583	
	Eigenvalue	7.224	1.012	
	% of variance explained	60.201	8.433	
	Cumulative % of variance explained	60.201	68.634	
		Factor 11	**Factor 12**	
		Planning of assessments	Facilitator role during assessments	
Assessment	Reliability analysis (Cronbach's alpha)	0.852	0.962	
	Item 69		0.862	
	Item 71		0.817	
	Item 68		0.816	
	Item 70		0.810	
	Item 67		0.771	
	Item 63		0.747	
	Item 60		0.746	

	Items in the questionnaire	Factor loadings and naming of components		
	Item 64		0.739	
	Item 62		0.734	
	Item 66	0.427	0.720	
	Item 59	0.448	0.719	
	Item 61	0.507	0.656	
	Item 65.	0.505	0.596	
	Item 58	0.578	0.581	
	Item 56	0.865		
	Item 57	0.788		
	Item 55	0.769		
	Eigenvalue	1.223	10.687	
	% of variance explained	7.197	62.865	
	Cumulative % of variance explained	70.062	62.865	

Twelve factors were extracted and named: (i) information received during orientation, (ii) introduction during orientation, (iii) orientation to resources in the skills laboratory, (iv) facilitator interaction during visualisation, (v) progression of demonstrations, (vi) authenticity of simulation, (vii) progression of guided practices, (viii) facilitator feedback during guided practice, (ix) encouragement during independent practice, (x) support during independent practice, (xi) planning of assessments, and (xii) facilitator role during assessments.

The factors identified during the factor analysis guided the presentation of the findings. The total number of responses varied on the items in the factors.

4.4.1 Factor 1: Information received during orientation

Factor 1 obtained a Cronbach alpha of 0.819 with Items 7, 8, 9 and 10 (Table 4.5). The general mean value and standard deviation of items in Factor 1 with regard to information received

during orientation was $\bar{x} = 3.64, SD = 0.996$. Respondents mostly agreed that they received information during orientation (Figure 4.4).

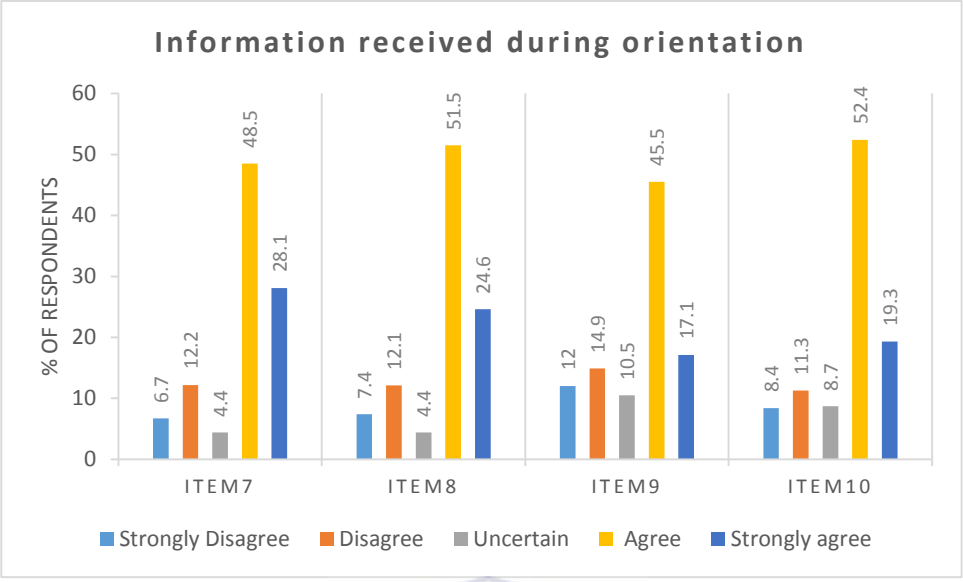

Figure 4.4: Responses in relation to information received during orientation

Table 4.5: Information received during orientation

Items	The facilitator:	Strongly Disagree		Disagree		Uncertain		Agree		Strongly agree		Total		$\bar{x}$	SD
		n	%	n	%	n	%	n	%	n	%	n	%		
7	informs students about the correct handling of equipment	18	6.7	33	12.2	12	4.4	131	48.5	76	28.1	270	100.0	3.79	1.173
8	focuses on the safekeeping of equipment in the unit	20	7.4	33	12.1	12	4.4	140	51.5	67	24.6	272	100.0	3.76	1.172
9	explains consultation times for individual appointments	33	12.0	41	14.9	29	10.5	125	45.5	47	17.1	275	100.0	3.41	1.268

10	explains the assessment criteria of the module	23	8.4	31	11.3	24	8.7	144	52.4	53	19.3	275	100.0	3.63	1.162
	Total													3.64	.996

Item 7 (inform learners about correct handling of equipment) obtained the highest mean value $(\bar{x} = 3.79; SD = 1.173)$ in Factor 1 and more than three quarters (n = 207; 76.6%) of the 270 (100.0%) respondents *agreed to strongly agreed* that they were informed about the handling of equipment in the skills laboratory $(\bar{x} = 3.79; SD = 1.173)$. In Item 8, three quarters (207; 76.1%) of 272 (100.0%) respondents, *agreed to strongly agreed* that facilitators focused on the safekeeping of equipment in the unit $(\bar{x} = 3.76; SD = 1.172)$.

This could be interpreted that facilitators raised the respondents' awareness of managing equipment in an environment of cost containment. The skills laboratory guidelines emphasise the maintenance, use, and cleaning of equipment. Replacing equipment proved to be costly, therefore, adequate control and maintenance of equipment are necessary (Hughes, 2008:233; Jeggels, 2010:58).

Item 9 showed a wide distribution of responses around the mean value $(\bar{x} = 3.41; SD = 1.268)$ and more than a quarter (74; 26.9%) of 275 (100.0%) respondents indicated that they *strongly disagreed* with and were *uncertain* about whether facilitators discussed consultation times. In Item 10, more than a third (78; 33.7%) of 275 (100.0%) respondents *strongly disagreed* to *disagree* that assessment criteria for the module were explained to them and (24; 8.7%) of 257 (100.0%) respondents seemed to be *uncertain* $(\bar{x} = 3.63; SD = 1.162)$.

The lack of individual appointments indicated in the findings could contribute to uncertainty of learners about their assessment criteria. Literature states that when learners understand what is expected of them – specifically in relation to required competencies, as well as assistance and support with challenges learners might face – their performance can be enhanced and learners will be prepared to take responsibility for their own learning (Fastré, Van der Klink & Van Merriënboer, 2010:518; McEnroe-Petitte, 2011:80).

4.4.2 Factor 2: Introduction during orientation

Factor 2 yielded a Cronbach alpha of 0.851 with Items 1, 2, 3, 4 and 5 (Table 4.6). The general mean value and standard deviation of items in Factor 2 with regard to the introduction during orientation was $\bar{x} = 4.03, SD = .987$. Respondents mostly *agreed* that they were informed about and orientated in respect of the skills laboratory, however, responses were negatively skewed (Figure 4.5).

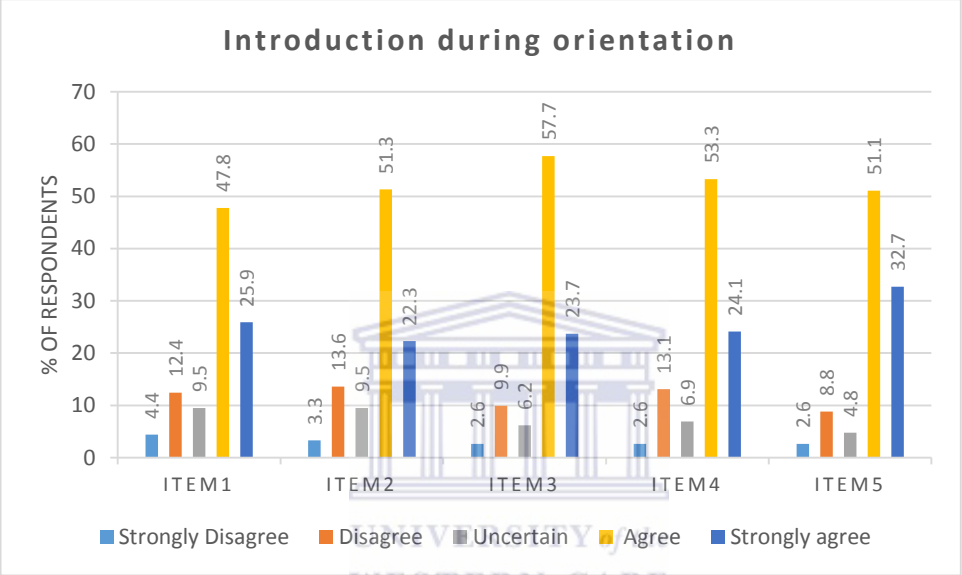

Figure 4.5: Responses to introduction during orientation

The highest response in Factor 1, to 4.4 for the rating *strongly disagree*, was obtained on Item 1.

Table 4.6: Introduction during orientation

Items	The facilitator:	Strongly disagree		Disagree		Uncertain		Agree		Strongly agree		Total		$\bar{x}$	SD
		n	%	n	%	n	%	n	%	n	%	n	%		
1	encourages me to attend the orientation for my particular year level	12	4.4	34	12.4	26	9.5	131	47.8	71	25.9	274	100.0	3.78	1.097

Items	The facilitator:	Strongly disagree		Disagree		Uncertain		Agree		Strongly agree		Total		$\bar{x}$	SD
		n	%	n	%	n	%	n	%	n	%	n	%		
2	informs me in time of the general orientation	9	3.3	37	13.6	26	9.5	140	51.3	61	22.3	273	100.0	3.76	1.050
3	introduces and orientates me to the clinical skills laboratory	7	2.6	27	9.9	17	6.2	158	57.7	65	23.7	274	100.0	3.90	.958
4	explains educational expectations in a clear manner that learners can understand	7	2.6	36	13.1	19	6.9	146	53.3	66	24.1	274	100.0	3.83	1.020
5	keeps an attendance register of learners attending the orientation	7	2.6	24	8.8	13	4.8	139	51.1	89	32.7	272	100.0	4.03	.981
	Total													3.87	.747

In Item 1, nearly half (131; 47.8%) of 274 (100.0%) respondents *agreed* that they were encouraged to attend an orientation for their particular level. However, more than a quarter (72; 26.3%) of 274 (100.0%) respondents indicated that they *strongly disagreed* with and were *uncertain* about being encouraged to attend the orientation $(\bar{x} = 3.78; SD = 1.097)$. The majority (n = 140; 51.3%) of 273 (100.0%) respondents in Item 2 *agreed* that they were informed about the general orientation whilst less than a quarter (n = 61; 22.3%) of 273 (100.0%) respondents *strongly agreed*.

Items 3 and 4 indicated similar responses with a normal distribution of responses around the mean values. Nearly three quarters (n = 201; 73.6%) of 273 (100.0%) respondents *agreed* to *strongly agreed* that they were orientated to the clinical skills laboratory ($\bar{x} = 3.90; SD = 0.958$) (Item 3). Just over a half (n = 143; 53.3%) of 273 (100.0%) respondents *agreed* that facilitators explained educational expectations in a manner that learners could understand and 43 (15.7%) of 273 (100.0 %) respondents *disagreed* ($\bar{x} = 3.83; SD = 1.020$) with the statement in Item 4.

The responses of the sample indicated a negatively skewed representation in terms of the keeping of an attendance register of learners attending the orientation (Item 5). The item obtained the highest mean value in Factor 2 in respect of the introduction to orientation and showed a narrow distribution of responses around the mean value ($\bar{x} = 4.03; SD = 0.98$). The vast majority (n = 228, 83.8%) of 272 (100.0%) respondents *agreed* to *strongly agreed* that attendance registers were monitored (Item 5). Those responses indicated that the sample perceived facilitators to monitor attendance of learners, since it probably was important to them.

The importance of a detailed introduction during orientation could significantly prevent problems from occurring in the learning environment. In order to achieve the objectives of a clinical learning situation or any simulated activity, objectives must be clearly formulated (before every session) and learners need to express an understanding of situation or activity (Edgecombe, Seaton, Monahan, Meyer, Le Page & Erlam, 2013:3).

4.4.3 Factor 3: Orientation to resources in the skills laboratory

Factor 3 obtained a Cronbach alpha of 0.786 with Items 6.1, 6.2, 6.2 and 6.4 (Table 4.7). The general mean value and standard deviation of items in Factor 3 with regard to the orientation to resources in the skills laboratory was $\bar{x} = 3.55, SD = 0.98$. Respondents mostly *agreed* that they were informed about the resources in the SLM (Figure 4.6).

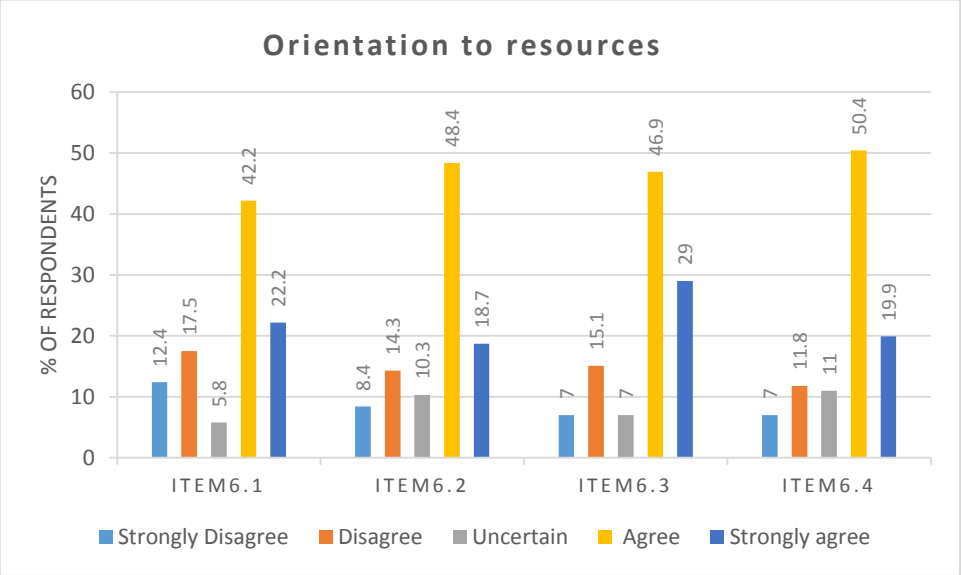

Figure 4.6: Responses with regard to orientation to resources

Table 4.7: Orientation to resources in the skills laboratory

Items	The facilitator:	Strongly Disagree		Disagree		Uncertain		Agree		Strongly agree		Total		$\bar{x}$	SD
		n	%	n	%	n	%	n	%	n	%	n	%		
6.1	orientates learners to the purpose of the SLM by showing a video of the method	34	12.4	48	17.5	16	5.8	116	42.2	61	22.2	275	100.0	3.44	1.337
6.2	explains the purpose of the manikins	23	8.4	39	14.3	28	10.3	132	48.4	51	18.7	273	100.0	3.55	1.191
6.3	introduces me to simulated patients	19	7.0	41	15.1	19	7.0	127	46.9	65	29.0	271	100.0	3.66	1.197

6.4	provides information with regard to resources; e.g. library, visual material, and self-recording rooms	19	7.0	32	11.8	30	11.0	137	50.4	54	19.9	272	100.0	3.64	1.134
	Total													3.55	0.982

In Table 4.7, Item 6.1 showed that more than one third (n = 98; 35.7%) of 275 (100.0%) respondents *strong disagreed* or were *uncertain* about watching any audio visual material. That item had the widest distribution of responses around the mean value ($\bar{x} = 3.44; SD = 1.337$). Similarly, in Item 6.2 one third (n = 90; 33.0%) of 273 (100.0%) respondents indicated that they *strongly disagreed* or were *uncertain* whether the purpose of the manikins were explained to them.

In Item 6.4, half (n = 137; 50.4%) of 272 (100.0%) respondents *agreed* that facilitators provided information about resources with less than one third (n = 81; 29.8%) of 272 (100.0%) respondents who either *disagreed* or were *uncertain* ($\bar{x} = 3.64; SD = 1.134$).

This could be interpreted that the use of visual aids and modern equipment were not effectively communicated during the orientation of learners to the skills laboratory method.

Learners are able to benefit from the skills laboratory environment and feelings such as anxiety and vulnerability in a hospital setting could be eliminated when they are aware of the available resources (Twentyman & Eaton, 2006:1).

The majority (n = 192; 75.9%) of 271 (100.0%) respondents *agreed* to *strongly agreed* that they were introduced to simulated patients (Item 6.3) and responses indicated the highest mean value ($\bar{x} = 3.66; SD = 1.197$) in respect of orientation to resources in the skills laboratory.

The support of resources in clinical teaching makes learning material memorable to learners and allows them opportunities to practice as often as they would like to. The use of audio visual and other related media and equipment can support teaching and it must be ensured that learners have access to these at all times, also in absence of a clinical supervisor (Online resources to support clinical skills teaching, 2009:210).

4.4.4 Factor 4: Facilitator interaction during visualisation

Factor 4 returned a Cronbach alpha of 0.895 with Items 11, 12, 23, 24, 25, 26 and 27 (Table 4.8). The analysis of the perceptions of learners with regard to the interaction of the facilitator during visualisation indicated a mean value and standard deviation of $\bar{x} = 3.94, SD = .814$. Respondents mostly *agreed* interaction with the facilitator did take place during the visualisation phase of the SLM (Figure 4.7).

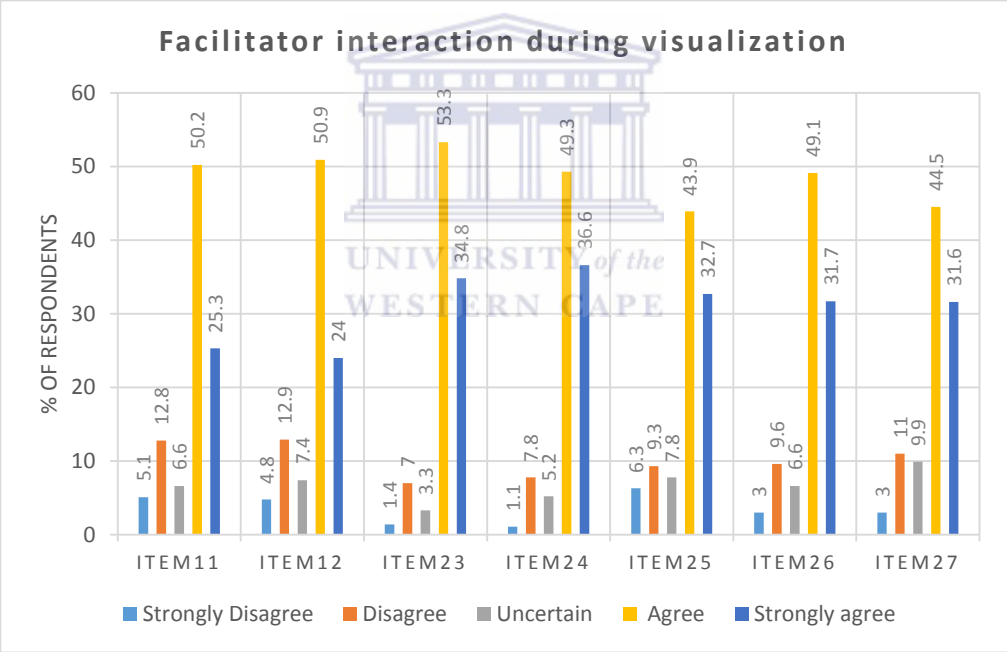

Figure 4.7: Responses to facilitator interaction during visualisation

Table 4.8: Facilitator interaction during visualisation

Items	The facilitator:	Strongly Disagree		Disagree		Uncertain		Agree		Strongly agree		Total		$\bar{x}$	SD
		n	%	n	%	n	%	n	%	n	%	n	%		
11	schedules small group sessions for demonstrations	14	5.1	35	12.8	18	6.6	137	50.2	69	25.3	273	100.0	3.78	1.117
12	small groups vary between 8 – 12 learners for demonstrations	13	4.8	35	12.9	20	7.4	138	50.9	65	24.0	271	100.0	3.76	1.100
23	explains procedure to learners whilst demonstrating	4	1.4	19	7.0	9	3.3	144	53.3	94	34.8	270	100.0	4.13	.885
24	allows learners to ask questions about the procedure	3	1.1	21	7.8	14	5.2	132	49.3	98	36.6	268	100.0	4.12	.906
25	appears to be knowledgeable when answering questions	17	6.3	25	9.3	21	7.8	118	43.9	88	32.7	269	100.0	3.87	1.155
26	pose questions to the group about a particular skill	8	3.0	26	9.6	18	6.6	133	49.1	86	31.7	271	100.0	3.97	1.018
27	is able to help me with integrating theory and practice	8	3.0	29	11.0	26	9.9	117	44.5	83	31.6	263	100.0	3.90	1.060
	Total													3.95	0.81

Visualisation is the phase of the SLM that allows learners to observe the demonstration of a new skill in order to gain an impression of the procedure, to immerse them into the experience with the goal of developing insight, and to reflect on the experience (Jeggels *et al.*, 2010:54). Learners seem to benefit from visualisation / observation early in their learning when they acquire dynamics, such as timing and psychomotor aspects of skills development (Bandura 1984 in Grierson, Barry, Kapralos, Carnahan & Dubrowski, 2012:415).

Three quarters (n = 203; 74.9%) of 271 (100.0%) respondents *agreed* to *strongly agreed* that group sessions for demonstrations were small $(\bar{x} = 3.78; SD = 1.117)$ (Item11). Half (n = 138; 50.9%) of 271 (100.0%) respondents *agreed* that group size varied between 8 – 12 learners $(\bar{x} = 3.76; SD = 1.100)$ (Item12).

Group size should remain small with the purpose of enabling learners to visualise what is demonstrated and also to allow adequate time for practice (Bastable, 2008:441).

A vast majority (n = 238; 88.1%) of 270 (100.0%) respondents *agreed* to *strongly agreed* that facilitators explained the procedures while demonstrating during the visualisation phase $(\bar{x} = 4.13; SD = .885)$ (Item 23). This finding showed that the majority of facilitators did not silently demonstrate a procedure in the way a new skill should be demonstrated.

In Item 24, less than half (n = 132; 43, 9%) of 269 (100.0%) *agreed* that they were allowed to ask questions during visualisation while a minority of 38 (14.4%) of 269 (100.0%) respondents indicated that they *strongly disagreed* and were *uncertain* $(\bar{x} = 4.12; SD = .906)$.

Facilitators seemed to be knowledgeable when answering questions (Item 25) because 206 (85.9%) of 269 (100.0%) respondents *agreed* to *strongly agreed* $(\bar{x} = 3.87; SD = 1.155)$ that facilitators were well-informed. A large majority, 219 (80.8%) of 271 (100.0%) respondents, *agreed* to *strongly agreed* that they were questioned about particular skills $(\bar{x} = 3.97; SD = 1.018)$ (Item 26).

In Item 27, nearly a quarter (n = 63; 23.9%) of 263 (100.0%) respondents indicated that they *strongly disagreed* and were *uncertain* about the ability of facilitators to assist them with the integration of theory and practice $(\bar{x} = 3.90; SD = 1.060)$. This could be interpreted that facilitators seemed to be knowledgeable and were able to challenge learners by regular questioning in order to improve their critical thinking and problem-solving skills.

Facilitators should, however, realise that observation is a scaffolding process in the attainment of a skill and that as learner progress; they could be directed to the critical elements of a skill which include the integration of theory and practice (Grierson *et al*., 2012:415). This confirms the aim of the visualisation phase, which intends to allow learners an opportunity to grasp the procedure without bombarding them with theory and to allow time thereafter for feedback, opinion, and re-demonstration (Jeggels *et al*., 2010:55).

4.4.5 Factor 5: Progression of demonstration

Factor 5 yielded a Cronbach alpha of 0.821 for Items 13, 14, 15, 16, 17, 18 and 19 (Table 4.9). The general progression of demonstration indicates a mean value and standard deviation of $\bar{x} = 3.59; SD = 0.874$, with respondents mostly *agreeing* to the items in Factor 4 (Figure 4.8).

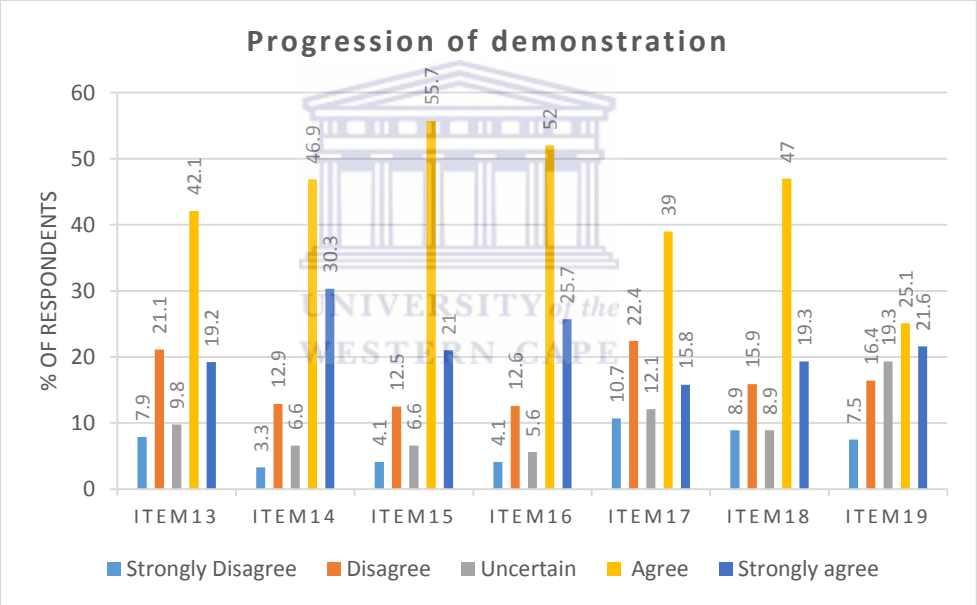

Figure 4.8: Responses to progression of demonstrations

Contrary to the findings in Factor 4 (Item 11; Table 4.8), Table 4.9 indicates that more nearly two thirds (n = 163; 61.3%) of 266 (100.0%) respondents *agreed* to *strongly agreed* larger group sessions with more than 12 learners were scheduled for demonstrations ($\bar{x} = 3.44; SD = 1.237$). Their responses show that group sessions might have exceeded the recommended size of groups.

Table 4.9: Progression of demonstration

Items	The facilitator:	Strongly Disagree		Disagree		Uncertain		Agree		Strongly agree		Total		$\bar{x}$	SD
		n	%	n	%	n	%	n	%	n	%	n	%		
13	schedules large group sessions with more than 12 learners for demonstration purposes	21	7.9	56	21.1	26	9.8	112	42.1	51	19.2	266	100.0	3.44	1.237
14	ensures attendance register for each demonstration is kept	9	3.3	35	12.9	18	6.6	127	46.9	82	30.3	271	100.0	3.88	1.084
15	emphasises the objectives for a particular demonstration	11	4.1	34	12.5	19	6.6	151	55.7	57	21.0	271	100.0	3.77	1.047
16	emphasises the importance of viewing the procedure holistically	11	4.1	34	12.6	15	5.6	140	52.0	69	25.7	269	100.0	3.83	1.077
17	allows learners to set their expectations of the method	29	10.7	61	22.4	33	12.1	106	39.0	43	15.8	272	100.0	3.27	1.268
18	determines what learners know about the procedure before continuing with the demonstration	24	8.9	43	15.9	24	8.9	127	47.0	52	19.3	270	100.0	3.52	1.222
19	makes the simulated scenario as realistic as possible	27	7.5	44	16.4	25	19.3	121	25.1	58	21.6	268	100.0	3.57	1.208
														3.59	0.874

In Item 14, 209 (77.2%) of 271 (100.0%) respondents *agreed* to *strongly agreed* that attendance registers were kept for each demonstration, showing that respondents perceived that facilitators valued attendance of the clinical sessions. This item represented the highest mean value in the progression of demonstrations ($\bar{x} = 3.88; SD = 1.084$).

More than half (n = 209; 57.7%) of 271 (100.0%) respondents *agreed* to *strongly agreed* that the importance of viewing procedures holistically were emphasised by facilitators (Item 16). However, in Item 17, almost half (n = 123; 45.2%) of 272 (100.0%) respondents indicated that they *strongly disagreed* and were *uncertain* about being allowed to set their expectations before demonstrations. Item 17 displayed the widest distribution of responses in Factor 5 with regard to the progression of demonstrations ($\bar{x} = 3.27; SD = 1.268$). Two thirds (n = 179; 66.3%) of 270 (100.0%) respondents *agreed* to *strongly agreed* that facilitators determined pre-knowledge before continuing with a procedure while one third (n = 91; 33.6%) of 270 (100.0%) respondents indicated that they *strongly disagreed* and were *uncertain* ($\bar{x} = 3.52; SD = 1.222$) (Item 18).

These findings emphasised that some facilitators did not allow learners to set their expectations before they had demonstrated procedures and consequently failed to determine learning needs. Active participation is a valued tool to facilitate learning and by asking questions and involving learners, educators explore learners' factual and theoretical knowledge and simultaneously assist with their skills development (Emerson, 2007:183). Determining learners' knowledge prior to a demonstration allows facilitators to adjust or amend their demonstration to meet the individuals' learning needs and goals (Gaberson & Oermann, 2010:62).

Almost half 179 (46.7%) of 268 (100.0%) respondents *agreed* to *strongly agreed* in Item 19, that facilitators mimicked scenarios as realistically as possible. However, 96 (43.2%) of the respondents 268 (100.0%) indicated either *strongly disagreed* or *uncertain* that facilitators incorporated in realism into demonstrations ($\bar{x} = 3.59; SD = 1.208$). This showed that some learners perceived an inability of the facilitators to effectively create realistic learning opportunities. Gaba (2004) in Hughes (2008:240) suggests that realistic patient scenarios would encourage learners to immerse themselves in the experience and allow learners to perform as they should with a real patient. The use of appropriate visual and auditory 'props' might further advance realism and aid the transfer of learning (Hughes, 2008:240).

4.4.6 Factor 6: Authenticity of simulation

Factor 7 obtained a Cronbach alpha of 0.700 with Items 20, 21 and 22 (Table 4.10). The perceptions of learners with regard to the authenticity of simulation during visualisation in the SLM are addressed in Factor 6. The general mean value and standard deviation of Factor 6 was $\bar{x} = 3.90; SD = .790$. Respondents mostly *agreed* to the authenticity of simulation (Figure 4.9).

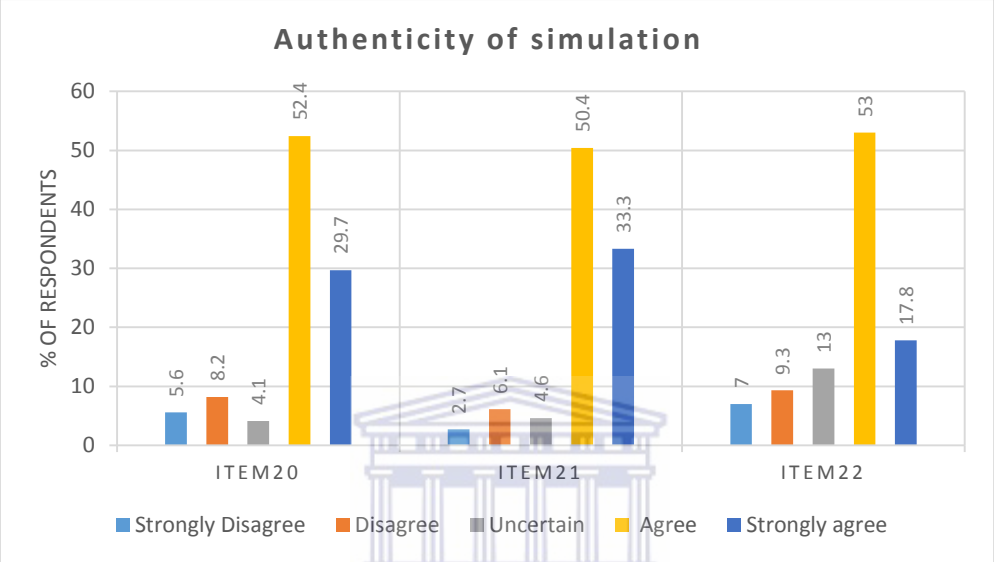

Figure 4.9: Responses on authenticity of simulation

Table 4.10: Authenticity of demonstration

Items	The facilitator:	Strongly Disagree		Disagree		Uncertain		Agree		Strongly agree		Total		$\bar{x}$	SD
		n	%	n	%	n	%	n	%	n	%	n	%		
20	demonstrates by using a simulated patient (real patient)	15	5.6	22	8.2	11	4.1	141	52.4	80	29.7	269	100.0	3.93	1.080
21	uses a manikin (doll) to demonstrate	7	2.7	16	6.1	12	4.6	139	50.4	87	33.3	261	100.0	4.08	.928

22	silently demonstrates the procedure emphasising communication skills with the simulated patient	19	7.0	25	9.3	35	13	143	53	48	17.8	270	100.0	3.65	1.093
	Total													3.903	.7900

Item 20 showed that the majority (n = 221; 82.1%) of 269 (100.0%) respondents *agreed* to *strongly agreed* that facilitators used simulated patients for demonstration purposes ($\bar{x} = 3.93; SD = 1.080$). In Item 21, the vast majority (n = 226; 83.7%) of 261 (100.0%) respondents *agreed* to *strongly agreed* that manikins were used during demonstrations. Negatively skewed responses were indicated in Item 21 which obtained the highest mean in Factor 6 with a narrow spread of responses around the mean value ($\bar{x} = 4.08; SD = .928$). The use of manikins, simulated patients, and human patient simulators provide learners with positive learning experiences because it enables them to correct mistakes without the fear of causing harm to patients (Hughes, 2008:235).

Item 22 showed that almost one third (n = 79; 29.3%) of 261 (100.0%) respondents indicated that they *strongly disagreed* that and were *uncertain* whether facilitators silently demonstrated the procedures to emphasise the importance of communication skills with the simulated patients ($\bar{x} = 3.65; SD = 1.093$). These findings concluded that facilitators made use of simulated patients and manikins but neglected to effectively enhance realism by demonstrating silently.

The use of simulated patients with scenario-based simulation could increase clinical skills performance and communication skills. A benefit is the feedback that simulated patients provide. For this reason, authenticity in the skills laboratory is advised in order to maximise benefits for learners (Houghton *et al*., 2012:32).

4.4.7 Factor 7: Progression of guided practice

Factor 7 yielded a Cronbach alpha of 0.915 with Items 28, 29, 30, 31, 32, 33, 34 and 35 (Table 4.11). The perceptions of learners with regard to the progression of guided practice were defined by items above. The findings in progression of guided practice displayed a mean value and standard deviation of $\bar{x} = 3.59, SD = 1.274$, which suggested that respondents mostly *agreed* with items in Factor 7 (Figure 4.10).

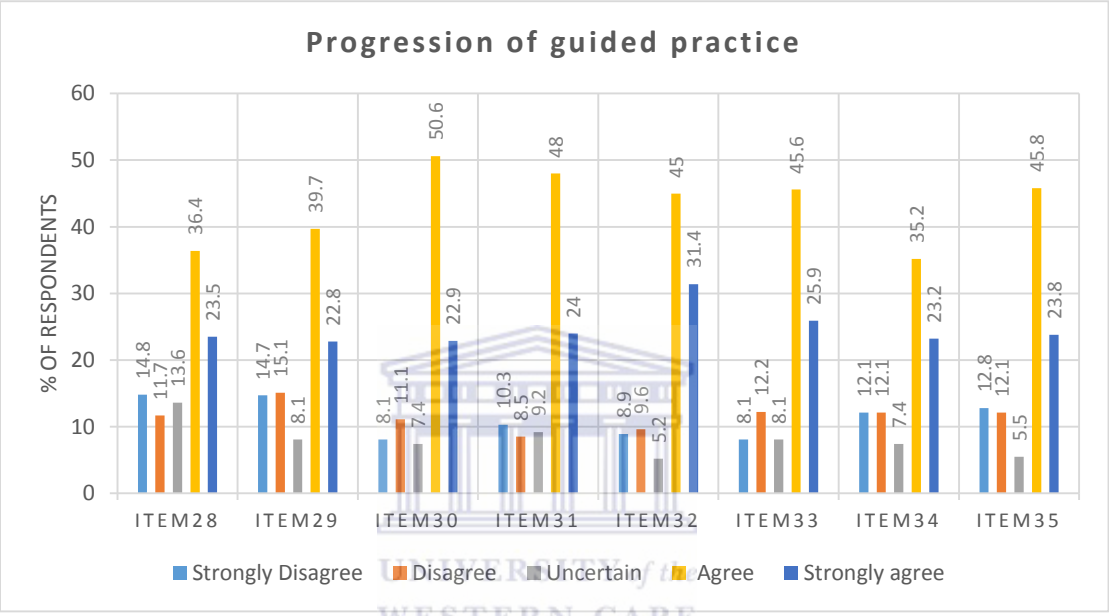

Figure 4.10: Responses on progression of guided practice

Table 4.11: Progression of guided practice

Items	The facilitator:	Strongly Disagree		Disagree		Uncertain		Agree		Strongly agree		Total		$\bar{x}$	SD
		n	%	n	%	n	%	n	%	n	%	n	%		
28	re-demonstrates a procedure after the visualisation phase	39	14.8	31	11.7	36	13.6	96	36.4	62	23.5	264	100.0	3.42	1.357

29	allows adequate time for guided practice to be conducted	40	14.7	41	15.1	22	8.1	107	39.7	62	22.8	272	100.0	3.40	1.374
30	allows the learner to make mistakes	22	8.1	30	11.1	20	7.4	137	50.6	62	22.9	271	100.0	3.69	1.177
31	allows the learners to reflect on their guided practice	28	10.3	23	8.5	25	9.2	130	48.0	65	24.0	271	100.0	3.67	1.223
32	gives learner constructive feedback after a procedure has been performed	24	8.9	26	9.6	14	5.2	122	45.0	85	31.4	271	100.0	3.80	1.230
33	involves all learners in the group sessions	22	8.1	33	12.2	22	8.1	123	45.6	70	25.9	270	100.0	3.69	1.213
34	conducts guided practice of individual learners before they are assessed on a particular skill	33	12.1	33	12.1	20	7.4	123	35.2	63	23.2	272	100.0	3.55	1.299
35	allows time for guided practice during scheduled sessions	35	12.8	33	12.1	15	5.5	125	45.8	65	23.8	273	100.0	3.56	1.319
	Total													3.59	1.274

The progression of guided practice refers to the manner in which facilitators proceed with guiding learners to perform procedures. It refers to overseeing, giving instructions, and assisting learners to perform tasks or procedures that would lead to the "emancipation" of learners and finally to provide them with an opportunity to perform tasks independently (Valdez, Guzman & Escolar-Chua, 2012:1217).

Item 29 had the lowest mean value in progression of guided practice ($\bar{x} = 3.40; SD = 1.374$). More than one third (n = 103; 37.9%) of 272 (100.0%) respondents indicated that they *strongly disagreed* with and were *uncertain* about allowing adequate time for guided practice. In Item 35, (a similarly phrased question), almost one third (n = 83; 30.4%) of 273 (100.0%) respondents indicated that they *strongly disagreed* with and were *uncertain* about whether facilitators allowed adequate time to ensure guided practice was done during scheduled sessions ($\bar{x} = 3.56; SD = 1.319$). In Item 34, more than half (n = 186; 58.4%) of 272 (100.0%) respondents *agreed* to *strongly agreed* that guided practice was done before they were assessed on a particular skill. However, close to one third (n = 68; 31.6%) of 272 (100.0%) respondents *disagreed* with and were *uncertain* about the provision of adequate time.

These findings reveal that the time for guided practice when learners should be able to practise in a safe and a non-threatening environment is lacking. This mirrors the findings of Donough (2013:45) that learners perceive the time for guidance by clinical facilitators is limited, since learners have expressed the need for more clinical supervision.

More than a third 106 (40.1%) of 264 (100.0%) respondents' data indicated a wide distribution around the mean value, since they *strongly disagreed* with and were *uncertain* about facilitators re-demonstrated procedures after the visualisation phase ($\bar{x} = 3.42; SD = 1.357$) (Item 28). Nearly three quarters (n = 199; 73.5%) of 271 (100.0%) respondents *agreed* to *strongly agreed* that learners were allowed to make mistakes during progression of guided practice. However, more than a quarter (n = 72; 26.6%) of 271 (100.0%) respondents indicated that they *strongly disagreed* with and were *uncertain* about being allowed to make mistakes (Item 30).

The skills laboratory is an environment where mistakes could be allowed within parameters of patient safety which leads to valuable learning experiences when learners experience the result of their mistakes (Emerson 2007:182). It is the responsibility of the facilitator to provide immediate feedback and to take corrective action when mistakes occur.

Item 32 revealed that 195 (72.0%) of 271 (100.0%) respondents *agreed* to *strongly agreed* that they received constructive feedback after they had completed procedures. This item showed the highest mean value in progression of guided practice $(\bar{x} = 3.80; SD = 1.230)$.

Similarly, nearly three quarters (n = 193; 71.5%) of 270 (100.0%) respondents *agreed* to *strongly agreed* that all learners were involved in group sessions $(\bar{x} = 3.55; SD = 1.299)$, although more than a quarter (n = 77; 28.4%) of the 270 (100.0%) respondents disagreed and were *uncertain* (Item 33).

4.4.8 Factor 8: Facilitator feedback during guided practice

Factor 8 yielded a Cronbach alpha of 0.928 with Items 36, 37, 38, 39, 40, 41, and 42 (Table 4.12). The perceptions of learners with regard to facilitator feedback during guided practice were defined by Factor 8 (Figure 4.11). The general mean value and standard deviation of Factor 8 was $\bar{x} = 3.71, SD = .985$. That indicated that learners mostly *agreed* that facilitators did give feedback.

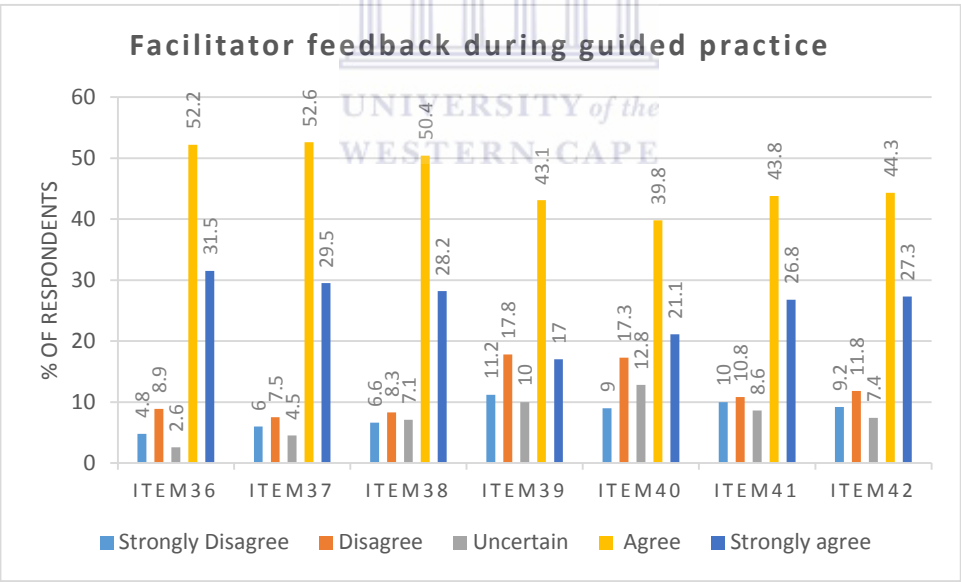

Figure 4.11: Responses on facilitator feedback during guided practice

Table 4.12: Facilitator feedback during guided practice

Items	The facilitator:	Strongly Disagree		Disagree		Uncertain		Agree		Strongly agree		Total		$\bar{x}$	SD
		n	%	n	%	n	%	n	%	n	%	n	%		
36	gives advice when needed	13	4.8	24	8.9	7	2.6	141	52.2	85	31.5	270	100.0	3.97	1.064
37	provides direction during guided practice	16	6.0	20	7.5	12	4.5	141	52.6	79	29.5	268	100.0	3.92	1.083
38	provides adequate and immediate feedback	16	6.6	22	8.3	19	7.1	134	50.4	75	28.2	266	100.0	3.86	1.101
39	allows simulated patients to give feedback with regard to the guided practice	30	11.2	48	17.8	27	10.0	116	43.1	48	17.0	269	100.0	3.39	1.275
40	allows peers to give feedback	24	9.0	46	17.3	34	12.8	106	39.8	56	21.1	266	100.0	3.47	1.250
41	provides feedback an acceptable manner, e.g. attitude of the facilitator	27	10.0	29	10.8	23	8.6	118	43.8	72	26.8	269	100.0	3.67	1.258
42	has a non-threatening attitude whilst giving feedback	25	9.2	32	11.8	27	7.4	120	44.3	74	27.3	271	100.0	3.69	1.248

Items	The facilitator:	Strongly Disagree		Disagree		Uncertain		Agree		Strongly agree		Total		$\bar{x}$	SD
		n	%	n	%	n	%	n	%	n	%	n	%		
	Total													3.71	.985

Item 39 showed the widest distribution of responses around the mean value ($\bar{x} = 3.39; SD = 1.275$) in Factor 8. More than a third (n = 105; 39%) of 269 (100.0%) respondents indicated that they *strongly disagreed* with and were *uncertain* about simulated patients being allowed to provide feedback during guided practice ($\bar{x} = 3.39; SD = 1.275$). Similarly, more than a third (n = 104; 39.1%) of 266 (100.0%) respondents indicated that they *strongly disagreed* with and were *uncertain* about peers being allowed to give feedback during guided practice ($\bar{x} = 3.47; SD = 1.250$) (Item 40).

These findings could be interpreted that peers and simulated patients were not constantly allowed by facilitators to give feedback during guided practice. By allowing simulated patients and peers to give feedback, learners' confidence levels and communication competence could improve significantly. Research shows that patient outcomes improve with good interpersonal skills and communication skills are in the health care environment (Lin *et al*., 2012:6; Kogen & Hauer, 2012:141).

Negatively skewed responses were provided to Item 36. The majority (n = 226; 83.7%) of 270 (100.0%) respondents *agreed* to *strongly agreed* that facilitators provided advice when it was required ($\bar{x} = 3.97; SD = 1.064$) (Item 36). In Item 37, the majority 220 (82.1%) of 268 (100.0%) respondents *agreed* to *strongly agreed* that facilitators provided direction during guided practice ($\bar{x} = 3.92; SD = 1.038$) and more than three quarters (n = 209; 78.6%) of 266 (100.0%) respondents *agreed* to *strongly agreed* that adequate feedback was given during guided practice ($\bar{x} = 3.86; SD = 1.101$) (Item 38).

These findings indicated that respondents perceived that facilitators provided feedback and direction. It is, however, unclear whether feedback was credible with the aim of advancing learning.

The manner of how feedback was given seemed to be acceptable, since more than two thirds (n = 190, 70.6%) of 269 (100.0%) respondents *agreed* to *strongly agreed* with the statement in

Item 41. It is still noteworthy that more than a quarter (n = 79; 29.4%) of these respondents indicated that they were in *strong disagreement* with and *uncertain* about the manner in which feedback was provided ($\bar{x} = 3.67; SD = 1.258$).

Almost three quarters (n = 194; 71.6%) of 271 (100.0%) respondents *agreed* to *strongly agreed* that facilitators had non-threatening attitudes while providing feedback but nearly a third (n = 84; 28.4%) of 271(100.0%) respondents seemed to *strongly disagree* with and were *uncertain* ($\bar{x} = 3.69; SD = 1.248$) about Item 42.

Feedback is considered a crucial aspect of clinical teaching and facilitators must aim at ensuring that feedback enables learners to develop their own learning needs and to take action that would equip them to accomplish their goals (Du Vivier *et al*., 2009:639).

4.4.9 Factor 9: Encouragement during independent practice

Factor 9 obtained a Cronbach alpha of 0.917 with Items 43, 44, 45, 46, 47, 48, 49, and 51 (Table 4.13). The general mean value and standard deviation of Factor 9 was $\bar{x} = 3.78, SD = .904$, indicating that across all four levels of training learners mostly *agreed* that they were encouraged during independent practice (Figure 4.12).

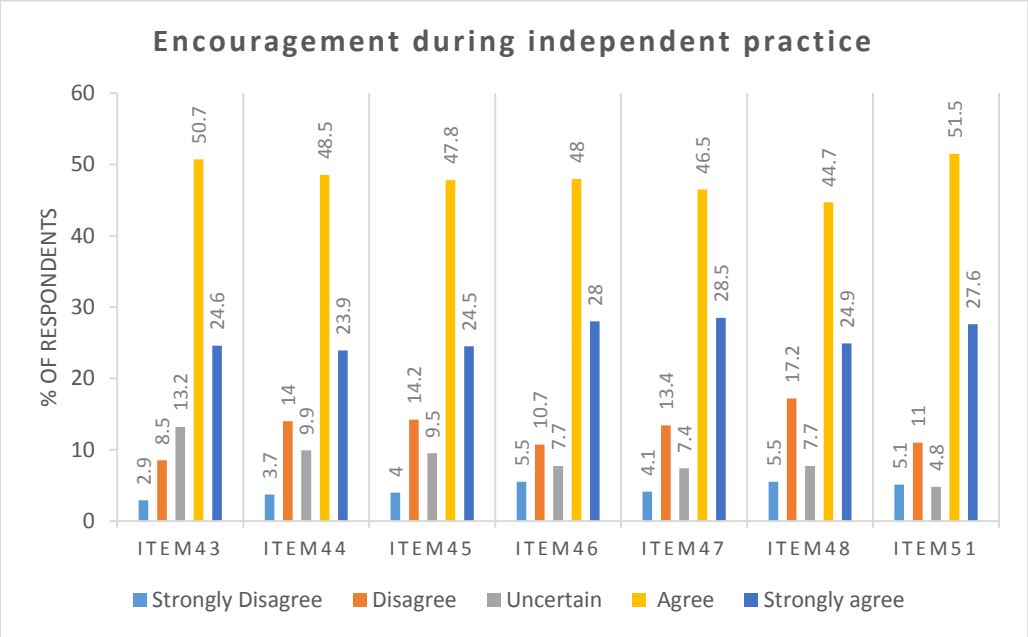

Figure 4.12: Responses on encouragement of independent practice

Independent practice is an essential aspect of promoting lifelong learning and students should be encouraged to practise independently in order to develop their critical thinking and reasoning abilities (Benedict, Schroner & McGee, 2013:151).

Table 4.13: Encouragement during independent practice

Items	The facilitator:	Strongly Disagree		Disagree		Uncertain		Agree		Strongly agree		Total		$\bar{x}$	SD
		n	%	n	%	n	%	n	%	n	%	n	%		
43	verbalises the importance of independent practice or self-directed learning	8	2.9	23	8.5	36	13.2	138	50.7	67	24.6	272	100.0	3.86	.982
44	adopts a supportive role in the learning process of the learner	10	3.7	38	14.0	27	9.9	132	48.5	65	23.9	272	100.0	3.75	1.082
45	assists learners to identify the factors necessary for effective learning	11	4.0	39	14.2	26	9.5	131	47.8	67	24.5	274	100.0	3.74	1.100
46	treats learners respectfully	15	5.5	29	10.7	21	7.7	130	48.0	76	28.0	271	100.0	3.82	1.121
47	helps learners with identifying their learning needs	11	4.1	36	13.4	20	7.4	125	46.5	77	28.5	269	100.0	3.82	1.112

Items	The facilitator:	Strongly Disagree		Disagree		Uncertain		Agree		Strongly agree		Total		$\bar{x}$	SD
		n	%	n	%	n	%	n	%	n	%	n	%		
48	acknowledge that learners' views are also important	15	5.5	47	17.2	21	7.7	122	44.7	68	24.9	273	100.0	3.66	1.184
51	encourages the learners to make use of the skills laboratory and other resources for SDL	14	5.1	30	11.0	13	4.8	140	51.5	75	27.6	272	100.0	3.85	1.100
	Total													3.78	.904

Responses to Factor 9 showed a narrow distribution around the mean value with three quarters (n = 205; 75.3%) of 272 (100.0%) respondents who *agreed* to *strongly agreed* that facilitators encouraged them to practise independently. This item had the highest mean value $(\bar{x} = 3.86; SD = .982)$ in relation to encouragement during independent practice (Item 43).

It is significant that close to one third of respondents to all the items in Factor 9 (Items 44, 45, 47, 48, 51, 46) indicated that they *strongly disagreed* with and were *uncertain* about whether facilitators encouraged them in respect of each specific item.

Almost three quarters (n = 198; 72.3%) of 274 (100.0%) respondents *agreed* to *strongly agreed* that facilitators assisted learners with identifying factors that were necessary for effective learning $(\bar{x} = 3.74; SD = 1.100)$ (Item 45).

Similarly, three quarters (n = 202; 75%) of 269 (100.0%) respondents *agreed* to *strongly agreed* that facilitators assisted learners with identifying their learning needs $(\bar{x} = 3.82; SD = 1.112)$ (Item 47). Also, almost three quarters (n = 197; 72.4 %) of 272 (100.0%) respondents *agreed* to *strongly agreed* that facilitators adopted supportive roles during the learning process while more than one quarter (n = 75; 27.6%) of the respondents

indicated that they *strongly disagreed* with and were *uncertain* about $(\bar{x} = 3.75; SD = 1.082)$ the supportive roles of facilitators (Item 44).

It was concluded that respondents perceived facilitators as supportive but some learners seemed to *disagree* with or were *uncertain* about the role of the facilitator during independent practice.

More than three quarters (n = 206 76.0%) of 271 (100.0%) respondents *agreed* to *strongly agreed* that they were treated with respect $(\bar{x} = 3.82; SD = 1.121)$ (Item 46). Nonetheless, a significant number (n = 83; 30.4%) of respondents indicated that they *strongly disagreed* with and were *uncertain* about some facilitators ability to acknowledge that learners' views were also important $(\bar{x} = 3.66; SD = 1.184)$ (Item 48). Item 48 showed the lowest mean value and standard deviation with regard to encouragement during independent practice.

A total of 217 (79.1%) of 272 (100.0%) respondents *agreed* to *strongly agreed*, that they were encouraged to make use of the skills laboratory and other resources for self-directed learning in the skills laboratory $(\bar{x} = 3.85; SD = 1.100)$ (Item 51). Literature suggests that by encouraging learners, facilitators allow learners to empower themselves during the learning process (Embo *et al*., 2010:267).

4.4.10 Factor 10: Support during independent practice

Factor 10 yielded a Cronbach alpha of 0.886 with Items 49, 50, 52, 53, and 54 (Table 4.14). The perceptions of learners with regard to support received during independent practice were defined by the mentioned items. The general mean and standard deviation of items in Factor 10 with regard to encouragement that learners received were $\bar{x} = 3.65 (SD = .989)$ (Table 4.14). That supported learners' notion that across the four levels of training that they were receiving support during independent practice (Figure 4.13).

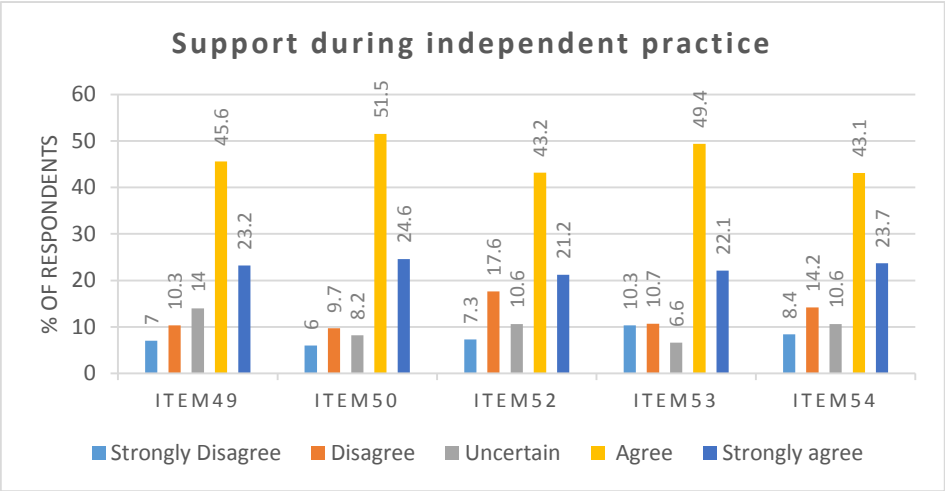

Figure 4.13: Responses on support during independent practice

Table 4.14: Support during independent practice

Items	The facilitator:	Strongly Disagree		Disagree		Uncertain		Agree		Strongly agree		Total		$\bar{x}$	SD
		n	%	n	%	n	%	n	%	n	%	n	%		
49	ensures the availability of adequate resources; e.g. videos, self-recording	19	7.0	28	10.3	38	14.0	124	45.6	63	23.2	272	100.0	3.68	1.145
50	encourages learners to reflect on experiences	16	6.0	26	9.7	22	8.2	138	51.5	66	24.6	268	100.0	3.79	1.102
52	is available for consultation when learners need assistance during SDL (skills laboratory coordinators)	20	7.3	48	17.6	29	10.6	118	43.2	58	21.2	273	100.0	3.53	1.213

Items	The facilitator:	Strongly Disagree		Disagree		Uncertain		Agree		Strongly agree		Total		$\bar{x}$	SD
		n	%	n	%	n	%	n	%	n	%	n	%		
53	keeps adequate record of the learners' SDL sessions in the skills laboratory	28	10.3	29	10.7	18	6.6	134	49.4	62	22.1	271	100.0	3.64	1.236
54	motivates learners constantly	24	8.4	39	14.2	29	10.6	118	43.1	65	23.7	274	100.0	3.59	1.229
	Total													3.65	.989

Item 50 showed the highest mean value in support during independent practice ($\bar{x} = 3.79; SD = 1.102$). Three quarters (n = 204; 76.1%) of 268 (100.0%) respondents *agreed* to *strongly agreed* that learners were encouraged to reflect during independent practice ($\bar{x} = 3.79; SD = 1.102$) (Item 50). Nearly a third (n = 76; 31.3%) of 272 (100.0%) respondents *strongly disagreed* with and were *uncertain* about whether facilitators ensured the availability of resources in the skills laboratory ($\bar{x} = 3.68; SD = 1.145$) (Item 49).

One third (n = 97; 35.2%) of 273 (100.0%) respondents *disagreed* with and were *uncertain* about whether facilitators were available for consultation ($\bar{x} = 3.53; SD = 1.213$) (Item 52). Item 52 showed the lowest mean value in support during independent practice (Factor 10) with a wide distribution of responses. Findings suggested that some facilitators were not always available for consultation which could have contributed to learners not utilising the skills laboratory for independent practice.

The majority 196 (71.5%) of 271 (100.0%) respondents indicated that they *agreed* to *strongly agreed* that adequate records were kept of SDL sessions in the skills laboratory; it showed once again that facilitators monitored attendance ($\bar{x} = 3.64; SD = 1.236$) (Item 53).

One third (n = 92; 33.2%) of the 274 (100.0%) respondents *disagreed* with or were *uncertain* about whether facilitators motivated them constantly $(\bar{x} = 3.59; SD = 1.236)$ (Item 54).

The findings suggested that respondents had a strong perception that facilitators provided the necessary support for independent learning. Some respondents, however, indicated an inadequate availability of resources. Continual individual support in the form of feedback and reflection might improve relationships between facilitators and learners and directly influence learning outcomes / competencies. Learners may not fully make use of opportunities to practise independently without input and guidance from facilitators (Brydges, Carnahan, Rose & Dubrowski, 2010:1833).

4.4.11 Factor 11: Planning of assessments

Factor 11 yielded a Cronbach alpha of 0. 962 with Items 55, 56 and 57 (Table 4.15). The perceptions of learners with regard to the planning of assessments in the SLM obtained a mean value and standard deviation of $\bar{x} = 3.75, SD = 1.082$, showing that respondents mostly *agreed* to the items in Factor 11 (Figure 4.14).

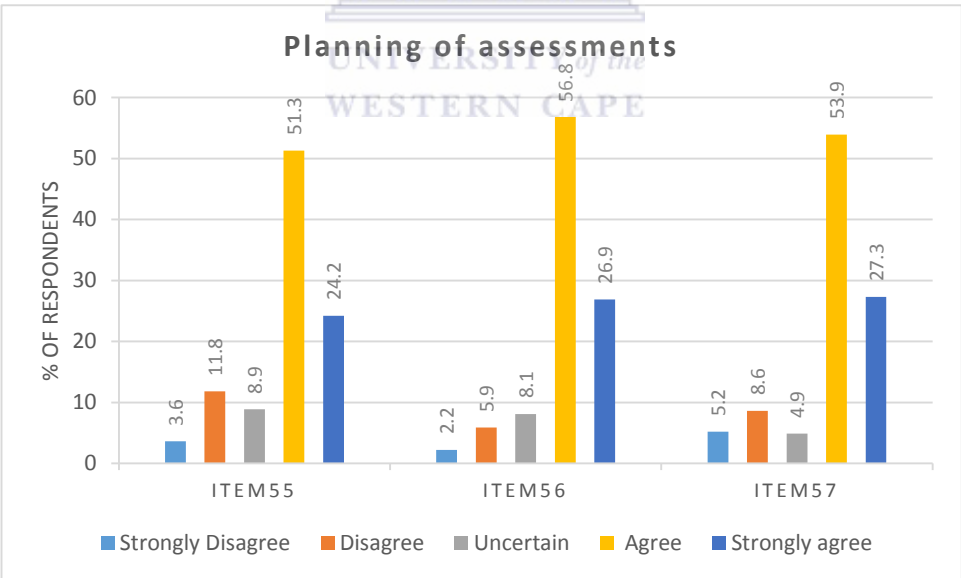

Figure 4.14: Responses on planning of assessments

Table 4.15: Planning of assessments

Items	The facilitator:	Strongly disagree		Disagree		Uncertain		Agree		Strongly agree		Total		$\bar{x}$	SD
		n	%	n	%	n	%	n	%	n	%	n	%		
55	is involved in all the assessments of clinical skills during the year	10	3.6	32	11.8	24	8.9	193	51.3	66	24.2	271	100.0	3.81	1.051
56	makes sure that assessments are linked to specific outcomes (explained in workbooks)	6	2.2	16	5.9	22	8.1	154	56.8	73	26.9	271	100.0	4.00	.888
57	makes sure assessments are relevant to specific procedures	14	5.2	23	8.6	13	4.9	144	53.9	73	27.3	267	100.0	3.90	1.064
	Total													3.75	1.082

Table 4.15 indicates negatively skewed responses on (Item 56). This item had the highest mean value in Factor 11 and showed a narrow distribution of responses around the mean value $(\bar{x} = 4.00; SD = .888)$. The majority (n = 227; 83.7%) of 271 (100.0%) respondents *agreed* to *strongly agreed* that assessments were linked to specific outcomes. In Item 55, the involvement of the facilitator in all assessments of clinical skills during the year, suggested that facilitators were involved in all the assessments during the year; less than a quarter (n = 66; 24.3%) of 271 (100.0%) respondents indicated their *strong disagreement* and *uncertainty* $(\bar{x} = 3.81; SD = 1.051)$. The vast majority (n = 217; 81.2%) of 267(100.0%) respondents *agreed* to *strongly agreed* that assessments were relevant to specific procedures $(\bar{x} = 3.90; SD = 1.064)$ (Item 57).

The findings of planning of assessments showed that respondents perceived assessments as relevant and related to learning outcomes. Facilitators should, however, be more involved in the planning and implementation of assessments to determine whether the assessments are relevant and effective.

4.4.12 Factor 12: Facilitator role during assessments

Factor 12 showed a Cronbach alpha of 0.852 with Items 58, 59, 60, 61, 62, 63, 64, 65, 66, 67, 68, 69, 70, 71 and 72 (Table 4.16). The general mean value and standard deviation of the items in Factor 12 regarding the role of the facilitator were $\bar{x} = 3.61, SD = 1.048$. Respondents mostly *agreed* and *strongly agreed* that facilitators did provide feedback during assessments (Figure 4.15). A wide distribution of responses on items in Factor 12 was found.

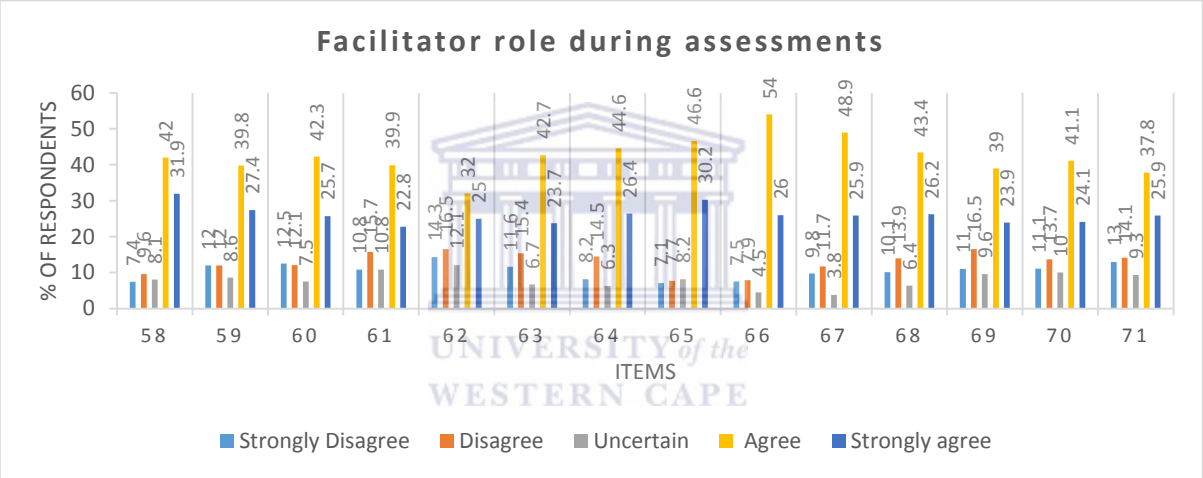

Figure 4.15: Responses on facilitator role during assessments

Table 4.16: Facilitator role during assessments

Items	The facilitator:	Strongly disagree		Disagree		Uncertain		Agree		Strongly agree		Total		$\bar{x}$	SD
		n	%	n	%	n	%	n	%	n	%	n	%		
58	gives clear and understandable instructions	20	7.4	26	9.6	22	8.1	116	42	86	31.9	270	100.0	3.82	1.194
59	is fair during assessments	32	12.0	32	12.0	23	8.6	106	39.8	73	27.4	266	100.0	3.59	1.327

Items	The facilitator:	Strongly disagree		Disagree		Uncertain		Agree		Strongly agree		Total		$\bar{x}$	SD
		n	%	n	%	n	%	n	%	n	%	n	%		
60	is objective when assessing learners	33	12.5	32	12.1	20	7.5	112	42.3	68	25.7	265	100.0	3.57	1.324
61	ensures that learners feel comfortable during assessments	29	10.8	42	15.7	29	10.8	107	39.9	61	22.8	268	100.0	3.48	1.294
62	ensures that learners feel confident during assessments	39	14.3	45	16.5	33	12.1	87	32.0	68	25	272	100.0	3.37	1.390
63	allows adequate time for assessments	31	11.6	41	15.4	18	6.7	114	42.7	63	23.7	267	100.0	3.31	1.316
64	provides feedback that allows learners to realise the importance of clinical learning	22	8.2	39	14.5	17	6.3	120	44.6	71	26.4	269	100.0	3.67	1.240
65	uses simulated patients during OSCE	19	7.1	21	7.7	22	8.2	125	46.6	81	30.2	268	100.0	3.85	1.148
66	provides specific instructions for assessments	20	7.5	21	7.9	12	4.5	143	54	69	26	265	100.0	3.83	1.130
67	provides clear feedback on performances	26	9.8	31	11.7	10	3.8	130	48.9	69	25.9	266	100.0	3.70	1.247
68	allows learners to reflect on assessments of specific skills	27	10.1	37	13.9	17	6.4	116	43.4	70	26.2	267	100.0	3.62	1.285

Items	The facilitator:	Strongly disagree		Disagree		Uncertain		Agree		Strongly agree		Total		$\bar{x}$	SD
		n	%	n	%	n	%	n	%	n	%	n	%		
69	is able to identify learners' strengths and limitations after each assessment	30	11.0	45	16.5	26	9.6	106	39.0	65	23.9	272	100.0	3.48	1.314
70	provides feedback on learners' limitations after assessments	30	11.1	37	13.7	27	10	111	41.1	65	24.1	270	100.0	3.53	1.295
71	provides positive feedback after assessments	35	13	38	14.1	25	9.3	102	37.8	70	25.9	270	100.0	3.50	1.354
	Total													3.61	1.048

Clinical assessments focuses on the acquisition of skills by direct observation of the respondents with the inclusion of cognitive, affective, and communication skills (Hauer, 2011:28; Jeggels *et al*., 2010:57).

The purpose of formative assessments is to determine competency with the aim of identifying gaps and remediation whereas summative assessments focus on judgements made with regard to competency (Jeggels *et al*., 2010:57).

The lowest mean value was indicated in Item 63 with regard to the facilitator's role during assessments. Responses showed a wide distribution of responses around the mean value. More than one third (n = 90; 33.7%) of 267 (100.0%) respondents indicated that they *strongly disagreed* with and were *uncertain* about the allocation of adequate time for assessments $(\bar{x} = 3.31; SD = 1.316)$ (Item 63). This could be interpreted that learners experienced limited time for assessments.

More than a third (n = 117; 42.9%) of 272 (100.0%) respondents indicated that they *strongly disagreed* with and were *uncertain* about whether the facilitators made them feel confident

during assessments ($\bar{x} = 3.37; SD = 1.390$) (Item 62). More than a third (n = 100; 37.3%) of the 268(100.0%) respondents *strongly disagreed* with and were *uncertain* about feeling comfortable during assessments ($\bar{x} = 3.48; SD = 1.294$) (Item 61).

Item 59 ($\bar{x} = 3.59; SD = 1.372$) and Item 60 ($\bar{x} = 3.57; SD = 1.324$) solicited similar answers from respondents about the fairness and objectivity of facilitators during assessments. The mean values indicated that respondents were mostly in *agreement* with these items and responses showed a wide distribution of responses around the mean values. Almost one third (n = 87; 32.6%) of 266 (100.0%) respondents *strongly disagreed* with and were *uncertain* about whether facilitators were fair (Item 59), and 87 (32.1%) of 265 (100.0%) respondents *strongly disagreed* with and were *uncertain* about whether facilitators were objective during assessments (Item 60).

This could be interpreted that some facilitators failed to ensure a conducive environment for assessments and feedback which influenced learner's level of confidence and affected performance. Literature states that the achievement of learning outcomes is extremely dependent on the learners' efforts and responsibility to claim ownership of their own learning, however, the atmosphere that a facilitator creates might encourage good learning experiences for learners (Dale *et al*., 2013:6).

Nearly three quarters (n = 204; 73.9%) of 270 (100.0%) respondents *agreed* to *strongly agreed* that facilitators gave clear and understandable instructions during assessments ($\bar{x} = 3.82; SD = 1.194$) (Item 58).

Negatively skewed responses to Item 66 were obtained which indicated the highest mean value in relation to the facilitator's role during assessments ($\bar{x} = 3.83; SD = 1.130$). More than half (n = 143; 54%) of 265 (100.0%) respondents *agreed* that specific instructions were given during assessments. This could be interpreted that learners were aware of what was expected of them during assessments.

The use of simulated patients during an OSCE (Item 65) had the highest mean value ($\bar{x} = 3.85; SD = 1.148$) for the facilitator's role during assessments with 206 (76.8%) of 268 (100.0%) respondents who indicated that they *agreed* to *strongly agreed* that simulated patients were used for assessments. Almost three quarters (n = 191; 71%) of 269 (100.0%) respondents

agreed to *strongly agreed* that facilitators gave feedback that allowed learners to realise the importance of clinical learning $(\bar{x} = 3.67; SD = 1.240)$ (Item 64).

Almost half (n = 130; 48.9%) of 266 (100.0%) respondents *agreed* that feedback provided by facilitators during performances was clear $(\bar{x} = 3.70; SD = 1.247)$ (Item 67). Nearly one quarter (n = 65; 24.1%) of 270 (100.0%) respondents *strongly agreed* that facilitators were able to identify learners' strengths and limitations after assessments $(\bar{x} = 3.48; SD = 1.314)$ (Item 69). However, more than a third (n = 94; 34.8%) of 270 (100.0%) respondents *strongly disagreed* with and were *uncertain* about whether facilitators provided feedback in relation to learners' limitations $(\bar{x} = 3.53; SD = 1.295)$ (Item 70). More than a third (n = 98; 37.4%) of 270 (100.0%) respondents *strongly disagreed* with and were *uncertain* about whether facilitators provided positive feedback after assessments $(\bar{x} = 3.50; SD = 1.354)$ (with a wide distribution of responses) (Item 71).

Almost a third, 81 (30.4%) of 267 (100.0%) respondents *strongly disagreed* with and were *uncertain* about an opportunity that would allow them to reflect on assessments $(\bar{x} = 3.62; SD = 1.285)$ (Item 68).

The findings could be interpreted that respondents perceived that facilitators did provide feedback but that facilitators might have failed to provide comprehensive feedback that allowed learners to critically reflect on their experience. Critical reflection and feedback is necessary in order to allow learners to think logically and to find reasons for their actions based on their decisions (Hughes, 2008:89).

4.5 SECTION C

Section C consisted of items that determined how learners generally perceive the skills laboratory method. The analysis is presented in Figure 4.16.

4.5.1 General perceptions of the skills laboratory method

The SLM aims at exposing learners to an environment where they are able to acquire psychomotor skills that improve interpersonal skills and that integrate theory with practice.

Almost three quarters (n = 200; 74.3%) of 269 (100.0%) of respondents *agreed* to *strongly agreed* that the SLM was an effective clinical teaching method (Item 72). A quarter (n = 69;

25.0%) of the 269 (100.0%) respondents *strongly disagreed* with and were *uncertain* about this statement. Almost three quarters (n = 192; 70.6%) of 272 (100.0%) respondents *agreed* to *strongly agreed* that the method allowed them to take responsibility for their learning (being self-directed). However, 80 (30.3%) of the respondent *disagreed* with and were *uncertain* about whether the method allowed them to take responsibility (Item 73).

Items 74, 75, and 76 showed similar responses. Less than half (n = 120; 44.3%) of 271 (100.0%) respondents *agreed* that that the SLM allowed them to practise independently, whereas 30 (10.9%) *disagreed* (Item 74). Almost three quarters (n = 191; 70.2%) of 272 (100.0%) respondents *agreed* to *strongly agreed* that the SLM improved their problem solving abilities (Item75). Nearly a fifth (n = 52; 19.3%) of 270 (100.0%) respondents *strongly disagreed* to *disagreed* that the SLM improved their decision making abilities and 29 (10.5%) of 270 (100.0%) respondents were *uncertain* (Item 76).

The findings suggested that most learners perceived the skills laboratory method as an effective teaching method, however, some learners were uncertain or felt that decision making and problem solving abilities were lacking. Some learners might lack clinical judgement and decision making skills in certain clinical situations (Levett-Jones *et al.*, 2011:69). Nonetheless, in order to improve those skills, facilitators should effectively prepare and implement the SLM by providing an authentic learning environment that would enhance clinical learning for learners.

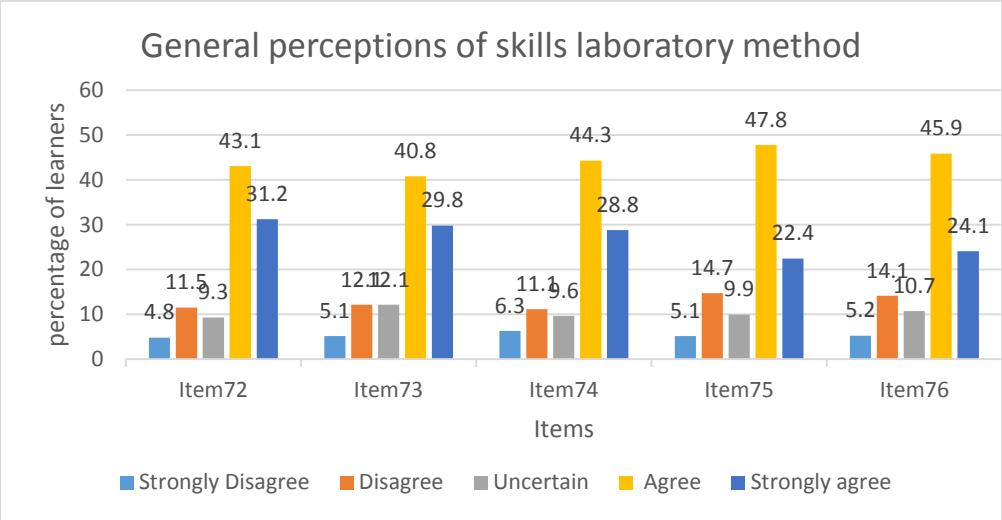

Figure 4.16: General responses on perceptions of SLM

4.6 SUMMARY OF THE FINDINGS

Reflecting on the findings, the **highest responses on**

- Strongly agree
- Agree
- Uncertain
- Disagree
- Strongly disagree

in each of the factors of the five phases were identified.

Three factors emerged from the **orientation phase** of the SLM: information received during orientation, introduction during orientation and orientation to resources in skills laboratory.

The information received during orientation

Factor 1

- Thirty three (12.0 %) of 275 (100.0%) respondents *strongly disagreed*, 41 (14.9%) respondents *disagreed*, and 29 (10.5%) of respondents were *uncertain* whether consultation times for individual appointments were explained (Item 9).
- More than half 140 (52.4%) of 272 (100.0%) respondents *agreed* that facilitators explained the assessment criteria for the modules (Item 10).
- Less than a third 76 (28.1%) of 270 (100.0%) respondents *strongly agreed* that that facilitators emphasised the correct handling of equipment (Item 7).

The introduction during orientation

Factor 2

- Thirty seven (13.6%) of 273(100.0%) of respondents *disagreed* that they were timely informed about the general orientation (Item 2).
- Twenty six (9.5%) of 274 (100.0%) of respondents were uncertain whether they were encouraged to attend the orientation for their particular level of training (Item 1), and 26 (9.5%) of 273 (100.0%) respondents were *uncertain* whether they were informed timely of the general orientation (Item 2).

- More than half 158 (57.7%) of 274 (100.0%) respondents mostly *agreed* that they were introduced and orientated to the clinical skills laboratory (Item 3).
- A third 89 (32.7%) of 272 (100.0%) of respondents *strongly agreed* that attendance registers were monitored of learners attending orientation opportunities (Item 5). This was also reflected during the visualisation phase which could indicate that the facilitators expected learners to attend these sessions and valued skills laboratory sessions.

Orientation to resources in the skills laboratory

Factor 3

- Thirty four (12.4%) of 275 (100%) of respondents *strongly disagreed* and 48 (17.5%) of 275 (100%) respondents mostly *disagreed* that learners were orientated to the purpose of the skills laboratory (Item 6.1).
- Twenty eight (10.3%) of 273 (100.0%) respondents were *uncertain* whether the purpose of the manikins was explained to them (Item 6.2).
- Half 137 (50.4%) of 272 (100.0%) respondents *agreed* that that facilitators provided information with regard to resources (Item 6.4).
- Sixty five (29%) of 271 (100%) respondents *strongly agreed* with being introduced to simulated patients (Item 6.3).

During the orientation phase of the SLM, the findings indicated that learners were orientated to the SLM; however, some learners indicated a lack of adequate information during the orientation period.

The **visualization phase** of the SLM consisted of three factors: The facilitator interaction during visualisation, the progression of demonstration, and authenticity of visualisation.

Facilitator interaction during visualisation

Factor 4

- Seventeen (6.3%) of 269 (100.0%) of respondents *strongly disagreed* that facilitators appeared to be knowledgeable when answering questions (Item 25).
- Thirty five (12.9%) of 271 (100.0%) respondents mostly *disagreed* that small groups for demonstrations varied between 8 – 12 learners (Item 12). The number of learners per group seemed to have varied throughout the phases of the SLM. Group size is considered

important in the SLM to allow all learners an opportunity to properly view the procedure, to ensure active participation by everybody, and to learn from one another.

- Twenty six (9.9%) of the 263 (100.0%) respondents were *uncertain* whether facilitators were able to assist learners with integrating theory and practice (Item 27).
- More than half 144 (53.3%) of 270 (100.0%) respondents mostly *agreed* that facilitators explained procedures during the visualisation phase, indicating that a "silent" demonstration might not have taken place (Item 23).
- Over a third 98 (36.6%) of 269 (100.0%) respondents *strongly agreed* that learners were allowed to ask questions during visualisation of procedures (Item 24).

The progression of demonstrations

Factor 5

- Some 29 (10.7%) of 272(100.0%) respondents *strongly disagreed* that facilitators allowed them to establish their (learners') expectations for the sessions (Item 17). This indicated that learning needs were not adequately assessed which influenced the learning outcomes.
- One fifth 56 (21.1%) of 266 (100.0%) learners mostly *disagreed* that large group sessions were scheduled with more than 12 learners (Item 13).
- Almost a fifth 25 (19.3%) of 268 (100.0%) respondents were uncertain whether scenarios were as realistic as possible (Item 19).
- More than half 151(55.7 %) of 271 (100.0%) respondents mostly *agreed* that facilitators emphasised the objectives of demonstrations (Item 15).
- Eighty two (30.3%) of 271(100.0%) respondents strongly *agreed* that attendance registers for demonstrations were kept (Item 14).

Authenticity of visualisation

Factor 6

Thirty five (13.0%) of 270 (100.0%) respondents were *uncertain*, 25 (9.3%) of 270 (100.0%) respondents *disagreed*, and 19 (7.0%) of 270 (100.0%) respondents *strongly disagreed* that facilitators silently demonstrated procedures to emphasise the importance of communication skills with simulated patients (Item 22).

Eighty seven (33.3%) of 269 (10.0%) respondents *strongly agreed* that manikins were used for demonstrations (Item 21).

More than half 143 (53%) of 270(100.0%) respondents *agreed* that facilitators silently demonstrated procedures to emphasise the importance of communication skills with simulated patients (Item 22).

Guided practice produced two factors: Progression of guided practice and facilitator feedback during guided practice.

Progression during guided practice

Factor 7

Thirty nine (14.8%) of 264 (100.0%) respondents *strongly disagreed* and 36 (13.6%) of 264 (100.0%) respondents were *mostly uncertain* whether facilitators re-demonstrated procedures after the visualisation phase (Item 28).

Forty one (15.1%) of 272 (100.0%) respondents *disagreed* that adequate time was allowed for guided practice (Item 29).

Half 137 (50.6%) of 271(100.0%) of respondents mostly *agreed* that they were allowed to make mistakes during guided practice (Item 30).

Eighty five (31.4%) of 271 (100.0%) respondents strongly *agreed* that facilitators provided constructive feedback (Item 32).

Feedback during guided practice

Factor 8

Thirty (11.2%) of 269 (100.0%) respondents *strongly disagreed* and almost one fifth 48 (17.8%) of 269 (100.0%) respondents *disagreed* that simulated patients were allowed to give feedback during guided practice (Item 39).

Thirty four (12.8%) of 266 (100.0%) respondents were *uncertain* whether peers were allowed to give feedback during guided sessions (Item 40).

The majority 141 (52.6%) of 268 (100.0%) *agreed* that facilitators provided adequate direction during independent practice (Item 37).

Eighty five (31.5%) of 270 (100.0%) respondents *strongly agreed* that learners received advice during guided practice (Item 36).

Findings suggested that opportunities for guided practice might not always be presented to learners. Respondents, however, indicated that facilitators provided support during guided practice but facilitators might not always include feedback from peers and simulated patients which with the purpose of improving decision-making abilities and communication skills of learners.

Independent practice produced two factors: Encouragement during guided practice and support during independent practice.

Encouragement during independent practice

Factor 9

Fifteen (5.5%) of 271 (100.0%) respondents *strongly disagreed* that learners were treated with respect (Item 46) and (5.5%) of 273 (100.0%) respondents *strongly disagreed* that facilitators acknowledged that learners' views were also important (Item 48).

Forty two (17.2%) of 273 (100%) respondents mostly *disagreed* that facilitators acknowledged the views of learners as important (Item 48).

Thirty six (13.2%) of 27 (100.0%) respondents were *uncertain* whether facilitators verbalised the importance of independent practice (Item 43).

The majority 140 (51.5%) of 272 (100.0%) respondents *agreed* that they were encouraged to make use of the skills laboratory and resources during SDL (Item 51).

Slightly more than a quarter 77 (28.5%) of 269 (100%) of respondents *strongly agreed* that facilitators assisted learners with identifying their learning needs (Item 47). This suggested that facilitators were concerned about the learners.

Support during independent practice

Factor 10

Twenty eight (10.3%) of 271 (100.0%) of respondents *strongly disagreed* that adequate records for SDL in the skills laboratory were kept (Item 53).

Almost a fifth 48 (17.6%) of 273 (100.0%) of respondents *disagreed* that facilitators were available for consultation when learners needed assistance in the skills laboratory (Item 52).

Thirty eight (14.0%) of 272 (100.0%) respondents were mostly *uncertain* whether facilitators ensured the availability of resources for independent learning (Item 49).

Half 138 (51.5%) of 268 (100.0%) respondents mostly *agreed* and 66 (24.6%) of 268 (100.0%) respondents *strongly agreed* that they were encouraged to reflect on experiences (Item 50).

It appeared that learners perceived facilitators' encouragement and support during independent practice. The availability of facilitators for self-directed learning seemed to be crucial for supporting and encouraging learners in the skills laboratory.

The **assessment phase** of the SLM produced 2 factors: Planning of assessments and the role of the facilitator during assessments.

Planning of assessments

Factor 11

Less than a quarter (n = 66; 24.3%) of 271 (100.0%) respondents indicated their strong disagreement and uncertainty onwhether all facilitators were involved during the assessments of skills (Item 55).

More than a quarter 73 (27.3%) of 267 (100%) of respondents *strongly agreed* that assessments were relevant to specific procedures (Item 57).

The majority 193 (51.3%) of 271 (100.0%) respondents *agreed* that assessments were relevant and linked to specific outcomes (Item 56).

The role of a facilitator during assessments

Factor 12

Thirty nine (14.3%) of 272 (100.0%) respondents *strongly disagreed* with and 33 (12.1%) of 272 (100%) respondents were mostly *uncertain* whether facilitators allowed them to be confident during assessments (Item 62).

Some (n = 45; 16.5%) of 272 (100.0%) respondents mostly *disagreed* that facilitators were able to identify strengths and weaknesses during assessments (Item 69).

More than half 143 (54.0%) of 265 (100.0%) respondents mostly *agreed* that specific instructions were given during assessments (Item 66).

Eighty six (31.9%) of 270 (100.0%) respondents *strongly agreed* that facilitators issued clear and understandable instructions during assessments (Item 58).

It could be assumed that facilitators made sure learners understood instructions for assessment purposes. However, a conducive atmosphere and appropriate feedback are required to boost confidence and to ensure positive learning experiences.

4.7 CONCLUSION

This chapter focuses on analysing and displaying the analysed data in the format of graphs and figures. According to the findings, learners perceived that facilitators implemented the phases of the skills laboratory method as indicated but it was also evident that learners perceived that aspects or certain steps of the SLM were either omitted or not fully implemented. In Chapter 5, conclusions are made, guidelines are discussed, and recommendations are provided.

CHAPTER 5
CONCLUSIONS, GUIDELINES, LIMITATIONS, AND RECOMMENDATIONS

5.1 INTRODUCTION

The focus of this chapter is to provide conclusions and guidelines that are soundly based on the scientific findings of this study. Guidelines are presented to improve the implementation of the skills laboratory method (SLM). The possible limitations of the study, as well as recommendations for the implementation of guidelines are included in this chapter. The second objective of this study was *to describe guidelines for clinical facilitators in order to improve the comprehensive implementation of the SLM.*

The conclusions of the study were summarised at the end of Chapter 4 and a brief summary is provided about the five phases of the SLM (Section 5.2).

5.2 CONCLUSIONS

Generally respondents perceived that the phases of the SLM were implemented by facilitators but the responses varied and facilitators did not fully adhere to certain principles or steps in each of the phases of the SLM. Some aspects were neglected and necessary data, feedback, and guidance were not always admitted.

5.2.1 Orientation phase

Facilitators seemed to value the orientation phase of the SLM and expected learners to attend. Some respondents were, however, not aware of orientation times an indicated that information provided during orientation required attention. The importance of a successful orientation is emphasised in literature and facilitators should communicate expectations clearly and ensure that learners understand and are familiar with procedures and practices related to their clinical learning (Ali, 2012:20).

5.2.2 Visualisation phase

The observation by the researcher that problems were experienced in terms of the implementation of the silent demonstration was verified in the findings. It will improve clinical

reasoning skills when facilitators explain their thought processes and provide specific feedback during visualisation (Ernstzen *et al*., 2000:100).

The primary focus of the visualisation phase is the ability of the facilitator to transfer skills to learners by appropriately displaying appropriate behaviour, attitudes, communication skills, as well as allowing learners to integrate theory and practice (Ramani & Leinster, 2008:357).

The majority of respondents perceived facilitators as knowledgeable but they were not always capable of assisting learners to integrate theory and practice. The theory-practice gap has been widely debated in literature and one finding suggests that learning from theory happens when there is a direct link to practice, and when demonstrations closely emulate theory (McCallum, 2006:828). Facilitators should utilise sessions in a way that the learning opportunities enable them to facilitate and obtain theoretical knowledge from learners during demonstrations and practice. Facilitators should be able to challenge or identify specific learning needs of learners. It is echoed in the findings that facilitators are inclined to neglect determining learners' prior knowledge before they commence with a demonstration. Some learners, however, indicated that facilitators determined and identified their learning needs. Surprisingly in one study, learners stated that it was unrealistic to expect staff members (facilitators) to understand all their learning needs but it was at least expected of facilitators to show individual interest in learners (Darlaston-Jones *et al*., 2003).

The vast majority of respondents also indicated that manikins and simulated patients were utilised for demonstrations but almost one third of learners held the opinion that facilitators were unable to portray realism and authentic simulations. Learners might feel and behave differently during simulation because they are aware that they are not nursing real patients. Some literature suggests that the use of some manikins lacks authenticity and that learners experience problems with communication skills. However, facilitators should be able to adequately use technology and their creativity to enhance realism with the view of making learning interesting. The use of technology and creativity is also emphasised in the SANC guidelines for nurse educators (SANC, 2005).

5.2.3 Guided practice

Guided practice includes feedback and reflection, as well as improves learners' performance of a skill. This is supported by the findings of Oermann who states that when practice includes guidance, it retains and improves skills over time and it yields significantly better than when

learners do not practise (Oermann *et al*., 2011:315). A finding in guided practice was that learners to a large extent perceived time for guided practice was limited and that some of them did not get an opportunity to practise with guidance before assessments. Similar findings are recorded in the study of Donough (2013:45) that echoes learners' perception of insufficient time for guided practice.

Literature states that learners require time for practice under supervision to ensure competence. Learners also need guided practice to ensure corrective feedback is provided as soon as mistakes are made (Emerson, 2007:182).

The majority of respondents indicated that when they were given an opportunity to practise, facilitators did provide feedback with the aim of assisting learners to take corrective measures and to improve skills. Attitude and behaviour of facilitators seem to be acceptable with a minority of respondents who indicated that facilitators had a threatening attitude. The perception suggested that some facilitators may lack proper feedback skills which are crucial in the SLM. Learners do, however, prefer knowledgeable and skilled facilitators who are able to give feedback in a proper manner within a non-threatening atmosphere (Steinert 2004:291; Kelly 2007).

The findings indicated that facilitators did not always allow opportunities for peers and simulated patients to give feedback during guided practice. Feedback from these role players might also increase confidence levels, which are also reflected in a similar study where interpersonal skills and communication skills has improved based on patient outcomes (Lin *et al*., 2012:6; Kogen & Hauer, 2012:141).

5.2.4 Independent practice

Literature (Chapter 3) mentions that the encouragement and support from facilitators during independent practice should enable learners to increase knowledge, performance of skills, and promote lifelong learning. The majority of learners observe that facilitators promote and encourage independent practice. Facilitators seem to be supportive, but respondents indicated that facilitators failed to acknowledge that learners' views were also important. Facilitators should motivate learners by providing them with the necessary encouragement and support. The availability of facilitators for consultation during independent practice sessions seems to be a problem. Some learners believe that facilitators are not available for consultation during

independent practice. Brydges *et al*., (2010:1833) points out that there should be a balance between the learners' self-directedness and input from educators.

The findings indicated that facilitators to a large extent supported and encouraged learners to practise independently. Similar findings appear in Donough's (2013:56) study, since supervisors are reported to build caring relationships and care about students' learning needs. The availability of facilitators may, however, impact on learning outcomes. Brydges *et al*. (2010:1833) state that learners may not make use of opportunities to practise when input from facilitators are lacking. It is evident that continual support, encouragement, and to some extent guidance are necessary for promoting self-directedness.

5.2.5 Assessment phase

The majority of learners perceive that assessments in the SLM are relevant and linked to specific outcomes. Facilitators seem to play a crucial role in ensuring competent practitioners. Learners expect consistency and appreciate that one preceptor (facilitator) is assigned to them for assessment purposes (Fahy, 2011:47).

Fairness and objectivity require attention and some learners indicate that they feel uncomfortable and insecure during assessments. The researcher suggests that measures need to be implemented to ensure fairness and objectivity. Learners share the opinion that not enough time for assessments is allowed. This could be due to various reasons, such as deadlines for formative assessments or timeframes for assessments that are too short.

For some procedures, however, speed and dexterity may be important features for competency, for example in the case of some emergency procedures. This necessitates the need for clearly defined objectives and outcomes (Lammers *et al*., 2008). Facilitators should allow enough time for practice and independent learning to ensure positive learning experiences for learners. Tollefson, Bishop, Jelly and Tambree (2004:9) state that learners cannot be expected to be competent with their first performance of a skill. The SLM, when properly implemented, should provide learners with an opportunity to practise under supervision and thereafter independently to master procedures before being assessed.

During assessments, learners' responses differ in respect of the manner in which facilitators provide feedback. Regular feedback and reflection improve mutual understanding between

learners and supervisors. Learners will also be more receptive to negative feedback which would contribute to learners' growth and positive learning experiences (Dale *et al*., 2013:6).

Although feedback is provided, learners indicate that they need more positive feedback, as well as feedback about their limitations. Respondents stated that positive feedback increased self-confidence and allowed them to feel better about themselves. Feedback about limitations allows learners to improve their skills. The researcher suggests that feedback is provided to learners for the above reasons, but also needs to include strategies for remediation. The process of feedback and reflection seems to be important and depends on the relationship between learners and facilitators.

The findings provided the foundation for the development of guidelines to improve the implementation of the SLM.

5.3 GUIDELINES FOR FACILITATORS TO SUPPORT AND IMPROVE THE COMPREHENSIVE IMPLEMENTATION OF THE SKILLS LABORATORY METHOD (SLM)

A guideline is described as principles or sets of standards that can be suggested to determine a course of action (Collins Dictionary, 2013). In this study, guidelines were developed for facilitators to support and improve the SLM.

The guidelines of the study are presented in Table 5.1.

Table 5.1: Guidelines for facilitators

Phases of SLM	Factors	Guidelines
Orientation	1. Information received during orientation	**Guideline 1:** Information provided to learners during orientation by facilitators is vital to eliminate fear for the unknown and to increase clinical success.
	2. Introduction during orientation	**Guideline 2:** The facilitator should acknowledge that a structured orientation could lay a sound foundation for clinical teaching and eliminate uncertainty.
	3. Orientation to resources	**Guideline 3:** The facilitator should be aware that identifying and providing information of resources influence the enhancement of clinical skills and knowledge.

Phases of SLM	Factors	Guidelines
Visualisation	4. Facilitator interaction during visualisation	**Guideline 4:** The facilitator must be aware that his / her knowledge, behaviour, and actions during visualisation have an influence on learners.
	5. Progression of demonstrations	**Guideline 5:** The facilitator should demonstrate skills in a supportive environment to encourage learners to take part and improve their performance of skills.
	6. Authenticity of simulation	**Guideline 6:** Facilitators should implement clinical teaching strategies that are realistic to increase knowledge, skills, and professional behaviour of learners.
Guided Practice	7. Progression of guided practice	**Guideline 7:** Facilitators should provide time for learners to practice under supervision to develop competence.
	8. Facilitator feedback during guided practice	**Guideline 8:** Facilitators should provide constructive feedback to increase confidence levels of learners with the aim of enhancing learning.
Independent Practice	9. Encouragement during independent practice	**Guideline 9:** Encouragement and support of learners to practise independently could empower learners to take control of their learning and to become self-directed.
	10. Support during independent practice	
Assessment	11. Planning of clinical assessments	**Guideline 10:** Facilitators should be involved in the planning and assessment of learners to ensure relevance and effectiveness of assessments.
	12. Facilitator role during assessments	**Guideline 11:** Facilitators should provide feedback based on the learners requirements. **Guideline 12:** The facilitator's behaviour and attitude during assessments should be appropriate to ensure positive learning experiences for learners.

Guidelines to assist facilitators in improving the orientation phase of the SLM is addressed in guideline 1, 2 and 3.

5.3.1 Guideline 1

The information that facilitators provide to learners during orientation is vital to eliminate fear for the unknown and to increase clinical success.

Learners are mostly satisfied with the information provided during orientation, but do feel that there is a lack of individual consultation time with facilitators. Prescribed time per week is available as mentioned in course guides; however, an available and cooperative facilitator makes clinical practice more interesting (Ali, 2012:16).

The following actions could be implemented by clinical facilitators in relation to Guideline 1:

- Clinical facilitators need to be approachable and available for concerns learners might have or to provide guidance when it is necessary. Use email or advise learners to keep reflective diaries and provide feedback about the content. Clinical facilitators need to noticeably display the most important attributes of approachability and availability (Ernstzen, *et al*., 2011:96).
- During the orientation and visualisation phases, facilitators need to give learners an opportunity to articulate and clarify their expectations in relation to clinical learning. Learners are convinced that the achievement of learning outcomes is mostly dependent on their own efforts and preparedness to learn (Dale *et al*., 2013:4).

5.3.2 Guideline 2

The facilitator should acknowledge that structured orientation lay a sound basis for clinical teaching and eliminate doubt.

Orientation should be treated in the same manner as any other teaching or training programme. It should contain specific learning outcomes, include active participation of learners, and recognise adult learning principles. All three learning domains (cognitive, affective, and behavioural) need to be addressed in order to motivate and inform learners about the SLM with the purpose of reducing the anxiety that results from the introduction of every new skill.

The clinical facilitator should implement the following actions for Guideline 2:

- All new facilitators require an orientation on the SLM and become mindful of the teaching strategies that support this clinical teaching method.
- Facilitators need to inform learners in advance about orientation times in order for them to prepare themselves for each session. Workbooks for clinical programmes are given to learners (Chapter 3) and constant reminders to complete them are necessary. Reminders are sent via email or provided during lecture periods.

- Facilitators need to clearly defined objectives should and learners can be questioned to determine their understanding of the objectives.
- Objectives guide learners and instead of overwhelming them, focus on what is absolutely necessary by limiting the amount of information provided. Lawson (2006) states that an 'information-dump' (providing too much information) could create cognitive overload and causes respondents much frustration.

5.3.3 Guideline 3

The facilitator should identify and provide information about resources in such a way that it enhances clinical skills and knowledge.

One of the criteria for an effective nurse educator is the development of learners' capacity to effectively use educational resources to support the success of their individual learning needs (SANC, 2005).

The following actions could be implemented for Guideline 3:

- During orientation, the facilitator ensures that learners are actively involved in the interactive exposure to the procedure, the manipulation of manikins and simulators, and the introduction to simulated patients.
- The facilitator demonstrates and explains the capabilities of different manikins.
- The facilitator identifies other resources; e.g. library, Internet access, equipment, and the availability of resources.
- One of the key resources for learners are facilitators and individual support should be provided on a regular basis and when necessary with the view of assisting learners to realise their individual educational goals (SANC, 2005).

Guidelines to assist facilitators with improving the visualisation phase of the SLM are addressed in Guidelines 4, 5 and 6.

5.3.4 Guideline 4

Facilitators must be aware that their knowledge, behaviour, and actions during visualisation have an influence on learners.

The ability to demonstrate a skill is fundamental to the teaching of clinical skills. The facilitator has to be adequately prepared, knowledgeable, approachable, and clinically skilled for enabling learners achieve their goals. Facilitators should be abreast of the latest developments in nursing and be able to face challenging questions from learners (Dale, Leland & Dale, 2013:5)

The following actions address Guideline 4:

- Being competent as a facilitator does not inevitably imply that one is competent in transferring skills to learners. Facilitators must be able to recognise their own shortcomings, needs, and preparedness for their role as facilitators (Andrews & Ford, 2013:415).
- Facilitators should act on these needs by identifying them and finding the necessary support structures. Facilitators are faced with many challenges and stress and often find that interacting with colleagues is beneficial to minimise the impact of challenges and stress (Andrews & Ford, 2013:415).
- Facilitators should focus on their own professional development to keep abreast of the latest developments with the aim of enhancing their teaching. Dedication to lifelong learning and professional development is of outmost importance and increases one's effectiveness as a facilitator (SANC, 2005).

5.3.5 Guideline 5

The facilitator should demonstrate skills in a supportive environment to encourage learners to take part in and improve their performance of skills.

Adequate clinical experiences are crucial for learners to become competent practitioners. Facilitators should ensure that learners are able to discover knowledge by ensuring that the learners "purposefully" observe in order to increase their knowledge and skills (McKimm, 2003:2).

The following actions should be taken into consideration by clinical facilitators to address Guideline 5:

- Assess learners' prior knowledge before the commencement of a demonstration. This can be done by questioning, short quizzes or short tasks. These actions are not for grading purposes but simply serve the purpose of identifying learners' preparedness or

establishing what learners' needs or expectations are in order to pace the demonstration accordingly (Elberly Center Teaching Fellows, 2014).

- Ask learners to follow the demonstration by explicitly telling them what to look for that supports the objectives.
- In order to bridge the "theory-practice gap", theory should be provided concurrently to the skills that are demonstrated. Learners find it easier to integrate theory when practice closely follows the theory (McCallum, 2006:828).
- Allow questions but reflect questions back to the learner or the group. It enhances their ability to develop clinical reasoning skills.

5.3.6 Guideline 6

Facilitators should implement clinical teaching strategies that are realistic with the purpose of increasing knowledge, skills, and professional behaviour of learners.

It is important that facilitators utilise current technological resources and simulators to provide realistic patient scenarios. Learners will not benefit from simulation when realism is not taken into consideration (McCallum, 2006:826). Realistic scenarios that include personal behavioural and environmental factors as stated by Bandura (1977) enable learners to view patients holistically.

Actions that enhance realism could be addressed by the following actions (Guideline 6):

- Facilitators should creatively emulate real patient scenarios. The application of current nursing practice is imperative because learners might experience differences in what is taught and what is actually practised. Learners must be able to transfer the skills learnt in the skills laboratory to the clinical setting (Kirkman, 2013:5).
- Increase the use of high fidelity patient simulators.
- Ensure facilitators are properly trained and capable of using simulators. The need for training must be assessed. The South African Nursing Council guideline for nursing educators states that nurse educators should be able to use technology skilfully to support teaching practice (SANC, 2005).
- Include visual 'props' during the simulation; for example intravenous lines, nasogastric tubes, other drainage tubes, and catheters. The use of evidence-based practice to inform

learners are important during simulation, therefore, all procedures should be based on what is current (Edgecombe *et al*., 2013:3).

- Consider using the Internet, since it has become an invaluable resource for teaching (short audio visual clips). Certain procedures are explicitly and clearly demonstrated on real patients.

Guidelines to assist facilitators with improving guided practice are addressed in Guidelines 7 and 8.

5.3.7 Guideline 7

Facilitators should provide time for learners to practice under supervision to develop their competence.

The main reason for the implementation of clinical skills laboratories in medical education are that learning opportunities in practice are not always guaranteed. Comprehensive training and practice in skills laboratories are, therefore, necessary to improve and maintain clinical skills. It should not be used to replace bedside teaching but to supplement and enhance clinical competence and continual growth of learners (Ahmed, 2008:101; Houghton *et al*., 2012:30).

Facilitators can implement the following actions to address Guideline 7:

- Adequate time for individually supervised / guided practice should be allowed.
- Time should be included in the curriculum for guided practice.
- Facilitators should avoid lengthy descriptions of procedures and manage time efficiently.
- Stimulate learners by constant questioning to enhance critical thinking and problem solving skills.
- If groups are large, subdivide them and repeat the demonstration with the aim of allowing each learner an opportunity to practice before an assessment. It cannot be assumed that learners are able to gain skills on their own without formal guidance (Ahmed, 2008:100).
- The researcher suggests that guided practice occurs in the skills laboratory.

5.3.8 Guideline 8

Facilitators need to provide constructive feedback to increase confidence levels of learners with the aim of enhancing learning.

The value of feedback and reflection has been clearly demonstrated in the previous chapters. It is a critical component of the SLM and is one of the factors that can improve the effectiveness of simulation training and have an effect on how learners transfer skills to the real setting (Lammers, Davenport, Korley Griswold-Theodorson, Fitch, Naran Evans, Gross, Rodriguez, Dodge, Hamann & Robey, 2008:1080).

Guidelines to assist facilitators to provide constructive feedback can be addressed by the following actions:

- Facilitators need to recognise what to include in feedback and observation during the SLM and how the arising issues should be addressed. Knowledge about feedback and reflection is crucial.
- Include questions that allow learners to think and present potential problems to increase problem solving abilities.
- Offer timely, constructive, and thoughtful feedback to learners (SANC, 2005).
- Learners in this study identified a lack of positive feedback, as well as feedback about their limitations. Provide feedback that includes these issues while allowing time for remediation should be obligatory.
- Depending on the phase of the SLM, allow feedback from peers and simulated patients. Feedback from simulated patients should be authentic based on their current experience and should not be instructive. The focus should be placed on communication skills and clinical judgement (Bokken, Rethans, Jobsis, Duvivier, Scherpbier, and Van der Vleuten, 2010:15).
- Questions to encourage reflection for each procedure can be included in assessment tools to guide facilitators. Using any model for reflection (Chapter 3) may prove to be beneficial.

Guidelines to assist facilitators with improving independent practice are addressed in Guideline 9.

5.3.9 Guideline 9

Encouragement and support of learners to practise independently empower learners to take control of their learning and to become self-directed.

The empowerment of learners to become autonomous practitioners and lifelong learners seems to be significant in the skills laboratory teaching method. The majority of learners in this study indicated that they received support and encouragement. Learners have to identify their own shortcomings with the continual support and encouragement of facilitators to improve clinical reasoning and critical thinking abilities. In addition to facilitators being supportive and encouraging, their teaching competencies (knowledge and skills) influence learning outcomes (Dale, Leland & Dale, 2013:3).

Actions that can be taken to address Guideline 9:

- Make learners aware of resources for independent learning that are available to them.
- When learners attend independent sessions, facilitators need to be supportive, guide, and challenge learners to take responsibility for their own learning. Learners in this study observed that adequate records of attendance of SLM sessions were kept. However, when facilitators observe learners, they need to also record the learners' progress with the aim of identifying individual learner's needs to augment further goal setting. Learners are able to self-direct by viewing audio visual material and other resources but some require a collaborative effort where educators provide clear direction (i.e. support and motivation) to ensure self-direction (Brydges *et al*., 2009:512).
- Continually motivate learners by providing them with realistic scenarios, by clearly stating objectives and outcomes, and making learning interesting. Constant motivation or general talks, reflection, guidance, and support from supervisors enhance positive learning experiences for learners (Dale *et al*., 2013:5).
- Empower learners to take responsibility for their own learning.

Guidelines to assist facilitators with improving assessment in the SLM are addressed in Guidelines 10, and 11 and 12.

5.3.10 Guideline 10

Facilitators should be involved in the planning and assessment of learners to ensure relevance and effectiveness of assessments.

The facilitator has the responsibility to provide positive learning experiences, as well as fair and objective evaluation of learners to empower competent nursing practitioners. Some learners in the study felt that facilitator were not always involved in clinical assessments. This

might be the result of various factors, such as staff turnover and the rotation of facilitators between groups of learners. These factors led to the perception that facilitators were not always available or involved in assessment.

Actions that address Guideline 10 are:

- Facilitators need to be familiar with local assessment policies.
- Ensure that all facilitators are involved in clinical learning which contribute to positive relationships between learners and facilitators.
- Collaboration amongst all stakeholders who are involved in assessments with the purpose of designing and developing standardised assessment tools.

5.3.11 Guideline 11

Facilitators should provide feedback based on the learners requirements.

Learners confirm that facilitators include feedback throughout the SLM but some indicate the need for more constructive feedback, especially during the assessment phase of the SLM. Adult learners acknowledge the need for feedback but generally take it very personally. They expect facilitators to consider their feelings and learn best in a non-threatening environment where they receive trust and mutual respect (Butler, 2014). Debriefing, including reflection and feedback, must be established to enhance the development of clinical judgement (Lusk & Fater, 2013:16).

The following actions described for Guideline 11 can be incorporated with those for Guideline 8:

- The facilitator as a role model should be able to provide feedback that is non-judgmental.
- Mutual respect and understanding between facilitators and learners prevent unwanted and unpredictable situations from occurring (Dale *et al*., 2013:4).
- Facilitators direct and guide the SLM process, especially when learners are unable to self-reflect.
- Allow sufficient time for the debriefing process.

5.3.12 Guideline 12

The facilitator's behaviour and attitude during assessments should be appropriate to ensure positive learning experiences for learners.

Learners generally fear assessments. However, by ensuring fairness and objectivity (which seemed to be lacking according to the findings of this study), learners become more motivated and interested. The diagnostic nature of assessments informs learners about their accomplishments and is necessary for facilitators to draw conclusions about learners and also to indicate whether their facilitation has been successful (Wynne, 2014). The "gate-keeping" function of assessments must be considered, since it ensures that learners are able to practise as autonomous nursing practitioners (Meyer & Van Niekerk, 2008:189).

Actions that address Guideline 12 are:

- Ensure learners acquire the necessary knowledge and skills for quality nursing care.
- Ensure fairness and objectivity from facilitators :
    - Refrain from being biased with regard to gender, age, ethnicity, language, religion, and sexual orientation.
    - Assumptions about the learners that are based on previous performances must be disregarded.
    - The use of checklists for assessments seems ideal for assessing procedural skills because it includes stepwise and structured components of a skill to be assessed.
    - Assessment tools must be standardised and developed by gaining the knowledge of "procedural experts" (Lammers *et al.*, 2008:1082). These tools must then be implemented after they have been fully evaluated or pilot tested by all facilitators.
- When there are time constraints due to other factors, such as the pressure on facilitators to meet deadlines, facilitators should endeavour to select the absolute necessary or core procedures for competence at each specific level of training.

5.4 RECOMMENDATIONS

Clinical skills laboratory teaching and simulation have been widely researched and found as an effective teaching and learning methodology.

The following recommendations drawn from the perceptions of learners, could aid in the promotion and enhancement of clinical learning objectives:

- Facilitators should consider implementing the developed guidelines in this study in addition to the existing guidelines of the SLM.
- Facilitators should be committed to teaching and continually strive to keep abreast of the latest developments and changes in practice to ensure learners are fully prepared for the clinical environment.
- Facilitators should use their innovativeness and creativity to enhance simulation.
- The curriculum should provide adequate time and resources to ensure all the phases of the SLM are fully implemented.
- Lastly, facilitators should be knowledgeable of all procedures, policies, and guidelines pertaining to clinical teaching.
- A qualitative study could be conducted to explore the experiences of clinical supervisors with regard to each of the four phases as outlined in this study.

5.5 LIMITATIONS OF THE STUDY

The study was conducted at one undergraduate university in the Western Cape. Despite the fact that a fairly large sample size was used, it still limits the generalisation of the findings to other institutions. The study focused on perceptions of learners with regard to the implementation of the SLM by facilitators and not on the outcomes of this clinical teaching methodology.

5.6 IMPLICATIONS FOR RESEARCH

Further research is recommended about the outcomes of the skills laboratory method, the perceptions of facilitator about each of the SLM phases, and barriers that may impede clinical learning.

5.7 CONCLUSION

Based on the perceptions of learners, the study found that facilitators to a large extent implement aspects in the phases of the skills laboratory method. However, shortcomings were identified. The importance of these phases and the benefits were emphasised in the reviewed literature and research findings. The researcher addressed limitations and developed guidelines that may enhance positive clinical learning experiences.

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ANNEXURE A: INFORMATION SHEET

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INFORMATION SHEET

Project Title: Guidelines for facilitators to improve the implementation of the clinical skills laboratory method in an undergraduate nursing programme.

What is this study about?

I am Nazmah Jansen, registered for a Master's in Nursing degree at the University of the Western Cape with Prof K Jooste as my supervisor. I am inviting you to participate in this research project because you are a student nurse at the University of the Western Cape and registered for the undergraduate nursing degree or a clinical facilitator at the School of Nursing. The purpose of this research project is to obtain information about your perceptions about the teaching method used in the clinical skills laboratory in the undergraduate programme. From the results of the study, guidelines will be developed to assist the clinical facilitators to improve the implementation of the skills laboratory method.

You will be asked to complete a consent form to participate in the project.

What will I be asked to do if I agree to participate?

You will have to complete a questionnaire that will take approximately 15 - 20 minutes of your time.

The questions that will be asked are related to how you perceive each of the phases in the clinical skills laboratory method. The questionnaire will consist of statements about each of the

phases of the skills laboratory method with five possible responses, ranging from 1 (strongly disagree) to 5 (strongly agree). You will have to indicate your response by placing an X in the appropriate block.

Written consent for the questionnaire will be needed and only the supervisor, the statistician, and I will have access to these documents. The data analysed along with the questionnaires will be placed in a safe place and will be kept under lock and key for a period of five years.

Would my participation in this study be kept confidential?

We will do everything within our power to keep your personal information confidential. To help protect your confidentiality, the questionnaire does not require your name to provide your name.

The publication of the results of the project will not mention any names of either respondents or the institution.

What are the risks of this research?

There are no known risks associated with participating in this research project.

What are the benefits of this research?

The results may assist the researcher to learn more about the perceptions of learner nurses about learning in the clinical skills laboratory. Guidelines will be developed for clinical facilitators to improve the implementation of the skills laboratory method and to address learner nurses' needs.

Information acquired during this research project will be shared with all respondents prior to public dissemination. Results of the study will be published in an accredited journal.

Other people might benefit from this study by obtaining a better understanding of learning and teaching in a clinical skills laboratory at nursing education facilities. This study could be repeated in a different but similar contextual setting.

Am I obliged to take part in this research project and can I stop participating at any time?

Your participation in this research project is completely free and voluntary. You may choose not to take part at all. If you decide to participate in this research, you may withdraw at any time during the study. If you decide to withdraw from the study, you will neither be penalised in any way, nor will you forfeit any benefits to which you otherwise qualify.

How do I get my questions answered?

This research is being conducted by Nazmah Jansen, registered at the University of the Western Cape. If you have any questions about the research study, please contact:

Nazmah Jansen

5 Jan Hartogh Close

Strand

7140

Cell Phone: 072 2138 990

Email: nazmahjansen@gmail.com

Should you have any questions with regard to this study and your rights as a research respondent or if you wish to report any problems you have experienced related to the study, please contact:

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021 9593024

Email: oadejumo@uwc.ac.za

Dean of the Faculty of Community and Health Sciences

Prof Hester Klopper

Tel: 021 9592631

Email: hklopper@uwc.ac.za

University of the Western Cape

Private Bag X17

Bellville 7535

Head of Department

Dean of the Faculty of Community and Health Sciences

University of the Western Cape

Private Bag X17

Bellville 7535

This research has been approved by the Senate Research Committee and Ethics Committee of the University of the Western Cape.

ANNEXURE B: WRITTEN INFORMED CONSENT

UNIVERSITY OF THE WESTERN CAPE

Private Bag X 17, Bellville 7535, South Africa

Tel: +27 21959 2274, Fax: 27 21 959 2271

Email: nazmahjansen@gmail.com

WRITTEN INFORMED CONSENT

Letter of request to participate in the study

Title of the research project: Guidelines for clinical facilitators to improve the implementation of the clinical skills laboratory method in an undergraduate programme.

The study has been described to me in language that I understand and I freely and voluntarily agree to participate. My questions about the study have been answered. I understand that my identity will not be disclosed and that I may withdraw from the study without giving a reason at any time and this will not negatively affect me in any way.

Respondent's name ……

Respondent's signature …….

Date …….

Should I have any questions regarding this study or wish to report any problems I have experienced related to the study, I am allowed to contact the study coordinator:

Study Coordinator's Name: Prof Karien Jooste

University of the Western Cape

Private Bag X17, Bellville 7535

Telephone: (021) 959 2274

Cell: 082 897 2228

Fax: (021) 959 2271

Email: kjooste@uwc.ac.za

ANNEXURE C: LETTER OF REQUEST TO CONDUCT THE RESEARCH AT AN EDUCATIONAL INSTITUTION

UNIVERSITY OF THE WESTERN CAPE

Private Bag X 17, Bellville 7535, South Africa

Tel: +27 21 959 2274, Fax: 27 21 959 2679

Email: kjooste@uwc.ac.za

5 Jan Hartogh Close
Strand
CapeTown
7140
July 2012

Head School of Nursing

Prof O Adejoumo

University of the Western Cape

Private Bag X17

Bellville

7535

Dear Professor Adejoumo

Consent to conduct a research investigation

I am a post-graduate student at the University of the Western Cape and am studying to fulfil the requirements for a Master's Degree in Nursing. My research topic is: Guidelines for clinical facilitators to improve the implementation of the clinical skills laboratory method in an undergraduate programme.

I am a clinical nurse facilitator at the University of the Western Cape and I am interested in the perceptions of nursing students about teaching and learning in the clinical skills laboratory. The results of the study may well assist with enhancing the current guidelines for clinical facilitators.

I request your permission to conduct this study; a questionnaire will be administered to learner nurses and facilitators. Systematic stratified sampling of learner nurses will be obtained from class lists in all four year levels of training in clinical teaching in the clinical skills laboratory will be included in the study. Informed consent will be obtained from all the respondents and the questionnaire will take approximately 15 - 20 minutes to complete. Having access to the class lists and permission to administer questionnaires to students and facilitators would be of great importance to complete the study.

I hereby request your permission to conduct my research investigation at the University of the Western Cape. Attached is a copy of the student consent form. Students will participate voluntarily and may withdraw, without fear or favour, from the study at any time. All information will be handled confidentially. Learner nurses will remain anonymous.

Information acquired during this research project will be shared with all respondents prior to public dissemination. Results of the study will be published in an accredited journal.

Yours sincerely,

_____

Nazmah Jansen

Student No: 9455518

Prof Karien Jooste

Supervisor

(021) 959 2274

ANNEXURE D: QUESTIONNAIRE

The purpose of the study is to determine to what extent facilitators are implementing the phases of the skills laboratory method.

SECTION A: BIOGRAPHICAL AND DEMOGRAPHICAL INFORMATION

This section of the questionnaire refers to the background information necessary for the perceptions of learners with regards to the Skills Laboratory Method. (SLM)

Instructions: **Mark 'X' in the response box to indicate your answer: NB. The facilitator in this context refers to your clinical supervisor, lecturers and skillslab coordinators who is all involved in the different phases of the SLM**

1. **Gender**

Male	
Female	

2. **Age group**

<19 years	

20 years	
21 years	
22 years	
23 years	
>23 years	

3. **Home language**

English	**Afr**	**Zulu**	**Sotho**	**Pedi**	**Tswan**	**Swati**	**Venda**	**Tshon**	**Ndebele**	**Xhosa**	**Othe**

4. **Year of study:**

1st Year	**2nd Year**	**3RD Year**	**4th Year**

5. **Have you previously repeated a year of study?**

YES	**NO**

6. **If yes in item nr.5, which year did you repeat?**

1st year	
2nd year	
3rd year	
4th year	

SECTION B

For each of the statements below please ensure that you mark <u>X</u> on the scale. Indicate the extent to which you agree with the statements, ranging from 1 strongly disagree to 5 strongly agree.

1 STRONGLY DISAGREE (SD)

2 DISAGREE (D)

3 UNCERTAIN (U)

4 AGREE (A)

5 STRONGLY AGREE (SA)

THE SKILLS LABORATORY METHOD (SLM)	**1 SD**	**2 D**	**3 U**	**4 A**	**5 SA**
ORIENTATION TO THE SKILLS LABORATORY METHOD The Facilitator:					
1.encourage me to attend the orientation for my particular year level					
2.informs me in time of the general orientation					
3.introduce and orientate me to the clinical skills laboratory					
4.explains educational expectations in a clear manner that students can understand					

5.keep the attendance register of students attending the orientation					
6.orientates learners to the purpose of the skills lab method by:					
6.1. showing a video of the method					
6.2.explaining the purpose of the manikins					
6.3. introducing me to the simulated patients					
6.4. providing information with regard to resources e.g. library, videos, self-recording rooms					
7.inform students about the correct handling of equipment					
8.focus on the safe keeping of equipment of the unit					
9.explain consultation times for individual appointments					
10.explain the assessment criteria of the module					

THE SKILLS LABORATORY METHOD (SLM)	**1** **SD**	**2** **D**	**3** **U**	**4** **A**	**5** **SA**
VISUALIZATION The Facilitator:					
11.schedule small group sessions for demonstrations					
12. small groups varies between 8-12 students for demonstrations					
13.large group sessions with more than 12 learners is scheduled for demonstrations of a new skill, e.g. urinalysis , immunizations,					
14.ensure attendance register for each demonstration is kept					
15.emphasize the objectives for a particular demonstration					
16.emphasize the importance of viewing the procedure holistically (considering all aspects of patient care)					
17.allowes students to set their expectations of the method					
18.determines what students know about the procedure before continuing with the demonstration(pre-knowledge)					
19.makes the simulated scenario as realistic as possible					
20.give a demonstration by using a simulated patient(real patient)					
21.use a manikin(doll) to demonstrate					

22.silently demonstrates the procedure by emphasizing communication skills with the simulated patient					
23.explaines procedure to students whilst demonstrating					
24.allow learners to ask questions about the procedure					
25.appears to be knowledgeable when answering questions					
26.pose questions to the group about the particular skill					
27.is able to help me to integrate theory to practice					
GUIDED PRACTICE The Facilitator:					
28.re-demonstrate a procedure after the visualization phase					

THE SKILLS LABORATORY METHOD (SLM)	1 SD	2 D	3 U	4 A	5 SA
29.allow adequate time for a guided practice to be done					
30.allow the student to make mistakes					
31.allow the student to reflect on their guided practice					
32. give the student constructive feedback after completing the procedure					
33.involve all students in the during group sessions					
34.undertake guided practice of individual students before they are assessed on a particular skill					
35. give time for a guided practice during scheduled sessions					
36. give advice when needed					
37. provides direction during guided practice					
38.provides adequate and immediate feedback					
39.allow simulated patient to give feedback with regard to this guided practice					
40.allow peers to give feedback					
41.the manner of how feedback is given is acceptable e.g. attitude of the facilitator					
42. have a non-threatening attitude whilst giving feedback					
INDEPENDENT PRACTICE					

The facilitator:					
43.verbalize the importance of independent practice or self-directed learning (SDL)					
44.adopts a supportive role in the learning process of the student					
45.help students identify the factors necessary for effective learning					
46. treat students with respect					
47.help students to identify their learning needs					
48.acknowledge that students' views are also important					
49. ensure the availability of adequate resources e.g. videos, self-recording					
50.encourage students to reflect on experiences					
51.encourage the student to make use of the skills lab and other resources for SDL					
52. is available for consultation if the student needs assistance during SDL(skillslab coordinators)					
53.keep adequate record of the students' SDL sessions in the skills lab					
54.motivates students constantly					
THE SKILLS LABORATORY METHOD (SLM)	**1** **SD**	**2** **D**	**3** **U**	**4** **A**	**5** **SA**
ASSESSMENT					

The Facilitator					
55. is involved in all assessment of clinical skills during the year					
56. make sure assessments is linked to specific outcomes (explained in workbooks)					
57. make sure assessments are relevant to specific procedures					
58.give clear and understandable instructions					
59.is fair during assessments					
60.is objective when assessing students					
61.make students feel comfortable during assessments					
62. make students feel confident during assessments					
63. allow adequate time for assessments					
64. give feedback to students that allow students to realize importance of clinical learning					
65. use simulated patients during OSCE					
66. provide specific instructions for assessments					
67. give clear feedback on performances					
68. allow students to reflect on assessments of specific skills					
69. is able to identify students' strengths and limitations after each assessment					
70.give feedback on students' limitations after assessments					

71.give positive feedback after assessments					

SECTION C

GENERAL QUESTIONS

THE SKILLS LABORATORY METHOD (SLM)	**1 SD**	**2 D**	**3 U**	**4 A**	**5 SA**
72. is an effective clinical teaching method					
73. encourage me to take responsibility for my own learning(being self-directed)					
74.allowes me to practice independently					
75.improves my problem-solving ability					
76.improves decision making ability					

THANK YOU

ANNEXURE E: ETHICAL APPROVAL

UNIVERSITY of the WESTERN CAPE

OFFICE OF THE DEAN
DEPARTMENT OF RESEARCH DEVELOPMENT

20 August 2012

To Whom It May Concern

I hereby certify that the Senate Research Committee of the University of the Western Cape has approved the methodology and ethics of the following research project by:
Mrs N Jansen (School of Nursing)

Research Project: Guidelines for clinical facilitators to improve the implementation of the clinical skills laboratory method in an undergraduate nursing programme.

Registration no: 12/7/7

Any amendments, extension or other modifications to the protocol must be submitted to the Ethics Committee for approval.

The Committee must be informed of any serious adverse event and/or termination of the study.

Ms Patricia Josias
Research Ethics Committee Officer
University of the Western Cape

Private Bag X17, Bellville 7535, South Africa
T: +27 21 959 2988/2948 . F: +27 21 959 3170
E: pjosias@uwc.ac.za
www.uwc.ac.za

ANNEXURE F: CONFIRMATION OF EDITING

* The stars that tell the spade when to dig and the seeds when to grow *

* Isilimela – iinkwenkwezi ezixelela umhlakulo ukuba mawembe nembewu ukuba mayikhule*

P O Box 65251
Erasmusrand
0165

11 November 2014

Dear Ms Nazmah Jansen

CONFIRMATION OF EDITING THE THESIS WITH THE TITLE GUIDELINES FOR FACILITATORS TO IMPLEMENT THE SKILLS LABORATORY METHOD AT AN UNDERGRADUATE INSTITUTION IN THE WESTERN CAPE

I hereby confirm that I have edited the abovementioned document as requested.

Please pay particular attention to the editing notes AH01 to AH71 for your revision.

The tracks copy of the document contains all the changes I have effected while the edited copy is a clean copy with the changes removed. Kindly make any further changes to the edited copy since I have effected minor editing changes after removing the changes from the tracks copy. The tracks copy should only be used for reference purposes.

Please note that it remains your responsibility to supply references according to the convention that is used at your institution of learning.

You are more than welcome to send me the document again to perform final editing should it be necessary.

Kind regards

André Hills
083 501 4124