

**THE DEVELOPMENT OF A CLINICAL PORTFOLIO AS A LEARNING APPROACH
FOR INTENSIVE CARE NURSES IN A PRIVATE NURSING EDUCATION
INSTITUTION IN GAUTENG.**

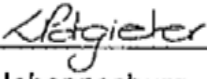
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**A Dissertation submitted to the Faculty of Health Sciences, University of the
Witwatersrand, in fulfilment of the requirements for the degree of Master of
Science in Nursing**

Johannesburg, 2016

DECLARATION

I Lizelle Potgieter, declare that this dissertation is my own unaided work. It is being submitted for the Master's Degree in Nursing at the University of the Witwatersrand, Johannesburg. It has not been submitted before for any degree or examination at any other university.

 _____ (Signature of candidate) 23rd day of March 2016
in Johannesburg.

ABSTRACT

Clinical portfolios guide clinical learning experiences and assess the student's attainment of programme outcomes. The researcher perceived a need to redesign the portfolio of the Diploma in Critical Care Nursing (General) programme offered by a private nursing education institution in Gauteng. The researcher experienced that neither the student nor the educator utilised the clinical portfolio effectively in the development and transformation of the intensive care nursing student at the private nursing education institution.

The purpose of the study was to improve the structure and enhance the use of clinical portfolios as a learning approach and as an assessment strategy in intensive care nursing education.

The study objectives for the study was:

Stage 1: to solicit the opinion of students and their educators on the quality of the existing clinical portfolio and their recommendations for the design and utilization of a revised clinical portfolio;

Stage 2: to design a revised clinical portfolio for intensive care nursing students based on educator and student opinion and literature review;

Stage 3: to solicit the opinion of nursing education experts on the revised clinical portfolio and to make changes as required.

This study is a shortened intervention research with qualitative methods for data collection from intensive care nursing students, lecturers, clinical facilitators, and nursing education experts. A content analysis (Tesch, 1990) was used for data analysis.

The setting for this study was set in a private nursing education institution in Gauteng that offers the intensive care programme.

Purposive sampling was used to select participants of the three focus groups.

Students were not as concerned about the structure of the clinical portfolio as they were concerned about how the portfolio assists them in reaching their outcomes. Small changes were recommended.

Educators and the literature were more concerned about the structure of the clinical portfolio and less concerned about the process of application.

The clinical portfolio was redesigned to improve its function as a learning approach and is ready for piloting in a larger sample group.

Students have concrete ideas about how to deal with some of their frustrations working in the clinical field but do not really know how to structure a clinical portfolio. The educators were in a much better position to comment on the structure of the clinical portfolio and what must be considered to improve clinical learning.

Different interview protocols should be used for students, educators and educator experts.

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CHAPTER ONE - OVERVIEW OF THE STUDY

1.1. INTRODUCTION

This chapter introduces the study and includes the background, the problem statement, the purpose and objectives of the study, the research question, the importance of the study, and concludes with relevant conceptual definitions.

1.2. BACKGROUND TO THE STUDY

All South African nursing programmes include a clinical learning component, which is referred to and regulated as work based learning. Nursing education institutions must provide evidence that students have been given the opportunity to reach their clinical outcomes. This is often provided by means of a “portfolio”, which is the collection of evidence that learning has taken place (Snadden and Thomas, 1998).

While the South African Nursing Council does not define the term “clinical portfolio”, the South African Qualifications Authority (2001) defines a portfolio as “A collection of different types of evidence relating to the work being assessed. It can include a variety of work samples.”

The use of portfolios is well documented prior to 2010. Literature established that portfolios are effective as a learning approach and even as an assessment strategy. What was not determined was how a clinical portfolio for intensive care students should be structured. The perceptions of intensive care students have not been surveyed to establish whether their portfolio was an effective learning approach to their field of nursing.

The literature (Birks, Hartin, Woods, Emmanuel and Hitchens, 2016; Haverkamp, and Vogt, 2015; Green, Wyllie and Jackson, 2013) seem to focus more on the development and use of an electronic portfolio.

Portfolios are used to demonstrate progression of learning and even demonstrate competence of programme outcomes. Domac, Anderson and Smith (2016) remind us that competence includes the ability in terms of knowledge, skill and attitude. The learner must be able to apply, analyse, evaluate and create using their ability in similar situations.

The use of portfolios has not been without challenges, but their potential to demonstrate that students have met the required standards of the licensing body (like the South African Nursing Council for nurses), while providing opportunities for gaining and assessing competencies not easily assessed by formal examinations, should not be under-rated. This includes using a portfolio as a tool for reflection in clinical skills (Khaw, Raw, Tonkin and Kildea, 2012).

The use of portfolios in post-registration nursing education started to feature in the literature after the release of the Post-registration and Practice Project Report of the United Kingdom Central Council for Nursing, Midwifery and Health Visiting (1990). Today many Schools of Nursing use portfolios as a method of both formative and summative assessment (Rassin et al., 2006).

Portfolios encourage students to be accountable for their own learning (Mitchell, 1994), and they create discipline that empowers the students to take charge of their lifelong learning (McMullan et al., 2003). Portfolios can enhance critical thinking, meaningful active learning and reflective practice and support students in managing change efficiently (Williams and Jordan, 2007). Portfolios can demonstrate these skills along with decision-making skills, problem-solving skills and interpersonal communication skills, and can indicate an array of clinical skills (Twadell and Johnson, 2007). The role of portfolios is to enhance clinical practice as students are enabled to reflect on their own performance (Quinn and Hughes, 2007), a notion that is supported by Schön (1991), who believes that reflection is essential for professional learning.

As stated earlier, the use of portfolios have not been without challenges, which may include portfolios having little formative effect if the social interactive dimension is neglected (Bloom in Glen and Hight, 1992). This means that the role of the educator in facilitating portfolio learning is essential (Karlowicz, 2000), and that comprehensive support and placement of the portfolio in context are important elements of the use of portfolios (McCready, 2007).

These ideas are tempered by Timmins (2008) who posits that, whilst students may feel they receive insufficient guidance as they complete the portfolio, it is important to understand that this minimalist intervention is rooted in self-directed learning - a

philosophy of adult education. Adults are capable of independent learning and they do not need to be told everything that they need to know (Knowles et al., 1998).

Another potential problem of the use of portfolios occurs if portfolios do not provide for an assessment strategy that integrates theory and practice (McMullan et al., 2003). This can be achieved when students and mentors have clear guidelines.

Endacott et al. (2004) warn that a portfolio is compromised as an effective measurement instrument if the role of the lecturer, clinical facilitator and shift leader is not clarified and no system of comprehensive support is described. If the portfolio contains elements kept separate with no reflection, report writing or peer assessments, the clinical portfolio structure may be described as 'toast rack structure'. Evidence of clinical accompaniment, clinical hours, clinical learning opportunities (procedures and clinical skills) should not be compartmentalised.

Within the discipline of nursing, various speciality groups are using portfolios. The use of portfolios in midwifery education was described by Mitchell (1994), in nursing education by Gwele (2001), in orthopaedic nursing by Oermann (2002), in gerontological nursing by Coffey (2005), in neonatal nursing by Twadell and Johnson (2007), in trauma nursing by Byrne et al. (2007), and in advanced nursing practice by Hespenheide, Cottingham, and Mueller (2011). There is, however, no published evidence of the use of portfolios in intensive care nursing.

Endacott et al., (2004) describe four factors that contribute to the effectiveness of using a portfolio, i.e. optimum structure, appropriate guidance, realistic expectations, and assessment language, but these elements are largely missing in the portfolio currently being used. The clinical portfolio for intensive care nursing students is largely missing statements on the purpose and expectations of the clinical portfolio; no guidance is noted on how to use the portfolio to benefit the students' learning or how to prepare for clinical assessment.

The private nursing education institution utilized a logbook of experiential hours, clinical experience, competencies and procedure assessments. The issue was that it was referred to a portfolio of evidence and that it did not meet the requirements of a portfolio. Students were not involved in critical reflection activities and the portfolio of

evidence did not prove competency according to the programme exit level outcomes for clinical learning.

The clinical portfolio submission was required for clinical exam entrance and contributed 50% towards the students' final clinical year mark. The portfolio was used to record clinical experiential hours required by the South African Nursing Council for registration of an additional qualification.

Nursing educators acknowledged that the portfolio was not used as a learning tool and that the portfolio could support clinical learning when the clinical educator was not with the student in the clinical field. The effective use of the portfolio to facilitate learning and assess the learning outcomes thereof was not determined as yet.

1.3. PROBLEM STATEMENT

Portfolios are used to facilitate learning and to assess learning outcomes. Portfolios may help students to consolidate learning, reflect on their learning as well as to demonstrate the acquisition of knowledge, skills and attitudes required of an advanced practice nurse.

Currently the private nursing education institution is using a clinical portfolio as evidence of clinical learning outcomes accomplished. On examination the portfolio was rather used as a log book of procedures but did not prove competency according to the programme outcomes. Students were not involved in critical reflection activities.

The researcher established that neither the student nor the educator utilised the clinical portfolio effectively in the development and transformation of the intensive care nursing student.

There is thus a need to redesign the current clinical portfolio to incorporate all the elements required to demonstrate competence of an advanced practice nurse in the field of intensive care and to adequately facilitate learning and assess the learning outcomes of intensive care students more fully/ comprehensively.

1.4. PURPOSE AND OBJECTIVES OF THE STUDY

The purpose of the study is to improve the structure and enhance the use of clinical portfolios as a learning approach and as an assessment strategy in intensive care nursing education.

The objectives of the study are divided into Stages:

Stage 1: to solicit the opinion of students and their educators on the quality of the existing clinical portfolio and their recommendations for the design and utilization of a revised clinical portfolio;

Stage 2: to design a revised clinical portfolio for intensive care nursing students based on educator and student opinion and literature review;

Stage 3: to solicit the opinion of nursing education experts on the revised clinical portfolio and to make changes as required.

1.5. RESEARCH QUESTION

How should the clinical portfolio be structured and utilized to facilitate learning and to assess learning outcomes of intensive care nursing students in a private nursing education institution in Gauteng?

1.6. IMPORTANCE OF THE STUDY

Kuh et al (2007) suggest that three elements are predictors of academic success namely preparation for academic work, as well as motivation and student engagement.

For portfolios to succeed as a learning and assessment method, students must be thoroughly prepared for the task at hand, be motivated throughout the period and must engage in the process of creating their portfolio. This calls for collaboration between lecturer and clinical facilitator and the student. Part of quality assurance is obtaining feedback.

Competency in intensive care nursing can only be tested in the clinical field and the educator cannot always be present to facilitate and guide the student. Therefore a

portfolio must be structured to assist the student and his/ her supervisor in the absence of the educator.

Little is known about the value of learning or the use of clinical portfolios at this level of education. This study will illustrate the perceptions of post registration students - nurses– and educators at a private nursing education institution on the use of portfolios.

1.7. CONCEPTUAL DEFINITIONS

The following definitions are pertinent to this study:

1.7.1. Clinical Portfolio

The clinical portfolio is the portfolio used by the private nursing education institution within their Diploma in Critical Care Nursing (General) programme. More generally, a clinical portfolio is a personal collection of evidence that demonstrates the continued acquisition and achievement of skills, knowledge, and understanding.

1.7.2. Competence

Competence refers to the ability to transfer knowledge, skill and attitudes newly acquired through learning to someone else or into a new situation. Competence is evaluated according to the programme outcomes.

Competency in intensive care nursing can only be tested in the clinical field and not in simulation. The educator cannot always be present to facilitate and guide the student whilst placed in the clinical field. Therefore the portfolio should be structured to assist the student and his/ her supervisor in the absence of the educator.

1.7.3. Effectiveness

In this study effectiveness refers to the manner in which the clinical portfolio demonstrates the process of learning and the attaining of the programme outcomes during the period of use.

The effectiveness of the revised portfolio was determined through the nursing education experts.

1.7.4. Nurse Educator

In this study, the “nurse educator” refers to a lecturer and/or clinical facilitator who coordinates the theoretical and practical components of the Diploma in Critical Care Nursing (General) programme.

1.7.5. Nurse Educator Expert

This study refers to a nurse educator expert as a nurse educator esteemed by their peers as an education expert and recommended by the Board of the Nursing Education Association.

1.7.6. Student

Students are the intensive care nursing students who were enrolled in the Diploma in Critical Care Nursing (General) programme of a private nursing education institution. These students had to use clinical portfolios as evidence of competence of accomplished clinical learning outcomes.

1.7.7. Workplace Learning

The acquisition of knowledge and skills, and the application thereof, through work experience in a nursing practice location to support and augment theoretical learning.

1.8. CONCLUSION

This chapter introduced the study and included the background to the use of portfolios at a private nursing education institution, the problem statement, the purpose and objectives of the study, the research question, the significance of the study, and concludes with relevant operational definitions. The following chapter will explore the literature.

CHAPTER TWO - LITERATURE REVIEW

2.1. INTRODUCTION

This chapter reviews the literature related to the development of portfolios in education, the purpose of the portfolio, more specifically related to the facilitation and assessment of learning. The use of portfolios in adult education is explored as well as the structure of a portfolio, its role players, and guidelines. The use of portfolios in nursing concludes the literature review of this study.

2.2. DEVELOPMENT OF PORTFOLIOS IN EDUCATION

By the early nineties it was accepted that portfolios could be used by professionals to demonstrate their professional development. They collected records and other material, reflected on it and used it in their work life (Hall, 1992). A later study confirms that a portfolio is about the collection of evidence that learning has taken place (Snadden and Thomas, 1998). Current research relates to the use of electronic portfolios or e-portfolios (Birks, Hartin, Woods, Emmanuel and Hitchens, 2016; Haverkamp, Vogt, 2015; Garrett, MacPhee and Jackson, 2013).

The South African Qualifications Authority affirmed the use of portfolios in education and defined a portfolio as the “collection of different types of evidence relating to the work being assessed. It can include a variety of work samples” (SAQA 2001).

Portfolios display evidence of having acquired certain abilities, implying that several processes have been demonstrated, and skills, knowledge, attitudes and concepts have been acquired. Portfolios may be used to demonstrate the abilities of the person as they experience daily work life. Portfolios may be used to as assessment instruments because students are asked to purposefully gather information to a specific purpose (Mueller, 2014). Learning portfolios are different to continuous development portfolios, because each portfolio is designed around the purpose of that specific portfolio (Mueller, 2014).

The portfolio is an instrument for reflective thinking, illustrates critical analysis skills and provides evidence of self-directed learning. The portfolio provides a collection of detailed evidence of a person’s competence (Scholes et al., 2004).

A comprehensive definition of the portfolio is “a person’s private collection of evidence which demonstrates the continued acquisition of skills, knowledge, understanding and achievement. It reflects the current stage of development, is retrospective as well as prospective, and demonstrates the activities of the individual.” (Norman, 2008:22).

Discussions on the use of portfolios continued as Miller and Tuekam (2009:79) define a portfolio as “a compendium of evidence that demonstrates the individual’s learning process and levels of competence”.

It was 28 years later that a professional portfolio for nursing and midwifery was first described as a collection of resources or a repository and means through which to develop skills in reflective analysis and communication, whether through written or computer-mediated formats (Andre, 2011).

Today, resources (Clark, 2010; Davies, 2015) are available to assist nurses to start compilation of their own portfolio – written or electronic.

2.3. THE PURPOSE OF PORTFOLIO

The purpose of portfolios are usually to demonstrate growth, to showcase abilities, and to evaluate growing accomplishment of specific outcomes. The purpose of the portfolio will determine the possible inclusions in that purposed portfolio (Mueller, 2014).

2.3.1 Facilitation of Learning

According to Norman (2008), the most valuable aspect of portfolios is the emphasis they place on experience as a learning opportunity.

Portfolios are useful to track learning that has occurred from experiences especially in work life. This learning can be a progressive, constant process stemming from the individual’s experiences (Cayne, 1995).

Students may find the process of portfolio development useful, but Elango, Jutti and Lee (2005) remind us that although portfolio-based learning is experiential in nature, it still requires motivation to use them well on the part of both learners and educators.

The authors describe the learning process as a cyclical process of documenting, reflecting on, and finally learning from events and experience.

Portfolios may also empower students to take charge of their lifelong learning (McMullan et al., 2003). Byrne et al. (2009) promote the use of portfolios that are seen as a compilation of personal documents, and agree they can be used to promote critical thinking and are useful as critical thinking cannot be assessed by traditional methods. A portfolio may also be of value for career advancement as professional profiles are increasingly requested.

Portfolios encourage students to be accountable for their learning (Mitchell, 1994). In order to maximize learning potential of portfolio development, the student therefore has to take responsibility for its creation, maintenance and appropriateness for purpose. Concurrently, the portfolio remains the practical and intellectual property of the student who develops it (Challis, 1999).

The integration of theory and practice in the process of portfolio development emphasizes that clinical practice is integral to academic learning. Developing portfolios can serve as an inspiration to students to think critically on how they make decision, the knowledge of which is useful to plan their actions and assist them on a life-long basis. (Joyce, 2005). McCready (2007) confirms this notion and adds that portfolios may ensure continuous quality improvement in the life of the professional.

Portfolios enhance critical thinking, meaningful active learning and reflective practice and support students in managing change efficiently (Williams and Jordan, 2007). They can demonstrate reflective skills, critical thinking skills, decision-making skills, problem-solving skills and interpersonal communication skills, as well as indicating an array of clinical skills (Twaddell and Johnson, 2007).

Many studies (Coffey (2005), McMullan (2006), McCready (2007), Oermann et al. (2009), Byrne et al. (2009) and Sowter et al. (2011) agree on the possible benefits for nurses applying portfolio-based learning which include, apart from those already discussed self-directed lifelong learning, improving clinical knowledge, and accelerating the student's accountability, authority and responsibility.

Other authors (McMullan, Endacott, Gray, Jasper, Miller, Scholes and Webb, 2003; Sowter, Cortis and Clarke, 2011) believe that reflection, the student-educator relationship and explicit guidelines are important components of portfolio development.

Within the discipline of nursing, various speciality groups are using portfolios. The use of portfolios in midwifery education was described by Mitchell (1994) and by Gwele (2001); in nursing education by Gwele (2001); in orthopaedic nursing by Oermann (2002); in gerontological nursing by Coffey (2005), in neonatal nursing by Twaddell and Johnson (2007); in trauma nursing by Byrne et al. (2007); and in advanced nursing practice by Hespenheide, Cottingham, and Mueller (2011). There is however no published evidence of the use of portfolios in intensive care nursing.

Today portfolios are used to promote dynamic learning and to provide an alternative assessment method that may be used in various ways in health science education (Stidworthy, 2013).

2.3.2 Assessment of Learning

Portfolios may be used to as assessment instruments because students are asked to purposefully gather information for a specific purpose (Mueller, 2014).

Multiple strategies should be used for the evaluation of students' cognitive abilities, communication skills, psychomotor and technological competencies, values, and professional behaviours. It is important for educators to ensure that students feel that they are assessing themselves to begin with in order to assume accountability for their learning, they will need specific direction, supervision and support in order to progress (Norman, 2008).

Generally, portfolios are excellent tools for assisting formative (formal) assessment and professional development (Snadden and Thomas, 1998). Portfolios can be developed into an assessment strategy that integrates theory and practice (McMullan et al., 2003). Today many Schools of Nursing use portfolios as a method of both formative and summative assessment (Rassin et al., 2006). Portfolios that were developed for formal assessment processes are seen as one form of authentic

assessment that is particularly suited to evaluate the application of theory in practice (Green et al., 2013).

A comprehensive literature review concluded that the use of portfolios to assess competence in nursing students is well accepted, although the concept and its implementation are still evolving. Competence is normally evaluated according to the programme outcomes.

A study conducted by Wenzel, Briggs and Puryear (1998) supports the view that portfolio-based learning has shifted nurse education to a learner-centred learning experience encouraging students to value their own learning and educators to rely more on continuous and formative assessment rather than relying on summative evaluations such as tests and examinations.

To assess a portfolio it is important to use a set of principles that enable the assessor to decide whether the evidence presented is valid (shows what it claims to show), and sufficient (detailed enough for an assessor to be able to infer that appropriate learning has indeed taken place) (Simosko, 1991).

Norman (2008) advocates that as an assessment strategy must directly relate with the learning outcomes. Assessment strategies must test valid evidence directly related to the learning outcomes which informs the facilitation of the attainment of the learning outcomes.

Portfolios are dynamic learning and assessment instruments used in various ways in health science education (Stidworthy, 2013).

2.4. PORTFOLIOS IN ADULT EDUCATION

It is advisable that the use of andragogic and pedagogical principles be determined by the situation and not by the age of the learner (Knowles, 1980). Knowles initially related four basic assumptions about the characteristics of adult learning and added a fifth and sixth in later publications:

- Self-concept: As people develop they mature from dependency towards being independent;
- Experience: People gather experiences that provide an abundant resource for learning;
- Readiness to learn: Adults are more interested in learning that has immediate relevance to their jobs or personal lives;
- Orientation to learning: People's time perspective changes from gathering knowledge for future use to immediate application of knowledge. As such, adult learners become more problem-centered rather than subject-centered (Knowles, 1980);
- Motivation to learn: People become more motivated by various internal incentives, such as the need for self-esteem, curiosity, desire to achieve, and satisfaction of accomplishment;
- Relevance: Adults like to know why they need to learn something (Knowles, 1984), and because adults manage other aspects of their lives, they are capable of planning and implementation of their own learning.

A portfolio offers a wonderful opportunity to illustrate the change in learning style from pedagogy to andragogy.

Another well-known educational theorist, Kolb, used Knowles' foundational assumptions on andragogy and coined the experiential learning theory (Kolb, 1984). Kolb defines experiential learning as "the process whereby knowledge is created through the transformation of experience. Knowledge results from the combination of grasping and transforming experience."

Kolb's learning styles are based on a cycle of concrete experience (CE), reflective observation (RO), abstract conceptualization (AC) and active experimentation (AE) to

illustrate four learning styles i.e. Diverging (CE/RO), Assimilating (AC/RO), Converging (AC/AE) and Accommodating (CE/AE).

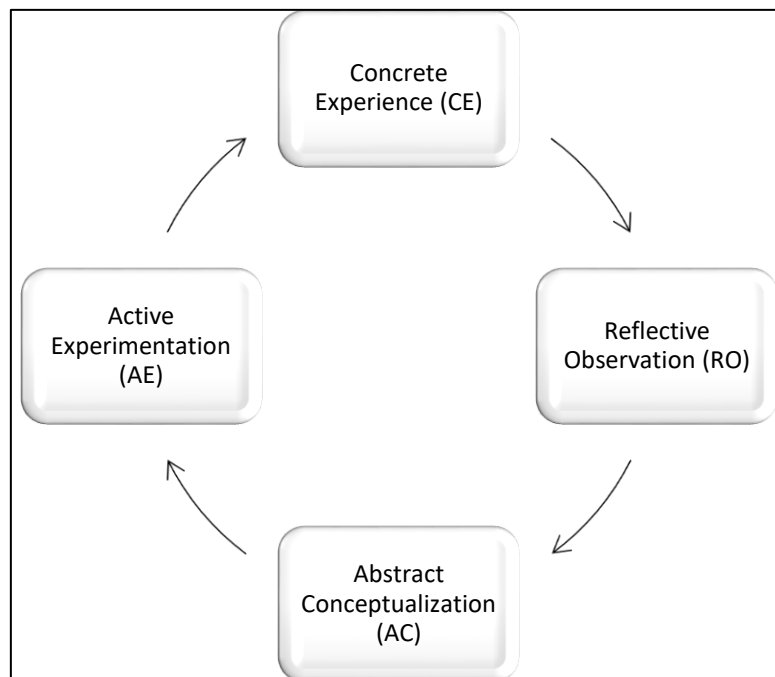


Figure 1 Kolb's Experiential Learning Theory (Kolb, 1984).

The experiential learning cycle can expand the students' knowledge, based on their ongoing actual experiences in the clinical field. They may identify problems and gaps in their learning which can be used in the development of their learning. (Norman, 2008).

The term 'deep' learning appeared in the beginning of the 1990s. Gibbs (1992) describes characteristics of a model of learning which leads to a 'deep', as distinct from a 'surface' approach to learning. Deep learning recognizes that a student's motivation is intrinsic, and they learn because they need to know something. Students who actively participate in their own learning, and utilize opportunities for exploratory talk and interaction with others, facilitate deep learning processes.

Gwele (2001) found in a study conducted in South Africa that students found the use of portfolios challenging and confusing but admitted, ultimately that it was a rewarding and empowering exercise.

The role of the nurse educator is further described by Joyce (2005) who advises that the nurse educator and the student should have a good relationship in order to discuss the student's reflections.

The nurse educator monitors the student's progress through identifying additional learning to achieve the learning outcomes and by assisting the student to prepare an action plan that will allow more learning. Students are not restricted in what they bring into their learning as a wide variety of previous learning, work and life experiences are brought into portfolio development to fulfil the learning outcomes (McCready, 2007).

Timmins and Dunne (2009) believe that whilst students may feel they receive insufficient guidance as they complete the portfolio, it is important to understand that the thinking behind this minimalist intervention is rooted in self-directed learning - a philosophy of adult education.

2.5. THE STRUCTURE

Before structuring a portfolio it is helpful to look at some central concepts.

Mueller (2014) suggests that the structure of a portfolio is determined by its purpose which means that learning needs must be identified and an indication given of where these learning opportunities may be met. The portfolio must provide a space to record experiences - what happened, what was done, seen, written, made etc.; this could be followed by the learning that occurred - the discovery of what is important enough for altering things in the future; followed by appropriate evidence (Redman, 1994). A later study confirms the ideas of Redman when suggesting that the portfolio contains learning objectives, learning strategies, learning resources and how learning might occur and be assessed (Elango, Jutti and Lee, 2005).

A basic structure was recommended (Challis, 1999) for a student to prove learning and achievement including a title page, the student's name, post and year of training and supervising educator; a table of content; the learning objectives which the portfolio demonstrate; a short reflective overview, summarizing the learning that has taken place since the last portfolio review; and the evidence.

In terms of the content and form of a portfolio, McMullan, Endacott, Gray, Jasper, Miller, Scholes and Webb (2003) suggest that the portfolio should consist of the evidence of changes in a student's performance. A portfolio should enable the compiler to examine his or her own growth (Oermann, 2002). The student must be able to decide whether additional learning is required to equip him or her for competent and effective clinical nursing. The advantage of the portfolio is that it documents evidence of competencies in an ongoing way. McMullan (2003) claims that action plans, reflective writing, peer evaluation and self-assessment learning are essential to aid the development of lifelong experiential learning.

The content and style of a portfolio can vary according to its intended purpose (Sowter, Cortis and Clarke, 2011; Webb, Endacott, Gray, Jasper, McMullan and Scholes, 2003). The portfolio must be relevant to practice; be clear and user friendly. (McMullan et al., 2003). McMullan et al. (2003) state that the evidence of achievement of the learning outcomes are the most important part of a portfolio.

A clinical portfolio should contain skills development, learning outcomes, learning strategies, performance guides and a collection of evidence to identify if learning outcomes have been met. Love and Cooper (2004) recommends that for the integration of theory into practice, learning strategies should include self - directed problem solving activities, reflective journaling, peer assessment, oral presentations and clinical skills evaluations.

The compilation of evidence in the portfolio must be presented in an orderly and concise manner (Byrne et al., 2007).

A detailed description of portfolio models is described by Endacott et al. (2004). The first model is described as a source of items with little organization and little attempt to link the evidence to the learning outcomes; likely to be a large ring binder that contains items in different divisions. This is known as the '*shopping trolley*'.

The '*toast rack*': is made up of separate fundamentals that present different facets of practice and/or theory, e.g. skill logs or reflective accounts; likely to be in ring binder.

A '*spinal column*' portfolio is arranged around learning outcomes with evidence inserted; the assessors need to see evidence of learning through the student's writing.

The '*cake mix*' portfolio contains evidence of theory and practice integration into a central narrative and a reflective commentary to demonstrate critical and analytical skills; reflectivity, practice and professional development are likely features of this model. Endacott et al. (2004) emphasize that the '*cake mix*' portfolio is more appropriate for honours or masters level.

The authors state that the '*spinal column*' and '*cake mix*' approaches are most probable to enable the student to demonstrate their progress (Endacott et al., 2004).

Evidence of clinical accompaniment, clinical hours, clinical learning opportunities (procedures and clinical skills) should not be compartmentalised. A portfolio is compromised as an effective tool if the role of the lecturer, clinical facilitator and shift leader is not clarified and no system of comprehensive support is described (Endacott et al., 2004).

Four factors contribute to the effectiveness of using a portfolio: optimum structure, appropriate guidance, realistic expectations and assessment language. These elements are largely missing in the portfolio currently being used by intensive care nursing students of a private nursing education institution in Gauteng. The clinical portfolio for intensive care nursing students is largely missing statements on the purpose and expectations of the clinical portfolio, and no guidance is noted on how to use the portfolio to benefit the students' learning or how to prepare for clinical assessment (Endacott et al., 2004). This study focussed on improving the structure and how the portfolio must be used according to the students, their educators and nurse educator experts; thus enhancing effectiveness of the portfolio.

Norman (2008) recommends using a durable and large enough ring binder for the portfolio that allows for the easy removal and adding of evidence. An index should direct the reader to all the evidence inserted into the portfolio. Students should use the same indexing system throughout the portfolio to avoid confusion. The student must ensure that the evidence included in the portfolio relates to the requirements (Norman, 2008).

2.6. ROLE PLAYERS

Higher education research indicates that academic preparation, motivation and student engagement are the three best predictors of student success (Kuh et al., 2007).

Students using their portfolios require encouragement and direction in preparation for gathering the right kind of evidence, so that the evidence and the learning criteria are aligned (Love and Cooper, 2004). For portfolios to succeed as a learning and assessment method, the students must be thoroughly prepared for the task at hand; be motivated throughout the period and must engage in the process of creating their portfolio.

The nurse educator that leads clinical practice aids the changeover of the learner from novice to skilled practitioner (Norman, 2008). Portfolios stimulate a conversation between student and educator that lead to a more significant learning experience for the student. The role of the educator is to offer constructive feedback, inspire, question, and aid the student's development through the use of the clinical portfolio (Timmins and Dunne, 2009).

As stated earlier, the use of portfolios have not been without challenges, which may include portfolios having little formative effect if the social interactive dimension is neglected (Bloom in Glen and Hight, 1992). This means that the role of the educator in facilitating portfolio learning is essential (Karlowicz, 2000) and that comprehensive support and placement of the portfolio in context are important elements of the use of portfolios (McCready, 2007).

2.7. REFLECTIVE PRACTICE

Reflection (a vital stage in Kolb's learning cycle) has been highlighted by Schön (1983, 1987). The difference between 'reflection in action' and 'reflection on action' is highlighted. "Reflection-on-action", and consequent learning, completes the learning cycle, showing what was gained from their experiences. "Reflection-in-action" refers to "a nurse's ability to "read" whether the intervention is effective", and to the nurse's ability to adjust the intervention based on that assessment in a real clinical situation. Schön (1991) explains that reflection is essential to professional learning.

Today portfolios are well accepted as a clinical learning approach and usually incorporate learning through reflective practice (Quinn and Hughes, 2007). This enhances clinical practice as students are taught to reflect on their own performance.

The evidence within a portfolio will enable the nurse educators to gauge the student's progress throughout the programme. The portfolio must contain reflections by the student of incidents that are appropriate to the student's learning, demonstrate self-directed learning, and provide details of skill (Norman, 2008).

This study's portfolio will introduce Gibbs (1988) reflective cycle to guide students to reflect in and on action in their work life.

2.8. GUIDELINES

Students moving toward portfolio development will expect support with the actual compilation of the portfolio and with engaging in and recording reflections upon their work (Hall, 1992). Some recommended the inclusion of accreditation criteria published by the National League for Nursing in the United Kingdom (Norris et al., 2012; Tracy et al., 2000).

2.9. PORTFOLIOS IN NURSING

The use of portfolios in post-registration nursing education started to feature in the literature after the release of the Report of the United Kingdom Central Council for Nursing, Midwifery and Health Visiting (1990).

Today, all South African nursing programmes' qualification frameworks include a clinical learning component which is regulated as work based learning. Nursing education institutions must provide evidence that students have been given the opportunity to reach their clinical outcomes.

Norman (2008) sees a portfolio as an asset to a nurse because it allows a nurse to demonstrate her or his past accomplishments and to make a favourable impression on the reader who may be convinced that these can be duplicated in future.

Professional bodies require evidence regarding nurses' qualifications, knowledge and skills even in primary health services (Strasser et al. (2005) and demand accountability

from nurses (Alsop, 2002). A portfolio can demonstrate best practice in order to meet the requirements of professional bodies (Casey and Egan, 2010).

The ongoing nature of a portfolio and the nurse's active involvement in portfolio development encourages responsibility and accountability through portfolio use (Byrne et al., 2009; Joyce, 2005).

When analysing the clinical portfolio that is currently in use for intensive care nursing students in private nursing education institution in Gauteng, little is found on the purpose and expectations of the clinical portfolio, no guidance is noted on how to use the portfolio to benefit their learning or how to use it to prepare for clinical assessments. This clinical portfolio structure may be described as 'toast rack structure' according to Endacott et al., (2004). It contains elements kept separate with no reflection, report writing or peer assessments. The roles of the lecturer, clinical facilitator and shift leader are not clarified and no system of comprehensive support is described. Evidence of clinical accompaniment, clinical hours, clinical learning opportunities (procedures and clinical skills) are compartmentalised. The bulk of the clinical portfolio for intensive care nurses in a private nursing education institution in Gauteng is evidence of procedure assessments completed, as the student develops. The clinical portfolio contains learning tasks and instruments for formative and summative assessments. This clinical portfolio determines clinical exam entrance and contributes 50% towards the students' final clinical year mark despite the fact that the effective use to facilitate learning and assess the learning outcomes thereof has not yet been determined.

2.10. CONCLUSION

In this chapter a literature review of portfolios was provided. The following chapter will address the research methodology used in this study.

CHAPTER THREE – RESEARCH METHODS

3.1. INTRODUCTION

This chapter describes the research design used in the study, including the setting, the population, the sampling process, and then discusses intervention research, specifically the first 3 phases which includes problem analysis and project planning, problem analysis and synthesis as well as designing the intervention. Measures of trustworthiness and ethical considerations are also discussed in this chapter.

3.2. RESEARCH DESIGN

A research design is the end result of decisions taken concerning how best to implement the study; a blueprint for conducting the study (Grove, Burns and Gray, 2013).

This study used an intervention research methodology, with qualitative methods for data collection, to improve the structure and to enhance the use of clinical portfolios as a learning approach and an assessment strategy in intensive care nursing education.

3.3. RESEARCH SETTING

The selected research setting was a private nursing education institution in Gauteng offering a Diploma in Critical Care Nursing (General) programme that leads to the registration of Internal Medical and Surgical Nursing Science (Critical Care Nursing – General) R212 with the South African Nursing Council.

Obtaining entry into the research setting relates to intervention research Phase 1: Problem Analysis and Project Planning which was described in the research proposal.

3.4. POPULATION

The population for this study was students and educators with experience of the use of clinical portfolios in nursing education in Gauteng.

The population was selected based on the interest of the researcher in the teaching and learning of students enrolled in the Diploma in Critical Care Nursing (General)

programme of a private nursing education institution. This private nursing education institution uses clinical portfolios as evidence of competence of clinical learning outcomes accomplished.

During Phase 1 of the intervention research: Problem Analysis and Project Planning concerns related to the clinical portfolio were discussed with the population of the study.

3.5. SAMPLING PROCESS

Purposive sampling was used to select the sample. Purposive sampling method is used in qualitative research to gain insight into a new area of study or to obtain in-depth understanding of a complex experience (Munhall in Grove, Burns and Gray, 2013). Brink, Van der Walt, and Van Rensburg (2012:141) explain that “this technique is based on the judgement of the researcher regarding participants or objects that are typical or representative of the study phenomenon, or who are especially knowledgeable about the question in hand.”

The sample for the study was identified. Three groups participated in the study; intensive care nursing students, their educators and nursing education experts. The final sample size was determined based on data saturation. Data saturation is discussed under 3.7.2 “*Phase 1 Intensive Care Nursing Students’ Focus Groups (A)*”.

For the objectives Stage 1 and 2, focus group participants were selected based on purposive sampling of homogeneity (Greeff in De Vos, Strydom, Fouché, Delport, 2011):

Group A: intensive care nursing students who have been registered on the course within the last 3 years;

Group B: educators involved in the teaching of intensive care nursing students at the private nursing education institution; and

Group C: nursing educators recognised as experts.

The nurse educator experts (Group C) were recommended by the Board of the Nursing Education Association. Inclusion criteria for this study included a minimum of

10 years' experience in education and a minimum of 10 years' experience in research and/or intensive care nursing. The researcher used those expert educators who were based in Gauteng as they were accessible to the researcher.

3.6. INTERVENTION RESEARCH

The researcher's objective was to design an intervention, i.e. a clinical portfolio, based on the recommendations of students and educators who use the portfolio, and on recommendations from a literature review, which could be tested, to advance the quality and use of nursing clinical portfolios.

According to Grove, Burns and Gray (2013), intervention research holds great promise as a more effective way of testing interventions.

While this study is the first study aimed at improving the use of clinical portfolios in intensive care nursing education, it is recognized that further studies will be required to ensure their appropriate use in other contexts. Intervention theory guides the design and development of an intervention, which is then extensively tested, refined and retested using quantitative, qualitative and mix-method research designs (Grove, Burns and Gray, 2013).

The intervention research model as described in De Vos, Strydom, Fouché, Delport (2011) consists of 6 phases, but only phase 2, phase 3 and part of phase 4, i.e. early development was used in this study. Piloting was not be part of this study.

Phase 1 Problem Analysis and Project Planning follows the steps of identifying and involving clients, gaining entry and cooperation from settings, identifying concerns of the population, analysing identified problems, setting goals and objectives.

Phase 2 Information Gathering and Synthesis follows the steps of using existing information sources, studying natural examples and identifying functional elements of successful models.

Phase 3 Design follows the steps of designing an observational system and specifying procedural elements of the intervention.

Phase 4 Early developments and the pilot test follows the steps of developing a preliminary intervention, conducting a pilot test and applying design criteria to the preliminary intervention concept.

Phase 5 Evaluation and advanced development follows the steps of selecting an experimental design, collecting and analysing data, replicating the intervention under field conditions and refining the intervention.

Phase 6: Dissemination of the intervention study findings.

Intervention Research Model Phases (De Vos et al., 2011)	Stages of the Study	Objectives of the Study
Phase 1 Problem Analysis and Project Planning.	Proposal	
Phase 2 Information Gathering and Synthesis.	Data collection through the focus groups	Stage 1: Solicited the opinion of students and their educators on the quality of the existing clinical portfolio and their recommendations for the design and utilization of a revised clinical portfolio.
Phase 3 Design.	Intervention design of the revised portfolio	Stage 2: Designed a revised clinical portfolio for intensive care nursing students based on educator and student opinion and literature review.
Phase 4 Early developments and the pilot test.	Nurse educator experts' review of the revised portfolio	Stage 3: Solicited the opinion of nursing education experts on the strengths and weaknesses of the revised clinical portfolio and made changes as required. Piloting the revised portfolio was not be part of this study.

Table 1 Application of intervention study phases during the study objective stages.

The pilot study of phase 4 was excluded from the study as the population used were only from one private nursing education institution; a small sample of the population. The pilot study, as well as phase 5 and 6 of de Vos' framework will be effected in a future study with a larger population from both private and public nursing education institutions.

3.7. PHASE 1: PROBLEM ANALYSIS AND PROJECT PLANNING

Phase 1 was conducted as development and acceptance of the research proposal.

3.7.1 Identifying and Involving Clients

The researcher had, during the course of her working life, experienced some difficulties surrounding portfolios herself. A discussion on the use of portfolios ensued with colleagues and the purpose of this study materialised. The study population was, therefore, colleagues and students in the nursing education institution where the researcher was working.

3.7.2 Gaining entry and cooperation from settings

The private nursing education institution is using a clinical portfolio as evidence of clinical learning outcomes accomplished. The efficacy of clinical portfolios in the use of the intensive care nursing science programme has not been determined.

From the outset the application to conduct this study was sought from the Committee for Research on Human Subjects (Medical) of the University of the Witwatersrand.

On receipt of ethics approval, a letter with the copy of the ethics approval was sent to the private nursing education institution requesting permission to conduct the research at two campuses in Gauteng. The institution is supportive of research and the development of new teaching and learning strategies to improve practice.

On receipt of the confirmation from the private nursing education institution, individual letters requesting permission and entry to the institution were then sent to the campus manager of each participating campus. Approval was granted based on certain ground rules.

Participants received an information letter stating the purpose of the study (to improve the structure and enhance the use of clinical portfolios as a learning approach and as an assessment strategy in intensive care nursing education) and giving them an option to voluntarily participate or not to participate. Participants were informed that they could terminate their participation at any point should they wish to do so. Informed,

written consent was obtained from the participants for their participation and the audio recording of the interviews.

3.7.3 Analysing concerns identified

The researcher is an expert in the field of intensive care nursing science and nursing education; has spent eight years in nursing education, with involvement in quality assurance and specialist forums; and is a committee member of a regional chapter of the Nursing Education Association (NEA). The researcher served on the nursing education institution's senate, the academic and curriculum subcommittees, and the nursing education institution's council. The researcher lectured intensive care nursing science and has prolonged engagement with clinical portfolios, including participation in a number of portfolio learning programmes and has presented programmes utilising clinical portfolios.

During the year 2006, the researcher used a clinical portfolio when she was a student on the course, and again in 2008 as an intensive care nursing educator. The clinical portfolio was still being used in 2010 - 2014 when the researcher was employed as a head of department. In all these roles, the researcher felt that the clinical portfolio was structured more like a log book as it included no reflection activities; no guidelines were available for the users to assist with clinical learning and competency assessment. The researcher observed over the years the students' lack of rigor when having to complete their clinical portfolios. The researcher established that neither the student nor the educator utilised the clinical portfolio effectively in the development and transformation of the intensive care nursing student.

At the end of every programme the nursing education institution reflects on the programme design and revises the study material. Changes are made to the clinical portfolio such as to update clinical standards or assessment instruments, but in essence the structure and use of the clinical portfolio has remained the same. With the clinical field changing constantly, and becoming more stressful and demanding, nursing education institutions are concerned about the success of their programmes, facilitating change in students, and preparing them for the workplace.

Students were generally happy with the structure of the clinical portfolio, but the educators felt that they would like to make certain changes. Some of these changes

ensure that learning continues even when the educator could not be with the student in the clinical facilities.

There was a need to redesign the clinical portfolio to facilitate learning and assess the learning outcomes of intensive care nursing students.

3.7.4 Setting goals and objectives

The purpose of the study is to improve the structure and enhance the use of clinical portfolios as a learning approach and as an assessment strategy in intensive care nursing education.

The objectives of the study are divided into 3 Stages:

Stage 1: to solicit the opinion of students and their educators on the quality of the existing clinical portfolio and their recommendations for the design and utilization of a revised clinical portfolio. Stage 1 relates to the second phase of intervention research, i.e. Information Gathering and Synthesis (de Vos et al., 2011);

Stage 2: to design a revised clinical portfolio for intensive care nursing students based on educator and student opinion and literature review. Stage 2 relates to the third phase of intervention research, i.e. Design (de Vos et al., 2011);

Stage 3: to solicit the opinion of nursing education experts on strengths and weaknesses of the revised clinical portfolio and to make changes as required. This Stage relates to the early developments of Phase 4 of intervention research.

3.8. PHASE 2: INFORMATION GATHERING AND SYNTHESIS

The researcher collected and analysed the data in consultation with her supervisor.

3.8.1. Using Existing Information Sources

An introductory literature review was conducted as reflected in Chapter 2. The full literature review was added during the data analysis, after the data collection to limit the researcher's potential interference with the responses of the participants.

3.8.2. Studying Natural Examples

To improve the structure and enhance the use of clinical portfolios as a learning approach and as an assessment strategy in intensive care nursing education, the perceptions of intensive care nursing students and educators on the use of portfolios at a private nursing education institution were explored and described.

The participants' opinions and recommendations were used to make recommendations on the utilization of the portfolio.

The interview protocol prescribed the questions to be asked by the researcher, that the interviews were audio recorded, and that hand written notes taken by the researcher. All hard copies and recordings of the interviews were kept under lock and key, and retained for an audit trail. Data were stored securely for as long as the data remained valid.

The overview question to the intensive care students and their educators was to ask the participants to tell the researcher about their perceptions on the use of portfolios at the nursing education institution. The following questions were used:

INTRODUCTORY QUESTION

How should the clinical portfolio be structured and utilized to facilitate learning and to assess learning outcomes of intensive care nursing students in a private nursing education institution in Gauteng?

GENERAL TO SPECIFIC QUESTIONS

1. How would you structure a clinical portfolio to facilitate learning and assess the learning outcomes?

Probing Question:

How would you enhance learning through altering the structure of the clinical portfolio?

How could the clinical portfolio help you to prepare for your clinical summative assessment?

2. How would you guide students having to compile a clinical portfolio?

3. What are your recommendations regarding reflection, report writing and peer assessments activities in a clinical portfolio?

Probing Question:

How would you utilise the revised clinical portfolio to enhance reflective practice?

3.8.2.1. Intensive Care Nursing Students' Focus Groups (A)

Group A participants were selected from two campuses of the private nursing education institution in Gauteng offering a Diploma in Critical Care Nursing (General) programme which leads to the registration of Internal Medical and Surgical Nursing Science (Critical Care Nursing – General) R212 with the South African Nursing Council.

The first focus group was held with seven intensive nursing students from the same campus on the 24th of October 2014. The focus group interview lasted 50 minutes. Six of the seven intensive nursing students participated actively. The focus group included male and female participants. This group A1, held little too contribute on the structure of the portfolio as they felt they knew little about such things. Most of group A1's contribution was on the process of how a portfolio should be used and a few recommendations on inclusions and exclusions on their portfolio. Data saturation was not obtained after the first focus group and therefore a second focus group was held with four intensive nursing students from a different campus on the 21st of November 2014. The focus group interview lasted 40 minutes. Six of the seven intensive nursing students participated actively. The focus group included only female participants. The researcher gave this focus group (A2) the interview schedule in advance to allow the participants to think and talk about it before hand. This was necessary to obtain data on the structure of the clinical portfolio and to verify data obtained on the process from the first focus group. It was evident in their focus group interview that these participants met beforehand and spoke about the portfolio; they delivered good data on the structure and process of using a portfolio. Data saturation was obtained.

3.8.2.2. Intensive Care Educator's Focus Group (B)

This focus group consisted of the educators who worked with the participants from the student focus group A1 and A2. They were invited to a convenient venue where the two campus educators would normally meet for strategic meetings. The educators'

focus group interview occurred a month after the student focus group interviews and lasted 50 minutes. All six participants participated actively.

Focus group interviews were done by the researcher, interviewing the participants in a group. It gave the researcher some control over the questioning, to ensure data were collected appropriate to the study topic. Group dynamics could be influenced so that data were collected from all participants and not only one or two. Shy participants could be enticed to have their say. The audio recording was done with a 'tablet' lying in the middle of the table with the participants seated around it.

A semi structured interview technique allowed the researcher to ask focus groups the same questions with the freedom to explore data that arose from the participants. Statements could be clarified by summarizing statements.

The researcher met with the prospective student participants to obtain informed consent for their participation and to be audio recorded. The student focus groups were held first on the two campuses at a time convenient to the researcher and participants. Even though discussions within the focus group were not be confidential, any direct quote that appeared in the transcript, was done anonymously. Transcribing commenced after the first focus group interview.

The intensive care nursing educators of the private nursing education institution were invited to a focus group interview after an event that both campuses' educators would attend.

The researcher facilitated the focus groups. The focus group interviews and their transcripts were the principal source of data.

After the portfolio was redesigned it was emailed to the education expert sample and they were asked to comment on the strengths and weaknesses of the clinical portfolio. Their feedback led to further improvements before releasing the portfolio in this study. In future it would be advisable to send the experts a rubric to evaluate the portfolio.

3.8.3. Identifying Functional Elements of Successful Models

Qualitative data analysis started with data collection during the focus group interviews. Tesch (1990) was used to analyse the content. The researcher had more flexibility

during the semi structured focus group interviews and could ensure that the participants understood the questions asked. After the first focus group, the researcher decided to forward the questions to the second group A focus group participants, to allow them time to think about the questions. The researcher conducted the focus groups to keep consistency.

The data were audio recorded and transcribed by an external company (Top Transcriptions). The transcriptions were validated by the researcher and 'inaudible' or incorrect concepts corrected. Transcriptions were read whilst listening to the audio tracks over and over on different days to ensure correct transcribing was done.

Tesch (1990)'s method was used to analyse the data. From the transcriptions the researcher identified themes and sub-themes. The identified themes and sub-themes were tested in the literature to affirm or resist what was found during the focus group interviews.

3.9. PHASE 3: DESIGNING THE INTERVENTION

From the preliminary literature review, two problems were highlighted for this study: the structure of a portfolio, and the way the portfolio is used by the different parties.

The intervention was designed using the combined data from the study and the literature review. Although this study does not include all the phases, the expert educators verified whether the revised clinical portfolio was educationally sound as a learning approach and an assessment strategy.

To test the intervention, the redesigned clinical portfolio would have to be applied with intensive care nursing students, with a repetition of the same kind of focus groups to determine whether the intervention succeeded in enhancing the structure and use of clinical portfolios as a learning approach and as an assessment strategy in intensive care nursing education.

The following criteria from Grove, Burns and Gray (2013) for the intervention design were used:

- The intervention is effective: the intervention to redesign the clinical portfolio is based on the recommendations of the users and on literature found on the structuring of a portfolio.
- The intervention is simple to use: the portfolio will illustrate the divisions recommended for the intensive nursing care students, without the inclusion of the actual instruments or standards used by the nursing education institution.
- The intervention is practical: the study did not include a pilot study which would be the next phase of implementation of the intervention study.
- The intervention is adaptable to various contexts and settings: the study's redesigned portfolio is an example for other nursing education programmes and may lead to further development and improvement of this teaching and learning strategy.

The redesigned portfolio was submitted to the participating educators for validation. Adjustments were made based on the comments and recommendations from the educators before the portfolios were e-mailed to expert educators to moderate the intervention.

The expert educators used were recommended by the Board of the Nursing Education Association. The researcher contacted the experts to inform them of the study and to obtain their consent to moderate the intervention - the revised clinical portfolio.

3.10. MEASURES OF TRUSTWORTHINESS

To ensure accuracy of data collection and analysis, the researcher followed the model of framework of trustworthiness in qualitative research described by Lincoln and Guba (1985). The four criteria to assess trustworthiness are:

3.10.1. Credibility

The credibility of this study was established by the researcher remaining in the field in order to gain in-depth understanding of the topic which was facilitated by the researcher's pre-existing understanding of the context in which the study took place and having been involved in the use of clinical portfolios prior to commencement of the study. Triangulation also took place in that the researcher collected data from students, lecturers and nurse educator experts in order to ensure differing points of

view were obtained. Peer debriefing also took place by means of discussion of the findings with the researcher's supervisor and colleagues not involved with the study (Brink et al., 2012).

3.10.2. Transferability

This research is limited in terms of transferability, due to purposive sampling and only conducting the study in one nursing education institution. The findings are contextual and generalizations are limited to the specific setting studied.

3.10.3. Dependability

The dependability of a study is determined by its credibility. Unless the study is credible it cannot be dependable. While every effort was made, as described above to ensure credibility, this was a small study and it cannot be said with any certainty that the same findings would be obtained were the study repeated in a similar context.

3.10.4. Confirmability

The researcher kept an audit trail, by tracking all references used, audio recordings made, transcripts of interviews and all rough copies of data analysis for peer review and member checking in order to validate how the findings were obtained.

See an example of an analysed transcript attached as Annexure J.

See the framework of content analysis attached as Annexure K.

3.11. ETHICAL CONSIDERATIONS

The following ethical requirements was taken into consideration prior and during the study:

- Submitted protocols for peer review to the department of Nursing Education to assess the feasibility of the proposed study;
- Submitted the research protocol to the university postgraduate committee for permission to conduct the study;
- Applied for clearance to conduct research to the Committee for Research on Human Subjects (Medical) of the University of the Witwatersrand.

- The researcher did not have a supervisory relationship with any of the participants.

3.11.1. Informed consent: Institutional aspects

From the outset the application to conduct this study was sought from the Committee for Research on Human Subjects (Medical) of the University of the Witwatersrand. On receipt of the ethics approval, a letter with the copy of the ethics approval was sent to the private nursing education institution requesting permission to conduct the research in two campuses in Gauteng. On receipt of the confirmation from the private nursing education institution, individual letters requesting permission and entry to the institution was then sent to the Campus Manager of each participating campus.

3.11.2. Informed consent: participants

Participants in the study received an information letter (Appendix E) stating the purpose of the study and gave them an option to voluntarily participate or not to participate. Informed written consent was obtained from the participants for the tape-recording of the interviews.

3.11.3. Autonomy

Participants were informed that they could terminate the study at any point if they so wish.

3.11.4. Confidentiality and anonymity

Discussions within the focus group could not be confidential, yet if any direct quote of what was said appears in the report, it was done anonymously. All participants' names was replaced with pseudonyms to ensure anonymity. All hard copies and recordings of the interviews was kept under lock and key and kept for an audit trail.

3.11.5. Access to reported findings

Feedback of the research findings was offered to all participants in the study, should they have requested it. Research findings will be disseminated as to the following:

- To the authorities at the private nursing education institution, Gauteng

- To the educators working in the private nursing education institution in Gauteng through in-service training.
- Research findings will be presented at the Department of Nursing Education, University of the Witwatersrand's research day.
- An attempt will be made to publish an article covering the study in an accredited Nursing Journal.

CONCLUSION

This chapter described the research methodology used in this study including the research design, the setting, the population, the sampling process and the data collection procedures, as well as the development of the research instrument used for data collection. The following chapter will explore the data analysis.

CHAPTER FOUR - DATA ANALYSIS

4.1. INTRODUCTION

In this chapter the qualitative data analysis of the study is presented and the findings of the students' - and educators' focus group discussed.

During stage 1 the opinion of students and their educators on the quality of the existing clinical portfolio and their recommendations for the design and utilization of a revised clinical portfolio was analysed.

4.2. DATA ANALYSIS

Content analysis was done utilising Tesch (1990)'s method. The researcher selected a focus group transcript, read it whilst listening to the audio recording to make sense of what was said. Thoughts were added to the margins and possible themes were highlighted in the text. Responses from the different focus groups on the same question was also read together to make sense of what was said. The themes were then noted in the transcripts.

From the transcripts their responses were listed together. After numerous times of reading through the transcriptions the researcher identified topics from the data. From the topics certain themes emerged.

The researcher returned to the transcriptions to find the themes and sub-themes in all of them. A excel spreadsheet was used to bring the themes and sub-themes together. The themes and sub-themes were discussed with Dr S Armstrong. Dr S Armstrong validated the themes and sub-themes found in the study.

The identified themes and sub-themes were tested in the literature to affirm or resist what was found during the focus group interviews.

4.3. FINDINGS OF THE STUDENTS' FOCUS GROUPS

Two themes were identified namely, structure of the clinical portfolio and processes related to use of the clinical portfolio, with several sub-themes in each as shown in the table below.

Theme 1: Structure of the clinical portfolio	Theme 2: Processes related to use the clinical portfolio
Organisation of the clinical portfolio	Educator
Assessment and evaluation	Student
Feedback and reflection	Clinical field

Table 2 Themes and sub-themes

The students discussed issues seemingly unrelated to the clinical portfolio and more related to the structuring of the programme and therefore were omitted from the findings.

4.3.1. Structure of the Clinical Portfolio

Organization of the Clinical Portfolio

Student participants are in agreement that the purpose of the portfolio is guided by the objectives of the programme and must enhance clinical learning through supporting the objectives of the theoretical content.

It was suggested that students start working on their portfolios as soon as possible, even before they start rotating through other specialities. The first focus group (A1) felt they could not comment on the portfolio structure as they had insufficient knowledge to do so. They did, however, identify assessments they felt must be present in the clinical portfolio. Reference was made to comprehensive patient care assessments (CPCAs), oral assessments and nursing care assessments.

Across the two student focus groups, two student participants suggested categories for the clinical portfolio using specialities and including pharmacology and nursing care in the speciality division. It made sense to the student participants to organise the portfolios in categories of specialisation i.e. cardiology, pulmonology, and noted that pharmacology should not only be a list of drugs. The participants felt this move may assist the students working through the medication section earlier and not leaving it until the end of their programme.

Student participants discussed the need for an introductory section in the guidelines that would to guide the students about where to start. This section should include

generic nursing procedures used in most specialities, e.g. physical assessment, chest X-ray, arterial blood gas analysis and basic electro-cardiogram (ECG) analysis and some medications that are frequently used. These procedures should be practiced and evaluated first.

The portfolio should make provision to record all structured clinical guidance sessions. Discussions also occurred around the use of mind maps, especially when illustrating the pathophysiology of the patient's disease. Provision must be made for mind maps, either in the guidelines or in creating a section for it.

Assessment and Evaluation

Assessments are instruments used by students and educators to track student progress in skill competencies; for this reason they are included in the clinical portfolio.

Students spoke about wider issues than the portfolio of evidence per se; these issues impact on the organization of the portfolio and were therefore included.

The student participants acknowledged that assessments are determined by the theoretical and clinical objectives.

It was clear that the student participants felt frustrated with the required number of procedures to be witnessed before they could even attempt the execution of the procedures, e.g. cardioversions. Participants found the witnessing made the completion of the portfolio "sometimes very impossible". In some instances modern techniques were making it difficult to attain the objective, for example, the removal of a femoral sheath with the required practiced cases prior to the sign-off of procedure as the use of 'angioseals' becomes more popular.

The importance of planning for assessments and evaluations was indicated with comments like that of student-participant A1.2: "you don't have time to sit and answer 'why are you doing that?' "

A difficulty the student participants expressed in terms as assessments was that there are not qualified assessors working on the floor and when assessments need to be done they need permission from the educators as to who may assess them. The educators do not allow the shift leaders and the unit manager and staff to assess the

students unless they meet certain criteria set by the educators. Therefore, the portfolio should have a designated area to list the approved assessors with an assessors' specimen signature list and where the assessors sign off the procedures in the portfolio.

The student participants advised that the clinical nurse specialist be invited to the exam "so they can hear and understand the type of questions or the kind of information and presentation expected from the students" (A1.4).

Student participants felt that the portfolio should only contain instruments that have been validated. When new or different evaluations are piloted, the educators should continue to adjust the instruments until it suits its purpose. A1.1 said: "observational CPCA is different, so the thing they need to do is to change the tool to suit what they mean".

An interesting request from the student participants was for the portfolio to provide the opportunity to record peer assessments. Participant A2.1 verbalised that it would be a good idea to do a peer assessment before you do the comprehensive patient care assessment (CPCA). A2.2 affirmed that it "would have been good to hear how other students view my presentation".

The student participants commented on the different assessments that would be beneficial to the student: peer assessments on comprehensive patient care assessments (CPCAs) prior to formative CPCAs as well as a CPCA for a summative assessment. With assessment the importance of clear and comprehensive feedback was noted.

Feedback and Reflection

Student participants referred to the use of reflection, A2.3 stated "it has to be there" yet there were very little detail about how it can be utilized to enhance learning from the participants.

Feedback remains an important component of learning and the student participants felt they wanted more constructive feedback. A2.2 said "we did that mock clinical assessment, but there was no feedback and feedback was not constructive because

you end up more confused than you were before you did the assessment". The educators agreed that feedback must occur as soon as possible after the interaction to have meaning; B2 stated "I think instant feedback is quite important".

In summary effective feedback requires good interpersonal relationships between the student and the educator; the portfolio would assist the students by containing reflective activities; the student participants felt that reflection must be represented in the portfolio.

4.3.2. Processes Related to the Use of the Clinical Portfolio

The student participants suggested that for a portfolio to be used successfully as a learning and assessment instrument, the clinical field and educators are crucial to its success. Students rely on competent educators and clinical nurse specialists to learn from their experiences in the unit. Few subject specialists are left on the floor and those who remain are overburdened with responsibilities other than coaching and mentoring of new trainees.

The importance of communication in terms of planning, communicating any change and the utter importance of guidelines was also discussed in the group.

Educator

Participant A1.5 said: "I don't want somebody to just sign my procedures. No, I want to be a competent ICU sister" hinting towards the value of accompaniment of competent educational staff. Educators are responsible for providing guidance from the beginning to end of their learning programme.

The student participants were of the opinion that clinical support is of more importance than the amount of time spent in the intensive care unit. Time spent with their educator was greatly valued, especially seeing that a number of students had to share one educator. Educators book time out in their diaries and notify each student when they are available for them. They mentioned that they lose out on learning opportunities because the educator is busy elsewhere.

The group stated that there are not enough educators available to support every student when a new learning opportunity arises; the subject specialists in the clinical

field need to become more involved. A1.5 asked “how you are going to do it and how you are going to involve your CNS and your unit managers and your senior staff in the ward.” A2.1 said “I really do feel that there is a place for a CNS in each unit, and without a CNS you go into a unit and although you are meant to be learning different things you don't actually learn them because there is no one there that actually has the time to say...” A1.4 recommended “inviting your CNS, clinical nurse specialist, to the exam so they can hear and understand the type of questions or the kind of information and presentation expected from the students.”

The participants assert that clinical learning must continue irrespective of the educator's presence at the bedside. Educators have many responsibilities that keep them away from being next to the student at the bedside. A1.2 verified (the clinical facilitators) “are never there every day”. A1.5 continued “when you phoned...she couldn't come because she was somewhere else.” This has become challenging with the lack of subject specialists left in the clinical field. A2.3 suggested to “use the hospital clinical facilitators”. Participants discussed the availability of the educator and how they need to rely on the few subject specialists to mentor them.

It is clear from the focus group discussions that there is a need for a close relationship between students, educators and the clinical field. Communication can be improved between the educator and clinical field, and one of the ways suggested was that each unit manager receives an email identifying the students' needs within their period of placement. Student participants also called for greater participation of the clinical field with the work place learning of the students. They recommended greater involvement of the clinical field with the compilation of clinical standards to standardize how procedures are done academically as well as practically.

Student

Not many students realise the importance of their role in the use of the clinical portfolio; this is evident in the two participants who commented on their role. A1.4 felt that she was “not being in touch. I'm just trying to work and work” and felt “challenged to look at what do I have and what am I supposed to be doing. Am I responsible for my learning?”

Some felt that the successful use of the portfolio depends on the individual, their emotional status and the circumstances around that person at that time, so do not believe it will be an accurate measurement of someone's competence.

According to adult learning, students are responsible for their own learning, yet not all students are ready for adult teaching strategies straight away. They may need to be challenged to look at what they have accomplished and what they were supposed to have accomplished. They need to be challenged: "Am I responsible for my learning?"

The student participants were in favour of presenting lectures and demonstrations in the clinical structured learning workshops, thus utilizing a peer teaching strategy.

They acknowledged their role in the learning process and that their emotional maturity may affect their learning. A need was mentioned to: "maybe once in two or three months I sit down with someone and talk about my life as a whole". Students may need help to prepare themselves emotionally so they acquire emotional maturity.

Clinical Field

Participants felt that there was "nothing wrong with the portfolio" but found the application thereof more difficult as the "clinical field is divorced from students" and students were seen as the responsibility of the educator. A1.3 stated that the students will be lucky if they find someone who actually wants to help them. A1.4 added that: "it is not my educator I need. I need the people that I'm working with." A1.5 summarised their experience of the use of the portfolio: "the portfolio is not an issue. It's the humans behind the portfolio."

What the participants wanted was to learn from the subject specialists working in the clinical field; they wanted more intellectual interaction with them at the bedside. Not only did they wish for closer cooperation between the subject specialists in the clinical field and the student, but they wished they would be more involved in the setting of clinical standards that is prescribed by the nursing education institution in that region. The students felt the subject specialists in the clinical field may then be more familiar with the clinical standards that would enable them to be self-assured when assessing competencies.

A particular difficulty for participants occurs when they are assigned patients outside their learning objectives and feel that this prevents them from completing their objectives as soon as possible. One said: "when I'm in cardiac, I need to have patients on thrombolytic" and often these patients are not assigned to participants because they don't know the participants yet and do not trust them alone with those patients. Other resources or systems are seldom applied to make it possible for the student to work with the patient whilst closely being supervised.

Another issue not directly related to the portfolio but something that impacts on clinical learning and therefore, ultimately the completion of the portfolio, was that of patient allocation. Participants believe that unless a good relationship exists between the student, the educator and staff in the clinical field, quality clinical learning cannot occur. Participant A1.4 summarised the students' frustration: "valuable learning opportunities are lost because people are uncomfortable because you have just arrived in the unit". The only way to improve the situation would be to build the relationship with the leadership of the unit. The same participant continues to explain that "people in the clinical field are divorced from students." The unit's leadership collaboration in educational activities and even standard design would allow relationship building with the students even prior to their arrival in the unit.

Participants commented on the important role of clinical accompaniment; commenting on the importance of guidance, A1.4 referred to the staff in the clinical field: "they will assist you but is there any clear understanding what I need, as a student, when I'm in the unit?" and should know that the "student should be able to tell you within that first hour, what are my patients four critical problems for today?"

A1.5 felt the students needed "somebody to guide you through the initial processes, showing what you've learnt in the workshop" and "you need a competent person to guide you through that process".

Five participants shared their opinions on clinical accompaniment and the role it plays in the facilitation of learning. Participant A2.1 believed that little attention is paid to students in the clinical field, saying "I really do feel that there is a place for a CNS in each unit and without a CNS you go into a unit and although you are meant to be learning different things you don't actually learn them because there is no one there

that actually has the time to say...". Clinical accompaniment may be built around clinical structured days to ensure the students are afforded group learning activities e.g. demonstrations; teaching students different learning methods, such as. The use of mind maps; and using mentors to work alongside the student in practice.

Participants need nursing colleagues to share their knowledge and support the students. A1.5 explained that when they put up a chest X-ray they need to know what they are looking for: "to see what is normal and what is abnormal... you need somebody to guide you through the initial processes, to show what you've learnt in the workshop."

Two participants mentioned the difficulty to sign procedures off "you work weekends; you work night duty whereby you are unable to see the educators"... "You will work for two days without signing off anything". These comments underline the importance of having a good relationship with the leadership of the unit and having a clinical nurse specialist in every speciality unit. A2.3 advised to "use the hospital educators" to help with sign off.

The conversation continued on the importance of the nurses in the clinical field to maintain current in their field knowledge and skill, and how effective learning could be if student rotation through the different disciplines, corresponded with the theory covered in class.

4.4. FINDINGS OF THE EDUCATORS' FOCUS GROUP

4.4.1. Structure of the Clinical Portfolio

Organisation of the Clinical Portfolio

The educator participants agreed with B2 who stated that the "structure of the portfolio of evidence depends on your objectives" of the programme and "should be enabling rather than punishment". The educators also agreed with B2 that the point of the portfolio of evidence is "to prove that I've grown and learnt and taken accountability for my own learning."

The educators were not too concerned with the structure of the clinical portfolio. Educator B1 suggested to "structure it in disciplines. If you are at cardiac, these are

learning opportunities.” Structuring it in disciplines would assist the students with examples of what possible learning opportunities are in every unit.

The clinical portfolio needs to provide a record of simulation activities as well as simulation practicing, self-assessment and peer-assessment.

They wanted the clinical portfolio to guide the student to insert evidence of what they achieved and what they have not, and believe it should be more than just a signature.

Assessment and Evaluation

The clinical portfolio that is reviewed contains all the standards to the competencies that have to be demonstrated through the academic year. It also contains the assessment instruments that may be used during the programme.

Educators discussed the addition of case studies for every discipline. B3 suggested “at the end of it let them do a case study and write out the nursing care that they actually implemented on this patient, and then what they could have improvised or done better on that patient.” They proposed that the students do a case study towards the end of their placement in a specific discipline. B4 liked the suggestion and continued that “I think it should be done on a few patients, but we can't do it on every patient...but we can maybe just ask them one or two questions.”

The educators suggested that the ICU chart is a case study and that its evaluation should be done. It was also suggested that the clinical portfolio may contain questions per discipline that should be answered by the student.

B6 suggested that they “use the ICU students to help evaluate...because when did we start learning? The moment we started to evaluate other people.” Peer assessments of comprehensive care are a practical way to prepare students for formal assessments whilst the educator is not always available at the bedside.

B1 mentioned that students “were not ready to be assessed in the first place and the second thing is...what is her evidence that she is prepared to be assessed?” The clinical portfolio can provide evidence that a student is ready for assessment. B1 suggested that “before you will be allowed to do the first CPCA... you must be marked competent in these procedures.” The clinical portfolio may indicate which procedures

they must be found competent in before booking for a comprehensive patient care assessment.

Feedback and Reflection

Educator B2 summarised the opinion of the participants by saying: “I think instant feedback is quite important.” Educators realise that the sooner feedback is given after an activity the more the student is able to learn from it. Feedback given the next day has lost a lot of value.

B2 valued peer feedback to promote learning “we should look into something like peer feedback as well.”

Promotion of reflective activities came through strongly in the educators’ focus group. They felt that reflection must be promoted through activities in the clinical portfolio. B2 suggested questions like: “what did you learn today?”; “what questions did you ask?” could assist a student to think on what they did.

Reflective activities should follow a learning opportunity in the clinical portfolio, which would assist the students to reflect. B4 suggested the portfolio prompts the students to question themselves on “whether they have done it good or bad”; “what did you do great today? What didn't you understand? What did you do wrong and what was the action plan on each of those things?”

4.4.2. Processes Related to the Use of the Clinical Portfolio

Educator

The educators suggested that they are part of the problem: B1 stated “part of the problem is us. How do we utilize the portfolio of evidence with them? It is not a continuous learning curve.” Educators are more familiar with the clinical portfolio and should assist the students to recognize its usefulness. Not using the clinical portfolio when with the students may not be the best example.

It was also suggested that the clinical field should be just as familiar with the clinical portfolio, as they need to assist the students when their educator cannot be with them. Students generally do not understand how to utilize the clinical portfolio. The clinical

nurse specialists and shift leaders must be coached in the application of the clinical portfolio too. They need to know what is expected from the students for the sign off of a competency.

More time must be spent in orientating the students through the clinical portfolio. It must be clearly illustrated that the clinical portfolio is in essence a learning guide for practice.

Written guidelines could assist in the application of the clinical portfolio but has to be written clearly in order to ensure the correct application of the clinical portfolio. Guidelines should orientate a new staff member/ student/ educator in how to apply the clinical portfolio: what needs to happen and how should it work.

The educators wanted the clinical portfolio to promote clinical learning especially when they cannot be at the bedside.

Student

Educator B4 mentioned that “I struggled this year a lot with my students - this total dependence on the CF to tell them ‘you are right or wrong’”. Conversation went around the total dependence on the educator to tell the students what is right or wrong. They want the clinical portfolio to assist the student to take responsibility of their learning.

B5 admitted that some students “don’t know how to plan” and may need more guidance in planning their activities to ensure they meet their objectives for clinical learning.

Clinical Field

The educator participant group did not discuss their expectations from the staff in the clinical field.

4.5. CONCLUSION

This chapter described the data from the focus groups. The following chapter will discuss the data before applying it to the intervention.

CHAPTER FIVE – DISCUSSION OF FINDINGS

5.1 INTRODUCTION

The purpose of the focus groups was to identify areas needed for change or additions to the existing portfolio. In order to ensure the recommendations made by the participants were valid, confirmation of their suggestions was sought in the literature.

The portfolio was developed taking these suggestions into consideration and also included administrative and regulatory requirements for a portfolio of this nature.

The first part of this chapter includes discussion of the findings and demonstrates how the findings were used to create the portfolio.

The second part of the chapter provides the feedback and recommendations from the expert educator group who were asked to identify strengths and weaknesses in order to produce an appropriate portfolio.

5.2 STRUCTURE

The decisions regarding the structure of the portfolio are based primarily on the findings of the literature review as presented in chapter 2 and also on the input from the educators in chapter 4. The students did not provide much input regarding the structure of the clinical portfolio and tended to concentrate on process issues.

A basic structure of a portfolio according to Challis (1999) suggests a title page, giving the student's name, post and year of training and supervising educator; a table of content; the learning objectives whose achievement the evidence in the portfolio claims to demonstrate; a short reflective overview, summarizing the learning that has taken place since the last portfolio review; and the evidence grouped together into the areas contained in the learning objectives.

Based on Challis (1999) the revised portfolio will have a title page and a table of content, as the table of contents provides structure to a document. A table of contents gives an overview of the content of the portfolio and assists the user for easy reference. The portfolio logically divides into information - clinical skills – and an assessment section.

Students using portfolios require support and direction in preparation for gathering and presenting the right sort of evidence, so that the learning criteria are aligned with those of the assessors (Love and Cooper, 2004). Norman (2008) supports Love and Cooper, saying that students need specific direction, supervision and support to begin with, in order to assume accountability for their learning, and in order to progress even though supervisors and assessors want students to feel that they are assessing themselves.

The above research is supported in the findings of the study. The students referred to the need for direction, A1.5: “somebody to guide you through the initial processes showing what you've learnt in the workshop”; “you need a competent person to guide you through that process”. A1.4 appreciated the amount of supervision they received “we have never seen so much clinical supervision” and on the need for clinical support A1.5 said “I think that it is not so much in relation to time but in relation to clinical support”.

The success of portfolio-based learning depends on detailed and clear guidelines on the purpose, content, structure, and the presentation of portfolios (Timmins and Dunne, 2009).

5.2.1 Purpose

The vague input of the students in the study on the structure of the clinical portfolio suggests that students do not understand the purpose of their clinical portfolio. Therefore the revised portfolio includes a purpose statement to inform students (and educators) why time and energy needs to be invested in working through the portfolio. It must be clearly explained how the clinical portfolio will be used to assess the student.

Students will be expected to use the portfolio as evidence of their learning and to assist them in their learning, and therefore need to understand from the beginning what the portfolio actually is and that it is not only a requirement but, as A1.4 and educator B5 indicated, a tool that is helpful in acquiring skills to become a safe practitioner and which can be used to enhance the learning process.

5.2.2 Content

Sections included into the portfolio are:

What exactly is a portfolio?

Why a portfolio?

It is important for the students to understand why portfolios are useful and a section explaining this was therefore included. The information was obtained primarily from the literature.

Both clinical facilitators and educators emphasize the integration of theory and practice in the process of portfolio development - making clinical practice integral to academic learning (Joyce, 2005). Building portfolios can encourage critical reflection on decision-making skills and assist the student to move forward with action planning. These skills have the potential to foster willingness to embrace change and prepare students for long term professional development.

Portfolio-based learning has shifted nurse education to a learner-centred learning experience (Wenzel, Briggs and Puryear, 1998). The portfolio ensures active participation of the student in the clinical field, reflecting on what they experience and what skills they have acquired.

Gibbs (1992) describes characteristics of a model of learning which leads to a 'deep', as distinct from a 'surface' approach to learning. Deep learning recognizes that a learner's motivation is intrinsic, and they learn because they need to know something. Students who actively participate in their own learning, and utilise opportunities for exploratory talks and interaction with others facilitate the deep learning processes.

In order to maximize the learning potential of portfolio development, the student has to take responsibility for its creation, maintenance and appropriateness. Concurrently, the portfolio remains the practical and intellectual property of the student who develops it (Challis, 1999).

A portfolio offers a good opportunity to illustrate the change in learning style from pedagogy to andragogy as discussed in chapter 2.

Aims of the portfolio

The original portfolio did not state the aims of the portfolio. The aims in the portfolio were taken from the literature review and applied to the nursing programme's portfolio.

Using the portfolio in assessment

Students need guidance in managing their time to reach critical outcomes. The portfolio advises the student to schedule frequent meetings with his or her facilitator to discuss his or her progress.

Programme information, exit level outcomes and level descriptors

This information was taken from the original portfolio and information was added from the qualification description from SAQA.

Definitions

Definitions were added to the portfolio to clarify the meaning of the important concepts of using a portfolio for learning and assessment.

The definitions that are included in the revised portfolio are listed below with a discussion relating to why they are included, based on the findings of the study.

Experiential learning

Kolb (1984) defines experiential learning as "the process whereby knowledge is created through the transformation of experience. Knowledge findings from the combination of grasping and transforming experience."

Portfolios are useful to track learning that has occurred from experiences, especially in work life. This learning can be a progressive, continuous process emanating from the individual's experiences (Cayne, 1995).

Definitions were reviewed to clarify the concepts for the students and their educators. Definitions included formative and summative assessment, final mark, educator and clinical facilitator.

Formative assessment

Students need to be familiar with terms relating to assessment in order to understand the requirements for the course. Formative assessment is therefore defined as assessment done throughout the learning program to give feedback to students on progress made, which serves needs intrinsic to the educational process (SANC Circular No.8/2013).

Summative assessment

A summative assessment is a formal assessment which is done at the end of a semester, year or programme of learning and is used to certify the attainment of a certain level of education.

Final mark

The final mark is made up by adding the semester/year mark and the summative assessment mark, each constituting 50% of the final mark. The student must have achieved a semester/year mark of at least 40% and a summative assessment mark of at least 40%. The combined pass mark is 50%.

Educator

The portfolio provides a guide to students and needs to explain the various role players with regard to assessment and teaching of the course. The terms are specific to the nursing education institution where the study took place. The terms educator and facilitator are therefore defined. The educator is a facilitator of learning in the theoretical component of the nursing curriculum.

Clinical facilitator

The clinical facilitator is a facilitator of learning in the clinical component of the nursing curriculum.

5.2.3 Learning Objectives

Both the participants (A1.1, A1.3) and the literature (Elango, Jutti and Lee, 2005:511; Challis, 1999) supported the need to include learning objectives in the portfolio. The

educators did not comment on the need to include learning objectives, possibly because it is taken for granted amongst educators. It is an accepted educational practice to do this in any educational guide.

The objectives that were formulated for the portfolio were drawn from Regulation R212 (SANC, 1993).

5.3 GUIDELINES ON COMPILING A PORTFOLIO

Norman (2008) recommends placing the portfolio contents in a durable and large enough ring binder which allows for the easy removal and adding of material. A rational indexing system should direct the reader to all the evidence inserted into the portfolio. Students should use the same indexing system throughout the portfolio to avoid confusion. The main focus when organizing a portfolio is to ensure that the material included relates to the requirements (Norman, 2008).

Several of the participants (A1.2; A1.4; B1; B3; B4; B6) indicated the need for the portfolio to provide guidance to the student with regard to the requirements for the course. This notion is supported by Endacott et al., (2004) who stated that appropriate guidance is one of the four factors contributing to the effectiveness of using a portfolio.

There were certain aspects of the existing portfolio that were not commented on by the participants. The researcher decided to include these aspects in the revised portfolio as they have proved useful in the past. Examples of records were included:

- Record learning objectives achieved;
- Record of clinical learning;
- Reflective narrative;
- Student duty roster;
- Clinical supervision record;
- Study activity;
- Research, audit, quality improvement projects and other projects;
- Documents designed;
- Lectures, seminars, papers and posters;
- In-service training;
- Monthly objectives record; and

- Student monthly growth report.

A section with guidelines is provided in the revised portfolio dealing with various issues that were raised during the interviews and in the literature. These issues are discussed individually below.

5.3.1 Use of Mind Maps

Student participant A2.3 suggested the educators encourage the use of mind maps by evaluating them "to see that mind map that you have done...your pathophysiology". This was considered to be a good idea and has been incorporated into the portfolio.

A mind map is a way of exploring ideas that emanate from a central concept in a highly visual way, which enables one to understand and explore the relationships between the concepts. It helps one build up an intuitive framework around the central concept in order to gain insight into complex subjects.

In this section of the portfolio, students are guided how to create mind maps, for example, by using different colours to map out associations and connections.

Students are encouraged to develop a mind-map for each of the comprehensive patient presentations they complete, which should be included in the portfolio in the section relevant to a particular system. In addition, students are advised to use mind maps to map out their study programme, time management or pathophysiology and processes. The mind maps will contribute to the evidence that the student has engaged in the required activities.

5.3.2 Reflection

The need for providing and encouraging an opportunity for reflection was raised by only two of the educators (B2 and B4) and somewhat obliquely by one of the students (A2.3), and yet this aspect is very prominent in the literature. Reflection was never previously included as part of the portfolio, which means that neither the educators nor the students have previously been exposed to this possible use.

McCready (2007:149-150) refers to the fact that students bring into their learning a wide variety of previous learning, work and life experiences, so it is important to allow them an opportunity to reflect on those experiences; adult students commonly use

previous experience to provide meaning to their learning. Redman (1994) states specifically that the portfolio must provide a space to record experiences - what happened, what was done, seen, written, made etc. and that this could be followed by the learning that occurred; the discovery of what is important enough for doing or changing things in the future; followed by evidence that the learning is being applied in an appropriate context.

Most nurses need to learn the value of reflection in learning new or confirming old competencies. Casey and Egan (2010) identify that portfolio preparation may help nurses to learn to value their experiences as part of their learning through reflection, and consequently to value themselves.

Reflection is an essential component of portfolio development, as are the student–educator relationship and explicit guidelines for constructing the portfolio (McMullan, Endacott, Gray, Jasper, Miller, Scholes and Webb, 2003; Sowter, Cortis and Clarke, 2011).

Reflection-on-action, and consequent clinical learning, completes the learning cycle, showing what was gained from their experiences. Reflection–in-action refers to a nurse’s ability to “read” whether the intervention is effective, and to the nurse’s ability to adjust the intervention based on that assessment in a real clinical situation. Schön (1991) explains that reflection is essential to professional learning.

The one educator (B2) who felt that reflection must be promoted through activities in the clinical portfolio suggested questions like: “what did you learn today?”, “what questions did you ask?” could assist a student to reflect on what he or she did. B4 suggested the portfolio should prompt the students to question themselves on “whether they have done it good or bad”, “what did you do great today? What didn’t you understand? What did you do wrong and what was the action plan on each of those things?”

The revised portfolio includes a section explaining what reflection is and then guides the student as to how to write up a reflection on their learning by means of Gibbs Learning by Doing cycle (Gibbs, 1988).

5.3.3 Case Study

A case study format was included in the revised portfolio on the advice of the educators in the study (B3 and B4). On the advice of B3, it is required towards the end of a clinical placement in a specific discipline. There was some discussion as to how many case studies should be done, with recognition that a full case study was only feasible for a few patients.

The format adopted in the revised portfolio was developed from existing guidelines for a case study used in the nursing education institution for classroom activities.

5.3.4 Peer Evaluation and Feedback

As a result of the interesting request from the student participants (A2.1, A2.2) for the portfolio to provide the opportunity to record peer assessments, a section for this was included. The motivation for this suggestion was not clear but was possibly the thought that peer assessments would provide opportunities to prepare students for formal assessment in a non-threatening environment to enable them to perfect their skills prior to formal assessment. While two educators (B6 and B2) also suggested the practice of peer evaluation of students, the motivation was very different and clear from B6, which was to reduce the workload of the educators, but B2 was of the opinion that it may promote learning and seemed more aligned to the students' viewpoint on this matter.

5.3.5 Presentation of Evidence

A common theme in the literature, related to the use of portfolios in education, was its usefulness for providing a collection of detailed evidence of a person's competence that is then used by the assessor to decide whether claims the student makes that he/she has engaged in learning activities are, in fact, valid (Scholes et al., 2004; Simosko, 1991). This can further be used to illustrate and develop the student's sense of accountability and responsibility, and used as a comparator with previous work to track performance (Sowter et al., 2011). A more local use of the evidence that a student has undertaken work is that it is used as proof to educators that the student is ready to be assessed (Educator B1).

The revised portfolio was therefore designed to allow space for evidence of the approved assessors with an assessors' specimen signature list to verify evidence inserted.

5.4 CLINICAL SKILLS

When opening a nursing science textbook you will invariably find the content divided into physiological systems. The researcher found no literature justifying the division of content in this manner; due to this practice being normal convention and the fact that the student participants (A2.1, A2.2, A2.3) suggested it be done this way, it was decided to divide this section into physiological systems.

On the advice of the students (A2.2), the requirements were further divided into fundamental nursing skills and advanced nursing skills. The fundamental skills include those learning outcomes for abilities common to all disciplines e.g. physical assessment, arterial blood gas analysis, interpretation of chest X-rays and basic electro-cardiograms (ECG) analysis (A2.1, A2.2, A2.3).

The students liked that they "we were given specific objectives to meet before our first CPCA (comprehensive patient care assessment)... five ECGs, blood gases and chest x-rays" (A2.2).

In the advanced section, every system commences with a *Reflection Summary* of the student's pre-knowledge on the system such as the ability to read an X-ray (student A1.5).

Then follows a record of a *System Learning Contract* where the student, unit manager and the facilitator agree that the proposed actions are relevant to the clinical objectives of the student.

Space is provided to record relevant articles read, surgical procedures witnessed in theatre, a reflective summary on the activity, and nursing cases nursed.

The pharmacology learning outcomes were included in the relevant system and not separated out and each section includes the system's learning outcomes, student's learning needs, learning opportunities and activities to be completed as well as examples of evidence that may be inserted, or as educator B2 said, make it possible

for the student to “slot in what they have achieved and what they haven't - more than just a signature”.

Both the fundamentals and the advanced section include activities such as self-directed problem solving activities, reflective journaling, reading to support practice, observing another experienced practitioner or a mentor, clinical supervision by a mentor, asking questions in the clinical field and in the classroom, undertaking a simulated experience with peers and reflection in and on action and experience in specific contexts.

This idea is supported by Norman (2008) who posits that students should reflect upon and recall previous learning and experience in order to decide whether they can apply the knowledge and skills as well as the approach and values to this new situation.

5.5 ASSESSMENTS

One educator (B1) suggested that the evidence in the portfolio would assist in determining whether a student was ready for assessment or not, and several students (A1.1; A1.2; A1.3; A1.5) suggested methods of assessments that should be included in the portfolio such as peer assessment, oral presentations and clinical skills evaluations, comprehensive patient care assessments (CPCAs), oral assessments and nursing care assessments in the portfolio. An attempt was made to include a variety of methods to suit all learning styles. It was decided that the portfolio assessment section should include the documentation the students will require to assess their own progress. The clinical procedural standards with their assessment instruments that relate to the clinical objectives of the programme and other assessment related documentation should be inserted, e.g. patient consent.

A decision was made to retain a criterion based assessment rather than introducing a norm-referenced system, as it is considered that “grading” portfolios, as would be done in a norm-referenced system, would be counter-productive to the learner-centred philosophy underpinning the use of portfolios. The criteria for assessment were designed to be explicit, and known to the student and assessor (Challis, 1999).

5.6 PROCESS

The students' feedback was unfocused, despite attempts to get them to focus. Many of their comments were, however, made on the application of the portfolio in the process of learning, which is the part that they probably feel affects them most directly.

Every nursing education institution has their own processes which need to be clarified. The processes in the revised portfolio have been gleaned from the participants as follows:

- The importance of effective communication (A1.1; A1.2; A1.4; A1.5; A2.1; B1; B3; B4; B6);
- Practicalities around sign-off of competencies (A1.2; A2.2; A2.3; B2);
- Encouraging permanent staff to take ownership of students (A1.3; A1.4; A1.5);
- Encouraging permanent staff to continue updating themselves (A1.4; A1.5);
- The importance of patient allocation (A1.3; A1.4);
- The importance of effective student rotation (A1.6);
- Ensuring standard compatibility between the nursing education institution and the clinical field (A1.3).

It is important that these issues be discussed with staff and students to ensure that the processes are followed, and should also form the basis of the orientation programme of new staff members.

5.6.1 Realistic Expectations

The students and educators have expectations of each other. This study highlighted a few areas for discussion.

Role clarification may be explained in terms of what the students may expect from their nurse educators and from the staff in the clinical field.

The role of the nurse educator is further described by Joyce (2005: 460) who suggests that the mentor or nurse educator should preferably be someone with whom the student can work easily in identifying and discussing his or her reflections on an experience in practice. These discussions are to help the student to explore his or her experiences more critically.

Most students approaching portfolio development for the first time will require some support, not only with the actual construction of the portfolio, but also in the unfamiliar process of engaging in and recording reflections upon their work (Hall, 1992).

Student participants made the following comments, illustrating that they had certain expectations that will be difficult or impossible to meet. Student A1.2 stated “(staff members) are never there every day”, A1.5 “when you phoned...she couldn't come because she was somewhere else” and A2.3 suggested to “use the hospital clinical facilitators”.

Comments made by the educators include that made by B1: “part of the problem is us. How do we utilize the portfolio of evidence with them? It is not a continuous learning curve” and B4: “it can't be only our responsibility because we don't see them enough.”

A2.1 felt “that there is a place for a CNS (clinical nurse specialist) in each unit and without a CNS you go into a unit and although you are meant to be learning different things you don't actually learn them because there is no one there that actually has the time to say...” A2.1 supported using the CNS “with mentorship because I think within the different specialities...that is severely lacking.” A1.4 suggested “inviting your CNS, clinical nurse specialist, to the exam so they can hear and understand the type of questions or the kind of information and presentation expected.”

The expectations that are not realistic need to be discussed with students and the realities of the training environment explained in order to reduce conflict in this area of use of the portfolios.

5.7 FEEDBACK FROM THE EXPERT EDUCATORS

The objective for Stage 3 of this study was “to solicit the opinion of experts on the effectiveness of the revised clinical portfolio and to make changes as required.” The nurse educator experts were only involved in the early developments of Phase 4 of intervention research (de Vos et al., 2011) and had no contact with the original portfolio.

The nurse educator experts (Group C) were recommended by the Board of the Nursing Education Association. Inclusion criteria for this study included a minimum of 10 years' experience in education and a minimum of 10 years' experience in research

and/or intensive care nursing. The researcher used those expert educators who were based in Gauteng as they were accessible to the researcher.

The group consisted of five nurse educators with doctoral degrees and two with master's degrees. An electronic copy of the revised clinical portfolio was emailed to them and they were asked to comment on the strengths and weaknesses of the portfolio. Four nurse educators with doctoral degrees and one with a master's degree returned electronic feedback.

The expert nurse educators verified that the revised clinical portfolio was educationally sound as a learning approach and an assessment strategy. The overall feedback was positive. The section on reflection received particularly positive feedback with C1 writing "The focus on reflection is commendable." A variety of reflection activities were suggested to further stimulate creative and critical thinking. C1 found the involvement of compiling documents a good addition to the portfolio and thought the extra objectives were a good idea. C2 commented positively on the student monthly growth rubric. C4 commented positively on the learning contract at the beginning of every discipline and the inclusion of peer assessments.

C1 suggested two more initiatives to improve learning that may be used in the compilation of the portfolio, e.g. the use of podcasts or YouTube clips. Extra uses for mind maps e.g. to map out their study programme or time management, and the addition of quality improvement projects were suggested under the "Research, Audit and Project Work" sections. An additional measurement criteria on "taking action" was suggested in the student monthly growth report.

C1 needed clarity on the use of the case study and found the term 'record reflective overview' unclear. Technical errors were indicated for correction.

C2 identified technical errors and suggested the inclusion of continuous professional development (CPD) points as evidence in the portfolio. C2 wanted to know whether the prescribed number of hours per discipline should not be stated in the portfolio. She suggested the inclusion of myocardial infarctions and peripheral vascular disease under the cardiovascular system. Lastly C2 suggested the assessment instrument of the portfolio be included for the students.

C3 indicated technical errors and some inconsistencies, and indicated a gap in the paragraph pertaining to National Qualifications Framework (NQF) level 7. This expert also stated that the section on mind maps needed more scientific writing skills to be applied.

C4 also commented on the technical aspects of the portfolio. She suggested adding the Peter Pappas model of reflection. She also requested the two most commonly occurring conditions be added to every discipline as was done in the cardiovascular section. This suggestion was not implemented as the researcher believes that this information would differ from region to region.

C5 found the study useful and identified some technical errors.

5.8 MODIFICATIONS MADE

The recommendations on the reflective activities were included in the revised clinical portfolio. Additional initiatives to improve learning were added to the list of items which can be included in the portfolio. The term 'record reflective overview' was renamed as 'reflective narrative'. The additional measure on taking action was inserted in the student monthly growth report. The section on the case study was rewritten for clarity.

No prescribed number of clinical hours per discipline is stated by the South African Nursing Council in R212 (SANC, 1993) relating to the training of post-basic nurses and it was therefore not added to the portfolio.

The researcher suggests that each nursing education institution (NEI) inserts the assessment instrument currently in use into the portfolio.

All technical aspects identified by the experts were corrected.

5.9 CONCLUSION

This chapter summarised the revised clinical portfolio for intensive care nursing students based on student and educator' opinion as well as in the literature review.

CHAPTER SIX – CONCLUSIONS, RECOMMENDATIONS AND LIMITATIONS

6.1 INTRODUCTION

In this chapter the conclusions arising from the findings of the study are presented, followed by a discussion of the limitations of the study and recommendations for clinical practice, nursing management, nursing education, and for further research in this area.

6.2 SUMMARY

This study aimed to improve the structure and use of a clinical portfolio as a learning approach, and to enhance its effectiveness as an assessment and learning strategy in intensive care nursing education.

Neither the students nor the educators were using the clinical portfolio effectively in the development of the intensive care nursing student.

The objectives of the study are divided into Stages:

Stage 1: to solicit the opinion of students and their educators on the quality of the existing clinical portfolio and their recommendations for the design and utilization of a revised clinical portfolio;

Stage 2: to design a revised clinical portfolio for intensive care nursing students based on educator and student opinion and literature review;

Stage 3: to solicit the opinion of nursing education experts on the revised clinical portfolio and to make changes as required.

All objectives of the study were met.

The study contributed to an improved clinical portfolio but as people and technology change, the need to continually update it will remain.

6.3 CONCLUSIONS

This study was done to gain an understanding of what recommendations can be implemented from the users of a clinical portfolio. It became clear that students have concrete ideas about how to deal with some of their frustrations working in the clinical field as a student but do not really have ideas on how it should be structured.

The educators were in a much better position to comment on the structure of the clinical portfolio and what must be considered to improve clinical learning. They have the educational background to understand what the role of the portfolio is and how much more it can assist to improve learning and to help students to prepare for assessments.

6.4 LIMITATIONS

The students' feedback was often not focused on the questions posed regarding the portfolio. This problem persisted despite the researcher's efforts to get them to give specific input. It appeared that they were more concerned with the use of the portfolio which is understandable as they have not had previous experience of developing a portfolio or any other type of educational material and would have been more concerned about how it would affect their success or failure.

The educators' feedback focused more on the structure of the portfolio and gave little input on the use thereof. This again is understandable in view of their perspectives as educators who are responsible for developing educational material but are not subjected to assessment.

The sample size was small and confined to one private nursing education institution which limits transferability but can be used as a prototype for piloting the tool during further research studies.

As with many qualitative studies, the participants gave their opinions of how the portfolio should be structured and used which were inevitably subjective. An attempt to remedy this problem was made by means of consultation of existing literature.

During the focus groups with the students and educators the same data collection questions were posed. In hind sight the groups should have different questions aligned to their understanding and perspective of the clinical portfolio.

The focus groups were held in English as this is the lingua franca of the nursing education institution but it was clear, particularly during the focus groups with the students that English was their second language and they often had difficulty in expressing themselves.

The study addressed the students and educators using the portfolio, but it should be piloted in other nursing education institutions before being implemented nationally.

6.5 RECOMMENDATIONS

The recommendations are based on the findings of this study and on the conclusions drawn from the study.

Portfolios can be useful in promoting critical thinking, problem solving and decision making but only if correctly structured and implemented with sufficient guidance and support.

6.5.1 Structure of the Portfolio

During the literature review much information was found on how to compile a portfolio. Many of the scholarly articles are older, possibly because it has been in use in education for so long already.

Basic structuring recommendations are common, although it does not describe how clinical learning in intensive care may be structured. The participants understood the system divisions; it appears that is how the theory is facilitated.

The student is granted as much freedom as possible in the compilation of his or her portfolio evidence, to allow interaction and creativity during his or her learning.

6.5.2 Use of the Portfolio

The portfolio has the potential to demonstrate that students have met the required standards of the licensing body (like the South African Nursing Council for nurses),

while providing opportunities for gaining and assessing competencies not easily assessed by formal examinations. These assessments may be formative, continuous or even summative in nature.

Students may acquire knowledge, skill and values whilst compiling their portfolio. The portfolio should encourage a student to find information, to test its credibility and to try different learning methods. The portfolio enhance the students' ability to reflect on their own experience and performance.

One of the biggest contributors to the portfolio's success or failure, as a learning and assessment instrument, is active participation between the nursing education institution, the clinical field and the student.

Even though the role of the educator in facilitating portfolio learning is essential, the value of a student friendly clinical environment is of utmost importance as students have the potential to learn from the moment they enter the clinical facility. Students are capable of independent learning.

The study has shown that students have concrete ideas about how to deal with some of their frustrations working in the clinical field, whereas the educators were more concerned about what happens to the student when the educator cannot be at the bedside with the student.

A meeting between the clinical nurse specialist and the student should be arranged early in the student's placement to formulate a learning contract for that unit.

6.5.3 Recommendations for Clinical Practice

Even though the study did not propose to study the relationships between the student, educator and the clinical field, it became clear that a much closer work relationship must be ensured. The clinical field should have a person who will champion learning in the workplace and support students in their learning.

6.5.4 Recommendations for Nursing Management

The reality is that clinical facilitators cannot meet with every student every day. When students are allocated to trained staff for assistance and guidance, clinical learning can continue when the clinical facilitator cannot be present.

Students' off duties require careful consideration; shifts should be arranged so that students can be orientated to the unit.

When compiling nursing care standards there must be close collaboration between the Education Institution and the clinical field. The clinical field is where the students experience the implementation of nursing care standards.

The education institution should communicate the time periods that will be spent in class facilitating learning through the different disciplines. This will assist the clinical field to place students in the appropriate units to facilitate theory and clinical integration in practice as far as possible.

Specific guidelines may be written after further studies are done.

On the students' recommendation, academic rounds for nurses should be introduced.

6.5.5 Recommendations for Future Research

The study was done on a small sample in Gauteng and would benefit from repetition on a larger sample. The study's student and educator participants were from the private sector; it would be interesting to include the public sector.

The pilot study, as well as phase 5 and 6 of de Vos' framework should be effected in a future study with a larger population from both private and public nursing education institutions.

Therefore, future research should include a larger sample of educators and experts to validate the improved structure of a clinical portfolio. The sample should include educators from the private and public sector and the area could be widened to a nationwide study.

Each focus group category should have their own interview guide with different questions to improve understanding and the experts should be sent a rubric for their feedback.

6.6 CONCLUSION

This chapter summarised the study conclusion, made recommendations for clinical practice, and discussed the limitations of the study and future research possibilities.

This study illustrated the perceptions and recommendations of post registration students - nurses – and educators at a private nursing education institution on the use of portfolios of evidence. A revised clinical portfolio was designed based on the data obtained from the participants and from literature review. The next stage would be that a pilot study be actioned on the revised clinical portfolio.

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Annexure A Human Research Ethics Committee (Medical) Clearance Certificate



R14/49 Ms Lizelle Potgieter

HUMAN RESEARCH ETHICS COMMITTEE (MEDICAL)

CLEARANCE CERTIFICATE NO. M140236

NAME: Ms Lizelle Potgieter
(Principal Investigator)

DEPARTMENT: Nursing Education

PROJECT TITLE: The Development of Clinical Portfolio as a Learning approach for Intensive Care Nurses in a Private Nursing Education Institution in Gauteng

DATE CONSIDERED: 28/02/2014

DECISION: Approved unconditionally

CONDITIONS:

SUPERVISOR: Dr Sue Armstrong

APPROVED BY: 
Professor PE Cleaton-Jones, Chairperson, HREC (Medical)

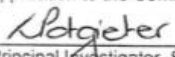
DATE OF APPROVAL: 07/04/2014

This clearance certificate is valid for 5 years from date of approval. Extension may be applied for.

DECLARATION OF INVESTIGATORS

To be completed in duplicate and **ONE COPY** returned to the Secretary in Room 10004, 10th floor, Senate House, University.

I/we fully understand the conditions under which I am/we are authorized to carry out the above-mentioned research and I/we undertake to ensure compliance with these conditions. Should any departure be contemplated, from the research protocol as approved, I/we undertake to resubmit the application to the Committee. I agree to submit a yearly progress report


Principal Investigator Signature

Date

9-4-2014.

PLEASE QUOTE THE PROTOCOL NUMBER IN ALL ENQUIRIES

Annexure B Research Operational Committee Final Approval of Research: Campus One

RESEARCH OPERATIONAL COMMITTEE FINAL APPROVAL OF RESEARCH

Approval number: UNIV-2014-0020

Ms L Potgieter

E mail:

Dear Ms Potgieter

RE: THE DEVELOPMENT OF CLINICAL PORTFOLIO AS A LEARNING APPROACH FOR INTENSIVE CARE NURSES IN A PRIVATE NURSING EDUCATION INSTITUTION IN GAUTENG

The above-mentioned research was reviewed by the Research Operational Committee's delegated members and it is with pleasure that we inform you that your application to conduct this research at has been approved, subject to the following:

- i) Research may now commence with this FINAL APPROVAL from the Sustainability Committee
- ii) All information with regards to will be treated as confidential.
- iii) Netcare's name will not be mentioned without written consent from the Sustainability Committee .
- iv) All legal requirements with regards to patient rights and confidentiality will be complied with.
- v) Insurance will be provided and maintained for the duration of the research. This cover provided to the researcher must also protect both the staff and the hospital facility from potential liability
- vi) In accordance with MCC approval, that medicine will be administered by or under direction of the authorised Trialist
- vii) The research will be conducted in compliance with the GUIDELINES FOR GOOD PRACTICE IN THE CONDUCT OF CLINICAL TRIALS IN HUMAN PARTICIPANTS IN SOUTH AFRICA (2000)
- viii) must be furnished with a STATUS REPORT on the progress of the study at least annually on 30th September irrespective of the date of approval from Sustainability Committee as well as a

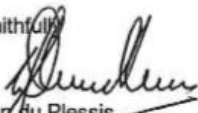


FINAL REPORT with reference to intention to publish and probable journals for publication, on completion of the study.

- ix) A copy of the research report will be provided to once it is finally approved by the tertiary institution, or once complete.
- x) has the right to implement any Best Practice recommendations from the research.
- xi) reserves the right to withdraw the approval for research at any time during the process, should the research prove to be detrimental to the subjects or should the researcher not comply with the conditions of approval.
- xii) APPROVAL IS VALID FOR A PERIOD OF 36 MONTHS FROM DATE OF THIS LETTER.

We wish you success in your research.

Yours faithfully



Prof Dion du Plessis
Full member: Research Operational Committee & Medical Practitioner evaluating research applications as per Management and Governance Policy

Shannon Nell 
Chairperson: Research Operational Committee

Date:

13/5/2014

Annexure C Research Operational Committee Final Approval of Research: Campus Two

RESEARCH OPERATIONAL COMMITTEE FINAL APPROVAL OF RESEARCH

Approval number: UNIV-2014-0020(A)

Ms L Potgieter

E mail:

Dear Ms Potgieter

RE: THE DEVELOPMENT OF CLINICAL PORTFOLIO AS A LEARNING APPROACH FOR INTENSIVE CARE NURSES IN A PRIVATE NURSING EDUCATION INSTITUTION IN GAUTENG

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- xii) APPROVAL IS VALID FOR A PERIOD OF 36 MONTHS FROM DATE OF THIS LETTER.

We wish you success in your research.

Yours faithfully



Dr CW Fölscher
Full member: Research Operational Committee evaluating research applications as per Management and Governance Policy

Shannon Nell
Chairperson: Research Operational Committee



Date: 21/01/2014


Annexure D Data Collection Instrument for Focus Groups

Study title: The Development of Clinical Portfolio as a Learning approach for Intensive Care Nurses in a Private Nursing Education Institution in Gauteng

OPENING STATEMENT

The purpose of the study is to improve the structure and enhance the use of clinical portfolios as a learning approach and as an assessment strategy in intensive care nursing education.

INTRODUCTORY QUESTION

How should the clinical portfolio be structured and utilized to facilitate learning and to assess learning outcomes of intensive care nursing students in a private nursing education institution in Gauteng?

GENERAL TO SPECIFIC QUESTIONS

How would you structure a clinical portfolio to facilitate learning and assess the learning outcomes?

Probing Question:

1. How would you enhance learning through altering the structure of the clinical portfolio?
2. How could the clinical portfolio help you to prepare for your clinical summative assessment?
3. How would you guide students having to compile a clinical portfolio?
4. What are your recommendations regarding reflection, report writing and peer assessments activities in a clinical portfolio?

Probing Question:

How would you utilise the revised clinical portfolio to enhance reflective practice?

CLOSING STATEMENT

Thank you for your participation

Annexure E Information Document

Study title: The Development of Clinical Portfolio as a Learning approach for Intensive Care Nurses in a Private Nursing Education Institution in Gauteng

Hello, my name is Lizelle Potgieter,

Dr Sue Armstrong and I are doing research on *“the development of a clinical portfolio as a learning approach for intensive care nurses in private nursing education institution in Gauteng”*. This study has been approved by the appropriate authorities i.e. The Research Committee of the University of the Witwatersrand as well as by the Research Operational Committee of the private nursing education institution.

In this study we want to learn from participants their opinion on the quality of the existing clinical portfolio and their recommendations for the design and utilization of a revised clinical portfolio. This will be done during Phase 1 and 2 of the intervention study. During phase 3 I will design a revised clinical portfolio for critical care nurses based on participants' and feedback from nurse education experts and a literature review.

The purpose of the study is to improve the structure and enhance the use of clinical portfolios as a learning approach and as an assessment strategy in intensive care nursing education.

We invite you to take part during Stage 1 and 2 in an audio-recorded focus group interview at the nursing education institution where studied. Your focus group will take about 1 hour.

We do not anticipate any risks of being involved in the study, whereas a possible benefit of being in the study may include a better understanding of the clinical portfolio and how it can work for you.

Participation is voluntary and refusal to participate will involve no penalty. You may also discontinue participation at any time without penalty. The findings of the study will be made available to you on request.

We reserve the right to terminate your participation when a lack of full participation is noticed.

Should you choose to participate in this study, you will be required to sign consent to participate as well as sign consent form to allow the focus group to be audio-recorded. The audio-recording assists with the transcribing of the discussions so that an accurate content analysis can be made.

Participants, who travel more than 40km to the focus group discussions, will be reimbursed for travel according to AA rates by means of electronic payment. We do not anticipate any additional costs to the participant that may result from participation in the research.

Your identity will be protected; no names will be used when transcribing the interview into the form of a hard copy, neither will identification occur in the Research Report. My supervisor and I will keep the data safely locked away.

Efforts will be made to keep personal information confidential. Please note that absolute confidentiality cannot be guaranteed due to the use of focus groups. Personal information may be disclosed if required by law. Some organizations may inspect and/or copy your research records for quality assurance and data analysis includes groups such as the Research Ethics Committee.

If findings are published, it may lead to individual / cohort identification.

Should you have any questions about your rights as a study participant, or questions or concerns about any aspect of this study, please call the Ethics Department of the University of the Witwatersrand on +27 11 717 1234 or email the Chairperson of the Ethics Committee, Professor Cleaton-Jones or the administrator, Anisa Keshav at Anisa.Keshav@wits.ac.za or my study supervisor Dr Sue Armstrong on 011 488 3094.

Thank you for taking the time to read the information sheet.

Sincerely

Lizelle Potgieter

Cell: 079 495 3231

Annexure F Study Consent Form

Study title: The Development of Clinical Portfolio as a Learning approach for Intensive Care Nurses in a Private Nursing Education Institution in Gauteng

I _____ (Full name and surname) have read and understood the content of the information sheet and have been given the opportunity to ask questions I might have regarding the study.

I hereby consent to participate in the focus groups related to the study *“the development of a clinical portfolio as a learning approach for intensive care nurses in private nursing education institution in Gauteng”*.

I understand that consent is voluntary and that I may withdraw from the study at any time. I understand that while discussions within the focus group will not be confidential, should any direct quote of what I have said appear in the report, it will be done anonymously, and I agree to their use under these conditions. The researcher has assured me that I will be given access to the research findings, should I wish to do so by contacting the researcher at the contact details supplied.

Lizelle Potgieter

Cell: 079 495 3231

Office: (012) 644 4902

E-mail:

Date: _____

Signature: _____

Annexure G Study Consent Form for Interview to Be Audio Recorded

Study title: The Development of Clinical Portfolio as a Learning approach for Intensive Care Nurses in a Private Nursing Education Institution in Gauteng

I, _____ (full name and surname) consent to be interviewed and I understand that this interview will be recorded.

I have been informed that the interviews will be recorded for the sake of accuracy and reliability.

I understand that consent is voluntary and that once the data recorded has been accurately transcribed and is no longer needed for purposes of the study, both the audio recording and transcripts may be destroyed after a period of 5 years. I understand that, should any direct quote of what I have said appear in the report, it will be done anonymously, and I agree to their use under these conditions.

Signature _____

Date: _____

Annexure H Research at Campuses

Lizelle Potgieter
Department of Nursing Education
Faculty of Health Sciences
University of the Witwatersrand
7 York Road
Parktown
2193

South Africa

Dear Sir/ Madam

RE: RESEARCH AT

CAMPUSES

I am presently registered as an MSc student at the University of the Witwatersrand in the Department of Nursing Education. I plan to review *“the development of a clinical portfolio as a learning approach for intensive care nurses in private nursing education institution in Gauteng”*. The purpose of the study is to improve the structure and enhance the use of clinical portfolios as a learning approach and as an assessment strategy in intensive care nursing education.

The objectives of the study are divided into Stages:

Stage 1: to solicit the opinion of students and their educators on the quality of the existing clinical portfolio and their recommendations for the design and utilization of a revised clinical portfolio;

Stage 2: to design a revised clinical portfolio for intensive care nursing students based on educator and student opinion and literature review;

Stage 3: to solicit the opinion of nursing education experts on the revised clinical portfolio and to make changes as required.

I intend to draw a purposive sample from current and previous intensive care nursing students within the last 3 years, lecturers and clinical facilitators involved in the teaching of intensive care nursing students, and nurse educator experts sourced from the Nurse Education Association Johannesburg and Pretoria Chapter.

Data will be collected through a focus group with each sample. The researcher will facilitate the focus groups.

I assure you that the name of your institution and personnel will not be divulged in the report. Informed written consent will be obtained from all the research participants. A copy of the report will be made available to you if you so request.

Please sign the attached letter in order to ask for Research Operational Committee approval.

Yours Sincerely,

L Potgieter

Lizelle Potgieter

MSc (Nursing Education) Student

Annexure I Approval to Conduct Research As Part of an MSc Nursing Research

Lizelle Potgieter
Onyx 49
35 Lemonwood Street
Highveld
0157

South Africa

To whom it may be of concern:

RE: APPROVAL TO CONDUCT RESEARCH AS PART OF AN MSc NURSING RESEARCH

I hereby request permission to conduct research as part of my MSc Nursing research.

I am enrolled as a Master of Science in nursing student at the University of the Witwatersrand, Nursing Education Department. My study will solicit the opinion of students, their educators and nurse education experts, develop a revised clinical portfolio, and utilization will enhance facilitation of learning and assess learning outcomes.

If approved, my study will be conducted at _____ Campuses
whom have intensive care nursing students from diverse Hospitals.

Yours Sincerely,

L Potgieter
Lizelle Potgieter
MSc (Nursing Education) Student

Annexure J Sample Page of Analysed Transcripts of Group B

1

Record_0003

INTERVIEWER: How should the clinical portfolio be structured and utilised to facilitate learning and to assess learning outcomes of intensive care nurses in private NEI?

INTERVIEWEE 1: How to structure a clinical portfolio? But I find with the recent students is that it is overwhelming for them in the beginning of the course. So I think they don't listen when you try to explain to them the portfolio and then, like in the end, there's so many things not signed off because they didn't realise it should be actually a learning -, guide their learning opportunities in practice. To tell the unit manager: "Listen, I have to seek or to look for this opportunity." I don't know how you can construct it better. I don't know if you can structure it in discipline. If you at cardiac, this is a learning opportunities, but it is more or less structured like that.

INTERVIEWEE 2: I think the POE depends on your objectives. Now this POE has evolved as a basic log book and as a log book I think it works well but if you want to make it a POE, a portfolio with evidence of clinical learning, it actually is not that and it depends on what the outcomes will be. So if you want to-, if your outcome is to pass CPCA, then I am even asking what are the procedures doing in the POE. If your outcome ... do you understand what I'm saying? How do you ... what is the point of POE? Is to prove that I've grown and learnt and taken accountability for my own learning and if you look at the things that we mark in the CPCA, the two don't talk to each other at all.

INTERVIEWEE 3: But that can be possibly due to the fact that the students don't understand how to utilise the POE. That is why. Like for a POE to work as a, you know, whereby your learning outcomes are met at the end of the day, they need to understand what to do with the information, how to follow each little thing that they tell you. I know, when I did my portfolio for the assessors, in order for it to be competent, every little instruction that was given needed to be followed and you needed to do stuff and it was not a little bit of information or whatever that you had to research in order to complete that POE. One little line could have meant actually doing research or doing an activity that involved quite a bit of work. So I think that's where another problem could actually come from. The fact that they don't understand how to utilise it.

INTERVIEWEE 1: I agree with X with this CPCAs, with the moderator's course. We spoke about the development of the students, and they-, X told me that we must give the students a sense of achievement. I said: "But how can I give them a sense of achievement if they score 30% for the POE?" Then she said to me: "Then they were not ready to be assessed in the first place, and the second thing is that she is-, what is her evidence that she is prepared to be assessed?" So you must ask her: "Where is your evidence that you can tell me that you going to be assessed?" Is that procedure, if you do the CPCA? It is not procedure.

INTERVIEWEE 2: I think procedures are a critical part of our work and that's why completion of the POE is by company requirement, because you can't have a critical care nurse without clinical skills. And through clinical we learn theory and if you look at the outcomes in the CPCA, actually outcomes are structured in the beginning of your study guide, you must just check. So if you say: "No, I'm just going to start from the top, the demographics," how and where do we teach them that?

Commented [LP1]: CF experience

Commented [LP2]: Per discipline incl. all learning objectives related to that discipline

Commented [LP3]: In line with clinical objectives

Commented [LP4]: Students to insert evidence of learning according to the programme outcomes

Commented [LP5]: Evidence of learning / change of behaviour

Commented [LP6]: Students must be guided in the use of their portfolio; there must be written guidelines, as students forget what is said in the beginning

Commented [LP7]: Guideline content

Commented [LP8]: Guideline content

Commented [LP9]: Portfolio to provide evidence that student is ready to be assessed

Commented [LP10]: Importance of learning at the bed side

Annexure K Framework of Content Analysis

Participant	Theme	Sub-themes	Concepts	Quotation
A1.1	Structure	Assessments	CPCA	"observational CPCA is different, so the thing they need to do is to change the tool to suit what they mean"
A1.1	Structure	Objectives	In line with theory	"in such a way that it meets the objectives of the theoretical input"
A1.1	Process	Communication	Change	"I think the problem was that they are having to..."
A1.2	Structure	Assessments	Q&A	"you don't have time to sit and answer 'why are you doing that?'"
A1.2	Structure	Assessments	Nursing care	"your actual day to day nursing is far more important than procedures."
A1.2	Process	Clinical facilitator	Availability	"are never there every day"
A1.2	Process	Clinical field	Sign-off	"they don't allow the shift leaders and the unit manager and staff to assess us"
A1.2	Process	Communication	Guidelines	"or guidelines"
A1.3	Process	Clinical field	Reluctance	"if you are lucky and you find someone who actually wants to help you."
A1.3	Process	Clinical field	Patient allocation	"I mean just get participative with them, so they know that here these are your objectives."
A1.3	Process	Clinical field	Standards	"If things can just be the same, you know where you compile the standards here and then it is the same in the unit as well"
A1.3	Process	Clinical structured day	Objectives	"if we get reps coming in then they must get the objectives and what we need"
A1.3	Process	Student	Emotional growth	it all depends on the individual, the emotional status and the circumstances around that person at that time, so it won't be a constant measurement of someone's performance or achievement"
A1.4	Process	Clinical accompaniment	Clinical Nurse Specialist	"look at inviting your CNS, clinical nurse specialist, to the exam so they can hear and understand the type of questions or the kind of information and presentation expected from the students."
A1.4	Process	Clinical accompaniment	Objectives	"student should be able to tell you within that first hour, what are my patient's four critical problems for today?"
A1.4	Process	Clinical facilitator	Availability	"we have one clinical facilitator and yes, we are eight students at...our clinical setting."

Participant	Theme	Sub-themes	Concepts	Quotation
A1.4	Process	Clinical facilitator	Availability	" we have never seen so much clinical supervision"
A1.4	Process	Clinical field	Reluctance	"people in the clinical field are divorced from students."
A1.4	Process	Clinical field	Reluctance	"it is not my clinical facilitator I need. I need the people that I'm working with"
A1.4	Process	Clinical field	Updating	"That is about not keeping up with the expectations of what the students need to know."
A1.4	Process	Clinical field	Patient allocation	"when I am in cardiac, I need to have patients on thrombolytic."
A1.4	Process	Clinical field	Patient allocation	"I need to nurse patients who are on dialysis."
A1.4	Process	Clinical field	Patient allocation	"valuable learning opportunities get lost because people are uncomfortable because you have just arrived in the unit."
A1.4	Process	Clinical field	Patient allocation	"is the practice enough to meet the theory?"
A1.4	Process	Communication	Guidelines	"they will assist you but is there any clear understanding what I need, as a student when I'm in the unit?"
A1.4	Process	Student	Self-regulation	"I am not being in touch. I'm just trying to work and work"
A1.4	Process	Student	Self-regulation	"challenged to look at what do I have and what am I supposed to be doing. Am I responsible for my learning?"
A1.5	Process	Clinical accompaniment	guidance	"I think that it is not so much in relation to time but in relation to clinical support."
A1.5	Process	Clinical accompaniment	guidance	"somebody to guide you through the initial processes showing what you've learnt in the workshop."
A1.5	Process	Clinical accompaniment	guidance	"you need a competent person to guide you through that process"
A1.5	Process	Clinical accompaniment	Structured clinical guidance	"Maybe a workshop can be used as a process to help us catch up...maybe a workshop shouldn't last for only six hours, but it should last the whole day"
A1.5	Process	Clinical accompaniment	guidance	"one x-ray and one ECG...and one ABG"
A1.5	Process	Clinical accompaniment	Objectives	"I don't just want somebody to just sign my procedures. No I want to be a competent ICU sister."
A1.5	Process	Clinical facilitator	Availability	"when you phoned...she couldn't come because she was somewhere else."
A1.5	Process	Clinical field	Updating	"It's about maintaining them as current and how you are going to do it and how you are going to involve your CNS and

Participant	Theme	Sub-themes	Concepts	Quotation
				your unit managers and your senior staff in the ward."
A1.5	Process	Clinical field	Reluctance	"the portfolio is not an issue. It's the humans behind the portfolio."
A1.5	Process	Clinical structured day	Peer teaching	"collaborative effort to learn and achieve, also for students to start presenting in those workshops...you have to learn how to use the product"
A1.5	Process	Communication	Planning	"this is my involvement and these are my days when I'm available for you."
A1.6	Process	Clinical field	Rotation	"when we finished with cardiac I was still stuck in cardiac."
A1.6	Process	Clinical field	Rotation	"it would be nice if you are doing the cardiac (system) in college and be in the cardiac unit,"
A2.1	Structure	Assessments	Summative	"definite finals only to be done in second year"
A2.1	Structure	Assessments	Peer	"we don't cover peer assessment... I think it would be a good idea to do a peer assessment before you do the CPCA"
A2.1	Structure	Categories	Early start	"I would facilitate it to be used already in the first year not only to come as the only clinical component within the second year of study."
A2.1	Structure	Categories	Specialities	"I would make definite categories on your specialities; cardiac, respiratory...and also with pharmacology not just a list of drugs"
A2.1	Structure	Objectives	elementary objectives	"even if it is the learning opportunities not necessarily your procedures"
A2.1	Structure	Objectives	elementary objectives	"even know... the physical assessment"
A2.1	Process	Clinical accompaniment	Structured Clinical Guidance	"if you had like a structured clinical guidance in how to present a blood gas"
A2.1	Process	Clinical accompaniment	Clinical Nurse Specialist	"I really do feel that there is a place for a CNS in each unit and without a CNS you go into a unit and although you are meant to be learning different things you don't actually learn them because there is no one there that actually has the time to say..."
A2.1	Process	Clinical accompaniment	Reflection	"you could bring it in with mentorship because I think within the different specialities...that is severely lacking."

Participant	Theme	Sub-themes	Concepts	Quotation
A2.1	Process	Communication	Planning	"I think that would be a good idea that each unit manager actually receives an email...purely identifying what the students need to learn within their period of training."
A2.1	Process	Student	Emotional growth	"as far as emotional preparedness emotional maturity it doesn't touch it at all."
A2.1	Structure	Objectives	elementary objectives	"there are surgical procedures you need to view if you have...you can sign those of in the first year"
A2.2	Structure	Assessments	Peer	"it would have been good to hear... how (the other peers) view my presentation."
A2.2	Structure	Feedback		"we did that mock clinical assessment, but there was no feedback"
A2.2	Structure	Feedback		the feedback was not constructive because you end up more confused than you were before you did he assessment"
A2.2	Structure	Objectives	elementary objectives	"doing the basic things like few x-rays, few ECGs, few blood gases"
A2.2	Structure	Objectives	elementary objectives	"I am working ICU but haven't trained yet but the ICU that I am working in say Neuro, why can't I do the neuro things in the first year"
A2.2	Structure	Objectives	elementary objectives	"we were given specific objectives to meet before our first CPCA... five ECGs, blood gases and chest x-rays"
A2.2	Structure	Reflection	1st day reflection	"scared of ICU because the sisters there are serious"
A2.2	Process	Clinical field	Sign-off	"you work weekends, you work night duty whereby you are unable to see the clinical facilitators."
A2.2	Process	Student	Debriefing	"maybe once in two or three months I sit down with someone and talk about my life as a whole"
A2.3	Structure	Categories	Comprehensive disciplines	"you can mix the medication and also the nursing care plan...is where we would forget about it"
A2.3	Structure	Objectives	elementary objectives	"start by actually getting to their medication"
A2.3	Structure	Reflection		"it has to be there."
A2.3	Structure	Reflection	1st day reflection	"you feel lost and scared, you see this very sick patient"
A2.3	Structure	Reflection	progress	'very proud"
A2.3	Process	Clinical accompaniment	prepare for assessment	"to see that mind map that you have done...your pathophysiology"
A2.3	Process	Clinical facilitator	Availability	"use the hospital clinical facilitators"

Participant	Theme	Sub-themes	Concepts	Quotation
A2.3	Process	Clinical field	Sign-off	"you will work for two days without signing off anything"
A2.4	Process	Clinical accompaniment	Structured Clinical Guidance	"you need guidance in the first year as well"
B1	Structure	Assessments	Assessment readiness	"they were not ready to be assessed in the first place and the second thing is that she is...what is her evidence that she is prepared to be assessed?"
B1	Structure	Categories	Specialities	"I don't know if you can structure it in disciplines. If you are at cardiac, these are learning opportunities"
B1	Structure	Objectives	elementary objectives	"before you will be allowed to do the first CPCA... you must be marked competent in these procedures"
B1	Process	Clinical facilitator	Guidance	"part of the problem is us. How do we utilise the POE with them? It is not a continuous learning curve."
B1	Process	Communication	Guidelines	"overwhelming for them in the beginning of the course...they don't realise it should be actually a learning guide; guide their learning opportunities in practice"
B2	Structure	Assessments	Peer	"we should look into something like peer feedback as well."
B2	Structure	Case study	Chart review	"the ICU chart is a case study in its own"
B2	Structure	Categories	Objectives	Structure of "the POE depends on your objectives."
B2	Structure	Categories	Insert	"portfolio be where the student slot in what they have achieved and what they haven't, more than just a signature"
B2	Structure	Clinical skills		"you can't have a critical care nurse without clinical skills"
B2	Structure	clinical skills		(handover)
B2	Structure	Feedback		"I think instant feedback is quite important."
B2	Structure	Objectives		"what is the point of POE?...to prove that I've grown and learnt and taken accountability for my own learning"
B2	Structure	Objectives		"the POE should be enabling rather than punishment"
B2	Structure	Reflection		"What did you learn today? What questions did you ask?"
B2	Process	Clinical field	Sign-off	"simulate in the beginning of the year for practicing and do self-assessment and peer assessment and it is organised...You practice the simulation, when you have this one learning opportunity..."

Participant	Theme	Sub-themes	Concepts	Quotation
B3	Structure	Case study	With reflection	"at the end of it let them do a case study and write out the nursing care that they actually implemented on this patient and then what they could have improvised or done better on that patient."
B3	Process	Communication	Guidelines	"the fact that they don't understand how to utilise the POE"
B4	Structure	Case study	One/ discipline	"I like your case study idea and I think it should be done on a few patients but we can't do it on every patient...but we can maybe just ask them one or two questions"
B4	Structure	Reflection		"I feel they use the portfolio as a list of what they have done, not whether they have done it good or bad."
B4	Structure	Reflection		"there is nothing that prompts them to say: 'You know I didn't do it as well as I could' There is no evidence and no prompting ..."
B4	Structure	Reflection		"you must use the opportunities but that opportunity should be followed by a reflective exercise or something"
B4	Structure	Reflection		"the portfolio not only ask you to sign for the CABG but to ask her: 'what did you do great today? What didn't you understand? What did you do wrong and what was the action plan on each of those things?'"
B4	Structure	Reflection		"I want to know what are you going to do about this, but when and how and I want you actually to develop responsibility"
B4	Process	Clinical facilitator	Availability	"it can't be only our responsibility because we don't see them enough."
B4	Process	Clinical field	Objectives	"when I am not there that learning still takes place at the bed"
B4	Process	Communication	Guidelines	"so long as you make a dot on the paper and the patient doesn't die and the family doesn't complain, they sign it."
B4	Process	Student	Self-regulation	"do you know what the sodium in this patient means? Even if I'm not there."
B4	Process	Student	Self-regulation	"I struggled this year a lot with my students - this total dependence on the CF to tell them 'you are right or wrong'"
B5	Process	Student	Self-regulation	"some of them don't know how to plan"
B6	Structure	Assessments	Peer	"shouldn't we use the ICU students to help evaluate...because when did we start learning? The moment we started to evaluate other people"

Participant	Theme	Sub-themes	Concepts	Quotation
B6	Process	Communication	Guidelines	"give them strict guidelines... (With targets)... it depends on how busy you are..."
B6	Process	Communication	Guidelines	"if a new CF get that POE, she must know exactly...What is going to happen, how is it going to work"