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Portfolio development as a method of learning, assessment and evaluation in clinical Nursing Education in Kenya

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Abstract

In the last few years, there have been remarkable innovations in the field of Nursing education and practice where education has experienced paradigm shift from being a traditional teacher-centered process to one that is student-centered. Nurses globally, are required by their professional bodies to maintain a professional portfolio to reflect on their own development of knowledge and skills over time and present evidence of competencies for career development. With the advent of online learning, e-portfolios have become popular than showcase portfolios with the advantage that in e-portfolio reflection is involved. This article is desk top research that reviewed several related literature. The study aimed at determining portfolio development as a method of learning, assessment and evaluation in clinical Nursing Education in Kenya. Students perceive portfolios as a representation of gathered and presented hard evidence and specific data about ones' learning. The study identified challenges in development of portfolios as; reluctance of the student to engage in self-reflection and time-consuming aspect of compiling, lack of writing skills and ethical issues. In conclusion, the use of a clinical portfolio by students demonstrate the uniqueness, empowerment and self-evaluative control. Therefore, the clinical portfolio has been seen to be responsive to student needs through self-directedness in constructing one's learning and creating meaning from their clinical knowledge within the practice environment.

Key words; *Portfolio development, perception, challenges, Evaluation*

1.0: Introduction

In the last few years, there have been remarkable innovations in the field of Nursing education and practice. Education has experienced paradigm shift from being a traditional teacher-centred process to one that is student-centered (Elango, 2005). Nurses globally, are required by their professional bodies to maintain a professional portfolio to reflect on their own development of knowledge and skills over time, present evidence of competencies, and market themselves when applying for career ladder positions or new jobs in nursing. Also, in the area of assessment there has been a shift away from assessing knowledge towards a more competency-based assessment.

There is a wide variety of methods of education and training to choose from and portfolio-based learning is becoming increasingly popular among educationists (Parboosigngh, 1996). A portfolio is a collection of written accounts of events and activities experienced by an individual and compiled in form of a journal (Elango, 2005). The portfolio is used not only as a document of evidence of written accounts but also as an effective learning tool in Nursing Education. The theoretical principles underlying portfolio based learning is experimental learning (Dennison, 1990). This implies that, any evidence of learning is collected in the portfolio as evidence that reflective learning has taken place.

Portfolio writing may also include details of learning objectives, learning resources and strategies that learning might be accomplished or assessed (Elango, 2005). Portfolio -based learning has several advantages, it enables learners to act and learn autonomously and allows them to assess their strengths and weaknesses, allows them to identify and meet their learning needs and build an education plan for the future. The role of medical educators today is not to a greater extent to impart knowledge but to ensure that learning has taken place and since the portfolio offers such an opportunity to assess what students have learnt, it has become an acceptable learning and assessment tool in medical education (Parboosigngh, 1996).

A professional portfolio contains materials that document the nurse's competencies and experiences and illustrate the career path of the nurse. Artists, photographers, designers, and other professionals use portfolios to showcase their work for clients and potential employers. Portfolios in nursing accomplish the same purpose; they showcase the nurse's background and expertise for others for review.

The Commission for University Education (CUE) in Kenya is a body responsible for quality assurance in University education institutions in the country, and the emphasis placed on the quality of the product of learning programmes (CUE, 2014). Teachers are engaged in restructuring the educational programmes, and the assessment and evaluation reform debate continues. Teachers are expected to use research evidence, innovative teaching and evaluation methods that encourage collaborative education and the development of lifelong learning skills. Outcomes-based education raises a number of questions about the learners and the employer's expectation of higher educational programmes. For the learner to be efficient and fit well into the working world, how to integrate the students' self-assessment with clinical teachers' assessment must be revisited.

The Moi University School of Nursing graduate school was started in the year 2006 and uses the clinical portfolio for assessment of students learning. A needs assessment indicates that the students did not have a clear understanding on the usefulness of the clinical portfolio as a tool for self assessment and for learning. Secondly, it was also identified that students experience challenges in developing and maintain one's own clinical portfolio. Literature review was conducted on portfolio development as a method of learning, assessment and evaluation in clinical Nursing Education.

2.0: Main Objective

This article aims at determining portfolio development as a method of learning, assessment and evaluation in clinical Nursing Education in Kenya

2.1: Specific Objectives

The review aimed to:

1. Determine students' knowledge on developing and maintaining a portfolio
2. Identify students' perceptions on the development and use of portfolios
3. Identify challenges encountered in developing and maintaining a portfolio

2.2: Theoretical basis of the portfolio approach

The theoretical basis of the portfolio approach in this framework is underpinned by the four assumptions of the theory of adult learning and the constructivist approach (Knowles, 1975):

- (i) The student is self-directed
- (ii) The student's past experiences are a rich resource for learning
- (iii) Readiness to learn develops from life tasks and problems
- (iv) The student demonstrates curiosity and is self-motivated to grow and achieve

According to Knowles (1975) and Cayne (1995) even if everyone does not have these tendencies, portfolio preparation can help to nurture and develop them, given a facilitative climate. The portfolio approach is based on experiential learning where the learner is actively involved with the realities being studied. Kelly (1996) suggests that portfolio development put students in control of their continuing professional development. However, there are potential benefits and challenges in the process of portfolio development.

IV. DISCUSSION

3.0: Categories of portfolios

There are three general types of student portfolios: Career, Assessment, and Development. Each of these has a specific focus or "purpose," and one portfolio will never be able to fulfill all three purposes at once; rather, the key to any successful portfolio is keeping the portfolio focused and concise. A well-organized portfolio demonstrates the clear and quality thought that went into producing the portfolio, making it easy for reviewers to understand more about the author.

3.1: Career Portfolio (Professional Portfolios)

They showcase work and supplement job applications. The work samples give potential employers a better idea of the portfolio owner's critical thinking, reflection, and process skills. Students are often quite motivated to create this type of portfolio, because they can easily perceive the direct benefit to them by getting a job.

3.2: Assessment Portfolio

Demonstrate the skills students have learned in a particular class or program, particularly "soft skills" such as critical thinking and interpersonal skills that are difficult to quantify.

Often used in place of a final exam, project, or paper. Students tend to be as motivated to create assessment portfolios as they are to complete a test or a project; their benefit is to pass the class or graduate from the program may include reflection component. It is suitable for students whose instructors are looking to test their achievement in certain academic areas, it's an assessment portfolio.

3.3: Development Portfolio(Reflective or Self-Assessment portfolios)

Used as a forum for students to think out loud about their experience, their skills.

It is useful in teaching students the characteristics of good reflection. Students may not be very motivated to complete reflective portfolios; it is difficult to convey the benefits of reflection such as the ability to articulate one's skills and abilities and generally, only students given to personal reflection (e.g. journaling) are internally motivated to complete a reflective portfolio.

3.4: Developing a clinical portfolio

It is only the student who can decide what goes into their portfolio. Portfolio development placed control and responsibility in the hands of the students (Murray, 1994; Barrow, 1993; Candy, 1990).

Barton and Collins (1993) identify four categories of evidence for inclusion in the portfolio. These are artefacts, reproductions, productions and attestation. Artefacts are identified as products constructed as part of the learning experience. They generate the substance of the construction of the student's understanding. The type of information students seek as artefacts may also be indicative of the type of learner they are, visual or auditory, surface or deep, reproductive or transformative.

Students may also gather research articles, pamphlets, ward-produced documents or information from other health professionals; view videos; develop client specific assessments or health education material; produce audio or video recordings; generate questionnaires or conduct research projects. The range of artefacts that a student can access to substantiate their range of knowledge, skills and affective development is limited only by our imagination.

Reproductions are documents describing typical events which portray the experience of the portfolio developer. Within this section some students have used photography, their own art work, such as sketches and diagrams, poetry or essays (Barrow's 1993).

Production documents within the clinical portfolio are produced particularly for the portfolio. These maybe such items as a learning contract, extracts from journal writing or captions. Barrow's (1993) believes the production category is the essence of the portfolio allows the developer to tell their story of the why, how and what worked or went wrong and how they felt about this. In the production category students can display their "thoughtful knowhow" through explanations of what the evidence represent. The evidence provides the building blocks, on which the students construct, reflect and reconstruct their knowledge development. Some students may use concept maps to display how they have arrived at particular answers. Whatever means the student uses to demonstrate evidence and process of learning, the production category infuses the portfolio with meaning.

Attestation is evaluative descriptions of the developer's work which are created by the developer or others vouching the authenticity of the specific claims made throughout the portfolio. These can take the form of recommendations, peer reviews, other practitioners or the clinical teacher's evaluations (Barrows, 1993).

Gerrish (1993) identifies personal objectives, a learning diary, self evaluation of competencies and comments by supervising staff as the tools which contribute towards providing a comprehensive picture of student progress and performance". Other authors (Barrows, 1993; Murray, 1994 and Cooper, 1995) suggest that a statement of purpose at the beginning of the portfolio be articulated with the overall goals and prospective outcomes of the portfolio.

Given the diversity of potential products to include in a portfolio and the multiple ways it can be used to demonstrate understandings of problem situations, it does become confusing for the developer to decide on just what to put into, and leave out of, the portfolio. The unpredictability of clinical settings can create an extraneous amount of "evidence" within the portfolio. In the initial development of a portfolio some students find it necessary to gather and hoard anything remotely connected to their perceived development. The portfolio is not a folder full of photocopied articles, drug information sheets, check- lists, assessments of numerous patients or several testimonials from staff. In the development of the portfolio one needs to present evidence in a concise and selective manner. Too much information can create, as Wolf (1991) notes, "a thick and unwieldy collection of documents and materials that would be indecipherable to anyone other than its owner". On the other hand Murray (1994) warns that if the portfolio becomes too streamlined it runs the risk of becoming "sterile". He goes on to say that a useful portfolio merges artefacts and reflections from the experience. More importantly it illustrates how the reflections on the artefacts demonstrate learning for the portfolio owner. It forces the student to become discriminatory selecting a range of "evidence" that demonstrates achievements, failures, insights and perceived progress yet to be achieved. As the students progress throughout the course they become more selective and present precise, relevant evidence of their learning development and outcomes.

Students have devised some interesting and creative ways to present their portfolios. They have used; colour coded entries; dividers for different sections, such as each placement they have been to, or set it out in sections that indicate learning goals, lists of artefacts collected or developed, journal extracts or activities they undertook in each clinical venue. For some students it is a way to show their artistic abilities as they created very personal and graphic covers or artefacts for their portfolios. Supporting the students' creativity and learning endeavors is therefore paramount.

The role of the clinical teacher is to guide and encourage, to challenge and question, and facilitate the student's development and understanding of concepts through the use of the clinical portfolio (Sadlo, Warren and Agnew, 1994). By generating an environment of trust the clinical teacher can extend student's learning by creating an atmosphere of freedom. This provides an opportunity for students to take risks, make choices and provides compelling evidence of developmental competence in nursing practice.

3.5: Types of Portfolios

Portfolios have been identified as a general assessment tool in nurse practitioner education, which could be refined for competence and capability learning. Until recently, portfolios were also a requirement for nurse practitioner authorization (Gardner, 2004a). While successful completion of a Masters level course is now considered sufficient for authorization by state and territory accreditation bodies (Gardner, personal communication), e-portfolios may be helpful for nurse practitioners for employment purposes and documenting lifelong learning (Byrne, 2007).

Electronic portfolios have two main uses: formative, as a tool to document a process of learning or individual learning journey; or showcasing to present evidence of competence for employment or professional registration (Butler, 2006; Marcoul-Bulinson, 2006). The e-portfolio was initially used as a showcasing tool to guide professional development planning (PDP) and lifelong learning. With the advent of online learning, e-portfolios also became popular in educational settings. Learning e-portfolios differ from showcase portfolios in that reflection is involved (Hartnell-Young 2006; Marcoul-Bulinson 2006). While reflection has been defined in many different ways, most authors refer to Dewey's (1933, cited in Moon 1999) definition as a starting point:

The e-portfolio is intended to stimulate learning processes or outcomes in which reflection plays a role. For example, educational frameworks used in conjunction with e-portfolios, such as constructivism (Emmett et al 2005), adult learning (Joyce 2005) and deep learning (Doig et al 2006) rely heavily on reflection to generate desired learning outcomes. In nurse practitioner education adult and constructivist learning, or variations on these themes, are central to teaching and learning, which suggests an e-portfolio for learning and assessment would capitalize on current analogical methods in NP education.

A UK based study identified four different types of portfolio structure used in educational courses (Endacott et al 2004), although it was not stated whether the portfolios were electronic. The simplest structure was called the *shopping trolley*, which was essentially a disorganized showcase portfolio. Reflective pieces were rarely included in shopping trolley portfolios and artefacts were not connected to competency standards or learning goals. Better structured was the *toast rack* portfolio, which was still essentially a showcase portfolio, although artefacts were organised under categories such as competencies or reflective accounts. The *spinal column* portfolio involved a series of competencies or learning goals, which served as the vertebrae in the metaphor. Artefacts were tied to each competency and candidates were required to demonstrate learning and competence via reflective writing pieces. As such the *spinal column* represents a learning portfolio, rather than simply showcasing competence. Lastly, the *cake mix* portfolio involved an underpinning reflective narrative written by the student that linked all of the artefacts together. This model was most frequently used.

Use of electronic portfolios in developing competence and personal qualities in postgraduate nurse education. The existing literature on e-portfolios in postgraduate nursing settings demonstrates the value of this tool in learning and showcasing competence. Capability was not explicitly researched in the e-portfolio and postgraduate nursing literature; however some studies mentioned personal qualities that alluded to capability traits.

Anderson et al (2008) reviewed the use of an e-portfolio designed by Gardner (2007) for use with nurse practitioner students at Queensland University of Technology. The portfolio followed the *spinal column* structure and used the national competency standards as anchors for reflective narrative and evidence. Student experiences of the e-portfolio were solicited via interview and survey. Thematic analysis of responses

indicated the competency standards were of benefit to NP candidates in shaping learning and reflection, understanding the expanded scope of the NP role and planning future professional development. Students identified additional uses of the e-portfolio including lifelong learning, an educational tool for subsequent cohorts of NPs and identifying research needs.

A study by Naude and Moynihan (2004) at Curtin University, Western Australia provided an analysis of the e-portfolio experience amongst 32 postgraduate nursing students undertaking a Corporate Nursing Leadership Development program. The portfolio exercise included a student resume, an outline of personal and professional goals pertaining to the coursework and self assessment of coursework specific core competencies. Self reflection via activities such as evaluation of skills and setting learning goals was thought to be the most valuable aspect of the process, reported by 22 students. Practical applications such as applying for jobs and development of computer skills were also considered to be beneficial by students. However, pre-existent information communication and technology skills were limited amongst the cohort, which may have influenced the perception of students who described the task as time consuming and difficult. One student referred to the possibility of using the e-portfolio to demonstrate competence for professional registration. While Naude and Moynihan did not require students to link self reflective narratives to relevant competency standards for authorisation, the e-portfolio still represents a *spinal column* structure as students were guided by coursework competencies and self directed goals.

The focus on personal goals and qualities may be beneficial to NP candidates in raising awareness of capability traits and their subsequent development. This was supported by student reports of enhancement of characteristics describable as capability including reflective thinking, confidence, self directed learning, new ways of thinking and team work (Naude and Moynihan 2004). Similarly, a case study described in Emden et al (2003/2004) implied that portfolios may be used to facilitate the development of capability in a professional setting. Specifically, portfolios were introduced to senior nursing staff at Whyalla Hospital and Health Services to promote personal and organisational development, which was also described as “personal and professional attainment of wisdom” (p.130). While the initial focus of the portfolio was to provide evidence of competence, the focus of the portfolio was rapidly shifted to personal development, which was deemed more meaningful by participants.

In international literature, there are two examples of e-portfolios in NP pre-registration courses. Joyce (2005) provides an example of a *spinal column* portfolio in a NP education setting. Specific aims of the portfolio were to create a bridge between theory and practice, provide evidence of core concepts and competencies stipulated by national standards and to facilitate personal development planning (PDP) amongst students. As a learning component of a clinical practice subject, students were prompted to recall and reflect on a clinical experience in their writing and link it to the core concepts and competencies.

The model of action learning and clinical practice has been used in Australian NP education (Gardner et al 2004a, 2004b) and the above study demonstrates how e-portfolios can be integrated into the existing model. In addition, the portfolio framework used by Joyce’s (2005) students could be expanded upon to include reflective narratives to demonstrate capability in practice.

Hayes, Chandler, Merriam and King (2002) adopted a different approach to portfolios in their study and described the experience of one student who completed a *cake mix* style portfolio. The student was required to provide evidence of prior education and development to stimulate reflection. By beginning with employer

references, educational certificates and awards, the student engaged with the development of an e-portfolio in the form of a reflective narrative, supported by a mentor within the faculty. The construction of a reflective narrative based on personal work history may be especially beneficial to postgraduate students, both to affirm and validate their commitment to their career and reasons for commencing postgraduate study and to identify skill areas in need of further development (Tigelaar et al 2006).

3.6: Portfolio assessment

While the *spinal column* and *cake mix* portfolio structures benefit students by bridging theory and practice, facilitating skill development for reflective practice and providing evidence for authorization, these structures are complex to assess. These complexities are also evident in the measure of competence in nursing, which is evaluated from a holistic perspective and views the professional in their practice context (McMullan et al 2003). Reliable and valid portfolio assessment is difficult due to the qualitative nature of content and the complexity of competence, which is not amenable to quantitative analysis. To overcome this issue Endacott et al (2004) and Webb et al (2003) suggested the use of qualitative indicators of research rigor. These are credibility, dependability, transferability and confirmability.

Webb et al (2003) developed a qualitative portfolio assessment process based on triangulation of data in the form of multiple sources of evidence for each competency and a documented internal and external audit system involving several assessors and external examiners to ensure consistency between assessors. Data was further triangulated by implementing the process across four sites for undergraduate nursing and midwifery students. In Webb et al's (2003) study and similar research in the medical field (Driessen et al 2006; Driessen et al 2005) the focus of the research has been the assessment process, rather than portfolio content, however e-portfolio content for NPs would be required to be informed by NP educational standards (Gardner et al 2004a).

3.7: Potential Benefits of the Portfolio

There is general agreement about the value of keeping a portfolio. The literature supports a number of potential benefits of the process of portfolio development. The following are Included:

1. As a means of facilitating the development of students' accountability and autonomy

It has the potential to encourage students to take more responsibility for the direction, progress and quality of their learning, in addition to the development of better study skills (Harris et al, 2001). It will thus encourage greater student involvement in decisions about the curriculum as well as about individual progress.

2. As a focus for discussion

Used as a focus for discussion between the student and facilitator it can help strengthen this relationship, as well as leading to a better learning experience for the student (Glen & Hight, 1992).

3. As a vehicle for the development of reflective skills

Reflection on experience needs to be central to the portfolio development. This reflection needs to be a conscious and deliberate strategy aimed at understanding and learning from clinical practice. Critical incident analysis is an accepted approach to reflecting on practice in a systematic way. Students can then be encouraged to share their reflections in small peer groups (Harris et al, 2001).

4. *As a means of assessment*

Portfolios have been used in the assessment of nursing practice at post-registration level. Murrell et al (1998) found that not only did portfolios enable theory and practice to be brought closer together, but that they could lead to improvements in practice and facilitate students taking control over their own learning.

3.8: Perceptions on development and use of portfolios

The portfolio is perceived as a representation of gathered and presented hard evidence and specific data about one's learning (Seldin, 1991). Murray (1994) extends Seldin's (1991) definition by indicating that a portfolio is a collection of documents that represents the best of one's discipline and provides one with the occasion to reflect on his or her discipline with intensity. The portfolio becomes a tool for an individual to reflect on real client "problems" in real clinical contexts. Urbach (1992) reports the intended outcome goal of a portfolio is to "describe, through documentation over an extended period of time, the full range of your abilities". In addition, Spandel (1992) views the portfolio as a collection of individual work that documents the learner's perspective on their efforts, progress and achievement.

Portfolios therefore present an opportunity for the student to investigate and reflect on individual learning related to clinical problems of practice that they find unique (Barrow, 1993). Ohlhausen and Ford (1992) identify that the portfolio "engages students in a continual process of self reflection, goal setting and attempts to change". This view is supported by Gerrish (1993:173) as she identifies the main aim of the portfolio is "to maximize learning by providing the student with the opportunity to maintain continuing awareness of their progress". Boud (1990:185) promotes self assessment schedules which provide opportunities for students to "reflect on their learning and give a public account of what they have learned." In advocating self directed and student centred learning Boud (1990:186) believes a framework, such as a portfolio, "focuses attention on the goals and criteria of learners, elicits evidence of achievement and provides an opportunity for learners to make judgements about how successful they may have been in meeting their goals".

In making judgements about their learning, one of the most important outcomes for the students of a portfolio is self reflection and the construction of clinical knowledge. The capacity to reflect upon previous representations and their construction is essential in developing and evaluating more adequate conceptions. (Oeschle, Volden and Lambeth, 1990). Cayne (1995) believes that, while portfolio assessment has been identified as fostering self awareness, personal growth and the stimulation for independent learning, students encounter a lot of challenges in developing and maintaining one.

3.9: Challenges in developing of the Portfolio

The following are some of the challenges of Portfolio development as identified in the literatures. They are as follow:

1. *The reluctance of the student to engage in self-reflection*

Focusing on fears and weaknesses as well as strengths may be seen as threatening by some students (Snadden et al, 1996; Karlowicz, 2000).

2. *The conversion of terminology from the familiar to the academic*

Lack of writing skills in portfolio development where credit is awarded on the basis of written presentation (Budnick and Beaver (1984)

3. *Time-consuming*

The amount of evidence to be provided, completing the portfolio and assessment is time-consuming, have a negative effect on the student's motivation (Mitchell, 1994 and Oechsle et al, 1990)

4. *Ethical issues of privacy and confidentiality*

The honesty of entries has been questioned, thus questioning the validity and credibility of the portfolio as an assessment tool. Portfolio entries may be censored if students are not assured of confidentiality (Gannon et al, 2001).

3.10: Evaluation of the Clinical Portfolio

As an assessment technology portfolios work best when students clearly consider the essence of self directed inquiry. Portfolios recognize the centrality of the learner to the learning process. The focus of the portfolio is on what stimulates students' interest in the clinical environment; how they seek solutions to these problems; how students use resources to generate understandings of problems in practice and how experiences of the problem generates new understandings and actions. Hence students' portfolios are assessed in terms of how well these students can articulate and demonstrate their understanding to solve perplexing individual problems of practice. The portfolio also serves as a valuable tool for diagnosing student learning difficulties.

The portfolio is documented evidence of the construction of a student's own understandings; therefore it is only the student who can determine what is appropriate. This creates making judgements on the quality of the learning both difficult for the student and the clinical teacher. Boud (1990) notes it is in the area of self assessment that students have the most difficulty. He (1990) acknowledges that the "involvement of learners in making decisions about criteria which are appropriately applied to their work and their making of judgements about achievements is the key characteristic of self assessment". Engagement in such activities encourages students' development as independent learners and critical thinkers (Boud, 1990).

Valencia and Place (1994), however, indicate that it is critical to establish common anchors, or criteria for determining the process and outcome of the portfolio. Because of the variable nature of student's self assessment combined with many of our teaching staff coming to terms with the role and purpose of the clinical portfolio, a set of criteria was established. The criteria address the developmental and individual character of students' learning. Elements of the criteria include:

- (i) The student is motivated to maintain and contribute to the clinical portfolio.
- (ii) The student incorporates previous learning experiences into the ongoing development of the portfolio.
- (iii) Contributions to the portfolio reflect meaningful learning, including demonstrations of the students' learning processes. ga concept map.
- (iv) The portfolio is presented and maintained in an orderly and concise manner.
- (v) The student critiques a broad range of artefacts, values the significance nursing research has for nursing practice.

(vi) The student justifies nursing practices using appropriate research findings.

(vii) The student values and demonstrates the significance that the clinical portfolio holds to demonstrate ongoing personal and professional development.

The developmental aspects to each criteria acknowledge that the student could be demonstrating unsatisfactory progress, that they are making progress, have reached an expected standard, attained an above expected standard or that exceptional progress has been made. The criteria acknowledge that the student can choose the form of evidence they wish to present but, they must show how the evidence they present relates to the knowledge, skills and attitudes they are claiming to possess. Following self assessment the portfolio is jointly assessed with the clinical teacher and a grade is negotiated. This is perhaps where a deviation from PBL and constructivism occurs. A major criticism of the clinical portfolio is that a grading system has been applied to it. While advocates of PBL (Margetson, 1993; Barrows, 1985; Sadlo, Piper and Agnew, 1994) recommend the noncompetitive nature of assessment processes, the 'real world' of universities and employment opportunities necessitates grades be appointed to learning outcomes. This should not be seen to negate the importance of self assessment in PBL. The main thrust of the portfolio is still to help students self assess their learning in preparation for the lifelong need to be reflective and self critical (Candy, 1990, Mills-Courts and Amiran 1991).

Student's verbal comments regarding the use of clinical portfolios favour the uniqueness, empowerment and self evaluative control this assessment offers them. In this sense the clinical portfolio has been responsive to student needs. The requirement for documentation to show growth over a period of time has generated enthusiasm and motivation to maintain and contribute to their clinical portfolio. However, students, like those in Cayne's (1995) study, have indicated that the portfolio is time consuming and often conflicts with the demands of the placement.

A small number of students also identified that the portfolio involves significant personal risk as unsuspecting deficiencies, imperfections and attitudes are revealed to the owner. These students were also reflective as they responded that this was also seen as a positive outcome as it identified areas for personal improvement.

4.0: Conclusions and recommendations

The development of a clinical portfolio shifts the ownership of learning to the student. With a clinical portfolio students create their own assessment documentation to explore clinical 'problems' and construct learning issues, related to these, that have personal relevance. Clinical teachers' concerns have been addressed as the clinical portfolio has allowed them access to students' previous learning experiences. This has afforded the clinical teachers an opportunity to relate previous learning outcomes to new and challenging student clinical experiences. As students identify their individual learning needs, clinical teachers can help students link these with course concepts within the clinical context. This provides a platform for both the student and clinical teacher to optimise the student's understanding and development of, knowledge, skills and appropriate attitudes to their nursing practice. For new graduates the portfolio documents evidence about how they think, construct personal learning from the clinical context, reflect and self evaluate. It displays to prospective

employers a graduates abilities, professional development and potential. Through the use of a clinical portfolio students can actively demonstrate self directedness through the ways in which they construct learning and create meaning from their clinical knowledge within the practice environment. The clinical portfolio as an alternate assessment item, for documenting student progress, generates new possibilities in understanding and developing students' interpretations of nursing knowledge and practice.

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