Portfolio assessment and evaluation: Implications and guidelines for clinical nursing education

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Abstract

With the advent of Outcomes-Based Education in South Africa, the quality of nursing education is debatable, especially with regard to the assessment and evaluation of clinical nursing education, which is complex and renders the validity and reliability of the methods used questionable. This paper seeks to explore and describe the use of portfolio assessment and evaluation, its implications and guidelines for its effective use in nursing education. Firstly, the concepts of assessment, evaluation, portfolio and alternative methods of evaluation are defined. Secondly, a comparison of the characteristics of the old (traditional) methods and the new alternative methods of evaluation is made. Thirdly, through deductive analysis, synthesis and inference, implications and guidelines for the effective use of portfolio assessment and evaluation are described.

In view of the qualitative, descriptive and exploratory nature of the study, a focus group interview with twenty students following a post-basic degree at a university in Gauteng regarding their perceptions on the use of portfolio assessment and evaluation method in clinical nursing education was used. A descriptive method of qualitative data analysis of open coding in accordance with Tesch's protocol (in Creswell 1994:155) was used. Resultant implications and guidelines were conceptualised and described within the existing theoretical framework. Principles of trustworthiness were maintained as described by (Lincoln & Guba 1985:290-327). Ethical considerations were in accordance with DENOSA's standards of research (1998:7).

Opsomming

Met die koms van uitkomsgebaseerde-onderrig in Suid-Afrika, is die kwaliteit van verpleegonderwys betwisbaar, veral ten opsigte van die waardering en evaluering van kliniese verpleegkunde, wat kompleks is en wat maak dat die geldigheid en betroubaardheid van die metodes wat gebruik word, aanvegbaar is. Hierdie artikel wil die gebruik van portefeuljewaardering en –evaluering ondersoek en beskryf, asook die implikasies en riglyne daarvan vir doeltreffende gebruik in verpleegonderwys. Eerstens, word die konsepte van waardering, evaluering, portefeulje en alternatiewe metodes van evaluering omskrywe. Tweedens, word die kenmerke van die ou (tradisionele) metodes en die nuwe alternatiewe metodes van evaluaering vergelyk. Derdens, deur deduktiewe analise, sintese en afleiding, word implikasies en riglyne vir die doeltreffende gebruik van portefeuljewaardering en –evaluering beskryf.

Na aanleiding van die kwalitatiewe, beskrywende en ondersoekende aard van die studie, is 'n fokusgroep-onderhoud met twintig na-graadse studente aan 'n universiteit in Gauteng oor hul persepsies van die gebruik van die metode van portfeuljewaardering en –evaluering in kliniese verpleegonderwys, gebruik. 'n Beskrywende metode van kwalitatiewe data-analise van opekodering, volgens Tesch se protokol (in Creswell, 1994:155), is aangewend. Gevolglike implikasies en riglyne is gekonseptualiseer en beskryf binne die bestaande raamwerk. Beginsels van betroubaarheid is gehandhaaf soos beskryf deur (Lincoln & Guba 1985:290-327). Etiese oorwegings was in ooreenstemming met DENOSA (1998:7) se navorsingstandaarde.

Background and rationale

South Africa has recently been experiencing a major educational paradigm shift from the traditional teacher to the learner-centered approach to learning that is outcomes based in nature. The outcomes-based curriculum requires the learner to evidence what he/she knows and can do, and to appreciate the acquired knowledge, skills and values. The South African Qualifications Authority Act SAQA (Act 58 of 1995) and the South African Nursing Council (SANC) are responsible for quality assurance in higher education institutions in the country, and the emphasis is placed on the quality of the product of learning programmes.

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, the nature of learning and how that learning can be assessed must be revisited (Van der Horst & McDonald, 1997:169, 170). Comprehen-

sive competence of the learner should be evaluated through varied methods of assessment and evaluation such as portfolio assessment (Wiggins, 2001:4).

According to Johnson (2000:129), in these changing times, many learners and employers are beginning to view the higher education curriculum as being too prescriptive, outdated, ungrounded, content driven, delivered by inaccessible modes and inaccessible times, and assessed against irrelevant criteria through inappropriate methods. Most of the traditional methods of assessment and evaluation make learners adopt a surface approach to learning. They are artificial and rigid, not capturing the actual changes in the learner's knowledge and skills (Biggs, 1996:348 and Tynjala, 1998:210). Traditional tests lack the ability to measure higher-order thinking skills. While multiple choice items can be valid indicators or predictors of academic performance, they too often mislead learners and teachers about the type of work that should be mastered. However, the place of traditional tests still remains (Harden & Gleeson in Nicol & Freeth, 1998: 602), and needs to be supplemented by other alternative methods of assessment and evaluation that are learner-centred.

In accordance with the constructivistic approach to learning (Peters, 2000:167), learners are encouraged to engage in dialogic interaction where they have to justify their reasoning and arguments based on evidence. Interactive teaching strategies and related assessment and evaluation methods will facilitate the development of the learner's critical and reflective thinking, a necessary skill to be learned by teacher trainers if educational standards are to be met. King and Kitchener (1997:3,78,194) advocate the use of authentic, ill-structured problems that will foster the use of higher-order thinking.

Definitions of concepts
Assessment

Assessment is a data-gathering process for measuring the learners' knowledge, performance, values or attitudes to determine the progress of the learner or to make a diagnosis of the learner's learning problems. The measurement of the data gained from the assessment process helps with the process of evaluation (Van der Horst & McDonald 1997:170).

Evaluation

Evaluation is the process of making a decision about the learning of the learner, using information gained from formal and informal assessment. Evaluation enables a teacher to answer the question: *"How good?" or "How well?"* (Van der Horst & McDonald 1997:169). According to Scriven (1991:1,3), evaluation is the process of determining the merit, worth and value of things. Evaluation is treated as a key analytical process in all disciplined intellectual and practical endeavours. Assessment and evaluation are the backbone of any educational discipline.

Portfolio

A portfolio is a selective collection of the learner's work and records of progress gathered across diverse contexts over time, framed by reflection and enriched through collaboration, which has the advancement of learning as its aim (Wolf & Siung-Runyan 1996:32,33). A portfolio is about the collection of evidence that learning has taken place (Snadden & Thomas 1998a:192).

Alternative methods of assessment and evaluation

These methods are often referred to as authentic or performance assessment approaches that offer alternatives to the traditional methods. They focus on learner processes or performance where learners solve problems that have an equivalent in their real world involving the use of resources, consultation and the integration of knowledge and skills. They are concerned with the assessment of complex performance and higher-order skills in a real life context. Learners become active partners in the assessment enterprise whereby they reflect on how they can learn meaningfully (Nicol & Freeth, 1998:602; Van der Horst & McDonald, 1997:188).

In the quest to differentiate the characteristics of the new alternative methods of assessment and evaluation and the old (traditional) methods, Wiggins (2001:4-6) provides a comparison of the two methods. The resultant differences reinforce and support the need for the method that will produce a learner who is balanced, reasonable, reflective and could make a useful contribution to society and the working world (Esteve, 2000:6).

Comparison of the traditional and alternative methods of assessment and evaluation:

- Alternative assessment requires learners to be effective performers with comprehensively acquired knowledge and skills (thoughts and feelings), while traditional tests reveal whether the learner can recognise and recall what was learned out of context.
- Alternative assessment presents the learner with a full array of activities that mirror the priorities and challenges found in the best instructional activities. These are as follows: conducting research; writing, revising and discussing papers; providing and engaging in an analysis of events; collaborating with others on a debate and discourse; and engaging in partnership with other stakeholders. Traditional tests are usually limited to pen and paper.
- Alternative assessment attends to whether the learner could provide thorough and justified answers based on evidence. The learner plans, revises and substantiates responses on typical tests, even when there are open-ended questions. Traditional tests only ask the learner to select or write correct responses…irrespective of reasons.
- Alternative assessment achieves validity and reliability by emphasising and standardising the appropriate criteria formulated collaboratively for scoring such (varied) products. Traditional tests standardise objec-

tive "items" and hence provide the (one) right answer for each item.

- In alternative assessment tests, validity depends in part on whether the test stimulates real world 'test' ability, while validity on most multiple choice items is determined merely by matching items to the curriculum content (or through sophisticated correlation with other test result.
- Alternative activities involve "ill-structured" challenges that prepare learners for the complex ambiquities of the 'game' of adult and professional life. Their higher-order thinking and problem-solving skills are facilitated. They are open-minded, encourage empathetic understanding, consider justice and strive for independence and autonomous practice. Traditional tests are more like drills, assessing static and too often arbitrarily discrete or simplistic elements of those activities.

Surely with the current revolution in higher education that demands quality assurance in education through a problem-based, constructivistic approach to learning, co-operative, community-based and outcomes-based education, the traditional methods of assessment and evaluation need to be revisited and supplemented where necessary with research-based evidenced of alternative methods of evaluation. The use of new technology, the pressure of accountability and accreditation, and the provision of the environment within the legal, ethical and professional boundaries should provide guidance in quality assurance in education.

According to Wolf & Siu-Runyan (1996:31), portfolios fit in well with the new views of learning and assessment. They are malleable enough to capture individual styles and varied contexts, and are robust enough to reflect broad and significant features of learning. They enable students and teachers to examine, discuss and reflect on their performance and perspectives. The research questions to give guidance to the study are as follows: What are the implications of portfolio assessment in clinical nursing education? How could the use of the portfolio method of assessment and evaluation be made effective in clinical nursing education?

The objectives of the study are:
- To explore and describe the implications of portfolio assessment and evaluation in clinical nursing education.
- To describe guidelines for the effective use of portfolio assessment and evaluation in clinical nursing education.

Research design and method

This study is a subsequent result of a bigger study in which a model to facilitate reflective thinking of learners in clinical nursing education was developed with guidelines for its implementation. The article serves to describe the implications and guidelines for the effective use of portfolio assessment and evaluation method in clinical nursing education. The re-search design was qualitative, exploratory, descriptive and contextual in nature.

Population, sample and sampling, data collection and data analysis

Of the thirty-five students undertaking a post-basic degree at a university in Gauteng, who were required to compile portfolios on a given topic as an assignment for the semester by using the guidelines described in the bigger study, twenty students volunteered to take part in the study on completion of the assignment to describe the implications of portfolios as an evaluation method in clinical nursing education.

Two focus group interviews consisting of ten students each were conducted (Krueger, 1994: 6-10). The participants were requested to call themselves by numbers for the sake of maintaining anonymity. They were ensured of the confidentiality of the data and they gave a written informed consent to take part in the study. Two questions were asked as follows: What are the implications of portfolio assessment in clinical nursing education? How could the use of the portfolio method of assessment and evaluation be made effective? The interviewer was purposively selected, based on her expert interviewing skills and knowledge of nursing education and qualitative research. The researcher's role was to ask probing questions in the quest to explore more in-depth information and to write field notes in order to enrich the data collected (Miles & Huberman, 1994:241).

Data was analysed by means of the descriptive method of open coding by Tech (in Creswell 1994:155). The independent coder, who was purposively selected, was given a similar protocol to analyse the data. A consensus discussion meeting was held after six days to confirm the findings. Following the completion of the data analysis, a literature review was done to re-contextualise the data within the existing theoretical frameworks (Morse & Field, 1996:106).

Measures to ensure trustworthiness

Trustworthiness was maintained by using strategies of credibility, applicability, dependability and confirmability as described by (Lincoln & Guba 1985:290-327). Credibility was achieved through prolonged engagement in clinical nursing education and by keeping reflexive field notes, and member checking was achieved by literature control using findings of similar studies done in portfolios as teaching and evaluation method to facilitate higher-order thinking skills. Dependability was ensured by a dense description of the data, an audit trail and the use of the co-encoder. Transferability was achieved by participants volunteering to take part in the study, a dense description of the method and literature review. Confirmability was ensured by audit trail and reflexivity (Lincoln & Guba, 1985:290-327).

Implications of portfolio assessment and evaluation in clinical nursing education

Clinical nursing forms an integral part of the nursing profession. It is complex and challenging since the learner has to integrate the theoretical component meaningfully into practice. *It is a hands-on learning activity where the life of the patient is involved. In clinical nursing education, assessment and evaluation play a key role in the education and training of the learner. Learners have to make informed, rational decisions and solve both structured and ill-structured problems. The clinical judgements and decisions should be reliable, valid, practical, free from bias and complete because it is the life of a patient that is at stake,* stated the participants.

The learners have to consolidate the knowledge, skills and attitudes acquired to make decisions that will benefit the patients and bring satisfaction to them (Chabeli 2001:94). *It is therefore important that the teachers should make use of a wider range of assessment and evaluation methods that will facilitate higher-order thinking skills of learners such as portfolio assessment. The emphasis should be placed on the continuous assessment of the learner's competence. The teacher should constantly monitor and provide support and guidance to the learners during the preparation and compilation of the portfolio,* stated the participants. Self-assessment, peer assessment and teacher assessment in order to examine the product and process that evidence the learners' thinking process and performance are mandatory in portfolio development (Van der Horst & McDonald, 1997:175).

Like all other teachers, nurse teachers are accustomed to the use of traditional methods of assessment and evaluation methods where evaluating the behaviour of the learners is measured instead of measuring the comprehensive and holistic competence of the learner. They still measure behaviours such as...did the learner greet and introduce herself to the patient? Did the learner check the doctor's prescription, making use of the yes/no checklist? This method is comfortable to use and to mark, but it does not demonstrate the learners' thinking process, stated the participants. Reflection on previous learning is expected from learners, otherwise a portfolio may become a little more than a scrapbook (Boud, 1995:147-149; Wolf & Siung-Runyan, 1996:31,33 and Van der Horst & McDonald, 1997:175).

In a portfolio, the work may have been selected by the learners themselves or the teacher, or through a mutual decision on the themes by both the learner and the teacher. Portfolio assessment could be used for comprehensive assessment assembled consciously from a number of tasks produced over a semester or a year (Gravett 1995:21). Portfolios could be used both as a way of constructing meaning and as an opportunity to teach the assessment of one's own work as evidenced by a citation made by a participant in LaBoskey (2000:591) "Portfolio assessment helped me to make my philosophy of teaching explicit and concrete. I became more reflective about my thought process and more confident about my opinions. A portfolio is a tangible expression of my ideas, thoughts, feelings, experiences and of my journey as a student teacher.

Learning how to bring my inner thoughts in to a concrete process and product was a good model for the work we do as teachers".

The relevant portfolios in clinical nursing education are those that merge assessment with learning, the kind of learning that involves deep understanding, reflectivity and multiple dimensions, including the moral and ethical dimensions (LaBoskey 2000:593). The educational portfolios must allow for, promote and reveal individual meaning-making. They must allow the opportunity to interact about the content and meaning of those portfolios with people who matter and who support the reflective process (Wolf & Siung-Runyan (1996:32,33); Gravett (1995:21); Boud (1995:147-149) and Van der Horst & McDonald (1997:175). *The value of portfolio assessment is best demonstrated where learners work collaboratively as a team, sharing ideas, thoughts and feelings to solve clinical problems related to a specific context,* stated the participants. Through analysis, synthesis and inference from empirical data, literature and theoretical frameworks, guidelines were described.

Guidelines for the effective use of portfolio assessment and evaluation

- As with any assessment, learners should be clear on the rationale for compiling a portfolio, and exactly what is expected of the learners.

- The first task is for the learners to assess their previous learning and accomplishments relating to the theme. This enables the learners to assess their own levels of knowledge and plan to remedy any deficits identified. Learners and teachers should provide evidence of a learning contract drawn where learning outcomes, methods, evaluations, time frames and resources to be used in order to compile a portfolio are outlined.

- The learning outcomes should relate to the professional competencies but be transformed into learner-friendly language so that the learners can see exactly what they have to achieve within the specified time frame. The processing of the portfolio should occur over an ex tended period.

- The portfolio should contain a diverse set of information gathered across a variety of learning context, content areas, and forms of communication. Otherwise, the full range of the learners' talents and interest may not be revealed. In order for the learners to negotiate a way through the course, the learning outcomes should be broken down into a manageable series of themes, which continually build upon each other.

- The learners should build upon this framework by adding their own material in the form of reading, planning collaborative projects, own research findings, artistic creations and reflective essays in which the most important ideas, skills and feelings they have experienced could be expressed. They should be able to evidence their thinking progression throughout.

- Every week, the learners should analyse and reflect on a critical incident to the learners in terms of their learning, the incident that provides the material for exam-

ining the relationship between theory and practice.

- The portfolio should serve the purpose of identifying the areas that the learners find most stressful, the areas where they received increased guidance and support, as well as the areas that provide an indication of extra work on the theme. This is subsequently used at the weekly portfolio workshops. By reviewing their progress on a regular basis, the learners gain the satisfaction of monitoring and controlling their own learning.
- Formative assessment should take place first in a monthly tutorial where learners are helped with their self-assessment in relation to their professional development and the acquisition of competence.
- There should be portfolio workshops during which learners work in small groups with or without a facilitator, and interact with peers and other related multi-disciplinary team members including the family and community members.
- By discussing their ideas, thoughts and feelings with

portfolio can become 'an episode of learning; without reflection, the portfolio may be...a little more than a scrapbook' (Boud 1995:147-149; Wolf & Siung-Runyan 1996:31,33 and Van der Horst & McDonald 1997:175).

- Portfolio assessment should be criterion referenced according to the learners' guidelines for the portfolio. The portfolio marking criteria should be mutually decided on by learners and teachers.
- The marking criteria should be sufficiently broad to encompass the individuality of each learner while ensuring that a uniform standard is met. In developing a scoring scheme and using it to evaluate the entire portfolio, a rubric as indicated in table 1 is advocated. A rubric is a scaled set of criteria that clearly define what the range of acceptable and unacceptable performances of the learner would look like. Rubric is a scoring guide that determines the quality of the answers to meet the desired performance (Van der Horst & McDonald 1997:197).

Table 1: Scoring rubric for portfolio assessment (Van der Horst & McDonald, 1997:197)

Poor	The learner did not do the task, did not complete the assignment, or shows no comprehension of the activity.
Inadequate	The product or assessment does not satisfy a significant number of criteria, does not accomplish what was asked, contains errors, or is of poor quality.
Fair	The product or assessment meets some criteria and does not contain gross errors or crucial omissions.
Good	The product or assessment meets the criteria completely or substantially.
Outstanding	All the criteria are met, and the product or assessment exceeds the assigned task and contains additional, unexpected or outstanding features.

others, the learners deepen their ability to reflect on their own work from a variety of perspectives. Each portfolio might also include reflections from others about the learners' performance. With reflection, the

Constructive, positive feedback should be provided continuously to encourage deep-holistic learning that promotes growth in clinical nursing education. The critical analysis of the compiled portfolio and the development of an action plan for future improvement is crucial.

Both the learner and the teacher should be acquainted and flexible with regard to the criteria used to determine the rubric.

Conclusion

Portfolio assessment and evaluation has proved to be valuable in developing the learner's competency and thinking skills (Johnson 2000:130). There is a need for a new philosophy of assessment and evaluation in education that never loses sight of the learner. To build such an assessment, we need to return to the roots of alternative, authentic assessments, since only a humane and intellectually valid approach to assessment and evaluation could help us ensure progress toward national 'intellectual fitness' of the learner, states Wiggins (1989:712). Wiggins states that for as long as we hold on to the traditional, simplistic monitoring tests for reaching our intellectual standards, the learner's performance and teaching, and our thinking and discussions about assessment will remain flaccid and uninspired.

It is recommended that further research be undertaken to address the validity and reliability of portfolio assessment in nursing education, to describe implications and guidelines for other alternative methods of assessment and evaluation that are learner-centred in a specific context in order to assist teachers in the implementation of these methods.

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