



Nursing students' experiences with the use of authentic assessment rubric and case approach in the clinical laboratories



Xi Vivien Wu ^{a,*}, Mary Anne Heng ^{b,2}, Wenru Wang ^{a,1}

^a Alice Centre for Nursing Studies, Yong Loo Lin School of Medicine, National University of Singapore, Singapore

^b National Institute of Education, Nanyang University of Technology, Singapore

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SUMMARY

Background: One current challenge for nurse educators is to examine effective nursing assessment tools which integrate nursing knowledge into practice. Authentic assessment allows nursing students to apply knowledge to real-life experiences. Contextualized cases have engaged students for preparation of diverse clinical situations and develop critical thinking skills.

Aim: This study aimed to explore nursing students' experiences and learning outcomes with the use of an authentic assessment rubric and a case approach.

Methods: An exploratory qualitative approach using focus-group discussions and an open-ended survey was adopted. Sixteen nursing students participated in three focus-group discussions and 39 nursing students completed an open-ended survey.

Results: Nursing students noted that an authentic assessment rubric with a case approach provided clarity for their learning goals; built confidence; developed knowledge, skill competencies and critical thinking skills; increased awareness of caring attributes and communication skills; and enriched and extended learning through self-, peer- and teacher-assessments.

Conclusions: These findings provide rich insights for nurse educators and curriculum developers in the use of an authentic assessment rubric and a case approach in nursing education.

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Introduction

Assessment in nursing education is the reflection of the quality and quantity of learning and is concerned with students' progress and achievement standards (Löfmark and Thorell-Ekstrand, 2014). The challenge for nursing educators is how to apply assessments effectively in assisting students with integration of theoretical knowledge and professional practice.

Traditional assessments are pen-and-paper tests, and they are commonly used to assess knowledge attainment, place students in different programmes and diagnose potential learning problems. Research, however, has shown that traditional assessments do not provide clear indicators of students' problem-solving, reasoning and critical thinking skills, or recognize their work habits, ability to

cooperate and sense of responsibility (Vanaki and Memarian, 2009). Authentic assessment is designed to ascertain students' ability to apply the knowledge to real-life experiences (Liu et al., 2007). Authentic assessment allows students to have alternative ways of responding, interpretations and solutions. Furthermore, authentic assessment provides teachers with the opportunity to introduce new instructional methods that favour investigation, exploration and students' creation of knowledge, as well as metacognition and self-reflection (Vanaki and Memarian, 2009).

In Singapore, changing healthcare needs over the years have led to a more highly educated nursing workforce. Currently, nurses are better educated with about 34,500 nurses having a bachelor's degree (Aronson et al., 2012). A better educated nursing workforce brings about quality patient care because nurses are better able to contribute to and make clinical decisions. To transform nursing education, a collaboration among nursing educators and healthcare nursing professionals must work together to enhance nursing students' education. Benner, Sutphen, Leonard and Day (2009b) advocated the use of both formative and summative assessments in laboratories and clinical settings to assess students' ability to solve clinical problems. Contextualized cases also help nursing students prepare for diverse clinical situations and develop critical thinking skills.

* Corresponding author at: Alice Centre for Nursing Studies, Yong Loo Lin School of Medicine, Level 2, Clinical Research Centre, Block MD 11, 10 Medical Drive, Singapore 117597, Singapore. Tel.: +65 66012756.

E-mail address: nurwux@nus.edu.sg (X.V. Wu).

¹ Tel.: +65 65165086.

² Tel.: +65 62196148.

Background

Authentic Assessment

A comprehensive authentic assessment consists of a performance task that may be presented using a case approach and an accompanying rubric. A case presents a real-life learning situation requiring nursing students to apply their knowledge and make decisions to solve problems. A rubric provides students with clarity about their learning goals.

In nursing education, experiential learning plays a critical role, as Nightingale pointed out: "It is as impossible in a book to teach a person in charge of the sick how to manage, as it is to teach her how to nurse. Circumstances must vary with each different case" (Ormrod and Casey, 2004, p.126). Authentic assessment promotes learning and assessment of cognitive, functional, ethical, and personal competence in professional, real-world situations (Elcigil and Yildirim Sari, 2007). The shift in focus from teaching to student learning requires contemporary nursing education to identify student-learning outcomes. This will prepare nursing students for increasingly complex patient care that requires clinical reasoning, decision-making, communication, teamwork and leadership.

Use of Rubrics

A rubric is a set of assessment criteria for a piece of work that articulates the gradation of quality for each criterion (Popham, 2013). Rubrics enable evaluation of student performance that more closely replicates the challenges of real life (Dellefeld, 2007). Used in conjunction with case studies to provide real-world simulation in nursing education, an authentic assessment rubric increases student self-efficacy and provides a clear means for nursing students to achieve their learning goals (Speers, 2008).

Rubrics help teachers to clarify their expectations and modify their teaching strategies according to students' progress towards learning goals. Students have a clearer idea of what constitutes excellence throughout a piece of work as rubrics provide a clear summary of performance levels across a scoring scale (Andrade, 2009). Self- and peer-assessments using rubrics help students to be more responsible and confident as they learn to take ownership of the learning process (Jokelainen et al., 2013). Hence, a rubric is a powerful motivational tool, especially when teachers provide individualized, constructive critique.

Use of Cases

Cases describe complex situations that can be used in learning about professional practice. The case method gives students the opportunity to explore a problem and come up with an acceptable solution (Benner et al., 2009b). Students receive immediate feedback and are better able to inquire more deeply and broadly about diagnosis, treatment and appropriate nursing interventions for the patient. Case discussions stimulate clinical reasoning and decision-making skills (Cowan et al., 2008). In discussing a case, students embark on an intellectual activity that requires the ability to integrate prior knowledge with new information and think critically about the outcomes and decisions to be made.

Critical Thinking Skills

In the nursing context, critical thinking is the thought process that underlies effective clinical problem-solving and decision-making (Cowan et al., 2007). Critical thinking provides a focused approach to clinical reasoning, requiring a tolerance of multiple perspectives supported by reason and evidence (Bor et al., 2007). Critical thinking is a significant component in nursing education and is integral to the nursing practice (Naber and Wyatt, 2014), particularly as nurses need to

function in today's complex nursing environments and deal with issues such as advanced technology, greater acuity of patients and complex disease processes. Scholars believe that critical thinking is both a process and an outcome that can be nurtured with active learning (Cassidy et al., 2012). Students need to master nursing knowledge, actively practise nursing skills, recognize assumptions and critique arguments.

Methods

Aim

The aim of this study was to explore nursing students' experiences and learning outcomes with the use of an authentic assessment rubric and a case approach.

Design

An exploratory qualitative approach using a focus group and an open-ended survey was adopted. Focus-group discussions uncovered rich and deep understanding of students' experiences with the use of an authentic assessment rubric and a case approach. An open-ended survey served to triangulate the findings of the focus-group discussions.

Participants

Purposive sampling was used to recruit nursing students in a post-secondary institution in Singapore. The inclusion criteria were:

- first-year nursing students
- enrolled in a nursing science module that focused on both nursing knowledge and skills
- age ranges from 17 to 35 years old.

Authentic Assessment Rubric and Case

The case and authentic assessment rubric (AA rubric) (Table 1 and 2) used in this study (Wu, 2012) were developed with reference to the Understanding by Design (UbD) framework and Task Design Guidelines (Levett-Jones et al., 2011; Wiggins and McTighe, 2005). Developed in consultation with nursing experts, the AA rubric sought to assess four primary domains important in nursing, namely cognitive, psychomotor, affective and critical thinking skills. These are also known as the habits of mind, hand and heart – the signature pedagogy for nursing education (Shulman, 2011).

The supporting case was developed based on the learning outcomes in the nursing science module for first-year nursing students. A real clinical scenario was created with information about a patient, such as reasons for admission criteria, current signs and symptoms, past medical history, social situation, and family support system. Students were required to analyse and synthesize available information as well as anticipate possible patient outcomes and complications for documentation and discussion with their peers. Students were required to make appropriate decisions supported by sound clinical reasoning and modify nursing interventions based on the patient's condition. In summary, authentic assessment with the use of a case and rubric helped nursing students develop habits of mind, hand and heart in the critical thinking, cognitive, psychomotor and affective domains so as to respond to a clinical situation and render quality patient care within the expected time frame.

Data Collection

This study was conducted over a ten-week academic semester. The theoretical knowledge for the nursing science module was taught

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