

# SELECTING STANDARDIZED TESTS IN NURSING EDUCATION



CHERYL L. MEE, MSN, MBA, RN\* AND VIRGINIA J. HALLENBECK, MS, RN, ACNS-BC†

Nursing faculty frequently utilize or consider the use of nationally standardized tests to evaluate nursing student performance and their potential to pass the National Council Licensure Examination (NCLEX)<sup>®</sup> after graduation. There is little literature available to advise and guide nursing faculty in criteria to consider when selecting a standardized testing company to assess student readiness for NCLEX. The intent of this article is to share criteria to consider when evaluating a standardized test or testing program that has been gathered through an informal survey of faculty who are currently using standardized tests. (Index words: Standardized tests; Attributes of standardized tests; Selection criteria) *J Prof Nurs* 31:493–497, 2015. © 2012 Published by Elsevier Inc.

AS NURSING EDUCATORS, we are accustomed to using standards and guidelines to assist in making the best decisions. These include standards for choosing a textbook, guidelines to determine if a clinical site is appropriate for our students, standards to evaluate research, and the list goes on. But, in a recent search of the literature, no standards or guidelines could be found to assist the nursing faculty member in determining the best standardized testing program they should adopt. A literature search was initiated using Cumulative Index to Nursing and Allied Health Literature Plus, PubMed, and ScienceDirect to find articles about the criteria to use in selecting standardized tests for nursing education. The search criteria included articles published in nursing, peer-reviewed publications within the last 10 years, in English. The search terms included the terms *selection*, *standardized tests*, *nursing education*, and *guidelines for selecting*. In addition, no dissertations or unpublished documents were included in this review. Although there have certainly been articles published on the quality of various standardized testing products, no articles were found that specifically addressed how to select a standardized testing product.

More and more nursing programs are using standardized testing. The pressure for high National Council Licensure Examination (NCLEX)<sup>®</sup> pass rates is imposed

by numerous stake holders and includes, but is not limited, to boards of nursing, program faculty and administration, students and their families, and funding bodies. NCLEX pass rates are measures of student success and program quality. Nursing faculty want to ensure that the quality of the nursing education at their facility is meeting or exceeding national standards. Nursing faculty also feel an obligation not to continue to retain students throughout the full program when there is little or no chance that these individuals will be able to pass boards. Standardized testing is one way to gauge a student's potential for program and NCLEX success.

Because of the critical role standardized testing can play for an education program, it is imperative that the right decisions be made when selecting a testing product. Because of the lack of literature available addressing this concern, the authors queried 10 expert faculty from 10 schools across the United States who were currently using standardized tests and involved in analyzing testing data. These nursing faculty members were currently using Health Education Systems, Inc. Assessment examinations; all were aware of product features offered by various standardized testing product companies, and some had experience using other testing products as well. One open-ended question was asked, "What do you think are the important criteria for selecting a standardized testing company/product that nursing faculty should consider?" Six major factors for faculties to consider emerged.

## Data to Support the Examinations Predictive Capabilities

The first criterion to consider is: Does the testing program being considered have research that supports the claim that the test is valid? A valid test means that it measures

\*Adjunct Faculty, Immaculata University, Manager Faculty Development, Elsevier.

†Clinical Nurse Specialist, The Ohio State University Medical Center, Adjunct Faculty, Indiana Wesleyan University.

Address correspondence to Cheryl Mee: Adjunct Faculty, Immaculata University, Manager Faculty Development, Elsevier. E-mail: cherylmeern@gmail.com  
8755-7223

what it claims to measure (Morrison, Nibert, & Flick, 2006; Polit, & Beck, 2012). Validity of a high-stakes exit examination in nursing can be determined by how accurately the test identifies students who will pass the licensure or certification examination.

If the testing company states that its examinations are predictive of success on the NCLEX, the faculty should conduct both a review of the research and the strength of the research. Inquiries about the research process, the examination statistics including those that demonstrate reliability and validity, and the predictive accuracy of the examinations related to student success are some details that faculty should review. Some factors to consider when reviewing the research data include the number of students in the pool of students selected in the research and the student selection methods—for example, does the pool of students in the exit examination validity research match the makeup of the pool of students that are taking the NCLEX? Has the examination been validated on the same type of students as in the school that is considering the testing package? For example, if the faculty is considering purchase of a testing program for an associate degree nursing program, has any research been done with associate degree graduates?

Reliability of examinations is how well the examinations do with repeated use among different groups of students and how consistent are the test scores (Nunnally & Bernstein, 1994). Reliability coefficients, such as a Kuder–Richardson, are a score for an examination's overall reliability. For more information on some examination statistics, see Table 1.

Faculty should consider the research because it pertains to the intended use of the testing product. If the school is planning on using the standardized exit examination, they should examine the research on the predictive accuracy of that examination. But, if the faculty are considering purchasing additional products such as admission assessment and specialty examinations, the research related to these examinations need to be examined.

### **Test and Test Item Development**

A review of the examination development processed should be conducted as well. Who are the test item writers, what are their qualifications as content experts, and how are they trained in test item writing? Are test items reviewed and revised after being submitted by the item writer, and are items piloted with statistical analysis completed for both difficulty and reliability before they are used as actual test items?

Following the test blueprint, content experts with active clinical experience should be developing the questions to assure that items are based on true current clinical expectations for new nurse graduates. Experts should be well versed in the expectations for a new clinical nurse in their field of expertise so that they are writing appropriate level questions for entry into practice and a diverse group geographically located across the nation.

In addition to being content experts, proficiency in item writing is also essential for the team of item writers

and editors. The team should be well versed in developing strong test items that assess the students at the analysis level or more based on the revised Bloom's Taxonomy (Anderson & Krathwohl, 2001). Questions should be well written with a tightly focused stem, require multilogical thinking to answer, and contain strong plausible distracters (Morrison, Nibert, & Flick, 2006). Each question should be supported with rationale that clarify and instruct the student when the questions are reviewed.

Editing processes help assure that formats and item development are of the highest quality and prevent cultural or regional biases. Internal quality review assures that item editing meets high quality standards. Standardized tests should contain questions that mimic the types of questions and formats seen on NCLEX, which includes chart exhibit, hot spot, select all that apply, ranking, fill in the blank, in addition to the customary multiple choice. And because the NCLEX evolves and newer innovative formats such as audio and video questions are added, the standardized test should reflect those changes.

The test blueprint should adhere to the NCLEX blueprint. As the blueprint changes, so should the preparation examinations. It is also essential that the standardized test remains current, and all changes that will be in the NCLEX are incorporated in a timely manner. For example, the NLCLEX changes occur in May/June time frame every 3 years. Therefore, the changes to the standardized testing program should occur prior to this event so that students preparing for the new version of the NCLEX are familiar with the appropriate test content.

Lastly, it is important to be sure that key concepts and content areas that the faculty desire to assess are actually covered in the examination. Does the standardized testing company provide a blueprint that the faculty can review? Finally, as mentioned above, item piloting and statistical analysis of items and examinations help assure that criteria are being met on an ongoing basis.

### **Faculty Friendly**

Faculties need scoring reports that are well developed yet easy to interpret. The data analysis capability of the standardized testing provider should include the scores for the school's group of students and the national averages. In addition, to improve ease of analysis, scores should be broken into categories of content that are appropriate for that school. For example, a faculty member, depending on which report they are writing or what concern they are addressing, might need to see how their group of students scored on various National League of Nursing (NLN) or American Association of Colleges of Nursing (AACN) accreditation categories, nursing process categories, or Quality and Safety in Nursing Education (QSEN) categories. Before choosing a product, nursing faculty members should inquire about the scope of the categories available in the reports generated. Some companies offer a wide variety of content categories, and some are more limited. When

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