OADN values the role of the educator. Being an effective educator can impact students and their patients for decades and it is for this reason that we promote professional certification as an educator. Obtaining the certification as a **Certified Nurse Educator (CNE®)** denotes your dedication to your practice as a nurse educator. Over the course of several months, the Education and Research Committee will post each of the six competencies as identified in the Detailed Test Blueprint for the CNE® examination. These posts will be brief summaries of how to focus your study for the competency exam along with some tips for practical application in your role as nurse educator.

In an ongoing effort to promote certification as an academic nurse educator, the Organization for Associate Degree Nursing (OADN) is providing a series of essays related to the NLN test plan for the CNE Exam. This essay will focus on the third competency, "Use Assessment and Evaluation Strategies.*"*

The CNE 2014 Candidate Handbook provides an in-depth explanation of certification and the test blueprint. The handbook can be viewed here: http://www.nln.org/docs/default-source/professional-development-programs/certified-nurse-educator-(cne)-examination-candidate-handbook.pdf?sfvrsn=2. By using the handbook, faculty will learn about the 150-item exam, the purpose of the exam and how to qualify to take the exam

CNE Major Content Area #3: "Use Assessment and Evaluation Strategies"

The third major content area, "Use Assessment and Evaluation Strategies*"* accounts for 17% of the exam. This content area has sub-categories that focus on assessment and evaluation of learning with regard to admission, progression and graduation. Knowledge of assessment and evaluation strategies used to evaluate learning in the cognitive, psychomotor and affective domains is required.

Assessment and evaluation are similar but interrelated concepts, both involving qualitative and quantitative information analysis. Assessment is an ongoing, continuous and systematic process. Assessment provides faculty with data, numerical or otherwise, which they can use to enhance the teaching-learning process. The information obtained fosters decision-making actions about student progression, graduation and program quality. Assessment provides for process or *formative* evaluation. Assessment data can be used to guide content and inform teaching-learning strategies as part of a quality improvement process. Multiple methods of assessment should be used to assess cognitive, affective and psychomotor domains. To assess learning effectiveness, the method of assessment should be accessible, efficient and appropriate. Emphasis on the need for excellence in higher education has increased the use of assessment as a tool for achieving and measuring the quality of student learning outcomes.

Evaluation occurs at one moment in time, at the end of an activity, course or program and can provide a *summative* assessment. Evaluation is the process of observing and measuring something for the purpose of making a judgment whether or not a criterion has been met and to determine its value either by comparison or to a standard. A philosophy of evaluation can be from a practice, service, and judgment or constructivist orientation. Several models of evaluation are available such as Logic, Decision-oriented, Fourth Generation and Accreditation (Evidenced Based) Models (Wittmann-Price, Godshall, & Wilson, 2013). The purpose of the evaluation should be clear and transparent for both the educator and the student. End-of-semester student evaluations can provide feedback regarding student satisfaction with course content and teaching strategies. Evaluation data from a summative approach can identify which teaching strategies enhance teaching-learning practices.

Using a systems theory approach, assessment and evaluation methods are strategically utilized at the stages of input, process and outcome. Input assessment relates to the development, implementation and evaluation of standards related to admission criteria. For example, **Input assessment** can describe the characteristics of entering students: minimum scores on a standardized placement test and/or critical thinking, GPA and completion of pre-requisite courses. Use of a standardized placement test can provide benchmarking statistics to further determine minimum entry requirements. This information provides faculty with crucial information for designing programs that meet students' needs. **Process assessment** determines why the results were achieved (programs, services and activities) and are interpreted to determine whether the process can identify high impact learning strategies. **Outcome assessment** (end results of course or program) provides summative information regarding progression and graduation. Effective assessment programs provide information regarding meeting student learning outcomes and objectives, identifying gaps in knowledge or means to improve the learning. All three types of assessment (input, process and outcome) interrelate and provide an understanding of each part of the system and how they interact. Each serves a critical role in understanding certain aspects of the institution (college, program, course, students) as parts of a system.

The methods of evaluation and assessment should help to achieve stated objectives and match the learning domain of those objectives. For example, the psychomotor skill of urinary catheterization could be evaluated by completing a return demonstration evaluated by peers or the instructor. For assessment of affective domain, students could submit a reflection paper, using a rubric for consistency in evaluation by peers or the instructor. The cognitive domain can be assessed using both norm-referenced and criterion-referenced tests. Assessment and evaluation methods should be examined for their relevance, validity and reliability to determine their usefulness. Qualitative methods such as surveys, focus groups, portfolios and direct observations are at least as important as quantitative methods (exams and tests) that use and produce numerical data. A fair and comprehensive plan to evaluate learning would incorporate many data points drawn from a broad array of teaching dimensions. Such a plan would include not only the student surveys, but also self-assessments, evidence of scholarly activity to improve teaching and evidence of student learning outcomes.

Norm-referenced tests (standardized tests such as the SAT) measure a broad content base and compare students to other test takers. The grade is usually expressed as a percentile ranking. For example, a student who scores in the 70th percentile performs as well or better than 70% of other test takers. In contrast, **criterion-referenced** (teacher-developed) tests measure a specific domain or content. These test results are not compared to other test takers' results and the grade is expressed as a percentage of correct items. When developing a criterion-referenced test, faculty should use a test plan that matches student learning outcomes or the content covered and can reference the blueprint to either the NCLEX Test plan or Bloom's taxonomy.

For the CNE exam, you will be given a sample item analysis report of a test question and asked to identify the item's difficulty, discrimination, validity or reliability using a basic knowledge of psychometrics. Psychometrics is concerned with the development of tests, measurement instruments and analysis of the results. For a comprehensive overview of psychometric analysis, McDonald (2013) has a chapter dedicated to item analysis and test results interpretation. **Validity** of the assessment method describes a condition where the method used assesses what it claims to assess, producing results that can assist in decision-making. For example, a test claiming to measure critical thinking skills but only measures knowledge and recall, lacks validity. Therefore, the nurse educator cannot use the results to make decisions concerning the students' ability to think critically. *P*-values are used to

determine difficulty levels of the items by measuring the proportion of students who answer the question correctly. *P*-values range from 0.00-1.00; items with *p*-values closer to 0.00 are considered the most difficult, higher-level thinking questions. A high *p*-value with a low point biserial indicates a poorly designed question. Point-biserial correlations calculate the relationship between an individual's score and the overall score of the assessment instrument. Point-biserial correlations range from -1.00 to +1.00; questions that receive point-biserial calculations close to -1.00 mean that those high scorers got the question wrong more frequently than the low scorers (McDonald, 2013, p. 205). Does the test question discriminate between those who know the material and those who do not? **Reliability** is the capacity of an assessment method to perform in a consistent manner with repetitive use. The Kuder-Richardson-20 (KR-20) test is used for internal reliability; values closer to 1.00 have a high internal reliability. The KR-20 becomes more reliable with a larger N If the method used is not reliable, then it is not valid and cannot produce results to support decision-making.

This is a brief overview of assessment and evaluation strategies. As you prepare for the exam, you need to be familiar with multiple modes of assessment and evaluation; review assessment models; test planning, construction and analysis, and strategies that are used to evaluate and improve learning.

References:

McDonald, M. (2013). *The nurse educator's guide to assessing learning outcomes*. Jones & Bartlett Publishers.

Oermann, M. H., & Gaberson, K. B. (2013). *Evaluation and testing in nursing education*. New York: Springer Publishing Company.

Wittmann-Price, R., Godshall, M., & Wilson, L. (2013). *Certified nurse educator (CNE) review manual* (2nd ed.). New York: Springer Publishing Company.
_____

Prepared by Tricia Burke on behalf of the OADN Education/Research Committee: September 9, 2016