Implementing Direct Measures of Student Learning

Assessing Our Assessments

Fall 2005

Introduction:

In many health care professions, graduates are required to take and pass a national licensing examination to ensure public protection and safety. In nursing, this examination is the National Council Licensure Examination or NCLEX, which is designed to measure competence to perform safely and effectively as an entry-level registered nurse. The nursing program at California State University, Fresno has identified successful NCLEX performance as one of its primary student outcomes.

Unfortunately, NCLEX passage rates have been falling steadily at CSU, Fresno as well as at most other nursing schools nationwide. In 2004-2005, 127 of the 665 new graduates of the 9 nursing programs in the Valley were unable to obtain RN licensure due to NCLEX failure (California Board of Registered Nursing, 2005). In 2005-2006, 141 of the 854 graduates failed (California Board of Registered Nursing, 2006). In addition, those students who do not pass on the first attempt have only a 39.2% success rate on their second try (National Council of State Boards of Nursing, 2005). In light of the current severe nursing shortage, strategies must be developed to improve pass rates. It is also important for nursing programs to identify measures that will increase the success of their graduate in meeting their educational goals.

This study analyzed assessment-driven review program exams from two national testing services: Health Education Systems, Inc. (HESI) and Assessment Technologies Institute (ATI). The purpose was twofold: to determine programmatic weaknesses and to assess whether these testing programs could be used to identify students in danger of NCLEX failure prior to graduation in order to intervene with appropriate remediation.

Methods:

The Department of Nursing prior to Spring 2004 utilized the Health Education Systems (HESI) assessment program. A HESI exit exam was given during the last semester and results were provided to the students as a part of preparing for the NCLEX exam. This was a comprehensive exam that was considered to be a predictor of NCLEX success. The faculty agreed in fall 2005 to begin using the Assessment Technologies Institute series of examinations as a formative assessment program with testing occurring throughout the program. The first

group of students who were required to take the RN Comprehensive Exam as a final predictor of NCLEX success took the exam in May of 2006.

All available data from both the HESI exit exam and ATI RN comprehensive exam were entered into the SPSS program for analysis. Initially the data was analyzed to determine if there were a significant correlation between the score on the HESI exit exam and passage of the NCLEX. Second, the data was analyzed to determine if there was a significant correlation between the score on the available ATI RN Comprehensive Exam and passage of the NCLEX.

All data from the ATI formative RN Mastery exams in Maternal and Child Health, Nursing Care of Children, Medical Surgical Nursing, Psychiatric Nursing, Community Health Nursing, and Leadership were entered into the database as well. Cohort data were analyzed for trends in each major mastery area to assist in curriculum development.

A major concern of the faculty was access and reporting of evaluation data. An evaluation committee was developed and began meeting to review the data analysis and determine needed curricular revisions.

Results

A significant correlation was found (p .001) between the student's score on the HESI exit exam and passage of the NCLEX. There was also a significant correlation found (p. 003) between the ATI RN Comprehensive Predictor Exam and NCLEX passage. This information was reported to the faculty and a decision was made to continue to use the ATI Testing program.

After entering all data obtained from student performance on the RN Mastery exams, data analysis was done to look at student performance over four semesters. Trending of student scores for Spring 05, Fall 05, Fall 06, and Spring 06 was done. Student performance across semesters was consistent with both program and national ranking on all but one exam. After reviewing the Medical Surgical Nursing RN Mastery Exam it was apparent that the exam was being given too early in the program. The timing of the exam was changed and an ongoing evaluation will be done to determine whether the new timing of the exam improves student performance.

The evaluation committee reviewed the data analysis. It was clear that although students had been required to participate in ATI testing, results had not been reported to the faculty and follow-up and remediation for students at risk had not been done. The committee identified a need for a set benchmark for each exam that could be reported early to the student and to the faculty in each course. If the student was not successful in meeting the benchmark, remediation and retesting with achievement of the benchmark score would be necessary for progression to the next semester.

The evaluation committee presented their recommendations to the baccalaureate curriculum committee. The recommendations were approved and brought to the faculty council. The recommendations were approved by the faculty council.

In the Spring 07 semester appropriate syllabi had the ATI testing procedure and proficiency levels included. Students were clearly instructed on the procedure for ATI testing and utilization of ATI material to support successful testing. The opportunity for remediation and retesting was discussed, and the remediation process is currently in development and review by the evaluation committee.

A benchmark for the RN Completion Exam was also developed. The benchmark was set for a predictive value of 90% passage on the NCLEX. The evaluation committee is currently working on recommendations for a program of remediation for all students who do not meet the set benchmark. All students who graduated in Fall 06 have been offered NCLEX success strategies and will have the opportunity to repeat the RN Completion exam before sitting for the NCLEX.

Discussion

The Department of Nursing is committed to the ATI program. Identification of the correlation between the RN Comprehensive Exam and NCLEX performance supported the faculty's belief and acceptance of the program. Determination of the effectiveness of testing is only the start of the process. The development of a benchmark for all formative exams and the identification of the need and importance of remediation were essential to student success.

Further research is planned to determine the most effective remediation strategies for student success. Identification of students at risk for NCLEX failure in the class that graduated Fall 06 has been done. Students have been contacted and offered success strategies in preparation for the NCLEX. Participation in an online NCLEX virtual review has been offered to selected students.

The most important outcome of this research has been the overall student understanding of the importance of using both the ATI materials and ATI testing as a formative learning process. Early remediation should improve student performance on the final predictor exam and readiness for NCLEX. Early student acceptance and the effective use of the program are extremely important.

The final outcome is that the faculty is beginning to understand how to utilize this program as both a teaching and testing tool. Discussion of both the research and the benchmarking process has stimulated faculty discussion on the need to also utilize the data for curriculum review. A review of student performance on the Medical Surgical RN Mastery exam demonstrated an increased number of students who were not meeting performance expectations. Changing the timing

of the exam was recommended and accepted, but faculty discussion also identified a need to review the Medical Surgical curriculum.

The authors will be developing and testing a remediation program during the next calendar year. The data analysis, faculty discussion, and student acceptance that were a part of this research process provided the necessary framework for future research

References

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