Assessing Critical Thinking Skills in Nursing

Two co-presenters at the Student Success Conference 2008, Kathy McNeese (Glendale College) and Shaaron Vogel (Butte College), have a common interest in building their respective students' critical thinking skills. The following post, written by Kelley Karandjeff, explores their unique processes and discoveries related to developing SLOs that address critical thinking, assessing those outcomes and considering the resulting data in improving their practice.

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2008 Student Success Conference co-presenters Kathy McNeese (Glendale College) and Shaaron Vogel (Butte College) have a common interest in building their respective nursing students’ critical thinking skills. Over the past few years, each has undertaken a process of identifying student learning outcomes that specifically address students’ critical thinking capabilities, assessing those outcomes and considering the resulting data in improving their practice. However, the variations in their approaches reflect the different stages of SLOAC development across colleges and the range of ways individual instructors can find themselves engaged in the assessment cycle.

About an hour north of Sacramento, Butte College’s Nursing Department has a program-level outcome focused on students’ successful passage of the National Council of State Boards of Nursing licensure exam, the “NCLEX.” To raise achievement of this goal, the Department has implemented several changes over the past several semesters. These changes have included higher admissions criteria based on students’ GPA in hard sciences pre-requisites and an absolute Test of Essential Academic Skills (TEAS) score of 67% to get into the program. Additionally, the program implemented a test preparation course utilizing Assessment Technologies Institute (ATI) resources geared toward preparation for the NCLEX.

Critical thinking is a skill commonly identified as vital to successful nursing care as well as passage of the NCLEX and these program level changes have been partially geared toward developing this skill among students. Vogel has also engaged in an individual journey to assess the development of students’ critical thinking—a skill she observes her students’ to struggle with in both clinical coursework and on the licensure exam. With minimum formal structure in place to support her process, Vogel has embraced a personal interest in SLOs and assessment in her instruction of third semester of ADN program theory, seminar and clinical courses.

She has utilized specific questions on exams, case studies, concept mapping and care planning to assess critical thinking. Personal observation of exam data from her course shows a slight increase in scores on ATI questions that target assessment of students critical thinking facility, improved exam scores on critical thinking items and improved ability to concept map critical thinking linkages.
Yet, Vogel notes that despite these departmental changes in entrance requirements and in spite of a small increase in grades and test scores, students still show difficulty with critical thinking in their clinical coursework. Through casual departmental conversations, program faculty have noticed that they still find that the “overall issues we have had [with students’ critical thinking] in clinical are still there. It hasn’t impacted clinical performance. This is an interesting thing to study…just because you get an A, doesn’t mean you are a good nurse on the floor…I think it’s a different set of skills [they need to learn].”

Vogel acknowledges several challenges to assessing students’ critical thinking skills. She believes that you can teach a baseline of critical thinking skills in clinical coursework but notes the need to identify an agreed upon foundation of skills, consider how to build on that foundation each semester and how to level skill development across semesters. She has plans to continue this assessment journey by working with Butte’s new institutional researcher to formally collect data from her courses.

Just south of Los Angeles, Glendale College has allocated a release time position to support attention to SLOs and assessment across the institution—a position currently filled by Alice Mecom. Mecom explains that Glendale started its SLOAC process by identifying course-level outcomes which were then mapped to larger institutional competencies. Mecom provided Nursing instructor Kathy McNeese guiding materials and technical assistance when she started her own SLOAC process in 2006—choosing outcomes for two of her courses and piloting an assessment cycle in each.

Like Vogel, McNeese also had a desire to improve critical thinking. She describes her first efforts quite simply. “I looked at my courses and said, ‘what do I want them to learn in this course’? Then I crafted a statement and went to Alice and said this is what I want them to learn. To keep data focused, I chose two intersession courses, Nursing Perspectives and Essentials of Medication Administration. I identified SLOs [for each course] and then linked them to the College’s competencies.”

For the Essentials of Medication Administration course, McNeese established the following outcome—“At the end of this six week course, student will analyze simple medication orders for all types of medication administration and compute correct dosage.” She then undertook a process of analyzing students’ achievement of this outcome. McNeese started by considering what students “brought to the table”—looking at their TEAS scores. She also took into account the teaching methods she employed during her lectures and the homework, practice problems and tests she implemented in the course. Additionally, McNeese considered where the course fit into the curriculum; as this class was the first in a sequence, she did not have to take into account what skills/knowledge they should have learned in a prior course.

To ultimately assess student achievement of the stated Essentials of Medication Administration outcome, she looked at students’ test scores on dosage calculations exams. Based on an analysis of student performance, the department decided to add a one-week remediation period between exam attempts, giving students and the instructor time to figure out what went wrong on the first try. In this same course, McNeese also observed that the students who did nor have adequate computer and/or Internet skills were not accessing online practice questions available to prepare
for the dosage calculations exams. As a result, the department adopted a process for instructors to track student use of web-based activities and intervene early when lack of student access to practice tests is noted.

Since these initial efforts, McNeese has become a SLOAC champion in Glendale’s Health Sciences Division with a sustained focus on critical thinking. In addition to continuing assessment within her individual courses, McNeese is leading a department-wide effort to develop a common assessment on students’ care plans—a learning experience embedded into all levels of nursing preparation. Students’ feedback indicated frustration with different instructors’ variable criteria for grading care plans. The department embraced a care plan assessment tool drafted by McNeese that they will use across the four semesters of the Nursing program. According to McNeese, the department is currently identifying the foundation of skills they intend to develop in first semester care plans as well as the level of proficiency expected in each subsequent semester—including how to incorporate critical thinking into each level.

The Department will use eLumen, a software tool Glendale is implementing to collect and analyze assessment data across the college, to assist in their SLOAC process. Through eLumen, the college will evaluate its stated institutional-level core competencies via course-level SLOs and assessments. The Nursing Department will feed care plan assessment data into eLumen. Through an individualized portfolio on the eLumen system, students will be able to see how they are learning across semesters based on the same care plan assessment tool.

McNeese and Mecom already see several benefits resulting from this department-level experience. McNeese notes the “huge sigh of relief” students will feel at not having to guess about instructor expectations on care plans from semester to semester. She also remarks on the improved ease of data analysis that will come from a common set of outcomes. Mecom emphasizes the shared sense of ownership. “You want to make the most out of [an assessment] tool and the best way to do that is to share [in its development] and not have something created for you. People buy into process this way.” Glendale’s Nursing Department expects to begin collecting data on its new care plan outcomes in 2010.

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