Using the Worldwide Instructional Design System (WIDS) to create an Integrated Nursing Curriculum

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Abstract

In 2005 Madisonville Community College (MCC) was awarded a second Title III grant targeting the revision of technical degree and diploma programs. These programs were the product of the former Technical College when the Kentucky House Bill 1 merged the state's community colleges and technical colleges in 1998. In the grant proposal accepted under the Title III program, the technical programs were described as being long in need of curriculum revision and streamlining.

A curriculum revision timeline was established by the Title III Leadership Team, including the Curriculum Specialist, a half-time Activity Director, a half-time Title III Coordinator, and an Administrative Assistant. Nursing and Surgical Technology were the first two programs to undergo revision through weekly meetings. Faculty members were appointed to the Curriculum Revision Committee in the spring semester of 2006. Due to the long-term process involving curriculum revision of twelve technical programs and the requirements of these programs in their accreditation process, Madisonville Community College actively sought out technical assistance with the revision. The Worldwide Instructional Design System (WIDS) stood out from the beginning in the practical application for technical programs. After touring the website and meeting with representatives from WIDS, MCC administration chose to purchase and use WIDS.

The first technical program scheduled for curriculum revision was that of Nursing. MCC had two separate programs—Practical Nursing and the Associate Degree of Nursing. The coordinators of the two programs decided to promote the creation of an integrated nursing program.

WIDS has provided a comprehensive tool to assist the faculty in the development of the new nursing courses. It is founded on performance-based learning, which underlies all technical education. There are four essential features of performance-based learning, according to the WIDS program. They are: Identification of who is responsible for the performance, Statement of what competencies are required in advance of the teaching process, Development of when the performance standards must be met, and Provision of how the learners will develop the desired competency in the form of a learning plan. The WIDS software creates the necessary documents to develop each of the four essentials: who, what, when and how. The faculty members learn to create the following documents in the WIDS software: a course syllabus, a course outcome summary (a document unfamiliar to MCC faculty prior to WIDS), learning plans, teaching notes for the learning plans, and performance assessment tasks. In the creation of these documents, they also link program standards, external standards (such as the National League for Nursing), and general education competencies to the course competencies they have written. This creates a pathway in the software to enable students, faculty, administration, and accrediting personnel to make the logical connections that are important to course and program development.

Finally, the WIDS program contains an analyzer function to allow faculty and administrator to show those linkages between course content and the standards determined externally and within the institution. This demonstrates to accrediting bodies how the curriculum makes sense. The analyzer function can also be used within one course to critique the course for essentials of good teaching practice, such as levels of Bloom's taxonomy, types of multiple intelligences, group size, and other aspects.

Currently, nine new courses have been developed in the WIDS system for the MCC nursing curriculum. The implementation date is fall of 2007.

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Purpose

The *Kentucky Postsecondary Education Improvement Act of 1997* created the Kentucky Community and Technical College System (KCTCS) and transferred governance of the state's community colleges and vocational-technical schools to the KCTCS. The legislation's intent was to improve program efficiency and increase postsecondary participation rates. It also necessitated the consolidation of Madisonville Community College (MCC) and the Kentucky Tech-Madisonville (KTM) vocational-technical school (Task Force on Postsecondary Education, 1997). As a result of the legislation and the consolidation, it necessitated a substantial restructuring of technical programs and courses for both institutions, but particularly for the Kentucky Tech-Madisonville institution.

The Technical Campus of MCC was begun in 1962 with program offerings such as auto mechanics, electricity, drafting, and machine shop. In 1971 health programs were added to the offerings on a separate campus, known as the Health Campus. The health technical programs fared well, due to an emphasis on health-related careers in Madisonville. In fact, the Health Campus became well-known in the state for quality education. The other technical programs offered on the Technical Campus experienced problems, including job losses due to decline in the local mining industry in the 1980's and closing of large manufacturing plants, low enrollments, and inflexible scheduling of courses.

With the legislation of the Kentucky *Postsecondary Education Improvement Act of 1997,* Kentucky lawmakers mandated the effective and efficient use of resources in higher

education. In the early twenty-first century, several negative factors began to turn around in the local area. The coal mining industry, which had been long thought of as dead, revived due to the expanded use of high sulfur coal. Several light manufacturing plants were established in Hopkins County. The health care industry, already well-known as Trover Foundation in Madisonville, continued to expand. All of these factors, along with the low educational levels of western Kentucky citizens, conspired to emphasize the necessity of revision of the technical programs in order to provide for the workforce required.

A Title III grant proposal was submitted to the Office of Postsecondary Education in the United States Department of Education for the purpose of Technical Curricula Revision in 2004 (Madisonville Community College, 2004). Its intent was to assist technical faculty in the implementation of curriculum best practices across the spectrum of each of the twelve technical programs. In 2005, Madisonville Community College was notified of the award of $1,900,000.00 for a “Strengthening Institutions” grant.

Methodology

As a result of obtaining the Title III grant, three separate processes were started. The first involved hiring of the necessary staff to work on the grant. The following positions were filled from October of 2005 through January of 2006: half-time Coordinator, half-time Activity Director, Curriculum Specialist, and Administrative Assistant. It was determined that the work of the Activity Director would begin the revision process by assisting the technical faculty to locate "best practices" sites and implement appropriate techniques, while the Curriculum Specialist would provide training in educational practices and development of the competencies, objectives, and courses to build the program.

The second process mandated was a timeline of technical programs to be revised over the course of the five-year grant. This was developed by the Coordinator of the grant. It was determined that the practical nursing program (a product of the Technical Campus) and registered nursing programs (a product of the community college) were worthy of the first round of curriculum revision work. The selection of these two programs occurred for several reasons.

First, the coordinators of the two separate nursing programs had come to the conclusion that a new and innovative education program for nurses was needed. They had communicated on numerous occasions the virtues of creating a "seamless" pathway from beginning nurse aid to becoming an Associate Degree nurse. They also lamented the lack of transferability of coursework from the practical nursing program into the registered nursing program, taking a minimum of seven college semesters to complete. Discussions

with top nursing educators in the country at various conferences also stressed this need for innovation. Therefore, nursing appeared to be a ripe field for revision.

Finally, the work of the revision process necessitated a method of addressing the educational requirements for the technical program and also meeting requirements of accrediting bodies, such as the National League for Nursing. Technology software programs for curriculum development were investigated for the grant personnel and administrators of Madisonville Community College. This search led to the Worldwide Instructional Design System (WIDS) (Mashburn & Neill, 2002).

WIDS was selected for the project because it comprised a comprehensive computer package for curriculum design. Performance-based learning is the foundation of WIDS, made up of four essential features: 1) identification of who is responsible for the performance, 2) a statement of what competencies are required from the beginning of the course, 3) a clear picture of when the performance standard must be met, and 4) the learning plan which relays how the learner will achieve the standard. It incorporates well-established educational principles, including Bloom's taxonomy, learning styles, and multiple intelligence theory. As a part of the package, instructors build courses to form a program or create just one course, produce syllabi and course outcome summaries for students and design learning plans for students and teaching plans for instructors. The analyzer portion of the WIDS package creates for the faculty member a grid which shows the match of competencies to external and internal standards. This can be employed to show accrediting bodies required information about the curriculum, courses, and competencies. Additionally, WIDS contains Wizards, which can be used to quickly

produce the documents listed above with all required components (Mashburn & Neill, 2002)

A Nursing Program Revision Committee was established in January of 2006 with seven nursing faculty selected from the practical nursing and registered nursing programs and four persons from the Title III grant. The committee met weekly during the spring semester of 2006. The first topic undertaken during the semester was the common areas and depth of instruction in the two programs. The old curricula and the new, tentative curriculum were printed on large wall sheets around the meeting room. This facilitated discussion and documented progress. Other faculty members were encouraged to give input anonymously if they chose to do so by writing on the wall sheets.

The committee then chose a nursing theorist, Betty Neuman (1989), whose theory would be the basis of the curriculum and content threads relating to the external standards of care as set forth by the National League for Nursing (National League for Nursing's Council of Associate Degree Nursing, 2000). During the initial work of the committee consultations with many others occurred. The Division Chair of Nursing consulted with Donna Ignatavicious, nationally renowned nursing educator and textbook author, and with four-year regional universities in MCC's area (Murray State University, Western Kentucky University, University of Southern Indiana) about transferability of the A.A.S. Nursing Degree Program. The Kentucky Board of Nursing was also contacted and offered resounding support for the curriculum. Other nursing coordinators within KCTCS were presented with the proposed changes and gave overall support. A visit to another career pathway program in nursing was made to Olney Central College (OCC) in

Olney, Illinois by committee members. The faculty of OCC shared their 1 + 1 program and related their successes and concerns. It was a very helpful experience.

The final work of the committee produced the program shell, which outlined content to be covered in each semester, general education courses and prerequisites, and technical support courses. Specific courses were given to teams of faculty to write course descriptions including the credit hours and components, competencies, and produce outlines. These key elements are the essential parts required for the KCTCS curriculum forms, which are required to propose a new curriculum. Four exit points were designated for the student.

The entire curriculum was presented to the Nursing Division in a meeting before the beginning of the 2006-2007 academic year. Nursing faculty members divided into teams and were assigned courses from the new curriculum to review. Changes were discussed by the entire group. These revised course documents were the final product to be submitted to the local MCC Curriculum Review Committee and the KCTCS Curriculum Review Committee during the fall semester of 2006.

Results

The Nursing Integrated Program developed by Madisonville Community College is shown in Appendix A. The new nursing program incorporates a career pathway with four exit points for students: certified nursing assistant, Medicaid nurse aid, licensed practical nurse, and registered nurse. At any of the exit points, students may reenter the program to continue on to the next level.

Although some general education and technical faculty in the KCTCS group opposed changes in the new curriculum, such as contextualized learning through a nursing pathophysiology course, the local Curriculum Approval Committee at Madisonville Community College passed the new program with substantial support. The Kentucky Board of Nursing gave the MCC group a standing ovation in its education committee and the Board passed the curriculum at its meeting in December of 2006. Work was begun in the spring semester of 2007 to work with four-year universities on a specific transfer agreement for the program.

Conclusion

The finished product of the curriculum revision process is a fully integrated educational program for nursing. Although change is always difficult, the result of the curriculum revision has been a positive force for innovation at Madisonville Community College. Nursing faculty members who had not worked together previously have collaborated to work on new courses. They have "bought into" the new curriculum. In several instances, energy that was not previously seen has become obvious to discuss competencies, to select textbooks and learning materials, and to plan lecture and lab outlines. It does appear that a new era of nursing education has begun with the new curriculum.

The successful revision of the nursing program has also inspired other technical programs to "think big." As those program coordinators look at their courses and curricula, they now talk about making real and substantial improvements, because they know that the nursing faculty achieved this.

Recommendations

Several nuggets of knowledge have been gleaned from this monumental task of curriculum revision in nursing. The first is the value in having someone knowledgeable in educational principles to direct the process of revision. The Curriculum Specialist, although technically not an expert in the revision of education curriculum, has taken education courses and learning theory courses which gave assistance in working with competencies and the use of the WIDS program.

Secondly, there is great value in encouraging people to work on a collaborative effort, reminiscent of the jigsaw classroom technique. Most of the two nursing program faculty had little experience in working together until they were assigned to the committee. Committee homework also required them to collaborate between committee meetings. Technology to assist the revision process was invaluable to the committee. The WIDS software provided a structure to understanding courses and how they should be built, as well as the documentation provided to students, administration, and accrediting bodies. WIDS also provided much assistance for faculty members with assessment techniques and learning principles because of the libraries build into the WIDS software. However, working actively in the WIDS software while building individual courses may be a more beneficial way to produce results in future revisions of curriculum. Because nursing faculty had been trained months before in the WIDS software before they actually wrote new courses and, finally, set them up in WIDS, several faculty members expressed frustration in remembering the intricacies of WIDS when they used it at the end. It is believed that WIDS input by faculty members should occur as they are constructing the courses along the way.

Finally, it was advantageous to have success in your first curriculum revision project! It was lucky (or smart) to select the nursing program as the first for curriculum revision because the faculty members as a whole are energetic and innovative.

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Appendix A