© *Journal of Interdisciplinary Studies in Education*
ISSN: 2166-2681 Volume 2, Issue 2, 2014
ittc-web.astate.edu/ojs

Development and Delivery of an Interdisciplinary Course for Nursing and Office Administration

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ABSTRACT

The development of an interdisciplinary course is a process derived from a unique educational or workplace need. The course can create a logical link between two or more programs with a career-based outcome that is invaluable to the graduate seeking employment. The process of creating, delivering, and revising an interdisciplinary course for nursing, office administration, and related majors (i.e. health services administration, human services technology, and medical assisting) is described in this manuscript. Important components of interdisciplinary course development and the highly technical, collaborative teaching environment are explained along with students' perceptions and recommendations which provide the basis for refinement.

Keywords: Interdisciplinary, course development, office administration, technology, nursing, healthcare, collaborative

Interdisciplinary education is a vital pedagogical approach to preparing those who will be employed in healthcare settings to function in a collaborative team environment. The Institute of Medicine (IOM) has clearly stated that patients receive safer, higher quality care when health professionals work in teams with productive communication and an accurate

understanding of each other's roles (IOM, 2010). Academic institutions educating future professionals face the challenge of preparing tomorrow's health care providers with the unique skills needed for 21st century practice. MacRae (2012) asserts that to meet this challenge academic institutions must "adapt learning and experience to expose students and faculty to team-based models" (p.285). This manuscript describes the development, implementation, and evaluation of *Health and Safety in the Medical Office*, an interdisciplinary course at a regional campus in rural Ohio.

Background

Interdisciplinary instruction involves the use and integration of methods and analytical frameworks from more than one academic discipline to examine a theme, issue, question or topic (Goldsmith, Hamilton, Hornsby, & Wells, 2012). Combining academic disciplines can result in new knowledge, a synthesis of issues and concerns across fields of study, and development of enhanced critical thinking skills from a team perspective. An emerging viewpoint in higher education emphasizes that a thorough understanding of today's real life problems requires interdisciplinary reflection (Goldsmith et al., 2012). Life is interdisciplinary. Pedagogical practices that emphasize the interdisciplinary, team-oriented approach required in today's healthcare environment are simply the more responsible methods of preparing students to enter into these highly complex work environments. There are pressing problems that cannot be resolved by a single disciplinary perspective. Students and faculty rail against the artificial fragmentation of knowledge, asking for more connected learning and coherence in the curriculum. Employers want college graduates who are prepared to meet the multidisciplinary needs of the work world, integrating what they have learned in disparate fields and having the capability of applying that knowledge in a meaningful and effective manner. As Dezure (1998) ascertains, "there are dynamic changes in knowledge construction, blurring disciplinary boundaries across fields," which further supports the need for college graduates to have a working knowledge of interdisciplinary communication and teamwork.

According to Goldsmith et al. (2012) using an interdisciplinary curriculum provides opportunities for more relevant, less fragmented, and more stimulating experiences for students. However, the literature reflects little data concerning the effectiveness of interdisciplinary instruction or guidelines for course planning. The need for administrative support, resources, and instructor commitment along with the identification of and logical themes based on societal needs is crucial (Goldsmith, et al., 2012). Clear learning objectives and course activities including evaluation methods, planning time and often training are identified as key components of the interdisciplinary education process (Goldsmith, et al., 2012). Although disciplinary and professional specializations are still useful in the discovery of knowledge, these are not the only methods of organizing knowledge for education. The real world rarely presents itself in specific, delineated packages, but rather in complex, blended problems that require students and faculty to explore other formats for learning. In addition, scholarship in the 21st century involves innovations that transcend the traditional boundaries of education. Federal funding for research and training is increasingly being allocated to programs and institutions that aim to solve problems by creating new opportunities for collaboration and discovery (Brooks et al., 2009). "This

change in education is opening the eyes of many faculty, administrators, and students as well as creating graduates who are better prepared for the world in which they live" (Brooks et al., 2009).

Course Creation

The impetus for the development of this interdisciplinary course was primarily a result of the interest of students majoring in an office administration program (OA) in expanding their employability through exposure to coursework that best prepares them for practice in healthcare settings. The OA faculty recognized this as a promising opportunity to facilitate this type of exposure, while designing a course that would not only provide instruction for the OA students but also provide an opportunity for interdisciplinary education.

The mission of the OA program is to prepare students for highly technical yet entry-level positions often in specialized roles. Administrative assistant positions are in demand and expected to grow by an average of 14 percent between 2010 and 2020 with growth expected in the medical office at 41 percent. Applicants must have extensive knowledge of software applications and advanced communication and computer skills (Occupational Outlook – OBLS, 2012). In addition to the technical skills related to software applications and computer skills, positions in healthcare settings may require a more diverse skill set including interpersonal communication in the healthcare setting, basic clinical office procedures, infection control and healthcare informatics.

The purpose for creating this particular course was to help students in office administration, nursing, and related majors (i.e. health services administration, human services technology, and medical assisting) develop an understanding of the various roles of professionals in a healthcare setting with an emphasis on a team-oriented approach. Two of the primary goals were to offer clinical communication opportunities to office administration students and offer additional computer applications' skills to healthcare field majors. This was achieved in part by delivering the course in four complementary environments: a traditional classroom, an online learning management system, a computer lab, and a clinical skills lab. Topics of confidentiality, infection control, and safety are among those designed to facilitate students' development and greater understanding of the various roles in healthcare settings.

The OA program is the home to this interdisciplinary course. OA programs lend themselves to several disciplines thus creating multiple opportunities for interdisciplinary collaboration. Today's OA graduates will find themselves embarking on multiple job opportunities in service and manufacturing settings. Knowledge of application software and communication skills is critical to all disciplines and many career paths. The healthcare field offers a plethora of opportunities for students. A program track of medical administrative courses has been a long-standing part of many office administration associate degree programs. This type of track often includes medical terminology, medical office procedures, patient recordkeeping using medical applications, medical billing and coding, and first aid with cardio pulmonary resuscitation (CPR). However, this track is often missing a true feeling of the day-to-day operations and expectations of an OA professional in a medical office. Knowing the duties of the "front office" versus the "back office" and drawing a cohesive picture of roles and expectations is the key to ensuring graduates interview well and survive/thrive in a clinical setting. Likewise, it is a launching point for this

course. The added benefits for students in healthcare majors are sharpening skills before graduation and licensure, opportunities for communication with a variety of medical office roles, and gaining experience with technology-based assignments.

To achieve that goal, professors from two associate degree programs, OA and nursing, with backgrounds and experiences in administration and multiple healthcare settings, saw an interdisciplinary opportunity and designed a course to serve this purpose. The end result is a course that has built bridges between two programs and is included in a set of courses combined to give students a certification in the medical office administrative assisting area, which students from many disciplines seek.

Course Development

Creating a new course is a resource-intensive process and can lead to particular challenges in the area of course approval. This course was developed and approved as an OA course but permitted students from any major to enroll. Specific course content was developed through a review of literature and feedback received from OA students, and campus advisory committee members, which included multiple employers of program graduates.

The goals and learning outcomes for this interdisciplinary course are presented in Table 1 and Table 2. The nursing and OA professors collaborated to bring a variety of relevant technical and clinical elements to the course. The course included preparation and testing for the National Safety Council (NSC) Airborne and Bloodborne Pathogens certification, documentation of clinical data, performance of basic clinical procedures, and techniques for patient interviewing in the healthcare setting. Interviewing included identification of abuse, recognition of potential violence, and basic therapeutic communication. Collection and handling of specimens, examination room preparation, infection control, and aseptic technique were demonstrated and practiced. The course site design included video, web links, presentations, and teaching tools along with interactive opportunities for students to use for group projects and testing. The nursing instructor provided medical expertise, visuals (presentations and handouts) for the lab setting, hands-on clinical equipment, interdisciplinary clinical group project topics, and a high fidelity patient simulator demonstration along with an eye-opening "blue light" for germ detection; all of which brought life to the course.

Both instructors collaborated with a textbook author to create a unique text to coincide with videos on course topic in asepsis, hand washing, and sterile fields in the medical office. A second text, the NSCs booklet for certification in airborne and bloodborne pathogens, was adopted with the assistance of the publisher to fulfill the certification requirement.

Business leaders agree that the ability to work in teams is essential to the success of individuals and organizations. A great deal of research has been performed to study various aspects of student teams. Cross-functional teams—those composed of members from several departments, disciplines, or classes—have also been the subject of previous studies (see course topics list and group activities in Table 3) Crittenden and Wilson (2006) reported on the use of cross-functional teaching in marketing departments at colleges and universities. Many researchers have reported the results of specific projects including teams that integrate traditional business functions, such as marketing and operations (Darian & Coopersmith, 2001; Kruck & Teer, 2009) teams that cross

disciplines such as engineering and business (Grinols, 2008; Sloan and Lewis, 2011).

Course Delivery

Those interested in our course development process often inquire about time commitment and administration support. No special budget or grant provided for the initial development of the course. Clinical items were borrowed from the nursing program and instructor prep time was voluntary. The course was set up in four modules. The responsibility of infection control in a medical office was the first module which included principles of asepsis (sterile fields, sanitation, and waste removal). The second module addressed airborne and bloodborne pathogens and the certification from the National Safety Council (NSC) based on Occupational Safety and Health Administration (OSHA) standards offered using an electronic assessment tool. The third module involved patient interviewing with an emphasis on interview techniques, electronic recordkeeping, and data entry. The fourth module included instruction and peer review of techniques for the collection of vital signs.

Course Outcomes

From a faculty perspective this course presented a unique interdisciplinary opportunity for two instructors to bring a unique perspective to a vital course while sharing knowledge and experiences. This is a significant opportunity to learn from and grow with peers, and it is important for both instructors to remain in the classroom during delivery to experience the course from the student perspective. From a student perspective this course provided an opportunity to meet and learn from an instructor in another discipline, develop an understanding of future coworkers, and experience the roles of the OA professional, nurse, and ancillary healthcare team members in a healthcare setting. This is the ultimate hands-on experience for those who will spend a great deal of time handling clinical records and maneuvering in a clinical environment. For the healthcare major, this is an opportunity to understand the importance of communicating to administrative team members effectively and to utilize technical tools and applications not necessarily a part of clinical instruction.

After the first offering the instructors took an opportunity to share thoughts and experiences from the class. Student feedback from written evaluations as well as faculty anecdotal experiences were utilized and incorporated in course changes. Evaluation of the learning outcomes resulted in the addition of a learning element to support the technical and communication goals.

It was also apparent after the first offering that something was needed to bring the learned skills together, bring the students together, and further the use of applications while exploring the uniqueness of medical settings like small offices, hospitals, emergency vehicles, specialist's settings, and labs. The students brought a wide array of experiences to the course, which clearly explains why they chose different aspects of the medical field. The nursing professor developed an outlet for this with the creation of a small group capstone project. The interdisciplinary course was ready for an interdisciplinary assignment. The addition of a project involving the use of applications in word processing and presentations including verbal presentation skills was a must for the evolution of the course. Knowledge of application software and communication skills is critical to all disciplines. The first inclusion of a project involved the addition of a medical office

inventory module with a group project (document development using application software—student choice). The project evolved to allow more freedom and was geared primarily towards a multi-disciplined student audience. Small interdisciplinary groups (2-3 students as approved by the instructors) offered input from their respective programs of study and experiences. Instructors assigned students to groups involving multiple disciplines/programs of study.

The result included the use of computer applications and presentation skills to develop a document/tool for use in a medical setting. Students explained their project's relevance to a small hospital, an emergency vehicle, a clinical lab, or other setting of their choosing. The focus for the assignment was interdisciplinary collaboration using a team-oriented approach.

The requirement to interview professionals in the setting in which the project is based lent to the usability of the document and gave students a link to local professionals. While designing and creating the document, faculty act as coaches and facilitators. Sample student comments from the evaluation tool are included in Table 4.

Discussion

As with any course the instructors will continue to update the content to match career expectations and evolving new technologies. Course popularity has grown with each offering and has included students from a variety of disciplines. The curriculum is appealing; student feedback on the course has been consistently positive providing support for the perceived value the course has for multiple disciplines. Future offerings of this course will include an updated software application for documenting patient billing and intake information, currently used in a medical applications course. Future course development will enhance a blended offering of the course incorporating the best of face-to-face interaction with the delivery of knowledge via the Blackboard learning management system. It is the goal of these professors to continue to pursue opportunities for interdisciplinary teaching and to afford our students a unique, team-based experience.

Table 1 Course Development Goals
1. Create setting where students from healthcare disciplines can intermingle with office administration students
2. Facilitate understanding of healthcare facilities, roles and job duties
3. Emphasize principles of asepsis, safety, and employee/patient health
4. Incorporate software applications into the educational setting transforming into tools for the medical setting; patient records and documents
5. Include a certification element of a medical nature
6. Improve communications (verbal, non-verbal, and technical language) between patients, administrative personnel, and healthcare providers

Table 2 Course Learning Outcomes
1. Define and recall methods and procedures for preparing patients, environments and records
2. Complete documents (forms and reports) of varying complexity
3. Apply appropriate safety measures and precautions to protect patients and clinical staff
4. Appraise operations and roles in various healthcare facilities
5. Demonstrate comprehensive knowledge of clinical skills including vital signs, analysis, and assisting skills
6. Develop initial understanding of documenting subjective and objective findings in patient records utilizing various interviewing techniques
7. Prepare for and obtain NSCs certification on airborne and bloodborne pathogens based on OSHA standard

Table 3 Course Topics and Activities	
Topics	**Activities**
NSC Certification *OSHA Standard on Airborne and Bloodborne Pathogens*	Read council materials Watched video demonstrations Conducted group discussions Completed computer-based test
Patient Interview Techniques (clinical lab) *Clinical data documentation and HIPAA regulations* (student pairs - peer reviewed)	Simulated patient interviews Obtained vital signs practice Completed forms Reviewed HHS web site on HIPAA
Principles of Asepsis Basic Infection Control Sanitation and Disposal (clinical lab) (student pairs - peer reviewed)	Washed Hands (hand hygiene exercise with blue light) Put on Personal Protective Equipment (PPE) Prepped exam room (sterile field practice) Opened supplies, poured liquids, examined collection tools Examined waste disposal options and use (sharps and biohazards)
Clinical Documentation Project (student groups 3-4)	Chose topic Researched Internet Interviewed experts Designed tool using application software Demonstrated to class using presentation software

Table 4 Student Comments	
"I thought that the project was very fun and easy to pull together."	"It was a good experience having experts from two fields as instructors. More courses like this should be offered."
"Even though presentations don't sound like much fun at first, I ended up enjoying it. It gave me more experience with talking to a group, which I may one day have to do in a similar setting."	"Knowing more about airborne and bloodborne pathogens will help me work safer at the front desk."
"I feel more prepared for the (healthcare) workplace. It was overall a good experience."	"As an administrative assistant major, I enjoyed the opportunity for hands-on experience."

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