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Cyber-learning: Designing Web-based Environments that Maximize Teaching and Learning From a Faculty Perspective

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Key components of instructional design, as a process and a product will be presented. The process from assessment of learner's needs to presentation and organization of materials to maximize students' abilities to navigate the course is vital in design considerations. Design, development and implementation of a doctoral level course requires particular attention to activities that will foster complex, higher order thinking, and enhance deeper levels of learning in a collaborative online environment. Motivational strategies to provide positive learning experiences and sustain adult learners' interest integral to design as well as strategies to support faculty and students will be discussed.

Objectives

1. Examine innovative approaches to instructional design in two doctoral courses
2. Evaluate learning activities that promote higher levels of cognitive engagement.
3. Learn about design principles that include student support for online learning.
4. Examine motivational principles to enhance collaborative online learning environments.

Historical context

This presentation focuses on instructional design as a process and a product from a faculty perspective and the activities and the lessons learned during the process. In the fall of 2000, the first classes for the Joint PhD Program a collaborative effort between The University of Akron and Kent State University were offered. One goal of the program was to offer doctoral courses online. The development and delivery of online courses across the joint doctoral program presented unique challenges for both universities. The development of the relationship with the Media department was initiated and negotiated by the Coordinator of the Joint PhD Program, the Dean of the College of Nursing and the faculty member developing and teaching the course.

Focus on instructional design as process and product

There are five important phases to consider when initiating the instructional design process, analysis, design, development, implementation and evaluation. Each of these components must be carefully constructed in order to ensure quality control of the courses and the programs.

Phase I Analysis: In this phase, questions must be addressed such as “Does online education make sense for our target audience and courses?” The program was receiving many inquiries from potential and enrolled PhD students about the possibility of offering web-based courses. PhD students are enrolled full time and part time, are generally older, 27 through 55, increasingly more diverse, are working full time, travel long distances and have families with children ranging from infants to adolescents. Learner support is a critical element in online learning and poses a dilemma for universities and colleges, as it requires substantial economic and human resource investment. Assessment of student needs and requirements for the course yielded valuable information for the faculty and the media department and the need for development of specific orientation materials for graduate students taking the course. Students’ degree of comfort depends on their experience and depth of technical knowledge and skill previously acquired. Motivation is key as they must be ready to meet the challenges posed and willing to learn.

Media - relationship development- UA Design & Development Services.

Existing technology: Over the past two years, the University of Akron has been changing and updating computer systems. The organization and the college of nursing have been innovative in the installation of wireless laptop computers with software to teaching faculty. WebCt 3.2 Campus Edition is the course management system that is being used. The desire was there to forge ahead, but the allocation of resources for faculty development in the development and/or redesign of courses for online delivery was and continues to be difficult due to declining resources.

Instructional Design and Pedagogical Issues: The Dilemma For Faculty

Phases 2 and 3: Curriculum Design and Course Redesign

The doctoral course was taught once face to face in a seminar format. The course needed to be redesigned and developed for online delivery. This redesign presented certain problems in terms of developing learner to content, learner to instructor and learner-to-learner interactions through content, projects and assignments. The features of the web for asynchronous and interactive communication make the web a different kind of teaching and learning environment, which affects both the faculty and student roles. The students take on more responsibility by taking a very active and engaged role in their learning.

What is instructional design? The Instructional Systems Development Model (ISD) is a systems approach to systematic and comprehensive design, development, and management of instructional materials and instructional systems (McCombs, 1986, p. 67). Instructional systems design enables you to address educational needs, human performance problems and develop solutions through instructional means. This process includes developing a blueprint for the course. A complete description of all aspects of

the course including, course description, objectives, course materials, plans for course delivery, orientation, assignments and evaluation. Many of these components had to be totally redesigned. Modules with course content, orientation, activities and assignments were developed. Structure, which would affect autonomy and independence and dialogue, which is the extent to which there is interaction between teacher and learners, were taken into account.

Instructional design principles: The web is a highly interactive and user-driven medium. Academics and faculty have the tendency to be content-centric with topics outlined in detail with specific information that can be unwieldy in a web-learning environment. The key is to become learner-focused. The aim of developing a sound instructional design system is to enhance the quality of learning for individual learners. Distance learning provides the opportunity for access to learning that is more flexible and has the capacity to foster deeper levels of learning if well designed and implemented. The constructivist theory of teaching and learning provides a framework for developing approaches to instructional design that will enable students to construct knowledge through perceiving, interpretation and reflection.

Instructional design methods: Course redesign issues and problems

The focus in redesign is matching the content with the objectives and how that subject matter will be delivered. Other issues were developing outcome competencies to match the course objectives, how to present the subject matter, development of relevant activities, and redesign of major assignments. The use of a modular approach overcame some of these difficulties. Another great challenge facing the distance educator is creating student-relevant examples with very abstract material. The constructivist theoretical approach fits well with PhD education, as the goal is to create knowledge as a conscious, intentional act. The content was chunked into components of information that was no longer than 2-3 pages. Each module began with a table identifying the major themes, key concepts, activities, with links to the readings and supplementary materials. The presentation of material remained constant throughout the course so as to make navigation easier for the students. The goal was to reduce frustration.

Phases 4 and 5: Implementation and Evaluation

Instructional strategies

Because the students had not participated in an online course previously, the activities were more structured for the first weeks of the course with very specific beginning and ending dates for each activity. In the introductory module, students were asked to write a biosketch, including their interests, academic and social, which was posted to a guest roster. A second activity asked them to identify their goals for the semester and for the PhD program. Other activities served as icebreakers and a means to introduce the students to interacting individually and collaboratively. Students were allocated to teams of three and they were reassigned to different teams each week so that they got used to working collaboratively in different groups. Dyads were also used for certain activities. Many of the activities involved responses to questions with discussion and commentary. Later in the semester debates were added and the students responded well to the debates, which were valuable vehicles for learning difficult and controversial subject matter.

Assessment of the course needs to be ongoing throughout the semester so that faculty can judge learning of content and whether or not objectives are being met and competencies being developed. An evaluation was developed that examined all aspects of the course.

Faculty/Student Interaction Issues: Motivational strategies to promote learning and promotion of a positive climate were important for success of the course. Learning and the learner must be the focus of the transition to distance learning rather than being technology-driven. The premise of constructivist environments is that learners bring knowledge (schema) experience, and values to the learning tasks. The learner needs to encounter new information in a way and in the context that it will be used in real life. The goal is to motivate students to engage in activities that will foster complex, higher order thinking, and enhance deeper levels of learning in a collaborative online environment. Technology is only one element in the total teaching-learning system whose aim is to enhance learning and support instruction. One of the most important strategies for the faculty teaching an online course is to develop and nurture student-to-content and student-to-student interaction as well as faculty-to-student interaction. Learning how to function and survive in a collaborative online environment can take time for students. Learners in distance education may come from cultural settings, social and or academic, in which openly expressed forms of communication and disagreement are not well received, or they have not had experience with expressing alternative perspectives in a safe environment. Every effort was made to construct learning activities that were based on authentic tasks and environments, providing opportunities for learners to question, explore, reflect, construct meaning and apply knowledge to current and future philosophical problems for the discipline.

Willingness to Accept Innovation and Faculty Development Issues

Readiness for climate change must be carefully assessed. One major pitfall may be a lack of commitment to allocation of time and this issue can arise at many levels. The time needed to develop and implement a course cannot be underestimated. Other problems are inadequate resources and support for web-based initiatives. Ideally faculty should be able to take charge of their course and handle revisions and updates by themselves if they have had significant input into how the course was designed and developed.

Faculty will come with a variety of teaching experiences, pedagogical strategies, and expertise, not only as a content expert, but also as a facilitator, coach and moderator. These latter skills need practice and development in an online environment. It would be helpful to faculty to have an online faculty development course so that faculty could practice teaching and learning in an online collaborative environment.

Billings, M., Connors, H. R., & Skiba, D.J. (2001). Benchmarking best practices in web-based nursing courses. *Advances in Nursing Science*, 23(3), 41-52

Billings, D. M. (2000). A framework for assessing outcomes and practices in web-based courses in nursing. *Journal of Nursing Education*, 39(2), 60-67.

Commission on Higher Education. *Best Practices for electronically offered degree and certificate programs*. Commission on Institutions of Higher Education, North Central Association of Colleges and Schools-info@ncacihe.org

McCombs, B.L. (1986). The instructional systems development (ISD) model: A review of those factors critical to its successful implementation. *Educational Communications and Technology Journal (ECTJ)*, 34(2), 67-81.

Mechanic, M. (2000). Faculty development in higher education: "Best practices" review and planning recommendations for technology-rich environments.

Milstead, J.A. (1998). Preparation for an online asynchronous university doctoral course: Lessons learned. *Computers in Nursing*, 16(5), 247-258.

Kathy Ross-Alaolmolki, PhD, RN, has 17 years teaching experience in higher education. She completed a 12 month web-based Distance Education: Teaching and Learning Certificate Program through the University of Wisconsin, Madison, designed to develop broad-based knowledge and application skills in major areas of distance education. Currently she is designing, developing and teaching web-based courses for the Joint PhD Program, a collaborative program between The University of Akron and Kent State University. She also has had experience teaching via two-way interactive compressed video.

Jeri Farwell has been a MultiMedia Specialist at The University of Akron for two years, concentrating on design and development of online courses including ADA compliance and training. She is a Microsoft Mentor, creates and maintains university websites and works with faculty to design and develop online courses in WebCT. With nine years of experience at Kent State University, Jeri has a thorough knowledge of the university environment including computer networks and course instruction.