Evaluation of Asynchronous Teaching Strategies in an Internet-Based Nursing Informatics Course

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Background. A Health Systems Nurse Specialist (HSNS) graduate curriculum uses a health systems approach to provide the knowledge, skills, and competencies needed by the HSNS to improve the health of various patient populations. "Nursing Informatics in Health Systems" is a course within this curriculum that explores the analysis and evaluation of information needs and information systems in communities and health care organizations. Knowledge, skills, and abilities necessary for using information technology to make decisions is emphasized.

The distributive education delivery mode used for this nursing informatics course includes the use of desk-top video conferencing (ClassPoint software), an Internet-based syllabus, a tool for online asynchronous discussions (Web Board software), and e-mail. Approximately one-half of the course is taught via asynchronous methodology. The asynchronous mode accomplishes two objectives: (1) it provides access to the course for students who are geographically distant as well as those who find scheduled class hours difficult to attend, and (2) teaching strategies using asynchronous communication techniques contribute to students' learning how to effectively use these evolving modes of communication. The communication strategies used to accomplish the required course activities emulate group work, discussion, consensus building, and dialogue. These asynchronous communication channels are rapidly becoming common approaches for conducting the work within health care communities and organizations, e.g., project planning and management, strategic planning, computer-based instruction, and conduct of team meetings. The purpose of this project is to evaluate the effectiveness of the asynchronous teaching strategies and describe our learnings from initiating their use within the distance delivery of a nursing informatics course.

Methods. The Internet-based syllabus for A Nursing Informatics in Health Systems includes the course description, objectives, schedule, assignments, evaluation criteria, hot-links to a variety of resources, "Meet the Class" information, and discussion area using Web Board (to be demonstrated at the poster session). The asynchronous teaching strategies used are (1) responding to posted questions, (2) sending information to be processed, (3) iterative discussion sessions, and (4) synthesizing information shared during an iterative discussion.

Evaluation: Both formative and summative evaluations are being conducted of the asynchronous teaching strategies being used within this course. Formative evaluations consist of faculty debriefing and consultation with an expert in instructional design as well as seeking frequent feedback from students via e-mail and online conferencing (video-conferencing and Web Board). Summative evaluations will include formal course evaluations by students and faculty. Results will be reported.

Conclusions: Self-discipline is an essential skill for successful use of online communication channels whether taking a class or completing other group work using these strategies. Time management becomes vital when there is no scheduled moment for completing a task. Learning how to set time aside for these activities and projecting the time needed for their completion is an integral part of functioning successfully within the virtual environment. An advantage to this means of communication is the freedom to interact at a one's own pace. Each individual has time to think and respond in a more individualized manner. Further, one can self-select how to encounter information and how much time to spend on it.

A more concrete structure is needed when designing online activities because the instructor is not in a face-to-face situation where the assignment can be clarified or negotiated. Questions posed for discussion need to be of an informal nature and presented in a conversational style rather than what is usually seen in a written document. These preliminary findings will be expanded upon as the formative and summative evaluations are completed.