

4-2010

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Recommended Repository Citation

Abell, Cathy H.; Garrett, Dawn M.; and Jones, M. Susan. (2010). The Effects of an Educational Program on Faculty Stages of Concern Regarding the Use of Interactive Video Services (IVS) in Undergraduate Nursing Education. *Kentucky Nurse*, 58 (2).

Available at: http://digitalcommons.wku.edu/nurs_fac_pub/39

Accent On Research

The Effects of an Educational Program on Faculty Stages of Concern Regarding the Use of Interactive Video Services (IVS) in Undergraduate Nursing Education

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There is an expected shortage of 500,000 nurses within the next two decades (AACN, 2008). This deficiency is compounded by a concurrent shortage of nursing faculty. Inadequate numbers of nursing faculty and scarcity of other resources, such as limited clinical sites for learning experiences, resulted in 30,000 qualified applicants being denied admission to baccalaureate nursing programs in 2006 (AACN, 2007).

In an attempt to address the nursing shortage, faculty members at Western Kentucky University (WKU) adopted the use of Interactive Video Services (IVS) to deliver the prelicensure BSN curriculum to one of the university's satellite campus. The use of IVS allows for synchronous communication between students and faculty. It also creates a face-to-face learning environment while allowing place-bound students the convenience of attending classes in their local community (Billings & Halstead, 2009). The advantage for the educational institution is the ability to increase enrollment while maximizing faculty and facility resources. For WKU, the implementation of IVS as a delivery mode to one additional site allowed for the admission of 10 additional full-time students to the prelicensure nursing program. This change required the addition of only one full-time faculty position. Health-care facilities in the geographic area benefited as well. First, facilities that had not been previously used by the BSN students had the opportunity to participate in the academic preparation of these students. This provides an excellent mechanism for the facilities to recruit future nurses. Secondly, by increasing the number of available clinical sites, increasing the number of students did not negatively impact local health care facilities.

While planning for the expansion of the prelicensure program with the addition of IVS as a teaching method of delivery, it was recognized that many of the current faculty members had little or no experience using this technology. It is imperative that faculty have the opportunity for professional development related to the use of IVS in order to maintain a positive learning environment (Billings & Halstead, 2009). Therefore, nursing faculty experienced with IVS and staff from the instructional technology (IT) department collaborated to develop a workshop for faculty members who would be implementing this educational innovation.

The purpose of this project was two-fold. First, the researchers identified the stage of concern of faculty members in a BSN prelicensure program regarding the use of IVS as a delivery mode for undergraduate nursing education. Secondly, the researchers examined how individual faculty members stage of concern was affected by providing education and practice with the IVS technology.

A quasi-experimental design with a pre/post test was utilized for this pilot study. Researchers obtained human subjects approval from the institution's review board. The sample was composed of faculty members teaching in the School of Nursing and participating in an IVS workshop. Nine faculty members made up the convenience sample. Inclusion criteria included being employed as a full-time faculty member in the School of Nursing during the fall 2007 term.

After the study was explained to the faculty members participating in the workshop and informed consent was obtained, each subject completed a demographic questionnaire and the Stages of Concern Questionnaire (SoC). Subjects were then engaged in a 2-hour interactive educational session. Following the intervention, the SoC was administered to faculty members as a post-test to examine changes in their stage of concern regarding the use of IVS.

The SoC is a 35-item self-report questionnaire measuring concern regarding educational innovation. The reliability coefficients range from .65 to .86 and

the internal consistency estimates range from .64 to .83 (George, Hall, & Stiegelbauer, 2006).

The SoC questionnaire measures seven stages of concern that may be present about an educational innovation. These stages are (Hall & Hord, 1987):

- Stage 0: Awareness. In this stage there is little concern or involvement with the innovation.
- Stage 1: Informational. In this stage, the person has a general awareness of the innovation and has an interest in learning more about it. The individual, at this stage, is not worried about the innovation in relation to themselves.
- Stage 2: Personal. During this stage, the individual is not sure about the requirements of the innovation.
- Stage 3: Management. Persons in this stage are concerned about the process of using the innovation. This includes organizing, scheduling, and time demands of implementing the innovation.
- Stage 4: Consequence. In this stage, the person is concerned about the impact of the innovation and the focus is on the relevance to students.
- Stage 5: Collaboration. The focus in this stage is collaborating with others in the use of the innovation.
- Stage 6: Refocusing. During this stage, individuals are exploring increasing benefits and other ways to use the innovation.

The educational intervention took place in the IVS classroom setting with a connection to one additional site 30 miles from the main campus. The workshop began with a presentation regarding the history, benefits, and challenges of IVS use in nursing education. The presenters were nurse educators who had experience teaching in an IVS setting. This was followed by a demonstration of equipment set up and features by the university's Instructional Technology Department. Time was then allowed for hands-on practice with the IVS equipment.

Data were analyzed using SPSS v. 16. The sample was comprised of all Caucasian females. The age of the subjects ranged from 30 to 64. The years of experience in nursing ranged from 6 to 34. Teaching experience varied from one semester to 23 years. The researchers found that 88.9% of participants reported having some formal training related to nursing education; however, only 44.4% had received formal training related to IVS prior to the decision to adopt this technology. In addition, only three faculty members in the study had actually implemented IVS as a teaching modality in another course, program or at another institution. Data regarding stages of concern was analyzed by examining first and second stages of peak concern.

Prior to the educational session, 89.9% of participants rated their first concern at a level of 0 (awareness, 66.7%) or 1 (information, 22.2%) using the SoC, indicating an awareness of the technology and some potential uses, as well as a desire for more information. After the educational session, a third of participants had moved to stage 2 (personal) or higher, indicating a better understanding of the technology and greater preparation for the use of IVS. In regards to the second peak concern for the respondents prior to the educational offering, 66.6% of the subjects reported being at the awareness, informational, or personal stage. Results of the post-test demonstrated that 66.6% had moved into the stages of management, collaboration and refocusing after the education session.

The greatest limitations were a small, homogeneous, convenience sample and all subjects being employed at one School of Nursing. The data were obtained by self-report; however, the instrument utilized in this study has acceptable validity and reliability.

This study should be replicated using a larger, more heterogeneous sample. It would also be of interest to examine the concerns of faculty teaching in other types of nursing programs, including practical nursing, associate degree nursing, RN completion, and graduate nursing programs. The researchers also recommend the study be expanded using a longitudinal design to examine stages of concern over time.

Results of the current study support that all nursing faculty members may not be prepared to utilize technology, such as IVS, even if they have had previous preparation in nursing education. Also, faculty members have concerns regarding the use of IVS to deliver undergraduate education. This study demonstrates that basic education and practice with the IVS technology can help faculty move past their fears and become more prepared to deliver content using alternative technologies such as IVS. Such alternative delivery modes may serve as one effective strategy to address the nursing shortage; therefore, it is imperative that further research be conducted to examine the use of IVS as a delivery mode.

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