Introduction: Project Care Plan

- Pre-taped lectures posted on Blackboard for students to view as a prior class assignment via Personal Lecture Capture feature of Echo 360.
- Team based case studies and Immediate Feedback Scratch Ticket quizzes were added to the live classroom experience of the Junior Level 33.313 Nursing Assessment & Skills course Fall 2011.
- Standard 14 week live lecture classroom divided into two sections.
- Traditional lecture format with I-Clickers and Echo lecture capture for post class review during first seven weeks.
- Teacher facilitated team based critical thinking exercises last seven weeks, with pre-taped lectures on Blackboard as a pre-class assignment.

Aim: Compare the two methods of course delivery and their effect on student learning outcomes.

Methodology

Students evaluated with two quizzes and a final examination

Students evaluated the course at midterm and final.

Evaluation consisted of satisfaction with course delivery & comparison of learning strategies employed throughout the semester.

Three One hour focus groups of students (N=15) held at end of the semester.

Participants were given a $25.00 gas card for participation. Exempt IRB approval was obtained from UMass Lowell IRB.

Analysis

Examination of student scores from intervention quizzes & Midterm examination for fall 2011 class was compared to students from Fall 2010 class to determine if there was any statistical differences in student performance.

Student comments were transcribed from midterm (N=104) and final (N=103) course evaluations.

Audio taped discussion of three post semester student focus groups (N=15) were transcribed.

Using qualitative analysis methodology (Weber, 1990), transcribed data was categorized and coded into common themes of student perceptions of the course delivery.

Results- Quantitative

Regression analysis demonstrated a statistical difference between cohort 1 (fall 2010- no intervention) and cohort 2 (fall 2011- intervention) on quiz 4 when controlling for quiz 1, 2 and midterm.

Intervention group scored 4.3 points lower than prior non-intervention cohort (p.<.001)

Midterm/Final Evaluation Results

I feel that the use of the ECHO 360 lecture caption of previous classes for review has assisted me to utilize critical thinking and therefore enhanced my learning of the content.

Midterm Yes (66%) No (34%)

Final Yes (76%) No (23%)

How well do you feel the use of the ECHO 360 lecture caption of previous classes for review prepared you to achieve the following course objectives.

A. Demonstrate the ability to collect health-related data systematically through history taking and selected psychomotor skills

Midterm 11% poor 20% fair 40% good 23% very good 9% excellent

Final 13% poor 20% fair 31% good 29% very good 7% excellent

How well do you feel the use of the ECHO 360 lecture caption of previous classes for review prepared you to achieve the following course objectives.

B. Formulate health assessments and nursing diagnoses based on data collected

Midterm 11% poor 21% fair 41% good 20% very good 9% excellent

Final 14% poor 21% fair 31% good 27% very good 7% excellent

Results- Qualitative

Focus Group & Midterm/Final Evaluation Significant Student Themes / Perceptions

Course credits Insufficient for work required during 2nd half of course

Grades Negative impact with 2nd half course format

Time Management Echo 360 lecture caption slow and inaccessible to hand held devices

Professor Role The Q&A of a live lecture was highly valued in 1st half of course

Classroom Environment Class size too large and noisy for lecture caption format and group case studies

Favored Teaching Methods Traditional lecture with Clickers / textbook / scratch ticket quizzes.

Unfavorable Teaching Methods Case Studies / group work / concept maps

Discussion

The 1st 7 week live lecture was seen as a valuable interactive classroom experience that enhanced visual attention and listening abilities, and student liked the real time didactics of questions and answers with the professor.

The 2nd 7 week classroom group activities, NCLEX online resources and quizzes were also regarded as helpful in meeting learning objectives. However, the Echo 360 lecture caption was deemed useful as an augmentation but not as a replacement of the live lecture experience.

The Live lectures, quizzes and text book review were all valued more highly than the lecture caption in developing clinical reasoning, meaningful questions, test preparation and improved grades by students. .

Intervention students scored lower on quiz 4 than students from previous year who experienced traditional course format.

Conclusions and Recommendations

A review of the literature suggests movement from a teaching-centered to a learning-centered approach to nursing education (Davis, 2011)

As web based technology continues to rapidly drive expectations and outcomes of the nursing classroom experience, (Mitchell, 2007) access to traditional teaching methodologies of live lecture and textbook study continues to be highly valued by this student sample population.

Therefore nursing educators must continue to assess and accommodate student values and preferred learning styles before implementing curricula changes that incorporates emergent online technology.

References

