Enhancing Active Collaborative Classroom Learning with Tablet PC Technology

Elaine Barber Parker
University of Massachusetts Medical School
Enhancing active collaborative classroom learning with Tablet PC technology

Elaine Parker, UMASS Worcester Graduate School of Nursing
Specific Aims

Aim 1: Describe graduate student and faculty perceptions of using tablet laptop technology to enhance active collaborative classroom learning.

Aim 2: Identify supporting structures and processes for using tablet laptop technology to enhance active collaborative classroom learning.

Research Design
Exploratory
Sample

- Ten (10) full time graduate students.
- 9 female; 1 male.
- Age range: 25-45 years.
- Cohort for 1.5 years.
- Experienced in collaborative learning.

Data sources

- Survey.
- Focus group.
- Student presentations.
- Instructor self-reflective diary.
Materials

- Four wireless tablet PCs.
- Wireless internet network.
- LCD projector wireless adaptor.
- Student guide to tablet PC.
- Authentic problems.
Classroom activities

- Tablet PC wireless internet and digital writing features used by instructor for lectures.
- Students used wireless tablet PCs.
  - Sixty minutes during selected classes.
  - Small collaborative groups.
  - Semi-structured real-world problems based on course outcomes. Each problem included a scenario, questions, and links to appropriate web sites.
  - Used tablet PC to create and present powerpoint presentations to entire class.
Results

- Students analyzed and synthesized content.
- Students enthusiastic of in-class collaborative problem-based learning using wireless tablet PC technology.
- Unreliable classroom wireless sub-network to link LCD and student laptops. IT staff recommended using hard wire when available.
- Instructor used tablet PC digital pen for powerpoint slide lectures.
- Students did not use the tablet PC digital pen technology during their presentations.
Conclusions

- Students need time to learn new technology such as tablet PC digital writing features.
- Students prefer to use personal laptops rather than unfamiliar technology provided by the instructor.
- Instructors require time to gain skill in using new technology such as tablet PC digital writing features.
- Developing problem-based authentic learning activities is time-consuming, especially to obtain expert review and locate appropriate web sites.
- Instructor/IT staff collaboration is vital prior to and during course for equipment preparation and continued support.


Study examined and exempted from review by the University Committee for the Protection of Human Subjects in Research.

Research supported by a UMASS Professional Development Grant.