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DO E-TEXTBOOKS FACILITATE LEARNING?

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Do E-textbooks Facilitate Learning?

ABSTRACT

The purpose of this study was to characterize the association of student learning outcomes in an introductory statistics course with the use of a web-based e-textbook. The primary research question was:

Do students who use a web-based e-textbook achieve different learning outcomes than those who use a traditional hardcopy textbook?

Students were allowed to choose the type of book (hardcopy or e-textbook) that they wished to use in the course. Since students self-selected their type of textbook, random assignment to book format was not possible. Learning in the course was measured by student performance on exams and homework assignments.

The sample was comprised of 56 students in an undergraduate, introductory statistics course with 33 (59%) students selecting a hardcopy text. Females comprised 61% of the sample and Hispanics comprised 73%. The students were generally traditional age with 71% classified as freshmen or sophomores. The mean number of prior college-level math courses completed was 1.52.

Student’s t test was used to evaluate differences for continuous variables, and Chi Square or Fisher’s Exact tests were used to evaluate differences for categorical variables. Multiple regression models, controlling for group differences at baseline, were used to determine if learning outcomes differed for students based upon the type of textbook used.

After controlling for differences in academic preparedness, students who used e-textbooks earned significantly lower mean scores on homework and on two of three exams.

The final course average was significantly lower (by about a letter grade) for students who used e-textbooks. Similarly, the percentage of students using e-textbooks who successfully completed the course (60%) was significantly lower than for those students who used hardcopy books (88%).

Findings from this study demonstrate the need to assess the impact of introducing technologies in the classroom. Given the trend towards increased use of digital media in higher education, these findings may help guide university faculty in their decisions regarding the use of e-textbooks within their courses.
LEVELING THE PLAYING FIELD: CAN STUDENTS SUCCEED IN HIGHLY TECHNICAL BUSINESS COURSES DELIVERED ONLINE?

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ABSTRACT

As universities seek to meet student flexibility requirements while maintaining a quality curriculum, questions arise regarding delivery formats. We present the findings of a longitudinal study considering face-to-face and online delivery formats in a highly technical, upper-level business course. In our study the course and the instructor remain the same across all years. Further, the instructor creates as similar a learning environment as possible across the different delivery modalities by codifying all lectures in their entirety. We control for age, gender, and ethnicity as suggested by previous literature. We find that overall, delivery format does not impact the learning success of students. Our results point to a common predictor, student GPA, as the most consistent student success indicator regardless of the delivery format. Our study suggests that students who have developed the skills leading to good grade performance are able to adapt those skills across divergent learning environments.
Online and On Time:  
Faculty presence in the virtual classroom  

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ABSTRACT

Online instruction is the fastest growing teaching method in higher education. However, critics often complain that it does not provide the same quality of instruction as the face-to-face class. There are research studies that dispute this claim and offer online models that provide close communication between faculty and students as well as introducing rigor and depth rivaling the traditional teaching methods. Sharing of these best practices is essential in assuring that online faculty have instructional tools equivalent to their campus-based counterparts.

Strategies for online parity include use of discussion boards with faculty participation, synchronous online seminars with archives, presentations with voice and video, 24-48 hour response time to student emails/messages, detailed grading rubrics which are shared with students, use of class announcements and messaging, and other methods of insuring faculty presence in the online classroom. Consistently, student evaluations of online faculty improved when faculty presence was high. Student evaluation of course success also increased as levels of faculty participation rose. Outcomes are generally measured by student evaluations, faculty peer review, and student success. Outcomes indicate a direct relationship between faculty presence and student achievement in the online environment.

Lessons learned include: 1) student retention levels in online offerings were higher when the instructor was very active in the course. 2) Student evaluations of the course and the faculty member were higher when there was high faculty presence in the online classroom. 3) Student success was directly related to faculty participation levels.

The next step is to expand faculty training by sharing Best Practices for online instructors. Student evaluation tools should also be revised to capture more data on the topic of instructor presence.

The content will be presented via PowerPoint slides, handouts, and discussion.
WEB 2.0 EXPERIMENTATION AND INNOVATIONS FOR TEACHING & LEARNING: AN INTERACTIVE DISCUSSION

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ABSTRACT

Purpose: The use of Web 2.0 tools in higher education continues to grow. This growth is perpetuated by educators’ experimentation with Web 2.0 tools in our classrooms. In the process of our experimentation and innovation we learn about the advantages and disadvantages of these tools, what works, what doesn’t, and what we can do better in the future. The purpose of this panel discussion is to provide an opportunity for interactive dialogue about our experiences using various Web 2.0 tools and how we can learn from each other’s trials and errors to improve our teaching and increase student learning going forward.

What will be discussed: The first panelist will share a brief overview of Web 2.0 and some the innovative tools available. The second panelist will discuss his use of social networking tools to create a sense of community among students in the classroom. The third panelist will talk about academic blogging and reflective learning. All three panelists will focus on successes and failures and what they plan to change the next time the tool is used.

Why it is beneficial: Participants have the opportunity to learn about new Web 2.0 tools as well as hear about the successes and failures of using these tools. An additional benefit is that the interactive nature of the session allows us to learn from each other. Observers who have not yet experimented with Web 2.0 tools have the opportunity to learn about new ideas for their classrooms and have the advantage of hearing about the successes and failures of others before trying a new tool themselves.

How time will be allotted: This panel discussion is an open forum. Participants are invited to engage in the conversation at any time. The role of the facilitator is to keep discussion flowing, on point, and on time. The time will be divided equally among all three panelists’ general topics. Each panelist will begin with an overview of the topic, share how Web 2.0 tools have been used, and finally what has been learned from the innovation and experimentation. Participants are expected to share their own experiences using Web 2.0 tools; in particular, how they might change the use of the tool based on previous experiences. The interactive discussion will create a rich and engaging learning experience for anyone attending.