

Who are Coastal Carolina University's Distance Learners?

**Scholarship of Teaching and Learning Poster Symposium Presentation
August 31, 2006**

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Abstract

One of the elements of effective course design is understanding the student audience. The goal of this research was to describe the student audience for web-based versus lecture-based Introductory Sociology courses in terms of demographic, academic and psychological characteristics. Data for this study were collected during the Fall 2005 semester. The instructor taught two sections of the introductory sociology course; one section was taught in web-based format and the other was taught in a traditional lecture-based format. Nineteen students completed the web-based course and 35 completed the lecture-based course. Students enrolled in the web-based course were similar to those enrolled in the lecture-based course in terms of the demographic characteristics of gender, race, and class rank, the academic variables of GPA and SAT scores, and the psychological variable of locus of control. However, students in the web-based course were significantly older and scored significantly higher on a measure of self-efficacy than students in the lecture-based course. Our findings indicated that on most variables the student pool for web-based and lecture-based courses was comparable.

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Accompanying the growing number of web-based course offerings is a discussion regarding the demographic, academic, and psychological characteristics of students enrolling in web-based courses. Some researchers have found that compared to students in lecture-based courses, students in web-based courses are more likely to be female, White, and over age 25 (Halsne & Gatta, 2002; MacGregor, 2002). However, other researchers have found that students in web-based courses do not differ from those enrolling in traditional courses in terms of age, gender, or race/ethnicity (Banerjee & Brinckerhoff, 2002; Leasure, Davis, & Thievon 2000; Roblyer, 1999; Wang & Newlin, 2002).

Merisotis and Phipps (1999) have hypothesized that students who take web-based courses may be superior academically to those in lecture-based courses. Additionally, it has been suggested that for students to be successful in web-based courses, they need higher levels of motivation, self-discipline, and independence than students in lecture-based courses (Sampson, 2003). However, there has been little empirical research demonstrating that successful students in web-based courses differ in their academic and psychological characteristics from students in lecture-based courses.

The present study was designed to describe the student audience for web-based versus lecture-based Introductory Sociology courses. Three research questions were evaluated:

1. Do students in web-based and lecture-based courses differ in the demographic characteristics of age, class rank, gender, and race?
2. Do students in web-based and lecture-based courses differ in the academic characteristics of SAT scores and GPA?
3. Do students in web-based and lecture-based courses differ in the psychological characteristics of locus of control and self-efficacy?

Method

The instructor taught two sections of an introductory sociology course during the Fall of 2005; one section was taught in web-based format and the other was taught in a lecture-based format. Students were not randomly assigned to the web-based or lecture-based learning environments; students chose one of the formats when they enrolled in the course. Nineteen students completed the web-based course and 35 completed the lecture-based course.

The structure of the courses was as consistent as possible across the two learning environments. Students in both learning environments were assigned the same textbook (Henslin, 2005) and given the same chapter outlines, notes, assignments, and exams. The instructor used WebCT as the course management system for the web-based class.

Students in both learning environments were asked to complete web-based versions of a 29-item Locus of Control Scale (Rotter, 1966) and a 10-item General Self-Efficacy Scale (Jerusalem & Schwarzer, 1995). These scales were administered in compliance with university Institutional Review Board guidelines. The university's Department of Institutional Research and Assessment provided the researchers with an

Excel file containing the following demographic and academic information for students enrolled in the introductory sociology classes: age, gender, race, class rank, verbal SAT score, quantitative SAT score, high school GPA, and cumulative college GPA. These data were accessed according to the privacy policies of the university.

Results

Demographic Characteristics

- **Age:** Students in the web-based course were significantly older than students in the lecture-based course, $t(df = 52) = 3.21$, $p < .01$. The mean age of students in the web-based course was 25.95 ($SD = 12.81$) and the mean age of students in the lecture-based course was 19.03 ($SD = .86$).
- **Gender:** The gender distribution in the two learning environments was not significantly different, $\chi^2(1, n = 54) = .17$, $p > .05$. In the web-based course, 68% of the students were female and 32% were male. In the lecture-based course, 63% of the students were female and 37% were male.
- **Race:** The racial distribution in the two learning environments was not significantly different, $\chi^2(1, n = 54) = .02$, $p > .05$. In the web-based course, 84% of the students were Caucasian and 16% were African-American. In the lecture-based course, 83% of the students were Caucasian and 17% were African-American.
- **Class Rank:** The class rank distribution in the two learning environments was not significantly different, $\chi^2(3, n = 54) = 5.78$, $p > .05$. The class rank distribution in the web-based course was 37% freshmen, 21% sophomores, 32% juniors, and 10% seniors. The class rank distribution in the lecture-based course was 43% freshmen, 43% sophomores, 11% juniors, and 3% seniors.

Academic Characteristics

- **Verbal SAT Scores:** The mean verbal SAT scores of students in the two learning environments did not differ significantly, $t(df = 36) = .18$, $p > .05$. The mean score for students in the web-based course was 512.22 ($SD = 46.84$, $n = 9$) and the mean for students in the lecture-based course was 507.93 ($SD = 64.39$, $n = 29$).
- **Quantitative SAT Scores:** The mean quantitative SAT scores of students in the two learning environments did not differ significantly, $t(df = 36) = .81$, $p > .05$. The mean score for students in the web-based course was 535.96 ($SD = 57.25$, $n = 9$) and the mean for students in the lecture-based course was 516.55 ($SD = 62.92$, $n = 29$).

- **High School GPA:** The mean high school GPA of students in the two learning environments did not differ significantly, $t(df = 44) = -.79, p > .05$. The mean score for students in the web-based course was 2.68 ($SD = .44, n = 13$) and the mean score for students in the lecture-based course was 2.78 ($SD = .39, n = 33$).
- **College GPA:** The mean college GPA of students in the two learning environments did not differ significantly, $t(df = 30) = -.24, p > .05$. The mean score of students in the web-based course was 3.20 ($SD = .52, n = 13$) and the mean score of students in the lecture-based course as 3.25 ($SD = .57, n = 19$).

Psychological Characteristics

- **Locus of Control Scores:** The mean locus of control scores of students in the two learning environments did not differ significantly, $t(df = 44) = .01, p > .05$. The mean score for students in the web-based course was 12.86 ($SD = 4.44, n = 14$) and the mean score for students in the lecture-based course was 12.84 ($SD = 4.32, n = 32$).
- **Self-Efficacy Scores:** The mean self-efficacy score of students in the web-based course was significantly higher than the mean score of students in the lecture-based course, $t(df = 42) = 2.27, p < .05$. The mean score in the web-based course was 33.85 ($SD = 3.44, n = 13$) and the mean score in the lecture-based course was 31.00 ($SD = 3.93, n = 31$).

Conclusions

- A comparison of the demographic composition of the web-based and lecture-based classes indicated that students in the two learning environments were similar in terms of gender, race, and class rank. However, the average age of students in the web-based course was significantly higher than that of students in the lecture-based course.
- A comparison of the academic profiles of students in the two learning environments indicated that the groups did not differ on the variables of verbal SAT score, quantitative SAT scores, high school GPA, or college GPA.
- A comparison of the psychological profiles of students in the two learning environments indicated no difference between the groups on locus of control scores. However students in the web-based course scored significantly higher on the self-efficacy measure than students in the lecture-based course. Students who enroll in web-based courses may have more confidence in their ability to manage challenging and novel situations than students who enroll traditional lecture-based courses.

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Acknowledgements

- Funding for this research was provided by the Center for Effective Teaching and Learning Scholarship of Teaching and Learning Grant Program.
- Special thanks to Chris Mee and the Institutional Research and Assessment Department for providing the demographic and academic data and to the CCU staff members who administer and maintain the WebCT management system.