

**Title: Comparison of Test Performance and Retention between Distance Education, CAI Lab Setting, and Traditional Lecture for Intermediate Algebra**

**Project Member(s):** Marion Foster

**Describe the problem, issue, or area of interest and the context.**

Having taught distance education, computer labs, and traditional lecture, I often wondered if students were getting adequate instruction without the benefit of an instructor. It seemed that they may have slightly poorer performance and a far greater drop out rate from class. I wanted to do an objective study with as many of the same parameters as possible to see if one mode was significantly better than the others in terms of performance and retention.

**Define your desired goals, or “outcomes.”**

I wanted to see if one mode was significantly better than the others in terms of student performance and retention.

**Describe your “indicators” of success.**

The main indicators were student performance on each major test, performance on departmental final exam, and retention as measured by difference in student count from week 1 to final exam.

**Describe your project.** Being in the position of teaching intermediate algebra in a distance education class, a computer aided instruction lab setting, and a traditional lecture all in the same semester, I wanted to do a comparison study of the three modes of instruction. In particular, I wanted to see if student performance suffered or was enhanced according to the mode of instruction and if there was a significant difference in retention for these three groups. If a significant difference were detected, this would invite further future studies to see if these differences could be ascribed to specifics in each mode of delivery. For all three cases, the text book, instructor, major tests, semester administered, and departmental final exam were the constants. MyMathLab was used for the distance education and CAI lab classes.

**Describe your results.**

Surprisingly, there was no significant difference in student test performance according to the mode of instruction. However, there were significant differences in retention.

**Describe your evaluation methods.**

All classes were given the same major exams on the same timetable. In addition, all were given the same departmental exam. These were then analyzed through SPSS statistical package in testing for significance. The first null hypothesis was that there is no significant difference in test scores between the three modes of delivery. The second null hypothesis was that there is no significant difference in retention. Acceptance or rejection of the null hypothesis was based on an alpha level of .05.