Distance education, especially that of online coursework, is growing at a phenomenal rate. Despite its growth, there is a lack of experimental and quasi-experimental research that has been conducted to investigate what factors influence students’ experiences and academic success in online learning environments. Previous research has focused on adult and college level students, or comparing distance education to traditional face-to-face classrooms. This study uses a quasi-experimental design to specifically examine online courses delivered to high school aged students from a distance education program located on the campus of a Midwestern land-grant university.

Asynchronous online courses, also called self-paced or independent study courses, were compared to semester-based courses. Semester-based courses in this study had a calendar with a start and ending date, due dates for assignments, and scheduled chats for interaction between other students and the instructor. Asynchronous courses did not have such features. These two types of courses were compared in terms of student experiences, student satisfaction, and academic achievement. The researcher constructed an online survey to gather student perceptions on their experiences and measures of satisfaction, while academic achievement data was gathered from the school’s school information system (SIS).

Based on the survey data collected from 50 high school students, no significant difference was found in terms of student experiences and satisfaction between students enrolled in asynchronous courses and those in semester-based courses. However, in the analysis of SIS data of 1,207 students, there were statistically significant differences between these two groups when comparing the academic achievement as measured by final course grades and course completion rates. Students in semester-based courses had higher course grades overall. Likewise, students in semester-based courses had a higher completion rate of 86.2% of students completing their online coursework, while only 62.4% of their asynchronous counterparts completed their online courses.

Results of this study suggest that some students perform better when given the increased structure and guidance of online courses that are designed in a semester-based format. Although leaders of high school online programs should consider these results and their implications, it is also important to note that students did not perceive differences in their course experiences and satisfaction levels.