

Can E-learning Replace the Traditional Classroom? A Case Study at a Private High School

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ABSTRACT

E-learning is a form of learning using electronic means, primarily e-mail and the internet. The teacher's role in online learning is mainly that of a facilitator. There is less direct teacher-to-student interaction than normally found in the classroom. Learning is largely self motivated, and the student bears more individual responsibility to manage time and complete tasks within the given time frame. However, some students learn less effectively through this method and do not have the required self discipline to learn via the internet. Further, their learning styles may differ and they may not be able to comprehend the given information without further explanation from a teacher. Therefore, as suggested by this case study of a private Catholic all-female school, E-learning may not be able to replace the traditional classroom.

Keywords: E-learning, synchronous e-learning, asynchronous e-learning, gender differences

1. INTRODUCTION

E-learning is a form of training or teaching over the internet or intranet. It is adapted from the computer based training used in the early eighties which utilized CD-ROMs to distribute information to the users of the program. Now E-learning is widely implemented by academic teachers and corporate trainers alike for instruction purposes for its convenience and cost-effectiveness. Companies, for example, can save significantly on expenses including transportation, room and board, and meals that are incurred from sending employees to training programs. In academia, E-learning

may enable students to complete their education through flexible course schedules.

There are two categories of E-learning: synchronous and asynchronous. Synchronous E-learning is similar to traditional classroom learning in that instructors and students meet at a particular time via audio, video streaming or a chat room. While Synchronous E-learning is effective for distance learning, it takes away the flexibility of time, which is a major advantage of e-learning. Asynchronous E-learning allows parties to work on their own time and pace with periodic and sporadic communication with the instructor. This type of E-learning is more frequently used in

corporate and college e-learning environments.

Although E-learning provides a number of advantages for users, significant disadvantages also exist for students. E-learning requires patience, motivation, self-confidence, dedication, and a general knowledge of using a computer – characteristics that students may not wholly possess. Additionally, the effectiveness of E-learning also fluctuates based on an individual's learning style and behavior type (Meyer 2003). In corporate E-learning, a company requires and supports employee learning; there is an understated premise that employees who fail to learn will be penalized. However, employees involved in these programs may not be accustomed to using a computer, or may not be willing to adapt to change. Some individuals become frustrated with using E-learning and may even reject it. Additionally, studies have indicated that several factors alter the success each individual has with E-learning, such as age and gender (Huang 2002).

Instructors of E-learning programs also face a number of new challenges. The teacher in an online course plays an integral role in the success or failure of a course. S/he must know and understand his/her role and limitations as a remote instructor, and must be able to communicate with the students on a regular basis at sporadic times to help them to move forward at a steady pace (Easton 2003). Teachers must take the initiative and occasionally initiate a discussion with the students. In online instruction in particular, instructors must make extra efforts to communicate with students. However, several factors may impede a teacher's ability to communicate with students through E-learning. These factors include the instructor's lack of computer literacy, resistance to online education, different philosophical beliefs about the nature of communication online, and heavy workloads (Easton 2003).

In this research, the effects of e-learning were analyzed. Although this was a limited study, it suggests that e-learning cannot be used to completely eliminate classroom-based learning. E-learning does not always provide students with comprehensive knowledge and understanding of a subject matter, and is unable to adapt to the individual needs of each student. This limited study suggests that e-learning may be especially challenging when dealing with high school students. If classroom learning is completely eliminated, an extremely large student segment will be left at a significant disadvantage (Easton 2003).

2. STATEMENT OF PROBLEM

E-learning does not have a way of ensuring that the students are really learning the material. In this study, tests and quizzes conducted in online classes were not monitored and, as a result, it is unknown whether or not students use notes or other resources to complete tests. Therefore, it is unclear if students completed exams based on knowledge they accumulated from E-learning, or if they illicitly used outside sources to "cheat" on exams. This problem is due to the lack of a human, in-person monitor that can prevent such problems.

E-learning also does not accommodate the different learning styles of the students. Not all students are self-motivated and self-determined to handle online courses (Meyer 2003). Students learn independently and from others who share in the discussions. If students are not focused and willing to push themselves to do the work, they will not be able to succeed in an online course. Some students need a teacher in front of them, explaining the course subject matter and materials, answering spontaneous questions, and monitoring their work. In order to learn, these types of students need the learning environment of a traditional classroom that E-learning is not able to provide.

Further, many instructors are not properly trained to facilitate online learning. They lack many of the necessary skills such as technical knowledge and the ability to move traditional content and time (Laird 2003). E-learning is extremely time-consuming for both the teacher and the student, and instructors must invest ample time to communicate with students online individually.

This study shows that students taking online courses are given more work than those in a traditional classroom, perhaps resulting from the instructor's lack of insight into exactly how occupied the student is with work. The instructors do not realize, however, that they will have more work to check in the end. As noted, there are many problems with online learning and many reasons for not being able to completely eliminate the traditional classroom.

3. STATEMENT OF THE OBJECTIVES

This study analyzes the effects e-learning had on various students. It gives statistical information on students who had experienced one class from the traditional classroom and one from E-learning. The success of the class using e-learning has various factors which will be discussed in detail. The many advantages and disadvantages will be discussed, including the factors that help determine each. In addition, a detailed comparison between e-learning and the traditional classroom will be discussed, showing how the traditional classroom is more preferable than e-learning by these students. Even

though e-learning has several advantages over the traditional classroom, this paper suggests that e-learning may not completely replace the traditional classroom on the high school level.

4. METHODOLOGY

The targeted population of this study is high school students. The research was conducted at St. Mary’s Academy, an inner city high school in Southern USA, that is a private, predominantly African-American, all girls high school. Students who attend St. Mary’s Academy come from various social classes and backgrounds, and all students must take placement tests to be properly placed in certain classes. All freshmen and seniors currently enrolled in a computer science course were surveyed.

The population of this survey focused only on female students. Such a group was chosen due to the results of a study by Mae Mc Sporrán and Stuart Young (McSporrán, Young, 2003) showing that woman are more successful than men in online environments, and that more women prefer an online environment over men. In the study, approximately 39% of women preferred online courses whereas only 10 - 28% of men preferred the online courses. Therefore, since women seem to be more acceptable to online learning, they were chosen to be the subject of this study.

The students were placed in an online environment for three weeks learning Microsoft Word. They received a book to supplement their learning. They also used online resources to gather more information to help gain a better understanding of the product. In addition, CTM (Certified Test Manager) testing was used to allow students to test their knowledge. They were given assignments to complete out of the book. At the end of the third week, they were given a test using CTM. Then, they were switched to the traditional classroom setting. Once again, they were given assignments to complete and a test at the end of the three weeks. During these weeks, the teacher explained several concepts to them and walked them through two exercises. At the end of the experiment, the students were given a survey to gather their thoughts and opinions about the course. The students were not aware that this was an experiment to prevent bias in their responses.

5. FINDINGS

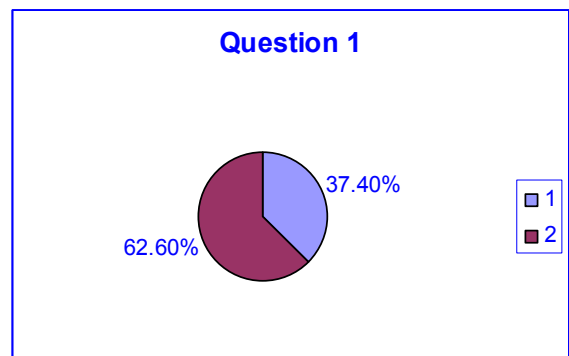
A survey was given to female students of the six classes who took the course. Three of the classes were

comprised of seniors and the other three were of freshmen. The six classes totaled one hundred and thirty five students, of which one hundred and seven students completed the survey. The results will reflect the 79% percent of students who responded to the survey. In addition to the survey, comments reported by individual students on a daily basis will also be reflected in the findings.

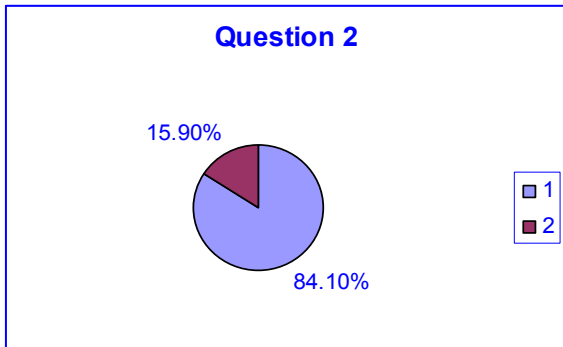
Survey Questions:

1. Did you like your overall experience with the online course?
2. Was it harder to learn online compared to the traditional class with a teacher?
3. Do you think you would have received a better grade in the traditional classroom setting?
4. Were you able to keep up with the assignments and tests?
5. Would you recommend this form of the course to other students?
6. Would you take another online course?
7. Did you like your overall experience with the traditional setting compared to the online setting?
8. Do you feel you learned more with the traditional classroom?
9. Was it easier to study for the tests after having the guidance of a teacher?
10. Was it easier to complete assignments on time with a teacher constantly reminding you of the due dates?
11. Would you recommend the traditional form of learning over online learning?

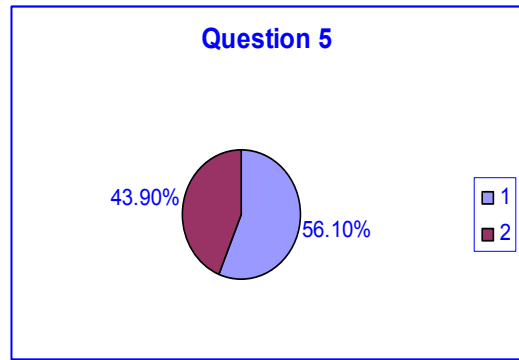
1 – Yes (column 1) 2 – No (column2)



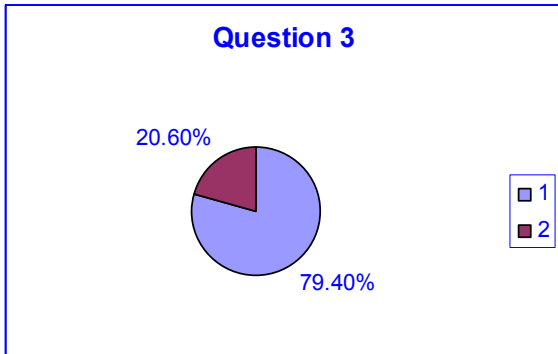
Did you like your overall experience with the online course? 40 67



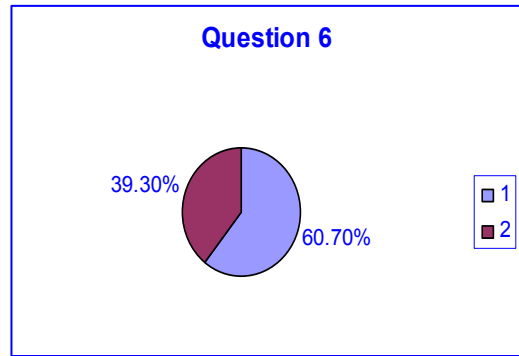
Was it harder to learn online compared to the traditional class with a teacher? 90 17



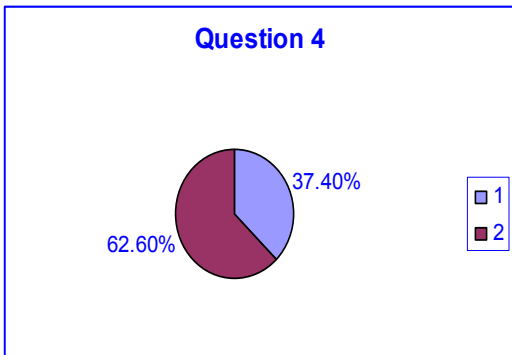
Would you recommend this form of the course to other students? 60 47



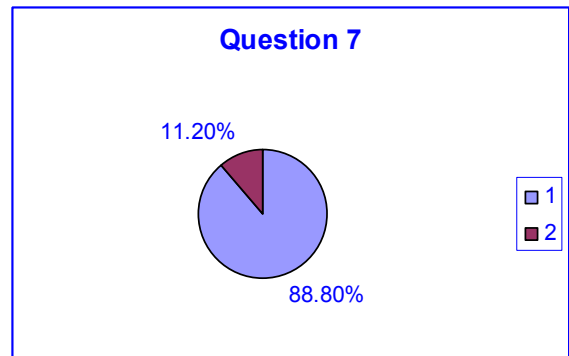
Do you think you would have received a better grade in the traditional classroom setting? 85 22



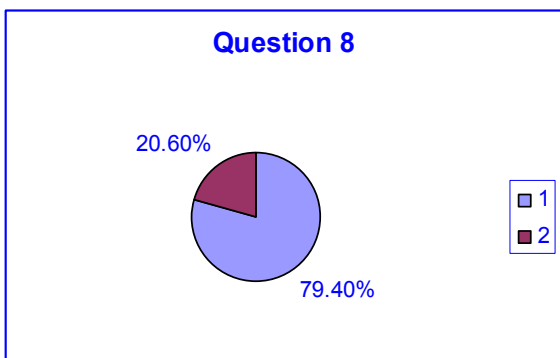
Would you take another online course? 65 42



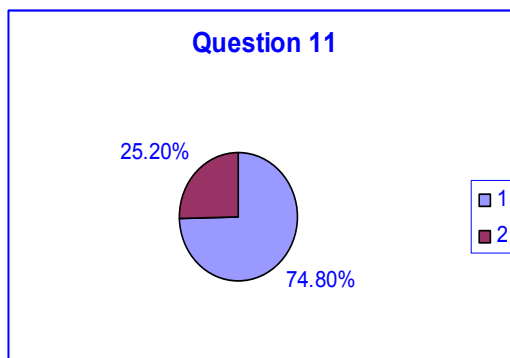
Were you able to keep up with the assignments and tests? 40 67



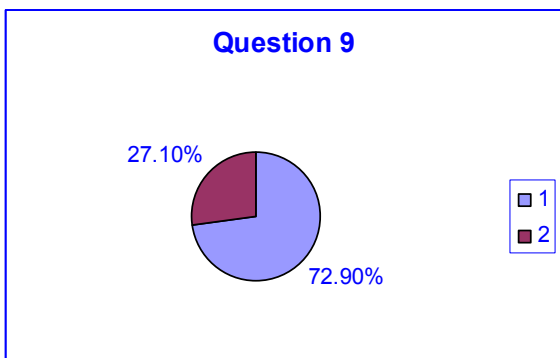
Did you like your overall experience with the traditional setting compared to the online setting? 95 12



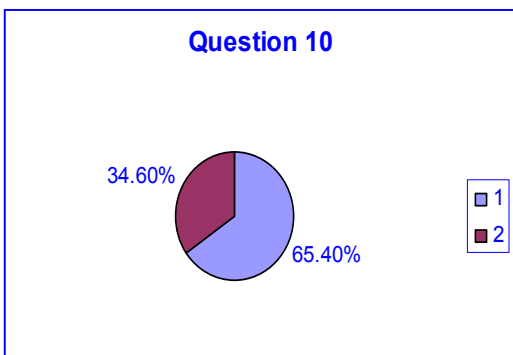
Do you feel you learned more with the traditional classroom? 85 22



Would you recommend the traditional form of learning over online learning? 80 27



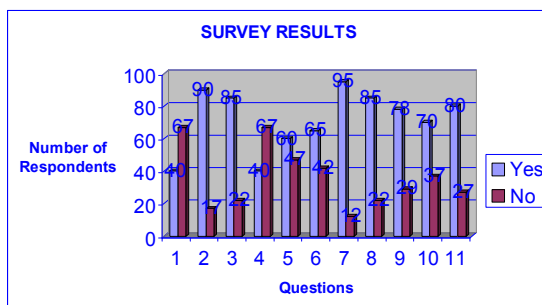
Was it easier to study for the tests after having the guidance of a teacher? 78 29



Was it easier to complete assignments on time with a teacher constantly reminding you of the due dates? 70 37

		Yes	No
	Did you like your overall experience with the online course?	37.4%	62.6%
Learning Styles:	Was it harder to learn online compared to the traditional class with a teacher?	84.1%	15.9%
Study Skills:	Do you think you would have received a better grade in the traditional classroom setting?	79.4%	20.6%
Time Management:	Were you able to keep up with the assignments and tests?	37.4%	62.6%
Recommendations:	Would you recommend this form of the course to other students?	56.1%	43.9%
	Would you take another online course?	60.7%	39.3%
	Did you like your overall experience with the traditional setting compared to the online setting?	88.8%	11.2%
Learning Styles:	Do you feel you learned more with the traditional classroom?	79.4%	20.6%
Study Skills:	Was it easier to study for the tests after having the	72.9%	27.1%

	guidance of a teacher?		
Time Management:	Was it easier to complete assignments on time with a teacher constantly reminding you of the due dates?	65.4%	34.6%
Recommendations:	Would you recommend the traditional form of learning over online learning?	74.8%	25.2%



As shown in the data above, 62.6% of the students surveyed did not feel comfortable with the online course. They did not like the class and did not wish to take it. However, 56.1% would recommend the course to other students. In essence, just because they did not like the course, does not mean that other students would feel the same way. In addition, 60.7% would take another online course, showing that they feel that there is a possibility that they may have a better experience with another course. 84.1% of the females surveyed believed the course to be harder than it was in the traditional setting. Only 37.4% were able to keep up with the assignments and tests and manage their time well. Also, 79.4% believed they would receive a better grade if the course was taught in a traditional classroom environment. Test results show that 75% of the students failed the test given at the end of the first three weeks, 10% received a low D, 10% received a C, 4% received a B, and only 1% received an A.

The majority of the students preferred the traditional environment that they were used to learning in. 88.8% said their experience in the traditional setting was better than that in the online setting. 79.4% felt they learned more from a teacher explaining the concepts they needed to know. 65.4% felt the assignments were easier to complete and keep up with. 72.9% felt they were better prepared for their test. The test results show that 77% of the students passed the test with a B or better, 15% made a C, 6% made a D, and only 2% failed the test at the end of the second three weeks. 74.8% of the

students said they would recommend this course in the traditional classroom setting to other students.

The comments received by the students were overall consistent. Each comment was a complaint. They could not understand why the teacher was not teaching them and leaving them to learn on their own. They did not like the online environment and felt it was not helping them learn what was needed for the test. They were not able to grasp a clear understanding of the topics and they did not do very well on the assignments or the tests. Approximately 28% students initiated, on an individual basis, complaints about the course. After the three weeks, students were switched back to the traditional classroom setting. They expressed their gratitude for the change. Some students felt that they were learning and understanding more after the change. These results suggest, as stated in the hypothesis, that e-learning will not be able to completely replace the traditional classroom setting. Too many students still rely on the guidance of teachers and are not able to learn independently and manage their time.

6. LIMITATIONS

The results were limited to only female high school students in a private school in an inner city with primarily black females. Some students may not have liked the instructor or the way she taught during the experiment. The students' personal attitude towards the teacher may have influenced their comments and opinions. Their negative attitude did not allow them to have an open mind regarding the two styles of learning. In addition, some students may not have actually read the survey and been honest about their responses. Such factors must be considered in evaluating the results.

The targeted population of this study is freshman and seniors in high school. Due to age differences, seniors may be more mature than freshmen and, consequently, perform better in e-learning. The current study does not break down differences in learning between freshmen and seniors. The result might be different if further study is conducted.

7. CONCLUSION

In this limited study, students did not seem to gain the same amount of knowledge using an online course as they would if they used the traditional classroom method. The majority of students in this study were uncomfortable with the setting of online learning and preferred a live, in-person teacher in the classroom teaching. This was either due to their understanding or their changed study habits. It may be that after failing the first test, they chose to study harder for the next. All of these reasons support the existence of different learning styles, behavior types, age, and gender in the study group. These students learn differently and do not

feel comfortable with learning online. Thus, our limited study suggests that the online courses are not for all the students and will not be able to replace the traditional classrooms.

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