

Evaluation and Comparison of Online Courses versus Face to Face Courses



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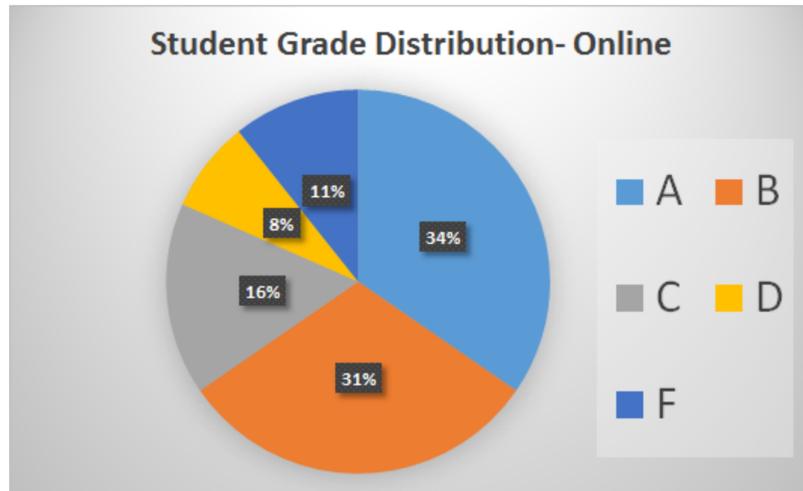


Figure 1: Pie chart illustrating the grade distribution of the 1,825 students who completed the online version of the course.^[1]

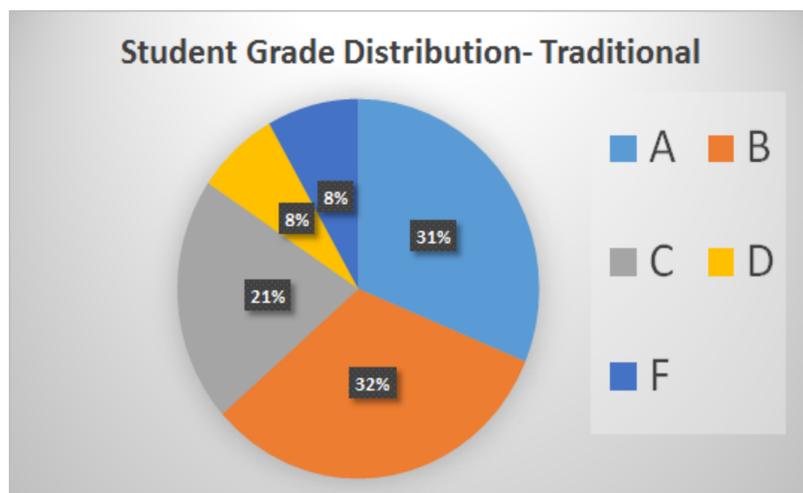


Figure 2: Pie chart illustrating the grade distribution of the 3,652 students who completed the in-class version of the course.^[1]

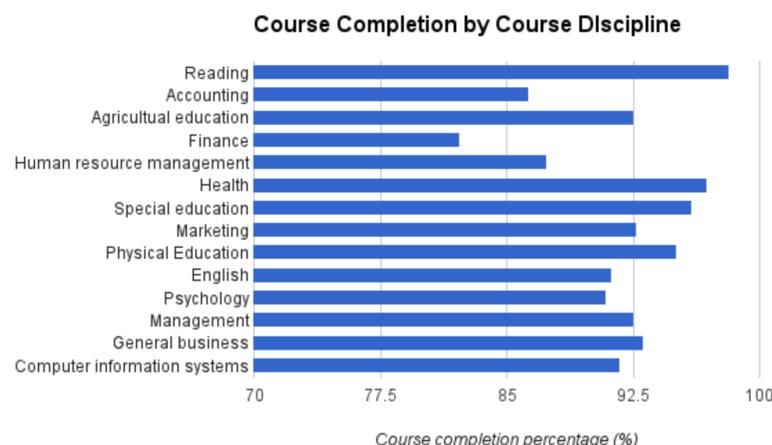


Figure 3: Illustration of the percentage of enrolled students who completed a particular course. The number of students in each course ranged from 167 to 1,429.^[1]

Introduction

As technology becomes increasingly accessible and user friendly, educational institutions are beginning to embrace a new form of learning. In order to reach a larger demographic, more and more institutions are offering online classes. This new learning method has sparked the interest of educational learning researchers as to whether or not the medium that the information is being received through affects the learning process.

Research Questions

The research was performed to measure the difference in learning, performance, and satisfaction between an online course and a traditional, “face-to-face”, course.

Article Methodology/Research

The primary goal of the research was to examine the difference of grade distribution between students enrolled in online courses as opposed to students enrolled in the traditional face-to-face courses.

In order to grasp a qualitative perspective, course completion percentages were analyzed and students were surveyed at the end of a course to determine the effect a class had on work habits and critical thinking.

Design Elements of the Course	Impact on the Learner
Clear Expectations and Instructions	Lessened anxiety
Weekly patterns of assignments and activities (and assessment of these)	Supported self-regulation and ability to consistently complete course assignments
Timely feedback	Maintained focus and minimized confusion
Quality materials (text, online readings, multimedia modules)	Introduced to challenging and provocative discourse
Weekly small group discussion forums	Clarified content, generated practical connections, built community

Table 1: Elements of the design and the impact on the learner through an online course according to student surveys.^[2]

Discussion

Quantitative assessments of the data illustrated in Figure 1 and Figure 2 show that there is a statistical difference between the two types of courses, indicating that it is reliable data. In analyzing the overall performance between the methods, there is minimal difference between online and face to face courses.

Figure 3 illustrates the course completion percentage by course discipline and shows that finance and accounting had the lowest completion rates at 82.2% and 86.3%, respectively. These results suggest that online STEM (science, technology, engineering, and mathematics) courses are not yet optimized to the level that disciplines like reading and health which have completion rates of 96.9% or higher.

Another study compared the satisfaction of student experiences when taking a course online versus face to face. The students were surveyed after completion of the course in regards to how the course affected their critical thinking skills and their work ethic. The results of the survey illustrated that students who completed the online version of the course saw an increase in their ability to think critically and their work ethic as compared to students who completed the face to face version.^[3]

Acknowledgments

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The International Review of Research in Open and Distributed Learning
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The Education Resources Information Center

References

1. W. Atchley, G. Wingenbach, and C. Akers (October 2013). *Comparison of Course Completion and Student Performance through Online and Traditional Courses*. Retrieved from <http://www.irrodl.org/index.php/irrodl/article/view/1461>
2. T. Herman, S. Banister (2007). *Face-to-Face versus Online Coursework: A Comparison of Costs and Learning Objectives*. Retrieved from http://jolt.merlot.org/vol6no1/dell_0310.htm
3. D. Larson, C. Sung (April 2009). *Comparing Student Performance: Online Versus Face-to-Face*. Retrieved from http://jolt.merlot.org/vol6no1/dell_0310.htm