Examining Online Student Engagement in a Program Development Course Offered at a Research University in the Southern Region of the U.S.

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Abstract

This study examines the effectiveness of an online delivery mode of a graduate level hybrid course that was offered to extension professionals at an extensive research university in the southern region of the United States. The researcher examines if a relationship exists between online student engagement and academic achievement. Research has shown that student engagement is critical for students' success. The number of interactions, that the students in the course had virtually (via the mode of delivery used) with the content of the course, their peers, and their instructors, were analyzed using measures of central tendency, measures of variation, and measures of association. The study findings indicate the course was effective as most students had a satisfactory grade. In addition, the study data indicates that the academic achievement of the students in the course had a positive correlation with their online engagement suggesting as the number of interactions increase the grade of the students increases. The researcher recommends an increase of teaching presence using the available teaching technology resources as it leads to students' satisfaction and higher order learning outcomes.

Keywords: Program development, online student engagement, teaching presence, extension, academic achievement.

1. Introduction

A graduate level course, program development (PD), was offered in the fall 2019 at a Research University in the southern region of the U.S. This course covered a variety of topics including program planning theory and social problems, needs assessment, intervention strategies, program goals and objectives, program implementation, outcome evaluation, and theory-driven evaluation. The primary instructor of the course used both face-to-face and online delivery methods to deliver the content of the course. At the end of the course, students were expected to submit a final project on a topic of their own interest. The primary instructor set up the course in a way that would help the students with the development of their final project. For instance, the assignments were deliberately designed to help the students develop their final project throughout the semester. In addition, a weekly discussion forum was created to increase student engagement in the course through posting weekly assignments and peer-feedback.

Student engagement in higher education has been constantly highlighted as an important benchmark and indicator of student success and retention. According to Chen, Lambert, and Guidy (2010), student engagement significantly impacts learning outcomes more than the students' social demographic characteristics. However, keeping students focused and engaged in a non-traditional classroom (online) has been a challenge for many educators. As online education increases, faculty members need to learn how to engage students in an online setting. A shift to non-traditional classrooms requires adjustments to the traditional teaching and learning practices (Redmon, Abawi, Brown, Henderson & Heffernan, 2018). Additionally, scholars need to further study the influence of online engagement on students' academic achievement. The complex nature of online education requires further attention (Pittaway & Moss, 2014). According to Hampton and Pearce (2016), being able to keep students focused and engaged in an online coursework is a critical step towards their success.

Therefore, the primary purpose of this study was to determine if a relationship exists between online engagement and the academic performance (grades) of the students enrolled in a program development course during the Fall semester 2019 at a Research University in the southern region in the United States.

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2. Methods

2.1 Participants

The target population of this study was graduate extension agent students in the southern region of the United States. The sample of the study included 20 students enrolled in a program development (PD) course at a research university in the southern region of the U.S. Examining the students' demographic characteristics, the data showed that 80% ($n = 16$) of the students were women, 20% ($n = 4$) were men, 75% ($n = 15$) were Caucasians, 20% ($n = 4$) were African Americans, and 1% ($n = 1$) was Asian American. Additionally, 85% ($n = 17$) of the students in the course were distance learners and 15% ($n = 3$) were face-face learners.

2.2 Measures

The primary instructor of a program development (PD) course created a weekly discussion forum in the university's Moodle page to foster participation and involvement of the students in the course. Each week, the students had an assignment to post in the discussion forum and were expected to provide feedback on their classmates' assignments. They could also discuss other topics of interest and ask questions to their primary instructors as needed. To motivate the students to participate and involve in the course, the primary instructor made their participation count towards their final grade. At the end of the semester, the primary instructor tracked and measured the students' participation by the total number of posts made by each student. The grades of the participants were also measured.

2.3 Data Analysis

The objective of this study was to determine if a relationship exists between online engagement and academic achievement (grades) of the students enrolled in a program development (PD) course at a research university in the southern region of the United States. Therefore, the researcher used descriptive statistics including measures of central tendency and measures of variability to describe online student engagement and grades in the course. Additionally, the researcher used measures of association to examine the relationship between both online student engagement and student performance in the course. The data was analyzed in IBM SPSS Statistics 26.0.

3. Results

This study examined the relationship between online engagement and student performance in a program development course (PD) that was offered in the Fall 2019 at a research university in the southern region of the United States. The student performance in the study was measured as the students' final grades and final project grades. The latter was described as follow:

3.1 Students' Final Grade in the Fall 2019 Program Development (PD) Couse

When examining the final grades of the students enrolled the Fall 2019 program development course, the data revealed that the students had an average score of 92.77 ($SD = 3.63$) in the course. This score fell in the A-category (90-93). The scores of the students in the course ranged from 82.69 (B-) to 97 (A+).

3.2 Students' Final Project Grade in the Fall 2019 Program Development (PD) Couse

When examining the grades of the students in the course for their final project submitted at the end of the course, the data indicated that the students had a score of 95.90 ($SD = 3. 60$) on average in the final project. The students' scores in the final project varied from 90 (A-) to 100 (A+). The average score of the class fell in the A category (94-96).

3.3 Online Student Engagement in the Fall 2019 Program Development Course

Online student engagement was another variable of interest in the study. The researcher measured student engagement in the hybrid course using the number of interactions of the students in the discussion forums throughout the Fall semester 2019. When examining the data, the findings suggested that the students had an average score of 18.15 ($SD = 8.43$) virtual interactions in the course during the Fall Semester 2019. The number of student interactions registered in the course during the Fall semester 2019 ranged from 5 to 36.

3.4 Relationship between Online Student Engagement and Final Grade in the PD Course During Fall Semester 2019.

The researcher in this study examined whether or not a relationship existed between online student engagement and the final grade of the students enrolled in the program development course in the Fall semester 2019 and found the existing relationship to be positive, but weak and non-significant for $p > .05$. (See Table 1).

3.5 Relationship between Student Online Engagement and Final Project Grade in the PD Course during Fall Semester 2019.

The researcher in the study also examined the relationship between the online student engagement and the grades of the students for their final project submitted at the end of the Fall 2019 program development course. The data showed that online student engagement had a positive relationship ($r = .46$) with the grades of the students for their final project for $p < .05$ (See Table 1).

Table 1. Relationship between Online Student Engagement and Student Performance in a Program Development Course at a Research University.

Variable	R	n	Sig.
Final Grade	.054	20	.82
Final Project Grade	.46	20	.04

4. Discussion

The findings of the current study suggest that, although online student engagement had a positive relationship with academic performance of the students in the study, did not have a significant impact on the students' final grades in the program development course that was taught at a research university in the Fall semester 2019. This result seemed to be inconsistent to many other research findings. Online researchers have supported the idea that online student engagement is critical for students' success (Kehrwald, 2008; Robinson & Hullinger, 2008). Students' grades have been found to be associated with access of online resources (Crampton, Ragusa, and Cavanagh, 2012). Perhaps, a larger sample size would have produced a significant result. In addition, teaching presence has been linked to student satisfaction and higher order learning outcomes (Akyol & Garrison, 2011; Garrison, 2007;). Online learning environment provides students with opportunities to interact with the content of a course, their peers, and their instructors. According to social constructivists, interactions and/or engagement are necessary for learning to occur (Ashcraft et al., 2008; Hrastinski, 2009).

The findings of this study indicated, however, that student engagement did significantly impact the grades of the students in the study for their final project submitted at the end of the Fall semester 2019. This finding seemed to indicate that the higher the level of student engagement, the higher their grades in the final project. The program development course provided the students with a cyber-community in which they could engage socially, emotionally, cognitively, behaviorally, collaboratively. Creating a learning environment that prevents students from feeling isolated, a major issue of online courses, is necessary for an effective community of learners (Lewis & Abdul-Hamid, 2006). According to social constructionist perspectives, learning occurs when opportunities are provided to engage with the content, apply skills and knowledge, and receive feedback. As result, instructors need to plan activities to enhance and facilitate online learning and engagement for students.

5. Conclusion and Recommendation

The findings suggest that the program development course taught in the Fall 2019 at a research university in the southern region of the U.S. was very effective since the overall average grade of the students in the course was "A-". The instructor of the course provided the students in the study with a cohesive and interactive online environment, which led to an increase in student academic performance. The more the students engaged in the course, the more their grades improved. The findings also suggest that faculty members who teach face-to-face courses could use online teaching technology tools available to them more effectively to enhance their teaching practices. The researchers recommend that faculty design online instructions that promote student participation and involvement. For instance, instructors may allow students to choose their own topics of interest for assignments. This may empower students to take more control of their own learning, which improves creativity, engagement, and learning. The assignments should, however, be an avenue for students to actively apply the course content to the real world settings.

In addition, the researcher recommends that other studies further examine the relationship between online student engagement and student academic performance in a classroom using a larger sample size.

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