Evaluation of Student Experiences in a Developed Blended Learning Course in Engineering

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INTRODUCTION

Blended learning (BL) is an instructional approach where traditional face-to-face instructional time and computer-mediated learning are combined. Higher education institutions are moving towards a BL because of (1) the opportunities it offers with respect to increasing engaged inquiry in the classroom, (2) the need to use classroom space more efficiently, and (3) the need for greater flexibility with changing student demographics.

The main motivation for implementing a BL approach in one of the key engineering undergraduate course in the Civil and Environmental Engineering program (Civ E 270: Mechanics of Deformable Bodies) emerged from a need to improve student engagement and satisfaction.

METHODOLOGY

Design: Quantitative single-case study analysis approach.

Participants: Civ E 270 students from two Winter 2018 sections (data from each section and their students was described as a single case study).

Data collection procedures: data was collected from students including pre- and post-surveys, LMS analytics, and YouTube analytics.

Objectives: (1) to discuss the BL approach implemented in Civ E 270, and (2) to describe student experiences, focusing on their engagement, and satisfaction.

CONCLUSIONS

Based on these preliminary results, introducing BL (i.e., computer-based instructional videos) improved the overall student engagement and satisfaction with the course.

Although our sample was not representative of the students in the course, data is still being collected and analyzed in order to identify the impact of this BL implementation on student achievement compared to previous traditional face-to-face course formats.

REFERENCES


