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Evaluation of Civil Engineering students' performance considering online versus on-campus delivery mode

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ABSTRACT

CONTEXT

Globally, over the last decade, the educational sector has been embracing the digital technology revolution by integrating industry 4.0 and web 3.0/4.0/5.0 concepts. Considering that learning and teaching involve community engagement and information exchange, it is essential to create a constructive environment motivating students and teachers to overcome geographical barriers. Many higher education institutions are leveraging this opportunity and are strongly investing in e-Learning systems offering courses in various disciplines.

PURPOSE OR GOAL

Civil Engineering courses are challenging on their own, but teaching and engaging e-learners cohorts require innovation from the teaching teams and providers. This paper aims to evaluate the performance and learning quality by considering the implementations of new technologies, as well as the students' knowledge gain and professional qualification via a comparison of online versus on-campus cohorts.

APPROACH OR METHODOLOGY/METHODS

The mixed-method approach in the paper includes desktop research and data analysis. Desktop research covers recent journal and conference publications in the field, government statistics and reports from Engineering Educational institutes. Data collection and analysis from 2020 and 2021 have been conducted considering the Bachelor's (first, second and third-year units) and Master's (first and second-year units) for both, online and on-campus students. To evaluate the student performance, a statistical analysis is conducted using the various grades from different types of assessments of selected units comparing the results of online versus on-campus cohorts.

ACTUAL OR ANTICIPATED OUTCOMES

It is an ongoing research that will be completed in the coming months. Conducting this study, it will be possible to identify the effectiveness of types of assessments as instruments to support students learning process.

CONCLUSIONS/RECOMMENDATIONS/SUMMARY

Conclusions and recommendations will be provided after the completion of data analysis and results discussion.

REFERENCES (OPTIONAL)

N/A

KEYWORDS

E-Learning, Civil/Structural Engineering, students' performance.