

## The Efficacy of Open Educational Resources in Students' Performance and Engagement

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**Abstract :** Higher Education is one of the most essential fundamentals for the advancement and progress of a country. It demands to be as accessible as possible and as comprehensive as it can be reached. In this paper, we succeeded to expand the accessibility and delivery of higher education using an Open Educational Resources (OER), a freely accessible, openly licensed documents, and media for teaching and learning. This study creates a comparative design of student's academic performance on the course Introduction to Database and student engagement to the virtual learning environment (VLE). The study was done in two successive semesters - one without using the OER and the other is using OER. In the study, we established that there is a significant increase in student's engagement in VLE in the latter semester compared to the former. By using the latter semester's data, we manage to show that the student's engagement has a positive impact on students' academic performance. Moreso, after clustering their academic performance, the impact is seen higher for students who are low performing. The results show that these engagements can be used to potentially predict the learning styles of the student with a high degree of precision.

**Keywords :** EDM, learning analytics, moodle, OER, student-engagement

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