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## APPLICATIONS OF LEARNING ANALYTICS TO STUDENT ENGAGEMENT DATA: A SYSTEMATIC LITERATURE REVIEW

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Abstract:

Learning analytics is a fast-growing field of data mining. Application of learning analytics to the education domain involves the collection of data about students and the learning environment, analysing and reporting of the discovered pattern to gain insight, improve learning activities and optimize learning outcomes. Application of Learning Analytics to gain insight into student

engagement from both student and teachers' perspectives can discover hidden patterns that will enhance students' level of engagement and, in turn, enhance students' performance.

This study presents a systematic review of the application of learning analytics to gain insight from student engagement practices in higher education to determine:

- (1) the authors' objectives of applying learning analytics to the student engagement dataset,
- (2) what approaches are commonly used to collect data about student engagement,
- (3) algorithms or learning analytics techniques that are commonly used to gain insight from student engagement data,
- (4) the important insights from the studies
- (5) the intended beneficiaries of the insights.

From the finding of the reviews, this study was able to shed light on the obstacles that are impeding the quick adoption and application of learning analytics to improve student engagement and outcomes, and recommendations were made for future studies on student engagement.

Keywords:

Learning Analytics, Student Engagement, data mining, learning outcomes.