Empowering Instructors in Learning Management Systems: Interactive Heat Map Analytics

Learning analytics visualizations can empower teachers to keep track of student engagement and performance of hundreds of students. This paper identifies a set of learning analytics dashboards and visualizations that help instructors keep track of student engagement and performance within Canvas, a learning management system. Visualizations are instructional tools that can support instructors in understanding student behaviors and performance. This paper presents a user study involving university students, which explores how instructors use Canvas’ course analytics dashboard to track student activity and performance. A total of 241 participants were involved in this study, and they were divided into three groups: instructors, graduate students, and undergraduate students. The participants were asked to complete a task sheet that included qualitative and quantitative questions. The results of the study showed that instructors used the course analytics dashboard to monitor student activity and performance, and to identify students who needed additional support. The study also highlighted the importance of visualizations for instructors, as they help to identify patterns and trends in student data. The study recommends that future research should focus on developing more interactive and user-friendly visualizations for instructors, and that instructors should be provided with more training on how to interpret and use analytics visualizations effectively. The study concludes with a discussion on the potential impact of visualizations on instructional practice and future research directions.