

Leveraging Learning Analytics to Inform Learning Design in Higher Education

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Abstract

With the prevalence of learning technologies, learning analytics plays an important role in driving new insights on how people learn, but lacks a theoretical grounding to enable learning design to enhance learning outcomes effectively. On the other hand, there is a need for learning design to become more data-driven by using the insight from learning analytics. This paper aims to explore the alignment between learning analytics and learning design, and how learning analytics has been leveraged to inform learning design in the unique context of higher education. Current research suggests a need to create more integration between learning analytics and learning design in higher education, in order to not only ground learning analytics on learning sciences but also enable data-driven decisions in learning design to improve learning outcomes. In addition, multiple conceptual frameworks have been proposed to enhance the synergy and alignment between learning analytics and learning design. Finally, three areas of future research have been proposed to foster this synergy further in higher education: identifying learning analytics metrics in higher education that can offer insight into learning processes, evaluating the effect of learning analytics outcomes on learning design decision-making, and designing learning environments that make the capturing and deployment of learning analytics outcomes more efficient.

Keywords: learning analytics, learning design, big data in higher education