Chapter 4

Practice Perspectives on Learning Analytics in Higher Education

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ABSTRACT

Learning analytics have taken higher education by the proverbial “storm.” Universities primarily employ learning analytics at the level of metrics to satisfy institutional requirements but are also investing significant effort in technical development. In the domain of teaching, learning analytics are making an appearance but are much less developed than in institutional or technical domains. On the basis of the potential of learning analytics to inform teaching practice and thus improve learning experiences, course instructors are now encouraged to use learning analytics at classroom level. Early forages are giving mixed results, and some confusion reigns among teaching staff in relation to the usability/value of learning analytics. The fundamental premise of the present chapter is that if potential of learning analytics to improve learning experiences is to be realized, then learning analytics must shift further into the practice domain, and this requires the projection of learning theory onto learning analytics.

INTRODUCTION

Enter the search term “learning analytics” in Google and in around a half second it will return something over 1.3 million results with the majority of results referring directly to higher education. The density of completely relevant results drops off at the tail end of the results but the large volume of relevant results is still quite impressive. Learning analytics has definitely taken higher education by the proverbial
“storm”. The excitement surrounding the potential of learning analytics is palpable across institutions of higher education, and though learning analytics systems are still nascent, institutions are already investing significantly in their development and implementation.

Why the excitement surrounding learning analytics? The backstory reads along these lines: higher education institutions continue to be placed under stress as the forces of competitiveness and difficult economic times bear down. The need to attract and retain students is of utmost strategic importance. In effort to survive and thrive, institutions turned to information and communication technology (ICT) for delivery of educational experiences, as a means for attracting and retaining more students. ICT satisfies the expectations of the millennial generation, provides the flexibility of access to education, attracts greater numbers from diverse geographical locations, and is seen to provide some pedagogical benefits to further improve the learner experience. A side effect of interaction with digital systems is the precipitation of great volumes of data. Data resulting from student interactions with various university information systems (including learning management systems) is considered useful intelligence about students. In particular, data generated by students as they engage in study and learning activities can provide insights into the learning approaches and processes of students, and such insights potentially provide a basis for delivering improved quality of education and experiences. With the overarching goal of gaining competitive advantage through student attraction, success and retention, institutions are making significant investment in learning analytics both in developing and implementing systems, and in researching how learning analytics can be utilized to meet the strategic goals of the university. From the top administrative echelons down to the teaching faculty, the use of learning analytics is strongly encouraged. Thus, the phenomenon of learning analytics in higher education arises largely from the convergence of institutional needs with technological capabilities.

If the history of analytics in marketing and business is anything to go by, learning analytics likely do hold considerable potential for positive impact on higher education. Much of what universities do with learning analytics have to do with fulfilling the needs of formal reports and credentialing, focusing primarily on the big picture with regards to attracting and retaining students, graduate success, planning and institutional accountability (Wilson, Watson, Thompson, Drew, & Doyle, 2017). In comparison, the use of learning analytics for institutional purposes, the application of learning analytics to teaching has been slower in eventuating, and related literature is comparatively sparse. But, from the viewpoint of students, the core service provided by universities is provision of quality learning experiences, and hence interfacing learning analytics directly with learning and teaching activities is crucial and should attract considerably more research attention than it has currently received. In the emerging literature the potential for positive impact of learning analytics on both higher education institutions and student learning is not strongly disputed but some early results are giving mixed findings and casting doubt over the value/usability of learning analytics in learning. Learning analytics systems certainly do yield volumes of data about learners and their activities. If generated data is to be used effectively to help understand learners and their needs, then learning analytics at classroom level must hold some potential for improving the quality of learning experiences. However, it is yet very early days in learning analytics, and learning is extremely complex so there is much to be done in realizing the potential of learning analytics for improving the quality of learning experiences.

If the preceding experience with learning technologies is anything to go by, then it is not surprising that early forages into learning analytics are characterized by a techno-centric perspective. The sophistication of the technology underlying analytics systems is such that learning analytics is quite firmly embedded in the IT domain and is being driven predominantly by IT departments and technology enthusiasts.
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