Chapter 12
The Role of Learning Analytics in Global Higher Education

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ABSTRACT
This chapter presents the role of learning analytics in global higher education, thus illustrating the theoretical and practical overview of learning analytics; learning analytics and educational data mining (EDM); learning analytics and learning management system (LMS); learning analytics and Course Signals; learning analytics and knowledge perspectives; learning analytics and social networking sites; and the significance of learning analytics in global higher education. The application of learning analytics is critical in global higher education that seeks to serve the school administrators and students, increase educational performance, sustain competitiveness, and fulfill expected accomplishment in global higher education. The chapter argues that applying learning analytics has the potential to improve educational performance and reach strategic goals in the information age.

INTRODUCTION
Learning analytics is a new field that grows at the confluence of learning technologies, educational research, and data science (Ochoa, Suthers, Verbert, & Duval, 2014). Learning analytics aims at using the collected information to improve the quality of a learning experience (Pardo & Siemens, 2014). Learning analytics enables a new level of data-driven decision making for the purpose (Diaz & Fowler, 2012). Learning analytics and educational data mining introduce a number of new techniques and frameworks for learning (Worsley & Blikstein, 2014). Agudo-Peregrina et al. (2014) stated that learning analytics is the analysis of electronic learning data which allows teachers, course designers, and school administrators of virtual learning environments to search for unobserved patterns in the learning processes.

Learning analytics is an emerging research discipline that occupies the middle space between the learning educational research and the use of computational techniques to capture and analyze data (Suthers & Verbert, 2013). Learning analytics needs to better connect with the existing body of research.

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The Role of Learning Analytics in Global Higher Education

knowledge about learning and teaching (Gašević, Dawson, & Siemens, 2015). Learning analytics can provide the powerful tools for teachers in order to support them in the iterative process of improving the effectiveness of their courses and to enhance their students’ performance (Dyckhoff, Zielke, Bültmann, Chatti, & Schroeder, 2012). Learning analytics can help learners to better plan and reflect these learning activities by becoming aware of their actions and learning processes (Scheffel, Drachsler, Stoyanov, & Specht, 2014). The use of technologies has enabled researchers to tackle and study educational challenges in the modern ways (Worsley & Blikstein, 2014).

The strength of this chapter is on the thorough literature consolidation of learning analytics. The extant literature of learning analytics provides a contribution to practitioners and researchers by describing a comprehensive view of the functional applications of learning analytics to appeal to the different segments of learning analytics in order to maximize the educational impact of learning analytics in global higher education.

BACKGROUND

The growth of data surpasses the ability of organizations to make sense of it. This concern is particularly pronounced in relation to knowledge, teaching, and learning. In an age where educational institutions are under growing pressure to reduce costs and increase efficiency, analytics promises to be an important method through which to plan for change at the course and institutions levels. Corporations face pressure for increased competitiveness and productivity, a challenge that requires important contributions in organizational capacity building from both workplace learning and informal learning. Learning analytics can play a role in highlighting the development of employees through their learning activities. The massive adoption of technology in the learning processes comes with an equally large capacity to track the learners (Pardo & Siemens, 2014).

In enterprise settings, information flow and social interactions can yield novel insights into organizational effectiveness and capacity to address new challenges when unanticipated event arise. Advances in knowledge modeling and representation, the semantic web, data mining, analytics, and open data form a foundation for new models of knowledge development and analysis. The technical complexity of this growing field is paralleled by a transition within the complete perspectives of learning (e.g., education, workplace learning, and informal learning) to the networked learning. These technical, pedagogical, and social domains must be brought into dialogue with each other to ensure that the interventions and organizational systems can effectively serve the stakeholders’ requirements.

ROLE OF LEARNING ANALYTICS IN GLOBAL HIGHER EDUCATION

This section illustrates the theoretical and practical overview of learning analytics; learning analytics and EDM; learning analytics and LMS; learning analytics and Course Signals; learning analytics and knowledge perspectives; learning analytics and social networking sites; and the significance of learning analytics in global higher education.