

## **Review of Literature**

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The disagreement on the definitions of learning analytics could be foreshadowing on the controversy of how to handle the policies that should govern the use. Learning analytics has been defined as the systematic tracking of student progress and behavior patterns (Jansen, 1990). Another author defines learning analytics as deciphering trends and patterns for advancement of teaching and learning (Johnson, 2014). An international conference on learning analytics adopted the definition of, “the measurement, collection, analysis and reporting of data about learners and their contexts, for the purposes of understanding and optimizing, learning and the environment in which it occurs” (Ferguson, 2012). For purposes of this paper, learning analytics refers to all data an institution has access to from the learning management systems that support in-class and online learning.

There seems to be consensus of some apparent benefits of using learning analytics to produce meaningful changes to customize learning and support for students. Additionally, using this data may improve early identification of at risk students and increase retention and student success (Jansen, 1990). Meisenhelder (2014) emphasizes that using learning analytics should assist institutions in providing access to success, opportunity and careers and can be used effectively in the retention efforts of post-secondary educational institutions.

### **Statement of the Problem**

With renewed interest in evidence-based policies student data may be the solution that enables universities to be more data-driven (Wishon & Rome, 2012). However, there are also concerns that learning analytics only values the measurable forgetting that digital footprints do not represent the whole picture (Macfadyen & Dawson, 2012). Further, all use of educational data should always be in the best interest of the student and committed to do no harm (Elbadrawy, Studham, & Karypis, 2015). On the contrary, many interpret gathering and using learning analytics as an invasion of privacy when personal information is being collected without knowledge or consent of the participants. Results show that research topics of learning analytics in higher education fall into five categories: learning, teaching, administration, technology development, and digital citizenship (Zhong, 2016). However, at present, the predominance of learning analytics research centers on the types of data available in institutional Learning Management Systems (Lockyer, Heathcote, & Dawson, 2013). It is clear that ethical decision making in relation to learning analytics is complex, particularly in terms of how it can be enacted in practice. Further issues will be unearthed as the field progresses, requiring identification of additional principles to be incorporated. Of central importance is the ability to make ethical decisions and the need to establish ethical institutional frameworks that support the learning analytics (West, Huijser, & Heath, 2016).

There is a need for a multi-faceted approach that guides the critical learning analytics decisions (West, Huijser, & Heath, 2016). As the field of learning analytics continues to evolve we must be aware of the necessity for certifying that any data analysis is seen through the lens that is informed and that promotes contextualized interpretations (Macfadyen & Dawson, 2012). Although many authors in the field refer to ethical challenges, there are few unified and consistent attempts to map ethical concerns and complications pertaining to the use of learning analytics in higher education (Slade & Prinsloo, 2013). A preliminary study on the subject, recommends that in order to resolve ethical dilemmas, higher education institutions could increase transparency of the process to students and obtain consent at multiple levels throughout the student journey (Lawson, Beer, Rossi, Moore, & Flemin, 2016).

A valuable step that any campus can take is to create an inclusive data collection blueprint to manage all the types of data used in various situations (Slade & Prinsloo, 2013). These suggestions that support the need for ethical policies that relate to the institutional use of learning analytics are the guiding principles of this research prospectus. The problem is a need for comprehensive ethical policies that govern the use of learning analytics in higher education. Any institution should thoroughly examine the following questions as a part of a comprehensive study of learning analytics:

- What policies govern the institutions use of learning analytics?
- How do the policies address the ethical concerns of the students?
- What types of student learning improvements has been a direct result of using learning analytics?
- What ethical considerations have been promoted by the policy of using learning analytics (student consent, guidelines, timeframe, etc.)

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