Education Tech Research Dev (2021) 69:339–341
https://doi.org/10.1007/s11423-020-09873-3

Exploring the ethical topic of learning analytics

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Accepted: 31 October 2020 / Published online: 10 November 2020

Abstract
This response reviews the article entitled "Ethical oversight of student data in learning analytics: a typology derived from a cross-continental, cross-institutional perspective" (Willis et al. in Educ Technol Res Dev 64(5):881–901. https://doi.org/10.1007/s11423-016-9463-4, 2016) from a policy perspective. The paper summarizes the typology of learning analytics and its core ideas proposed in Willis et al. (2016), but also highlights the challenges considering the third-party policies of data privacy and usage. Additionally, the paper addresses the core ethical principles declared in Corrin et al. (Access Online 26, 2019) and suggests using these principles as underpinnings when considering the ethics of learning analytics and seeking effective solutions to best ensure ethical practices of implementing learning analytics. The establishment of a comprehensive data governance system by institutions of higher education is recommended.

Keywords Learning analytics · Ethics of learning analytics · IRB · MOOCs · Higher education · Education policy

Willis et al. (2016) summarize four common ethical issues, which include (1) using the invasive techniques that could direct students to participate in other activities, (2) surveilling students' activities, (3) conducting questionable interventions, and (4) storing and interpreting data for different purposes. To solve these issues, Willis et al. (2016) propose a typology of defining learning analytics (LA) as research, "an emerging specific form of research needing oversight", or practice including four different types (Willis et al. 2016, p. 893). Formulating this typology, they conducted a qualitative multiple-case study involving three higher education institutions from three continents. This study analyzes the existing institutional practices from the aspect of institutional review boards (i.e. IRBs) review processes. Willis et al. (2016) reference Kitchin's definitions and types of data surveillance (Kitchin 2013), the respective surveillance scopes proposed by Knox (2010) as well as the processes regarding IRBs' approval, related personnel in the LA studies, and dissemination of the results. The value of Willis et al. (2016) is its proposed typological framework which reveals the possible hidden assumptions and purposes of different LA projects. The

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awareness of the hidden assumptions and different research purposes can help maintain the effectiveness of the current IRBs' rules and review processes.

In practice, the typology of LA by Willis et al. (2016) can give a multi-angle insight to the related stakeholders, such as researchers in this field and IRBs' reviewers. Utilizing this typology framework can guide researchers to carefully plan and scope their studies and solidify the preparations of appropriate IRBs' applications. The typology urges IRBs' reviewers to carefully scrutinize the review processes in terms of the different types of LA. However, the difficulty of implementing this typology into the real practice should be alert. Although Willis et al. (2016) claim the gaps in the existing IRBs' rules and processes based on the typology, other factors such as the policies of technology tools were not considered in this study. However, these factors can be 'uncontrollable', which will greatly raise the ethical issues of LA and pose greater challenges to the ethical processes.

As online education has become ubiquitous, the data privacy and usage policies of the applied technology tools put users into dilemmas. For instance, massive open online courses (MOOCs) such as Coursera, edX, and FutureLearn have been worldwide used and promoted by institutions to offer users free and affordable online courses. Each of these platforms has its own policy regarding the data privacy and usage. However, the technology providers can take advantage of such policies to obfuscate and redirect users to accept their conditions. Prinsloo et al. (2019) indicate that using cookies as the common tracking technologies applied by edX, Coursera, and FutureLearn leave no choices for users who are in fact forced to compromise the ways those providers require in order to use their services. Additionally, the privacy policies provided by edX and Coursera remain vague and negative to users (Prinsloo et al. 2019). Hence, the involved stakeholders should consider the potential impacts and risks of these third-party policies and how the IRBs' rules and processes can appropriately treat these policies.

In order to reduce the risks of LA, the improvement of IRBs' review processes involves seven core ethical principles declared in Corrin et al. (2019). These ethical principles include data privacy, ownership and control, transparency, consent, anonymity, non-maleficence and beneficence, management and security, and access (Corrin et al. 2019). Corrin et al. (2019) explore several case studies of how each of the ethical principles has been addressed, and further confirm the urgent needs from institutions of higher education for the ethical practice of LA. From this inspiration, the current IRBs' review processes are highly recommended to clearly declare requirements and scopes regarding each principle that can be mapped to the typology of LA by Willis et al. (2016). This declaration in the ethical processes may further impel tools' providers to properly regulate their policies by seriously considering the users' equal rights. In addition, enhancing the engagement among different stakeholders involved in LA is excessively important to improve practicing the ethics of LA (Corrin et al. 2019).

In conclusion, ethical issues of LA are very complicated as a matter of fact. Institutions of higher education not only face the arising concerns towards the ethical issues of LA, but also need intensive efforts to seek effective solutions catering to different stakeholders involved in LA in order to support the implementation of LA in a proper manner. Overall, the exploration will still be ongoing but the core ethical principles (Corrin et al. 2019) can serve as the underpinnings when considering these critical issues. Future efforts on formulating the best ethical practices in this field may include the establishment of a comprehensive data governance system by the institutions as mentioned in Singh and Ramutsheli (2016). Utilizing the typology (Willis et al. 2016) and the ethical principles of LA (Corrin et al. 2019) can provide a thorough insight when establishing this data governance system. To evaluate the effectiveness of this system, stakeholders are suggested to provide detailed

assessment plans. The evaluation phase is necessary because it will allow institutions to identify new problems and accordingly improve the system.

Compliance with ethical standards

Conflict of interest All the authors declared that they have no conflict of interest.

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