For now we see through a glass, darkly – critical perspectives on the rise of learning analytics in higher education (0331)

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Summary

This paper offers a critical review of the rise of the new 'field' of learning analytics and its growing influence on learning and teaching in higher education. 'Learning analytics' can be defined as 'the measurement, collection, analysis and reporting of data about learners and their contexts for purposes of understanding and optimising learning and the environments in which it occurs' (Ferguson, 2012). Feedback from such systems, for example through dashboards (intended to allow students to monitor their activities and behaviours), or through the repurposing of centralized, aggregated data, are claimed to offer the potential for adaptations, improvements and recommendations for learners,

teachers and institutions as a whole. Drawing on a recent review of the literature, the paper gives an overview of the history of this growing field and interrogates the claims being made by proponents of learning analytics in higher education. It explores some of the unasked questions, in particular ethical implications, the kinds of data collected, and the value and validity in assessment and student engagement and potentially in the UK for the Teaching Excellence Framework. I then argue that 'learning analytics' is gaining ground in policy circles as part of an increasing individualistic view of learning. The paper concludes that there needs to be more scrutiny of learning analytics to uncover and challenge the implications for learning, teaching and assessment.

Learning analytics is a growing, international research field that is devoted to the study of the use of digital data and it has its own Society (Society of Learning Analytics Research -SOLAR) and has just had its sixth international conference. The website suggests this is an inter-disciplinary network of leading international researchers, exploring the role and impact of analytics on teaching, learning, training and development. One of its stated aims is to raise awareness of learning analytics amongst policymakers in educational institutions and governments (SOLAR, 2016). Furthermore, the EU now has a funded community hub for Learning analytics called LACE. Whilst here are some voices within this community that do offer critical perspectives (e.g. Kirschner, 2016), the broader higher education research and practice community may be unaware of the extent of this research, its reach and growing influence on higher education policy.

There is now a proliferation of digital data collected and stored on students (and staff) in universities across the world and it is no longer possible to be a student at university without engaging in online systems and processes (Dahlstrom et al, 2013). Issues around data management, ownership and sharing are likely to multiply for both individuals and the organisations and networks they belong to.

Indeed, data flow within the higher education sector, at classroom, institution and national levels is already prolific. Not only does this raise ethical issues about the degree of consent students may have over the collection of such data and the purpose to which it is put, equally important is the issue of how they can access, own or control their own personal data. Furthermore, as part of a recent review of the literature on learning analytics in relation to assessment, it was found that these ethical issues seem to be rarely raised in learning analytics research or when discussing its implementation (Author et al, 2016).

The kinds of data and the purposes for which learning analytics are appropriated will also be explored and scrutinized. The paper will highlight a possible UK Learning Analytics Service intended to feed into the Teaching Excellence framework (THE, 2016a) which is in contrast to earlier reports that JISC (Joint Information Systems Committee) were suggesting the purposes were mainly about student welfare and progress and where it is claimed that 'seventy-one per cent of students questioned by JISC, the sector technology body, said they would be happy for data such as their library or virtual learning environment usage to be used by their university, if it could help to improve their grades." (THE, 2016b). This suggests potential conflicts in purposes of data being collected and stored and also that students may be being sold an overly positive message. Furthermore, it will be argued that there needs to be far more interrogation of what 'data from libraries and virtual learning environments' might entail and how this will be analysed and for whom. I will argue that measuring the number of students accessing a virtual learning environment, the footfall through the library or the number of books taken out tells you very little about student learning or engagement and yet these reports suggest that institutions are considering these measures.

Facer (2011) contrasts this proliferation of data and the issues raised by the steadily increasing use of surveillance technology and constantly expanding 'digital footprints' for the auditing and management of educational performance with the much slower pace of technologies that share control with students through, for example, the use of portfolios and social software. This suggests that rather than looking at the potential of digital technologies to support collaboration or new forms of assessment, learning analytics may be supporting the trend towards a more individualistic view of learning in higher education where the onus is firmly placed on learner to address any progress or attainment deficiencies but with little control over their data.

Universities have previously fallen prey to technologically deterministic policies, for example the notion of 'digital natives' which remains firmly fixed in the minds of policymakers despite being thoroughly dismissed by research (Jones, 2013). I conclude that learning analytics is gaining credibility in policy circles in similar deterministic ways through an over zealous belief in technology, without there being sufficient scrutiny of what this field entails, what measures are being proposed, the ethical implications and the validity of such measures. This is of particular concern in the UK, when the Teaching Excellence Framework is being established, but equally elsewhere where similar regimes are being considered. This paper will end with a series of questions and challenges, intended as starting points for discussion for shining a clearer light on the Learning Analytics research community and its work and influence.

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