

The use of digital technology in higher education – some questions

At this time of year many young adults leave compulsory education to attend higher education institutions (HEIs) as a next career step. As they enrol, students are required to give their 'consent' to how their data will be used by the HEI. This is often done through the HEI sharing a student handbook which contains an almost overwhelming set of policies and regulations including how data is managed. Although meeting legal requirements, terms about privacy and security of data can be vague or so generic it is difficult to extract detailed meaning from them. Enrolment is deemed to constitute acceptance of these regulations with few opportunities for discussion on what giving or withholding consent means in practice. Which 18-year-old, on the cusp of enrolling at a university, will be willing to challenge if there is an opt-out option? We need to ask: at what point does obtaining 'consent' become digital coercion?

Two areas within higher education need scrutiny:

1. the use of student data collected and aggregated by or on behalf of the HEI to provide information about the study habits and ongoing performance of individual students and cohorts of students (learning analytics)
2. the use of social media platforms and other third party tools & technologies, hosted external to the HEI, to engage students and/or to enhance learning.

Activities in both the above areas offer *potential* benefits to students and their institutions and have been discussed within the sector. For students and financially challenged institutions it's anticipated that learning analytics will be of value:

- For identifying at risk students who may be in danger of dropping out of university (Blackboard 2017, Jisc 2016)

And

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- As a tool for quality assurance and quality improvement (potentially providing evidence for exercises such as the [Teaching Excellent Framework](#))
- For engaging students in their learning through self-regulated tests, comparisons with their peers' achievements, apps which track their progress
- For enhancing student learning through monitoring progress and achievement (Jisc, 2016)

Within the sector, data-gathering has become a default, habitual process. There is, however, an urgent need to examine the cost of the benefits, not just financially, but also cost in terms of individual privacy and data security. This is important because, at the time of publication, there is a 'dearth' of evidence 'in the literature and rigorous, empirical, replicable studies' making 'it difficult yet to justify any grand claims for the impact of learning analytics' (Jisc, 2016).

This is concerning given talk of utilising the 'fine grained details of the students' clickstream'(Jisc, 2016) and the quantity and granularity of student data currently being collected and stored.

At a crucial stage in a student's career when they should be encouraged to question perceived wisdom, challenge the status quo, and seek to bring about improvements in the society they live in, should students' study habits and even opinions be digitally stored and kept for future use? This collection and storage is happening through:

- virtual learning environments (e.g. [Blackboard](#), [Canvas](#), [Moodle](#)) where areas accessed, contributions made and time spent on task can all be monitored. Blackboard promote their '[Blackboard Analytics](#)' system to universities.
- student information systems (e.g. [Tribal](#), [Banner](#)). Tribal are promoting [learning analytics and business intelligence solutions](#).

- library systems, where records of e-journals accessed and annotations made can be recorded (e.g. [EBSCO](#), [Insignia](#)),
- Course e-text books (e.g. [Kortext](#))¹
- Assessment and plagiarism detection systems (e.g. [Turnitin](#)). Blackburn (2017) raises the question of ‘whether Turnitin ‘originality reports’ are seen as student data in the same way as attendance records, Learning Management System access reports and other common ‘big data’ sources.’ A small number of academics have raised the issue of the ethics of using Turnitin for reviewing student work.

“There is enormous potential for accident and abuse in the creation of a permanent, central data-minable repository of everything that every student ever writes. Moreover, this database is completely outside the ownership of [the university] and that magnifies the problem.” (Cochrane, 2006 in Blackburn, 2017)

- Lecture recording where lectures are automatically recorded, shared with students and stored for a period e.g. 2 years (e.g. [Panopto](#))

The flow of data between and out of systems, and the potential for this to merge with larger datasets with complex shared ownerships and the involvement of multiple commercial software/platform vendors, make this an area of serious concern. Ownership of the data is unclear and carries risk. (Alamuddin et al 2016, p 4). Using third-party, commercial platforms may offer ‘customization’ and financial benefits, but the core algorithms they [third-party platforms] use tend to be proprietary and are not shared with clients. This secrecy can make it hard for institutions to gauge the integrity and flexibility of the algorithms; it also raises questions about the ethics of making decisions about students’ instructional pathways based on a black box that

¹ See Kortext Privacy notice <http://www.kortext.com/privacy/>

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administrators, instructors, and students do not understand

(Alamuddin et al 2016 p 22).

Is it fair to ask students to give their informed consent to something that is beyond the understanding of a range of professionals?

These are areas which need robust regulation and oversight, something which is currently lacking. A small number of universities are piloting information and consent procedures to comply with the impending EU GDPR, trying to be more transparent about what happens to student data. However, these don't address the challenge of 'digital coercion' at the point of enrolment at university. Currently there seems to be a lack of a meaningful alternative to the contract offered by universities to students. It's a stark case of accept the university's terms and conditions, or don't enrol. We need to consider:

'Should students have the ability to opt-out of having their data collected?' (Stiles, p33).

According to Jisc, a recent survey claimed that 78% of students would be happy to have learning data collected if it improved their grades (figure 1). However there needs to be a frank discussion about why 22% did not want their data collected. The full details of the survey have not been shared so it is difficult to draw a conclusion about whether those 'happy' to have their data collected were made fully aware of the potential risks and consequences.

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Figure 1 Tweet from Jisc

This is a rapidly changing and complex situation with policies and practice varying from institution to institution. Added to this, is the complexity of anticipating what will happen in future to the large datasets gathered on student behaviour.

Regarding consent and transparency about how student data is collected and used, the use of social media platforms by HEIs gives additional cause for concern. Although many students already have accounts with social media platforms, should HEIs be actively encouraging students to engage and communicate through these third party commercial tools? Social media platforms are used:

- To market courses and recruit students

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- To offer places to students (Oxford Mail 2017, Bearne, 2016)
- As part of the induction process and for alumni activities²
- For teaching and learning activities. The Education Foundation worked in collaboration with Facebook to publish an uncritical report, describing Facebook as ‘a vital tool for teaching and learning in the 21st century and for making education more social’ (Education Foundation 2013, p 2).
- As a means of demonstrating a student’s employability as they graduate with classes on how to use LinkedIn.³

There is only limited discussion about the downside or full cost to using social media, with most of the focus being simply on immediate benefits to students and HEIs (Stoller, 2015). A more sophisticated approach to recommending the use of social media needs to be in place.

Can education institutions provide meaningful reassurances to students about the privacy and security of data when social media platforms are notoriously reluctant about sharing how they harvest and profit from user data?

Should education institutions be encouraging students to communicate or engage in learning activities through third party social media platforms, when it is clear these are commercial enterprises, often with servers outside the UK? Is it time to have a set of criteria to evaluate the appropriateness of social media tools? Business models, funding, ethical issues such as the use of profiling users through ‘affinity targeting’ and the links with data mining companies – all these are issues which need addressing. Do these activities pass as ‘endorsements’ by an education institution? Does this endorsement mean that

² If you have a [Facebook account](#) search ‘student induction week’ or ‘university alumni’ to see the range of universities who use this social media platform for induction activities

³ [An example is Durham University](#) providing advice on using LinkedIn.

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education institutions are taking on additional responsibilities both legal and in terms of care?

Education institutions cannot offer any guarantees about social media platforms reusing data, with whom data is shared or how the data is analysed and users categorised. The future policies and practices of social media companies is out of an education institution's control. Data sharing policies between universities students and social media companies seem to be non-existent. Universities have no control over the type of advertisements placed near content, the reactions of social media companies when users are abused (trolling), or the timing and style of updates to the service and terms of use such as the recent controversy surrounding Snapchat (Solon, 2017).

Conclusion

5 points to take away:

1. As young adults move from compulsory education to post-secondary education, the potential benefits of deploying learning analytics needs to be counterbalanced with equal, detailed attention to pitfalls, risks and dangers.
2. Although there is some evidence that, for the moment most students are comfortable with education institutions collecting and using their data to enhance learning (Edquarter 2017, HE Commission, 2016, p 38), this trust cannot be abused. There needs to be a full and frank discussion about terms and conditions and awareness raising about student rights regarding their intellectual property. This discussion needs to include answers to *when* it is most appropriate to ask students for their consent so that it is sought within a reasonable timeframe.
3. With the wholesale and indiscriminate collection of student data, we need to ask 'at what point does learning analytics become surveillance?' Within this discussion there needs to be transparency and clarity around the benefits a university gains through the collection of student data.

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4. Finally, there needs to be a discussion about how and when it is appropriate for social media platforms to be used in an educational context and within this area, identification of the responsibilities of HEIs.
5. Higher Education needs to engender a culture of openness and transparency by respecting and protecting student (data subject) rights, and their intellectual privacy.

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