

Irish College of Humanities and Applied Sciences

2024

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**2024 Annual Quality Report ICHAS**  
**CASE STUDIES RELATED to**  
**Academic Year September 2022 –**  
**August 2023**

## **CASE STUDY 1**

**Title:** Educational Techno-ethical Decision Making and Learning Analytics

**Theme:** 1. The use of data analytics in QA and QE.

**Note:** The theme was reinterpreted to align with a relatable QAE event in the reporting period

**Keywords (2-3):** Learning Analytics, Student Supports

**Insert Case Study 1 below (in any format - QQI does not prescribe):**

### **Case Description**

In addition to more obvious primary functions, learning management systems offer a range of learning analytics that collect, measure and analyse learner data. Most incorporate the four basic forms of data analysis, namely, descriptive, predictive, diagnostic and prescriptive - with the purpose of analytics most often presented as having a supportive, quality enhancement and best practice orientation. In this instance, the focus is on descriptive and diagnostic analytics identifying patterns in engagement behaviour and the impact on learning performance.

During the reporting period, one point of faculty discussion centred on student disengagement where it was posited that earlier and more systematic analysis might contribute to enhanced learner supports. This differed from existing practice where the lecturer or tutor, with the support of the educational technologist, was the primary proactive user of insight data that might indicate disengagement. The use of learner data in this context was used beyond this triad for a range of purposes but always reactively; where the information was anonymised and used statistically. The QAE Officer was tasked with assessing the suitability of these affordances for a more systemised approach in the context of existing policies and procedures. They were also tasked with establishing a pathway by which systemised data collection would be operationalised outlining clear processes how any intervention around disengagement would be managed and performed. In the interests of maintaining focus on the recommended thematic objectives, this latter aspect of the case does not feature in the following analysis.

### **Case Analysis**

Technology affordances have been defined as “action possibilities and opportunities that emerge from actors engaging with a focal technology” (Faraj and Azad, 2012, p.238) and can give rise to important philosophical and ethical questions. In this case affordances can also be associated with “insights” derived from learning analytics. Insights are generated based on criteria or sets of criteria that can be defined by the administrator or lecturer. These criteria are linked to LMS data generated by all users in the course of their interaction with

the platform. Data sources used in the generation of insights are highly customisable in order to create actionable insights. A non-exhaustive list of potential data sources includes the following:

- Has the student accessed the module before the start date?
- Has the student accessed the module since its start date?
- Has the student accessed files or pages associated with the module?
- Has the student accessed URLs on the module page?
- Has the student looked at assessment outlines?
- Has the student tracked discussion forums?
- Has the student used social functions of the module such as contacting another student, accessing a discussion forum, replying to another student's post, etc
- Has the student completed any scheduled tasks?

The use of analytic tools is by now well established. As an early adopter of Blended Learning, the College has been particularly focused on the philosophical and ethical implications of technological advancement on teaching and learning. Philosophical concerns around technology affordances have centred on three controversies in particular: subject-object dualism; structure-agency split; and determinism vs. voluntarism dichotomy (Faraj and Azad, 2012). As has been evidenced through other ubiquitous technologies such as social media, philosophical and ethical implications are emergent and can only be fully realised through long term observation and analysis (Green, 2024). Ladjal et al (2022) also remind us that in the context of LA, data rights and privacy are sociological rather than technological issues and educationalists must interrogate fitness of technological purpose carefully and continuously through an ethical lens.

This was especially pertinent in this case, where a change (albeit modest) in how the technology was applied was proposed. In defining educational technoethics, Luppicini (2010) distinguished between general educational technoethics and professional educational technoethics. The former "is concerned with ethical use of technology to promote the aims of education" and the latter "a specialized area of educational technoethics focusing on the development and evaluation of ethical codes and standards to guide decision-making about technology in education and professional life" (Luppicini, 2010, p.18). Professional educational technoethics also involves the development of ethical frameworks to guide decision-making around the introduction or use of technological affordances (Ladjal, 2022). One such framework was especially useful in this case. The TEFT framework assesses educational technology through three lenses:

The instrumental lens...focuses on the policies and laws governing teachers' and students' uses of technology. The sociomaterial perspective attends to technology's built-in biases and how it translates behaviour in prescribed or circumscribed ways. The existential lens considers how students' and teachers' entanglements with technology condition how they experience the world and transform their ways of knowing, doing, being and becoming. (Adams & Groten, 2023)

The philosophical and ethical justification of the use of learning analytics appears to have rested largely on specificity of purpose. In the early stages of rollout in Ireland, the National Forum for the Enhancement of Teaching and Learning In Higher Education heralded LAs as “invaluable” adding “learner data can be used as an evidence base for proactively identifying students at risk of underperforming, for recommending services and courses of action that can enhance students experience and for targeting support resources to students with the greatest need” (NFETLHE, n.d., p.1). A recent “state of the art” review across sixteen HE institutions, indicates that student improvement and support remain foremost motivations for the use of learning analytics (Hernández-de-Menéndez, 2022). Critically, this study noted “poor information... regarding privacy issues” with only one of the sixteen institutions surveyed specifying “how the [LA] data collected will be treated” (Hernández-de-Menéndez, 2022, p. 1223). This was somewhat surprising - if not worrying.

It appeared that ethical propriety has been folded into specific purpose based on the assumption that analytics are primarily used as tools to support student engagement and attainment. However, it also appears that precise communication of how analytics are and can be used remains somewhat opaque in HE Institutions. This was central to the QAE Officer’s review in this instance. The College was also mindful that there is always potential for purpose to be perceived as diluted where an individualised process is systemised. In other words, it was important that the distinction between monitoring and support was preserved and that any potential for the use of learning analytics to be perceived or interpreted as invasive as opposed to supportive be avoided. The preservation of student autonomy and agency were related concerns.

The review conducted by the QAE Officer was therefore guided by the following questions:

- Is the nature, purpose and extent of learning analytics clearly defined?
- Are students sufficiently informed of these technological capacities and their potential application?
- Could learning analytics related to student engagement be systemised proactively while preserving specificity of purpose including how that purpose is perceived by students.
- The precise statement of purpose and linkage to specific intention (supporting student engagement) was especially pertinent in this instance.

It was evident that relevant purposes of Learning Analytics were captured throughout the relevant suite of policies and procedures. It was also confirmed that the purpose and analytic scope of the LMS is communicated to all students at inductational and introductory sessions by the Educational Technologist and IT Manager as per the foregoing procedures. However, the QAE Officer believed the communication of the purpose of learning analytics could benefit from greater specificity, that is, the stated purpose of LMS analytics could be further consolidated around support for student engagement and attainment.

**Case Outcome:**

While QAE documents were found to communicate how and why LA are used by the College, it was felt they would be enhanced by greater specificity before Learning Analytics were to be used systematically and proactively to ascertain student disengagement. This could be either achieved through the development of a specific policy and related procedures on the Learning Management System or through existing policies and procedures. Specifically, an expansion of the definition of “Learning Management System” in the Policy on Supporting Students to Engage with Blended Learning and an expansion of the policy and procedures on student engagement. The QAE report concluded that while it was possible and necessary to accommodate a more proactive systemised approach to student disengagement, it was not the role of QAE specialists to determine the primary capacity dilemma at the heart of technoethics succinctly captured in the idiom – “because you can, doesn’t mean you should”. This was a matter for college-wide decision making structures.

## References

Adams, C. & Groten, S., (2023). A TechnoEthical Framework for Teachers. *Learning, Media and Technology*. DOI: 10.1080/17439884.2023.2280058

Faraj, S, & Azad B, (2012). The Materiality of Technology: An Affordance Perspective in P. M. Leonardi, B. A. Nardi, & J. Kallinikos (eds), *Materiality and Organizing: Social Interaction in a Technological World*. Oxford Academic.

<https://doi.org/10.1093/acprof:oso/9780199664054.003.0012>

Green, P.B. (2024). *Technology Ethics*. Markkula Center for Applied Ethics, Santa Clara University. <https://www.scu.edu/ethics/focus-areas/technology-ethics/#:~:text=Technology%20ethics%20is%20the%20application,t%20have%20to%20make%20before>.

Ladjal, D., Joksimović, S., Rakotoarivelo, T. and Zhan, C. (2022), Technological frameworks on ethical and trustworthy learning analytics. *British Journal of Educational Technology*, 53, 733-736. <https://doi.org/10.1111/bjet.13236>

Luppardini, R. (2010). *Educational and Professional Technoethics*. IGI Global.

<https://doi.org/10.4018/978-1-60566-952-6.ch009>

National Forum for the Enhancement of Teaching and Learning in Higher Education, (n.d.) *Learning Analytics Platform Guide*. [https://www.teachingandlearning.ie/wp-content/uploads/LA\\_Platform\\_Guide\\_proof03.pdf](https://www.teachingandlearning.ie/wp-content/uploads/LA_Platform_Guide_proof03.pdf)