LEARNING ANALYTICS

Student Perception across Scottish Higher Education Institutions

Niklas Bals, Robert Gordon University
Laura Bryce, University of Stirling
Diego Rates, University of Edinburgh
Jason Sell, University of St Andrews
Context

- This is a presentation which summarizes the report sponsored by the QAA on the student perception on Learning Analytics in Scottish Universities

- The findings of this study can give insight to stakeholders involved in Learning Analytics in higher education
- First Scottish cross-institutional study on student voice regarding Learning Analytics
What is Learning Analytics?

- Measurement, collection, analysis, and reporting of data about students and their academic environment
  - *Or: The use of digital data to enhance student learning*
- In detail those may be:
  - *Measuring and monitoring performance levels*
  - *Understanding the factors at play in student achievement*
  - *Help educators create the right conditions and design the most effective interventions for student success*
- This can be used in standard analysis of ‘analog’ student data or more elaborate digital Big Data analysis

What was the background of project?

- Quality Assurance Agency of Scotland (QAA) set out to improve strategy, policy and practice at Scottish Universities through the Enhancement Theme

- Current Enhancement Theme is ‘Evidence for Enhancement: Improving Student Experience’ over a three-year period
  - **Year 1:** Exploratory workshops to shape and define Scottish sector needs
  - **Year 2:** Conduct a series of sector-wide student focus groups to explore student perceptions of learning analytics

- 13 Scottish higher education institutions (HEI) declared interest in exploring learning analytics
What were the goals?

- Conduct focus groups to provide a student voice from a cross-institutional perspective that can better inform decision-making across the higher education sector
- Showcase potential pitfalls in exercising Learning Analytics
- Showcase potential for additional research
What was the methodology?

- student interns contacted 15 HEIs, of which five facilitated the recruitment of students for the focus groups
- 29 students from across these institutions participated in the focus groups
- participants were a mix of undergraduate and postgraduate students, and they varied in age and background
- Nine institutions were contacted but did not participate
What was the procedure like?

- Review of similar studies such as the SHEILA Project, which investigated stakeholders' views and concerns about learning analytics, was used to inform and define specific topics of interest for this study.
- One common protocol was designed so all focus groups, delivered in different institutions, by different student intern facilitators.
- Cross-institution analysis conducted by student interns.
- Identification of common responses and themes, which appeared across institutions.
What are the findings?
Feedback: format and structure

- It was clear that students were not in favour of LA systems publishing peer-to-peer comparisons, indicating it may trigger feelings of embarrassment, stress and reduced confidence.

- Some students discussed that LA feedback if mediated by staff may help receive the information less 'cold' and impersonal. As noted by a student: "I would prefer if [the feedback] came from a teaching team, if it would be an automated email, I would consider it useless and would not check it".

- Others voiced preference for automated feedback, as face-to-face feedback may not be practical. In the words of a student: "it may be problematic because it can be too time consuming and also impractical for those with other, external commitments such as part-time employment or childcare".

- Beyond that, automated feedback may avoid some students feeling 'interrogated' and 'forced' to discuss reasons of their academic problems with staff, which they may not feel comfortable in doing.
What are the findings?
Purpose and perceived benefits

- Students emphasized that the main purpose of LA should be to help mitigate circumstances in which students are 'at-risk' of failing, or when their academic performance is highlighted as problematic.
- Students were interested in that LA systems could give them clear instructions on how to improve their work.
- Students also voiced interest that LA systems could identify and support academically-struggling students.
- Students highlighted wellbeing as a commonly agreed upon theme where learning analytics could prove beneficial.
- In synthesis, LA as tools for improving their academic and personal experiences throughout their studies.
- Yet, almost all participants voiced concerns with potential misuse of students' data, and that the purpose of the data collection for non-academic purposes of LA needed to be made clear.
What are the findings?
Awareness and consent

- Students voiced a general lack of awareness regarding
  - *what data is being collected, and*,
  - *the purpose behind collecting certain types of data*.

- Students were vocal that institutions frequently overlook the notion of 'clear and informed' consent regarding the collection and usage of their data.

- Students alluded frequently to the sensitivity of personal data such as the monitoring of students' mental health or disabilities. While they noted that this data can be useful, students were adamant about the importance of obtaining explicit consent and clearly informing students that their personal data was being collected.

- Most students agreed that institutions should implement an 'opt-in/opt-out' system that fully informs students of the methods and purpose behind the collection of data, such as established by current General Data Protection Regulations (GDPR).
What could be pitfalls?
Ethics and risks

- Non-academic data - such as students' health records, information about disabilities, ethnic background, religion and, amongst others, political positions - is sensitive and necessitates special care and transparency in handling.

- Students expressed that, even with the best intentions, using students' data can carry risks, which should be mitigated.

- Some students pointed out the potential for discrimination based on staff's 'personal bias'.

- Students also pointed to risks related to an 'invasion of privacy'.

- Students voiced risk of failure to interpret data: 'People don't have time [to] familiarise [themselves] with data, so [people] could get wrong remarks'.

- Based on the potential concerns related to LA, various students argued the necessity for guidelines or policies: 'It will be very difficult that everyone agrees, but we need something'. 
What are the key conclusions?

- Our analysis suggested that students from Scottish HEIs had an overall positive stance towards the practical use of learning analytics and a number of potential benefits for their studies.

- However, the consideration of informed consent and mitigation of ethical and legal risks involved in the use of LA is vitally important for students.

- As LA are further integrated in Scottish HEIs, future studies should continue to expand the understanding of students' perspectives.
What are some future implications?

- **Transparent and simple policies** are vital for the informed agreement of students to learning analytics.

- **Students perspectives will be needed to inform and validate future learning analytics policies and initiatives**, in order to ensure that these are effective and provide benefits for students.
Full report

- For the full report please visit the QAA website [LINK]