

UNIVERSITY OF LEEDS

TAUGHT STUDENT EDUCATION BOARD

Learning Analytics Strategy for Taught Student Education

Executive summary

This strategy covers all aspects of the use of Learning Analytics in relation to student education for taught students at the University of Leeds. Developed in partnership with students and staff, it sets out the University's expectations for the use of Learning Analytics across the institution to enhance the quality of student education, and to improve student success. This strategy covers the use of Learning Analytics to support student success for all registered taught students at the University and therefore describes the target expectations to be realised over the next five years. The University will use learning analytics to: (i) support individual learners – through actional intelligence for students, teachers and professional staff; (ii) help understand cohort behaviours and outcomes; (iii) help understand and enhance the learning environment. This is an aspirational strategy designed to initiate the university's activity in this rapidly evolving area. It is expected that this strategy will evolve and be iterated in an agile fashion, as learning analytics is embedded within the institution. Investment will be required to realise the benefits of this strategy, and this will necessarily be subject to prioritisation and available funds. The University anticipates that the use of learning analytics will be beneficial for students to support their learning progress and consultation that has taken place with students and student education colleagues corroborates this. The University is implementing learning analytics to improve student retention rates, improve degree attainment and create efficiencies in student support processes, all of which should contribute to improved student success, and enhancement of student education. The University recognises that the use of learning analytics data requires strong data stewardship, data management, robust ethical practices and may require changes to some existing student education policies to be effective. This strategy should be read in conjunction with the University's Code of Practice on Learning Analytics.

Definition

Learning Analytics is defined as follows: "the measurement, collection, analysis, and reporting of data about learners and their contexts, for the purposes of understanding and optimising learning and the environments in which it occurs." (International Conference on Learning Analytics, 2011). The University of Leeds has adopted this definition for the purposes of this Strategy and the Learning Analytics Code of Practice.

Call to action

This document is provided for all stakeholders responsible for the delivery of student education and student support services across the University of Leeds. This includes Faculties and Schools, Student Education Service, Facilities Directorate, IT Service, Digital Education Service, the Library and Leeds University Union.

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1. Vision

Use of learning analytics will enable students and staff at the University of Leeds to work together, ethically and transparently, to understand individual learning journeys and circumstances, to support students to reach their full potential and maximise their chances of success.

This means that:

- The use of learning analytics will support student success;
- Students will have the option to view the same learning analytics data on themselves that staff will view;
- Students and staff will be fully informed on the data collected, how it is used, access permissions and where it will be shared, to ensure transparency;
- Personal tutors and student education staff will make use of learning analytics data to support students' progress;
- The University's Code of Practice on learning analytics will be regularly reviewed and provided to all staff and students;
- The use of learning analytics will be aligned to the academic mission and values of the University.

2. Strategic alignment

This strategy aligns with the University strategy, the student education priorities and other related strategies. Learning analytics will support our student education strategic priorities, as follows:

- Deliver an outstanding educational experience for all students;
- Recruit and retain high-quality students from diverse backgrounds, providing access for all who can benefit;
- Further develop our distinctive approach for inclusive education;
- Deliver outstanding outcomes for all students;
- Support the commitment under the Leeds Partnership, "to help each other to reflect, develop and improve.";
- Develop internationally competitive and institutionally efficient delivery models for digital education;
- Implement tools and processes for student education management information and learner analytics, to effectively benchmark and evidence the quality of the student experience and student outcomes.

3. Benefits of learning analytics

Benefits of implementing a learning analytics strategy for students

- a) Students will have visibility of their individual learning analytics data held by the University;
- b) Students will be able to make effective use of data, based on their own activities at the University, to enhance their learning;
- c) Students will have greater knowledge and understanding of their progress providing more opportunities to improve their academic performance;
- d) Meetings with personal tutors will be better informed allowing for more personalised and nuanced conversations;
- e) The University will meet the expectations of applicants and current students, in relation to the use of learning analytics to support learning and to improve student success.

Benefits of implementing a learning analytics strategy for staff

- a) Staff will be able to make effective use of learning analytics data to support student learning and success, and enhance communication;
- b) Staff will be able to have more informed, nuanced conversations with students around their academic performance, progress and wellbeing;

- c) Staff will be better able to suggest interventions to students based on a combination of learning analytics data and discussions, leading to a greater impact on student progress and support;
- d) Staff will have earlier indications that students may be facing academic or wellbeing issues;
- e) The University will meet the expectations of staff and University partners, in relation to use of learning analytics to support learning and improve the student experience.

Benefits of implementing a learning analytics strategy for the University

- a) Students can be identified, and supported, to improve retention and address differential degree attainment;
- b) Student services can be focused to students most likely to benefit from intervention and support, reducing reliance on other processes and systems;
- c) Evidence can be gathered to support effective decisions about curriculum, educational interventions and student education strategy;
- d) Staff time and resources can be directed more effectively to supporting students;
- e) The University will maintain parity (as a minimum) with peer institutions who are moving forward rapidly in this area;
- f) Institutional data can be analysed to improve student education and student support.

4. Principles

Use of learning analytics at the University of Leeds will be focussed on student success and will be informed by the following principles:

- (i) Learning analytics will be used to support student education, student well-being, and students' outcomes;
- (ii) Learning analytics will be used according to defined guidelines, agreed in partnership with students, and in alignment with the University's organisational strategy, policies and values;
- (iii) The University will collect learning analytics data transparently and ethically, and ensure that where data are shared, it is clear where the consent lies and with whom data are shared;
- (iv) The University will communicate widely and regularly with students and staff about the rationale for use of learning analytics;
- (v) Learning analytics data will be used within the context of existing and future student education activities to enable our staff to have more nuanced conversations with students about their individual progress and support needs;
- (vi) The University will actively work to recognise and minimise opportunities for bias when processing learning analytics data, and will endeavour to minimise potential negative impacts, focussing on individuals and their circumstances;
- (vii) The University will use learning analytics data to improve its processes and practices, for the benefit of staff and students;
- (viii) Students and staff will be actively involved in the consultation on learning analytics at the University;
- (ix) The University will use predictive analytics carefully, to ensure that the full spread of student behaviour and capability are recognised;
- (x) All learning analytics activity will comply with the Code of Practice on Learning Analytics;
- (xi) The University will ensure that any user interface displaying learning analytics data will include accessibility features;
- (xii) The University will regularly monitor and quality assure use of learning analytics to ensure it is meeting the objectives of the learning analytics strategy, and wider university strategies;
- (xiii) The University will provide training and support for staff and students in the appropriate and ethical use of learning analytics data;
- (xiv) The University will consider the impact of learning analytics on staff roles, training requirements and workload, and recommendations will be made to the Taught Student Education Board for review and approval;
- (xv) Professional development opportunities will be offered to all staff using learning analytics, and mandatory training may be required to access data;

- (xvi) Data generated from learning analytics will be used to generate management information about teaching quality and for enhancement purposes;
- (xvii) Data generated from learning analytics will not be used by the University to initiate investigations into staff performance, but students, staff and Schools will have the right to use the data in appeals or complaints.

5. Objectives

Objective 1: Provide learning analytics data to individual students and relevant staff that demonstrates their learning progress, to support student well-being and outcomes

Outputs: We will provide:

- a system that collects, manages, aggregates and interprets learning analytics data;
- a learning analytics dashboard to students that allows them to monitor their own progress;
- a learning analytics dashboard to relevant staff that allows them to monitor student progress;
- training and guidance to students and staff to understand the data presented in learning analytics dashboards.

Objective 2: Do this in a manner consistent with good data stewardship, ownership and management of learning analytics data

Outputs: We will provide:

- Principles, policies and practices to ensure that our learning analytics data are appropriately governed and managed;
- The means by which to allow students to have appropriate control over their data used in a learning analytics system;
- Training and support for staff and students to help them understand how our learning analytics data are collected, stored, managed, processed and presented.

Objective 3: Develop a programme of research and evaluation to measure the impact and effectiveness of learning analytics to enhance student education, learning and student support

Outputs: We will provide:

- a mechanism for researchers to access LITE funding for a defined programme of research on learning analytics;
- opportunities for staff and students to contribute views and case studies on the use of learning analytics;
- opportunities to learn from internal and external stakeholders engaged in learning analytics;
- wide dissemination of research and evaluation findings from projects on learning analytics.

Objective 4: Integrate learning analytics data with business intelligence and data analytics processes, to provide information for decision-makers

Outputs: We will provide:

- principles, frameworks and practices for aggregated learning analytics data to be available for analysis by the business intelligence and data analytics team for institution-level analysis;
- reports of aggregated data sets for institutional analysis of learning analytics data to inform

decision making by student education leaders and managers.

6. Actions needed to realise this strategy

In order to realise these outcomes across the University, the following enabling actions will be required:

- a) Continuous alignment with the University's Code of Practice on Learning Analytics;
- b) A clear institutional position on data to be collected for the purpose of learning analytics, taking into account the local context of Faculties and their individual Schools;
- c) Investment in an institution-wide learning analytics system that successfully integrates with current and planned university systems;
- d) Review, and possible modification, of the following student education policies: (i) Personal Tutoring Model; (ii) Attendance Monitoring Policy, and other relevant policies, to ensure that this strategy can be realised. The review will take into account the University moving away from an attendance monitoring policy and towards an engagement policy;
- e) Institution-wide implementation of existing student education initiatives, such as Inclusivity Framework and Leeds Expectations for Assessment and Feedback;
- f) Staff development to ensure that all staff have the skills and confidence to make effective use of a learning analytics system and interpret learning analytics data to students and student learning;
- g) Ongoing institutional review of the ethical use and impact of learning analytics at the University in partnership/consultation with staff and students;
- h) A programme of research into the impact and effectiveness of learning analytics to support student education and learning;
- i) Good data management and stewardship practices adopted across the institution, and particularly for the systems which will provision learning analytics data;
- j) Alignment with other institutional strategic activities and on-going Programmes of work, such as: (i) Student Lifecycle Programme (in particular in relation to electronic management of assessment, single source of truth and central data system, student view and data analytics); (ii) Data Foundations Programme (in relation to data strategy, data ownership, data stewardship and storage of data); (iii) ESLEO (in relation to student education quality assurance).

7. Measures of success

The following indicative measures will be used to determine whether the learning analytics strategy, once implemented, has been successful:

Measure	Sources of information	Key Performance Indicator
Student satisfaction	National Student Survey; PGT Programme Survey	Improved NSS and PGT programme survey scores
Student outcomes	Degree classification, graduate employability	Optimal degree attainment for all groups of students, graduate employability data
Student retention	HESA data return; TEF institutional and subject-level data	Reduced non-continuation
Efficiency	Student Education Service	Reduced time to provide, analyse and interpret data
Staff satisfaction	Personal tutors; student support staff; academic staff; professional staff	High satisfaction with learning analytics system
Data management	Business Intelligence and Data Analytics	High quality learning analytics data

APPENDIX A: Student and staff views of an exceptional learning analytics experience

If this learning analytics strategy is realised, the following scenarios, from a variety of users' perspectives across the University, may become reality:

Students

Learner analytics, done with transparency, would be a strong step towards encouraging a truly two-way relationship between staff and students and embedding The Partnership further in university life. Students who feel that they are slipping behind would be able to contextualise their progress in a productive way, and also have a starting point to discuss with personal tutors. Students often find it hard to reach out for support, particularly when they have no real understanding of their academic progress, especially in the first couple of years of an undergraduate degree. Similarly, tutors who see students slipping behind would have a concrete position to begin the conversation with a student. A learning analytics system would also enable professional and academic staff to create a more comprehensive image of a student when identifying the best way to support them in achieving their potential. If this could be executed effectively, it would undoubtedly be an invaluable aid in tackling attainment gaps and spotting students who may benefit from support. The system could also help to provide support for students who are struggling with their well-being, as it could show them positive improvements in their progress as a result of actions taken in partnership with staff.

Student Support staff

Student support staff can help students come together as a group, to develop relationships and help them support each other. In addition, student support staff help students who may be struggling, to signpost them to access the support and services they need to keep them engaged with university and their studies. The analytics dashboard would enable student support staff to look at how the whole cohort of students are engaging with their studies. The systems would enable more proactive behaviour to discuss and recommend support options instead of waiting for students to come to discuss their concerns. For example using the dashboard student support staff could identify students who had previously been fully engaged but had suddenly stopped attending classes or going to the library, and could arrange a conversation and suggest actions to support those students.

Personal Tutors

Personal tutors could check their view of the tutees' dashboard. They would see students' progress in terms of attendance, Minerva usage, lecture capture views, assignment submissions, academic marks, and other measures of student engagement. They could compare each students' progress against their cohort, and identify patterns and trends to discuss with their tutees. During personal tutorial meetings, tutors would be able to discuss the dashboard data with their tutees, and agree actions which may help to improve students' academic progress. These actions could be recorded for tutor and tutee to review in future.

Module Tutors / leaders

Module tutors/leaders could check module dashboards and identify patterns in students' use of lecture capture recordings and other resources on Minerva. Module tutors/leaders could then ask students about their understanding of specific topics, to identify areas of misunderstanding and provide supplementary learning resources. The dashboard would also indicate students who are at increased risk of underperformance. Module tutors/leaders could view a summary of relevant analytic data about students, to identify risk factors and actions taken by other staff, and could suggest additional actions to students.

Programme Leaders

Programme leaders could access a report providing an overview of available data for the programme and a summary for each component module. This report could highlight cohorts of students who are performing significantly above or below expectations across the programme, and also highlight the regularity and quantity of engagement with university online systems. By clicking through the online report programme leaders could see that the decreased engagement in the third and final year happens largely during dissertation study, and could discuss this with colleagues and students. Programme leaders would be able to analyse patterns in overall engagement results between modules, and identify differences in students' behaviours in relation to use of learning resources, allowing a dialogue with colleagues and students.

Educational Developers/Learning Technologists

Educational developers/learning technologists could access end-of-semester reports which provide an overview of data across the school, to identify overall trends in student activity in Minerva, allowing informed discussions with teaching staff about the use of in-class and online learning tools. Educational developers/learning technologists could also use learning analytics reactively when approached for support by a module leader who has implemented a flipped learning approach but is finding students are not engaging effectively with the pre-sessional resources. Using a live module dashboard the educational developer/learning technologist could see that the majority of students are accessing the pre-sessional resources in the first two weeks, but then fewer do so in each following week, allowing a dialogue about optimal course design and interventions to help improve student engagement.