



Evidence for Enhancement: Improving the Student Experience

Investigating the Use and Implementation of Learning Activity Across the Scottish Higher Education Sector

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Executive summary

The use and implementation of learning analytics in Scottish Higher Education was investigated as part of the current QAA Scotland Enhancement Theme, Evidence for Enhancement: Improving the Student Experience. Through workshops led by the University of Strathclyde, as part of the Learning Analytics collaborative cluster work, interns were tasked with conducting semi-structured interviews with all 19 Scottish higher education institutions (HEIs). A set of questions aiming to explore the objectives, policies, systems and future plans of each institution with regards to learning analytics was posed to each HEI. The interviews took place between June and August 2018 and were conducted primarily over the telephone or through Skype conference calls. Interviewees were provided with a set of questions prior to the interview. The interviews have provided a comprehensive view on Scottish institutions' engagement with learning analytics

Summary findings

The summary below present and discusses the key findings of the research across all institutions.

Metrics

The first aim of the research was to identify the current implementation of learning analytics solutions. Interviewees responded as follows:

Learning Analytics Status	Percentage	Number of Institutions (19)
A solution is in place	26%	5
A solution is in development or planning	42%	8
No solution is in place, development or planning	32%	6

Table 1: Status of learning analytics implementation

Of those with some level of solution in place, these are the types of systems being explored:

Current Solution	Percentage	Number of Institutions (19)
Jisc Pilot	26%	5
An in-house system	32%	6
An external system	32%	6
Multiple solutions are in place or in trial	21%	4

Table 2: Learning analytics solutions

The most commonly used virtual learning environments (VLEs) used across the sector are shown in table 3. Some institutions primarily used Blackboard but also made use of Moodle within specific schools or courses.

VLE	Percentage	Number of Institutions (19)
Moodle	47%	9
Blackboard	42%	8
Canvas	11%	2

Table 3: Virtual learning environments

Several common key drivers for learning enhancement and analytics were identified, see table 4.

Key Driver	Percentage	Number of Institutions (19)
Retention	58%	11
Engagement	47%	9
Improving learning design & pedagogy	42%	8
Student performance and progression	42%	8
Student experience	26%	5

Table 4: Key drivers

Other key drivers identified included student well-being, employability, resource management and 'coping with scale' which targets delivering the same quality of teaching and personalised assessment across large cohorts of students. There was a specific divide identified between the institutions with a main focus on retention versus those without; the approaches and systems used varied among these two main groups. There was a general opinion that current vendors of learning analytics are mainly focused on solving retention issues.

The types of data collected for the purposes of learning analytics or for rudimentary engagement monitoring were most commonly associated with four categories (see table 5):

Data Type	Percentage	Number of Institutions (19)
VLE activity	63%	12
Attendance	42%	8
SITS/student records	26%	5
Assignments/grades	32%	6
Library data	21%	4

* SITS (Strategic Information Technology Systems)

Table 5: Data collected for learning analytics

However, 6 of 19 institutions (32 per cent) also identified other data types, including; wider performance indicator measures, registration data, portal engagement and engagement with student support services. A point worth noting is that a lot of data about students was already being collected for other purposes (demographics, UK Visa requirements, VLE and systems debugging), but could be (or was) being re-purposed for learning analytics and important questions arose from this about whether or not students are aware of the data already being collected about them, particularly due to the General Data Protection Regulation that came into force in May 2018.

Many institutions reported that learning analytics policies are not yet established and may need to work alongside other institutional frameworks (see table 6).

Policy	Percentage	Number of Institutions (19)
Complete policy (published online)	16%	3
Draft policy	16%	3

Table 6: Status of learning analytics policies

All 19 respondents indicated that they would be willing to share their policies once developed. It is also worth noting that every institution involves, or plans to involve, students in the development of their policies and systems.

Every institution noted that there is a level of concern about learning analytics, with some still being in exploratory stages, expecting to discover more concerns when undertaking staff and student consultations. Many institutions reported that staff show more concern than students do, although this may be due to more engagement in conversation surrounding the topic with staff. The most common concerns described are reported in table 7.

Common Concerns	Percentage	Number of Institutions (19)
Ethics, use of data, privacy and data security	53%	10
Increasing student stress by sharing analytics	32%	6
Staff performance management via analytics	21%	4
Increased staff workload	21%	4
Surveillance	16%	3

Table 7: Common concerns

Overall, there were two institutions with a roadmap specifically for learning analytics. The majority of institutions include future plans for learning analytics as part of wider strategic plans.

Conclusions

The work undertaken here provides an overview of engagement with learning analytics in the Scottish higher education sector and can be used as an initial consultation document to potentially inform future collaborations among institutions.

The questions used at interviews are provided in appendix 1. The questions were divided into four themes; objectives and outcomes, policy, systems and data and future developments. A summary of the discussion that took place with each institution is in appendix 2.

Appendix 1: Interview questions

The set of questions below was used for interviewing HEIs and the appropriate section was answered depending on the learning analytics status of the institution.

Questions

- Does your institution monitor student engagement through any of the following means: attendance monitoring, library records, assignments, VLE activity?
- Does your institution currently have any specific Learning Analytics systems or tools in place or in development?

If there is a system in place - objectives and outcomes:

- What are your institutional objectives in regards to Learning Analytics? (For example key drivers such as student retention, engagement, performance or learning content?)
- Did you make use of a business case to secure funding? Would you be willing to share it?
- Have you in any way evaluated the impact of your Learning Analytics strategies on staff and students? Have there been any benefits observed?
- Have you targeted any specific learning enhancements or staff development that you would like to make?
- What training is there in place for the use of your Learning Analytics system for staff and students?
- How are you using Learning Analytics to integrate with interventions for students that are not engaging/attaining?

Policy:

- Do you have any policy framework in place? (In terms of Ethics/GDPR/Principles of practice?)
- Who are the major stakeholders in the development of your Learning Analytics system? (Students, staff, management?)
- Who was involved in the development of the policy?
- How are you involving students in the process?
- Is there a governance structure in place for the oversight of Learning Analytics at your institution? Who is accountable for each aspect? (technical/ethical/pedagogy - is it an individual or a committee? Who sits on the committee? What roles do they have?)
- Would you be willing to share your policy? (At what level: for report purposes only or shared with other institutions)?

Systems/Data:

- Which systems are you using for Learning Analytics? Did you contract an external provider or did you develop in-house?
- How many of your staff are currently regular users of your Learning Analytics system?
Is it mandatory?
- What kind of data are you collecting and using?
- Do you share your findings in relation to Learning Analytics? Is this sharing internal or external? Do you engage with any particular learning community?
- Which VLE are you using at your institution?

- Which of your systems are integrated? Does your Learning Analytics system speak to your library records, internal grading system, VLE?
- Do you support all students with your Learning Analytics system, and if not, why not?
Which students are you supporting?

Future developments:

- What are your future plans for Learning Analytics, do you have a roadmap? How many years will it take to achieve your goals? Who is involved in developing the roadmap?
- What benefits do you want Learning Analytics to bring to your staff and students in future?
- Have you encountered any resistance from any stakeholders in the past or with future plans?
- How is the whole Learning Analytics process evaluated and at what levels?
- What are the short/mid/long term challenges?
- Reflecting on your implementation, what lessons have you learned that would be useful to share across the sector?

If it is in development/planning - Objectives and outcomes:

- What are your institutional objectives in regards to Learning Analytics? (For example key drivers such as student retention, engagement, performance or learning content?)
- Will you make use of a business case to secure funding? Would you be willing to share it?
- Have you targeted any specific learning enhancements or staff development that you would like to make?
- Will there be training in place for the use of your Learning Analytics system for staff and students?
- Do you plan to integrate Learning Analytics your current engagement or attainment policy?

Policy:

- Have you started to develop any policy framework? For example ethics/GDPR/principles of practice?
- Who are the major stakeholders in the development of your Learning Analytics system? (Students, staff, management?)
- Who will be involved in the development of the policy?
- How will you involve students in the process?
- Is there a plan for a governance structure for the oversight of Learning Analytics at your institution?
- Who will be accountable for each aspect? (technical/ethical/pedagogy - is it an individual or a committee? Who will sit on this committee? What roles do they have at your institution?)
- Would you be willing to share your working documents or complete policy once it is developed? (At what level: for report purposes only or shared with other institutions?)

Systems/Data:

- Have you thought about which systems you will use for Learning Analytics? Are you contracting an external provider or are you developing in-house?
- How many of your staff do you want to use Learning Analytics once it is implemented? Is this achievable? Will it be mandatory?
- What kind of data will you be collecting and using?
- Which VLE are you using at your institution?
- To which level are your systems currently integrated? Do you have plans to integrate these systems with your Learning Analytics system?

Future developments:

- What are your future plans for Learning Analytics, do you have a roadmap? How many years will it take to achieve your goals? Who is involved in developing the roadmap?
- What benefits do you want Learning Analytics to bring to your staff and students in future?
- Have you encountered any resistance from any stakeholders in the past or with future plans?
- What are the short/mid/long term challenges?

If 'No' to both:

- Are you aware of any plans to introduce such a system in future?
- Does your institution have any concerns about Learning Analytics?

Objectives and outcomes:

- Do you feel that there are any institutional objectives that could be met by introducing Learning Analytics? Think about key drivers such as student retention, engagement, performance and learning content.
- Have you considered how you might fund a Learning Analytics project? (business case)
- Is there any specific learning enhancement or staff development that you would like to take forward?
- How do you identify students that are not engaging currently?
- What interventions do you have in place for those students that are not engaging/attaining?

Policy:

- Who are the major stakeholders in the development of policies at your institution in relation to learning enhancement?
- Do you involve students in your decisions and development of policies?
- Is there a governance structure in place at your institution for persons responsible for learning enhancement?
- Would you be willing to share your current policies surrounding that issue?

Systems/Data:

- What kind of data are you collecting and using to monitor student engagement and learning?
- Which VLE are you using at your institution?
- To which level are your systems integrated?

Future developments:

- What are your future plans for Learning Analytics, do you have a roadmap? How many years will it take to achieve your goals?
- What benefits do you think Learning Analytics could bring to your staff and students in future?
- Have you encountered any resistance from any stakeholders in the past or with future plans?
- What are the short/mid/long term challenges?

Appendix 2: Institutional summaries

Abertay University

Learning analytics status: A system is in place

Implementation details: A Jisc Learning Analytics tool is being used for staff and students

VLE: Blackboard

Objectives and outcomes:

- Identifying students who need support, helping them get the best out of the student experience in terms of attainment and final graduate outcome. From a student support perspective, student well-being is also important. Learning analytics can also help better understand learning content.
- A business case was used which helped with establishing purpose, focus and university-wide buy in.
- There has been no evaluation yet but feedback on the implementation will be sought next session.
- The system has been used by a group of amenable staff and the feedback provided will be acted upon.
- Ideally staff will employ data-driven decision making. The concept of learning analytics should be taken seriously and embedded into everyday 'business as usual'.

Policy:

- There isn't a specific policy yet, but there is a Learning & Teaching framework and strategic aims the policy will be underpinned by. The policy will be developed through Learning & Teaching.
- Stakeholders include; Learning Enhancement, Academic Leadership Group, Heads of Schools, Information Services, Registry, Student Services, Student Association and Student Voice Forum.
- The governance structure is two-fold. One group includes; the sponsoring member of the University Executive Team, the Academic Registrar, Director of Teaching & Learning and Information Services. There is another group that includes senior users, students, academic staff and student advisers. Reports are made to the Teaching & Learning Committee.

Systems and data:

- The Jisc study goal mobile app is implemented for students to manage their learning activities and have visibility on how they are engaging from the point of view of attendance and the VLE.
- Jisc's Data Explorer is used from the staff point of view to capture attendance recording but at the same time to also give visibility to learning analytic activities (VLE, student record system).
- Blackboard has helped configure their data from their systems to go into the Jisc tools.
- Most staff are regular users because otherwise attendance data would have to be added manually.
- Attendance, VLE and assessment data is pulled into the Jisc tool for all undergraduate students.

Future developments:

- Acting on the feedback from the first implementation so staff can be proactive and access reports.
- Reviewing the current traffic light system to ensure that the rules selected are giving a balanced picture, managing the output in relation to available staff for support and checking the algorithms.
- Addressing the attainment gaps for students from different demographics and hopefully student well-being will be an indirect benefit. It is important to know if the interventions work and how well.
- A report for the university executive is produced each year. By 2021-22, there will be a much better idea of how this has gone.
- In the short-term there are some technical challenges to address but in the longer-term the main issue will be in making sure users understand the value of the system so they keep using it effectively.

University of Aberdeen

Learning analytics status: In development

Implementation details: A proof of concept pilot is currently running with an external provider.

Data sources have been identified and these are being investigated to find out if they will be useful for predictive purpose.

VLE: Blackboard and a bespoke medical school system.

Objectives and outcomes:

- Student engagement, particularly identifying when students begin to struggle, for early intervention.
- Work is being done to find out if the available data is actionable before trying to use it.
In developing the policy, collection of data will be minimised so that only useful information is collected and used.
- The pilot is funded through an IT budget. If it goes forward it will be done by a business case.
- Staff will be encouraged to intervene with students because there will be evidence to support taking action. For students, the focus is on engaging more fully in learning and being aware of responsibilities.
- The pilot includes making reports available to members of the team to see how they would be used.
- Learning Analytics will be fundamental to engagement strategy.

Policy:

- A draft policy will go through committee structures this autumn, informed by the pilot. It has been created with reference to shared best practice from other institutions. The draft will go to Senate for discussion and then approval probably by next year and this should lead to a full-blown pilot.
- Students are represented in all committee/group structures and would be integral to interaction with new system. Management have the least direct involvement in creating the policy.
- Student involvement also includes; discussion with Student Convenors and consultation/group sessions. Students express less concern about learning analytics than staff.
- A project-based methodology is used. The Project Board oversees work on the pilot and is helping draft the policy. The policy is overseen by Learning & Teaching. It will definitely be shared once ready.

Systems and data:

- It is highly likely an external provider will be used, as is the case for the pilot work. A previous pilot with another company tried to predict for enrolling students, however, it didn't prove to be effective.
- Ideally the system would have to be used by all staff for the benefit of students and for consistency. It will have to be presented very carefully. Getting people on board will be crucial.

- Attendance, VLE, library borrowing/gate access, everything about student behaviour is being investigated to find out what gives useful insights and then only the useful data will be used.
- Some student records data is used but background data is avoided.
- The systems will absolutely become integrated, this will form the basis of learning analytics. There is some integration already but it's not consistent.

Future developments:

- The pilot will be complete by autumn as will the initial policy. This will lead to a business case and by the 2019 session there should be a full-blown pilot which becomes more widespread by 2020.
- The system should be more efficient so time and resources can be targeted in the most needed areas.
- Staff concerns: change, workload, approaching students at a more personal level and use of data.
- Data integrity could be challenging in the short-term; getting all the right data from different systems.
- Mid-term, gaining actionable insights and using them effectively.
- Long-term, seeing Learning Analytics as more than identifying students who are struggling and instead seeing it as way to identify improvements in practice and Learning & Teaching tools and methods.

University of Dundee

Learning analytics status: Currently in development

Implementation details: Currently running a pilot project with Jisc and Turnitin using assignment data. Some postgraduate courses in medicine use Moodle which have a widget to show engagement data through VLE activity. The Registry are also running some dashboards on retention and progression.

VLE: Blackboard. Moodle is used in the Medical School.

Objectives and outcomes:

- Retention and progression are targeted by the dashboard so are of obvious interest as well as exploring how data can be used to enhance student experience, learning and attainment.
- The Turnitin pilot will identify assignment bunching and other aspects of assessment which could be improved and will help to better target support for academic skills development.
- The Jisc datahub is free right now but when it becomes chargeable a business case will be needed for it or any learning analytics system that will be considered.
- Consultations will be run with both staff and students to articulate a clear set of motivations for Learning Analytics.
- It is always necessary to provide training for staff for any new system. If student dashboards are developed it is anticipated that some training will be involved to help them understand the data.

Policy:

- A policy has not been developed yet, this will be the task of the Analytics Governance working group. When it is, it will feed into other policies and there will be links between them.
- Staff, students, academics, teaching admin staff, business transformation staff, information governance staff and potentially researchers will all be involved in drafting the policy and purposes.
- Major stakeholders include the above as well as professional services and management.
- The Analytics working group will include members of the student's association, VP for Academia and maybe other VPs. They will play a key role in wider engagement with the student community.
- There is also the Data, Research & Information Committee (DRIC) which oversees institutional use of data already. The Analytics working group will report to DRIC and this will feed into the Digital Strategy group and the Learning and Teaching Committee for approval.

Systems and data:

- The retention/progression dashboards work by taking data from SITS and pulling it into dynamic spreadsheets which can be accessed by Programme Leads through the VLE.
- Dundee is moving to Blackboard SSAS (SQL Server Analysis Services) in January and the license will give access to more VLE data.

- A new student management system is being developed. How staff will engage with Learning Analytics and how many, will be informed by consultations and the policy and purpose of Learning Analytics being agreed and approved.
- There is also the potential to look at the Turnitin data alongside some of the data on library usage, and so on.
- Systems are currently not integrated but the aim is to develop more integration.

Future developments:

- There isn't a specific roadmap for learning analytics other than the work on the pilot and the governance working group. These will help to identify key areas which will be explored with Learning Analytics.
- There is some concern about whether the Jisc/Turnitin pilot will be used to monitor staff, but other concerns have not been identified yet. They will be through further consultations.
- The main challenge will be resourcing. The idea is that a full plan will come out of the policy development and that will require funding.

University of Edinburgh

Learning analytics status: Some systems in place with more in development

Implementation details: A pilot was run with Civitas Learning focused on retention for distance-learning cohorts, but this pilot will not continue as there were no significant findings. Currently looking at piloting OnTask, which provides analytics-driven personalised feedback for students. A system called the Learning Analytics Report Card (LARC) is used in one distance-based master's course, covering basic activity tracking.

VLE: Blackboard Learn is the biggest. Moodle is used for distance courses and three MOOC providers are also used: EdX, Coursera and FutureLearn.

Objectives and outcomes:

- Retention is not of interest so the use of learning analytics is more tactical.
- Full reasons and objectives are covered in the principles and purposes document, which can be found on the [University of Edinburgh website](#) along with policy and governance documentation.
- The main purposes outlined are: quality; equity; personalised feedback; coping with scale; student experience; skills; and efficiency.
- Each project requires different documentation in regards to business cases. OnTask is part of a larger project to design distance courses at scale so it did not have one, but reasoning behind it can be shared.
- There are two papers published by Jeremy Knox (2017) evaluating the impact of LARC. The benefits observed included an improved understanding among students about how they constitute data subjects.
- Training is incorporated as part of each project when thinking about the creation and roll out of courses.
- Learning Analytics is currently not used for triggering interventions with students, tutors make their own decisions.

Policy:

- The complete policy framework and governance structure is published online as above.
- Policy was developed by Professor Dragan Gasevic, Anne-Marie Scott, Professor Sian Bayne (Assistant Vice Principal Digital Education), Deans of teaching, Information Security, Data Protection Officer, academic services and academic registry.
- There are student representatives on the governance group, there is also a student on the senate Learning and Teaching committee. Students will be involved in the DPIA consultations too.

Systems and data:

- Civitas was an external provider and will not be used moving forward.
- LARC was developed in-house at Edinburgh and is actively in use but only in Master's for Digital Education.
- OnTask is open-source software and implementation is still in planning stages.
- Unlikely anything will be mandatory unless identified as part and parcel of a particular programme.

- LARC is using data from Moodle, OnTask is going to use data from the VLE but it may be augmented with data from a few other teaching tools such as blogging platforms or computational notebooks.
- A variety of tools and measures are used as there is not one blanket solution for everyone.

Future developments:

- There is not a defined roadmap as there is not one problem to solve. There are Digital Education and Learning and Teaching roadmaps so learning analytics can be used as a vehicle to meet those objectives.
- People have questions about what is being done with their data; there is a resistance to surveillance.
- Any concerns about performance management were eased by stating clear Principles and Purposes.
- The field is still new, and vendors are seeing quick money. Be cautious and engage with the research.

Edinburgh Napier University

Learning analytics status: Currently in development

Implementation details: Jisc free learning analytics tools are being developed into a pilot for the next academic year. Still at an early stage with a scoping project reporting to the University Leadership Team that will help define what learning analytics should look like at Napier.

VLE: Moodle.

Objectives and outcomes:

- Key objectives include student retention, engagement, performance and improving learning content but the scoping project will gather more information and help shape the purposes for Learning Analytics.
- A business case cannot be built until it is determined exactly what the Learning Analytics system would be for. If it is for a retention or satisfaction focused system, there would need to be a baseline from which to calculate if any improvement is worth the cost.
- There would be a programme of training and staff development to support effective use of any system. The intention would have two aspects of training. Firstly, the series of steps required to access the data but secondly, how to then interpret that data.

Policy:

- Information has been given to students to explain how the data will be used. VLE data, for example, is collected but it isn't used predictively. More information will be updated as appropriate.
- There would be a strand of a project created to look into guidelines and policy to ensure everything was done properly. There could be a wider group to consult on it, like the Learning and Teaching committee.
- Major stakeholders are the Deans of schools, the student body, academics, administrative staff (especially online courses), information services and unions.
- There is a current dialogue with the Heads of Student Services around the pilot and how it will be used.
- A governance structure isn't explicit yet. It will have to evolve along with the project.

Systems and data:

- The pilot is with an external provider, Jisc, but nothing has been discounted yet. There will be further investigation into what vendors have to offer and what kinds of systems could be made in-house.
- The Jisc pilot will take VLE data and SITS data. There are other things which could be used in future, such as attendance at different types of sessions but this will need more investigation.
- There are small integrations between systems. Strategic Information Technology Systems (SITS) populates data on courses and enrolment into Moodle. This integration is one-directional. There is an element of SITS which receives library data, but this is only so students can see their own library status.

Future developments:

- There is an initiative to have 100 per cent online submission of course work so it is important to figure out how to get assessment data into SITS automatically.
- Academics would benefit from early warning that a student may be struggling, and giving students access to their own data would allow them to benchmark themselves.
- Some academics have felt that they are not sure the pilot will be useful as they don't rely heavily on the VLE and instead have their own pages or systems which wouldn't feed into the pilot.
- Care has been taken to ensure staff understand it's about student engagement not about performance monitoring.
- The hard part is to know how the system will be used and by who, how prescriptive it needs to be and what benefits it will provide. Working out where the system is adding value is the most important thing.

Glasgow Caledonian University (GCU)

Learning analytics status: Currently in development

Implementation details: GCU currently has a tool called GCU-DASH and are also currently involved in a pilot of the Jisc learning analytics tool. Other systems are still in discussion as part of the bigger picture.

VLE: Blackboard

Objectives and outcomes:

- The main driver is learning design, particularly for developing the VLE and learning and teaching tools.
- Staff consultation will happen around data (particularly assessment and feedback) and this will inform further development. This will be a different approach to DASH, which only looks at raw data.
- Training on DASH was provided to programme leaders because it is used at an institutional level. Training for staff and students will be provided if/when new systems are put in place.
- Integrating learning analytics with current engagement policy will be done through the Student Experience Action Plan. The action plan feeds into GCU's wider 2020 Strategy.

Policy:

- There is a draft policy which is at an investigative stage with work to be done on the ethical stance the policy will take. It was developed by the Academic Development Department in consultation with staff and students and was reviewed by the Academic Policy Committee.
- The policy is based on Jisc principles and takes account of GDPR in a contextualised way.
- The major stakeholders are students, staff and management.
- Lots of consultation with students has been done on the current VLE system. A refreshed VLE will include more learning analytics, although decisions still to be made about the exact features to include.
- Academic Services and Information Services are most involved with no working group or committee in place yet. There is a Data Schedule which covers policy aspects and will get approval before proceeding.

Systems and data:

- GCU-DASH provides module monitoring reports as part of quality and governance.
- The Jisc pilot uses VLE and student record data from a cut-down sample. Historic data has been used to create a baseline, although Jisc is designed for live data. Turnitin assessment data will also be used.
- The likelihood is that a customised mix of systems will be used in future.
- It would be expected that all staff would use the system(s) once it's ready.
- Turnitin, the library system and EdShare (which stores teaching materials) are fully integrated, as well as some other third-party services. Students records auto-populate the VLE. Office 365 will soon be integrated as part of a plan for seamless integration.

Future developments:

- There is no learning analytics roadmap as the Student Experience Action Plan will be the main vehicle.
- Learning Analytics will be used to enhance practice through being better informed about data.
- No resistance from stakeholders yet. Most people are genuinely interested, but it is at a very early stage.
- There may be difficult issues to address in future such as staff performance data although learning analytics shouldn't be seen as a management monitoring tool.
- In the short term there are ethical challenges and issues around GDPR where students don't want to share their data.
- Digital capabilities may be an issue, specifically the ability of user to accurately interpret data.
- Cost, resourcing and technical issues may bring challenges too.

University of Glasgow

Learning analytics status: No system in place

Implementation details: A data warehouse has been built and to look for factors which influence academic performance. The data warehouse is currently processing historic data and isn't using active student information.

VLE: Moodle

Objectives and outcomes:

- Drivers are being considered very carefully and the space needs to be understood before going ahead. Undesired outcomes are clear, but what is needed from Learning Analytics has yet to be established.
- There are no major issues with retention and many engagement tools seem to offer a belated effort.
- Prevention is more important and making sure strategies support weaker students properly.
- Ensuring Learning & Teaching is delivering against intended learning outcomes.
- The data warehouse rationale is about allowing strategic thought about what data it is useful to capture.
- New active learning spaces are about a year away from full implementation. Densely packed seating has been removed from lecture theatres and replaced with group work areas and other spaces.
- A previous Learning Analytics system used data from attendance, assignments, library and the VLE to flag at risk students. It found that in cases of personal circumstances students did accept help so going forward the priority is on students with a lack of interest or ability.
- A proactive system is in place which flags people in student records who may come from a disadvantaged background, or who have low level qualifications so extra hidden support can be applied.

Policy:

- The Student Representative Council (SRC) is represented on all university committees and working groups. The SRC should consult with wider student body, but sometimes there are joint events.
- Ultimately everything answers to Senate. The Learning & Teaching Committee set up a working group for ethical use of student data which will look at Learning Analytics and behavioural analytics.

Systems and data:

- The data warehouse holds student performance data, especially exam data. Also student background data, tariff on entry, subject coverage on entry, address - basically data collected by registration process.
- There are some links but for now, assessment data isn't yet linked to other systems. We can see how and when students are interacting with the VLE. There is a big assessment and feedback transformation project in progress as there was little coherence across assessment systems.

Future developments:

- There is a timeline for the assessment project and a timeline for roll out of physical spaces. Within a three-year window these will be concluded, both around the same time.
- Supporting students more effectively in their learning and have better student outcomes, it's about developing the capacity of the learner and having graduates who are strong self-directed learners.
- There will be big benefits for staff in terms of the reward of teaching more engaged cohorts at a deeper level, more efficient use of time and better support for staff as they develop and deliver the curriculum.
- To do learning analytics properly, core systems and underlying structures have to be in place. In the short term, getting systems fully in place is hugely challenging. Underlying issues with core systems and data quality can significantly undermine data analytics. In the long term, deciding where to put the effort and what direction to take. There are methodologies which have not yet been proven, the literature is not totally consistent on the benefits. We feel as it develops behavioural analytics may be more useful.

Glasgow School of Art

Learning analytics status: No system in place or in development

Implementation in future: GSA are interested in learning analytics but also wary of data and privacy implications so treading lightly.

VLE: Canvas.

Objectives and outcomes:

- Student experience and student perception are large priorities at the minute. If it could be demonstrated, for example, that students who visit the library an average of once a week and access the VLE daily tend to respond more positively when surveyed about their satisfaction with their course, which would be of value, but there is some way to go to establish this.
- Because GSA follows a studio based instructional model, student engagement is monitored by their attendance and contact time with their tutors.
- Students are flagged after three reported absences and this is followed up by email and in phone contact from the department administrative staff and tutor. Other contact is made according to the tutor's practice. Student support is alerted when appropriate to offer support.

Policy:

- Learning Resources, Teaching and Learning department, Heads of Programmes and Heads of Schools are involved in creating policies in Learning Enhancement.
- The Student Association and student reps are involved in all institutional decisions and department decisions regarding policy and future planning.
- The Head of Learning Resources, Head of Learning and Teaching and Deputy Director (academic) hold overarching responsibility for cascading Learning enhancement policy to heads of schools and support teams.

Systems and data:

- Attendance and VLE usage data are used at the moment as rudimentary means of monitoring engagement and learning.
- There is very little integration between the systems.
- Canvas was only introduced this year so use of VLE data is sporadic.

Future developments:

- GDPR implications for data collection are foremost in everyone's minds just now, and the need for compliance with regulations. The more data that is collected and aggregated, the more vigilance will be needed regarding data processing and storage.
- As an institution there is a cultural resistance here to relying on quantifiable metrics when making learning and teaching decisions, and learning analytics can seem to fall into this category. Learning analytics are not an institutional priority although as the institution expands its digital provision this may change.
- Integrating systems is the number one challenge followed by resourcing for gathering and interpreting data.

Heriot-Watt University

Learning analytics status: No system in place

Implementation details: Learning analytics may be introduced to support students in future. Also, for flagging to students when their learning behaviour has changed and perhaps offer support if it's needed for issues such as mental health or financial difficulty.

VLE: Blackboard

Objectives and outcomes:

- Student retention, student engagement, informing students of their progress and being able to offer students ways to get back on track or enhance their performance.
- Systems are currently being reviewed and work on learning analytics will step up next year. At present, capacity and other competing work, not resistance, have limited work on learning analytics.
- A business case would provide funding, probably as part of a pot of money for various other projects.
- Engagement issues are handled by systems and human intervention at School level. Students are invited to meet their Personal Tutor for a discussion. They may be referred on other staff or to Student Services.
- There is a centrally managed and supported 'Thinking of leaving?' service, which seeks to intervene in a timely way and offer bespoke support to help the student re-engage.

Policy:

- This falls within the remit of the Deputy Principal (Learning & Teaching). Other key stakeholders include: The Academic Registrar, Head of Information Services, Provosts and Deputy Provosts of Campuses, Heads of School and Directors of Learning and Teaching in each School.
- There is a very diverse student population including two overseas campuses in Dubai and Malaysia. 10,000 students are based in Scotland, 4,000 in Dubai and 2,000 in Malaysia.
With 29,000 students all together, there are also extensive distance learning numbers.
- Students are members of all key academic policy making committees from Senate through the University Committee for Learning and Teaching to the Student Learning Experience Committee.
- Learning Enhancement Policy is the responsibility of a committee of Senate - the University Committee for Learning & Teaching - which is chaired by the Deputy Principal (Learning & Teaching).
- Most policies are publicly available online and once created learning analytics should be included.

Systems and data:

- All the data which is currently collected on attendance, assignments and VLE activity could be used for learning analytics.
- Blackboard speaks to the student records system to some degree although there have been some challenges with this. There is a current Student Administration Revitalisation programme which is looking at all systems.

Future developments:

- The University is currently consulting on a new Strategic Plan. The roadmap will be created as part of this work in academic year 2018-19. Time-frames for the work have not yet been established.
- Clarity on engagement and improving this for both staff and students, more focused attention from students and highlighting gaps in knowledge which need to be filled, identifying where there need to be changes in behaviour and improving ability to support students with all levels of mental health.
- There are particular concerns around privacy, consent and having clearly defined purposes.
- Resourcing and engaging all key stakeholders in a complex global organisation.

University of the Highlands and Islands (UHI)

Learning analytics status: Currently in place

Implementation details: UHI operates a federation model with 13 academic partners including; specialist teaching centres, colleges and research centres. There isn't a standard approach but most of the higher education partners have a traffic light system (BRAG: Blue, Red, Amber, Green) to check engagement through attendance, VLE and assignment submissions. That system is linked to the system of personal academic tutors.

VLE: Blackboard

Objectives and outcomes:

- Engagement, progression and retention. A piece of work to come up with a robust set of engagement indicators for the whole institution is in progress and these will inform a new VLE.
- Some funding was generated to put together the BRAG system. Tenders are due in this week for the new analytics-based VLE. The results of the scoping project determined what the new system should do.
- Soft and informal evaluation has been done on the BRAG system. An internal consultation was undertaken and is the basis for the current situation. Engagement indicators are the main theme.
- The main focus has been looking at early intervention and identifying those at risk as soon as possible.
- Considering the course content to ensure that the material being delivered is appropriate and manageable and that this isn't ever a cause for disengagement.
- Information Services has an ongoing programme of work to refresh staff training for the new VLE.
- Training for students is part of current scoping and future planning, it hasn't been tackled directly yet.
- Any sign of disengagement will flag an alert to the student's personal academic tutor.

Policy:

- There isn't a specific policy at the moment. It will be done as part of the work to define the engagement indicators. An initial draft will be available for consultation within the next academic year.
- Stakeholders include anyone who has a role involved with Learning & Teaching or those systems.
- The Engagement Indicators Working Group will develop the policy and oversee how it is operationalised. Student colleagues were consulted during previous pieces of work on learning analytics and are involved at all levels. There are three strands of institutional objectives related to the Enhancement Theme.

Systems and data:

- The current system was mostly in-house. Data from the VLE, library and SITS is pulled into BRAG.
- There is a different breadth of use across the institution. It's not mandatory but it has good levels of use. More work that could be done to improve staff understanding of how the system could be used.

- There isn't a complete integration of all systems, a short-life working group are looking at this and how data is stored and used. SITS is integrated with the VLE and also connected with the BRAG system.

Future developments:

- There will be a roadmap with key milestones in terms of development of the new VLE.
- There will be a formal evaluation of analytics capability through the new VLE probably around a year after implementation.
- Three key priorities: early intervention (including social inclusion and well-being), identifying patterns of engagement to improve support and teaching materials and supporting personal academic tutors.
- Challenges: getting a clear shared view of learning analytics, operationalising that shared understanding and ensuring appropriate and sensible use of the system.
- It's important to remember analytics needs to be part of a solution, not the whole solution. It has to inform a more qualitative overview rather than just looking at data alone.

Queen Margaret University (QMU)

Learning analytics status: Currently in development

Implementation details: The University have developed a dashboard in-house that makes available to students their own data about attendance in their student portal. A staff dashboard is also in development.

VLE: Blackboard.

Objectives and outcomes:

- Key drivers are based mostly around student retention due to having a lot of students from different backgrounds and QMU are interested to see what works for each person.
- A business case is not on the agenda due to lack of funding and developing in-house instead.
- Broader scoping has been done to find out what data staff would like to have about students in order to better support them through the 'Five Things' project.
- No explicit training was necessary as implementation has been gradual and people have taken to it well.

Policy:

- The University has GDPR and ethical use of data practices in place in a more general sense. There may need to be something more explicit for Learning Analytics in the future so that students know what is being done with their data and so that they can have the option to opt in/out.
- Main stakeholders are management at the moment, mostly because of NSS drivers - specifically assessment feedback. The Students' Union were heavily involved in that side of things.
- Information Services are quite instrumental in developing the systems, and there is a student experience committee that have kept an eye out on where they are going with it.
- Students are currently not involved in the learning analytics process, but they will be in future.
- The Governance and Quality Enhancement Unit currently look after things in this area as there is no specific learning analytics governance structure in place yet.

Systems and data:

- QMU make use of ERA (electronic recording of attendance) through smart card readers on all classroom doors. Through this, attendance monitoring is being used as a proxy measure for student engagement.
- Students can see their top level attended/not attended figure in the dashboard. The figure is also broken down into each module they are enrolled on as well as a comparison to the class average.
- Access, inclusion and retention data is being used in the development of the Learning Analytics system.
- There is a hope that there will be a Learning Analytics tool that is systemic and systematic that will be used by everyone, however, this doesn't always reflect reality.

- There is quite a lot of integration with the VLE, library records and student records, however, the in-house dashboard is not integrated with the VLE at all as it is a separate system.

Future developments:

- QMU currently have an IT roadmap which is for the development of institutional systems but doesn't currently involve learning analytics.
- Students should have a better grasp of their own progress and have more information so that they can use learning analytics data to improve their learning. Staff also need to learn how to interpret the data to help students.
- There has been quite a bit of resistance to attendance monitoring and concerns over what the data is going to be used for.
- Challenges are in identifying who has ownership of the data. IT people are also great at producing systems, but they may not know how to use them pedagogically or how to use them for student support.

Robert Gordon University (RGU)

Learning analytics status: No system in place or in development

Implementation in future: At exploratory stage with a number of current work strands that could set RGU up in a place to introduce a system. There are planned upgrades to the VLE which will have more analytics capability built in. Also looking at different aspects of Learning and Teaching to increase the baseline understanding of engagement factors and how they might feed into a learning analytics system. RGU will roll out a new reporting tool and a new Learning and Teaching strategy through the SITS continuous improvement programme.

VLE: Moodle

Objectives and outcomes:

- RGU has a new strategy and elements of that are related to research in learning and teaching. Learning Analytics could drive and help staff to explore how students are engaging with their learning.
- There is no specific retention issue, but there are pockets of students that are known to have higher attrition rates. Learning Analytics might help explore why and how they could be better supported.
- Learning Analytics may help more effectively identify areas of good performance and aspects for development when indicators are looked at collectively. This could range from applications and enrolments to achievements, courses, outputs, graduate employment and student satisfaction.
- Certain groups of students have been identified as more likely to withdraw based on crude measures (assignments, attendance and so on).
- There are a number of support departments offering different services, from study skills to counselling, and academic personal tutors.

Policy:

- There is a management structure and a committee structure both driving learning enhancement. Deputy Principal for Learning and Teaching and the Department for Enhancement of Learning, Teaching and Access (Delta) have significant roles to play in the development of Learning Analytics.
- Director of Delta and Deputy Principal are the key responsible people.
- The Student Union would be involved in any work leading up to learning analytics solutions.

Systems and data:

- The kinds of data collected are core performance indicator measures which are considered annually. Main engagement factors are student feedback mechanisms and student evaluations at the moment.
- Integration is part of the development process. The student records system (SITS) is integrated with aspects of Moodle and the reporting system (will be moving to Tableau) which will be known in the University as 'RGU Insight'. Looking to join new datasets together like library data and attendance monitoring depending on what is possible. Initial work is about integrating SITS data with the rest.

Future developments:

- Do not have a roadmap yet, in the initial phase of working out what would be best for the institution.

- Hopefully Learning Analytics will provide staff with a greater understanding of how students are interacting whether that is with course material, within a cohort, or in different aspects of the course. For students, it might provide them with a picture of how they are performing at a point in time.
- Challenge is to work out the scope and key objectives for Learning Analytics, really maximising the data that goes into it to maximise the output from it.
- Concerns include wider discussions across the sector about mental health, well-being and resilience. Comparing students to their peers may cause undue stress.

Royal Conservatoire of Scotland (RCS)

Learning analytics status: No system in place or in development

Implementation details: Information on retention, admissions and attainment is collated and presented in an annual report alongside institutional performance indicators. The work is manually extracted by a Data Analyst rather than automatically by a system. Introduction of a statistical analyst has enabled a greater insight into using data for the student experience.

VLE: Moodle

Objectives and outcomes:

- There is a feeling that in the context of RCS it would be difficult to incorporate learning analytics. Use of spaces could be a useful metric for evaluating how students access performance spaces.
- Retention would be the key driver. Retention rates are generally high but there are particular areas where improvements could be made. Engagement and learning content probably wouldn't be drivers because of the intensive nature of student support provided by staff.
- Information Services would manage funding using a business case. No source has been identified as yet.
- Use of data is still very new, a data analyst role was introduced in the last three years at RCS. Staff who generally work in a one-to-one setting with students will need to evolve new behaviours to work with data.
- Absence monitoring, inter-departmental communication and student contracts which contain information about their performance.
- Interventions are human-based. If a problem is identified an initial meeting will be set with the student.

Policy:

- The Head of Information Services and the Head of Research, who also chairs the Ethics Committee. The committee meets quarterly, although this is mainly for discussing research ethics. There has been general discussion around the use of student data. Also, any policies which are drawn up are passed through the Academic Board.
- The student union are involved and year group class representatives, they attend meetings including programme meetings, where data findings are presented.
- The Head of Information Services overlooks the library, VLE and learning platforms. The Heads of Learning and Teaching and Research would also be involved. The heads of department are then responsible to the Assistant Principal.
- There are no particular policies on this at present but if any are developed they could be shared.

Systems and data:

- Most systems are not currently integrated, there is a platform called Portal which can be used to access Moodle but ASIMUT (an event management and timetabling booking system) as well as student records are all separate.

Future developments:

- Staff who work with data would like to see something done with learning analytics in future, but this will be dependent on effectiveness in the context of RCS and levels of up-take.
- Learning analytics could help to identify areas of interest quickly and could offer a broad view to complement the existing view of individuals afforded by the nature of one-to-one and small group teaching.
- Many teaching staff feel that learning analytics can't offer them any additional insight beyond the already deep knowledge they have of their students.
- Student and staff engagement with information, developing an appropriate ethics policy and identifying what information is available that can be used effectively.

Scotland's Rural College (SRUC)

Learning analytics status: Currently in development

Implementation details: There are plans to introduce a new student portal. Attendance is used as a measure of engagement, and VLE activity is also monitored by individual staff but this is not an institutional policy.

VLE: Moodle.

Objectives and outcomes:

- Key drivers are student retention, engagement, performance and improving learning content, and an additional primary objective is resource management.
- A business case is in development for a student portal and a brief has been outlined.
- SRUC would prefer to use Learning Analytics to draw conclusions across cohorts rather than for individuals.
- There will ideally be a strong Student Services presence on the new portal so that student needs can be properly met whenever they need help or advice, for example, with finance or mental health.
- Consideration has been given to the use of chatbots to provide both quantitative and qualitative feedback from student interactions.
- Staff have not been keen to use central data and have preferred to use their own. A timely and meaningful central data source would be necessary, which staff can learn to access and use all year.

Policy:

- Discussions took place at the last Academic Board meeting, but a formal policy isn't yet in development.
- Major stakeholders are student representatives, the wider student body, the Executive Leadership, Learning & Teaching and Information Services teams. All but the Executive Leadership team will be involved in developing a policy as they will be the ones to oversee it.
- Students will be key partners, supported by Learning Engagement officers and Sabbatical Officers.
- The Transformation Project Team has oversight and management responsibility for Capital projects. Learning analytics would be treated as a project or series of projects. The team oversee all projects and each project has a sponsor and monthly meetings are held.

Systems and data:

- It is hoped everyone would use learning analytics, because the intention is that it will provide useful data for staff. It would be preferable to avoid referring to it as mandatory.
- The data collected will be; portal engagement, attendance, VLE engagement and student support engagement. Data on assignment and submissions could also be used.
- There is moderate integration but it's a work in progress. Student records feed into Moodle, but this is one directional. The aim is to move towards more integration.

Future developments:

- No roadmap is in place but creating one will be part of the development process. This will reflect around a three-year plan. Getting approval for the portal should kick start the process and be central to the project.
- The hope is that Learning Analytics will help staff reflect on Learning & Teaching. It should enable them to identify strengths and weaknesses and give them evidence to be able to tackle issues.
- There are typical concerns such as the meaningfulness of the data and how it can be understood and used effectively. There may also be concern over monitoring being applied to staff.
- Feedback from students at other institutions has indicated a negative response to analytics which allow students to compare themselves to the rest of the cohort.
- Time is the biggest challenge as Learning Analytics is not currently identified as a single person's responsibility. Also, gaining engagement from staff and students and getting training in place.

University of Stirling

Learning analytics status: Currently in development

Implementation details: There are two projects being piloted; one to trial the Jisc learning analytics platform and another to scope out the functionality and usage of Tableau to visualise data from Canvas.

VLE: Canvas.

Objectives and outcomes:

- Retention would be the main focus but further staff and student consultation will be needed to provide more direction. This will be done at the start of next academic year 2018-19.
- A business case is planned for February 2019 to secure funding for a learning analytics system.
- Assessment in year 1 would be the main focus and it is hoped that learning analytics could help model for disengagement behaviours and help improve retention, but it should be a service which supports improvements for everyone, including high-performers.
- Ideally students would be able to choose what aspects of Learning Analytics they want to see and be able to customise how much of the data they want to see.
- Training would be provided not only on using the software but interpreting the data.

Policy:

- There are existing GDPR policies but nothing specific for learning analytics. The plan is to have the students write the Learning Analytics ethical policy as it is specific to the use of data about them.
- Would like to encourage a nationwide approach - a Scottish ethical policy written by Scottish students.
- Major stakeholders are students collectively (but this may be further segmented), individual lecturers, groups of lecturers within faculties, faculty management and university senior management.
- There is a Learning Analytics Steering Group, chaired by Richard Aird, Head of Customer Service (IS). The group is made up of the following: academic registrar, Students Union, infrastructure specialists, research fellows, lecturers, academic development, Head of Student Support. This group feeds into the Digital Learning Project Board, with a similar type of membership structure.

Systems and data:

- If the Jisc pilot goes well it may be implemented fully or it could give a better idea of what to look for.
- The Tableau trial will potentially give an interface to data people might find interesting, currently exploring visualising engagement data.
- VLE and SITS data is being used for the Jisc pilot. The Tableau pilot focuses only on VLE data at the minute. In future, a reliable predictive model would need library and physical data as well.
- None of the systems are currently integrated.

Future developments:

- The roadmap was drafted through Information Services and was approved by the Learning Analytics Steering Group. It should be achieved by academic year 2019-20.
- Initial feedback suggests that some students feel the tools can be stressful and some do not like being compared to their peers. It brings a level of competition and pressure to perform.
- Short term challenges are establishing what is needed and whether it is achievable. Finding out whether customisation for students is possible. Building models with accurate prediction. Looking at the market for suitable products and securing the necessary investment.
- Longer term challenges will be creating the system, getting staff and students to use it and using the right data to draw useful results, and for constructive interventions to be enabled as a consequence.

University of St Andrews

Learning analytics status: Not currently in place or in development

Implementation in future: In a piecemeal fashion, St Andrews have some traditional means of monitoring attendance and assignment submissions. There is a wider review of technology and enhanced learning at the institution and there is a learning analytics work stream, however, it is not driven by introducing something. Trying to have an evidence-based approach, first establishing what questions need to be asked and what data there is and whether it can be used these to solve those problems.

VLE: Moodle and a bespoke system that work in parallel with each other.

Objectives and outcomes:

- In a lucky position in that there aren't any big issues with retention, so the key drivers are two-fold: improving student well-being and improving pedagogy.
- Still very much in a scoping stage. Whether there would be an application for internal or external funding, a business case would need to be provided but there is not one as yet.
- Currently engagement is being monitored by watching for things like missed submissions, attendance, grades. This data can be gathered electronically and in conjunction with tutors knowing their students.
- Human intervention is used, and tutors make decisions about contacting students.

Policy:

- The major stakeholders in the development of policies would be the group of representatives in the work stream. The membership ranges from student representation through to technology and enhanced Learning, representatives for the Vice Principal of Learning and Teaching, library staff, registry staff and IT Services staff.
- The governance structure is a broadly similar group to that one described above but including more academic representation. They answer to the Vice President Education (Learning and Teaching).

Systems and data:

- Current measures of engagement are attendance, assignment submissions, grades, and in some cases activity within the VLE but that is not particularly widespread as measuring engagement as a whole.
- VLEs are integrated with student records, but they are not integrated with Library records (although they are integrated with the library for reading lists, for example), Moodle is integrated with the lecture capture system, but not specifically used to monitor engagements.

Future developments:

- The early stage roadmap would be to engage in this research [the QAA internship] and then focus on figuring out the questions to answer or problems to solve with learning analytics, at the same time looking at what data is available and what is the best way of putting this together.

- Ideally, this would be done for the start of the following academic year (2019). This type of work shouldn't be rushed into, but it should take less than three years to have something up and running.
- There is concern over the impact on student well-being depending on how analytics are being presented to them and whether or not they can opt in or out of what is being shown to them.
- There are also concerns about increased workload for staff and staff training.
- The challenge will be selling learning analytics from an enhancement perspective and giving academics tools to help them improve their teaching. It has to be clear that the University is **not** looking at monitoring staff based on their engagement with a learning analytics system.
- Academic engagement is a challenge. Funding may or may not be an issue depending on chosen approach, if a light-touch use of existing systems is chosen then funding will not be an issue.

University of Strathclyde

Learning analytics status: There is a system in place

Implementation details: Engagement Report has just been launched and is generating an activity completion report through Moodle allowing data (live included) to be sorted and filtered. There is also first phase development on an Assessment & Feedback Workload Planning tool.

VLE: Moodle

Objectives and outcomes:

- Improving student experience and ensuring students are supported, engaged and on track.
- The Engagement Report was produced 'business-as-usual' by the development team.
- Current implementation will be evaluated in semester one of 2018-19 academic year.
- A programme of staff development training will support effective use of the new assessment and engagement tool. It will be available in the Emerging Technologies section of online learning training.
- Learning Analytics is currently targeting fully online courses and graduate apprenticeships which are predominantly online. The only available data on this is interaction with the VLE.
- A semi-automated e-mail system where rules are used to send tailored messages to students is expected to be piloted in the 2018-19 academic year.

Policy:

- The data being used is already collected by the VLE and no specific other data is collected. The data is not specifically processed or measured against metrics.
- The major stakeholders are the Strategy and Policy Team, Assessment & Feedback Champion, Faculty Digital Education Champions, Deputy Director of Library & Information Services, student elected reps, Staff Development Unit, Learning Enhancement Team and Senior Management.
- The governance structure involves the steering group on the pilot project, which included the Staff Development Team and student execs. This went on to form a Learning Analytics Board where deputy directors were invited too. The steering group funnels into the Learning Enhancement Committee and ultimately reports to the Education Strategy Committee.
- All policies will be shared publicly, as transparency is key.

Systems and data:

- One aim is to provide a feedback portfolio for students which can also feedforward to other assignments. It will also be used to monitor student workload and ensure students aren't overloaded.
- The system in place was developed in-house, as external options were focused too heavily on retention.
- There is an external facing project blog to share progress, with the aim of disseminating information through the sector. Sharing practice is a key objective.
- The current focus is dealing with online courses, those groups were identified in the engagement report. Also, some staff who are very competent with online systems have been accessing the data a trial way.

Future developments:

- A business case will be used to recruit for building a data mart, analysing to look for relationships in the data and developing a front-end dashboard.
- Learning Analytics will be incorporated into all other major institutional strategies and existing projects.
- The short-term challenges are trying to get things done through committees. The mid to long-term challenge is funding.
- Senior management buy-in is essential or the whole process won't move forward.

Open University (OUiS)

Learning analytics status: Currently in development/planning

Implementation details: OU Scotland have a data team and there is work in place for next year on construction of a dashboard where student engagement can be monitored.

VLE: Moodle.

Objectives and outcomes:

- OU Scotland is very much concerned with improving student success, retention, employability, engagement and improving learning content.
- For next year OU are deciding on whether Scotland should have a separate dashboard in which case an internal business case will need to be made, however, it is too early to tell.
- It would be useful to be able to monitor the performance and engagement of students from different backgrounds, specifically those from SIMD20 post codes.
- OU Scotland would use the University's existing information and training material to do training for staff.

Policy:

- Policy, ethics and GDPR are handled by the OU in general, they have an existing ethics code and analytics council. OU Scotland would use guidance from it and integrate it into the appropriate context. The OU documents can be on the [OU website](#).
- The system would mainly be used for policy and senior staff and extended senior management groups, but faculty staff would be encouraged to use it as well.
- The dashboard would not be designed to perhaps help staff figure out interventions, but for OUiS to figure out if there is an issue with a specific course.
- Engaging students is difficult because of the nature of teaching but there are student representatives like most other universities.
- In Scotland, the data and planning team are responsible for strategic input into decisions.
In the wider context the Strategy and Information Officer is responsible for the data.

Systems and data:

- If a dashboard is built it is likely it will be developed in-house, but it is not certain.
- Hopefully insight into performance across different metrics could be achieved; things like numbers of students registering, numbers of students completing their first assignments, assignment scores, submission rates, the number of students with a good pass, number of students progressing to level 2 or from level 1 to 2 to 3 for example, perhaps employability data, demographic data.
- Systems are not fully integrated. Ideally, information from existing systems could be pulled together into a dashboard.

Future developments:

- No current roadmap is known for OUiS specifically.
- A benefit learning analytics could bring is having a firmer understanding of how evidence can be used to change things. The work should be facilitative, not directive.

- No concerns have been picked up yet but more will come up in conversations around the dashboard.
 - Identify that there is a need to be careful and make sure that proxy measures of engagement are clear, transparent and robust so that people understand them.
 - If OUiS can get a dashboard and get people using it, it would be a good mid-term objective.
- A long term goal or challenge is to try and push those metrics and that data into the rest of OU to get them to understand the Scottish context.

University of the West of Scotland

Learning analytics status: A system is currently in place

Implementation details: A learning analytics tool was implemented three years ago, using an external package from SolutionPath.

VLE: Moodle.

Objectives and outcomes:

- The original project was for retention and that's still a main objective.
- The system was used to encourage use of the library. This has been found in research to be the most determining factor to academic success. It uses behavioural analytics not predictive.
- There wasn't any training when the system was first implemented. A handbook is being produced for staff to allow them to customise their view of the dashboard and use tailored alerts.
- Students can see the dashboard and allows them to see how they compare to their cohort for assessment as well as engagement.
- Currently looking into chatbots which can be deployed for students who flag up as not engaging with the VLE or other systems.

Policy:

- GDPR policy acceptance is done on enrolment. The policy was written when the tool was first created but mostly relies on a set of principles that reflect the way data will be used and for what purpose.
- A mix of student representatives, academic staff and support staff were involved in writing the policy.
- The major stakeholder groups are students, staff and management.
- Students are represented on committees and in the last year there have been more focus groups.
- Over the years there was a low uptake from students and staff and it was initially quite unsuccessful. Over the last year there has been a robust communication plan developed which will go out to all new students and a lot of work has been done to increase uptake and change views about the system.

Systems and data:

- SolutionPath is external. The chatbot would be a separate company although both companies are working together so that an API is included to allow the new technology to be plugged in.
- Not a lot of staff engagement, only about 10 per cent. Students are likely to click onto the system but don't continue to log in, so this is being worked on, perhaps through a single sign on.
- The data is not collected and stored, it is taken as a snapshot. Attendance is a poor indicator of academic success, so the system looks more at library data, such as access of journals and printing logs. The data never goes off-site.
- The systems are not integrated beyond minor links for operational purposes. SolutionPath pulls all the data together.

Future developments:

- There is not a robust roadmap at present. There are targets for this year and UWS are working towards them one step at a time. More robust data is needed before going into a formal plan.
- Achieving meaningful dialogue between staff and students based on evidence to enhance student learning behaviour.
- Most resistance is from staff feeling overworked and not being sure how to use the data effectively. Students generally have less concerns.
- Challenges include engagement in the short term and making meaningful conclusions, so these can be shared to help other institutions in the longer term.

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