



GMIT Academic Council

Policy document

“Learning Analytics for Student Success”

Version 1.0

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and approved by Governing Body on 29th August 2019**

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Office of the Registrar

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Version Number/Revision Number	Consultation Date	Names of Parties in Consultation	Summary of Changes
1.0	Jan-Apr 2019	Using Data for Enhancing Student Success Working Group	First draft of policy

Approval

This document requires the following approvals:

Name	Title	Date
Academic Council		3 rd June 2019
Governing Body		29 th August 2019

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Introduction

The overarching goal of GMIT is to provide students with the best possible education. In its strategic plan 2019 – 2023, the Institute has committed to developing a culture of collaboration and innovation in learning and teaching. In this data-driven world, it should be possible to use data to the student's advantage. GMIT is committed to using data to enhance student success in an open and transparent manner to make this a reality.

The digital footprint that students leave as they engage with online services such as Moodle can be an invaluable source of information for institutions as they aim to increase retention, progression and completion rates, protect students' welfare and enhance their depth of learning. Even more importantly, from a student perspective, Learning Analytics has the potential to provide students with constructive and timely feedback on how they are performing and provide them with the information they need to take appropriate action.

This policy is building on the foundational work of the National Forum for the Enhancement of Teaching and Learning in Higher Education through the Data-Enabled Student Success Initiative (DESSI) project¹. The initiative was led by the National Forum in partnership with the HEA, QQI, ISSE, IUA, THEA, HECA, HEANet and EduCampus. The DESSI project developed a set of guidelines and resources to assist institutes in developing Learning Analytics policies and strategies.

Learning analytics can support a variety of functions across the institute, both at a micro and macro level. It can also enable a more equitable service both in terms of being inclusive of all students and providing a more detailed insight into the requirements of a diverse student population. Students will at all times be fully aware of what data is being collected about them and how this is being used and to what end. Exposure to learning analytics as part of their learning experience can help our students become 'digital natives' and prompt more critical reflection on how data about them is being used more generally.

Purpose

The strategic aim of the policy for Learning Analytics is to support the learning experience of the student as the primary stakeholder, and to provide relevant and up to date analysis to all stakeholders to facilitate informed decision making throughout the Institute to support positive outcomes for all students.

The **Learning analytics policy** defines appropriate use of student data for enhancing student success. It recognises that there are potential privacy issues arising from combining sources of student data and modelling that data. Therefore, this policy aims to ensure that data collection and modelling is in compliance with GDPR, is transparent, has clearly defined boundaries for data collection and analysis, and that it is clear to all parties that it is for the

¹ National Forum for the Enhancement of Teaching and Learning in Higher Education – Data Enabled Student Success <https://www.teachingandlearning.ie/resource-hub/student-success/data-enabled-student-success/>

benefit of the student to improve the learning experience. The policy defines a set of guiding principles to inform the ethical use of learning analytics at the Institute.

The Learning Analytics policy has the following policy objectives:

1. To provide feedback to students on their learning interactions and progress that empowers students to improve their likelihood of success.
2. To provide data analytics tools to staff members relating to student activity and progress, which would enable and inform appropriate intervention strategies. For example, provide a dashboard with suitable data visualisations to provide students with feedback on their performance. This should enable better staff-to-student feedback and improved decision-making.
3. To enable the institute to enhance the quality of the supports it provides for students.

The Learning analytics policy is to be reviewed annually and updated to reflect lessons learned from initial pilot studies.

All individuals processing personal data are expected to do so in compliance with data protection legislation and in particular with GMIT's Data Protection Policies and Procedures.²

Definitions

Learning Analytics: Learning Analytics is “the measurement, collection, analysis and reporting of data about learners and their contexts, for purposes of understanding and optimising learning and the environments in which it occurs” (Siemens & Long, 2011, p.34³).

Descriptive Analytics: Descriptive Analytics provides information on what has happened or what is happening. This is essential for an informed, evidence-based understanding of the current situation.

Predictive Analytics: Predictive Analytics uses modelled historical data to predict likely outcomes of current or future situations. If, for example, an institution wished to employ predictive analytics to identify students that are likely to withdraw from their Programme in their first year, they would begin by looking at previous students that had withdrawn early and those that had continued in their studies, to try to identify patterns of behaviour that correlate with one outcome or the other. Having tested the ensuing model on another set of historic data, they would then look at the data patterns of current students to identify those whose data-evidenced behaviour most closely matches the patterns of the historic students that went on to withdraw.

² GMIT Data Protection Policy is available at: <https://galwaymayoinstitute.sharepoint.com/sites/data-protection/SitePages/Home.aspx>

³ Siemens, G., & Long, P. (2011). 1st International Conference on Learning Analytics and Knowledge, Banff, Alberta, February 27–March 1, 2011.

Prescriptive Analytics: Prescriptive Analytics also uses modelled historic data, but the aim here is to identify courses of action that are likely to have a successful outcome, or ‘What should we do?’ questions. Prescriptive analytics would be used to answer a question such as ‘What type of intervention is most likely to have a positive, preventative impact on students that are likely to withdraw?’ In this scenario, institutions would need some historic data on the types and timings of interventions that had been employed in the past and whether they had the desired result. This data could be used to identify interventions for current or future students that are most likely to succeed.

Learning Analytics Guiding Principles

The following guiding principles will ensure that learning analytics projects and implementation processes are aligned with the institute strategies, policies and values. The practices and procedures relating to Learning Analytics should be respectful of students and staff as partners in learning; and should be cognisant of the principles of academic freedom and student engagement.

Primary focus is on benefit to learning

1. The primary purpose of Learning Analytics is to benefit the student learning experience. It is the responsibility of the Institute to ensure that its capabilities and outputs are not used in any way that conflicts with this primary purpose.

Openness & Transparency

2. Transparency is a requirement of Data Protection legislation; all data subjects (in this case students) must be fully informed of the purpose of analytics, what data will be used, how it will be used and to what end.
3. The Institute will ensure that the learning analytics policy is well publicised and accessible to all stakeholders.

Data Protection and Governance

4. All new learning analytics initiatives will comply with the principles of the GDPR, ensuring data collection and processing comply with general data protection regulations and GMIT’s data protection policies and procedures. Where consent is required, this will be clearly explained.

Duty of care to students

5. It is essential that Learning Analytics is underpinned by a rigorous, scientific approach to modelling and intervention. The institute will ensure that the limitations and potential biases in the data are understood, and the impacts of bias in the data are minimised.
6. Learning analytics strategies will aim to provide a uniform experience for all students. While some outcomes may be more targeted at particular programmes and categories of students, it will be ensured that information derived from student data will be used for the benefit of all students
7. Where results of a Learning Analytics model identify students that may benefit from secondary course intervention measures, the action arising from that model will be sensitive to the student needs and acted on in a responsible manner. Analysis of data will never result in a significant action without human intervention.

Duty of care to staff

8. Learning analytics will not be used to monitor or evaluate staff performance.

Responsibilities

Analytics presented to students are intended to help them understand how their learning is progressing, and suggestions may be made as to how they can improve their practices. Students are responsible for assessing how they can best apply any such suggestions to their learning.

The institute recognises that learning analytics cannot present a complete picture of a student's learning, and that the associated predictions may not always be accurate. Students will retain autonomy in decision making relating to their learning; the analytics are provided to help inform their own decisions about how and what to learn.

Where a learning analytics model indicates that a student may benefit from an intervention, the Institute will endeavour to follow up while recognising that this may not be possible in all cases.

Data Security & Confidentiality

Data and analytics on an individual student will be provided only to:

- The relevant student.
- Institute staff members who require the data to support students in their line of duty and in a professional capacity.
- Institute staff members who require the data to meet regulations or statutory obligations.
- Third parties processing learning analytics data on behalf of the Institute and comply with GMIT Data Protection policies and procedures.
- Other individuals or organisations to whom the student gives specific consent.
- Institute IT staff will have access to systems and data in order to maintain proper functioning of systems rather than to access any individual's data.

Learning Analytics Data Sources

All the Institute's information systems should be considered as potential analytics source systems with the exception of the special categories of personal data as outlined in GDPR legislation. Learning analytics initiatives may consider data from a number of sources including (but not limited to) the following:

- Banner: Student records.
- Moodle: Student activity records, contributions to forums, individual assessment grades, Moodle analytics.
- IT Systems: Office365, Timetables, exam scheduling.
- Library:

- Irish Survey of Student Engagement (ISSE): student feedback.
- Other surveys as appropriate.

Acknowledgements

This learning analytics policy and strategy document has been informed by the following:

- The working group of GMIT Academic Council on Data Enabled Student Success (see Appendix I)
- Engagement with, and support and advice from Lee O’Farrell, DESSI National Coordinator, National Forum for the Enhancement of Teaching and Learning
- Learning Analytics Principles and Practice from The National Forum for Teaching & Learning⁴ and TU Dublin
- The Sheila Project⁵

⁴ National Forum for Teaching and Learning <https://www.teachingandlearning.ie/>

⁵ SHEILA Project Framework <http://sheilaproject.eu/sheila-framework/>

Appendix I

Working group of GMIT Academic Council on Data Enabled Student Success

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Margaret Waldron	Library
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