

## Developing Learning Analytics Principles

### 1. Introduction

The purpose of this resource is to encourage institutions to take the time to determine the principles that will drive every aspect of their analytics strategy. Doing this will provide a foundation upon which an ethical, effective practice that is in-line with the values and ethos of the institution can be built.

Below are six sample principles that institutions may wish to consider. These are the principles upon which the approach proposed by ORLA is founded. Clicking on each of the principles below will show an expanded explanation of their importance as well as practical steps that institutions can take to ensure that they inform their analytics approach.

### 2. Prioritise Trustworthiness

Trustworthiness is a key component of the relationship between students, staff and institutions. No party should engage in actions, practices or research relating to Learning Analytics which could harm or jeopardise that trust.

Since the function of analytics is to support student success, institutions should have nothing to hide. Full disclosure is a primary means of dispelling student and staff concerns about ulterior motives.

A useful rule of thumb may be to ask 'Would students be surprised that we are using their data in this way?'

#### Actions

- Develop analytics strategy from the beginning in collaboration with student representatives
- Set up your analytics to enable students to freely opt in/out of analytics-led interventions at any time
- Establish and publicise a means by which students can complain about the use of their data

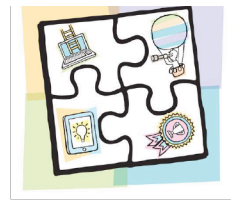
### 3. Focus on benefitting learning

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

Learning Analytics gives users access to a wide range of potentially personal data that would not be available otherwise. Institutions are responsible for ensuring that all staff with access to this data are fully trained in the limitations of its appropriate use.

#### Actions

- Identify a party in the institution with responsibility for overseeing the use of analytics tools to ensure that all usage is compliant with Data Protection legislation and institutional policies and guidelines



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- Ensure that analytics data is only available to those staff with an explicit responsibility for acting upon it
- Develop guidelines on the appropriate use of analytics data and Ensure that all relevant staff are fully trained/informed

#### 4. Maintain Transparency and Clarity

Institutions should be clear and transparent how and to what end they use Learning Analytics. It is the responsibility of the institution to ensure that all stakeholders, including students and staff, are kept fully informed and involved.

Transparency is not only a key element in maintaining a trusting relationship between students, staff and the institution, it is also a legal requirement of Data Protection legislation.

Students should be fully informed of all aspects of analytics including:

- What data is collected
- What data will be used to inform analytics interventions
- How the data is modelled (eg what are the components, weightings and the mechanics of any algorithm (eg that identifies at-risk students) that makes up a part of the institution's analytics)
- To what end(s) analytics is being used
- The principles and policy behind the analytics strategy
- How to opt out of analytics-led interventions

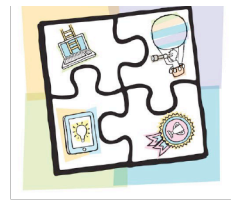
#### Actions

- Undertake a collaborative process involving all stakeholders as a first step in establishing institutions analytics strategy. Identify the questions they want to be able to answer, how they will engage with the data and all considerations regarding acting upon the information
- Publicly publish all information relating to the institution's analytics strategy and approach
- Be seen to make concerted efforts to draw students' attention to this information

#### 5. Bear Learning Partnership in Mind

Institutional policies, practices and procedures relating to Learning Analytics should be respectful of students and staff as partners in learning. They should be cognisant of the principles of academic freedom, student engagement, enabling autonomous learning and mutual responsibility.

For Learning Analytics to succeed at the highest level of enhancing learning, it is essential that institutional analytics strategies are developed with the understanding that students are active partners in the learning process, rather than passive subjects. As active partners, institutions are encouraged to adopt an approach to interventions that aims to engage students to reflect and inspires them to act.



### Actions

- Every aspect of the institutional strategy should be developed in conjunction with representatives of both students and staff
- Institutions are advised to use analytics interventions as an opportunity to challenge, engage and inspire students
- Student feedback on their experience of the analytics approach should be sought at regular intervals. Once sought, it should be acted upon where possible or appropriate

## 6. Adopt a Scientific Approach

It is essential that Learning Analytics is underpinned by a rigorous, scientific approach to modelling and intervention and is free from bias.

Models that are developed without such an approach will not only be incorrect but may trigger unnecessary interventions that waste resources and may have a counterproductive impact on students.

### Actions

- Ensure that all modelling is undertaken by an appropriately qualified professional
- Take steps to ensure randomisation of sample data and use anonymisation and pseudonymisation minimise potential for bias

## 7. Respect the Data

It is the responsibility of the institution to ensure that all data which is gathered or processed for Learning Analytics is accurate and is collected, analysed and stored in a secure manner which is consistent with best practice and compliant with data protection legislation.

See ORLA resources on Data Protection for further details.

### Actions

- Invite a member of institutional data protection office to assist with development of institutional strategy
- Design your analytics approach to be fully compliant with Data Protection legislation (Data Protection Acts 1988 & 2003 and GDPR)
- Ensure that your approach is also consistent with your institutional policies on data