LEARNING ANALYTICS POLICY AND PROCEDURE

CONTENTS

1 PURPOSE

1.1 This policy and procedure establishes a governing framework to promote accountability, transparency and student trust in CQUniversity's use of learning analytics.

2 SCOPE

2.1 This policy and procedure applies to:

- CQUniversity employees involved in learning analytics activities, and
- learning analytics activities, including operational and scholarship activities, such as systems design and the development, implementation and application of learning analytics in educational practice, quality assurance, learning support and services, and research.

2.2 Learning analytics and associated data used in research and publication must be undertaken in line with national research standards and CQUniversity research policy documents, including the:

- Code of Conduct for Research
- Research Involving Human and/or Animals for Ethical Clearance Policy and Procedure

3 POLICY STATEMENT

3.1 Students provide feedback on their learning experiences and, through their engagement with the University's services and systems, generate data that is used in learning analytics to enhance student learning, educational practice and support services.

3.2 The University will:

- Use learning analytics to benefit students as part of its strategic goal to achieve student-centred learning, teaching and support, based on data driven decision making, real-time student feedback and reflective practice.
- Aim to innovate learning and teaching practice using learning analytics to optimise and personalise the student experience. Ultimately, the goal is to improve student satisfaction, retention, completion, and the achievement of learning outcomes and the University's Graduate Attributes.
- Ensure employees use learning analytics, where possible and appropriate in their role, to inform learning interventions and engagement with students, and to enhance education practice and support services. Learning analytics used for research publications will only proceed with approved ethical clearance.
- Ensure employees will be provided with appropriate development, training and information necessary to enable them to engage productively with and benefit from learning analytics.
- Ensure students will be provided with the appropriate information necessary to enable them to engage productively with and benefit from learning analytics.
- Ensure learning analytics systems, data and information about students are managed lawfully, ethically and appropriately by:
    - protecting the privacy of students' personal information in line with Queensland's *Information Privacy Act 2009*
    - providing students with access to their own information on request and to correct inaccurate information in line with Queensland's *Right to Information Act 2009*, and *Information Privacy Act 2009,* and the Privacy Policy and Procedure
    - providing students with appropriate access to their personal information in relation to learning analytics and resulting insights which will usefully inform their learning journey, and
    - engaging with students openly and inclusively as a key stakeholder in learning analytics activities.

Learning analytics

3.3 Learning analytics is an education activity involving the measurement, collection, analysis and reporting of data about learners and their learning contexts to understand and optimise learning and the environment in which it occurs.[1]

3.4 Data about students will be analysed to gain insights about them as learners and the context in which learning occurs. The primary aim is to apply these insights in practical ways that benefit students' learning and experience. Learning analytics systems may be employee-facing and/or student-facing.

3.5 Employee-facing learning analytics enables employees to facilitate student success through data-informed student interventions and enhancements to the quality and delivery of education, learning support and services.

3.6 Student-facing learning analytics enable students to view and reflect on their own data and empower them to decide how best to enhance their learning.

3.7 Students will not be wholly defined by learning analytics or resulting insights, as it is recognised that data and analysis do not present a complete picture of a student and their learning context or capability. Learning analytics will be used only as an indicator to inform student learning interventions or other support services and will not be used to limit employees' or students' expectations of what students can achieve.

3.8 Learning analytics will be used equitably to support all students to achieve their learning goals.

[1] Source: Society for Learning Analytics Research (2020).

Learning analytics framework

3.9 The learning analytics framework is a combination of policy documents and strategies that together govern and facilitate learning analytics in a way that is ethical, educationally appropriate and complies with relevant legal and policy obligations:

- Learning Analytics Policy and Procedure defines learning analytics; explains the associated legal, ethical and practical boundaries of learning analytics activities; and identifies related roles and responsibilities.
- Privacy Policy and Procedure explains the legal obligations for safeguarding the privacy of personal information, how to access information under the relevant legislation, and the transparency and other requirements to be met when collecting, accessing and using personal information.
- Data Governance Framework identifies the roles and responsibilities for managing and deciding access to data, including student data for learning analytics purposes. It promotes system and data security in line with legislation, government policies, and University policy documents on cybersecurity and information asset classification.
- Research Involving Human and/or Animal for Ethics Clearance Policy and Procedure sets out the obligations of researchers when undertaking research involving humans and human-related data.
- Implementation strategies including systems user training, employee professional development, guidelines for actioning learning analytics insights, communications explaining learning analytics for employees and students, and any other actions taken to achieve the University's Strategic Plan and goals.

4 PROCEDURE

4.1 The following procedure provides direction for making decisions and taking action, when developing and implementing learning analytics systems and processes.

Information security and privacy protection

Personal information

4.2 Personally identifiable data and analytics about an individual student will be accessible only to:

- the student
- employees who use the data necessary to undertake their role and responsibilities, and
- third parties (e.g. government departments with which we have regulated reporting requirements such as the Department of Education, Skills, and Employment, and external organisations/vendors engaged under an agreement to develop systems, process data or provide services that require data access) in line with privacy and data protection requirements in the Privacy Policy and Procedure, Cybersecurity Management Policy and the Information Assets Security Classification Policy.

4.3 Students may request access to their personal information and information relating to the use of that information for analytics purposes in line with the Privacy Policy and Procedure.

4.4 Employees will be allowed access to and use information systems and data for learning analytics on the basis that it is necessary to undertake their role and responsibilities, and they satisfy any conditions required for access (e.g., the completion of data responsibility training).

4.5 Employee access to and use of student information and data is bound by this policy and procedure, data management plans relevant to the learning analytics undertaken, and approval by the information asset owner as designated in the Data Governance Framework.

4.6 Employees given access to systems and data are required to protect the privacy of personal information in line with legislated information privacy principles and the Privacy Policy and Procedure. Personal information is information about an individual whose identity is apparent or can reasonably be ascertained.

Sensitive personal information

4.7 Sensitive information is a type of personal information which may result in discrimination or harm if it is mishandled. Examples of sensitive personal information includes information about an individual's racial or ethnic origin, political opinion, religious beliefs, sexual orientation, health, and financial or criminal records. Where sensitive personal information has been disclosed to the University (e.g. disability status or identity as an Aboriginal or Torres Strait Islander), this information may inform decisions about eligibility for additional support services or strategies for ensuring student success at university.

4.8 Detailed sensitive information, including that related to students' use of University confidential services (e.g., counselling, disability, or health services) is not accessible by employees except where necessary for their roles and responsibilities, and will not be used for learning analytics purposes.

De-identified information

4.9 Information privacy principles do not apply to de-identified information (i.e., information recorded in a way that it cannot be linked to a known individual). Employees must use and manage de-identified data in a way that mitigates the risk of re-identification to ensure information privacy is not breached.

Transparency and student consent

4.10 The University will be fully transparent with students about learning analytics. This includes the data sources used, how analytics are produced, how students may be able to use analytics provided to them to assist their learning, and the type of interventions that employees may implement based on learning analytics to assist students.

4.11 Students will be informed about the University's use of student information for learning analytics when their consent is sought upon course admission. This consent applies to an employee's use of learning analytics in their day-to-day role, reflective practice, quality assurance, or scholarly activity (except research publication) (see learning analytics in education and learning support).

4.12 When seeking students' consent to use their personal information for learning analytics, the University must take all reasonable steps to ensure that students are generally aware of:

a) what the data will be used for

b) whether the collection of the data is authorised or required under a law, and

c) any external parties who will have access to the data.

4.13 Employees who use learning analytics for research, including research as a student or scholarly activity of any kind intended for external publication or dissemination, must obtain ethical clearance (see learning analytics in research).

4.14 Students are responsible for their own learning. When provided with feedback or offered suggestions to support or optimise their learning outcomes resulting from learning analytics, it is the student's responsibility if and how they choose to apply any feedback or suggestions.

Data quality, robustness and validity

4.15 Learning analytics systems present readily available, collated data and visualisations of student learning activities and experiences at the University that are used to personalise and enhance student learning outcomes. Learning analytics, using data from any University system or student data sources, may also be used to gain insights into student learning to enhance their experience.

4.16 The data and methods used in learning analytics includes but is not limited to:

- weekly engagement activity data based on student interactions with systems that make up the digital learning environment
- personal information provided by students for admission and enrolment
- student course admission and unit enrolment history

- unit attempts history, grades and results
- academic progress status records
- student–university interaction data recorded in the customer relationship management system
- de-identified, anonymised data from student feedback and surveys of student experience
- interactions with library systems data, and
- predictive models using algorithms, machine learning, and selected metrics to make predictions about student attainment.

4.17 The University assigns roles and responsibilities to implement measures for monitoring and reviewing the quality, robustness and validity of data to business areas and individuals in line with the Data Governance Framework. In relation to learning analytics, these measures are intended to ensure:

- inaccuracies and gaps in the data are understood and minimised
- confidence in the data to effectively inform analysis, insights and interventions
- the optimum range of data sources to achieve accurate predictions is selected
- false correlations and conclusions are avoided
- the algorithms and metrics used for predictive analytics and interventions are valid and minimise the potential for bias, and
- learning analytics is considered in the wider education context and is combined with other relevant data and approaches appropriate to learning and teaching.

4.18 Students can request changes to their own personal information if they believe it is inaccurate, incomplete, outdated or misleading. Students requesting changes need to make a written application in line with the Privacy Policy and Procedure.

4.19 Employees must report any inaccuracies, gaps or errors in the data to the business area or data steward responsible for the data or information system for validation and correction.

Implementing learning analytics

Stakeholder engagement

4.20 Designing, developing and implementing learning analytics systems and processes must involve the contribution of key stakeholders to optimise their acceptance, engagement with, and successful implementation of learning analytics technology and outcomes.

4.21 Key stakeholders include but are not limited to students, educators, learning designers, learning support and other professionals, learning analytics analysts, system developers and analysts, systems support and other professionals, key leaders and managers, and policy developers.

Learning analytics in education and learning support

Appropriate uses of learning analytics

4.22 Employees are responsible for acting on the insights they gain from learning analytics where possible and in a way that is appropriate to their role. Employees may apply learning analytics in several ways to benefit students and their learning context, including:

- in their day-to-day operational role as University employees to understand students' learning activities and learning needs to respond with appropriate interventions
- for self-reflection about their own practice and services to personalise feedback or to enhance teaching and services, e.g., review curriculum design or service delivery (i.e. professional development, continuous improvement)

- in course monitoring, review, and enhancement, and evaluating the impact and benefit of learning analytics (e.g., evidence of continuing quality assurance of education delivery and services, evidence for deciding priorities, resources, and funding)
- external referencing activities, such as the analysis and benchmarking of learning analytics data in collaboration with reference providers, and the communication of findings to regulatory bodies, such as the Tertiary Education Quality and Standards Agency (TEQSA) or other government or professional accrediting bodies,
- for innovation and development in the University's systems, processes, and practices for internal business improvement
- for academic progression, recognition (e.g., awards) and internal dissemination (e.g. reports, presentations) as evidence of innovation or developments in their own teaching or learning support practice, and
- in scholarly activity, except research, as evidence of an academic's ongoing knowledge and skills development in learning and teaching and their discipline (e.g., projects, reports, and presentations not for external publication; see limitations on using learning analytics).

4.23 Use of learning analytics for research purposes must be conducted in accordance with this policy and procedure and comply with requirements outlined in learning analytics in research.

4.24 Learning analytics data may also be used to ascertain the eligibility of continuing students for Commonwealth Supported Places (CSPs). The use of analytics data for this purpose will be governed by the directions and requirements of the Australian Government. Potential uses include:

- monitoring the activity level and engagement of students with their course
- assessing students' eligibility for CSPs or HELP loans, and
- making recommendations regarding withdrawing CSPs from ineligible students.

Limitations on using learning analytics

4.25 Employees with access to student personal information and data must protect the privacy of students' personal information and manage data in line with the information security and privacy protection section.

4.26 This data must be de-identified and anonymised to protect personal privacy when communicating student information and data internally for the purposes of institutional quality assurance, planning or decision-making; as evidence of good practice or innovation (e.g. awards, academic progression); or for research or any external dissemination.

4.27 The systematic investigation of learning analytics data to answer research questions that may inform scholarly publications, whether via conferences, symposia, theses, or journal article submissions, is regarded as research and will require prior ethical clearance (see learning analytics in research). The internal use or communication of data for learning analytics for education and learning support purposes does not require ethical clearance, nor does the analysis and external communication or reporting of learning analytics data for benchmarking or external referencing purposes.

4.28 Learning analytics cannot be used to determine a student's marks or grade or be used for formal assessment.

4.29 Use of sensitive personal information for learning analytics purposes must be managed in line with the sensitive personal information section.

Interventions

4.30 Interventions that may be taken to support student learning may include but are not limited to:

- personalised and timely feedback
- electronic prompts and suggestions, and
- direct contact with a group of students to offer support, direction, help, learning resources or feedback.

4.31 Interventions will not take the form of generic mass mailing communications or be used as a marketing or advertising opportunity.

4.32 The scholarly comparison of intervention approaches, such as in between-groups and pre/post-intervention designs, is permissible ensuring:

- students who are not offered the intervention are not disadvantaged
- analytics data is used for improving the delivery of interventions that support student learning, and
- interventions used in Scholarship of Learning and Teaching research are governed by the requirements in learning analytics in research.

Minimising adverse impacts

4.33 Learning analytics used to present predictions and data about students and their learning activities do not provide a complete picture of the student, their capabilities, or personal circumstances. Predictive analytics is based on historical data, which does not necessarily reflect future behaviour. Learning analytics, and the algorithms and metrics which underpin it, are not neutral as they can reflect design and institutional preferences, selections and assumptions about human behavioural norms and trends. Individual behaviours do not always follow 'typical' patterns.

4.34 Employees should recognise the limitations of learning analytics and to apply it only as an indicator for the basis of decisions or actions. Students must not be wholly defined by their data or its interpretation to minimise the potential for bias, stereotyping, discrimination, or limiting perceived expectations of student success.

4.35 Training, professional development and guidance will be available for employees to optimise their use of learning analytics and to minimise the potential for adverse impacts.

Learning analytics in research

4.36 Research involving learning analytics necessarily involves the use of human-related data and as such must align with the National Statement on Ethical Conduct in Human Research.

4.37 Employees intending to communicate learning analytics data or analysis externally or use learning analytics for research publication must obtain ethical clearance before research begins in line with the Research Involving Humans and/or Animals Ethical Clearance Policy and Procedure and the Human Ethics Application Guideline. For more information about ethical clearance, contact the Research Ethics Office via ethics@cqu.edu.au or see the StaffNet Research Division Website.

4.38 Employees using learning analytics data for research must access, use and manage data in line with this policy and the Research Data Management Policy and Procedure.

Privacy Complaints

4.39 Students who believe the University has not dealt with their personal information in accordance with the *Information Privacy Act* or this policy and procedure, may make a formal privacy complaint in line with the Privacy Policy and Procedure.

5 RESPONSIBILITIES

Compliance, monitoring and review

5.1 The Deputy Vice-President (Education Strategy and Innovation) is responsible for implementing, monitoring, reviewing, and ensuring compliance with this policy and procedure.

5.2 The Deputy Vice-President (Digital Services) is responsible for monitoring and reviewing the effectiveness of learning analytics systems.

5.3 The Information Asset Owner is responsible for monitoring and reviewing the effectiveness of data governance and management measures in relation to learning analytics data, including the effectiveness of this policy and procedure and compliance with the Data Government Framework.

5.4 The Director Governance is responsible for monitoring and reviewing employee compliance and the alignment of this policy and procedure with information privacy and right to information legislation.

Reporting

5.5 No additional reporting is required.

Records management

5.6 Employees must manage records in accordance with the Records Management Policy and Procedure. This includes retaining these records in a recognised University recordkeeping information system.

5.7 University records must be retained for the minimum periods specified in the University Sector Retention and Disposal Schedule on the Queensland State Archives website. Before disposing of any records, approval must be sought through the Records Management Office (email records@cqu.edu.au).

6 DEFINITIONS

6.1 Terms not defined in this document may be in the University glossary.

6.2 Terms used in CQUni Success are published in the Data Dictionary (StaffNet CQUni Success website).

Terms and definitions

Learning analytics: defined in the policy section of this document, and was adapted from Gašević and Siemans (2015, p. 1).

7 RELATED LEGISLATION AND DOCUMENTS

Code of Conduct for Research

Cybersecurity Management Policy

Data Governance Framework (StaffNet Data Governance website)

Human Ethics Application Guideline

Information Assets Security Classification Policy

Information Privacy Act 2009 (Qld)

National Statement on Ethical Conduct in Human Research

Privacy Policy and Procedure

Research Data Management Policy and Procedure

Research Involving Humans and/or Animals for Ethical Clearance Policy and Procedure

Right to Information Act 2009 (Qld)

8 FEEDBACK

8.1 Feedback about this document can be emailed to policy@cqu.edu.au.

9 APPROVAL AND REVIEW DETAILS

Approval and Review	Details
Approval Authority	Academic Board
Delegated Approval Authority	N/A
Advisory Committee	Education Strategy and Innovation Committee
Administrator	Deputy Vice-President (Education Strategy and Innovation)
Next Review Date	31/03/2024

Approval and Amendment History	Details
Original Approval Authority and Date	Academic Board 31/03/2021
Amendment Authority and Date	Editorial amendment 28/04/2021
Notes	

Acknowledgement

This policy and procedure was guided by the Jisc *Code of Practice* (2018) by P. Bailey & N. Sclater, and the Jisc *Model Institutional Learning Analytics Policy* draft v0.1, Nov 2016 by N. Sclater. It was also informed by a review of learning analytics literature and other institutional policies.

CQUniversity gratefully acknowledges its use of information and ideas from the following additional sources:

- Beer, C., Jones, D., & Lawson, C. (2019). The challenge of learning analytics implementation: Lessons learned. In Y. W. Chew, K. M. Chan, and A. Alphonso (Eds.), *Personalised Learning. Diverse Goals. One Heart*. ASCILITE 2019 Singapore (pp. 39–49).
- Cormack, A. (2016). *A Data Protection Framework for Learning Analytics*. http://dx.doi.org/10.18608/jla.2016.31.6
- Corrin. L., Kennedy, G, French, S., Buckingham Shum, S., Kitto, K., Pard, A., West, D., Mirriahi, N., & Colvin, C. (2019). *The Ethics of Learning analytics in Australian Higher Education. A Discussion Paper*. https://melbournecshe.unimelb.edu.au/research/research-projects/edutech/the-ethical-use-of-learning-analytics
- Drachsler, H. & Greller, W. (2016). *Privacy and Analytics – It's a DELICATE Issue. A Checklist for Trusted Learning Analytics*. http://dx.doi.org/10.1145/2883851.2883893
- Gašević, D. & Siemans, G. (2015). Let's not forget: Learning analytics is about learning. *TechTrends, 59*(1).
- SalingerPrivacy. *Big Data – An Ethical Framework for Protecting Privacy* (June 2015).
- Scheffel, M., Yi-Shan Tsai, Gašević, D. & Drachsler, H. (2019). Policy Matters: Expert Recommendations for Learning Analytics Policy. https://doi.org/10.1007/978-3-030-29736-7_38
- Selwyn, N. (2020). *Re-imagining 'Learning Analytics'…a case for starting again?* https://doi.org/10.1016/j.iheduc.2020.100745
- Slade, S. & Prinsloo, P. (2013). *Learning Analytics: Ethical Issues and Dilemmas*. http://abs.sagepub.com/content/57/10/1510
- Slade, S., Prinsloo, P., & Mohammad Khalil. (2019). Learning analytics at the intersections of student trust, disclosure and benefit. https://doi.org/10.1145/3303772.3303796
- The Open University (UK). *Policy on Ethical Use of Student Data for Learning Analytics* (September 2014).
- University of British Columbia. *Learning Analytics at UBC: Purposes and Principles* (July 2019).
- University of Edinburgh. *Learning Analytics Principles and Purposes* (January 2018).
- University of Edinburgh. *Policy and Procedures for Developing and Managing Learning Analytics Activities* (June 2018).
- University of West London. *Learning Analytics Policy* (August 2017).
- University of Wollongong. *Learning Analytics Data Use Policy* (May 2020).