

Clearing the Fog: A Learning Analytics Code of Practice

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Learning Analytics is an area of practice that impacts the legal and ethical obligations of educational institutions. New legislative regimes, growing concern about online privacy, and the affordances of the data being collected mean Learning Analytics could represent a risk to universities to the same extent that it represents an opportunity. These risks augur the need for institutions to develop formal practice and/or policy frameworks around Learning Analytics to define supported practice, actively manage risks and begin to build trust and ethical practice through transparency. There is a danger for Australian universities that the development of such “checks and balances” are not keeping pace with the technological advancements in this field. This paper outlines how one university is seeking to provide a frame for lawful and ethical practice of Learning Analytics through a Code of Practice.

Keywords: Learning Analytics; Ethics; Privacy; Learning Technology; Code of Practice; Higher Education

The Need for a Learning Analytics Code of Practice

It is four years since Long and Siemens published their now oft-cited paper *Penetrating the Fog* (2011), which provided a brief context and direction for the new field of Learning Analytics. Since then, as Learning Analytics has grown and evolved, so to have concerns around its potential impacts on the privacy and agency of University students and staff. Beattie, Woodley and Souter (2014), for example, examined a number of ethical issues around Learning Analytics and argued for a Charter of Learner Data Rights. Despite awareness of the ethical concerns, it appears that technological advancements and analytics capabilities within Australian universities are out-pacing the development of controls around what is collected, why and how such data is used. In early 2015, as an initial aspect in the development of a Code of Practice, Charles Sturt University (CSU) issued a “call out” to members of the Australasian Council on Open, Distance and e-Learning (ACODE) and the New South Wales Learning Analytics Working Group to share any a formal practice or policy framework for Learning Analytics they might have in place. No such documents were reported.

A number of factors strongly suggest that Learning Analytics as a field of endeavor needs to be practiced within a defined framework of lawful and ethical practice:

- the law - Learning Analytics embodies the collection, storage and use of personal information and, as such, is subject to relevant privacy laws (eg *Privacy and Personal Information Protection Act 1998* (NSW)) and the Australian Privacy Principles. Our work also suggests that Learning Analytics activities undertaken by Universities (or other research bodies) are subject to the National Statement on Ethical Conduct in Human Research;
- general societal concern around monitoring of online behavior and collection of personal information via tracking technologies;
- relative immaturity of the discipline with institutions, practitioners and technology vendors still figuring out what works and finding the boundaries of “acceptable” practice; and
- potential for inadvertent misuse and/or abuse. That is, Learning Analytics can offer new ways to discourage, disadvantage or even discriminate against students and staff.

Importantly, a Code of Practice is not just a means for defining how institutions want to practice in order to maximise effectiveness or minimise risk; it is also an essential step in building trust between the institution and its students and staff through openness and transparency. A Code of Practice that guides the institution towards transparency and openness can serve to clear the fog around how students and staff are being monitored, why and how data is used, and start to dispel some of the fears about what lurks within. Such transparency in itself can also build a propensity for ethical practice as it provides a mechanism for staff and students to “watch the watcher”.

The University's Approach to a Learning Analytics Code of Practice

Practice and Policy

The trouble with Codes of Practice is that they don't necessarily have the weight of policy. The trouble with policies is that nobody reads them. Early in our work, it was recognised that CSU would need a readily accessible Code of Practice that worked from relevant legislation and University obligations, in order to provide staff and students with clear boundaries for the lawful and ethical use of Learning Analytics. This Code of Practice would be supported with a suite of professional learning resources and activities to further contextualise the Code around the use of specific learning technologies, Learning Analytics approaches and interventions. Importantly, the key elements of the Code would be reflected within a Policy Framework.

A key goal for the Policy Framework was to mainstream Learning Analytics by embedding it into the everyday practice of the University. Therefore, it was decided not to develop a separate Learning Analytics Policy, but rather to renew existing policies to reflect the legal and ethical challenges around Learning Analytics and the tenets of the Code of Practice. Thus, the Policy Framework became a document defining how relevant existing policies would be changed to support the Code of Practice, legislation and other obligations. The existing policies to be renewed go beyond just technology-related policies to include policies around admissions, learning and teaching, intellectual property, staff codes of conduct and others. These key policies create obligations for University staff, students and systems, as well as for third-party learning technology parties. A central component of the Policy Framework is an Analytics Consent Statement, which explicitly addresses the key features and practices of our approach to Learning Analytics collection, storage and use in order to enable informed consent by staff and students.

A Multi-disciplinary Approach

The Code of Practice and Policy Framework –still in draft form at time of writing – were developed through a literature review and individual consultations with major stakeholders across CSU. This latter activity provided a mechanism for multi-disciplinary input to the Code, which is critical, given the scope of impacts of Learning Analytics practice across a range of professional discipline areas. To provide a coherent Code that is integrated with the broader operations and obligations of the University it was necessary to engage with areas of the institution representing those disciplines, including the CSU Privacy Officer, legal, information technology, Corporate Affairs, Academic Governance, research ethics committee, human resources, University records, Faculties and the Office for Students. A key outcomes of this consultation was not just the input and reshaping of the draft Code but the raising of awareness and understanding of a) privacy issues in relation to learning and teaching, and the use of learning technologies in particular, b) the extent to which the collection of personal information is possible within University systems and external learning technologies and c) who needs access to such personal information and for what purposes. Students were also consulted, via their representative bodies, as part of the Code development. The student response (like that of staff) was very positive: affirming the need for a Code, appreciating that the University was undertaking this work and strongly embracing the notions of the openness and transparency that permeate the draft Code.

Principles and Commitments

The Code of Practice was developed with both CSU staff and students as intended audiences. It is structured around three themes: i) Ethical Intent; ii) Student Success; and iii) Transparency and Informed Participation. Within each theme are the "Governing Principles". These are more than mere 'guiding' principles. They are positioned as the core ethical and legal foundations of Learning Analytics at CSU with which all practices must be consistent. Alongside of the Governing Principles are a series of "Commitments", which describe the University's assurances – our promises – towards an ethical and open practice of Learning Analytics.

Theme 1: Ethical Intent

CSU acknowledges that Learning Analytics raises a number of ethical and legal issues (including privacy rights). However, given the University's educational context, the benefits offered by Learning

Analytics for students and staff justify its practice in supporting learning and teaching insofar as those ethical and legal issues can be managed to respect all who are the subject of data collection. The body of literature makes frequent reference to how institutions need to have in place clear guidelines on ethical considerations surrounding such aspects as the rights and dignity of individuals, and openness about processes and practices (Pardo & Siemens, 2014; Siemens, 2013; Slade & Prinsloo, 2013). The literature is equally insistent on higher education institutions ensuring that their legal obligations are being met in relation to personal privacy, data collection and information protection (Kay, Korn & Oppenheim, 2012; Siemens, 2013).

The Governing Principles and Commitments for the category of Ethical Intent are shown in Figure 1.

| Governing Principles | Our Commitments |
|---|--|
| <p>Ethical Intent</p> <ol style="list-style-type: none"> Learning Analytics contributes to equitable and inclusive participation in education by providing information in support of quality learning and teaching, and student-centred practice. Learning Analytics will be conducted in a way that: a) respects the rights and dignity of those who are the subject of data collection; b) accords with the obligations, commitments and values of the University; and c) after due consideration of risks/benefits, makes no unwarranted incursions into, or breaches of, an individual's privacy. Learning Analytics is a justified and ethical practice that is core to the University's operations. | <ul style="list-style-type: none"> The University recognises that data from learning and teaching systems constitute personal information. Therefore, all Learning Analytics practices are to be grounded in provisions of the NSW Privacy and Personal Information Protection Act 1998 (PPIPA) and the National Statement on Ethical Conduct in Human Research (NSECHR). The University will update this Code of Practice and relevant policies in accordance with changes to the NSW PPIPA, the NSECHR and recognised "best practice" in the field of Learning Analytics. Teaching and support staff of the University will act professionally, confidentially and sensitively when dealing with data about their students and/or colleagues. The University will apply appropriate governance and review processes to the introduction and on-going use of any analytics-enabled learning technologies. Learning Analytics practices will be constrained to only those technologies used for learning and teaching, and data captured therein. The University will not engage in Learning Analytics practices that use data sources: a) not directly related to learning and teaching; and/or b) where users may not reasonably expect such data collection by the University to occur. Examples of the latter include email, social media, private online communication (e.g. Skype) accounts and so forth. Any Learning Analytics practices that seek to collect and use data in any way that is not consistent with: a) this Code of Practice; and/or b) the original purpose for which the data in question was collected can only proceed if: <ul style="list-style-type: none"> explicit informed consent is gathered from those who are the subject of measurement. Where informed consent means that: a) clear and accurate information is provided about what data is or may be collected, why and how it is collected, how it is stored and how it is used; and b) agreement is freely given to the practice(s) described; and such activities are undertaken for a purpose consistent with Governing Principles 4 and 5 of this Code. |

Figure 1: Draft CSU Learning Analytics Code of Practice – Ethical Intent Principles and Commitments

Theme 2: Student Success

Principles 4 and 5 align with the CSU Learning Analytics Strategy (2013), whereby the analysis of learning and teaching related behaviours and data are argued to provide valuable insights into the student experience. Collected data is used for the purpose of better understanding and supporting student progress and retention, and promoting teaching excellence and scholarship. Students are engaged as active agents in the implementation of Learning Analytics, and placed at the centre of the learning experience by accommodating diverse individual characteristics in the learning process, by providing choice, and by allowing them to be active 'managers' of their own learning through the use of analytics. Elemental to gaining a better understanding of and supporting student progress and retention is the recognition and respect given to all students' knowledge, experiences, strengths and needs (Boyle & Wallace, 2011). Of particular relevance, consonant with the University Strategy Objectives for improved educational outcomes and lives for Indigenous Australians, is ensuring learning data is used in ways that optimise all students' engagement and advances successful learning outcomes according to their understandings and aspirations. Our Governing Principles and Commitments under Student Success can be seen in Figure 2.

| Governing Principles | Our Commitments |
|---|---|
| <p>Student Success</p> <p>4. Data is collected from learning and teaching systems, retained and utilised for the purposes of enhancing learning and teaching by:</p> <ol style="list-style-type: none"> Increasing the capacity for data-informed improvements in the learning, teaching and support practices of the University, incorporating its students, employees, systems and processes; Enabling personalised management of the relationship between the University and its students and employees; Managing the performance of online learning systems and resolving issues therein; and Contributing to research and scholarship in learning and teaching, including the field of Learning Analytics itself. <p>5. Student success is enhanced when meaningful data is provided to students to give them greater control over and responsibility for their learning.</p> | <ul style="list-style-type: none"> The University will only collect data from learning and teaching systems that are meaningful within Governing Principles 4 and 5 of this Code. The University recognises that “best practice” in Learning Analytics can vary depending on the educational context, the student context and background, the technology employed, the type of data in question, as well as other factors. Therefore, the Adaptive Learning and Teaching Services team, Learning Technologies Unit, DSL will provide: <ul style="list-style-type: none"> guidance and advice to the University, its employees and students on effective and appropriate application of Learning Analytics within specific contexts; and an ongoing program of professional learning, learning resources and Communities of Practice around the effective and appropriate application of Learning Analytics. The University will provide students with access to data on their learning in a way that: a) enhances agency and autonomous learning; b) promotes quality learning and engagement; and c) recognises student diversity and individuality. With regards to its employees, the University’s application of Learning Analytics will focus on supporting reflective and collaborative practices for improving learning and teaching. Learning Analytics will never be used as a basis to unfairly discriminate against or disadvantage a student, group of students and/or employee(s), including (but not limited to): <ul style="list-style-type: none"> using data in a way that is not supported by: a) the constraints and assumptions on that data; and/or b) its original purpose of collection; accessing data from sources not connected to the learning and teaching of the University; and accessing and/or using data in anyway inconsistent with Principle 2 of this Code. <p>Data from learning and teaching systems may be used to investigate conformance with University policies (e.g., Computing and Communications Facilities Use Policy, Student Charter, Code of Conduct, academic policies related to plagiarism, etc.) and inform subsequent action.</p> <ul style="list-style-type: none"> Student interventions made on the basis of Learning Analytics: <ul style="list-style-type: none"> should draw upon multiple sources of insight on a student’s behaviour, performance and context; must be managed professionally and sensitively; must not unfairly advantage or disadvantage a student or group of students; and should promote student-centred practices by: <ul style="list-style-type: none"> positively contributing to student engagement; building student responsibility, agency and learning autonomy; optimising accessibility of people, experiences and support; enabling timely two-way feedback and reflective practice; and being responsive to diversity and individuality in student learning characteristics and behaviours. In addition to this Code of Practice, the collection, retention and use of data from learning and teaching systems in any research project will be subject to the ethics approvals and controls for that project. |

Figure 2: Draft CSU Learning Analytics Code of Practice – Student Success Principles and Commitments

Theme 3: Transparency and Informed Consent

The final two principles show how the University will be clear and open in its purpose and scope for Learning Analytics, and maintain an established pathway for staff and students to understand their rights of access and privacy and regularly update their consent to data collection and storage. In order for the University to confirm Learning Analytics as a trusted activity within a community of practice for learning and teaching, then “its very policy of transparency” will inspire confidence in the institution’s efforts in Learning Analytics (Kruse & Pongsajapan, 2012). Forthrightness in processes and practices will ensure all staff and students have access to descriptions “of how Learning Analytics is carried out and [...] informed of the type of information being collected, including how it is collected, stored and processed” (Creagh, 2014, p. 15). Our Governing Principles and Commitments under Transparency and Informed Consent can be seen in Figure 3.

| Governing Principles | Our Commitments |
|---|--|
| <p>Transparency and Informed Participation</p> <p>6. The University (and its employees) will be transparent with regard to the collection, retention and use of data/analytics from learning and teaching systems.</p> <p>7. All users of the University’s learning and teaching systems will have access to clear explanations of their rights and obligations with respect to data from those systems.</p> | <ul style="list-style-type: none"> The University will provide all users of its learning and teaching technologies with accessible, clear and accurate explanations of what data is or may be collected, why and how it is collected, how it is stored and how it is used. The University will use and maintain a <i>CSU Learning Analytics Consent Statement</i>² and periodically require students and employees to review and (re)confirm their acceptance of this Statement. The University will make available a plain language <i>Statement of Student Data Rights and Responsibilities</i>³ that outlines students’ rights and responsibilities with relation to collection, retention and analysis of data from learning and teaching systems The University will employ consultative processes around any changes to policy relating to Learning Analytics (including this Code). It can be expected that data from learning and teaching systems would be accessible to: <ul style="list-style-type: none"> the system user themselves, for the purposes of disclosure and enhancing their learning and teaching experience; the institution and its authorised agents, for the purposes outlined in Governing Principles 4 and 5 of this Code; and the vendor of the learning and teaching technologies employed, only where: a) the vendor provides information on the data it collects and the privacy policies underpinning that collection; and b) those privacy policies have been reviewed and align with the requirements of the University. Such analytics may only be used by the vendor for the purpose of resolving service/technical issues and maintaining service provision to CSU. Students and employees of the University have the right to know: a) if data from learning and teaching systems has been used to inform decisions regarding them; and b) what data was used, how and by whom. Subject Outlines will clearly state if and how student data may be used in a subject to: a) monitor student activity and learning; and b) adapt teaching and/or support resources and practices. Data from learning and teaching systems will be an input to the decision-making and professional judgement of University employees, but: a) will not be used as an official record of the University; and b) do not, in themselves, create an obligation to act. The University (and its employees) may only share data from learning and teaching systems with external parties insofar as that action is consistent with the <i>CSU Learning Analytics Consent Statement</i> and this Code. The University will protect the security of any data from learning and teaching systems it holds consistent with the CSU Information Security Policy. This responsibility extends to any University employees personally collecting and retaining data about students and/or colleagues. Data from learning and teaching systems will only be retained by the University for so long as it is relevant to Governing Principles 4 and 5 of this Code. |

Figure 3: Draft CSU Learning Analytics Code of Practice – Transparency and Informed Consent Principles and Commitments

Conclusion

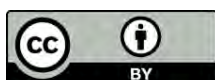
The essential argument for a Learning Analytics Code of Practice is to recognise that the collection, retention and analysis of student and staff data from learning and teaching systems is an impingement on privacy. However, this impingement is justified to the extent that it is undertaken for an ethical purpose (e.g. to provide a meaningful benefit for those whose privacy it impinges upon) *and* conducted in accordance with clear, transparent and lawful governing principles and policies that define acceptable practice consistent with that purpose. Without the latter, any means could be argued to justify the ends. The authors do not suggest though that all institutions should adopt the draft Code outlined here. Rather, the argument is simply to have a Code. Indeed, there is great value in the development of a Learning Analytics Code of Practice through a broad consultative process across an institution as this a) raises awareness and understanding of the issues, b) identifies the opportunities for connections between existing policies and practices unique to each institution and c) enables the institution to contextualise the Code to their Learning Analytics strategy and stakeholder needs and expectations.

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