

Indigenising the Griffith School of Environment Curriculum: Where to From Here?

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This article presents a discussion on a study undertaken by academics within the Griffith School of Environment, Brisbane, Australia that sought to explore the potential of an Indigenised curriculum to attract and retain Indigenous students, and thereby facilitate greater participation of Indigenous students in science. The article highlights the need for staff to be both reflective and reflexive about the limitations their particular knowledge systems may impose on Indigenous ways of knowing and knowledge systems. The article also acknowledges the need for professional development opportunities for staff prior to any attempts towards Indigenisation of the curriculum.

■ **Keywords:** Indigenised curriculum, reflexivity, receptivity, professional development

The underrepresentation of indigenous peoples in educational institutions has become an issue of critical importance for educators across all sectors. The United Nations report, 'The State of the World's Indigenous Peoples', confirms the education gap that exists between indigenous and non-indigenous peoples worldwide — stating 'indigenous students have lower enrolment rates, higher dropout rates and poorer educational outcomes than non-indigenous people in the same countries' (Department of Economic and Social Affairs, 2009, p. 130). As a consequence, indigenous people are underrepresented in higher education institutions across the globe. In Australia in 2010, while Aboriginal and Torres Strait Islander people made up 2.2% of the working age population, they constituted only 1.4% of all enrolments in university (DIICC-SRTE, 2013).

An Indigenous Higher Education Advisory Council (IHEAC; 2008) supplementary report to the Bradley Review of Australian Higher Education (DEEWR, 2008) reiterated the 'need for Indigenous knowledge to be valued, respected and recognised as critical to Indigenous engagement in the higher education sector' (IHEAC 2008, p. 5). Many tertiary institutions are tentatively exploring the possibilities of bringing Indigenous worldviews and perspectives into the curriculum as a means of increasing the relevance of tertiary education for both Indigenous and non-Indigenous peoples. For example, James Cook University and Charles Sturt University have partnered with Griffith University in a ALTC Leadership for Excellence in Learning and Teaching Program project entitled 'Facili-

tating a Whole-of University Approach to Aboriginal and Torres Strait Islander Curriculum Development: Leadership Frameworks For Cultural Partnership'. All partner universities have committed at senior university leadership level to the goal of offering relevant Indigenous perspectives across program and discipline levels, in partnership with local Indigenous Elders and communities.

The Review of Australian Higher Education, 2008, recognised that 'Indigenous students and staff have unique knowledge and understandings which must be brought into the curriculum for all students and must inform research and scholarship' (DEEWR, 2008, p. 32). Nakata (2007a, p. 224) confirms the utility of such an approach, stating 'we need curriculum designs to build on those capacities and experiences of Indigenous students and to create opportunities for learners to achieve a balance of knowledge skills and processes for exploring disciplinary boundaries'. Indigenisation of the tertiary curriculum, and the academy in general is, however, not without its inherent problems and issues, as we elaborate on later in this article.

At an institutional level, Griffith University in Brisbane has responded proactively to the suggestion that Indigenisation of university curricula is one avenue to increase Indigenous numbers within the university. It has set itself the task 'to develop a culturally appropriate Aboriginal

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and Torres Strait Islander curriculum which is inclusive of Aboriginal and Torres Strait Islander studies, knowledges and perspectives, and to support its sensitive implementation in degree programs' (Griffith University, 2010). As part of that commitment, an Aboriginal and Torres Strait Islander Curriculum Advisory Group was established to oversee the initiative as a whole, and a working party to progress the agenda. The university has thus laudably committed itself to Indigenisation of the curriculum. Such institutional commitment is essential, given that Fasoli et al. (2008) have identified the involvement of senior university leadership as critical to the success of long-term cultural change within universities.

Kuokkanen (2007, p. 1), a Sami academic working within Canadian higher education, warns, however, 'that even in the academic spaces that consider themselves most open to "changing the paradigm", individuals are often unwilling to examine their own blind spots, nor their privilege or their participation in academic structures and the various colonial processes of society in general'. She thus verifies the themes of recent research (e.g., Hauser et al., 2009) that stress the key role of individual academics in changing the culture of the academy. For effective change to occur within the academy there must thus be support at the institutional level and support at the faculty level where individual academics will be responsible for including authentic and genuine indigenous worldviews and perspectives into their curricula. This article focuses its analysis at the level of the individual within higher education institutions in the Australian setting, and looks at the responses of individual academic faculty members from the Griffith School of Environment when surveyed on their attitudes to, and understanding of, an Indigenised curriculum. This analysis draws on both international and Australian literature, and does so for the following reasons. Several of the authors have been involved in research into indigenisation of the Canadian higher education system and are very familiar with the Canadian experience and literature on indigenising the higher education curriculum. Also, the statistics on the attraction, success and completion of indigenous students within higher education in all settler countries is depressingly similar. The use of both international and Australian literature in this article supports an analysis that is therefore international in its implications and findings.

In an earlier research project, Howlett et al. (2008) identified strong Indigenous student support for the development of an Indigenised science curriculum within the Griffith School of Environment as a strategy for improving the attraction and retention of Indigenous students. This is despite the historical privileging of Western science as the only 'way of knowing' the natural world, and the marginalisation of other knowledge systems, including Indigenous knowledge. The subjugation of other knowledge systems, along with the historical link between science and colonialism, understandably make 'Science' a

less than desirable career option for Indigenous students. This underrepresentation of Indigenous students within the science disciplines is also exacerbated by a combination of the poor performance of Indigenous students within secondary schools and their low academic aspirations, resulting in inadequate levels of academic readiness and capital (Pechenkina et al., 2011). Yet, as noted in the Howlett et al. (2008) research, Aboriginal and Torres Strait Islander students enrolled in the Griffith School of Environment at Griffith University perceive the incorporation of Indigenous knowledge into mainstream science as a technique for overcoming the historical reluctance of Indigenous students to enrol and complete science studies. It is not entirely evident, however, how an inclusive Indigenous curriculum can be effectively developed and implemented, and if in practice it would be effective in attracting and retaining Indigenous students.

Motivated by this uncertainty and the desire to facilitate the participation of Indigenous students in science, a team of researchers from Griffith University received a Griffith University Learning and Teaching Grant to explore whether an Indigenised curriculum in the environmental sciences would help Griffith University to attract and retain Indigenous students. The team decided to approach the research task by focusing on the academic staff within the Griffith School of Environment and ascertaining their understanding and perceptions of an Indigenised environmental science curriculum, including whether they see Indigenous knowledges/perspectives as relevant to their specific discipline areas. Academic staff within the School were surveyed and their responses collated.

This article reports on the findings from this study and locates them within the Australian and international literature on indigenising the academy. The aim is twofold: to inform any future attempts to indigenise the Griffith University curriculum, and to inform similar projects in other universities, both in Australia and overseas. The article is structured as follows: first, a review on the impetus for Indigenising the academy is presented, including an overview of recent literature exploring the seemingly Herculean task of bringing indigenous worldviews and perspectives into the academy via, in part, reformed curricula. Second, an overview of the methodological approach used for this research is presented. Third, the authors present an analysis of the findings from this small staff survey in light of the literature reviewed. Several important findings from this research on both the receptive climate within the School and the capacity for staff reflexivity — two essential elements in any attempt to indigenise university curricular — are presented.

Literature Review

There is a burgeoning worldwide movement for indigenisation of the academy in general, and universities in particular, so 'that they become places where the values,

principles, and modes of organization and behaviour of our [Indigenous] people are respected in, and hopefully even integrated into, the larger system of structures and processes that make up the university itself' (Alfred, 2009, p. 88). Indigenous scholars working within the Canadian higher education system, such as Rauna Kuokkanen (2007), and Taiaiake Alfred (2006, 2009) along with Martin Nakata (2004, 2007a, 2007b), a Torres Strait Island scholar, have all contributed to the dialogue concerning the need for transformation of the academy so that indigenous worldviews, ontologies, epistemologies and ways of knowing can be genuinely acknowledged and accepted within the academy. Together, these authors call for a paradigm shift in the academy's epistemic and intellectual relations (Kuokkanen 2007, p. 5).

Some universities have responded proactively to this call for transformation as part of an acknowledgement of the fact that Indigenous people are underrepresented in higher education institutions. In addition, the Australian government recognises the need to enhance participation rates and outcomes for Aboriginal and Torres Strait Islander students and staff in higher education. This commitment was evident in the government's support of the Review of Australian Higher Education's (DEEWR, 2008) recommendation: 'That the Australian Government regularly review the effectiveness of measures to improve higher education access and outcomes for Indigenous people in consultation with the Indigenous Higher Education Advisory Council (IHEAC). Recommendation 30'.

The Review (DEEWR, 2008, p. xxvi) argued that one means of improving the access to and outcomes of Indigenous peoples in higher education was via an Indigenised curriculum: 'Indigenous knowledge should be embedded into the curriculum to ensure that all students have an understanding of Indigenous culture.' Showing a degree of prescience, the Review (DEEWR, 2008, p. 33) also warned that, 'as the academy has contact with and addresses the forms of Indigenous knowledge, underlying assumptions in some discipline areas may themselves be challenged'.

In response, in April 2011, the incumbent Labor Minister for Education, Employment and Workplace Relations announced a Review of Higher Education Access and Outcomes for Aboriginal and Torres Strait Islander People (DIISRTE, 2012). Two specific foci of the review were to explore 'best practice and opportunities for change inside universities and other higher education providers (spanning both Indigenous specific units and whole-of-university culture, policies, activities, and programs); and the recognition and equivalence of Indigenous knowledge in the higher education sector'. There is thus a distinct focus and effort on the part of the federal government to address issues that are of core concern in this article.

The stakes are high as scholars the world over attempt to bring indigenous knowledges and worldviews into the academy (Kincheloe et al., 2008, p. 137). When indigenous perspectives are included in the curriculum, which

is needed for genuine transformation of these pedagogical spaces, the challenges are huge (Kuokkanen 2007, p. 73). Indigenising the university, and by association, university curricula, will not be a simple, nor uncontested process, for as Nakata (2007b) and Carey (2008) state, the academy has played an historical role in colonising the production and dissemination of knowledge about indigenous people. Indeed, universities have supported and reproduced systems of thought and knowledge that seldom reflects nor represents indigenous worldviews (Kuokkanen, 2007, p. 1). There has been a profound neglect of indigenous ontologies and epistemologies in Eurocentric university systems (Hauser et al., 2009) and this historical neglect cannot simply be addressed by the addition of 'Indigenous components in the mix' (Nakata, 2007a, p. 7). There is a real danger that the inclusion of indigenous knowledges as 'add-ons' to mainstream courses, without a concomitant acknowledgement of indigenous knowledge as equal knowledge, will therefore be mere tokenism. Kuokkanen (2007, p. 2) argues that for indigenisation of the academy to occur, the academy must address its own ignorance regarding indigenous worldviews, epistemologies and ontologies. She contends that for this to occur the academy will have to profoundly transform itself, as systemic indifference is ingrained within the very structures of the academy, and there is a 'prevailing epistemic ignorance' at all levels of the university. Thus, transformation must occur at all levels of the university if there is to be genuine acceptance and inclusion of indigenous worldviews and intellectual perspectives.

At the individual level, staff within higher education institutions can find it extremely discomfiting and challenging when negotiations begin concerning the place of indigenous worldviews and knowledges within the curriculum (Williamson & Dalal, 2007, p. 57). In recent research conducted on Canadian practices of indigenising university curriculum, Hauser et al. (2009, p. 50) identified staff reflexivity — 'the process of self-confrontation with the limitations one imposes on other ways of knowing' — as critical to the effective implementation of an indigenised curriculum. The transformation that is required across the university is profound, for acceptance of indigenous ontologies and epistemologies requires a reconceptualisation of the very foundations upon which dominant knowledge is based. Individual staff will need to be open and reflexive about their disciplines, the hegemonic role of science in the curriculum, the lack of ontological pluralism within the academy, and finally, about their own privileged position within the academy.

While Fasoli et al. (2008, p. 13) identify the critical need for effective institutional leadership in any attempts to transform the academy into places that openly welcome indigenous knowledges and perspectives, they also argue that for successful transformation to occur, the focus in part needs to be on the nexus between the individual and the organisation. Mentkowski et al. (2000, p. 366) concur

and state that transformation ‘does not occur by fiat or drift’ but rather it is ‘constructed out of processes that engage and depend on a high level of participation by faculty and staff. Thus, while Griffith University is laudably committed to transformation at the institutional level, and has made institutional commitments to indigenisation of the curriculum, without receptivity and transformation at the level of individual academic staff members within various schools across the university, these initiatives will falter and remain unrealised. The goal of this research project was to determine if individual staff members with the Griffith School of Environment were aware of, and open to, the challenges inherent in indigenising their curricula.

Methodology

Cognisant of the need for ethical transparency in any research, particularly research relating to Indigenous issues, the research team sought and obtained ethical clearance from the Griffith University Ethics Committee before conducting this research. It was decided a written survey of all staff within the Griffith School of Environment might elicit the greatest number of responses and prove the most time-efficient way of collecting the data. While there are significant issues with the use of surveys as research tools, in particular, email surveys, such as response rate and depth of study (see, e.g., Denscombe, 1998), it was felt that the survey would provide a wide and inclusive coverage of staff attitudes and perspectives concerning Indigenising the School curricula. A survey was sent electronically to all staff within the school and asked the following questions:

1. Are you aware of the requirements on our course outlines to nominate whether there is Aboriginal and Torres Strait Islander (ATSI) content in your course?
2. How do you regard the university’s commitment to an Indigenised curriculum?
3. Do you see a place for Indigenised curriculum content within your course?
4. What support do you envisage you may need to embed Indigenous perspectives, knowledges and ways of knowing within your courses?
5. Would you be interested in participating in our project with the view to embedding Indigenous perspectives, knowledges and ways of knowing in your courses?

The questions were open-ended, which allowed for staff to answer the questions in the manner they deemed appropriate and in their own words. This provided us, the researchers, the opportunity to draw conclusions about the respondents’ thinking in relation to Indigenising the curriculum, rather than simply ascertaining whether they supported the idea or not (Sarantankos, 2005, p. 245). The authors chose to analyse the survey responses manually and rich data was obtained, albeit from a small sample size,

that revealed some worrying misconceptions among staff about indigenous knowledge and its place in the academy.

Analysis

An important point to make at the outset of this analysis is the very low response rate to the survey conducted in this study. Only nine of the sixty academics invited to participate responded. This is a finding in itself, and can perhaps be interpreted as disinterest or disengagement. Alternatively, it may reflect an unwillingness or incapacity to reconcile Other knowledge systems as equal and compatible within a school of science. Inclusivity fatigue may also be a factor, as academics grow tired of the seemingly endless requests for inclusion, be that the ‘internationalisation’ or ‘indigenisation’ or some other ‘isation’ of curricular. Regardless of the reasons why, the low participation rate makes it clear the challenge of Indigenising science curriculum is enormous, though not insurmountable.

All staff who responded to the survey were aware that there is a university policy relating to Aboriginal and Torres Strait Islander content. All respondents supported the university’s commitment to an Indigenised curriculum. This support ranged from those who thought it was good but insubstantial (‘notional’), to those who say it is a work in progress that would slowly lead to good outcomes. A number of respondents commended the university for its commitment, but felt that there are not enough resources provided to support staff seeking to develop and deliver an Indigenised curriculum. Some indicated that they were unclear what the policy actually meant in terms of implementation, that is, how the policy would be ‘actioned’. Thus, staff are aware of initiatives across the university, are supportive of these initiatives, but unsure how they are to be implemented and resourced.

The concerns of the staff are, at least to some degree, valid. An Indigenised curriculum necessitates the development of an implementation strategy that is widely understood by those who are expected to implement it within the university community. The desire by universities to have an Indigenised curriculum has to be matched by commitment to provide the training and resources for effective implementation. Further, it is imperative to secure the commitment of academic staff, taking them on the journey to improve the cultural capability of staff and students, and to increase the enrolment and retention and therefore improve education outcomes for Aboriginal and Torres Strait Islander students.

Universities have a major role to play in improving access to and outcomes from higher education for Indigenous Australians, and can participate in the process by providing culturally relevant and culturally safe learning environments where students feel welcome and course content is relevant (Hagan & Huijser, 2008). An Indigenised Science curriculum could arguably help attract and retain Indigenous students who currently feel

excluded from the mainstream sciences, due largely to both the exclusion of Indigenous knowledge as science and the assumption underpinning many science programs and courses that there is only one correct form of scientific knowledge (Howlett et al., 2008). Without the participation of Indigenous students, there will continue to be too few Indigenous academics in this field. However, how one goes about constructing an Indigenised science curricula in mainstream courses, particularly with few Indigenous academics, is not readily evident.

All respondents were able to identify areas in their courses where Aboriginal and Torres Strait Islander perspectives and knowledges could be included. Respondents were especially keen to include Indigenous perspectives in such content areas as ecology, planning, resource/land management, impact assessment, law (native title), and human–environment relationships. Such enthusiasm should be celebrated, but also scrutinised closely. The responses were mostly content focused, based on the disciplines taught, generally indicating a willingness to include Indigenous plant and animal knowledge or natural resource management techniques as ‘add-ons’, peripheral to the dominant Western science curricular. Though the concept of Indigenous knowledge is contested, we can be quite sure it is not content driven like dominant mainstream science as understood by many academics. The inclusion of Indigenous knowledges as ‘add-ons’ to mainstream courses, could therefore, justifiably be seen as tokenistic. For example, to simply include references to Aboriginal fire management or use of plants and animals in science courses, demonstrates the power, implicit or explicit, of dominant knowledge systems over ‘Other’ knowledge. For Indigenous knowledge to be truly embedded within a curricular it needs to be valued and respected as equal knowledge.

This is the crucial challenge for academics in mainstream dominant sciences in universities. One respondent demonstrated significant enthusiasm for including content that is ‘relevant and interesting to Indigenous students and also in a way that is sensitive to the range of views within the Indigenous community’. The enthusiasm was tempered, however, by a plea from the same respondent for guidance ‘on how to incorporate Indigenous content in science courses in a way that students would not perceive as including ‘non-science’ content in the course’. From this response we can construe that the dominant perception persists of Indigenous knowledges as belief systems belonging within the social sciences, and having no place in dominant mainstream science curricula.

Respondents also noted a number of impediments to them Indigenising their curriculum such as: not having information about how to Indigenise their curricula and being unsure how to access such information; a dearth of staff development on what an Indigenised curriculum is; and the need for assistance with developing course lectures and materials. These documented concerns indicate that

while respondents could identify opportunities for incorporating Aboriginal and Torres Strait Islander content in their courses, they did not feel they had the knowledge or expertise to do. Such an acknowledgement is positive. Aboriginal and Torres Strait Islander peoples do not necessarily want non-Indigenous staff Indigenising their course content independently and without guidance.

Ensuring indigenous peoples are genuinely, and not just tokenistically, involved in indigenising the higher education curriculum, is neither simple nor a certainty, given the low number of Indigenous academics currently employed within higher education institutions in Australia. In 2010, Aboriginal and Torres Strait Islander people made up only 1.0% of all full-time positions within universities, with 65.8% of these positions being non-academic. Recommendation 29 of the Higher Education Review (DI-ICCSRTE 2012) states ‘universities develop strategies . . . , to recruit, support and retain Aboriginal and Torres Strait Islander staff to meet the parity targets set by the Australian government’. Adherence to this recommendation is essential if attempts to Indigenise university curricula are to be successful. The Indigenisation of curricula is not a short-term project that can be ‘completed’, allowing staff to tick the box and move on. It is an ongoing process of learning, exchanging and engaging.

Summary

It could be construed from the low response rate to the survey that informs this article on staff receptivity and reflexivity within the Griffith School of Environment that any attempt to Indigenise the school’s curricula will be impossible. We choose to see it otherwise and insist that the findings from this small survey highlight some critical issues that lay ahead for the university as a whole, and Griffith School of Environment staff in particular, as they attempt to incorporate Indigenous worldviews, knowledges and perspectives into the academy.

Staff responses indicate that they are receptive to the idea of an Indigenised curriculum, yet perhaps unaware of the need to engage in a process of self-confrontation with the limitations their particular knowledge systems may impose on Indigenous ways of knowing and knowledge systems. This is a significant finding and indicates the crucial need for professional development prior to any attempts towards Indigenisation of the curriculum. In short, staff may be receptive, but they also must be reflexive about their own world views and their own teaching practices. This indicates that before changes are made to curricula, staff must be introduced to the ontologies and epistemologies of Indigenous knowledge in a non-threatening, professional format. Unless this acknowledgement for reflexivity on the part of participating staff is addressed prior to any attempts to Indigenise the curriculum within Griffith School of Environment, genuine transformation of this particular academic space may indeed prove impossible.

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Dr Monica Seini is a Lecturer within the Griffith School of Environment, Griffith University, teaching courses focusing primarily on Indigenous peoples and the environment. To complement her teaching, Monica brings to the role her experience of years working in government, most recently in Wild Rivers. Monica has, as a member of this research team, also participated in numerous research projects aimed at Indigenising curriculum, particularly within Environmental Science at Griffith University.

Dr Chris Matthews is from the Quandamooka people of Minjerribah (Stradbroke Island). Chris has received a PhD in applied mathematics from Griffith University and is currently a Senior Lecturer at the Griffith School of Environment, Griffith University. Chris has undertaken numerous research projects within applied mathematics and mathematics education. More recently, Chris was the patron and expert advisor for the Make It Count Project, a large mathematics education project coordinating education research within clusters of schools across many areas with the specific aim of improving mathematics education for Indigenous students. Chris is also the co-chair of the Griffith University Working Party to develop and implement an Indigenised curriculum across the whole university. The work is part of an Office for Teaching and Learning (OLT) grant which aims to implement a university-wide model and leadership framework that potentially could grow and sustain an effective Indigenous curriculum within Griffith University.