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'Wings to fly': a case study of supporting Indigenous student success through a whole-of-university approach

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Research Article

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Abstract

Although there have been repeated calls for empirical evaluations focused on *if* and *how* the activities of Indigenous Education Units contribute to Indigenous student success at university, data demonstrating the outcomes of these activities remain scarce. As a first step in addressing this gap, a case study of the *Kulbardi Aboriginal Centre* is presented which documents the development and implementation of its student success strategy. Informed by research that identifies a range of different barriers and enablers of Indigenous student success, the strategy was built around a 'whole-of-university' approach which focuses on influencing across multiple levels of the university (governance and management, teaching and pedagogy and direct student support). The success of the strategy is described in relation to changes in Indigenous student retention and pass rates. The case study offers insight into the activities of an Indigenous Education Unit, which can inform future models of practice in this area and raise awareness of the need for more comprehensive and nuanced evaluation of Indigenous higher education initiatives.

Introduction

Almost 6 years ago, and drawing on a number of different sources, the final report of the Review of Higher Education Access and Outcomes for Aboriginal and Torres Strait Islander people (*the Review*; Behrendt *et al.*, 2012) documented substantial differences between Indigenous[1] and non-Indigenous domestic students' university degree pathways, rates of retention and completion. For example, *the Review* highlighted that there was 'a one in three drop-out rate from university [for Indigenous students] compared to one in five for all domestic students' (p. 7). Since *the Review* was released, there is evidence of steady increases in Indigenous student participation in the higher education sector; however, the most recent national statistics still show a disparity between Indigenous and non-Indigenous student participation. For instance, in 2016, Indigenous persons constituted 2.8% of the population, but only 1.2% of higher education enrolments (ABS, 2016; Department of Education and Training [DET], 2016), and retention rates are still below those of all domestic students (71.2% for Indigenous students versus 79.9% for non-Indigenous students) (based on 2014 outcomes; Universities Australia, 2017). The Universities Australia report further notes that just under half (47.3%) of the 2006 cohort of Indigenous Bachelor students had completed their degrees by 2014 (i.e. within 8 years of commencement), whereas nearly three quarters (73.9%) of non-Indigenous students from the same cohort had completed within this time frame (see also Edwards and McMillan, 2015). These statistics clearly suggest that higher education providers have some way to go towards achieving the 'parity to population' targets set by *the Review* (Behrendt *et al.*, 2012) and, more recently, in the Universities Australia Indigenous Strategy 2017–2020 (Universities Australia, 2017). This study describes the efforts of one university to realise this goal.

A whole-of-university approach

Until relatively recently, scholars and policy-makers alike have tended to view Indigenous Education Units as being responsible for Indigenous student outcomes (Nakata, 2013). Landmark reviews of Indigenous higher education, such as *the Review*, have however increasingly called for a 'whole of university' approach, underscored by the sharing of efforts to

[1]In this paper, the term 'Indigenous' is used where possible unless the work relates specifically to an Aboriginal or Torres Strait Islander community. The term 'Indigenous' is used, respectfully, but the authors acknowledge that its meaning is ambiguous and not widely agreed upon.

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support Indigenous students across university units. For example, it was recommended that 'faculties and mainstream support services have *primary responsibility* for supporting Aboriginal and Torres Strait Islander students, backed up by Indigenous Education Units' (Recommendation 10, p. 52; emphasis added). Likewise, the Universities Australia Indigenous Strategy 2017–2020 suggests that 'embedding Indigenous issues within core [university] policies' (Universities Australia, 2017, p. 28) will address disproportionally low participation and success rates among Indigenous students. Notably, these calls for a whole-of-university approach focus attention on the need for cultural change across institutions, with Indigenous Education Units providing 'value-added, specialised support over and above what should already be provided by faculties' (Behrendt *et al.*, 2012, p. 50) and broader guidance on all matters Indigenous across the university; including curriculum, teaching, research and governance.

A subsequent question arising from calls for a whole-of-university approach is who is responsible for the leadership, implementation and evaluation of universities' Indigenous student success strategies? Some of the changes that have resulted from efforts to implement the Review's recommendations have proven to be both divisive and contentious, with some Indigenous Education Units subject to review and restructuring. Further, some institutions' interpretation of a whole-of-university approach has led to the 'mainstreaming' of staff and services, and Indigenous Education Units closing down completely (Asmar and Page, 2017). Thus, key questions about the role that Indigenous Education Units have to play in supporting academic progression remain largely unanswered, with increased pressure on those that remain to demonstrate that they can offer a return on investment in relation to improving student retention and completion rates (e.g. Frawley *et al.*, 2015; Smith Pollard, Robertson & Trinidad, 2017*a*).

Despite ongoing calls for a whole-of-university approach in supporting Indigenous student success, there are a few examples in the published literature of how such an approach has been applied. One exception is Rigney (2017), who describes how a whole-of-university approach at the University of Adelaide has taken the form of university management driving changes in sectors beyond student support. Activities to indigenise the university have included establishing an Indigenous Education and Engagement Committee within the management level of the university, staff being trained in cultural awareness and faculty members being supported to indigenise the curriculum. Notably, although not directly aimed at student support, these activities paralleled favourable increases in Indigenous student enrolments at the university. Though helpful in understanding how a whole-of-university approach can be applied, the activities described by Rigney (2017) were driven by staff across the whole university, rather than the Indigenous Education Unit. Thus, there is a gap in knowledge as to how Indigenous Education Units might go about leading and applying a whole-of-university approach. To our knowledge, there is yet to be an examination of how an Indigenous Education Unit has adopted the whole-of-university approach, with the specific aim of increasing Indigenous student success. In this context, the aim of this paper is to present a case study of how one Indigenous Education Unit, the *Kulbardi Aboriginal Centre*, has lead and implemented a whole-of-university approach to Indigenous student success. In doing so, this study offers an example of how efforts to build the evidence base of 'what works' in the Indigenous higher education space (Smith *et al.*, 2017*a*; Smith, Trinidad, & Larkin, 2017*b*) might proceed.

Case study: *Kulbardi*

An exploratory case study methodology was identified as well suited to developing the type of descriptive insight that could inform practice, policy and future research projects (see Zanial, 2007). Whilst delimited in context-specific ways, Merriam (1988) argues that the case study approach 'offers a means of investigating complex social units consisting of multiple variables of potential importance in understanding the phenomenon' (p. 41). Case study approaches are also open to different theoretical paradigms and types of data (VanWynsberghe and Khan, 2007). With this in mind, the methodology is consistent and intent of this study which examines a suite of activities that make up a whole-of-institution approach to Indigenous student success.

Our methodological steps began with mapping the actions of the Centre to support student success. Specifically, we examined the activities outlined by the Centre's Student Success Strategy, which was developed in 2013 and implemented from 2014 to 2016. We then requested Indigenous onshore student outcome data from the university's Office of Strategy, Quality and Analytics (OSQA) for the 3-year period before implementation of the strategy (i.e. 2011–2013), the three years during implementation (2014–2016) and 1-year post-implementation (2017). Although OSQA routinely reports on student outcomes for all enrolled students, these data are not typically broken down to allow outcomes to be compared across enabling, undergraduate and post-graduate courses. This is problematic because the workload, academic skill-level of students, level of academic support and expectations of students, fundamentally differ between these courses. A third and final step in our methodology was, therefore, to request course-level student outcome data. The university provided approval for the use of student data in this study.

Overview. As is the case in many other units, *Kulbardi*'s model has developed organically over time, with changes occurring in neither a linear nor consistent manner. It is, therefore, useful to start by providing an overview of the history of the unit. First established as the Indigenous Education Unit in 1988, the unit formally became the *Kulbardi Aboriginal Centre* in 1996. The Centre's motto 'wings to fly' (*Kulbardi* is a Noongar word for magpie) encapsulates the aim of supporting students to develop the tools (i.e. the wings) that they need for independent learning and to engage in the broader community. The Centre sits on Noongar country in a public university in Perth, Western Australia and provides services to 200–300 Indigenous students at any one time. The majority of students enrol from non-traditional pathways (e.g. non-ATAR entry) and there is a high proportion of students from low socioeconomic status backgrounds.

Centre staff include a Head of Centre, one full-time Student Success Officer, one full-time Student Support/Indigenous Tutorial Assistance Scheme (ITAS) Co-ordinator, two full-time academics, a part-time teaching academic, a part-time post-doctoral research fellow, an Administrative Coordinator, two Communications and Engagement Officers and several casual tutors. Facilities include a study space where students can access computing facilities, study rooms, a kitchen and an outdoor area. The Centre offers three major academic support programmes: *K-Track*, a university enabling programme, which has recently received an Australia Award for University Teaching; *Ngoolark*, an enabling programme for undergraduate students; and the *Indigenous Student Success Program* (formally ITAS),

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which is a federally funded tuition support programme that provides Indigenous university students free access to tutors (see Wilks *et al.*, 2017). Notably, not all Indigenous students enrolled in the host university attend the Centre and some access alternate academic and support programmes. For example, Indigenous students can access an Indigenous pre-entry course run by the School of Veterinary and Life Sciences or a mainstream pre-entry enabling course.

Recent history. Although the aims of the Centre have remained mostly unchanged from conception to present (i.e. the Centre provides a physical space for Indigenous students to access academic, social, emotional and cultural support), the mechanisms for achieving these aims have changed considerably since the Centre's inception. In 2011, an external review raised substantial concerns about the Centre's capacity to support Indigenous students through their educational journeys. At the same time, the host university was struggling to achieve national standards, with Moreton-Robinson *et al.* (2011) ranking the university as the 'worst performing institution in the country' (based on its performance in three areas: Indigenous participation in university governance structures; student access and attainment rates and staff employment). Although this assessment proved to be a catalyst for change, the subsequent recommendations focused primarily on re-establishing an inclusive and supportive professional and learning environment and did not speak to what the 'core business' of *Kulbardi* should be. Thus, in 2013, with new leadership (and structural changes occurring both within and external to the Centre), *Kulbardi* was asked to reconsider its purpose within the institution and re-focus efforts on supporting Indigenous students.

Importantly, and at odds with reports of Indigenous Education Units taking a step back from leading Indigenous success strategies under a whole-of-university approach (Asmar and Page, 2017), Centre staff were the innovators and drivers of the strategy described here. The rationale for the Centre leading the new student success strategy was in some ways pragmatic, and in some ways strategic. At a practical level, and as evidenced by the external review, the host university had a lack of maturity and a poor track record around Indigenous student support. Thus, it did not make sense to task the wider university with the development of a new Indigenous student success strategy. Second, there was a lack of existing infrastructure within the broader university to develop and implement Indigenous student support activities. In contrast, the Centre's core business had always been student support, and so the existing capacities of staff in this area could be leveraged to implement the new student success strategy. Strategically, Centre staff saw the opportunity to drive the universities' new approach to Indigenous student success as key to the Centre's sustainability. Importantly, the leadership of the Centre in driving a whole-of-university approach to student success was received positively by the wider university, and viewed as the Centre leading a mainstream response to Indigenous student support.

Conceptualisation of the strategy. A starting point for refocusing *Kulbardi's* strategic direction was to look towards the academic literature on supporting Indigenous student success. Drawing on Nakata's (2013) advice that Indigenous staff within universities should take greater ownership over the support and success of their student cohorts, the strategic intention was to focus on student success (rather than enrolments) and how student data might be utilised to inform practice. The resulting approach drew on a relatively large body of published research that documents factors that affect the performance of Indigenous students in tertiary education (e.g. Nakata *et al.*, 2008; Pechenkina and Anderson 2011; Rigney, 2011). It was apparent that Indigenous student success is not solely dependent on student-level factors, but also affected by structural-level factors across the university. For instance, academic issues, including those related to academic content and skills, teacher attitudes, the curriculum and teaching and learning practices, have been identified as a recurring barrier to success for many Indigenous students (e.g. Morgan, 2001; Ellender *et al.*, 2008; Whatman *et al.*, 2008; Devlin, 2009). There is also evidence from the broader literature that indicates that students will be more likely to thrive, persist and complete their degrees in environments that provide clear and consistent information about institutional and curricular expectations and requirements (e.g. Engstrom and Tinto, 2008). Non-university factors including financial circumstances, housing and family, peer and community support are also regarded as crucial to academic persistence (e.g. Guillory and Wolverton, 2008; Pechenkina and Anderson, 2011). A direct consequence of recognising that the responsibility for student success does not lie solely with the student is that support programmes will work best if they are targeted at multiple systems across the university. Specifically, Nakata (2013) has suggested that Indigenous Education Units should work across three levels of intervention when developing a student success strategy: (1) university management and governance; (2) teaching and pedagogy and (3) student support. Hence, the new strategy was based on the understanding that interactions at multiple levels of the university would be necessary.

Measuring success

The first stage in developing the strategy was to define Indigenous student success. Definitions of student success within Indigenous higher education have been mixed, and some have argued that widely adopted measures do not adequately capture what success means to Indigenous students (Herbert, 2003; Pidgeon, 2008). For example, total university enrolments have been the yardstick for measuring student success, with more enrolments used as a proxy for student outcomes (e.g. Asmar *et al.*, 2015; Smith *et al.*, 2017*a*, 2017*b*). Yet, increases in Indigenous student enrolments do not correspond directly to graduation rates, and thus do not accurately represent academic achievement (see Pechenkina *et al.*, 2011; Nakata, 2013). Furthermore, although Indigenous student participation in enabling programmes is fundamental to improving undergraduate entrance rates, the completion of these courses is also not considered to be a reliable indicator of success (Behrendt *et al.*, 2012) and there are discrepancies in reports of how many undergraduate Indigenous students have actually accessed these programmes (DET data suggest that only 9.4% of Indigenous students between 2009 and 2013 had completed an enabling course; Pitman *et al.* (2017), whereas *the Review* suggested that over 50% of Indigenous students had accessed undergraduate degrees through enabling or special entry programmes). Thus, other ways to measure student success that reflected students' ongoing participation and progression through their undergraduate degrees were sought.

Indigenous and non-Indigenous staff at the Centre discussed the pros and cons of utilising student enrolments and enabling course pass rates as the sole indicators of student success, and decided that these metrics did not reflect the reasons students were saying they attended university (i.e. informal discussions

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with students indicated that they wanted to pass their units and receive their degrees). Based on these discussions, two types of success outcomes were identified: *academic retention* rates; and *unit pass* rates. *Academic retention rates* represent the percent of domestic students who remain enrolled in the university from one academic year to the next. They offer a more nuanced measure of university progress than overall enrolments because staying in the university from year-to-year represents a commitment to, and likely progression, through an enabling course or a degree. The Centre set a 'proximity to parity' target for academic retention. That is, the goal was to match (or better) the retention rates for non-Indigenous domestic students by 2017, based on baseline data showing that, in the 3 years before the implementation of the strategy (2010–2013), the average retention rate for Indigenous students was 12% below that of non-Indigenous students (Indigenous = 71.5%; non-Indigenous = 80.9%). *Unit success rates* were calculated using the method described by Pitman *et al.* (2017) where success is expressed as the proportion of units in which students receive a 'pass' (or above) grade, divided by the total number of units attempted. The Centre set a target that 70% of all units undertaken by Indigenous students would result in a 'pass' (or above) grade by 2017. The average pass rate for 3 years before the implementation of the strategy was 62%. Hence, reaching the target of 70% would mean increasing the pass rate by just over 11%. The use of these success metrics, rather than total enrolment numbers, is increasingly recognised as relevant to Indigenous higher education studies (see Wilks and Wilson, 2015) and has the advantage of drawing on data that are routinely collected by universities as part of their standard reporting requirements. Further, an additional deciding factor in the Centre utilising these success outcomes was that both metrics map onto national reporting requirements for Indigenous Education Units, and on which federal funding for Centres is directly tied. Thus, it was important that the Centre aim to achieve improvements in the student outcomes which it is funded to achieve.

It is important to note here that in implementing the new Success Strategy, Centre staff anticipated an initial decrease in retention of Indigenous students. Consistent with the Centre's revised definitions of student success the strategy saw staff make an explicit shift from focusing on retention to focusing on pass rates. As a result, difficult conversations had to be had with students who were retained year on year but whom achieved little or no academic progress. As part of their outreach work, the Student Success team (discussed below) had in-depth conversations with students who were not at good standing within the university. Many students who were identified in this process had gained entry to the University through 3–5 week short courses that were mapped to specific disciplines. These programmes, no longer in existence, were discontinued due to the poor academic progress of students when transitioning into undergraduate studies. Put simply, these programmes were inadequate in preparing these students to undertake university studies. Students were asked to consider the financial implications of their continuing studies and reflect on the likeliness of their success at university. Students who opted out were supported to take up employment or alternative educational pathways.

Approach

Figure 1 outlines the actions taken by *Kulbardi* across three levels of intervention. As illustrated in figure 1, the strategy employed a phased approach, where Centre staff focused first on university management and governance, followed by faculty and teaching, and then direct student support.

The approach involved the following components:

University management and governance. In 2014, the Head of Centre booked meetings with key university management staff and other stakeholders to communicate the aims and the scope of *Kulbardi*. The Student Success Strategy (figure 1) was presented and examples of activities provided for each stage. These meetings served to 're-brand' the Centre as a place that was focused on student success and to commit the University to supporting efforts to achieve the expected level of performance (i.e. parity in retention figures, 70% pass rate). Senior academics and managers were asked to provide their ideas about how each part of the university could enable student success and to share the responsibility of providing a supportive learning environment for Indigenous students. A salient outcome of the intervention at the management and governance level was that *Kulbardi* staff became embedded in university governance structures (e.g. the Head of Centre joined the Academic Council). Through this, embedding representation increased at the highest levels of the university.

Teaching and pedagogy. In 2015, Centre staff focussed on working with the various schools in the University. The aim here was for *Kulbardi* to gain visibility with each of the schools so that academic staff would refer Indigenous students to the Centre for support. Increased visibility of the work the Centre did was achieved by Centre staff holding meetings with faculty members including school Deans, academic chairs and first year student support co-coordinators. In turn, faculty members began to reach out to the Centre, asking for support on developing culturally appropriate curriculum, seeking cultural competency training or emailing the Student Success Officer directly about how best they could support a specific student. Centre staff viewed this reciprocated communication between faculty and the Centre as evidence of strong collaboration between the Centre and the host university. Building such relationships and knowledge created new opportunities for *Kulbardi* to provide appropriate resources and support in the development of curriculum and pedagogy. For example, the importance of explicit and rigorous expectations for success combined with culturally-responsive and connected curriculum was emphasised (see Bodkin-Andrews and Carlson, 2014).

In a context in which Indigenous education is 'everybody's business', another important purpose of engaging with the schools was to model how engagement with broader university systems might occur. Building relationships between faculty staff and students was considered necessary for the academic development and support of Indigenous students who attended the Centre. The establishment of support networks, comprised of an assemblage of academic and professional staff across the entirety of an institution and its functions, have been identified as important to student agency and persistence (Maldonado *et al.*, 2005; Pechenkina, and Anderson, 2011). Such networks establish the 'relational' groundwork (Carter *et al.*, 2018, p. 255) for cultural 'border crossing' and learning that provides students with important insights into hidden sources of knowledge and power (Giroux, 1992, p. 22). This approach is also consistent with Nakata's (2013) observation that the formation of collegial relationships between Indigenous students (and staff) and non-Indigenous university staff is a critical step of closing the gap between Indigenous and non-Indigenous ways of thinking.

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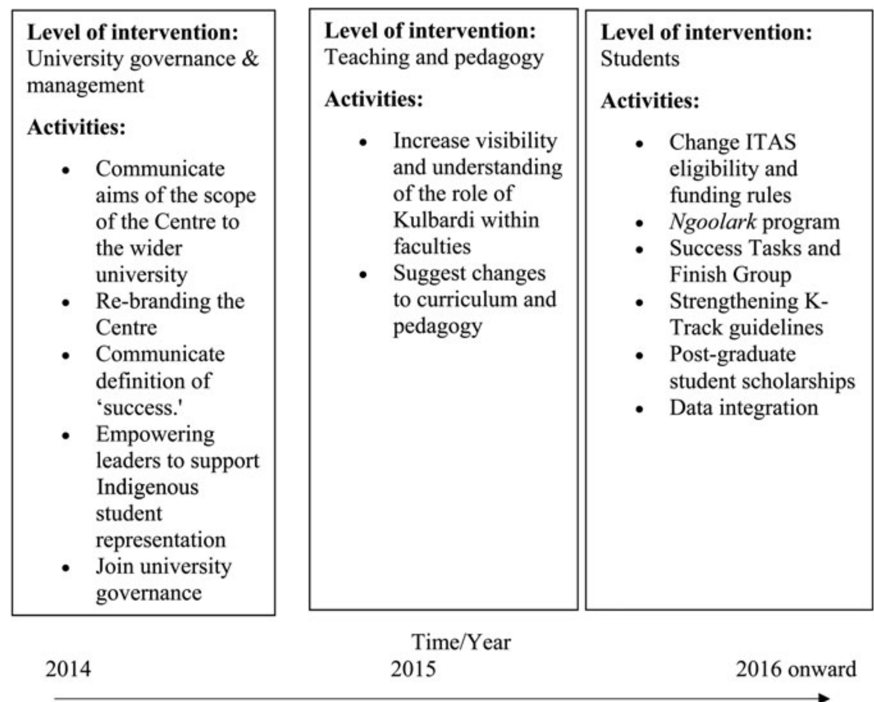

Fig. 1. Implementation plan for *Kulbardi*'s Student Success Strategy.

Within the Student Success Strategy, these relationships between faculty staff and students were established early in students' journeys. For example, in the K-Track enabling course, students work alongside academics in Psychology and Exercise Science, Health Professions, and Veterinary and Life Sciences through educative experiences embedded in their coursework that extend beyond ad hoc guest lectures. For instance, in K-Track's *iHealth* unit, non-Indigenous Psychology and Exercise Science academics and postgraduate students work collaboratively to develop and implement individual health and well-being plans for students. This has not only fostered a sense of connectedness with the academy for *Kulbardi* students, but it has had a significant impact on non-Indigenous perceptions of Aboriginal and Torres Strait Islander people within the University community. Another practical example of this is when students attending the Centre enquire about course selection: in this circumstance Centre staff support the student to book an appointment with the student advisor in their faculty, rather than enquiring on their behalf.

Student support. Across 2016–2017, *Kulbardi* staff further narrowed their focus on direct student–staff interactions. The focus on direct student support only occurred *after* staff had spent time engaging with university management and governance and with individual schools. The rationale here was that encouraging students to join with broader university systems would not be successful if the systems were not ready to support and receive students.

Several activities occurred at this level of intervention. Firstly, a change in eligibility rules for ITAS allowed for a more equitable distribution of tuition hours such that *any* Indigenous student (regardless of current academic performance) became eligible for tuition (Department of Prime Minister and Cabinet, 2014). Such funding changes meant that those students who were succeeding but still wished to improve their performance, as well as those who were struggling academically, could access tutors. Consequently, ITAS tutors began to perform a greater variety of tasks; ranging from teaching study skills, to the support of students' academic thought (e.g. helping students develop strong conceptual arguments, critical analysis of texts). Importantly, as part of the ITAS tutors' reporting responsibilities, they were required to indicate their observations of their student's individual academic performance. Where a student was deemed to be at-risk, support interventions were put in place by *Kulbardi* staff (see description of the student success working group, below).

The second student-focused initiative was the development and implementation of the Ngoolark unit (first implemented in semester 1, 2017). Ngoolark is as an enabling unit that facilitates undergraduate students' use of the Centre and wider university support services. Ngoolark is limited to humanities students.[2] Although open to all undergraduate students, the unit targets those students who have failed two or more units in the previous semester (and so are at risk of failing the next semester). A critical component of encouraging students to participate in Ngoolark is that the unit carries full course load. Thus, students remain enrolled in a full-time course load, and as a result, are still eligible for total ABSTUDY funding. The Ngoolark unit runs for a semester during which students meet weekly with an ITAS tutor (to work on assignments from their course-specific units) and with the Student Success Coordinator who provides academic coaching (e.g. helping the student to develop goals for the week, time management strategies). All Ngoolark assessments are formative, and directly related to the content that the student is learning in their degree.

Third at the direct student support level of intervention, Centre staff made changes to the entry conditions for its pre-university enabling programme, *K-Track*. Before the implementation of the Student Success Strategy, *Kulbardi* admitted students into enabling programmes without any assessment of the prospective students' academic preparedness or university readiness.

[2]Ngoolark is a Noongar name for the white tailed black cockatoo. Indigenous science students receive support from a programme, which is separate from the Centre and thus not discussed in detail here.

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This 'open door' approach was one that was supported by the Centre's previous management and rewarded by the former federal Indigenous funding regime. Yet, while this 'open-door' approach led to high Indigenous enrolment figures, it also led to high-attrition rates and low numbers of completions in the enabling programme. The practice of enrolling students who are not ready to begin a university-enabling programme also presents complex pedagogical and curriculum challenges, because the resulting student cohort has wide-ranging academic needs. Therefore, the academic team within *Kulbardi* developed a combined skills assessment and university readiness survey that better identified the needs of prospective Indigenous enabling students. Importantly, there were no previous instruments for assessing university readiness among Indigenous students within the literature to draw this assessment from. Therefore, the assessment was developed in consultation with academics in the University's non-Indigenous enabling programme. While benchmarking was not undertaken, the diagnostic assessment and survey has been reviewed and refined over time with particular attention paid to the relation between outcomes/findings from the diagnostic and survey and the subsequent student performance within and beyond the enabling programme.[3] Based on the results of these assessments, students were only granted entry into the enabling programme if they could demonstrate appropriate levels of academic preparedness and self-reflection about their ability to undertake university studies. Observations from Centre staff support that students' performance on the combined skills assessment and university readiness survey is a strong predictor of student success within the enabling programme. Notably, although staff were planning to make changes to *K-track* entry requirements in the final year of implementation of the Student Success Strategy, the changes took place 1 year earlier (i.e. 2015). This pre-emptive change in entry requirements was catalysed by changes in federal government funding which saw Indigenous Education Units allocated funding on student enrolment rates *as well as* pass rates. Thus, there was a shift in the economic context of the Centre which allowed for a greater focus on selecting enabling students who were most likely to complete the course.

A fourth student-focused strategy was the establishment of the Student Success Working Group (formed in 2017 after discussions in 2016). The Working Group, comprised of the Head of Centre, Student Support/ITAS Coordinator, academic staff and the Student Success Officer, met fortnightly to discuss students at the Centre who might benefit from additional support. Students were not included in the Working Group to maintain individual student confidentiality. The Student Success Coordinator subsequently established contact with 'at-risk' students and offered them individual support (e.g. enrolment in the Ngoolark unit). Students were flagged as 'at-risk' if they: (a) were disengaged from their course of study (ascertained by checking whether the student has logged onto the university's learning management system to access course material and checked university email); (b) not attending the Centre and/or classes and (c) have psychological and/or physical limitations to studying and no current equity/disabilities/medical support plan.[4] (d) had not submitted course assignments or submitted late; or (e) were studying in a psychosocial context (e.g. living away from home) that requires additional support. The bulk of information on student engagement was gathered using the university's client management system that provides real-time detailed information relating to students' interactions with a broad range of functions within the institution. This system could identify, for example, if a student did not submit an assessment, had not attended a tutorial and also document all communications or support the student received from various areas of the university.

Students who were deemed 'at risk' by the Working Group were offered tailored interventions. Both student support and academic staff collaboratively developed these interventions. Although a significant body of research focused on increasing retention and success of Indigenous, equity and broader student cohorts informed these support activities (e.g. , Ellender *et al.*, 2008; Engstrom and Tinto, 2008; Guillory, and Wolverton, 2008; Devlin, 2009) best practice relating to supporting Indigenous students remains contentious. Indeed, while the Behrendt review (Behrendt *et al.*, 2012) provided some case studies and recommendations, no clarity in the literature exists regarding what constitutes best practice in supporting Indigenous students through university. Therefore, interventions were developed and tailored to each individual student's need and relied on context-specific factors. For example, one student may have benefited most from being linked in with financial support, whereas another student may have required remedial study skills. This broad spectrum of interventions included referral to specialist services, referral to academic support, financial support, support in finding accommodation or broader external advocacy agencies were common. Further, the identification of individual student needs was supported by one-to-one conversations between Student Success Officers and the student. What support staff found from these conversations then fed back into the Student Success Working Group on how best to support the student in the future. This type of process ended in staff having a comprehensive picture of student needs from a range of perspectives. Importantly, throughout each step, students were empowered to reflect on their own strengths in seeking to overcome their identified obstacles.

A secondary and broader aim of the Working Group was to develop a culture of success within *Kulbardi*. To achieve this shift in culture, the Working Group members reviewed the Centres' website; ensuring content was communicating a narrative of Indigenous student success. As an example, Centre staff uploaded student success profiles onto the website. Students were also encouraged to write their weekly 'victories' on a student success wall, and staff awarded prizes for academic achievement. Moreover, as a result of meeting regularly to discuss at-risk students, the Working Group was able to identify risk factors for student disengagement and implement centre-wide strategies to address these. These included: holding an Indigenous student orientation day during O-week (the first of which occurred during semester 1, 2018); encouraging commencing students to 'buddy-up' with Indigenous undergraduate students, the employment of a student wellbeing officer. Several other recommendations which are yet to be enacted by *Kulbardi* staff are the provision of practical and contextualised cultural awareness training for all staff to ensure best practice; provision of mental health 'fun days' to improve student awareness of mental health and university health services, and to investigate the feasibility of Indigenous student campus housing. *Kulbardi* is also designing a proposed new purpose-built Centre

[3]The first author can be contacted about the diagnostic assessment.

[4]This was assessed by the Student Support Officer in conversation with the student, whom has several years of experience in the role. The Student Support Officer would consult with general practitioners, clinical psychologists, counsellors and/or social workers employed at the student health clinic if a student disclosed a medial or psychological condition that was likely to influence their ability to succeed in their studies, and recommend a meeting with Student Equity if necessary.

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that meets the now increased student demands on Indigenous student support services.

A fifth, and final, student support strategy focused on Indigenous post-graduate students. Based on findings from the Centre's annual Indigenous Student Experience Survey, it became apparent that students faced substantial financial barriers to taking up postgraduate studies, particularly research degrees. In response, and in partnership with the School of Graduate Studies, *Kulbardi* established four annual research scholarships for Indigenous students enrolled in higher degrees (i.e. at the masters or doctoral level). *Kulbardi* also created a postgraduate research support role to mentor and guide students through to candidature and beyond. Academic staff at the Centre are also permitted to co-supervise and deliver independent study contracts where appropriate. These additions to Centre practice resulted in an encouraging increase in Indigenous students undertaking higher degree research—from six students in 2014 to 12 students in 2018. Increasing the amount of Indigenous students who graduate with post-graduate degrees is a key part of the Centre's wider strategy to develop a future Indigenous academic workforce. The awarding of Indigenous academic fellowships, where PhD students are employed as fixed-term academic staff members to extend their learning and teaching experiences alongside their research studies, also supports this endeavour.

Outcomes

Retention rates. As noted above, a key component of the *Kulbardi* approach has been to measure success directly regarding student outcomes (i.e. retention rates, unit pass rates). Figure 2 compares Indigenous and non-Indigenous student retention rates from 2011 to 2017.

Figure 2 depicts how, from 2011 to 2017, there has been an upward trend towards Indigenous students moving closer to parity with non-Indigenous student retention rates. Notably, there was a sharp increase in parity in 2014, which was the first year of implementation of the Student Success Strategy. However, it is important to note that retention rates recorded in 2014 likely reflect students' experiences of the university in the 2013 (i.e. the previous academic year). Although speculative, this uptick in parity may be because discussions about a new strategic direction for the *Kulbardi* began in 2013, and thus Indigenous students may have anticipated positive changes at the Centre and remained at university. Figure 2 also shows that the closest point to parity with non-Indigenous students occurred in 2017, which was 1-year post the full implementation of the Student Success Strategy. However, it should also be noted that this uptick occurred in the context of a slight downward trend in non-Indigenous student retention, which could explain part of the narrowing gap between Indigenous and non-Indigenous students. Figure 2 also demonstrates a slight reduction (3% decrease) in Indigenous student retention rates between 2015 and 2016. This drop in retention may be due the Centres' shift from focusing on retention to focusing on academic progression, and the resultant difficult conversations with some students around deciding whether university was the best option for them.

Pass rates. Figure 3 shows the unit pass rates between 2011 and 2017, broken down by enabling, undergraduate and post-graduate units. As figure 3 demonstrates, across this time-period, there was a trend towards increasing pass rates for Indigenous students. In examining differences across enabling, undergraduate and post-graduate cohorts, post-graduate pass rates reached and continued to remain around 70% from 2012 onwards. Similarly, undergraduate pass rates fluctuated around 70% from 2012 onwards and reached 81% by 2015. However, the largest increase in pass rates occurred among the enabling student cohort. For these students, the largest increase in the pass rate was between 2016 and 2017, 1 year post-implementation of the Student Success Strategy.

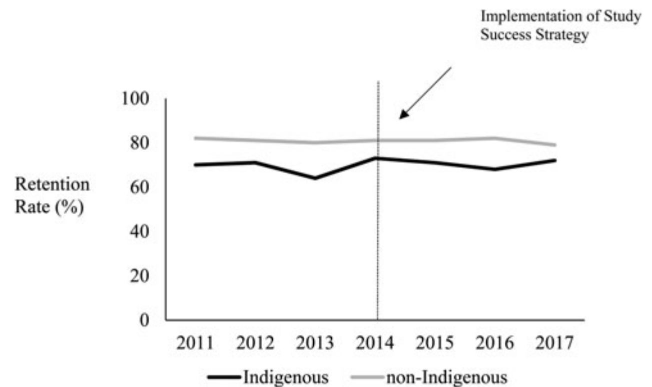

Fig. 2. Indigenous and non-Indigenous student retention rates, 2011–2017. *Note*: Indigenous student *N* = 193–283. Non-Indigenous student *N* = 13,109–14,065.

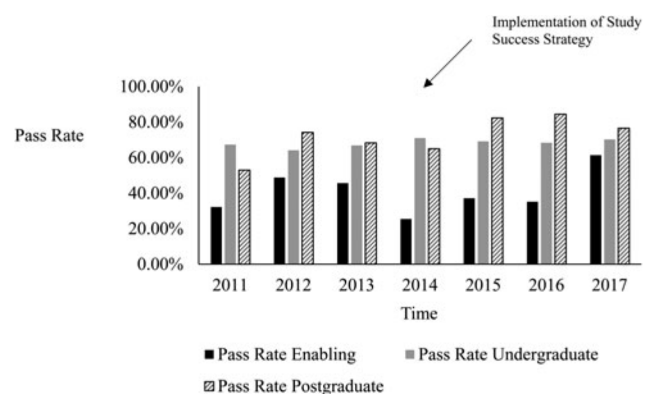

Fig. 3. Unit pass rate for Indigenous enabling, undergraduate and post-graduate students, pre- and post-implementation of the Student Success Strategy. Indigenous student *N* = 193–283. Non-Indigenous student *N* = 13,109–14,065.

Discussion

This paper presents a case study of one Indigenous Education Units'—the *Kulbardi Aboriginal Centre*—implementation of a whole-of-university approach to Indigenous student success. Specifically, we have described how, capitalising upon the outcomes of an external review and renewed institutional commitment to Indigenous education, *Kulbardi* led a concerted effort to strategically operationalise, implement and evaluate a whole-of-institutional approach to supporting student success. In doing so, a model of student success was developed that spans multiple levels of the university (i.e. management and governance, teaching and pedagogy and direct student support), with initial evaluation based on university data concerning: (1) parity of Indigenous student retention rates with non-Indigenous students and (2) unit pass rates. Overall, these data suggest that, despite an upward trend towards parity in Indigenous and non-Indigenous *retention rates* from pre-post implementation,

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the implementation of *Kulbardi's* student success strategy did not co-occur with any substantial improvement in parity, but rather tracked in-line with this upward trend towards parity. In contrast, *unit pass rates* for Indigenous students increased from pre-post implementation, and showed that the Centre had been successful in reaching its target of a 70% pass rate by 2017. More broadly, this case study begins to address an identified need in the literature for a more comprehensive discussion about 'what works' in Indigenous higher education (see Smith *et al.*, 2017*a*, 2017*b*, 2018). In what follows, we discuss the need for evaluation of efforts to implement a whole-of-university approach to Indigenous student success that are driven by Indigenous Education Units and also discuss nuanced approaches to data collection when evaluating the activities of Indigenous Education Units.

Evaluating the practice of Indigenous education units

Nakata (2013) has argued that staff at Indigenous Education Units must engage in critical, self-reflective practice if they are to improve success outcomes in their student cohorts. In line with this recommendation, the staff at *Kulbardi* underwent a detailed and systematic approach to critical-self-reflection, which resulted in the development and implementation of the Student Success Strategy presented here. Based on recommendations from previous reviews in the field of Indigenous higher education and a small, but informative, body of previous empirical evidence, the Centre adopted a whole-of-university approach, which saw intervention occur across multiple levels of the university. To our knowledge, this is the first published study to detail the steps that an Indigenous Education Unit has taken in the operationalisation and implementation of this type of multiple layered approach, and presents a model which can be considered and further developed by other Indigenous Education Units across Australia.

Importantly, this case study illustrates how a whole-of-university approach can be driven and implemented by an Indigenous Education Centre. Although some institutional responses to a whole-of-university approach have seen the restructure, mainstreaming and even closure of Indigenous Education Units (Asmar and Page, 2017), *Kulbardi* interpreted a whole-of-university approach as the Centre leading mainstream responses to Indigenous student support. As a result of the work performed in engaging university management and increasing Indigenous representation at the governance level of the university, which run parallel with promising gains in student success, *Kulbardi* is now seen within the university as a sector leader in student support. Thus this case study provides an illustration of how a whole-of-university approach to student support can be housed within an Indigenous Education Unit, and provides an alternate model of student support to that of strategies which are owned by mainstream university services (e.g. non-Indigenous student support, university governance).

The examination of student pass rates demonstrated that the Centre reached its target of an overall 70% pass rate for units undertaken by Indigenous students, following the implementation of the strategy. Specifically, the introduction of the *Ngoolark* unit in 2017, which supports undergraduate students to access academic support systems, co-occurred with undergraduate pass rates reaching over 70% for the first time. Likewise, increases in post-graduate pass rates tracked in-line with the Centre creating a postgraduate research support position and ensuring financial support for postgraduate students. Furthermore, although the pass rates for enabling units did not reach the 70% target in the period examined, they did show a sharp upward trend post-implementation of the success strategy, suggesting that the Centre is on the way towards achieving this. Overall, these findings offer some support for the adoption of a whole-of-university approach in terms of increasing Indigenous student pass rates.

Limitations of student outcome data

Despite the improvement in unit pass rates, our examination of student retention rates provided less robust support for the Centre's Student Success Strategy. That is, although Indigenous retention rates continued to move closer to parity (with non-Indigenous rates) during the implementation period, an upward trend was already present pre-implementation. Thus, it is difficult to disentangle whether the new activities of the Centre contributed to tangible increases in student parity, or whether this was a natural extension of an already increasing trend. That said, academic retention rates may not be the most accurate and nuanced indicator of student success because they only reflect Indigenous students remaining at university, regardless of course progression. That is, retention rates do not show whether a student is progressing through their degree, and hence, moving towards completion. Moreover, this metric does not measure the extent to which students are failing and re-taking the same unit, or switching between degrees and remaining in first-year units. These students are recorded as 'retained', despite (arguably) stalling in their academic progression. Likewise, retention rates are measured from one academic year to the next and thus do not capture so-called 'boomerang' students (i.e. those who leave university for extended periods of time but then return to complete their degree). In addition, local retention rates do not reflect the progression of those students who have transferred to other universities.

In fact, although the student outcome data that we chose to examine here is highly accessible and practical, in many ways this case study serves to highlight the limitations of this data. Firstly, data were aggregated to the level of 'Aboriginal and Torres Strait Islander' student, meaning that tracking individual student retention and pass rates was not possible. It would be useful to track an individual student's academic trajectory, as the activities of Indigenous Centres are unlikely to be equally beneficial to all Indigenous students. These individual differences need to be considered if evaluations of Indigenous Education Units are to be taken seriously. Further, this level of data may help to identify subgroups of students who can benefit from alternative programmes and activities. A related limitation of the current study is the absence of qualitative data assessing university staff members' and students' perceptions of the efficacy of the Student Success Strategy. Such data would provide insight into how students and staff members viewed the changes that the Centre was making during the implementation of the strategy, and would likely provide further insight into implementation practices. Thus, scholars wishing to conduct evaluation of strategies to support Indigenous student success would benefit from including a qualitative data collection component.

Secondly, despite working closely with the host universities OSQA to assess unit pass rates based on course type (e.g. enabling, undergraduate or post-graduate), we were unable to drill down further into other student characteristics which may affect success (see Gore *et al.*, 2017). Most pertinent to the current

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study, we were not able to compare retention rates and unit pass rates for the enabling cohort based on whether students were enrolled in a centre-run enabling programme (i.e. the *K-track* programme) or other university-run enabling programmes. Likewise, we could not compare these success outcomes based on whether Indigenous students enrolled at the university actively attended the Centre. This type of comparison is worth conducting, but requires the integration of the student outcome data routinely collected by OSQA and the individual student data held by the Centre.

At the same time, however, Fogarty *et al.* (2018*a*) have pointed to the complicity of 'deficit metrics' in perpetuating the notion and visibility of a 'problem' in Indigenous education (p. ix). In this context, rather than privilege institutional indicators of success (which reinscribe the hegemony of mainstream ideals and performance measures), there is also preference for more holistic, strength-based conceptualisations of success that encompass personal, cultural and contextual considerations (Biddle *et al.*, 2017; Fogarty *et al.*, 2018*b*; see also Herbert, 2003). As a result, there have been increasing calls for evaluation to be 'decolonised' (Johnston-Goodstar, 2012, p. 113) so that the process is grounded in Indigenous knowledge, protocols and agendas (Smith *et al.*, 2017*a*). What this means is that Indigenous people must be active participants in all aspects and stages of evaluation to ensure that the process is aligned with their values and agendas rather than simply to satisfy government or funding requirements (Johnston-Goodstar, 2012). In response to the legacy of 'racialised' data collection and its complicity with deficit constructions of Indigenous people, Walter (2016) argues for the assertion of Indigenous data sovereignty (p. 84). For Walter, Indigenous data sovereignty encompasses 'the right to determine the means of collection, access, analysis, interpretation, management, dissemination and reuse of data pertaining to the Indigenous peoples from whom they have been derived, or to whom they relate. Indigenous data sovereignty rejects the discourse and practices of Indigenous data business-as-usual and instead centres Indigenous collective rights in relation to data about our peoples, territories, lifeways and natural resources' (p. 261).

Despite such important contributions to 'disrupting' the status quo (Walter, 2016, p. 90), efforts to develop 'alternative' Indigenous evaluation frameworks and processes, remain emergent in the context of Australian higher education (Smith *et al.*, 2017*a*, p. 25). In the absence of any drive by government or higher education providers to implement change, the danger is that the many different whole-of-university initiatives underway to support Indigenous education in the sector will continue to be evaluated using default processes and benchmarks, which fraught by biases and incomplete data, have had the combined effect of reducing Indigenous people to a perceived problem (Fogarty *et al.*, 2018*a*). In short, Indigenous student success may not always conform to such simple outcome indicators, such as those used in this study. Indeed, it is also, of course, the case that the goals and priorities of Indigenous students may not always conform to the objectives and desired outcomes of the Australian government and higher education providers. Indigenous students are not a homogeneous category and care should be taken to ensure that data collection methods and conceptualisations of university success reflect this heterogeneity.

Conclusion

This case study presents descriptive data on the success of the *Kulbardi Aboriginal Centre*'s whole-of-university approach, in the form of Indigenous student parity rates and unit pass rates in. Indeed, a whole-of-university approach to Indigenous student success is relatively new and little evidence has accumulated on the outcomes of interventions in this space. Moving beyond descriptions of the diversity of activity that is currently underway to support Indigenous student success (Asmar and Page, 2017), this paper presents a case study that reports efforts to develop an approach to systematic evaluation of student outcomes. Evaluation activities within this realm can contribute qualitatively and quantitatively to the decision-making of Indigenous staff, students and other higher education partners, including Indigenous community members, who share a commitment to the sustained improvement of Indigenous education and student success. Indeed, there is scope to support and evaluate the plethora of current activities centred on supporting Indigenous students at university (Smith *et al.*, 2018). By adopting a systematic approach to the evaluation of such activities, which is informed by Indigenous standpoints and principles, practitioners and policy makers will gain knowledge on 'what works' in Indigenous higher education.

References

ABS (2016) 2016 Census data summary: Aboriginal and Torres Strait Islander Population. Retrieved from http://www.ausstats.abs.gov.au

Asmar C and Page S (2017) Pigeonholed, peripheral or pioneering? Findings from a national study of Indigenous Australian academics in the disciplines. *Studies in Higher Education* **43**, 1679–1691. https://doi.org/10.1080/03075079.2017.1281240

Asmar C, Page S and Radloff A (2015) Exploring anomalies in Indigenous student engagement: findings from a national Australian survey of undergraduates. *Higher Education Research & Development* **34**, 15–29.

Behrendt L, Larkin S, Griew R and Kelly P (2012) Review of higher education access and outcomes for Aboriginal and Torres Strait Islander people final report. Department of Prime Minister and Cabinet, retrieved from http://www.innovation.gov.au/IHER.

Biddle N, Gray M and Schwab J (2017) *Measuring and analysing success for Aboriginal and Torres Strait Islander Australians*. CEAPR Working Paper No. 122/2017. Centre for Aboriginal Economic Policy Research: Australian National University: Canberra. Retrieved from http://caepr.cass.anu.edu.au/sites/default/files/docs/Working_Paper_122_2017.pdf; www.innovation.gov.au/IHER.

Bodkin-Andrews G and Carlson B (2014) The legacy of racism and Indigenous Australian identity within education. *Race Ethnicity and Education* **19**, 784–807.

Carter J, Hollinsworth D, Raciti M and Gilbey K (2018) Academic 'place-making': fostering attachment, belonging and identity for Indigenous students in Australian universities. *Teaching in Higher Education* **23**, 243–260.

Department of Prime Minister and Cabinet (2014) Indigenous tutorial support more flexible under Indigenous Advancement Strategy. Department of Prime Minister and Cabinet. Retrieved from https://ministers.pmc.gov.au/scullion/2014/indigenous-tutorial-support-more-flexible-under-indigenous-advancement-strategy

DET (2016) Selected higher education statistics: 2016 student summary. Retrieved from http://education.gov.au

Devlin M (2009) Indigenous higher education student equity: focusing on what works. *The Australian Journal of Indigenous Education* **38**, 1–8.

Edwards D and McMillan J (2015) Completing university in Australia: A cohort analysis exploring equity group outcomes. Australian Council for Educational Research. Retrieved from https://www.acer.org/publications-and-resources

Ellender I, Drysdale M, Chesters J, Faulkner S, Kelly H and Turnbull L (2008) When a dream becomes a nightmare: why do Indigenous Australian medical students withdraw from their courses? *The Australian Journal of Indigenous Education* **37**, 40–47.

Engstrom C and Tinto V (2008) Access without support is not opportunity. *Change: The Magazine of Higher Learning* **40**, 46–50.

https://doi.org/10.1017/jie.2019.6 Published online by Cambridge University Press

Fogarty W, Bulloch H, McDonnell S and Davis M (2018*a*) *Deficit Discourse and Indigenous Health. How Narrative Framings of Aboriginal and Torres Strait Islander People are Reproduced in Policy*. Melbourne: The Lowitja Institute. Retrieved from https://www.lowitja.org.au/sites/default/files/docs/deficit-discourse.pdf.

Fogarty W, Lovell M, Langenberg J and Heron M (2018*b*) *Deficit Discourse and Strength-Based Approaches: Changing the Narrative of Aboriginal and Torres Strait Islander Health and Wellbeing*. Melbourne: The Lowitja Institute. Retrieved from https://www.lowitja.org.au/sites/default/files/docs/deficit-discourse-strengths-based.pdf

Frawley J, Smith JA and Larkin S (2015) Beyond Bradley and Behrendt: building a stronger evidence-base about Indigenous pathways and transitions into higher education. *Learning Communities* **17**, 8–11.

Giroux H (1992) *Border Crossings: Cultural Workers and the Politics of Education*. New York: Routledge.

Guillory RM and Wolverton M (2008) It's about family: native American student persistence in higher education. *The Journal of Higher Education* **79**, 58–87.

Gore J, Holmes K, Smith M, Fray L, McElduff P, Weaver N and Wallington C (2017) Unpacking the career aspirations of Australian school students: towards and evidence base for university equity initiatives in schools. *Higher Education Research and Development* **36**, 1383–1400.

Herbert H (2003) *Is success a matter of choice? Exploring indigenous Australian notions of success within the context of the Australian university* Doctor of Philosophy (PhD). Education, RMIT University. Retrieved from https://researchbank.rmit.edu.au/view/rmit:11437

Johnston-Goodstar K (2012) Decolonizing evaluation: the necessity of evaluation advisory groups in Indigenous evaluation. *New Directions for Evaluation* **136**, 109–117.

Maldonado D, Rhoads R and Buenavista T (2005) The student-initiated retention project: theoretical contributions and the role of self-empowerment. *American Educational Research Journal* **42**, 605–638.

Merriam SB (1988) *Case Study Research in Education: A Qualitative Approach*. San Francisco: Jossey Bass.

Moreton-Robinson A, Walter M, Singh D and Kimber M (2011) *On Stony Ground: Governance and Aboriginal and Torres Strait Islander Participation in Australian Universities. Report to the Review of the Higher Education Access and Outcomes for Aboriginal and Torres Strait Islander People*. Canberra: Department of Education, Employment and Workplace Relations.

Morgan D (2001) Indigenous education: factors affecting students' decisions to continue or withdraw from tertiary studies at Flinders University. *International Education Journal* **2**, 233–239.

Nakata M (2013) The rights and blights of the politics of Indigenous higher education. *Anthropological Forum* **23**, 289–303.

Nakata M, Nakata V and Chin M (2008) Approaches to the academic support of Australian Indigenous students for tertiary studies. *Australian Journal of Indigenous Education* **37**(Suppl.), 137–145.

Pechenkina E and Anderson I (2011) *Background paper on Indigenous Australian Higher Education: Trends, Initiatives and Policy Implications*. Report prepared for the Review of Higher Education Access and Outcomes for Aboriginal and Torres Strait Islander People. Commonwealth of Australia. Retrieved from https://docs.education.gov.au.

Pechenkina E, Kowal E and Paradies Y (2011) Indigenous Australian students' participation rates in higher education: exploring the role of universities. *Australian Journal of Indigenous Higher Education* **40**, 59–68.

Pidgeon M (2008) Pushing against the margins: Indigenous theorizing of 'success' and retention in higher education. *Journal of College Student Retention: Research, Theory & Practice* **10**, 339–360.

Pitman T, Harvey A, McKay J, Devlin M, Trinidad S and Brett M (2017) The impact of enabling programs on Indigenous participation, success and retention in Australian higher education. In Frawley J, Larkin S and Smith J (eds), *Indigenous Pathways, Transitions and Participation in Higher Education*. Singapore: Springer, pp. 235–249.

Rigney L (2011) Indigenous education and tomorrow's classroom: Three questions, three answers. In Nola P, Gina M and Hannah RB (eds), *Two way Teaching and Learning: Toward Culturally Reflective and Relevant Education*. Camberwell, VIC: ACER Press, pp. 35–48. https://research.acer.edu.au/indigenous_education/38.

Rigney L-I (2017) A design and evaluation framework for Indigenisation of Australian universities. In Frawley J, Larkin S and Smith, J (eds), *Indigenous Pathways, Transitions and Participation in Higher Education*, Singapore, Springer, pp. 45–63.

Smith JA, Pollard K, Robertson K and Trinidad S (2017*a*) What do we know about evaluation in Indigenous higher education contexts in Australian? *International Studies in Widening Participation* **4**, 18–31.

Smith J, Trinidad S and Larkin S (2017*b*) Understanding the nexus between equity and Indigenous higher education policy agendas in Australia in Indigenous pathways, transitions and participation in higher education. In Frawley J, Larkin S and Smith J (eds), *Indigenous Pathways, Transitions and Participation in Higher Education*. Singapore: Springer, pp. 15–30.

Smith J, Pollard K, Robertson K and Shalley F (2018) *Strengthening Evaluation in Indigenous Higher Education Contexts in Australia: 2017 Equity Fellowship Report*. Perth: National Centre for Student Equity in Higher Education.

Universities Australia (2017) *Indigenous Education Strategy* 2017–2020. Retrieved from https://www.universitiesaustralia.edu.au/

VanWynsberghe R and Khan S (2007) Redefining case study. *International Journal of Qualitative Methods* **6**, 80–94.

Walter M (2016) Data politics and Indigenous representation in Australian statistics. In Kukutai T and Taylor J (eds), *Indigenous Data Sovereignty: Towards an Agenda* CAEPR Research Monograph. Canberra, ACT: ANU Press, pp. 79–98.

Whatman S, McLaughlin J, Willstead S, Tyhuis A and Besston S (2008) Quality and efficacy of the Indigenous tutorial assistance scheme (ITAS) for university students. *The Australian Journal of Indigenous Education* **37**, 118–130.

Wilks J and Wilson K (2015) A profile of the Aboriginal and Torres Strait Islander higher education student population. *Australian Universities Review* **57**, 17–29.

Wilks J, Fleeton ER and Wilson K (2017) Indigenous tutorial assistance scheme. Tertiary tuition and beyond: transitioning with strength and promoting opportunities. *Australian Universities Review* **59**, 14–23.

Zainal Z (2007) Case study as a research methodology. *Journal Kemanusiaan* **9**, 1–6.

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