A profile of the Aboriginal and Torres Strait Islander higher education student population

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This paper brings together recent statistics relating to the participation of Aboriginal and Torres Strait Islander students in higher education. A number of key statistical realities relating to their enrolment into, retention during, and completion of, their university courses are depicted. Foremost among these realities is that despite initiatives over recent years to redress their under-representation, Aboriginal and Torres Strait Islander students' participation in higher education remains significantly below the population parity rate. This paper also warns about the need to exercise care about definitions, sources, measurement, collection, interpretation and analysis of data in the higher education field relating to Aboriginal and Torres Strait Islander peoples. It concludes that successful transitions to university involve not just success in enrolling more Aboriginal and Torres Strait Islander students, but in improving their retention and completion rates, and moreover, the qualities of their engagements and experiences in university life during their journey through higher education.

Keywords: Aboriginal and Torres Strait Islander peoples, Indigenous, higher education, statistics, university, vocational and educational training

Introduction

This paper provides an overview of statistics relating to the current and recent experiences of Aboriginal and Torres Strait Islander students in higher education. It draws from an Office for Learning and Teaching (OLT) funded project conducted during 2011-2013, entitled *Can't be what you can't see: The transition of Aboriginal and Torres Strait Islander students into higher education* (see Kinnane, Wilks, Wilson, Hughes & Thomas, 2014). This project documented the processes, the data, the pathways, the enablers, the constraints, and the opportunities associated with the transition of Aboriginal and Torres Strait Islander students into higher education. It concluded that there has been a steady increase in Indigenous student numbers since the first Aboriginal person graduated from university in 1966. However, as the statistics put forward in this paper demonstrate, Indigenous participation in higher education remains significantly below the population parity rate, despite initiatives over recent years to redress this.

Note: The terms 'Aboriginal and Torres Strait Islander' and 'Indigenous' are used interchangeably in this article.

Background

Enhancing transitions for all Aboriginal and Torres Strait Islander students, and for other under-represented groups,

requires a greater focus on targets for increasing student higher education completions. It also requires appropriate resources and governance to work with community-based and Indigenous Education Unit based assets that are already in place. Kinnane *et al.* (2014) found that there is significant scope for increasing and strengthening Aboriginal and Torres Strait Islander students' transitions into higher education by building on the assets already in place, including supporting university Indigenous Education Units to engage in leading practice toward this end.

The enrolment of Aboriginal and Torres Strait Islander students in Vocational Education and Training (VET) is higher than in university, although there are variations in this pattern in the states and territories, especially those with a dominant mining sector. VET to university is not a strong pathway for students into higher education, with 4.9 per cent of Aboriginal and Torres Strait Islander students making the transition in 2012, compared to 7.9 per cent for non-Indigenous students.

This paper highlights some of the variations in data sources and reporting practices, for example population categorisation, data gathering and representations, that render difficult the portrayal of an accurate statistical reality of the higher education experiences of Aboriginal and Torres Strait Islander students. Underlying many statistics relating to Indigenous peoples' engagement in higher education are concerns about the continued variations in data collection and measurement. The measurement of statistics from different baselines renders analyses and trend predictions difficult. Additionally, flux, change, and ideological motivations in methods of measurement and reporting are noted by several authors (for example, Prout, 2010; Rowse, 2009; Walter, 2010). Further, there is uncertainty about levels of self-identification by Aboriginal and Torres Strait Islander peoples in higher education enrolment practices (Kinnane *et al.*, 2014).

Even at the most fundamental of data collection levels, for example the actual number of Aboriginal and Torres Strait Islander students participating in higher education, there is no agreement among the responsible data gathering agencies. Current data sources include, but are not limited to: the Department of Education (previously the Department of Education, Employment and Workplace Relations (DEEWR)); the Department of Industry (previously the Department of Industry, Innovation, Climate Change, Science, Research and Tertiary Education (DIICCSRTE)); the Australian Bureau of Statistics (ABS); individual universities through data collection methods in response to and contributing to reports such as the annual Indigenous Education Statements (IES); and state VET providers.

This confusion was compounded in 2012 when responsibility for higher education was moved from DEEWR to DIICCSRTE. This move resulted in some loss in equivalency of relevant statistics in the area of Aboriginal and Torres Strait Islander higher education participation. Not long after, in September 2013, DIICCSRTE became the Department of Industry and higher education functions were transferred to the Department of Education.

Thus it is difficult to track through data amongst the shifting sands of departmental responsibilities and re-structuring and there is a need to exercise care about definitions, sources, measurement, collection, interpretation and analysis. Drawing from the findings of the aforementioned project (Kinnane *et al.*, 2014), this paper aims to chart a course through these difficulties to present a picture of some salient statistical trends associated with Aboriginal and Torres Strait Islander participation in higher education.

Findings

(1) The complexity

As previously identified, the collection and storage of Aboriginal and Torres Strait Islander higher education data is subject to variations in policy, resourcing, political philosophies and the constant administrative reconfigurations of Australian government departments. This has led to inconsistencies in some of the major sources of Indigenous higher education data. Examples include: missing, limited or unavailable data for some target groups, for example Indigenous students with a disability (COAG Reform Council, 2013; Miller, 2007; O'Neill, Kirov, & Thomson, 2004; Productivity Commission, 2011; Tiplady & Barclay, 2007); incomplete or inconsistent data (Pechenkina & Anderson, 2011); and lack of standardisations in reporting and data collection across higher education institutions (Pakeha, 2011).

Data and statistics relating to Aboriginal and Torres Strait Islander peoples present unique challenges. There is a significant lack of essential longitudinal and cross-sectional data required to properly research and understand the factors influencing and encouraging Aboriginal and Torres Strait Islander students in transitioning from school to higher education (Biddle & Cameron, 2012; Wijesekere, 2008; Wilson & Barnes, 2007). There are frequently problems arising from data aggregation because of small samples, and with small numbers of Aboriginal and Torres Strait Islander peoples

living in scattered, remote locations, rendering analyses 'unreliable and not generalisable' (Walter, 2010, p. 46). Yet while much has been done in recent years to improve the quality of and access to this data (Allbon & Trewin, 2006; Gilbert, 2010; Trewin, 2002) much remains to be done.

Statistics regarding Aboriginal and Torres Strait Islander peoples in Australia are largely collected within non-Indigenous frameworks. These frameworks have aligned with the ideological motivations, social interests and practices of the individuals and institutions involved. Walter (2010) referred to the lack of impartiality of Indigenous statistical data collection in Australia, a practice that she argues is in reality complicated by the political and racial values of statistical gatherers and framers of questions. Walter cited the *Closing the Gap* reports which, she argued, employ statistics for the purposes of 'fixing' the Indigenous problem (p. 50). Caution is required around the data, and these issues run deep in the Indigenous data collection field (Prout, 2010).

Other issues that may affect the integrity of data relating to Aboriginal and Torres Strait Islander educational participation include variations over time in the rates of self-identification of Aboriginal or Torres Strait Islander students (COAG Reform Council, 2013; Wijesekere, 2008), for example, the fluctuations in self-identification across Years 7 to 12. Attendance and enrolment data from government, Catholic and independent schools cannot be aggregated (Steering Committee for the Review of Government Service Provision, 2011) and this leads to inconsistencies in 'apparent' retention rates and transition higher education data.

(2) The reality

We propose that not even all of these confusions, problems and challenges surrounding the collection of data about Aboriginal and Torres Strait Islander students' participation in higher education can detract from the stark reality that their enrolment, retention, and completion rates are significantly lower than those of non-Indigenous students (Andersen, Bunda, & Walter, 2008; Bradley, Noonan, Nugent & Scales, 2008; Devlin, 2009). Students who self-identified as Aboriginal or Torres Strait Islander made up 1.0 per cent of all university enrolments (13,781) in 2013 (Department of Education, 2014a). Although there was an increase of 9.1 per cent

from 2012, the figure is significantly below the population parity rate.

A *Review of Higher Education Access and Outcomes for Aboriginal and Torres Strait Islander people* (Behrendt, Larkin, Griew, & Kelly, 2012) was commissioned by the Australian Government following a recommendation by the *Bradley Review of Australian Higher Education* (Bradley *et al.*, 2008). The Behrendt Review, as it has come to be known, was the first review to address the full scope of the provision of Indigenous higher education across Australia. It examined 'how improving higher education outcomes among Aboriginal and Torres Strait Islander people will contribute to nation building and reduce Indigenous disadvantage' (p. ix). Both the Behrendt Review and the Bradley Review suggested a population parity rate of 2.2 per cent as the aspiration, reflecting the proportion of the population aged between 15-64 years of age that is Aboriginal and/or Torres Strait Islander (based on 2006 ABS population statistics).

The Department of Education, on the other hand, argued for a parity rate of 3.1 per cent as an estimate of the proportion of Australian students we could expect to be Aboriginal or Torres Strait Islander, 'if Aboriginal and Torres Strait Islander peoples were represented according to their proportion of the higher education aged population' (Panel for the Review of Higher Education Access and Outcomes for Aboriginal and Torres Strait Islander people, 2011, p. 14). In particular, specific groups of the Indigenous populations that are under-represented in relation to higher education include: women as primary carers, students living in remote locations, young men, people in the prison system and people with disabilities.

Participation statistics depend on self-identification at enrolment as Aboriginal or Torres Strait Islander, and therefore are almost certainly an underestimate given that some students choose not to identify for a range of reasons, and universities apply a variety of ways – from nothing at all, to pro-active confirmation – that the students who 'tick the box' are Indigenous (Kinnane *et al.*, 2014). Further, the two lead agencies for higher education data collection, collation and analysis differ on this matter. Department of Education statistics depend on the internal reporting processes of universities which vary by institution. Bradley *et al.* (2008) and Behrendt *et*

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al. (2012) utilised ABS data from the 2006 census, now nine years old.

Higher education participation statistics

The following sets out the available statistics in relation to the participation of Aboriginal and Torres Strait Islander students in university and VET. VET is included here for the purposes of demonstrating the interrelationships between Aboriginal and Torres Strait Islander participation in university and their participation in VET.

(1) University

The thirty-eight established Table A universities (government funded) are eligible for all funding programs defined in the *Higher Education and Support Act (HESA) 2003*. Three recently established smaller, privately funded Table B universities have limited access to Australian government funded student places, and are not eligible for Indigenous Support Program funding.

The most recent full year of statistics for Indigenous students available from the Department of Education at the time of writing is for 2013, and as has been noted, these statistics depend on two factors: internal reporting of universities which varies by institution; and Indigenous student self-identification. Reporting methods have changed from area of study or discipline in the 1990s to provider in the 2000s, making long term comparisons difficult. Limited data is available online pre-2004, and many are inconsistent and lack Aboriginal and Torres Strait Islander student characteristics and socioeconomic status data (Pechenkina & Anderson, 2011).

In 2013, students who self-identified as Indigenous (Aboriginal or Torres Strait Islander) on enrolment made up 1.0 per cent (13,781) of all university enrolments (1,313,776), a 9.1 per cent increase from 12,632 in 2012; and 1.2 per cent of all commencements (537,886) an increase of 7.7 per cent from 2012 (5,824 to 6,275). Female Indigenous students commencing university studies numbered 4,141, an increase of 8.3 per cent, with 2,134 male students, representing a 6.7 per cent increase from 2012. The total number of female Indigenous students in 2013 was 9,148, and the total number of male Indigenous students was 4,633, both an increase of 9.1 per cent from 2012. The differences with gender repeat a pattern established in recent years (Department of Education, 2014a).

State and Territory figures for all Indigenous university students in 2013 are shown in Table 1. Numbers have increased from 2012, although the addition of private

Table 1: Indigenous higher education enrolments by state/territory, 2013

State/territory	No. of Indigenous enrolments
Australian Capital Territory	363
New South Wales	4,898
Northern Territory	709
Queensland	3,159
South Australia	866
Tasmania	379
Victoria	1,622
Western Australia	1,184
Multistate (Australian Catholic University)	396

Department of Education, 2014a

level C universities and non-university higher education institutions for the first time will have impacted the figures.

The number of Indigenous students completing university courses in 2013 was 1,859, comprising 1,257 female students and 602 male students. This represents 0.5 per cent of the 311,597 total award completions for all students. The highest completion numbers for Indigenous students were in Society and Culture (556), Health (427), and Education (354) (Department of Education, 2104b). In relation to the dynamics between commencements and completions Pechenkina, Kowal & Paradies (2011) observed that Indigenous university commencing numbers have increased slowly since 2005, but 'completions have fluctuated' (p. 59). Their analysis of DEEWR higher education statistics from 2004-2008 found 'no correlation between Indigenous student commencement numbers and Indigenous student completion rates' (p. 64), and a dual system within Australian universities: 'those that have high commencement numbers and a high proportion of Indigenous staff, and those that have high completion rates with the Go8 dominating the second group' (p. 64). The Behrendt Review noted that Aboriginal and Torres Strait Islander students experience a one-in-three dropout rate from university compared to one-in-five for all domestic students, and that overall completion rates were 22 per cent less than for non-Indigenous (Behrendt *et al.*, 2012).

(2) Vocational education and training (VET)

The VET statistics relating to enrolments and qualifications (Ainley, Buckley, Beavis, Rothman & Tovey, 2011) during the period 1996-2008 revealed a far higher rate of increase for Indigenous compared to non-Indigenous persons (700 per cent compared with 227 per cent). The data also show

Table 2: VET enrolments by state/territory, 2012

State/territory	Number of Indigenous students	Percentage of population
Australian Capital Territory	851	2.8%
New South Wales	32,695	5.5%
Northern Territory	10,120	41.7%
Queensland	17,268	5.9%
South Australia	6,392	4.5%
Tasmania	2,010	4.7%
Victoria	7,728	1.2%
Western Australia	12,814	7.7%

National Centre for Vocational Education Research, 2013

Table 3: Australian Qualifications Framework (AQF) qualifications completed by Indigenous students, 2011

Qualifications	Numbers	Completed by Indigenous students
Diploma or higher	1,228	20.9%
Certificate IV	2,733	
Certificate III	5,865	79.1%
Certificate II	6,155	
Certificate I	2,963	
Total	18,944	100%

National Centre for Vocational Education Research, 2013

that Indigenous young people aged between 15 and 19 years are more likely to be enrolled at Certificate II level than in higher qualifications Certificate III and IV). This high enrolment in Certificate II courses 'helps to reduce the gap between Indigenous and non-Indigenous young people in the attainment of Year 12 and Certificate II, although the difference does not fully compensate for lower retention rates and consequent attainment of Year 12 experience by Indigenous school students' (Ainley *et al.*, 2011, p. 42).

Behrendt *et al.* (2012, p. 40) noted that unlike the university sector, the VET sector provides:

> ... a proven record of enrolling Aboriginal and Torres Strait Islander students in VET courses in numbers that reflect population parity. This can be both a benefit and a drawback... a benefit when higher-level VET courses are used as a launching pad into university for students without the existing academic preparedness for direct entry, and a drawback when VET acts as a diversion from higher education.

In 2010, eight times more Indigenous students enrolled in VET than in university, compared with twice as many non-Indigenous students enrolling in VET than in university (Taylor, Gray, Hunter, Yap, & Lahn, 2011). In 2012, Indigenous VET students numbered 89,878 or 4.6 per cent of the total national VET student population (1,943,195) and 15.3 per cent of the total Indigenous population, a gradual but steady increase since 2002 (4.1 per cent). However, the Indigenous status for a large number of students (98,402) was declared unknown in 2012.

A breakdown of 2012 figures by state and territory (Table 2) indicates that the Northern Territory has the largest percentage of Indigenous population undertaking VET studies (41.7 per cent), while New South Wales has the largest number overall.

Table 3 shows a breakdown of VET qualifications completed by Indigenous students in 2011. Certificate IV can be a pathway into university, but in 2011, 79 per cent of Indigenous VET completions were for Certificate I – III.

Reasons given by Indigenous graduate students for undertaking VET training in 2011 were: 'employment related outcomes' (81.1 per cent); 'further study outcome' (4.4 per cent); and 'personal development outcome' (14.5 per cent). Significantly, it appears that VET to higher education is not a strong pathway for most students. Only a small percentage of Indigenous students make the transition from VET studies to university study. In 2012, 2.3 per cent of Indigenous students who had completed VET training were studying at university, compared with 4.9 per cent of non-Indigenous students (National Centre for Vocational Education Research, 2013).

Moreover, the number of Indigenous students continuing on to higher education through the VET system has declined since 2006. The pathway from VET to universities is complex, with many barriers, for students as well as for education providers, and is not well-researched (Bandias, Fuller, & Pfitzner, 2011; Behrendt *et al.*, 2012). Dual sector universities (VET and university) show some success in 'mapping' VET goals onto university degree programs and in transitioning Aboriginal and Torres Strait Islander students to university (Behrendt *et al.*, 2012). For example, in 2010 dual-sector institutions RMIT and Swinburne University had the highest transition of Aboriginal and Torres Strait Islander students from VET (Behrendt *et al.* 2012), indicating a stronger pathway in such configurations.

VET enrolments more accurately reflect Aboriginal and Torres Strait Islander population parity. Behrendt *et al.*, (2012) suggests reasons for the higher levels of VET study include 'method of study, its curricular content, or the career options', and the need to earn money (p. 40). Geographical location is given as another potential

reason for higher numbers enrolling in VET, with only 44 per cent of Aboriginal and Torres Strait Islander peoples currently living within one of the 49 cities or towns with a university campus.

Other entry pathways to university

School to university transitions

Available data reveal that retention rates of Indigenous students through high school to Year 12 are improving, and a small but increasing percentage of students complete Year 12, and are applying for and qualifying for university by way of an Australian Tertiary Admissions Rank (ATAR), the entry rank for secondary school to gain admission to universities. However, these rates are still well below those for non-Indigenous students. In 2008, ten per cent of Year 12 Indigenous students were eligible for university through an entrance score (the ATAR) compared to 46 per cent of non-Indigenous Year 12 students (DEEWR, 2008, cited in Behrendt *et al.*, 2012, p. 6). It is noted that university eligibility data ceased to be tracked nationally in 2008 (The Aurora Project, 2011a).

In 2013, Aboriginal and Torres Strait Islander Year 12 full-time students enrolled in government, Catholic and independent schools across all states and territories in Australia numbered 6,934. The reported Indigenous Year 7/8 to Year 12 'apparent' retention rate has increased from 36 per cent in 2000 to 40.1 per cent in 2006, and 55.1 per cent in 2013 (Australian Bureau of Statistics, 2013a). Apparent retention rate is an 'indicative measure of the number of school students who have stayed in school… expressed as a percentage of the respective cohort group against the cohort that those students would be expected to have come from, assuming an expected rate of progression of one grade a year' (Australian Bureau of Statistics, 2013b. p. 47). However, there are large disparities across states, territories and regions and in the measurement of such aspects. In South Australia and Western Australia, Year 7 is the last year of primary school, but it is the first year of secondary school in Queensland, New South Wales, Victoria, Tasmania, Northern Territory and the Australian Capital Territory. Northern Territory moved to include Year 7 in secondary school in 2008 and Queensland made this transition at the beginning of 2015.

The ABS notes that the increase in the apparent retention rates of Indigenous students through to Year 12 is increasing at a faster rate than for 'Other' students (Indigenous status not stated or non-Indigenous), but this may be due to a number of factors: 'an actual increase in the number of Indigenous students, an increase in the likelihood of Indigenous students to identify as such, or the improvement in Indigenous status data collection' (Australian Bureau of Statistics, 2011). Students may identify or be identified as Indigenous in later years but may not have identified in Year 7, potentially contributing to an apparent growth in the retention rate (Long, 2009, cited in Ainley *et al.*, 2011, p. 4). In 2012, the apparent retention rate from Year 7/8 to Year 12 was 52.9 per cent for female students and 49.2 per cent for male students (Australian Bureau of Statistics, 2013b).

This rate of change, despite being very positive 'is insufficient if the COAG [Council of Australian Governments] targets for 2020 are to be reached' (Ainley *et al.*, 2011, pp. 41-42). However, Biddle & Cameron (2012) point out that 'statistical significance shouldn't be confused with determinism' (p. 32). Three quarters (74.1 per cent) of Aboriginal and Torres Strait Islander students aged 15 expected to complete Year 12, with 47.1 per cent expecting to move to post-school study. Multiple influences on the transition of Indigenous students to post-study and employment, such as school support, peer association, discrimination, and causal effects of pre-school education are not factored into statistical analyses, and more nuanced data is needed (Biddle & Cameron, 2012).

Outreach to students by universities is a key means of encouraging and assisting transition. In a study commissioned by DEEWR, Gale *et al.* (2010) examined university early intervention (pre-Year 11) or outreach programs targeting low socioeconomic students, Indigenous students, and those from rural and remote areas. Twenty-six universities responded to a survey and the research team selected seven case studies to examine in detail. From this analysis the team developed a 'Design and Evaluation Matrix for Outreach (DEMO)' (p. 12, Synopsis) for evaluating and designing outreach programs. However, the authors caution that there is 'no simple formula' for approaching outreach and that the DEMO model should be used as a starting point (p. 19). Significantly, they found that outreach in the formative years of middle school (Years 5-8) followed up by outreach in Years 10-12 is the most beneficial for successful school to university transitions.

Behrendt *et al.* (2012) likewise observed the need for early intervention and 'sustaining a peer support structure for the duration of the student's schooling and higher education and beyond' (p. 173). Building trust with families and communities, and connecting pedagogies with the 'lived experiences' of young Aboriginal and Torres Strait Islander students are further important transition strategies (p. 174).

Several universities have designed internal processes to assist transition whereby student merit beyond the value of an ATAR ranking is taken into account when students apply for entry. For example, under the Cadigal Alternative Entry Program, the University of Sydney estimates, or re-calculates, Indigenous students' ATARs and makes recommendations to faculties based on the course preferences expressed in their state admissions centre applications. This enables University of Sydney to reduce the course entry requirement (ATAR score) by five points, providing students who are marginally below the entrance rank an opportunity to be assessed for entry and the possibility of staged and supported engagement with their studies. If a student is still within eight points of the entry requirement, a recommendation can be made to the faculty to consider accepting a student with a reduced load until such time as enabling programs can be implemented to progress the student's readiness to enrol full-time. The University of Notre Dame Australia utilises a model for all student intake that includes consideration of ATAR and direct interviews with each student to assess their suitability for university (Kinnane *et al.*, 2014).

In recent years, programs targeting the school-to-university transition of Aboriginal and Torres Strait Islander students have increased. Many universities collaborate with schools and communities to provide outreach to a greater number of Indigenous students. These diverse programs are making progress nationally in raising the aspirations of young Aboriginal and Torres Strait Islander students about 'going on to uni' (Kinnane *et al.*, 2014). Valuing and engaging with family and community is a common theme of many successful programs. Outreach introducing students to the opportunities of higher education is effective when undertaken early in their schooling, and these programs provide an opportunity to inform communities of what is involved in university education, as well as seeking information in relation to the needs of the community to take back to universities. To name a few such programs:

Australian Indigenous Mentoring Experience engages university students as mentors for Year 7-12 Indigenous students. In 2013, 93.2 per cent of students participating in this program completed Year 12 compared to the national figure of 71.8 per cent; and 26.8 per cent of Year 12 students progressed to university compared to ten per cent of students nationally with a university level ATAR score (AIME Mentoring, 2013).

The Aspiration Initiative of the Aurora Project is a residential 'academic enrichment program' for Aboriginal and Torres Strait Islander secondary day students with high academic achievement and for those with high potential who may be at risk of underachieving. By building a peer support cohort of students as they move into university, the initiative aims to develop the 'cultural capital' resources necessary to navigate university life (The Aurora Project, 2011b).

Yalari is a non-profit organisation that provides scholarships for Indigenous students from regional, rural and remote communities throughout Australia to attend 29 boarding schools around Australia to complete their education to Year 12. Yalari has developed partnerships with universities to offer full scholarships (Annual Report 2010/2011, Yalari, 2010, p. 26).

It is noteworthy, however, that almost half of Indigenous university students do not transition directly from school. In 2010, 47.3 per cent of Indigenous commencing students entered university on the basis of their prior educational attainment (higher education course, secondary education [HSC], or VET award course). More than half (52.7 per cent) of Indigenous student admissions were through mature age special entry, professional qualifications, or other reasons. At some universities assessment is based on a prospective student's individual circumstances.

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Entry via tertiary admissions processes

In 2013, 1.3 per cent (3,539) of applicants to university via Tertiary Admissions Centres using an ATAR score identified as Indigenous (Aboriginal, Torres Strait Islander, or both). This resulted in offers to 2,703 Indigenous applicants. Over three-quarters (76.4 per cent) of Indigenous applicants received an offer to study in 2013, compared with 81.7 per cent among non-Indigenous applicants. Applications from Indigenous people are highest in the fields of Education, Health, and Society and Culture.

Indigenous status is gathered from a self-identification question on the Tertiary Admission Centre form and it is believed that many applicants do not identify as such at this point (Department of Education Employment and Workplace Relations, 2011a). Significantly, analysis

Table 4: Indigenous applicants by age, 2013

Age	Proportion of applications from Indigenous applicants	Proportion of Indigenous people in the general working age population
15 to 19	1.1%	4.2%
20 to 24	1.3%	3.2%
25 to 39	1.8%	2.4%
40 to 64	2.6%	1.7%
Total	1.3%	2.3%

Source: Department of Education, 2013

of applications to university via the Tertiary Admission Centre by age indicates a high proportion of Indigenous applicants aged 40-64. Indeed, as age increases so does the percentage of Indigenous applications to university as shown in Table 4.

The type of university that Indigenous and non-Indigenous students applied to in 2013 is shown in Table 5, indicating more Indigenous applications to Innovative Research Universities, and less to the Group of Eight universities. This is a government typology and the total includes non-aligned universities. The table excludes applicants whose Indigenous status is unknown.

Although the Group of Eight universities in each state have a lower share of applications from Indigenous students, they claim to have good success and completion rates (submission no. 61, University of Western Australia, in Behrendt *et al.*, 2012, p. 49). However, as Pakeha (2011) pointed out, the reporting of completion rates is not standardised and varies across institutions.

Entry via pre-tertiary preparation programs

Most universities in Australia offer pre-tertiary or preparatory programs. In 2010 over half of the Aboriginal and Torres Strait Islander students who gained entry to university did so through enabling or special entry programs (Department of Industry, Innovation, Science,

Research and Tertiary Education (DIISRTE), 2012 quoted in Behrendt *et al.*, 2012, p. 49).

Tertiary preparation programs, pre-orientation courses and early entry schemes play a significant role in helping to alleviate some of the stress experienced by students in transitioning into an unknown university world. They provide students who wish to study at university (but are not confident or may not meet the entry requirements of their chosen course) with the opportunity to develop the academic skills required. These courses also have the potential to provide students with an understanding of lecturers' expectations and how universities operate in terms of their policies, and course requirements. Further, tertiary preparation courses provide a pathway into further study for mature age students and for those who have not studied formally for a number of years. However, those who are entering through enabling programs or bridging programs do not receive Indigenous Tutorial Assistance (ITAS) support. Behrendt *et al.* (2012) identified this as a serious flaw in the program.

Direct application

The option of applying directly to universities was introduced in 2010. A higher proportion of Indigenous applications are made directly to universities (2.7 per cent in 2013), as opposed to applications through Tertiary Admission Centres (1.3 per cent). The data suggests that more applicants entered from Indigenous admission schemes, or pre-tertiary programs, and therefore were more likely to self-identify as Aboriginal or Torres Strait Islander students. However, of the total number of direct applications made (82,890) 7,684 (9.27 per cent) did not record an Indigenous status (Department of Education, 2013). Table 6 shows the breakdown of applications made directly to universities by permanent home residence across Australia in 2013. The highest number of Indigenous direct applications were made in Queensland (4.0 per cent), followed by NSW/ACT (3.1 per cent), with

Table 5: Types of university applied to in 2013

Type of university	Applications		Share (%)	
	Indigenous	Non-Indigenous	Indigenous	Non-Indigenous
Group of Eight	572	84,359	16.2%	31.1%
Australian Technology Network	549	52,741	15.5%	19.5%
Innovative Research Universities	1,165	46,729	32.9%	17.2%
Regional Universities Network	384	14,177	10.9%	5.2%
Total	3,539	270,951	100.0%	100.0%

Source: Department of Education, 2013

Victoria recording the lowest proportion of Indigenous direct applications (1.6 per cent).

Entry via scholarship programs

Scholarships to university are offered for Aboriginal and Torres Strait Islander students from universities, governments, non-government and industry sources for study across a range of disciplines at undergraduate and postgraduate levels (The Aurora Project, 2011c). However, only limited data is available on the full numbers of scholarships awarded or on completion rates for scholarship supported study, indicating a need for further research and better reporting in this area.

The Australian Government Indigenous Common-wealth Education Costs Scholarships (previously the Commonwealth Learning Scholarships Program) was introduced in 2004 to assist students from low socio-economic backgrounds, particularly those from rural and regional areas and Indigenous students, with costs associated with higher education. Since 2010, the Commonwealth Scholarships Program is open only to commencing students who are identified as being Aboriginal or Torres Strait Islander. Additional scholarships within the program include an Indigenous Access Scholarship that provides eligible commencing students with a one off payment to study a higher education undergraduate or eligible enabling course; an Indigenous Enabling Commonwealth Education Costs Scholarship; an Indigenous Commonwealth Accommodation Scholarship; and an Indigenous Enabling Commonwealth Accommodation Scholarship. The scholarships are administered and awarded by individual universities on behalf of the Australian Government (Department of Industry, 2014). The Department of Human Services Centrelink office pays a separate Relocation and Student Start-up Scholarship for students receiving AUSTUDY or ABSTUDY assistance and undertaking an accredited higher education course or preparatory, enabling course (Department of Human Services, 2014).

Teaching scholarships to support and increase the number of Indigenous teachers in schools include the Governor-General's Indigenous Student Teacher Scholarships, awarded to one teacher education student from each state and territory, offering $25,000 per year for up to four years, to assist with study costs. The More Aboriginal and Torres Strait Islander Teachers Initiative

Table 6: Direct applications to universities by state and territory, 2013

State	Non-Indigenous	Indigenous	Total **	% Indigenous
NSW/ACT	27,380	1,073	35,105	3.1%
Qld	11,281	476	11,984	4.0%
SA/NT	3,047	59	3,142	1.8%
Vic.	17,936	302	18,501	1.6%
WA	13,352	300	14,247	2.1%
Australia *	672,996	2,210	82,890	2.7%

All applications for the University of Tasmania are included in the Tertiary Admissions Centre count.

*The Australia total includes data that could not be assigned to a State.

**Applicants with an unknown Indigenous status are included in the total application count.

Source: Department of Education, 2013

(MATSITI) (2012) also provides teaching scholarships for Indigenous students. In addition, industry and business offer tertiary scholarships, for example the AIEF-BHP Billiton Iron Ore scholarships to Indigenous students to study in mining-related disciplines (Australian Indigenous Education Foundation, 2011). Indigenous Business Australia, a government body, provides scholarships for VET and higher education study in the fields of commercial and economic management (Indigenous Business Australia, 2011).

Under-represented cohorts within the Aboriginal and Torres Strait Islander higher education population

Four specific groups within the Aboriginal and Torres Strait Islander population are identified as being under-represented in relation to higher education participation: women as primary carers; young men; prisoners; and people with disabilities. Many students belong to more than one of these specific groups, sometimes experiencing multiple layers of disadvantage compounding their challenges. Targeted data for these groups is limited, difficult to find and inconsistent, and thus although the literature relating to the experiences of these groups is scant, the following discussion draws from the available data at the time of writing.

Women who are primary carers

In 2013, women comprised 66.3 per cent of Aboriginal and Torres Strait Islander enrolled higher education students (Department of Education, 2014); the same percentage was recorded in 2010 (Behrendt *et al.*, 2012, p. 8). The rate of participation of Aboriginal and Torres Strait Islander women in further education from

their mid-thirties is higher than Aboriginal and Torres Strait Islander men or non-Indigenous men and women (Doyle & Hill, 2012, p. 25). A profile of Aboriginal women indicates they are often single mothers (Biddle & Yap, 2010, cited in Doyle & Hill, 2012, p. 10) who may defer education until their children have completed schooling. Care costs and availability, access to information, peer and family networks, Indigenous Education Units, enabling courses and away-from-base courses contribute to Aboriginal women's decisions relating to the timing of their transition to further education. Enabling Aboriginal women to maintain cultural and family connections is an important factor assisting them to educational success (White, 2007, cited in Doyle & Hill, 2012). However, data on the transitions and progress of Aboriginal and Torres Strait Islander women who are primary carers in higher education is limited.

Young men

A number of studies have identified a preference for vocational training over academic education among young Indigenous men from rural and regional areas (Craven & Marder, 2007; James, 2000; Larkins *et al.*, 2009). In a small study with Indigenous young people in schools and a youth shelter in Townsville, Queensland, Larkins *et al.* (2009) found a higher percentage of young men (20.5 per cent) felt they would be 'happy/proud' to be teenage fathers than young women (9.1 per cent) (p. 15). Supporting this position, young men in the study expressed a preference for employment after school to enable them to fulfil traditional family provider roles (p. 17). To counter the impact of government policies that place responsibility at the individual level, and do not consider implicit inequalities and power imbalances, Larkins *et al.* (2009) recommended assistance for families and students in mapping pathways to higher education; changes in pedagogy and policy; and co-operation between vocational and educational sectors. Behrendt *et al.* (2012) also recommended collaboration across educational sectors, with Aboriginal and Torres Strait Islander bodies and organisations, and government agencies.

The mining industry actively supports and recruits Indigenous peoples in some areas of Queensland and Western Australia, in conjunction with VET, universities and private providers. Indigenous enrolments in these programs are higher for males but tend to be in short 'enabling' courses, or at the lower end of the certification spectrum (Taylor & Scambary, 2005, p. 87). Tiplady & Barclay (2007) identified inconsistent standards in mining

company reports of the numbers of Indigenous peoples they train, educate and employ.

People with disabilities

An accurate picture of the educational achievement and aspirations of Aboriginal and Torres Strait Islander persons with disabilities is difficult to obtain because of variations and limitations in definitions and statistics. Since 1998, the ABS has defined disability as 'any limitation, restriction or impairment which restricts everyday activities and has lasted or is likely to last for at least six months' (Australian Bureau of Statistics, 2013c).

Statistics for Indigenous Australians with disabilities are limited; before 2002 there were no surveys to do with the extent and nature of disabilities among the Australian population. The 2009 ABS Survey of Disability, Ageing and Carers (Australian Bureau of Statistics, 2013c) measured the prevalence of disability in Australia and the need for support for people with a disability. The 2009 results were the first to include data for Indigenous peoples, although the survey excluded people living in very remote areas (15 per cent of whom are Indigenous). The overall rate of disability of Indigenous peoples in 2009 was 28 per cent, compared with 17.6 per cent for non-Indigenous; and was higher for Indigenous children aged 0-14 years than for non-Indigenous children (14.2 per cent compared with 6.6 per cent). The Productivity Commission (2011) estimated there were 26,000 Indigenous Australians with a 'profound or severe core activity limitation' (p. 533), with the highest level of disability in remote areas. Although statistics are considered to be underestimated, they are higher than those for non-Indigenous Australians, and barriers to support are greater for Aboriginal and Torres Strait Islander peoples. The Productivity Commission (2011) based its inquiry report, *Disability care and support,* on the 2006 Census and the 2008 National Aboriginal and Torres Strait Islander Social Survey, although it claimed the statistics may be underestimated. Reasons suggested for this under-representation include non-response rates to census and surveys, and a difficulty for Indigenous people to relate to the concept of disability (Productivity Commission, 2011).

In 2008, approximately 42 per cent of Aboriginal and Torres Strait Islander people with a disability or long-term health condition had left school at Year 9 or below with 18 per cent having completed school to Year 12. Further, Aboriginal and Torres Strait Islander people aged 25-64 years with a disability or long-term health condition tend not to have post school qualifications higher than a Certificate III (Australian Bureau of Statistics, 2011). Most

university Indigenous Engagement Units have strong relationships (Kinnane *et al.*, 2014) with their universities' mainstream disability services and play a significant role in connecting students with appropriate disability support services by ensuring Aboriginal and Torres Strait Islander students are aware of the services available to them on campus. However, this is yet another situation where the onus of identifying a disability or sharing details is upon the student who may or may not choose to disclose their disability.

People in the prison system seeking higher education participation

At March 2014, the Australian Bureau of Statistics (2014) reported 9,220 average daily full-time adult prisoners (defined by the ABS as 'persons in custody') identified as Aboriginal or Torres Strait Islander, or just over one quarter (28 per cent) of the total prisoner population. The figure consisted of 8,320 (90 per cent) male and 900 (10 per cent) female prisoners. The ABS cautions that these figures are dependent on the prison population self-identifying as Aboriginal or Torres Strait Islander, and therefore may not be a fully accurate representation.

Limited data is available regarding higher educational aspirations, participation levels and achievements of Aboriginal and Torres Strait Islander persons who are currently incarcerated (Carnes, 2011). However, it is known that correlations between low levels of education and high levels of incarceration among Aboriginal or Torres Strait Islander peoples are complex. The potential value of education in reducing imprisonment rates is recognised, although it is acknowledged that this is only one contributing factor (Senate Select Committee on Regional and Remote Communities, 2010). The Senate Committee identified limited research into this area in Australia, citing mainly international literature, and highlighted a need for further investigation and evidence-based data underlying policy and practice to enhance opportunities for prisoners seeking higher education opportunities. A review of education and training for incarcerated Aboriginal and Torres Strait Islander persons (Miller, 2007) reinforced the lack of data regarding the number undertaking education and training, nationally and in states and territories, and the limited nature of research into this area. Provision continues to be inconsistent, varying by jurisdiction and by institution with other barriers to inmates including limitations on the subject areas in which degrees can be undertaken, access to computers for online learning, and an inability to participate in practical classes (Kinnane *et al.*, 2014).

The 1991 Royal Commission into Aboriginal Deaths in Custody recommended the development of a national strategy to 'improve the opportunities for the education and training of those in custody' (Royal Commission into Aboriginal Deaths in Custody,1991, p. 705). In 1999, all state and territory governments agreed to such a strategy (Department of Education, Science and Training, 1999). Specific recommendations included access to funding through the Indigenous Education Strategic Initiatives Program, and the 'lawful custody allowance' to assist Indigenous people in custody with full-time study costs, excluding tuition fees (Centrelink, 2008). This allowance still exists but there appears to be little evidence of its use (Australian Broadcasting Commission (ABC), 2011). Miller's (2007) review noted there was no evidence that 'relevant government departments' endorsed the national strategy, or that there was any systematic monitoring or evaluation of the strategy (p. 206, n. 6).

Some universities offer distance learning opportunities for prisoners. For example, Nulloo Yumbah, Central Queensland University's Aboriginal and Torres Strait Islander Learning, Spirituality and Research Centre delivers its Tertiary Entry Program in correctional centres, and supports inmates enrolled in other university programs. TRACKS, a tertiary preparation program at the University of New England, delivers distance education to Aboriginal and Torres Strait Islander men at the Woodford Correctional Centre in Queensland (Behrendt *et al.* 2012).

Conclusion

This paper has reviewed recent available data relating to the participation of Aboriginal and Torres Strait Islander students in higher education. It draws together some significant statistical trends and realities concerning student experiences to do with access, entry and transition through higher education. It notes that Aboriginal and Torres Strait Islander students entering university through mainstream high school entry represent less than half of the Aboriginal and Torres Strait Islander university population. This proportion has the potential to increase, and indeed is being gradually increased, through many of the available strategies and programs aimed at increasing pathways from secondary education to university.

However, university course completion rates are significantly lower among Aboriginal and Torres Strait Islander students than for non-Indigenous students. This signals an ongoing and major need for targeted investment in skills, knowledge and support for these students to

negotiate higher education cultures successfully through to course completion.

The VET sector is more successful at attracting Aboriginal and Torres Strait Islander students than universities, but the greater emphasis on training of the former does not provide significant pathway possibilities for Aboriginal and Torres Strait Islander students to transition into university from VET. More effective engagement between the VET and university sectors could include creating effective bridging programs to university from the VET sector (Kinnane *et al.*, 2014), and extending the eligibility of students to participate in the ITAS-Tertiary Tuition (ITAS-TT) scheme whilst undertaking these programs. It is noted that funding for ITAS-TT is, at the time of writing, only assured for 2015.

Cultural shifts are required in the way statistics are collected and in the manner in which data is analysed and interpreted. Indeed, there are many issues and challenges for the sector as a whole to do with the collection and interpretation of data relating to Aboriginal and Torres Strait Islander participation in higher education. Improvements to data collection methods and approaches require the building of relationships of trust (Taylor, Doran, Parriman, & Yu, 2012), cultural collaborations, and the scoping of variations in definitions and terminology across different geographic areas and among peoples (Doyle & Prout, 2012; Martin, Morphy, Sanders, & Taylor, 2004).

Notwithstanding these complexities to do with the data, the current and persistent reality remains the critical challenge of improving transitions for Aboriginal and Torres Strait Islander students to higher education. Irrespective of the measure of population parity applied for participation, parity has not yet been achieved. Achievement in this arena involves not just success in enrolling more Aboriginal and Torres Strait Islander students into university, but in improving the retention and completion rates of these students, and the qualities of their engagements and experiences in university life during their journey through higher education.

Acknowledgements

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