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BUSINESS-RELATED STUDIES AND INDIGENOUS AUSTRALIAN STUDENTS

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Aboriginal Economic
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CAEPR WORKING PAPER NO. 100/2015

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February 2015



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Working Paper No. 100/2015
ISSN 1442-3871

ISBN 0 7315 4999 6

An electronic publication downloaded from <caepr.anu.edu.au>.

For a complete list of CAEPR Working Papers, see <caepr.anu.edu.au/publications/working.php>.

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Abstract

Substantial recent growth in the number of Indigenous businesses means that the need for business-related skills in the Indigenous population will be greater than ever. This report reviews the existing literature relating to Indigenous students and business-related studies in Australia, and provides a snapshot of Indigenous students' participation in, and completion of, business-related higher education courses. Data from the Higher Education Statistics Collection are analysed, in conjunction with evidence on labour market outcomes of Indigenous and non-Indigenous graduates from the 2011 Census and the Australian Graduate Survey, to identify examples of strategies to engage Indigenous students in business-related courses. This analysis is complemented by extensive consultations with 15 of the 40 institutions involved in providing management and commerce courses in Australian universities. Indigenous support centres are an important factor, as are modes of teaching for the courses in question. A number of universities suggested working with industry to create more employment opportunities and support Indigenous role models in associated occupations (e.g. as is already occurring in the accountancy profession). Given the lack of participation of Indigenous students in enabling courses in this field of study, it is likely that Indigenous students will need to augment their level of proficiency in the basic competencies required for successful completion of their studies.

Keywords: management and commerce, university education, numeracy and literacy, Indigenous business

Acknowledgments

We are grateful for the detailed feedback from anonymous referees and members of the Aboriginal and Torres Strait Islander Higher Education Advisory Council. Bruce Guthrie and the staff at Graduate Careers Australia provided invaluable assistance in accessing and interpreting the Australian Graduate Survey. We would also like to thank Zhengfeng Li and Yew May Martin from the Australian Government Department of Education, who provided data from the Higher Education Statistics Collection.

Acronyms

ACU	Australian Catholic University
AGS	Australian Graduate Survey
ATAR	Australian Tertiary Admissions Rank
CAEPR	Centre for Aboriginal Economic Policy Research
CDU	Charles Darwin University
CSU	Charles Sturt University
ITAS	Indigenous Tutorial Assistance Scheme
M&C	management and commerce
UNSW	University of New South Wales

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Introduction

The Review of Higher Education Access and Outcomes for Aboriginal and Torres Strait Islander People (Behrendt et al. 2012) delivered a number of recommendations aimed at achieving parity for Aboriginal and Torres Strait Islander students and staff in the higher education sector. One of these recommendations highlights a role for universities in setting targets for Indigenous participation in higher education, ‘focusing initially on priority disciplines that support the Closing the Gap agenda or where Aboriginal and Torres Strait Islander students are currently most underrepresented’ (Behrendt et al. 2012: xvii).

The Aboriginal and Torres Strait Islander Higher Education Advisory Council (ATSIHEAC) provides advice to the Australian Government in relation to Indigenous participation in higher education. ATSIHEAC has identified business as a priority discipline, and intends to engage with universities and other key players to improve the participation of Indigenous students in this discipline.

CAEPR was commissioned by the Australian Government Department of Education to undertake research on business-related studies and Indigenous Australian students, to help inform the work of ATSIHEAC. This report presents a quantitative analysis of Indigenous business graduates, including recent graduates, and their labour market outcomes, as well as trends in Indigenous participation in university-level business-related studies. The analysis was complemented by consultations with deans and other relevant staff in business-related faculties at Australian universities regarding preparation and entry programs for Indigenous students; enablers of, and barriers to, participation in business-related studies by Indigenous students; and the type of support needed by Indigenous business students.

Why is it important to increase Indigenous participation in business-related studies?

Indigenous participation in business-related studies is an important area of research for several reasons. Indigenous Australians are under-represented in managerial and professional occupations (Taylor et al. 2012). It is important to increase the levels of Indigenous employment in these occupations because such jobs are associated with higher income and higher status, as well as with better health, control over working conditions and greater social participation (Taylor et al. 2012). Business-related study at universities is a key entry point into these occupations (Friga, Bettis & Sullivan 2003).

Substantial recent growth in the number of Indigenous businesses means that the need for business-related skills in the population will be greater than ever. The number of Indigenous self-employed increased by a factor of almost three in the two decades to 2011 (Hunter 2013). Although the number of Indigenous self-employed is now substantial, at 12,500, this still represents a relatively small percentage of all Indigenous employment: 3 per cent of the Indigenous population aged 20–64 years (the working-age population) was self-employed in 2011, compared with more than 10 per cent of the non-Indigenous working-age population.

Even though there are relatively few Indigenous businesses in Australia, they play a significant role in providing employment opportunities for Indigenous Australians. Hunter (2014) provides evidence that Indigenous-owned businesses are around 100 times more likely to employ an Indigenous Australian than other businesses. The recent Forrest review (Forrest 2014) recognises the importance of Indigenous business for closing the employment gap (or ‘creating parity’). The recommendations of the review provide several creative initiatives to enhance outcomes through tax-free status for new and innovative first Australian commercial enterprises (recommendation 12), and through government procurement policy (recommendation 18).¹

As the number of Indigenous enterprises grows, there is a commensurate increase in the need for business-related education in the Indigenous population. Recent studies have also emphasised the need to increase the skills and educational levels of existing Indigenous entrepreneurs (Foley & Hunter 2014). Financial literacy skills, and other skills related to operating and managing a business within various market contexts are considered to be key success factors (Morley 2014).

Non-Indigenous businesses also have a demand for Indigenous or non-Indigenous employees with business- and management-related qualifications to manage their enterprises. Organisations that develop and implement Reconciliation Action Plans (RAPs) are likely to value suitably qualified Indigenous staff (Ham 2014). The capacity to manage the human and other resources required to implement RAPs without compromising the profitability of the enterprise will be highly valued.

Indigenous people with business-related qualifications are needed in the Australian economy. The challenge is how to augment the number of Indigenous students and support them in successfully completing their courses.

Aims of research

This report aims to:

- review the existing literature relating to Indigenous students and business-related studies in Australia
- provide a snapshot of Indigenous students' participation in, and completion of, business-related higher education courses
- describe the labour market outcomes of Indigenous graduates, including types of employment (e.g. occupation, industry, self-employment)
- identify examples of strategies to engage Indigenous students in business-related courses.

Literature on Indigenous students and business-related studies

Australian context

Even after taking into account differences in age profiles, Indigenous males and females—especially males—are less likely to have a post-school qualification than their non-Indigenous counterparts (Crawford & Biddle, forthcoming).² Indigenous males are less likely to have a degree at bachelor level or above than Indigenous females, or non-Indigenous males and females. The prevalence of attaining a degree at bachelor level or above is almost 60 per cent higher for Indigenous females than for Indigenous males (10.3% Indigenous females have attained this level of education compared with 6.5% of Indigenous males). The percentage of non-Indigenous males with a degree at bachelor level or above (24.3%) is almost four times higher than the percentage of Indigenous males (6.5%). Recent research indicates a substantial increase between 2006 and 2011 in the number of Indigenous Australians who were undertaking tertiary studies. However, the gap between the proportion of Indigenous and non-Indigenous people with a post-school qualification of any type barely changed between the past two Australian censuses, in 2006 and 2011. Indigenous Australians remained substantially under-represented at higher levels of educational attainment. In higher education, the gap has widened. Indigenous Australians continued to be under-represented among university enrolments, and Indigenous students, particularly males, had lower completion rates than non-Indigenous students (Crawford & Biddle, forthcoming).

There is relatively little literature on Indigenous students' participation in business studies in Australia. A recent literature review by the Australian Council for Educational

Research relating to the current context and discourse of Indigenous tertiary education in Australia noted that Indigenous students and academic staff were less likely to be pursuing business-related studies (and a range of other subjects). The report observed that there was a lack of research in the area of Indigenous professional education (ACER 2011).

One small-scale qualitative study that examined Indigenous participation in a business degree program identified a number of issues that could affect Indigenous participation or success (Fitzgerald 2010). These included:

- prospective students not seeing the relevance of business studies or thinking that business studies are all about 'making a profit', which is at odds with Indigenous values of 'caring and sharing'; however, students did consider management, leadership and marketing as important for helping them contribute to Indigenous communities
- poor numeracy skills
- inadequate learning support and support for administrative tasks (e.g. enrolment, choosing subjects)
- lack of a sense of community
- absence of Indigenous topics in the curriculum.

Duckworth et al. (2014) summarise issues identified by previous research as needing to be addressed in an Indigenous degree. These include a lack of skills in maths, communication and financial literacy; poor mentoring and business advisory support; and insensitivity to Indigenous cultural issues, including in the curriculum.

More than half of Indigenous higher education students are aged 25 years or over, delaying university study in favour of full-time work and family responsibilities. This results in fewer productive years in a professional occupation after completing university (Pechenkina & Anderson 2011). Indigenous mature-age students are more likely than younger students to study part-time and may have lower success rates than younger students (Crawford & Biddle, forthcoming).

Development of a new Indigenous-only business degree

A new Bachelor of Business Administration (BBA) degree for Indigenous students only has been developed at the University of Technology, Sydney. This degree addresses a number of barriers to study, by using strategies such as intensive support and offering the program in block

mode. The design of the new BBA degree involves an intensive block of study, with follow-up via online communication. This supports an Indigenous student cohort or community by enabling students to get to know each other on campus, as well as combining their studies with work and family responsibilities. The degree is a targeted degree specifically designed for Aboriginal and Torres Strait Islander people, and supports nontraditional entry—applicants will not need to have a particular university entrance score or have finished Year 12, but will be assessed to ensure that they have the ability to succeed in the course. The curriculum integrates Indigenous perspectives throughout the degree (Duckworth et al. 2014; Ham 2014).

International context

Recent international research confirms that business-related studies need to take into account cultural differences, knowledge and learning behaviours (Hardy & Tolhurst 2014). It has been suggested that ‘business’ and Indigenous cultural values are sometimes seen to be antithetical—that a focus on profit and emphasis on self-interest are at odds with collectivist notions that underpin Indigenous culture (Verbos, Gladstone & Kennedy 2011). However, many Indigenous scholars have argued that these collectivist values can complement western-oriented business approaches, or provide new, productive frameworks and principles for business education and economic development (Hook, Waaka & Raumati 2007; Stewart & Pepper 2011). Other countries provide many examples of programs and strategies to engage Indigenous students with business studies. The following sections describe examples from Canada, New Zealand and the United States.

Indigenous-focused programs within traditional universities

Indigenous-specific content in courses is relatively novel in Australia, but is a more common feature in other English-speaking countries with a similar colonial history. In Canada and the United States, First Nations governance majors are sometimes embedded in faculties that offer business studies in management, accounting, finance, information systems, marketing and the like. For example, the University of Lethbridge, Alberta, offers such a program through a partnership between the Faculty of Management and the Department of Native American Studies.³

New Zealand has courses focused on Māori business, leading to a Bachelor of Commerce with a ‘Māori business’ major. For example, Victoria University of

Wellington offered a Māori business major focused on Māori businesses and organisations.⁴ The University of Auckland offers a Postgraduate Diploma in Business in Māori Development,⁵ while Massey University offers a Graduate Diploma in Business Studies (Management and Leadership for Māori Providers).⁶

Programs offered by Indigenous universities (often in partnership with traditional universities)

In Canada and the United States, programs of study are offered by what are effectively Indigenous universities. The First Nations University of Canada offers a range of business and public administration certificates, diplomas and bachelors degrees, and a Master of Business Administration.⁷ These programs are often offered in partnership with mainstream universities. For example, the First Nations University of Canada courses, programs and instructors are accredited by the University of Regina, but First Nations University of Canada provides academic programming through its own departments, including the Department of Indigenous Science, the Environment and Economic Development. Within this department sits the School of Business and Public Administration, offering both a bachelor degree and a Diploma of Administration (in partnership with the University of Regina’s Faculty of Business). The bachelor degree and diploma programs offer an optional qualifying program for first-year students who are not yet ready for the main course of study. The School of Business and Public Administration also offers a Certificate in Hospitality, Tourism and Gaming Entertainment Management, and a Certificate in Administration. These certificates are offered in partnership with the University of Regina’s Centre of Continuing Education.

Outreach to schools

Canadian and United States programs also provide outreach to Indigenous school-age students who have shown an interest in future university-level business studies. First Nations University of Canada, for example, runs an annual Aboriginal Youth Entrepreneurship Camp for year 11 and 12 students. Participation is free, but applicants compete for only 25 camp positions. The camps, which are held on campus during the summer, involve hands-on learning opportunities, field trips, recreation, prizes and opportunities to interact with faculty, alumni and Aboriginal entrepreneurs. The focus is on marketing, advertising, cash flow projections, business plans and networking.⁸

Outreach to, and partnerships with, Indigenous communities and corporations

The Sauder School of Business at the University of British Columbia is home to a very successful program aimed at advancing Indigenous business education. The Ch'nook Initiative focuses on increasing post-secondary business studies through a range of collaborative programs involving Aboriginal organisations, First Nations communities, post-secondary institutions and Canadian corporations. Prominent among these programs is the Indigenous Business Education Network, which provides scholarships to Aboriginal business students, internships, an outreach and mentoring program for Aboriginal school children from years 9–12, and conferences ('gatherings') that focus on Aboriginal business, leadership, networking, traditional teachings and professional development.⁹ A similar program exists in the United States. American Indian Business Leaders is a nonprofit organisation, with dozens of chapters nationwide, that provides education and training in business and entrepreneurship for American Indian and Alaskan Native business students. It offers online tutorials and 'webinars', maintains an active alumni network and offers an annual national conference.¹⁰

Promotion of business education and experiences by Indigenous nonprofit organisations

In Canada, a nonprofit association focuses on helping Indigenous people to better manage and govern their communities and organisations, by supporting the development of skills in finance, administration, leadership and management. Aboriginal Financial Officers Association of Canada (AFOA Canada)¹¹ operates a leadership and training institute and delivers online courses, in collaboration with a range of higher education institutions (e.g. the University of New Brunswick and the University of Saskatchewan's Edwards School of Business). AFOA Canada also offers scholarships and bursaries, and publishes a journal (*JAM: Journal of Aboriginal Management*) and a range of strategic documents, such as *Building the Next Generation of Aboriginal Financial Professionals*. AFOA Canada is funded by government (48%), workshops and products (17%), memberships (9%), conference earnings (23%) and other funds (3%).

Nontraditional modes of entry and delivery

Nontraditional modes of entry and delivery vary. Most involve mechanisms to encourage and assist students who come to the institution via a route other than an intention to gain mainstream entry into business studies. They may come from another institution that

provides a certificate or other lower qualification that is recognised as a prerequisite. In the United States, for example, students can study at a 'community college' and undertake entry-level or bridging studies that are recognised and transferable. In some cases, a student can undertake some first-year courses at a community college and receive full credit towards a degree when they transfer into the university course. Another strategy is to use flexible learning approaches (distance learning coupled with blocks of residence) that help ease a student into more formal studies.

The Peter B. Gustavson School of Business at the University of Victoria in Canada, and the Tribal Resources Investment Corporation have developed a course of study (Northwest Aboriginal Canadian Entrepreneurs) that involves 6 weeks of university classroom studies followed by 12 weeks of entrepreneurial mentorship. Student tuition costs are covered by the Tribal Resources Investment Corporation. In this case, a degree is not necessarily the focus of study; rather, the aim is outreach to Aboriginal organisations and communities to help train and support Aboriginal management and business leaders.¹²

Data sources

The analyses presented in this report are drawn from three main data sources:

- The Higher Education Statistics Collection provides detailed descriptions of enrolments and completions.
- The 2011 Australian Census describes population outcomes for working-age Indigenous and non-Indigenous people who have a degree-level qualification.
- The Australian Graduate Survey (AGS) reports information on recent graduates who completed their undergraduate qualifications between 2010 and 2012.

Each of these data sources provides different insights into educational participation and outcomes. The census data are based on large numbers of people, and allow analysis by student background characteristics, but the respondents may have obtained their qualifications many years ago. The Higher Education Statistics Collection and the AGS provide information on recent graduates, but relatively small numbers mean that it is not possible to disaggregate the information to a great extent because this would reduce the reliability of estimates. Because of gender segregation in the labour market, the education and employment analyses are reported separately for males and females, where possible (Hunter 2004; Strachan 2010).

Higher Education Statistics Collection

The Higher Education Group of the Australian Government Department of Education collects and disseminates statistics relating to the provision of higher education in all Australian institutions that receive funding from the Australian Government.

This report focuses on the following data from the student collection, which are reported by all higher education institutions:

- course information, including level and field of education
- Aboriginal and/or Torres Strait Islander indicator
- award course completions (Australian Government Department of Education 2014).

Information about Indigenous status is obtained from students at the time of enrolment. Pechenkina and Anderson (2011) argue that these data are dependent on internal reporting of enrolments and completion, which may vary between institutions. The non-Indigenous comparisons relate to enrolments and completions of domestic students—information from overseas students is excluded from all calculations.

Some of the results presented in this report focus on undergraduate enrolments and completions, trends in field of study, and enabling and award courses. In some cases, data were aggregated over the years 2010–12 to give a sufficiently large data set for analysis. Since this project began, higher education data have also become available for 2013. Although these data are reported where possible, the aggregated data in the text refer to the 2010–12 period, because this is comparable with the data from the Australian Graduate Survey, increasing the coherence of the overall analysis.

Preliminary examination of the Higher Education Statistics Collection indicates that the ‘basis of admission’ data may have problems with data quality. The completion data for award courses indicate that there are relatively few Indigenous students who were admitted straight from school (compared with other Australian students). In contrast, mature-age students are over-represented among Indigenous students. The main evidence for data quality problems is that the ‘other basis of admission’ category constitutes more than 70 per cent of the total Indigenous completions for 2010–12. Hence, no definitive claims can be made about the basis of admission because the residual category is more important than the categories that we would like to make claims about (i.e. admission through secondary school, vocational education and training award course, other higher education course or

mature-age entry). This data quality issue is not confined to Indigenous students, as almost half of non-Indigenous completions fall into the residual category. More effort is needed to ensure that more complete ‘basis of admission’ data are collected. No detailed analysis of the basis of admission data is attempted in this report.

Australian Census

The Australian Census supports analyses of small population groups such as the Indigenous population. The census contains a range of information about educational participation and attainment, as well as sociodemographic and labour force characteristics.

The estimated resident population of Indigenous Australians was around 517,000 in 2006, but had increased to about 670,000 by 2011. This population growth was much greater than that indicated by adding the number of births of Indigenous children and subtracting deaths within the population. Potential reasons for this nonbiological growth in the population include improved census enumeration of the Indigenous population, a decrease in the number of people for whom this question was not answered, and people being identified as Indigenous in the 2011 Census but not in the 2006 Census (Biddle 2012). This issue is relevant to analyses in this paper that draw on results from the 2006 and 2011 censuses to make comparisons over time. Of course, the issue of nonbiological growth in the Indigenous population is not confined to census data—for example, higher education data are probably influenced by a similar phenomenon. However, if comparisons over time are conducted over a relatively short period, the effect of nonbiological growth on the overall analysis is likely to be small (Hunter 1998).

Information about educational attendance was obtained from the census question ‘Is the person attending a school or any other educational institution?’ For those who were attending an educational institution, the next question was ‘What type of educational institution is the person attending?’ Response options under the heading ‘Tertiary education’ were ‘Technical or further educational institution (including TAFE colleges)’, followed by ‘University or other higher educational institution’. Both of these questions included an instruction to ‘include external or correspondence students’.

Census information about level of educational attainment was obtained from a further set of questions directed at those aged 15 years and over. The questions that relate to the analysis in this report are ‘Has the person completed any educational qualification (including a trade certificate)?’ This is followed by questions asking ‘What is the level of

the highest qualification the person has completed?’ and ‘What is the main field of study for the person’s highest qualification completed?’ (ABS 2011). Information collected via the above questions is classified according to the Australian Standard Classification of Education.

Australian Graduate Survey

The AGS, conducted by Graduate Careers Australia, is a national census of newly qualified higher education graduates. The AGS covers new graduates from all Australian universities, and a number of other higher education institutes and colleges, approximately four months after they complete the requirements for their awards. The survey response rate for domestic graduates typically ranges from 60 to 65 per cent (Graduate Careers Australia 2014). Information about student demographics, including Indigenous status, is collected at the time of enrolment.

The main component of the AGS of interest for our analyses, the Graduate Destination Survey, collects details about graduates’ education, including level and field of study, and labour force outcomes.

Comparability of data

Higher Education Statistics Collection data, the census and the AGS all provide information on students and graduates, but there are some important differences between these data sources. The census provides information about those currently studying and attainment of post-school qualifications for the whole population, but it does not indicate when the qualifications were obtained. Population measures from the census of levels of attainment of post-school qualifications therefore include people who may have obtained their qualifications many years ago.

Data from the Higher Education Statistics Collection and the AGS focus on recent graduates, providing more current information about those who have completed studies in the field of management and commerce (M&C). Some data from the Higher Education Statistics Collection were aggregated over three years (2010–12) to obtain an adequate sample size, although the number of Indigenous students in recent data is sufficiently high to allow greater disaggregation of enrolment and completions by field of study. In the Higher Education Statistics Collection, combined courses were coded to two fields of education and students enrolled in these courses are counted against each field of study, but are only counted once in total numbers of enrolments and completions.

Data from the AGS were aggregated over three years (2010–12) to obtain an adequate sample size and to allow comparison with similar analyses using the Higher Education Statistics Collection (which are aggregated over the same period). In the AGS, students can report up to four main fields of study; 5 per cent of students reported more than two fields of study. In this report, a student was classified as having studied a business-related subject if M&C, or economics and econometrics were reported for either of the first two fields of study. If none of these were reported in the first two fields of study, the student was classified to ‘other’ fields of study.

Analysis of Higher Education Statistics Collection data

Student participation by Indigenous status

Data from the Higher Education Statistics Collection show that the number of Indigenous award completions increased over the period 2001 to 2013 from 1,045 to 1,859 (Table 1). The number of Indigenous completions increased for all course levels except the diploma/other level, in which completions fell from 186 to 57 over the period. There was a slight decrease in completions overall and for most course levels between 2011 and 2012, although the 2013 Indigenous completions were higher than the 2011 completions.¹³ This is consistent with the trends from the census (Crawford & Biddle, forthcoming).

Analysis of data from the Higher Education Statistics Collection shows that, between 2010 and 2013, Indigenous undergraduate enrolments in M&C increased substantially, from 884 to 1,123 (an increase of 27%), whereas non-Indigenous enrolments increased from 121,501 to 129,870 over this period (an increase of just under 10%) (Table 2. Undergraduate enrolments by Indigenous status, Australia, 2010–13). Even so, in 2013 Indigenous students remained heavily under-represented in M&C: the percentage of all enrolments that were in M&C was around 7 percentage points less for Indigenous students than for non-Indigenous students. Whereas the number of undergraduate enrolments in M&C increased for both Indigenous and non-Indigenous students, there were only small changes in the proportion of undergraduate enrolments that were M&C students. For Indigenous students, the proportion of enrolments in M&C was basically steady (around 11%); for non-Indigenous students, there was a very small, steady decline in the proportion of enrolments in M&C between 2010 and 2013 (from 19.7% to 18.2%).

TABLE 1. Indigenous award completions by level, Australia, 2001–13

Level of course	2001	2006	2010	2011	2012	2013
Doctorate	8	18	30	38	28	32
Masters	96	118	165	194	198	232
Graduate diploma	136	161	219	280	253	276
Bachelor degree	600	869	921	1,117	985	1,189
Associate degree	19	57	61	70	57	73
Diploma/other	186	137	41	70	106	57
All Indigenous award completions	1,045	1,360	1,437	1,769	1,627	1,859

Source: Australian Government Department of Education, Higher Education Statistics Collection.

TABLE 2. Undergraduate enrolments by Indigenous status, Australia, 2010–13

Enrolments	2010	2011	2012	2013
Indigenous				
M&C enrolments	884	1,066	1,042	1,123
All enrolments	8,273	8,879	9,461	10,342
Percentage of all enrolments that were in M&C	10.7	12.0	11.0	10.9
Non-Indigenous				
M&C enrolments	121,501	121,805	125,631	129,870
All enrolments	616,570	639,604	676,000	713,350
Percentage of all enrolments that were in M&C	19.7	19.0	18.6	18.2

M&C = management and commerce

Note: M&C enrolments are those who studied M&C as one of their major fields of study (two fields were recorded where combined degrees were undertaken).

Source: Australian Government Department of Education, Higher Education Statistics Collection.

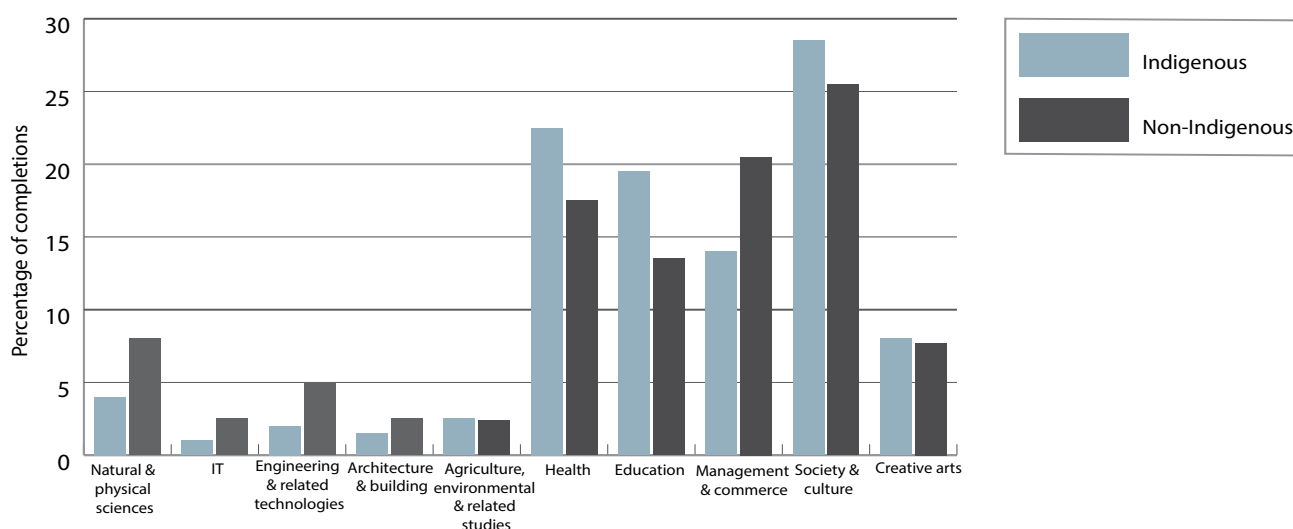
Currently, Indigenous people constitute around 3 per cent of the Australian population aged 15 years and over.¹⁴ Drawing on the data summarised in Table 2, overall less than 1.5 per cent of all domestic enrolments were Indigenous students. For most fields of study, Indigenous students represented less than 1 per cent of all undergraduate students studying in that field. One exception was undergraduates in the field of education, among whom almost 2 per cent were Indigenous. Clearly, Indigenous students are grossly under-represented in all fields of study. Among undergraduates who completed studies in M&C, just 0.6 per cent were Indigenous (see Table 4 for numbers).

Fig. 1, using data from the Higher Education Statistics Collection, shows that, among Indigenous undergraduates who completed an award course during 2010–12, the most common fields of study were

society and culture (studied by 29% of Indigenous undergraduates), health (22%) and education (20%), with M&C in fourth place (14%).¹⁵ Among non-Indigenous graduates, the same subjects made up the top four; however, although society and culture was the most common (studied by 25% of non-Indigenous undergraduates), M&C was the next most common (20%), followed by health (18%) and education (13%).

As noted previously, in analysis of the Higher Education Statistics Collection, students completing combined courses were classified to more than one field of study. Analysis of the AGS data provides very similar results. Double counting fields of study in the Higher Education Statistics Collection does not affect the broad pattern of field of study for Indigenous and non-Indigenous graduates.

FIG. 1. Award completions by field of study by Indigenous status, Australia, 2010–12 aggregated



Note: Students undertaking combined courses were classified to more than one field of study, so the sum of the components may be more than 100%.
 Source: Australian Government Department of Education, Higher Education Statistics Collection.

Enabling courses are offered to domestic students to assist them in successfully undertaking an award course in a student place funded either partially or fully by the Australian Government. A wide variety of enabling courses are offered, depending on the needs of the field of study (or discipline) and the students in question. Poor numeracy and financial literacy skills have been identified in the literature as barriers to undertaking business-related studies for Indigenous students (Duckworth et al. 2014; Fitzgerald 2010). Enabling courses in these subjects may facilitate greater Indigenous participation in M&C. Although Table 3 shows that there were very few M&C students enrolled in enabling courses between 2010 and 2013, other data from the Higher Education Statistics Collection show that, for 54 per cent of Indigenous students and 44 per cent of non-Indigenous students enrolled in enabling courses, the field of study is recorded as ‘mixed field programs’—many enabling courses are generalist rather than discipline specific. The data therefore provide little information about how many students participate in enabling programs that might provide them with skills relevant to undertaking an award course in the M&C field, or how many embark on an M&C award course after completing an enabling course. Around 6 per cent of all students enrolled in enabling courses were Indigenous, indicating that many Indigenous students were seeking the additional skills offered by such courses.

TABLE 3. Enrolments in enabling courses for management and commerce and other fields of study, Australia, 2010–13

Type of enabling course	2010	2011	2012	2013
Indigenous				
M&C	<5	<5	0	<5
All fields	1,008	962	1,137	1,236
Non-Indigenous				
M&C	61	73	81	99
All fields	14,750	15,973	17,627	19,700

M&C = management and commerce
 Source: Australian Government Department of Education, Higher Education Statistics Collection.

Although the total number of Indigenous students in award courses is relatively small, aggregating the number of students over a three-year period (2010–12) provides some insight into the type of M&C courses that Indigenous graduates completed (Table 4).

Of the group who completed their M&C course between 2010 and 2012, the proportion of Indigenous undergraduates who had studied accounting (24.0%) was just over double that of non-Indigenous undergraduates (10.9%). However, among those completing postgraduate courses, the proportion of Indigenous students completing an accounting course (4.9%) was just over half that of non-Indigenous postgraduates (9.6%).

TABLE 4. Postgraduate and undergraduate award completions in management and commerce by detailed field of study categories and Indigenous status, Australia, 2010–12 aggregated

Field of study	Indigenous		Non-Indigenous	
	Post-grad	Under-grad	Post-grad	Under-grad
Percentage				
General M&C	2.4	7.9	4.3	16.7
Accounting	4.9	24.0	9.6	10.9
Business & management	82.0	47.6	68.1	51.1
Sales & marketing	5.8	4.3	6.1	7.3
Tourism	np	np	np	np
Office studies	np	np	np	np
Banking, finance & related fields	np	np	7.4	4.1
Other M&C	2.9	15.0	4.7	11.0
Total M&C	100.0	100.0	100.0	100.0
Number				
Total M&C	206	466	41,447	72,430
Economics & econometrics	<5	5	952	4,797

M&C = management and commerce, np = not published because of confidentiality issues

Notes: Students undertaking combined courses were classified to two fields of study, so the sum of the components presented here may add to more than 100%. Economics and econometrics, although business related, is classified under the broad field of society and culture, and so is presented separately here.

Source: Australian Government Department of Education, Higher Education Statistics Collection.

The other focus for Indigenous students within the broader M&C field was general business and management, especially among postgraduates. This is consistent with a focus on generalist skills, which may be useful in managing and running a business. Taken together, the two specific areas of accounting, and business and management cover the majority of Indigenous graduates in the broad field of M&C. A large proportion of non-Indigenous graduates also studied these two categories combined, but there were substantially larger proportions of Indigenous graduates. One explanation for the relatively large numbers of Indigenous accountancy graduates is the promotion of accountancy by industry initiatives and active professional associations (see ‘Consultations with universities, and management and commerce departments’ on page 17).¹⁶

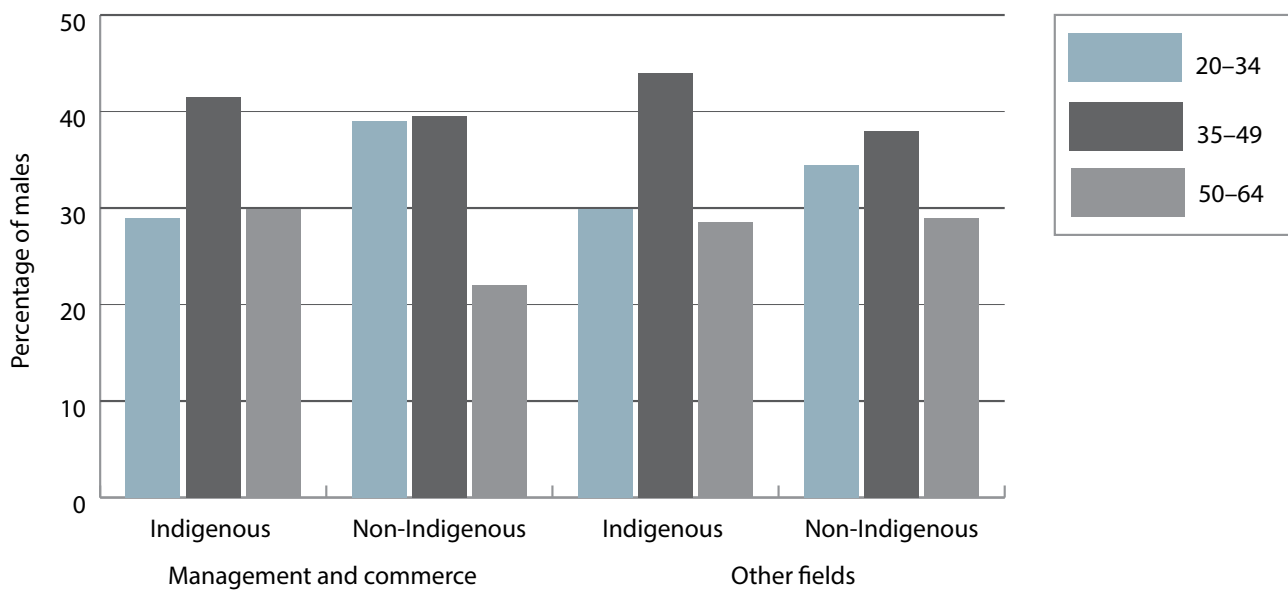
In contrast, Table 4 shows that Indigenous graduates were substantially under-represented, compared with non-Indigenous graduates, in courses associated with higher status and higher income (e.g. in banking, finance and related fields, for which the number of Indigenous graduates was too small to report and the percentages would be less than 2%).

Role of age and mature-age entry

Given the inadequacy of the statistics on ‘basis of admission’ (see ‘Higher Education Statistics Collection’, above), this section revisits the issue indirectly by focusing on population statistics from the most recent census. Among those currently studying at university, Indigenous students tend to be older than non-Indigenous students—in 2011, 46 per cent of Indigenous students were aged 15–24 years, compared with 59 per cent of non-Indigenous students. Moreover, a larger proportion of Indigenous university students were studying part-time (17%), compared with 11 per cent of non-Indigenous university students (Crawford & Biddle, forthcoming). The older age profile of Indigenous students may result in lost productive years for Indigenous graduates in a professional career, and is considered especially crucial in the fields of law, medicine and business (Anderson & Potok 2011).

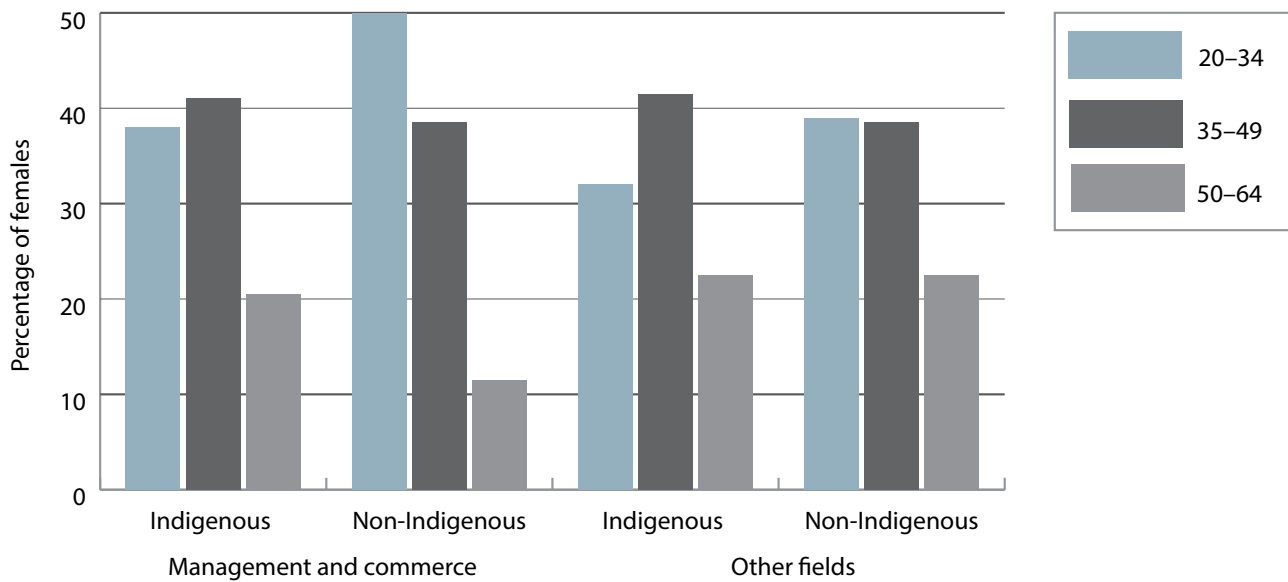
Figs 2 and 3 draw on census data to examine the age profile of Indigenous and non-Indigenous students with a degree at bachelor level or above in the field of M&C, compared with other fields. Indigenous men and women with a bachelor degree in the field of M&C are noticeably older than their non-Indigenous counterparts. Just 28 per cent of Indigenous men with an M&C degree at bachelor level or above were aged 20–34 years, compared with 38 per cent of their non-Indigenous counterparts. Among women, the difference was even greater—37 per cent of Indigenous women with an M&C degree at bachelor level or above were aged 20–34 years, compared with 50 per cent of non-Indigenous women.

FIG. 2. Proportion of males with a degree at bachelor level or above by age group, field of study and Indigenous status, Australia, 2011



Source: Australian Bureau of Statistics, using customised calculations from the 2011 Census.

FIG. 3. Proportion of females with a degree at bachelor level or above by age group, field of study and Indigenous status, Australia, 2011



Source: Australian Bureau of Statistics, using customised calculations from the 2011 Census.

Indigenous students and Indigenous graduates are older, on average, than their non-Indigenous counterparts. A number of factors contributing to, or associated with, studying at an older age have been identified (Crawford & Biddle, forthcoming). Lower rates of year 12 completion and poorer academic results among those who do complete year 12 constitute barriers to participation in higher education for the Indigenous population. Higher education is less accessible to those living in remote areas; this disproportionately affects Indigenous people because a much larger proportion of the Indigenous population than of the non-Indigenous population lives in remote areas. Role models are important: lack of role models with experience of higher education is associated with lower expectations of completing a degree, while parental attainment of post-school qualifications is associated with higher rates of attaining post-school qualifications and participation in higher education among the next generation.

Caring responsibilities also appear to be important, though the causal direction is difficult to establish. Young Indigenous people are more likely than their non-Indigenous counterparts to be either looking after their own children or caring for someone with a disability, long-term illness or frailty due to old age (Crawford & Biddle, forthcoming; Yap & Biddle 2012). Those caring for children—whether Indigenous or non-Indigenous—are less likely to be attending university than those not caring for children, but the proportion of young Indigenous people caring for their children is three times that of non-Indigenous people, making it a more significant factor in relation to participation in higher education. Caring for someone with a disability appears to have a greater negative effect on Indigenous participation in higher education than on non-Indigenous participation (Crawford & Biddle, forthcoming). Finally, financial pressures, racism and discrimination, a lack of academic support, and cultural alienation or feeling excluded from mainstream academic environments have been identified as continuing barriers to successful Indigenous participation in higher education (Pechenkina & Anderson 2011).

Institutional distribution of Indigenous enrolments

Table 5 provides some institution-specific information on Indigenous enrolments in M&C courses. An important factor in attempting to understand institutional success in engaging Indigenous students in M&C courses is the size of the recent student cohort (i.e. the 'Indigenous enrolments in M&C' column). These data enable a comparison of the percentage of Indigenous students at each institution who are enrolled in M&C with the corresponding percentage of non-Indigenous students.

The institutions in Table 5 are ranked according to the size of the recent Indigenous student cohort in M&C courses. Although it was important to take this information into account in our consultations with universities, the information on sizes of institutions and their relative success in securing Indigenous students (i.e. the last two columns, which give different rankings of institutions) is also important. We therefore took all this information into account in designing our consultations. Given constraints on time and resources, we wanted to talk to universities that had a range of experiences and degrees of success in attracting Indigenous students. One factor was the number of Indigenous students in the enrolment 'catchment' area (i.e. students who lived within commuting distance of the university). Another was the size of the M&C faculty, as indicated by values in the last two columns. For example, at Bond University (a private university), almost one-quarter of Indigenous students study business-related studies. For this reason, it was particularly important to include Bond University in our consultations.

At the other extreme, Charles Darwin University (CDU) has limited offerings in this field of study (i.e. only 3% of all Indigenous enrolments at CDU were in M&C). Pechenkina, Kowal and Paradies (2011) argue that there is a dual system of universities: one group that attracts substantial enrolments from Indigenous students, and another that has high Indigenous completion rates but low Indigenous enrolments. Batchelor Institute of Indigenous Tertiary Education, which had the largest enrolment of Indigenous students at the time of that study, now has a collaborative partnership with the CDU to address the needs of their Indigenous students. Under this new arrangement, the CDU M&C enrolments are not in the top half of the rankings for the M&C statistics reported in Table 5.¹⁷ The institutional dichotomy observed by Pechenkina, Kowal and Paradies (2011) is not clear when one focuses solely on M&C courses. Given the focus on business-related studies, it is important to take into account where courses are provided and how relevant they are.

TABLE 5. Indigenous undergraduate enrolments in management and commerce by institution, Australia, 2012

Institution	Indigenous enrolments in M&C (number)	Non-Indigenous enrolments in M&C (number)	Indigenous enrolments in all fields (number)	Non-Indigenous enrolments in all fields (number)	Indigenous M&C enrolments as a percentage of all Indigenous enrolments (%)	Non-Indigenous M&C enrolments as a percentage of all non-Indigenous enrolments (%)
Griffith University	89	5,716	510	25,198	17	23
Queensland University of Technology	67	6,527	436	28,952	15	23
University of Southern Queensland	55	2,492	318	14,312	17	17
University of Technology, Sydney	48	5,602	183	18,200	26	31
Central Queensland University	47	1,660	232	9,383	20	18
James Cook University	45	1,224	515	11,073	9	11
University of Newcastle	41	2,047	486	19,731	8	10
University of Western Sydney	39	8,356	408	30,485	10	27
Southern Cross University	38	2,032	269	9,186	14	22
Deakin University	32	5,506	495	24,923	6	22
University of South Australia	29	3,440	312	18,507	9	19
Charles Sturt University	28	2,752	567	22,832	5	12
University of Canberra	25	2,261	138	9,173	18	25
University of New England	25	1,179	368	11,976	7	10
University of Queensland	25	4,277	236	27,575	11	16
University of the Sunshine Coast	25	1,262	123	6,773	20	19
University of Wollongong	23	3,023	221	13,632	10	22
Swinburne University of Technology	22	5,130	49	14,087	45	36
Curtin University of Technology	21	4,863	330	22,312	6	22
University of New South Wales	21	5,474	224	24,719	9	22

TABLE 5. *continued*

Institution	Indigenous enrolments in M&C (number)	Non-Indigenous enrolments in M&C (number)	Indigenous enrolments in all fields (number)	Non-Indigenous enrolments in all fields (number)	Indigenous M&C enrolments as a percentage of all Indigenous enrolments (%)	Non-Indigenous M&C enrolments as a percentage of all non-Indigenous enrolments (%)
Edith Cowan University	18	2,320	182	16,188	10	14
Flinders University of South Australia	18	1,102	142	12,023	13	9
University of Tasmania	18	1,360	246	14,754	7	9
Macquarie University	15	5,018	174	19,813	9	25
Charles Darwin University	14	398	413	5,238	3	8
La Trobe University	14	3,361	120	20,304	12	17
RMIT University	14	4,352	93	20,790	15	21
Australian Catholic University	13	1,770	324	15,522	4	11
University of Western Australia	12	3,411	142	15,559	8	22
Australian National University	11	1,370	88	8,029	13	17
Monash University	11	6,381	110	29,411	10	22
Bond University	9	689	37	2,817	24	24
University of Sydney	9	2,961	202	26,926	4	11
Murdoch University	7	1,186	116	10,753	6	11
University of Adelaide	6	1,726	119	14,315	5	12
University of Melbourne	6	2,590	94	18,429	6	14
Victoria University	5	3,375	55	14,880	9	23
Federation University Australia	<5	np	36	4,836	–	–
University of Notre Dame Australia	<5	np	45	7,998	–	–
MCD University of Divinity	0	0	<5	–	–	–

– = not possible to calculate statistic because numerator or denominator is zero or not precisely specified (e.g. <5), or not published because of confidentiality concerns (np); M&C = management and commerce

Notes: Batchelor Institute of Indigenous Tertiary Education is not listed because the delivery of undergraduate programs moved to Charles Darwin University from 2012. Institutions highlighted in bold are those we planned to consult with.

Source: Australian Government Department of Education, Higher Education Statistics Collection.

The quality and quantity of offerings in M&C vary greatly between institutions, such that consultation with some institutions may be less important. For example, Federation University Australia (formerly known as Ballarat University, which had a prominent vocational education and training connection) and the University of Notre Dame Australia each have fewer than five Indigenous enrolments in M&C.

The institutions listed in bold in Table 5 are those that we attempted to consult about their engagement with Indigenous students in the field of M&C. They include universities from both metropolitan and regional areas, and cover both the established 'sandstone' universities and those that have emerged since the 1960s (e.g. as a result of the Dawkins reforms of the 1980s). It was important to consult institutions that provide conventional academic business studies and more innovative courses with a technological focus. We return to this analysis under 'Consultations with universities, and management and commerce departments' on page 17.

Labour force outcomes for graduates

Labour force status

One of the main goals of business-related education is to secure a job or even to start up one's own business. Using data from the 2011 Census, Table 6 shows that male M&C graduates aged 20–64 years were highly employable. The percentage employed was very similar for Indigenous and non-Indigenous graduates, at about 90 per cent. For Indigenous males, this employment rate was the third highest among all fields of study, after engineering and related technologies (92.9%), and architecture and building (90.5%). For non-Indigenous male M&C graduates, the employment rate was the fourth highest among all fields of study, after health (93.0%), information technology (90.3%), and architecture and building (90.1%).

To the extent to which there are evident differences in male labour force status, Indigenous males were slightly more likely than non-Indigenous males to be not in the labour force. This could reflect higher marginal attachment¹⁸ because of a lack of available jobs and even discrimination in the labour market (Hunter & Gray 2012).

Table 7 presents a similar analysis for female graduates. A slightly larger proportion of Indigenous female graduates were employed than non-Indigenous female graduates. This is consistent with high rates of return for Indigenous qualifications that are demonstrated in the literature (Kalb et al. 2014). It is especially true for M&C graduates, with 86.0 per cent of Indigenous female graduates in this field

being employed, compared with 80.6 per cent of non-Indigenous female graduates. For Indigenous female graduates, the proportion employed was the third highest among all fields of study, after information technology (91.7%), and engineering and related technologies (88.9%). For non-Indigenous females, the proportion employed was also the third highest among all fields of study, after health (86.7%) and education (82.6%).

TABLE 6. Labour force status for males aged 20–64 years with a bachelor degree or above by field of study, Australia, 2011

Field of study	Emp. (%)	Unemp. (%)	Not in labour force (%)	Total (%)
Indigenous				
M&C	88.9	3.4	7.7	100.0
Other	84.9	4.4	10.6	100.0
Total	85.6	4.3	10.1	100.0
Non-Indigenous				
M&C	90.0	3.4	6.6	100.0
Other	88.7	2.9	8.4	100.0
Total	89.1	3.0	7.9	100.0

emp. = employed; M&C = management and commerce
Source: Australian Bureau of Statistics, using customised calculations from the 2011 Census.

TABLE 7. Labour force status for females aged 20–64 years with a bachelor degree or above by field of study, Australia, 2011

Field of study	Emp. (%)	Unemp. (%)	Not in labour force (%)	Total (%)
Indigenous				
M&C	86.0	2.4	11.6	100.0
Other	82.8	2.8	14.4	100.0
Total	83.1	2.8	14.1	100.0
Non-Indigenous				
M&C	80.6	3.9	15.5	100.0
Other	81.3	2.5	16.1	100.0
Total	81.2	2.8	16.0	100.0

emp. = employed; M&C = management and commerce
Source: Australian Bureau of Statistics, using customised calculations from the 2011 Census.

Table 8 examines labour force status using AGS data, which are not disaggregated by gender because of the relatively small sample sizes in some categories, even after aggregating three years of data (2010–12). The labour force status categories in the AGS are different from those used in the census tables above. It is also worth remembering that the AGS data focus on recent graduates, rather than covering all graduates in the working-age population.

In contrast to the above census analysis, recent Indigenous graduates in the AGS were substantially more likely to be working or have accepted a job offer than non-Indigenous graduates. This difference is even more evident among M&C graduates than in the total population of graduates in all fields. Indigenous graduates were also less likely to be unemployed (not working and looking for work) or not in the labour force (neither working nor looking for work) than their non-Indigenous counterparts. A possible reason is that, even though the focus in these data is on recent graduates, the slightly older age profile of Indigenous students compared with non-Indigenous students may mean that they have a relative advantage in terms of work experience.

TABLE 8. Labour force status for recent graduates aged 20–64 years with a bachelor degree or above by field of study, Australia, 2010–12 aggregated

Field of study	Working or accepted a job offer (%)	Not working, looking for work (%)	Neither working nor looking for work (%)	Total (%)
Indigenous				
M&C	86.1	6.3	7.6	100.0
Total	84.6	7.5	7.9	100.0
Non-Indigenous				
M&C	72.2	15.2	12.6	100.0
Total	77.5	11.2	11.4	100.0

M&C = management and commerce

Note: M&C graduates are those who studied M&C or economics/econometrics as one of the first two fields of study they reported (a very small percentage of students reported 3 or 4 fields of study).

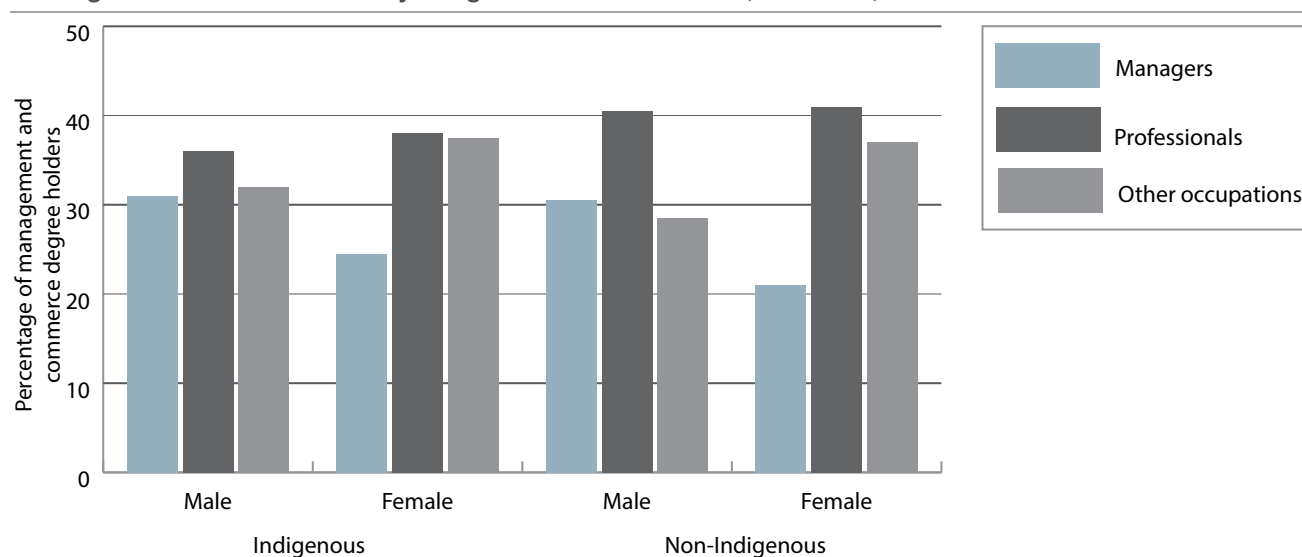
Source: Graduate Careers Australia (2014)

Occupation and self-employment

The occupational analysis in this report is based on all broad-level occupations in the Australia New Zealand Standard Classification of Occupations (ANZSCO). To simplify the exposition, only managers and professionals are reported separately (Fig. 4) because they tend to have better socioeconomic outcomes and higher status than other occupations (Taylor et al. 2012). This broad occupational category also has the advantage that it gives an adequate sample size for separate analysis of the M&C field of study. As is the case for the analysis of labour force status in Tables 6 and 7, observed differences are greater by gender than by Indigenous status.

Fig. 4 shows that female M&C graduates aged 20–64 years were less commonly employed as managers than male M&C graduates (irrespective of Indigenous status). Non-Indigenous male M&C graduates aged 20–64 years were more commonly employed as professionals (40.7%) than their Indigenous counterparts (36.1%). This may reflect the detailed field-of-study data, which indicate that non-Indigenous M&C graduates were more likely than Indigenous graduates to have undertaken more specialised courses that may result in high-paying careers—for example, in banking and finance. Indigenous female M&C graduates aged 20–64 years were slightly more commonly employed as managers (24.5%) than their non-Indigenous counterparts (21.3%), and less commonly employed as professionals (38.1%) than their non-Indigenous counterparts (41.2%).

Studying management should equip students to manage and run both community organisations and businesses. Table 9 shows that M&C courses are an important source of Indigenous business people (analysis by sex was not attempted because of the small numbers in some categories). Census questions are used to distinguish between self-employed people, employees and contributing family workers.¹⁹ The results presented here also distinguish between self-employed people who were owner-managers in incorporated (proprietary limited) versus unincorporated enterprises. Consistent with the general population statistics, employed Indigenous graduates were less likely to be self-employed than employed in other ways. However, the differential is least evident for M&C graduates. Note that these census data include graduates in a wide age range (working-age population), irrespective of how long ago they graduated.

FIG. 4. Occupations of employed people aged 20–64 years with a bachelor degree or above in management and commerce by Indigenous status and sex, Australia, 2011

Source: Australian Bureau of Statistics, using customised calculations from the 2011 Census.

TABLE 9. Self-employment status of people aged 20–64 years with a bachelor degree or above by field of study and Indigenous status, Australia, 2011

Field of study	Employees, excluding owner-managers (%)	Owner-managers of incorporated enterprises (%)	Owner-managers of unincorporated enterprises (%)	Contributing family workers (%)	Total (%)
Indigenous					
M&C	88.1	5.6	4.7	1.5	100.0
Other	93.1	2.6	3.7	0.6	100.0
Total	92.4	3.0	3.8	0.7	100.0
Non-Indigenous					
M&C	85.4	8.6	5.0	1.0	100.0
Other	86.5	6.1	6.6	0.8	100.0
Total	86.3	6.7	6.2	0.9	100.0

M&C = management and commerce

Note: An owner-manager of an incorporated enterprise works in their own business entity, which is registered as a separate legal entity from its members or owners (also known as a limited liability company). An owner-manager of an unincorporated enterprise operates their own unincorporated economic enterprise—that is, a business entity in which the owner and the business are legally inseparable, so that the owner is liable for any business debts that are incurred. This category includes those engaged independently in a profession or trade (Australian Bureau of Statistics census data dictionary).

Source: Australian Bureau of Statistics, using customised calculations from the 2011 Census.

In terms of the skills required to run a business, it is worth noting that more than 90 per cent of the Indigenous and non-Indigenous self-employed in incorporated enterprises operate a small business (i.e. <20 employees) rather than a larger business. Compared with non-Indigenous businesses, Indigenous businesses are more likely to be small or even micro businesses with fewer than five employees (Hunter 2014). More than three-quarters (77%) of Indigenous owner-managers in unincorporated enterprises have no employees; many of these are probably 'sole traders' (the corresponding non-Indigenous statistic is 69%). Generalist skills received in M&C courses are likely to be highly valued in running these small businesses, as it is unlikely that these organisations can afford to appoint specialists.

Table 10 presents AGS data on recently graduating cohorts (based on a smaller sample). In contrast to the analysis of the census data, Indigenous graduates in M&C were the group most likely to be self-employed. Clearly, recent Indigenous graduates are doing very well in terms of starting their own businesses. Again, this may be because this group, despite being recent graduates, tend to be older than the non-Indigenous graduates and may have prior career experience.

TABLE 10. Self-employment status of recent graduates by field of study and Indigenous status, Australia, 2010–12 aggregated

Field of study	Self-employed (%)	Not self-employed (%)	Total (%)
Indigenous			
M&C	6.1	93.9	100.0
Other	3.7	96.3	100.0
Total	4.1	95.9	100.0
Non-Indigenous			
M&C	4.9	95.1	100.0
Other	5.0	95.0	100.0
Total	5.0	95.0	100.0

M&C = management and commerce

Note: M&C graduates are those who studied M&C, or economics and econometrics as one of their major fields of study (of two major fields reported). This table covers those aged 20–64 years to facilitate comparability with the census data analysis in Table 9.

Source: Graduate Careers Australia (2014)

Some salient facts about industry distributions (Appendix A) are noteworthy. Among Indigenous M&C graduates, 61.5 per cent of men and 68.2 per cent of women were employed in five industries: financial and insurance services; professional, scientific and technical services; public administration and safety; education and training; and health care and social assistance (Figs A.1 and A.2). The same five industries also accounted for a large share of employment among non-Indigenous M&C graduates, with just over half (52.1 per cent of males, 56.0 per cent of females) employed in these industries. However, the non-Indigenous graduates showed a wider spread across all industries; employment in other industries, such as manufacturing, wholesale trade, retail trade, and accommodation and food services, was more prominent among non-Indigenous M&C graduates than among their Indigenous counterparts.

Consultations with universities, and management and commerce departments

Consultation process

As indicated above, M&C is nominally taught in around 40 tertiary institutions. To maximise representativeness within our budget, it was important in this project to undertake consultations with a diversity, but limited number, of universities and departments. Analysis of Table 5 provided a basis for excluding certain universities with limited involvement in teaching M&C courses, and identifying institutions that were likely to have been relatively successful or unsuccessful in engaging Indigenous students. For example, why did Griffith University attract 89 Indigenous students in M&C between 2010 and 2012, while the University of Melbourne attracted only 6 Indigenous students? Of course, a university's historical experience does not indicate that it has good (or bad) practice with regard to Indigenous enrolment. Proximity to a sizeable Indigenous population (and hence a potential pool of students) might also be important. In targeting universities to consult, we stratified institutions by number of enrolments (high versus low Indigenous enrolments—i.e. 20+ versus <20 students) and type of university, to ensure that the main issues were covered. One crucial criterion for targeting the consultation was coverage of the different sorts of labour markets, especially in regions where more Indigenous people live—for this reason, a substantial number of regional universities were consulted.²⁰

The above analysis and a literature review were useful in helping us to identify a range of issues to raise with the M&C departments at various universities around Australia:

- What are the minimum entry requirements for your business degrees (Australian Tertiary Admissions Rank [ATAR] for maths/English)?
- Do you have an alternative Indigenous entry program (for business degrees)?
- Does your university have an Indigenous foundation, or Indigenous university preparation program or associate degree? Does this include business-related studies?
- Do your Indigenous business students access the Indigenous Tutorial Assistance Scheme (ITAS)?
- What would attract more Indigenous students into business studies?
- What support do Indigenous students require in business degrees?
- What do you think are the impediments to Indigenous students enrolling in business degrees?

The process of consultations was standardised across all universities. Calls were made directly to the student admission areas. Most student admission officers provided the basic details of ATAR entry and prerequisites for business degrees. After obtaining these data, in most cases, the enquiries were directed to the Aboriginal and Torres Strait Islander (Indigenous) support centre. CDU was the only university that did not direct some or all of the questions associated with Aboriginal and Torres Strait Islander enquiries to the Indigenous support centre. This probably reflects the location of CDU and the relatively large enrolment of Indigenous undergraduates in all fields of study. The comparative advantage of that institution is exemplified by its student admissions officer, who demonstrated extensive knowledge of ITAS and alternative entry pathways for Aboriginal and Torres Strait Islander students, and an awareness of the Australian Centre for Indigenous Knowledges and Education.

Identifying and being able to contact the most appropriate person in the university faculties was quite challenging. As a result, few responses were obtained from the faculties. Once contact was established within the Indigenous support centre, a questionnaire was emailed to the individual to complete and return.

Data collection occurred during the beginning of semester two, and this probably contributed to the poor response in terms of details obtained. One of this report's authors (Professor Radoll) gave each contact person a weekly phone call and email reminder, and recorded the response. In the end, some information was collected from all but one institution.

The difficulties in gaining an adequate response meant that it was not possible to ask all the questions listed above. Consultations focused on the nature of Indigenous business enrolments and the support needed for Indigenous students. Consultations needed to be kept as simple as possible to elicit some information. In reality, a substantial portion of the consultation was taken up discussing how overworked Indigenous staff are in universities (especially in Indigenous support centres)—a useful finding in itself.

In addition to institutional responses from the various universities, the following people were individually consulted and were happy for us to use their insights in this report:

- Dr Kerry Bodle—Indigenous Accountant and academic at Griffith University Business School
- Mr Phillip Ironfield—believed to be the first Aboriginal accountant and first known Aboriginal Certified Practising Accountant
- Mr Adrian Williams (non-Indigenous)—Head of Property Finance at AMP Capital, founder of indigenoussaccountantsrock.com.au,²¹ and co-founder of Indigenous Accountants Australia.²²

Extensive details of the consultations are provided in Appendix B. Table 11 provides an overview of institutional responses. Each university responded the best they could to the questions. Universities such as the Australian Catholic University (ACU) primarily focused on their longstanding Associate Degree in Business Administration (Indigenous Studies). Universities that did not have an Indigenous business program provided responses on their alternative entry pathways.

TABLE 11. Summary of responses from the institutions contacted

University	Australian Tertiary Admissions Rank; overall position	Prerequisites for business degrees	Level of response
Australian Catholic University	58–61, depending on State; 17 in Queensland	English	Detailed
Bond University	66.80; 15	None	Limited
Charles Darwin University	60	None	Detailed
Charles Sturt University	65	None	Detailed
Flinders University	70.55	None	None
Griffith University	55.80–65.25, depending on stream	English standard	Limited
RMIT University	70	English	Limited
Swinburne University of Technology	70.05	Pass in English higher than general English	None
University of Newcastle	60 for business degrees, up to 90 for combined degrees	Maths and English assumed	Detailed
University of New South Wales	96.3	2-unit maths	Detailed
University of Southern Queensland	55; 16	Year 12 English and maths assumed	None
University of Technology, Sydney	80–90, depending on stream Accounting entry via interview	Maths assumed but not a prerequisite	Limited
University of Melbourne	96, but 88 for disadvantaged students	VCE Maths Methods plus 3- or 4-unit English	Detailed
University of Western Australia	80	English 3A/3B plus Maths 2C/2D or pass in Maths Competency	Detailed
University of Western Sydney	70	None	None

VCE = Victorian Certificate of Education

Note: One institution that was contacted did not provide a formal response.

Reflections on the consultations

The value of the Indigenous support centres cannot be overstated. Throughout the consultation process, few of the student admission centres could provide information on Indigenous student programs. In most cases, they were unable to provide a contact point within the Indigenous support centre or a faculty-based contact. In all cases, they suggested the Indigenous support centre as the contact point. Another important function that most Indigenous support centres provide is monitoring individual student grades. The Indigenous support centres are able to provide targeted assistance early, which increases the completion rates of their students.

ACU appears to have the longest running business qualification for Aboriginal and Torres Strait Islander people across the university sector. As a result, it might be able to provide insights on longer-term trends.

From 2012 onwards, an increased focus seems to have been placed on Aboriginal and Torres Strait Islander entry into business degrees. During the consultations, some pointed to the influence of the Indigenous Accountants Australia Project, a joint initiative of CPA Australia, and Chartered Accountants Australia and New Zealand, which was launched in February 2012.

The standard school leaver requirements for entry into business degrees vary considerably, ranging from an ATAR of 55 at the University of Southern Queensland and Griffith University to 96 for the University of Melbourne and the University of New South Wales (UNSW). Similarly, the prerequisites for school leaver entry vary from no assumed knowledge or prerequisites to passes in higher-level English and mathematics.

Almost all universities, with the exception of Bond University, have one or more dedicated Aboriginal and Torres Strait Islander alternative pathways into university.

Bond University uses an interview as an alternative entry pathway for most students who do not meet standard entry requirements.

The terminology around alternative entry programs is quite confusing and inconsistent. For example, UNSW has a 'pre-program', which is described as an enabling program. This program is just four weeks long. At the other end of the scale, ACU's two-year Associate Degree in Business Administration (Indigenous Studies) is also described as an enabling program. There is a considerable difference between a four-week course and a two-year associate degree.

The naming of the enabling programs is also quite diverse. Some universities have chosen to give their programs an Aboriginal name, while others use only English terms. In all cases, the Indigenous support centre has an Indigenous name, which makes it easily identifiable and provides a point of difference in a large organisation.

The mode of teaching is important, but again the terminology is confusing. The terms used to describe teaching were 'face-to-face on-campus', 'mixed mode', 'residential' and 'block release'. On further investigation, mixed mode means that the teaching has no set or standard format. It could mean that all lectures are online and tutorials are conducted face-to-face, or that some lectures are online and others are face-to-face. Throughout the consultations, mixed mode, residential and block release were used to describe the same format of teaching—that is, they are all forms of teaching in which students undertake the bulk of their study at home and attend the university a few times during the year. Some universities will allow students to undertake four units of study off-campus, whereas others will only allow up to two units of study to be undertaken off-campus. Restrictions on the number of units that students are able to undertake off-campus seem to be associated with the level of successful completion of units. Every university that had off-campus students talked about the challenges for students studying this way and the attrition rate from degrees taught through this mode. However, having an off-campus option was important because universities felt that the level of flexibility it provides ensures that they continue to attract students into their programs. The universities reported that very few students who enrol in business degrees want to start their own businesses.

The demographics of students in business degrees varied greatly. Some universities, including UNSW and the University of Melbourne, reported that they have mostly school leavers in their undergraduate degrees; others, including Charles Sturt University (CSU) and ACU,

reported that they find it hard to attract school leavers. The mode of teaching is likely to be the reason behind the differences. Both ACU and CSU teach their Indigenous business degrees in residential mode, and both reported that the majority of their enrolments are Aboriginal and Torres Strait Islander people who are currently working in an Aboriginal organisation and are either looking to become qualified to be able to undertake the position that they currently hold (such as chief executive officer) or to gain qualifications for promotion. Overall, it appears that mature-age students and other non-school leavers make up the majority of the Indigenous student population in Indigenous business degree programs.

Providing the right support to students in business programs is vital. All universities use ITAS tutors for their students; however, some find it challenging to source ITAS tutors. The mode of teaching affects both the level of support required by students and the availability of ITAS tutors. Those who study on campus are able to more easily access support and ITAS tutoring, whereas those who study in residential mode find it challenging to access the level of support they require and gain access to an ITAS tutor in their local area.

Many barriers to Indigenous participation emerged from the consultations.

School qualifications were cited as a barrier for school leavers wishing to gain entry into business degrees. To gain entry into business degrees, school leavers require an ATAR of between 55 and 96 (depending on the university), as well as successful completion of year 12 English and mathematics (again, depending on the university). The better the educational outcomes at secondary school, the greater the choices available for a university and associated degrees. Universities such as UNSW, the University of Western Australia and the University of Melbourne believe that their institution's high ATAR requirement is a factor in the low Indigenous student numbers at their institutions, and that their mathematics prerequisites are the main factor in their low numbers of enrolments in areas such as business, engineering and technology. Other universities, such as ACU, CSU, the University of Newcastle and CDU, believe that their ATARs are set at a level that provides access to university for Indigenous students, who do not have to meet any prerequisites to enrol in the business degree; however, there are likely to be other barriers to business degrees.

Other barriers have their origins in the family and community. The consultations revealed that some Aboriginal and Torres Strait Islander families and communities do not see business degrees as an

attractive option for their children or youth to study at university. Universities with higher Aboriginal and Torres Strait Islander enrolments, such as CSU, believe that the majority of their Indigenous students enrol in disciplines such as nursing, teaching and policing because this is consistent with the wishes of their parents and community. Universities also believe that information provided by secondary school careers advisers is based on historical family and community expectations; as a result, the information regarding degree choices is limited to specific vocations such as those listed above. A number of universities speculated that one of the reasons that business is not very attractive to Aboriginal and Torres Strait Islander students is that there is not a great deal of understanding of what business is. Business degrees range from management to accounting, finance and economics, but many see business degrees as predominantly involving accounting.

Another barrier that emerged strongly from the individual consultations was that potential Indigenous students did not appear to understand the nature of a career in accounting. Respondents believe that there is disconnection between what people perceive accountants do and what accountants actually do. Moreover, the two Aboriginal accountants consulted believe that Aboriginal and Torres Strait Islander students have probably never met an Indigenous accountant and therefore have no role models to guide them on a pathway through their business degrees. Moreover, as reported throughout our consultations, business and commerce degrees are seen as a nontraditional area of study for Aboriginal and Torres Strait Islander students because of their close links to mathematics. Mathematics is certainly not incompatible with customary or contemporary Indigenous knowledge and practice, and it was suggested that the links between mathematics and traditional knowledge could be included in the curriculum. However, it should be noted that the numeracy requirements for operating a business in a modern capitalist economy are substantial and an important component of business-related studies, especially accountancy.

The lack of high-profile and easily identifiable role models was also raised as an issue by the universities. Some universities believe that they would see an increase in Aboriginal and Torres Strait Islander students enrolling in business degrees if there were high-profile Indigenous accountants. They argued that a government-funded program similar to the More Aboriginal and Torres Strait Islander Teachers Initiative (MATSITI) would be a good way to increase awareness about the importance of business in the Indigenous community; such a program could also put forward a number of role models.

Competition for Indigenous student enrolments was raised as a barrier to Indigenous participation in business-related degrees. For example, the MATSITI program, Indigenous allied health, medicine and mining engineering were all identified as strong competitor disciplines and programs that have been successful in attracting Aboriginal and Torres Strait Islander students.

A number of universities made suggestions on how to improve the attractiveness of business degrees. These included working with industry to create more employment opportunities. This is already occurring through the Indigenous Accountants Australia project.²³ Another idea is to develop targeted scholarships. However, no amount of employment opportunities or scholarships can mitigate some of the barriers identified above, such as the minimum entry requirements to gain access to business degrees in some universities.

Most universities stated that, regardless of the immediate barriers to entry into a business degree, Aboriginal and Torres Strait Islander students almost always find a way to study their desired degree, even if it means additional preparation and a longer degree. Given the lack of participation in enabling courses in this field of study, it is likely that Indigenous students will need to augment their level of proficiency in the basic competencies required for successful completion of their studies.

Concluding remarks

University graduates tend to be highly productive members of society because higher education expands the economic and social options of students. However, there is arguably a particular need to increase the participation of Indigenous Australians in business-related studies because this is likely to have a significant multiplier effect on other Indigenous people. Graduates of M&C courses have improved employment outcomes and are also disproportionately likely to own and manage their own businesses. This is likely to help close the gap in employment between Indigenous and non-Indigenous Australians because Indigenous-owned businesses tend to be Indigenous-friendly workplaces that are more likely to employ Indigenous workers (Hunter 2014).

However, business-related studies are not the only path for potential Indigenous entrepreneurs; other specialised fields of study (e.g. architecture and 'creative arts' fields of study) are also associated with relatively high rates of running businesses that employ other staff.²⁴ Census data show that graduates in 'creative' fields are more likely to be unincorporated businesses and sole traders.

This may be because such graduates have fewer options in their chosen field and are demand constrained—that is, there may not be many employers competing for these particular skills. However, even if potential Indigenous entrepreneurs pursue other specialised fields of study, they need access to general skills that business-related courses provide. As argued above, someone running a small business requires a range of skills, and a generalist qualification may be preferable. Hence, access to business-related subjects as part of a ‘minor’ may be just as important as a main qualification in M&C.

The consultations with universities highlighted the need for alternative pathways for facilitating Indigenous enrolment, and adequate resourcing of Indigenous support centres so that Indigenous students can be adequately supported.

Although alternative pathways are to be encouraged, the ACU Associate Degree in Business Administration (Indigenous Studies) has been operating for more than five years and the number of enrolments in award courses in M&C is not substantially higher at that institution. There are limitations to the extent to which alternative pathways can increase Indigenous enrolment in business-related education. Students are attracted to quality educational products that will add to their productive skills. However, deficiencies in core competencies may mean that not all students can make the transition to an award-level course. ACU implicitly acknowledges this constraint—it believes that its enrolments would increase if more Indigenous students undertook business studies in secondary school.

Numeracy is likely to be one of the core competencies for running a business and is a prominent component of many business-related courses. Accordingly, it is important that basic competencies in numeracy are addressed so that more Indigenous students can successfully complete such courses. Given the limited use of enabling courses among Indigenous students, some consideration needs to be given to the structure and organisation of such courses. Perhaps greater resourcing of numeracy-related skills through the local Indigenous support centres needs to be considered.²⁵ Of course, literacy may also be a significant constraint for Indigenous students that may need to be addressed.

In view of the emphasis on Indigenous-specific courses and named courses in the overseas literature (e.g. Postgraduate Diploma in Business in Māori Development), the recent development of a specialised degree for Indigenous students at the University of Technology, Sydney, is likely to be positive, especially if it augments required skills in

numeracy as well as literacy (the implicit focus of existing enabling courses). The success of these newly created Indigenous courses needs to be closely monitored.

As substantial cohorts of Indigenous students graduate in M&C and become visibly successful, there may be a snowballing effect. The absence of role models is one possible constraint on many Indigenous youth seeing themselves as having a career in management and business. It is also possible that the under-representation of Indigenous students in business-related studies can be turned around relatively quickly. However, the main caveat to such optimism is that structural issues, such as core competencies and skills, may need to be addressed before Indigenous students can acquire the formal prerequisite skills. Allowing inadequately prepared students into courses would be setting them up to fail. There are limits on the extent to which alternative pathways into courses can increase Indigenous enrolments and completions. The bottom line is that the services that support Indigenous students need to be adequately resourced.

Notes

1. Recommendation 12: That tax-free status be provided to new and innovative first Australian commercial enterprises that create real jobs by providing the training grounds to eliminate the disparity for the most disadvantaged job seekers.
Recommendation 18: That the Commonwealth Government purchase at least 4% of its goods and services within four years (either directly or through subcontractors) from first Australian businesses (with a minimum of 25% Indigenous ownership) and in particular from the new first Australian commercial enterprises once they are established.
2. Age standardisation is recommended for ‘national reporting where indicators of advantage and disadvantage are compared over time and between populations’, specifically where the aim is ‘to compare the gap in wellbeing between Indigenous and non-Indigenous Australians’ (AIHW 2011: 23). Age standardisation accounts for differences in the age distributions of different populations or the same population at different points in time. These results have been age standardised using the direct method, based on the total Australian population in June 2011. Results contained elsewhere in this report are based on analyses of the Higher Education Statistics Collection and the Australian Graduate Survey, which have a narrower scope (recent graduates, who are usually drawn from younger age groups). Therefore it is not appropriate to age standardise these results using population-wide age distributions. Notwithstanding, some salient age-related issues are discussed in this report.
3. <http://www.uleth.ca/ross/undergraduate-programs/majors/management/fng>

4. <http://www.victoria.ac.nz/som/study/subjectsoffered/mbus>
5. <http://www.gsm.auckland.ac.nz/mba-pathways/postgraduate-diploma-in-business/maori-development>
6. http://www.massey.ac.nz/massey/learning/programme-course-paper/programme.cfm?major_code=2781&prog_id=92761
7. <http://www.fnuniv.ca>
8. <http://entrepreneurbcamp.ca/home.html>
9. <http://www.chnook.org/student-opportunities/indigenous-business-network/>
10. <http://www.aibl.org>
11. <http://www.foa.ca>
12. <http://www.theglobeandmail.com/report-on-business/careers/business-education/how-a-b-school-is-helping-aboriginal-startups/article12133072/>
13. As with Indigenous completions, Indigenous enrolments appeared to be particularly high in 2011, and the 2012 statistics are mostly still substantially higher than the 2010 numbers. One possible explanation for the small decline between 2011 and 2012 may be a negative effect of the global financial crisis on demand for graduates; another is that increased employment of Indigenous staff resulting from implementation of Reconciliation Action Plans may have led to a decreased supply of potential students.
14. Calculated using the most recently available Australian Bureau of Statistics population estimates based on the 2011 Census and *Estimates of Aboriginal and Torres Strait Islander Australians, June 2011* (ABS 2013).
15. Indigenous award completions as a percentage of all domestic award completions by field of study, Australia 2010–12 aggregated.
16. Lombardi and Clayton (2006) identify some historical and cultural reasons why there have been so few accountants who identify as Indigenous Australians. Indigenous Accountants Australia (<http://indigenousaccountants.com.au>) is a joint initiative of CPA Australia, and Chartered Accountants Australia and New Zealand. Warren Mundine was involved in the 1,000 Australian Indigenous Accountants initiative, as Chair of the Indigenous Chamber of Commerce (<http://www.indigenouschamber.org.au>). Indigenous Accountants Rock (<http://indigenousaccountantsrock.com.au>) is a community-based educational initiative that aims to address the shortage of Indigenous accountants (also see Kahdem 2012 and Williams 2011).
17. The CDU still has a substantial number of Indigenous enrolments in all fields, but there are relatively few Indigenous enrolments in M&C within this new arrangement.
18. In labour markets, a person is marginally attached if they want to work but are not currently looking for work. If the local or national labour market becomes more favourable, policy makers could reasonably expect that people who are marginally attached to the labour market will start to look for work.
19. The 2011 Census has the following questions relating to self-employment: Q35 asks 'In the main job held last week, was the person?'; response categories are 'Working for an employer?' and 'Working in own business?' Those who answer that they were working in their own business are then asked Q36—'Was the person's business ...?'; response options are 'Unincorporated?' and 'Incorporated (e.g. Pty Ltd)?' Q37 asks 'Does the person's business employ people?'; response options are 'No, no employees', 'Yes, 1–19 employees' and 'Yes, 20 or more employees'.
20. The Group of Eight ('sandstone') universities consulted were the University of Melbourne, the University of New South Wales and the University of Western Australia. From the Australian Technology Network, which tends to focus on the practical application of tertiary studies and research, we included RMIT University, the University of Technology, Sydney, and Queensland University of Technology. Among the institutional cluster called the Innovative Research Universities Australia, we approached Flinders University, Griffith University and the University of Newcastle. Most of the other universities consulted are part of the Regional Universities Network, which is committed to playing a transformative role in their regions. Bond University was included because it is the only private university that does not belong to any of the other institutional clusters. The Australian National University and the University of Canberra were initially flagged for consultations, but we did not pursue these consultations to avoid any perceptions of conflict of interest (the authors of this report are associated with these institutions).
21. <http://indigenousaccountantsrock.com.au>
22. <http://indigenousaccountants.com.au>
23. <http://indigenousaccountants.com.au>
24. Of Indigenous owner-managers of a business with a degree, 23.1 per cent have a M&C qualification, and a further 26.1 per cent of Indigenous owner-managers have studied society and culture (the field that covers economics-related disciplines).
25. Augmentation in numerical competencies among Indigenous students is warranted because these skills are required to complete M&C courses. Crucially, there is an ongoing gap between Indigenous and non-Indigenous youth in many areas, including mathematics, English and science (Biddle 2013: Fig. 4).

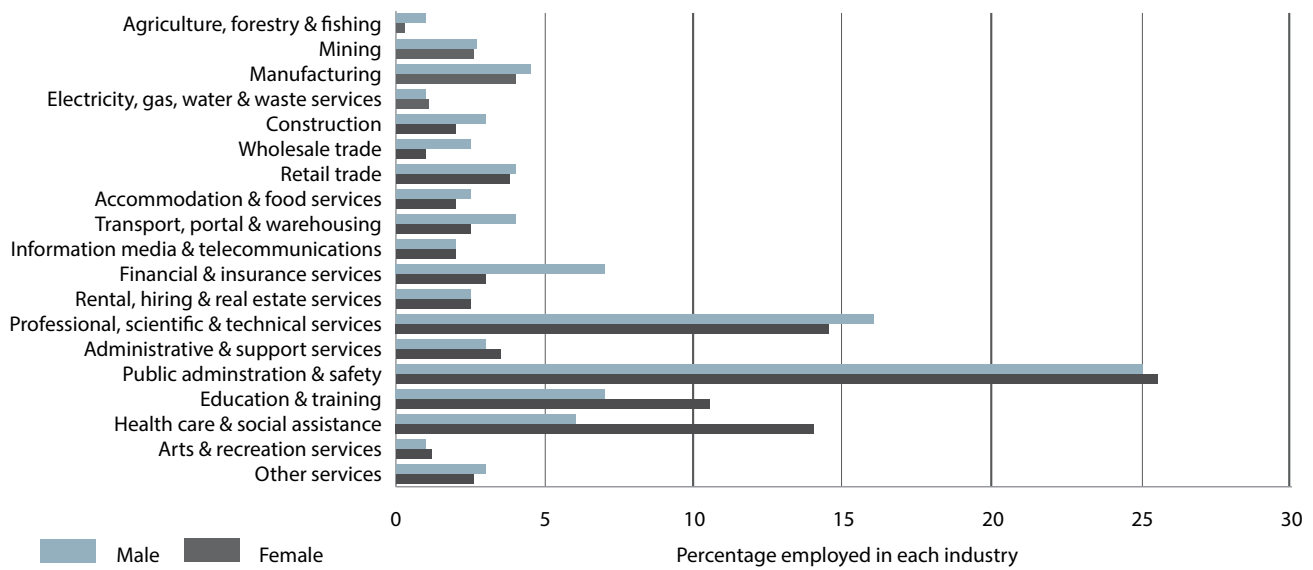
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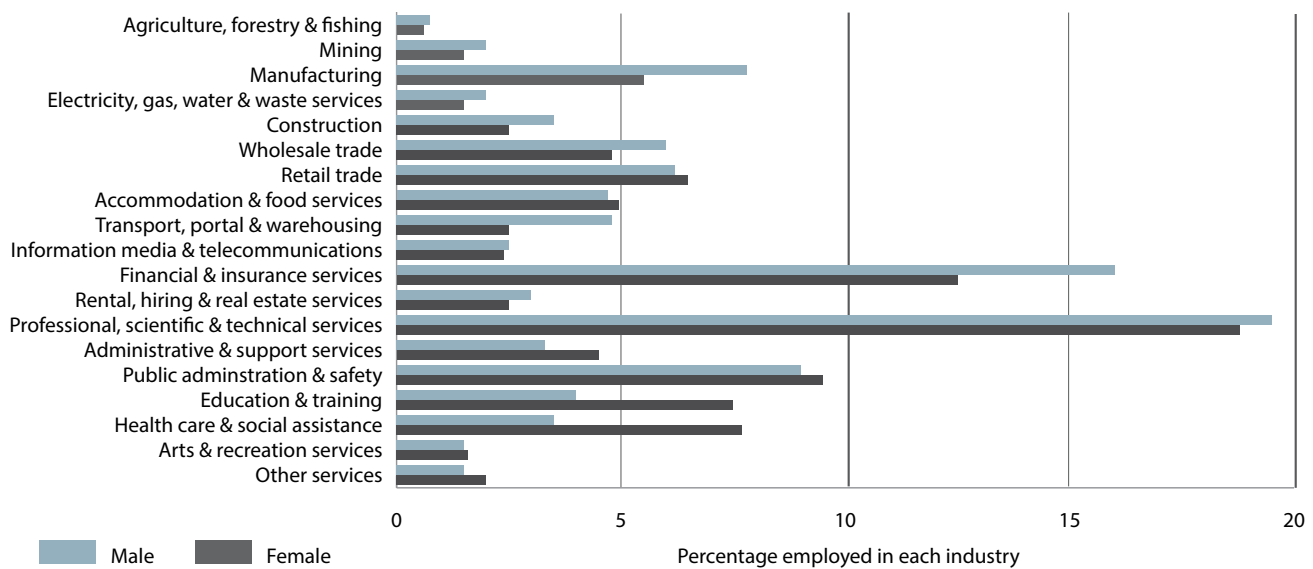
Appendix A: Industry of employment for management and commerce graduates

FIG. A.1 Industry distribution of Indigenous employed people aged 20–64 years with a bachelor degree or above in management and commerce, by sex, Australia, 2011



Source: Australian Bureau of Statistics, using customised calculations from the 2011 Census.

FIG. A.2 Industry distribution of non-Indigenous employed people aged 20–64 years with a bachelor degree or above in management and commerce, by sex, Australia, 2011



Source: Australian Bureau of Statistics, using customised calculations from the 2011 Census.

Appendix B: Detailed consultations with management and commerce departments (or business schools)

B.1 Australian Catholic University

The Australian Catholic University (ACU) has had an Associate Degree in Business Administration (Indigenous Studies) for more than five years. The Associate Degree can be credited towards the first two years of the Bachelor of Business Administration. It is taught in 'residential mode', in which students study predominantly off-campus and attend two compulsory residential schools each semester. To fund the Associate Degree, ACU uses Away from Base ABSTUDY funding. Entry into the Associate Degree is by interview, and each application is assessed on a case-by-case basis. It is expected that each applicant will have successfully completed both mathematics and English at the year 12 level, or have equivalent work experience.

When students are at their home base, they are able to access a tutor to assist with all units that they are studying. Students in the Associate Degree in Business Administration (Indigenous Studies) have access to the Indigenous Tutorial Assistance Scheme (ITAS), and sourcing ITAS tutors is not an issue for ACU. Additionally, the Weemala Centre monitors grades of all students and provides support, where required.

The students attracted to the Associate Degree program are mostly people who are working in Aboriginal and Torres Strait Islander organisations and looking to obtain either the qualifications for the position that they currently hold or the qualifications required for promotion within the organisation. The Associate Degree attracts very few school leavers. Because this program has been established for more than five years, ACU believes that future students are also likely to be mature aged. A small number of students who have completed the Associate Degree have been keen to establish their own businesses. Unfortunately, ACU does not keep track of its graduates and was unable to provide information on whether any students have gone on to start their own businesses.

ACU credits its success to the close working relationship between the teaching and Indigenous support services, as well as the mode of teaching.

ACU believes that there are many barriers to growth in its Indigenous business program:

- Some barriers are internal, such as having the program as an Associate Degree rather than a full degree. The university is redeveloping the Associate Degree to a Bachelor Degree in Business Administration (Indigenous Studies) for 2015.
- Students are not provided with enough information about the benefits of business qualifications in their schooling years. If business studies were undertaken in secondary school, ACU believes that it would see an increase in Indigenous students taking the Associate Degree.
- Students undertaking residential study often report feeling isolated, and this isolation can lead to noncompletion. Isolation is associated with the mode of teaching rather than the qualification itself.
- The cost of study, more generally, can be prohibitive for students and also leads to noncompletions.
- Many students start university with a low level of confidence.
- Support from family and friends is lacking. This is associated with both the specific degree program and attending university more generally. Students' family and friends often do not provide the level of support needed for the student to be successful at university.

ACU has no Indigenous alternative entry program; however, all students can access an alternative entry program through ACU's registered training organisation ACUcom.

B.2 Bond University

Bond University has neither a specific Indigenous preparation program nor an enabling program. All students are able to enrol in the Foundation Program in business or the Diploma of Business as pathways into the Bachelor of Business. Entry into the preparation programs requires completion of year 11 or an Australian Qualifications Framework Certificate III. The Foundation Program in business and diploma programs is taught in face-to-face mode at the main campus on the Gold Coast. Indigenous students who are enrolled in the diploma or Foundation Program are able to access the Nyombile Indigenous support centre for ITAS and other support, as required.

Bond University identified two primary barriers that it believes play a significant role in the university's low number of enrolments by Aboriginal and Torres Strait Islander students in business degrees:

- Indigenous students need a greater awareness of the opportunities available to business degree graduates. This should occur in secondary schooling or through careers advisers.
- Many Indigenous students do not possess the qualifications that would enable them to commence a bachelor degree. It is therefore important for potential students to have knowledge of business studies.

B.3 Charles Darwin University

Charles Darwin University (CDU) does not have a designated Aboriginal and Torres Strait Islander business degree or qualification; however, it has a Diploma of Business Administration that has seen a small number of Indigenous enrolments.

CDU offers a number of alternative entry pathways for Indigenous students through the Australian Centre of Indigenous Knowledges and Education, including Preparation for Tertiary Success 1 and 2 (PTS1 and PTS2). These are pathway programs into any technical and further education (TAFE) program or bachelor degree at CDU. PTS1 is a one-year program that enables entry into most TAFE and degree programs, except those that have a mathematics requirement or mathematics as a prerequisite. PTS2 is a six-month extension of the PTS1 program, which includes units such as Introduction to Science and Advanced Mathematics. This qualification enables students to undertake science- and mathematics-based degree programs such as the Bachelor of Science and Bachelor of Accounting.

CDU has a 'mainstream' enabling program, but very few Indigenous students enrol in it. This enabling program is taught in 'mixed mode'. This format is not considered very appropriate for Aboriginal students, as Aboriginal completions using this mode are quite low.

Using the Indigenous Cadetship Scheme in conjunction with private industry was suggested by CDU as the best way to attract more Indigenous students into business degrees.

Providing students with the best information about their degree choice is important. CDU suggested having an induction scheme, where information for each degree is offered, and the expectations of students within each of the degrees is clearly outlined and discussed.

A number of barriers were cited by CDU. The most prominent barrier is the mathematics requirements for entry into the Bachelor of Accounting. The mathematics requirements are also a challenge for degrees such as engineering and science. CDU argues that too many students take the wrong level of mathematics in secondary school, and this needs to be addressed. However, CDU believes that, regardless of the barriers, most students find ways to get into the course they want to do, even if it takes additional time.

B.4 Charles Sturt University

Charles Sturt University (CSU) commenced a Bachelor of Business (Management) Indigenous in 2013. This is the same as the 'mainstream' Bachelor of Business (Management), but incorporates a significant Indigenous student support program. The program is part-time and taught in residential mode, with students able to take a maximum of two units of study per semester. The course was initiated in 2012 by a 'mainstream' academic in the discipline of management who had an interest in supporting Indigenous business and Indigenous people. The Bachelor of Business (Management) Indigenous had 13 enrolments in 2013 and 16 enrolments in 2014. There are no school leavers in the program. All enrolments in the program are Aboriginal and Torres Strait Islander people who are managers or chief executive officers in Indigenous organisations and require, but do not hold, the appropriate level of qualifications for their roles.

Barriers cited by CSU that lead to low enrolments and reduce the attractiveness of business degrees to the Indigenous community include:

- the lack of Indigenous corporate and entrepreneurial success
- the inability of schools, families and communities to consider that there are good career opportunities outside of nursing, teaching, policing and sport.

CSU finds that Indigenous students prefer face-to-face ITAS tutoring, and the university finds it challenging to source tutors for each student in their local area. Sourcing locally based ITAS tutors is also a challenge for students in other degrees, such as law.

CSU believes that the support required for Indigenous students to be successful in the Bachelor of Business (Management) Indigenous goes beyond academic support. Only a small number of Indigenous students leave university as a result of low grades, but a large number leave because of family, mental health and financial reasons. Students who are currently enrolled in the Bachelor of Business (Management) Indigenous work

full-time, and it is challenging for students to find the time to complete assessable pieces of work.

B.5 Griffith University

Griffith University's response was provided verbally by Dr Kerry Bodle—Indigenous Accountant and academic at Griffith University Business School. Her comments are incorporated in the discussion section above.

B.6 University of Newcastle

The University of Newcastle (UoN) has a number of alternative entry programs for Aboriginal and Torres Strait Islander students. One pathway is through a two-interview process. The first interview is designed to determine the academic readiness of a potential student. The second interview is to determine the criteria of Aboriginality. The Business School provides flexibility around standard entry requirements, but is reluctant to allow entry to students with an Australian Tertiary Admissions Rank (ATAR) of less than 55.

Another pathway by which students can enrol is through the Yapug program, an enabling program for Aboriginal and Torres Strait Islander students. It is a one-year full-time program that is taught face-to-face at the Callaghan campus. The program covers academic preparation and content preparation, such as science and mathematics. Content preparation is designed to fill any gaps in assumed knowledge for the degree that students intend to take.

UoN has a large number of Aboriginal and Torres Strait Islander students enrolled in its 'mainstream' Open Foundation program. This is a one-year part-time or six-month intensive enabling program. The program has been running since 1974. It is taught both on and off campus—the only difference is that elective choices are limited for the off-campus students.

UoN's Indigenous business students regularly access ITAS, and sourcing of tutors is not an issue.

UoN believes that closer links between the Aboriginal community and business would be one way to increase Indigenous student numbers in business degrees. The university acknowledges the need to increase the number of business-qualified Aboriginal and Torres Strait Islander people to work in areas such as Aboriginal Land Councils and other Aboriginal organisations.

Barriers identified by UoN include:

- the lack of career opportunities for Indigenous graduates to move into middle to high-level business roles
- a need for more awareness of opportunities and better preparation of key skill areas during students' secondary schooling
- a lack of information on how these degrees can translate to a future career—for example, although commerce degrees do not specifically graduate people wanting to work in accounting, this is often the perception
- the stigma associated with business and commerce degrees, which are seen as nontraditional areas because they are linked closely to mathematics. UoN believes that an inclusive Indigenous university curriculum that shows that mathematics has always been within traditional teachings would be valuable.

B.7 University of New South Wales

The University of New South Wales (UNSW) has a number of alternative entry programs for Aboriginal and Torres Strait Islander students. Some are as brief as four weeks, while others are targeted diploma programs. Pre-program four-week courses are run in conjunction with the faculties. The pre-program courses for Indigenous students are conducted in face-to-face mode on the Kensington campus in Sydney. These programs are designed for Aboriginal and Torres Strait Islander students wishing to enrol in bachelor degrees in the areas of education, law, medicine and social work. Indigenous students wishing to enrol in business degrees are required to undertake the UNSW Pre-Business Program, which aims to provide Aboriginal and Torres Strait Islander students with the skills necessary to complete a business degree. The program is taught in intensive mode over the four weeks, and includes both case studies and site visits.

The second pathway that Indigenous students can use to gain entry to UNSW degrees is the Indigenous student enabling program. This program runs for two semesters and is taught face-to-face at the Kensington campus in Sydney. The enabling program is available in arts, social sciences, business, engineering, law, science and technology.

UNSW encourages most students to apply for ITAS. Sourcing ITAS tutors is no issue because Nura Gili, the Indigenous Program Unit at UNSW, has a strong working relationship with the faculties.

UNSW cited a number of barriers to attracting more Indigenous students into business degrees, including:

- lack of family and community support. UNSW believes that family and community see very little value in the area of business and business degrees. An increase in enrolments would require both families and community to see business degrees as important and of value
- the mathematics requirement. Indigenous students need to keep a focus on, and interest in, mathematics at school. UNSW goes so far as to suggest that mathematics should be compulsory to the end of year 12.

UNSW identifies enabling programs, preparation programs and ITAS as key support mechanisms for students who are currently studying business. These programs are seen as essential to Indigenous success, particularly for Indigenous students who have only completed general mathematics up to year 10. UNSW further argues that Indigenous students who have not completed the required level of mathematics in secondary school should try to catch up on two years of mathematics when they get to university. The university suggests that Indigenous students will continue to require significant support until parents encourage their children to stay in mathematics until year 12 or until the Department of Education makes mathematics to year 12 compulsory.

B.8 University of Southern Queensland

The University of Southern Queensland (USQ) provided limited responses over the phone. The university has several alternative pathways into degree programs. USQ believes that the low enrolments in business degrees are attributable to a lack of focus on business, mathematics and computer skills in secondary schooling, and that secondary schools should address this lack of focus.

B.9 University of Technology, Sydney

The University of Technology, Sydney (UTS), provided limited responses over the phone. UTS is introducing a Bachelor of Business Administration (Indigenous) for 2015. This program has no ATAR entry point and no prerequisites. The motivation for introducing the new degree is cited as industry demand. The new degree will be in an 'intensive' format and will be taught in three-week blocks each semester. UTS intends to use Away from Base ABSTUDY funding to deliver this program.

B.10 University of Melbourne

The University of Melbourne (UoM) has a Bachelor of Arts (Extended) and a Bachelor of Science (Extended) that are designed specifically for Indigenous students. These programs are supported by Trinity College and are well established.

In 2011, UoM developed a pathways program from Bachelor of Arts (Extended) into the Bachelor of Commerce for the 2012 intake. The program is taught on campus face-to-face. To gain entry into the Bachelor of Commerce from the Bachelor of Arts (Extended), students require the Victorian Certificate of Education Maths Methods or equivalent, which has to be attained during the Bachelor of Arts (Extended). UoM has no issue sourcing ITAS tutors and encourages most of its students to have an ITAS tutor.

UoM believes that barriers to direct entry into the Bachelor of Commerce include:

- the high ATAR requirement—this is the major barrier
- the fact that very few students enquire about business degrees; this should be addressed in secondary schooling.

Melbourne Business School's MURRA Indigenous Business Master Class Program appears to be unique across the university sector. The MURRA program, which began in 2012, is a partnership between Melbourne Business School and Indigenous Business Australia (IBA), supported by other partners. It is a fee-for-service program, with participants paying a nominal fee and IBA providing a scholarship for travel and accommodation. The program is for Indigenous Australian business owners or leaders and is run over three months. To gain entry, participants must provide evidence of leading or owning a business that has been operating for at least 3–5 years. Previous educational qualifications must also be sighted because the program is taught at the graduate level. The program is taught in residential mode with three four-day residential schools. It is a nonqualification master class, but students are able to access alumni from Melbourne Business School for up to one hour per month, for as long as they need.

B.11 University of Western Australia

The University of Western Australia (UWA) has a number of alternative entry pathways for Indigenous students. Entry into a program depends on the level of qualification. For example, a school leaver with an ATAR between 70 and 79 can gain entry into the Indigenous Alternative Entry Program of the School of Indigenous Studies.

Students whose scores are lower than this can access the one-year Aboriginal Orientation Course, which is taught face-to-face on campus. The course prepares students to undertake any degree at UWA. Students wishing to undertake business degrees would be required to enrol in one mathematics unit and another elective to ensure that they have the skills needed for success.

Most Indigenous students currently enrolled in business have ITAS tutors. The School of Indigenous Studies has no issues with sourcing ITAS tutors.

UWA believes that there are many barriers to increased Indigenous enrolments in business:

- Younger students tend to see business as only accounting and finance, and not the range of other business-related degrees. Business therefore needs to be promoted or marketed in Aboriginal communities. Links to business, cadetships in business, specific scholarships, vacation employment in business and identified graduate positions within industry were cited by UWA as the best way to increase Indigenous student enrolments.
- Strong competition from other disciplines such as medicine, law and engineering is another barrier. These disciplines all have targeted marketing, scholarship and graduate positions.

B.12 University of Western Sydney

The University of Western Sydney provided limited responses over the phone. The university's Badanami Alternative Entry Program provides students with general study skills for successful completion of degrees, but does not include any mathematics.

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