FINAL REPORT

THE UNIVERSITY OF
NEWCASTLE
AUSTRALIA

Improving Aboriginal & Torres Strait Islander Student Participation, Retention and Success in Australian Business-Related Higher Education

Front Cover: Amber Hallmen, originally from Jawoyn Nation and born on Awabakal Country. Amber is a University of Newcastle student in her final year of a Bachelor of Business / Bachelor of Commerce. Amber is also undertaking an Indigenous Cadetship working at the University of Newcastle, which she is undertaking whilst completing her studies.

Improving Aboriginal and Torres Strait Islander Student Participation, Retention and Success in Australian Business Related Higher Education

Professor Morris Altman PhD., University of Newcastle, Australia; Dr. Tamara Young PhD., University of Newcastle, Australia; and Louise Edmee Marie Lamontagne (ABD) PhD., Independent researcher, New Zealand.

NATION AND COUNTRY RECOGNITION

The research team acknowledge that Aboriginal and Torres Strait Islander peoples are Australia's traditional owners and custodians of the land. This report was written on the lands of the Awabakal peoples where the University of Newcastle Callaghan and City Campuses are situated.

In embracing the notion of reconciliation between Aboriginal and Torres Strait Islander peoples and non-Indigenous Australians, the research team acknowledges that proper use of terminology can assist in healing the past and building a stronger and more sensitive society for all Australians.

In this report we collectively refer to Indigenous Australians as Aboriginal and Torres Strait Islander peoples. We do, however, recognise that Aboriginal and Torres Strait Islander peoples may prefer to identify themselves in terms of their community's or group's own title to reflect diverse and distinct geographic, linguistic and cultural connections and identities.

For the purposes of depicting data in our tables and figures we have used the term Indigenous to directly refer to Aboriginal and Torres Strait Islander peoples. This approach conforms to Australian Government standards that, to date, use one or the other terms when referring to Aboriginal and Torres Strait Islander peoples in legislation and official documents (Leroy-Dyer, 2016, Australian Institute of Aboriginal and Torres Strait Islander Studies, 2015).

Notwithstanding this, the research team recognise that terminology as it relates to Aboriginal and Torres Strait Islander peoples still requires reform and direct consultation with Aboriginal and Torres Strait Islander peoples. We also wish to inform Aboriginal and Torres Strait Islander readers to be mindful that past and present research and commentary directly cited or referred to in this report may not acknowledge, or be sensitive to Aboriginal and Torres Strait Islander peoples. These direct citations or references do not reflect the views of the research team or those organisations that have supported this research.

ACKNOWLEDGEMENTS

This project was led by researchers in the Newcastle Business School, Faculty of Business and Law, at the University of Newcastle (UON) in partnership with the Wollotuka Institute of Indigenous Education (UON) and the University of New England (UNE) Business School.

We would like to acknowledge the academic and professional staff research team for the support and insights they have provided throughout the project. Our team comprised both Aboriginal and Torres Strait Islander and non-Indigenous researchers.

We thank the research team who contributed to the project (*listed alphabetically*):

Mr. Gregory Davison	Director, Oorala Aboriginal Centre, University of New England.
Ms. Lillian Eastwood	Indigenous Student Engagement Officer, The Wollotuka Institute, UON.
Dr. Sharlene Leroy-Dyer	Program Convener, Centre for English Language and Foundation Studies, UON.
Dr. Sara Motta	Senior Lecturer, Newcastle Business School, Faculty of Business and Law, UON.
Professor Alison Sheridan	Head, UNE Business School, University of New England.

We extend our gratitude and thanks to the UON Faculty of Business and Law professional staff team led by Ms. Kate Ramzan-Levy and Ms. Kirrily Anderson (*listed alphabetically*).

Ms. Marijke Bassani	University of New South Wales Graduate. Marijke identifies as Lama Lama and Binthi Warra from Cooktown.
Ms. Monique Moore	UON Graduate. Doctoral candidate, University of Western Australia.
Ms. Deana Purcell	UON Graduate. Wollotuka Engagement Officer. Deana identifies as Dhungutti and Worimi Nation.
Ms. Sarah Tooth	UON Graduate. Professional staff member of the Faculty of Business and Law, UON.

We acknowledge and thank the project research assistants who contributed to data collection and analysis:

Mr. Nimay Kalyani	Lecturer in Entrepreneurship and Marketing at UON and international contributor.
Ms. Parvaneh Pirani	Doctoral candidate in the Newcastle Business School and international contributor.

We are grateful for the input from colleagues in our Community of Practice (see list on following page), along with colleagues who provided insights regarding strategies and initiatives from other Australian business schools, as well as organisations outside of Australia, especially New Zealand and Canada.

We thank the Australian business schools that participated in this study and the insights they provided into initiatives and strategies taking place at the school and/or faculty level to increase Aboriginal and Torres Strait Islander student participation, retention and success.

Thank you to the universities that participated in the research to assist in the recruitment of Aboriginal and Torres Strait Islander students, alumni and staff.

We thank the Aboriginal and Torres Strait Islander interview and survey participants from universities across Australia for the time they gave to sharing information about their views on, or their experiences of, higher education in business-related education.

OUR COMMUNITY OF PRACTICE

We acknowledge the guidance and feedback provided by our Community of Practice (CoP) and the role that this group plays in contributing to the project recommendations and sharing the outcomes of this report. The CoP members include (*listed alphabetically*):

Ms Leah Armstrong	Director, The Wollotuka Institute, University of Newcastle.
Ms Bec Bell	Indigenous Cadet, Faculty of Business and Law, University of Newcastle.
Dr Kathleen Butler	Associate Professor, Indigenous Education and Research, The Wollotuka Institute, University of Newcastle.
Ms Bronwyn Chambers	Elder in Residence, The Wollotuka Institute, University of Newcastle.
Mr Michael Combs	Founder and Chief Operating Officer, CareerTrackers—Indigenous Internship Program.
Mr Adam Davids	Learning and Development Director, CareerTrackers—Indigenous Internship Program.
Dr Michelle Evans	Associate Professor, Leadership, School of Management and Marketing, Charles Sturt University.
Dr Stephanie Gilbert	Senior Lecturer, Indigenous Education and Research, The Wollotuka Institute, University of Newcastle.
Maree Gruppetta	Associate Professor, Indigenous Education and Research, The Wollotuka Institute, University of Newcastle.
Dr Freya Higgins-Desbiolles	Senior Lecturer, School of Management, University of South Australia.
Ms Gina Milgate	Research Fellow, Indigenous Education Australian Council for Educational Research.
Dr Lisa Ruhanen	Associate Professor, UQ Business School, University of Queensland.
Dr Ruth Sibson	Senior Lecturer & Academic Coordinator, School of Business and Law, Edith Cowan University.
Dr Michelle Whitford	Associate Professor, Griffith Business School, Deputy Dean (Learning and Teaching), Griffith University.
Dr Erica Wilson	Associate Professor, School of Business and Tourism, Deputy Head of School/Director of Teaching and Learning, Southern Cross University.

LIST OF KEY ACRONYMS

ABDC	Australian Business Deans Council
ABS	Australian Bureau of Statistics
AIME	The Australian Indigenous Mentoring Program
AMB	Aboriginal Management Program
CAP-ED	The Community Aspirations Program in Education
CoP	Community of Practice
FIF	First in Family
HEPPP	Higher Education Participation and Partnership Program
HSES	High Socio-Economic Status
IEU	Indigenous Education Unit
LSES	Low Socio-Economic Status
MMAIBus	Master of Māori and Indigenous Business
MSES	Medium Socio-Economic Status
NATSIHEC	National Aboriginal and Torres Strait Islander Higher Education Consortium
OECD	The Organisation for Economic Cooperation and Development
SES	Socio-Economic Status

LIST OF KEY DEFINITIONS

Participation Rates	Relates to the percentage of students enrolled in a business-related program compared to enrolment in other programs. The analysis is based on 2015 calendar year data published in 2016.
Pass Rates	Are determined by a student's successful completion of one academic year of coursework equivalent to completing a full-time load of courses for a given year. The analysis is based on 2015 calendar year data published in 2016.
Retention Rates	Relates to student drop-out rates. It is defined as the percentage of students remaining at university after a given year. The analysis is based on 2014 calendar year data published in 2016.
Withdrawal Rates	Related to a student giving up or dropping out to avoid actually failing a course. It is indicative of an environment wherein a student believes that he or she does not have the skill set to do well enough. Of course, not withdrawing and then failing is not a mark of success. But withdrawal is an early warning sign of a problem in the system. The analysis is based on 2015 calendar year data published in 2016.

TABLE OF CONTENTS

LIST OF TABLES

LIST OF FIGURES

EXECUTIVE SUMMARY

Since Charles Perkins, a leading Aboriginal activist, of Arrente and Kalkadoon heritage, graduated from the University of Sydney in 1966, there have been progressive efforts to address issues of inequity within higher education for underrepresented groups, such as, Aboriginal and Torres Strait Islander peoples (Cadzow 2010; Cleverley & Mooney 2010; Wilks & Wilson 2014). This widening participation agenda has evolved into a national focus of vital importance (Behrendt et al 2012; Commonwealth of Australia, 2017; Cuthill & Jansen, 2013; Edwards & McMillan, 2015; Gale & Parker, 2015).

The Australian Government has been guided by two pivotal reports:

- *Review of Australian Higher Education*, known as the Bradley Review (Bradley, Noonan, Nugent & Scales, 2008).
- *Review of Higher Education Access and Outcomes for Aboriginal and Torres Strait Islander People*, known as the Behrendt Review (Behrendt, Larkin, Griew & Kelly, 2012).

Stemming from the Bradley Review came the Australian Government's *Transforming Australia's Higher Education Policy* (Commonwealth of Australia, 2009), setting two key benchmarks:

- By 2025, 40% of 25-34 year olds should hold a bachelor degree.
- By 2020, 20% of undergraduate university students should be from lower socio-economic status backgrounds.

In response to these higher education reviews, most Australian universities now have strategies to increase the number of students from low socio-economic status backgrounds, as well as strategies to increase the number of Aboriginal and Torres Strait Islander students. However, Aboriginal and Torres Strait Islander students remain seriously underrepresented in Australian universities, especially in business-related programs compared to other disciplines, such as education and nursing. Aboriginal and Torres Strait Islander business students also remain less successful than non-Indigenous business students.

This research project aims to address the challenge of relatively low participation and success rates of Aboriginal and Torres Strait Islander business students. The project was initiated and endorsed by the Australian Business Deans Council (ABDC) and funded through a competitive Higher Education Participation and Partnerships Program (HEPPP) Grant.

RESEARCH AIMS

This research sought to:

- Develop an evidence base on the extent of Aboriginal and Torres Strait Islander student participation and success relative to non-Indigenous business school students.
- To identify barriers to increasing participation and success in Australian business-related higher education for Aboriginal and Torres Strait Islander peoples, with one point of focus being students from low socio-economic status backgrounds (low SES).
- Identify effective strategies and initiatives currently being implemented by national and international universities that aim to address these barriers.
- Develop strategies and initiatives to address these barriers for implementation by business schools in Australia.

- Establish a Community of Practice comprising a network of key stakeholders, including university business school academic and professional staff, Aboriginal and Torres Strait Islander students, Aboriginal and Torres Strait Islander communities and business groups.
- Develop key impact indicators to help guide Australian business schools in aiding their evaluation of and successful ability to reach targets to increase the participation and success in of Aboriginal and Torres Strait Islander students in Australian business-related higher education, particularly for those from low SES backgrounds.

RESEARCH METHODOLOGY

In order to build an evidence base to inform the development of strategies and initiatives to improve Aboriginal and Torres Strait Islander student participation, retention and success in business-related higher education, a mixed-method research design was employed. This study involved five methodological components:

- A review of academic and policy literature;
- A quantitative micro data analysis;
- A scoping study of Australian business school strategies and initiatives;
- Online surveys with Aboriginal and Torres Strait Islander university students and alumni;
- In-depth interviews with Aboriginal and Torres Strait Islander university staff.

KEY PARTICPATION RELATED FINDINGS

With regards to Aboriginal and Torres Strait Islander Business School participation:
- In 2016, there were 1,609 Aboriginal and Torres Strait Islander students in Australian business schools, compared to 147,182 non-Indigenous students in Australian business schools.
- 15% of the Aboriginal and Torres Strait Islander student population were enrolled in Australian business schools.
- 24% of the non-Indigenous student population were enrolled in Australian business schools.
- This participation gap holds true for almost all business schools in Australia, although there was some variation in this average ratio across Australian business schools.
- There is also a lower rate of participation of Aboriginal and Torres Strait Islander students in business school programs compared to other disciplines, such as teaching and nursing.

For the Aboriginal and Torres Strait Islander university students and alumni who responded to online surveys, their main reasons for engaging in higher education are to:
- Make a difference within their Aboriginal and Torres Strait Islander communities;
- Contribute to their broader communities;
- Improve the perception of Aboriginal and Torres Strait Islander peoples within broader society by being a positive role model; and,
- Achieve personal goals, such as, improving their career prospects.

For the student respondents not enrolled in business-related higher education, negative perceptions towards business and business degrees are identified as the main barriers to enrolling in business programs, such as:

- Lack of community applicability and relevance;
- Limited understanding of program purpose, course content or career outcomes; and,
- Negative perceptions of business within their communities.

For the student respondents enrolled in business-related programs, their reasons for participating in these programs relate to a strong interest in job opportunities and career development, and motivation for developing entrepreneurial skills.

The research identifies a number of initiatives and policies that have been adopted to increase the participation of Aboriginal and Torres Strait Islander students in Australian business schools. These are:
- Preparation/Enabling Programs;
- Alternative Entry Pathways;
- Outreach Programs;
- Scholarships; and,
- Equity Working Groups.

Based on a statistical analysis of the relationship between business school initiatives and participation rates, the initiatives and policies that appear to be most effective are:
- Preparation/Enabling Programs; and,
- Alternative Entry Pathways.

When discussing the impact of socio-economic status, the micro data findings indicate that low socio-economic status Aboriginal and Torres Strait students provide universities with opportunities to increase participation rates because they are the largest catchment of potential candidates.

- There is an unequivocally positive relationship between the percentage of low SES Aboriginal and Torres Strait students in Australian business schools and the participation rate in business schools.
- There is also an unequivocally negative relationship between the percentage of low SES Aboriginal and Torres Strait students in business schools and the success gap. As the percentage of low SES Aboriginal and Torres Strait Islander students in Australian business schools increases, the participation gap narrows. This is because there is a larger catchment area for Aboriginal and Torres Strait Islander students in low SES cohorts.
- Top ranked business schools, in terms of pass rates (one measure of success), have much higher percentages of high SES Aboriginal and Torres Strait Islander students, but had few Aboriginal and Torres Strait Islander students enrolled. These are easy wins in terms of pass rates, but severely limit the ability of a business school to reduce the participation gap.

KEY SUCCESS RELATED FINDINGS

As it relates to Aboriginal and Torres Strait Islander success, the micro data findings confirm that a substantial systemic success gap prevails for Aboriginal and Torres Strait Islander business students compared to their non-Indigenous cohorts.
- This gap is across almost every business school in Australia, especially where Aboriginal and Torres Strait Islander business student numbers are relatively large. The University

of New England and the University of Sunshine Coast are standout exceptions to this generalisation.

- Previously cited success determinants (such as, socio-economic status, gender, age, and first-in-family status) thought to significantly affect Aboriginal and Torres Strait Islander success rates were explored. These determinants were found to not explain the success gap. Even if all things were equal there would be only a moderate or marginal improvement for Aboriginal and Torres Strait Islander student success rates as compared to non-Indigenous business school students.
- As such, greater resolve on the part of all levels of society will be required to address the underlying challenges faced by Aboriginal and Torres Strait Islander students in business schools, even across the socio-economic divide.

In 2016, on average, the pass rates of Aboriginal and Torres Strait Islander business students (one measure of success) lagged significantly behind the pass rates for non-Indigenous business students. There are, however, some important variations about the average:

- 59% pass rate for Aboriginal and Torres Strait Islander students.
- 68% pass rate for non-Indigenous business students.
- 80% is the ratio of the pass rate for Aboriginal and Torres Strait Islander students to that of non-Indigenous students.
- There is a success gap of 20% with regards to pass rates.

In 2014, on average, Aboriginal and Torres Strait Islander students were more likely to drop out of business schools compared to non-Indigenous students. There was a higher retention rate (another measure of success), on average, for non-Indigenous business students. But there is some important variation around the average:

- 73% retention rate for Aboriginal and Torres Strait Islander business students.
- 82% retention rate for non-Indigenous business students.
- 89% is the ratio of the retention rate for Aboriginal and Torres Strait Islander business students compared to that of non-Indigenous business students.
- There is a success gap of 11% with regards to retention rates.

> Our findings document what we refer to as the "success gap". This can't be easily explained by previously cited determinants of the success gap.

In the context of SES, the micro-data reveals that high to medium SES Aboriginal and Torres Strait Islander students achieve higher pass rates compared to low SES Aboriginal and Torres Strait Islander students. The same pattern is detected for non-Indigenous business students.

The results indicate that there exists a profound and systemic success gap between Aboriginal and Torres Strait Islander business students and non-Indigenous business students across SES cohorts, FIF and non-FIF cohorts, age cohorts, and gender. Simply improving SES-related performance, for example, albeit of importance, will not fix this problem.

A quantitative analysis of business school initiatives provides an insight into the types of initiatives that appear to improve Aboriginal and Torres Strait Islander business student success. First, the analysis reveals that the quality (not the quantity) of business school initiatives is essential to achieving better outcomes. Second, the analysis reveals that there is no empirical relationship (correlation of close to zero) between the number of initiatives or programs and success rates.

The most successful success rate initiatives identified in this study are:
- Aboriginal and Torres Strait Islander course content;
- Aboriginal and Torres Strait Islander professional staff;
- Aboriginal and Torres Strait Islander tutoring; and,
- Aboriginal and Torres Strait Islander academic staff.

Most business schools have adopted the above initiatives. Other initiatives and policies in place within Australian business schools include:
- Support for Indigenous culture and events;
- Indigenous recognition and cultural protocol;
- Indigenous research;
- Indigenous services and support from Indigenous education units;
- Indigenous portfolio role;
- Elder in residence;
- Degrees specifically for Indigenous students;
- Paid Indigenous internships;
- Mentoring for Indigenous students; and,
- Indigenous representation in decision making.

The Aboriginal and Torres Strait Islander student and alumni respondents identified a range of challenges to their success in higher education, regardless of their field of study. These include:
- Not having appropriate emotional and financial support;
- Challenges dealing with complex personal issues;
- Inadequate support dealing with personal and family health concerns;
- Inadequate support to deal with lack of self-confidence/low self-esteem; and,
- Inadequate support to deal with a sense of isolation.

Interviews held with Aboriginal and Torres Strait Islander staff provide suggestions for improving Aboriginal and Torres Strait Islander student success in business-related higher education. These recommendations are based on the opinions of the staff interviewed in this study and it is important to note that these suggested policies have not been tested for effectiveness. University staff suggestions for increasing the participation, retention and success of Aboriginal and Torres Strait Islander students in business related higher education include:
- Business schools and faculties to prioritise collaborating with Indigenous Education Units;
- Business schools and faculties to employ Aboriginal and Torres Strait Islander staff;
- Business schools and faculties to modify higher education pathways and program content;
- Business schools and faculties to increase industry engagement;
- Business schools and faculties to provide appropriate formal support; and,
- Business schools and faculties to place student needs at the centre of strategies and initiatives.

RECOMMENDATIONS

The research findings suggest that the quality (not quantity) of initiatives is key to addressing the Aboriginal and Torres Strait Islander student success gap in business-related higher education.

Based on the literature review and the analysis of primary and secondary data, recommendations to improve the participation and success of Aboriginal and Torres Strait Islander students in business related higher education include:

- Providing scholarships and other forms of financial support;
- Providing emotional and cultural support for students;
- Ensuring student support is from IEUs and *most importantly* from within business schools;
- Improving learning, skills and capabilities of students;
- Including Aboriginal and Torres Strait Islander knowledges and perspectives within course content;
- Increasing staffing levels of academic and professional Aboriginal and Torres Strait Islander peoples;
- Improving the negative perceptions of business through engagement with Aboriginal and Torres Strait Islander success stories and role modelling;
- Fostering career guidance and promoting job opportunities;
- Establishing Aboriginal and Torres Strait Islander student clubs in business schools;
- Implementing an ongoing role for the Community of Practice;
- Testing the effectiveness (or quality) of these, and any other, initiatives or programs; and
- Developing policy outside of the conventional policy box.

SUGGESTED KEY IMPACT INDICATORS

As part of this report, the research team worked to develop a set of Key Impact Indicators to determine the extent to which Australian business schools are capable of meeting their targets to increase effective participation and success in business-related higher education for Aboriginal and Torres Strait Islander peoples, particularly those from low SES backgrounds.

The following Key Impact Indicators are recommended:
- Increase relative participation rates for Aboriginal and Torres Strait Islander students compared to non-Indigenous cohorts, particularly those from low SES backgrounds.
- Measure participation rate in the context of the catchment area of the business school. One would expect higher participation rates in business schools where there is a relatively large Aboriginal and Torres Strait Islander student population.
- Increase relative pass rates.
- Increase retention rates.
- Increase capability sets required in business schools and "soft" professional skills.
  - Such improvements could be measured through end of first year not-for-credit assessment on mathematical skills and analytical skills;
  - Implementation of end of second year not-for-credit assessment of "soft" professional skills, followed by mentoring to develop these skills.
- Implementation of annual exit surveys on business school program satisfaction and student recommendations for business program and course improvement.

- Assess individual business school performance using existing feedback mechanisms, such as, the 'Australian Graduate Destination Survey'.
- Comparative and longitudinal analysis across Australian business schools on policy effectiveness (i.e., type of controlled experiment on policy effectiveness).
- Locate policies and initiatives not currently undertaken.
- Run viability and effectiveness pilots to determine potential effectiveness.
- Develop new measures of success (i.e., related to current and potentially other pertinent measures of success). A suggested approach may include measuring:
    - The Relative Average Rate (an average of pass and participation rates);
    - Comparing the Relative Average Rate overtime; and,
    - Relative Average Rate giving greater weight to Relative Pass Rate changes (*preferable*).

This methodology has the potential to ultimately encourage Australian business schools to approach Aboriginal and Torres Strait Islander student participation and success in a more holistic manner, where business schools consider the implications of increasing participation rates at the expense of pass rates, and work to provide the resources necessary to support Aboriginal and Torres Strait Islander student success.

CONCLUSION

This project focused on developing and enhancing the evidence base of Aboriginal and Torres Strait Islander student participation and success in Australian higher education, with special attention paid to business-related education in Australian business schools. The systematic participation and success gaps between Aboriginal and Torres Strait Islander business students and non-Indigenous business students has been an important but neglected issue in the literature.

Based on available micro-data for every Australian business school, and survey and interview data collected for this study, in addition to a review of the literature, the project develops an evidence base that determines the extent of the participation and success gaps between Aboriginal and Torres Strait Islander students and non-Indigenous business students.

The research finds that not only do these gaps exist, but the extent of these vary across Australian business schools. Moreover, increasing participation without developing policy to address success can only worsen the experience of Aboriginal and Torres Strait Islander business students in Australian business schools. The causes of success and failure are multifaceted and they cannot be addressed easily.

This evidence base is also explored to determine the causes of these participation and success gaps, to suggest policy that might serve to reduce the identified gaps, and to suggest ways of measuring these gaps into the future as well as measuring the effectiveness of future policy initiatives.

CHAPTER 1. INTRODUCTION

PROJECT OVERVIEW

This project is sponsored by the Australian Business Deans Council through a competitive Higher Education Participation and Partnerships Program (HEPPP) Grant. This initiative evolved from a number of successive Australian government policies seeking to address the issue of social inclusion and equity in higher education.

This project specifically sought to document the differences and determinants of participation and success rates between Aboriginal and Torres Strait Islander business students and non-Indigenous business students.

The project also assesses the major barriers faced by Aboriginal and Torres Strait Islander people in participating and succeeding in business-related higher education, and also identifies and evaluates policies and initiatives to address these barriers.

BUILDING THE EVIDENCE BASE

This project focuses on building an evidence base through a mixed methods approach to make recommendations for strategies and initiatives to improve Aboriginal and Torres Strait Islander participation, retention and success in Australian business programs. Particular attention is paid to Aboriginal and Torres Strait Islander students from low socio-economic status backgrounds.

REPORT STRUCTURE

The report is structured into the following chapters:

Chapter 1	Introduction
Chapter 2	Literature review of the topic area
Chapter 3	Methodology outlines the mixed methods model employed
Chapter 4	Micro-data participation rate analysis
Chapter 5	Micro-data success rate analysis
Chapter 6	Student and alumni survey analysis
Chapter 7	Interview data analysis of interviews with Australian university staff
Chapter 8	Findings
Chapter 9	Recommendations
Chapter 10	Community of Practice Feedback on Research Findings and Recommendations

CHAPTER 2. LITERATURE REVIEW

In this review of higher education reports and academic literature, particular attention is paid to identifying the barriers to participation and success for Aboriginal and Torres Strait Islander students in higher education, and in business education in particular.

As Indigenous communities, both in Australia and internationally, are increasingly being called upon to manage community enterprises, business education has become a priority. Economic development, when combined with strong business education, is now recognised as a formula for 'closing the gap' between Aboriginal and Torres Strait Islander and non-Indigenous Australians (Bajada and Trayler, 2014).

In this context, we review the literature to locate effective policy that aims to improve higher education outcomes for Aboriginal and Torres Strait Islander students, and we pay special attention to the factors, programs and initiatives that are deemed effective to improving Aboriginal and Torres Strait Islander student retention and success rates in Australia and internationally.

In so doing, this review contributes to building the evidence base required to inform recommendations with which to improve Aboriginal and Torres Strait Islander student engagement and success in business-related higher education.

A NATIONAL EDUCATION AGENDA

"Universities have historically underperformed against their obligations to Australia's Aboriginal and Torres Strait Islander peoples. Enrolments have been low, attrition rates high and Indigenous staff remain few" (Universities Australia, 2017)

Over the past decade, reviews of Australian higher education have urgently called for a national policy for educational reform so as to correct the inequity that continues to persist in higher education between Aboriginal and Torres Strait Islander students and non-Indigenous students. Most notable is the *Review of Australian Higher Education* (Bradley, Noonan, Nugent and Scales, 2008; known as the Bradley Review) and the *Review of Higher Education Access and Outcomes for Aboriginal and Torres Strait Islander People* (Behrendt, Larkin, Griew and Kelly, 2012; known as the Behrendt Review).

These reviews recommend policy aimed at delivering parity for targeted equity groups, including Aboriginal and Torres Strait Islander students and staff in higher education (Hunter, Radoll, Schwab, Crawford, Biddle and Gray, 2015). Addressing issues of inequity within higher education has been a long standing focus of national policy, at least since 1990 (Cuthill and Janesen, 2013; Edwards and McMillan, 2015b; Gale and Parker, 2015). Most recently, Universities Australia (2017) have articulated the goal of reaching parity in success between Aboriginal and Torres Strait Islander and domestic non-Indigenous students by 2025. This position has also been articulated repeatedly in 'Closing the Gap' documents (see, for example, Commonwealth of Australia, 2017).

THE BRADLEY REVIEW

The Bradley Review, initiated by the Federal Government in 2008, recommended major reforms to the Australian higher education sector, including the urgent need to increase the number of university graduates across the sector but, most significantly, students from disadvantaged backgrounds. The Bradley Review identified the three most disadvantaged groups in Australian higher education as: Aboriginal and Torres Strait Islander Australians, students from regional and remote areas, and students from low socio-economic status backgrounds. The authors of the Bradley Review found that the major barriers to participation for these three disadvantaged groups were: educational attainment; lower awareness of the long-term benefits of higher education; less aspiration to participate; and, the potential need for extra financial, academic or personal support once enrolled.

The outcomes of the Bradley Review led to the development of the *Transforming Australia's Higher Education System* policy (Commonwealth of Australia, 2009), with two overarching targets directed to the higher education sector:

- By 2020, 20% of undergraduate university students should be from low socio-economic status backgrounds; and
- By 2025, 40% of 25 to 34 year olds should hold a Bachelor degree.

To achieve these equity targets, the Higher Education Participation and Partnerships Program (HEPPP) was established and, through this program, funding was distributed to higher education institutions to improve access to higher education. This project on Increasing Aboriginal and Torres Strait Islander Participation, Retention and Success in Australian Business-Related Higher Education is funded by a 2016 National Priorities Pool HEPPP grant.

Whilst some researchers have found that there has been improvement in Aboriginal and Torres Strait Islander student participation and in success over time (see, for example, Fleming & Grace, 2015), it is also true that Aboriginal and Torres Strait Islander students continue to remain disadvantaged and underrepresented in higher education. This persistent gap has been well analysed, including in regards to participation in business schools (Hunter et al, 2015).

A central issue for Aboriginal and Torres Strait Islander peoples is that they face disadvantages in being disproportionately located in regional and remote areas and being disproportionately from low socio-economic backgrounds (Fleming & Grace, 2015; Thomas et al, 2014). This makes it "less likely that students from remote Indigenous communities will aspire to attend university" (Thomas et al, 2014, p.23).

Increasing tertiary education access for disadvantaged minority groups and people both in Australia, and elsewhere, is regarded as a social good, being equitable and just, and providing new opportunities to social groups and individuals who would not otherwise participate in higher education (Fredericks et al, 2015). Moreover, increasing tertiary education access for disadvantaged minority groups can have positive trickle-down effects on broader Australian economy and society.

The national agenda for widening higher education participation has seen an increase in students from low socio-economic backgrounds attending university (Rissman et al, 2013; McKay & Devlin, 2014; Devlin & McKay, 2016). A significant component of the 'widening participation agenda' is that most Australian universities now officially aspire, through key performance indicators (KPIs), to increase the number of Aboriginal and Torres Strait Islander students at their institutions (Wilks & Wilson, 2015; Kim et al, 2016). This, however, is often taken to mean the relative participation, i.e., being relative to the non-Indigenous population.

THE BERHENDT REVIEW 2012

The 2012 Berhendt Review of *Higher Education Access and Outcomes for Aboriginal and Torres Strait Islander People*, built on the Bradley Review and delivered a number of recommendations to address the substantial under representation of Aboriginal and Torres Strait Islander students in higher education. The Berhendt Review (2012, p. 12-25) called for a number of key reforms to higher education to improve access and outcomes for Aboriginal and Torres Strait Islander people, including:

- Achieving parity for Aboriginal and Torres Strait Islander students and staff in the higher education sector;
- Unlocking capacity and empowering choices, through: engagement with schools; the development of alternative pathways to higher education; the development of enabling programs; and, improving access to information;
- Providing support for Aboriginal and Torres Strait Islander student success, through: the provision of support through Indigenous Education Units and faculties; building professional pathways; and, responding to community need;
- Providing Aboriginal and Torres Strait Islander-specific support to universities and students, through: Aboriginal and Torres Strait Islander tutorial assistance scheme; support for Aboriginal and Torres Strait Islander students from regional and remote areas; financial support for Aboriginal and Torres Strait Islander students;

- Expanding Aboriginal and Torres Strait Islander knowledge and research, through: implementing curriculum incorporating Aboriginal and Torres Strait Islander knowledge and perspectives; providing higher degrees by research and research training for Aboriginal and Torres Strait Islander students; developing Aboriginal and Torres Strait Islander research capability;
- Providing support for Aboriginal and Torres Strait Islander staff;
- Improving university culture and governance; and
- Developing an Aboriginal and Torres Strait Islander higher education strategy and 2030 framework.

The result of the above recommendations has been the expansion of higher education opportunities for Aboriginal and Torres Strait Islander students through university policy, some of which are examined for this project in the context of Australian business schools and faculties. Also, there is now more of an emphasis on developing an evidence base for better understanding the position of Aboriginal and Torres Strait Islander students in higher education.

In this context, in this project we engage in an extensive reconstruction of demographic micro-data so as to better understand and situate the position of Aboriginal and Torres Strait Islander students in Australian business schools. We also survey Aboriginal and Torres Strait Islander students and alumni, and carry out interviews with Aboriginal and Torres Strait Islander staff to provide complementary and more nuanced insights to our demographic presentation and analysis.

LOW SOCIO-ECONOMIC STATUS CONSIDERATIONS

The widening participation agenda in Australian higher education focuses "on the participation of disadvantaged students, particularly those from low socio-economic status (LSES) backgrounds" (Devlin & McKay, 2016). This reflects broader global trends whereby increasing the participation of people from low SES backgrounds is the focus of government policy in many of the Organisation for Economic Cooperation and Development (OECD) nations (Gale and Parker, 2015; Marginson, 2016). Although this focus on low SES is warranted, our study points to a significant success gap across all SES student cohorts in business schools.

However, in Australia, whilst the recommendations for educational reform and related policy development has resulted in some increases in participation by particular equity groups, "access rates for people from low socio-economic backgrounds remain persistently low" (Cuthill and Jansen, 2013, p.7). Consequently, much research has been carried out to understand ways to facilitate low SES student engagement and success in higher education.

For example, Devlin (2013, p.939) notes that there is a need to "work toward successful experiences for all students in an increasingly massified system", arguing that it is not enough to focus only on access to university, but also on success and achievement of students. In this context, she cites the International Association of Universities who have adopted the principle that "access without a reasonable chance of success is an empty phrase"(2008, p.1, in Devlin, 2013, p.939). The latter is a critical focal point of our study. Much of the literature on Aboriginal and Torres Strait Islander students in higher education has focused on increasing participation rates. However, increasing participation without addressing serious success gaps can only result in higher participation rates with a widening success gap between Aboriginal and Torres Strait Islander and non-Indigenous students.

Devlin and her colleagues (2009; 2012; 2013; 2016) have contributed significantly to literature concerned with understanding ways to best facilitate low SES student success and achievement. A concern is that although students from targeted equity groups are commencing university in larger number and proportion than ever before, these under-represented student groups have significantly lower success and completion rates (Devlin, 2009; 2012; 2013; Kahu & Nelson, 2017; Marginson, 2016).

Devlin et al. (2012; see also Devlin & Orchard, 2013) suggest some key initiatives and strategies to facilitate the success of low SES students in higher education, including:

- The use of technology in both teaching and learning and student support, whereby a range of resources and media can be engaged with to facilitate 'interactive and connected learning' to enable 'personalised learning' and assure 'high academic standards' (Devlin & McKay, 2016). Creating online and virtual learning environments have been found to be accessible to all (Larkin et al., 2014);
- Engaging students to learn in ways that are best suited to individual styles and needs (Larkin et al, 2014). In so doing, students can be empowered to progress and succeed at university (McKay & Devlin, 2014);
- Inclusive approaches are important pedagogically (Larkin et al., 2014). Academic culture and discourses need to be demystified for low SES students to progress and succeed at university (McKay & Devlin, 2014).

Critical to each of these approaches is student engagement. Put simply, students who are engaged with their studies are more likely to be successful (Kahu & Nelson, 2017, p.2). Central to much of the literature on increasing low SES student engagement and improving student success and retention is related to the design and implementation of inclusive pedagogies and curricula as student engagement and, consequently, success, occurs "dynamically within an educational interface at the intersection of the student and their characteristics and background, and the institution and its practices" (Kahu & Nelson, 2017, p.2).

A central focus of higher education reform policy is to raise the aspirations of targeted equity groups towards tertiary study. Gale and Parker (2015, p.139) examine the meaning of aspiration, finding that it carries "simplistic meanings in much higher education policy and practice". They argue that if raising aspirations among under-represented groups is part of government and higher education policies aimed at widening participation, then more nuanced understandings of aspiration are essential. As recently noted by Gore et al. (2017, p.167), "merely having aspiration does not deliver one from a starting point to attainment… because one must have access to the social, cultural and economic resources that are strategically valuable within a particular setting".

Also importantly for low SES students (Karimshar et al. 2013, p.5), there must be support systems that assist with the combination of financial, relationship, mental and physical health stress that affect students from low SES backgrounds. Whilst the research described above provides some insights into Australia's widening participation agenda, including the main reported issues faced by low SES students, the focus of this literature has been on generic student issues. It is, therefore, imperative to consider the specific context of Aboriginal and Torres Strait Islander participation in higher education in Australia.

UNIVERSITIES AUSTRALIA INDIGENOUS STRATEGY 2017-2020

As discussed above, Aboriginal and Torres Strait Islander people are notably disadvantaged in the higher education context, with participation rates and successful outcomes significantly below those experienced by the Anglo Australian population (Pechenkina, et al., 2011; Behrendt et al., 2012; Oliver et al. 2015; Wilks & Wilson, 2015; Kim et al, 2016; Smith, Trinidad & Larkin, 2015). This is despite initiatives undertaken by universities across Australia to increase Aboriginal and Torres Strait Islander student engagement in higher education (Department of Education and Training, 2015; Universities Australia, 2017).

The Universities Australia Indigenous Strategy 2017-2020 (Universities Australia, 2017), developed in consultation with the National Aboriginal and Torres Strait Islander Higher Education Consortium (NATSIHEC), sets targets for equal success and completion rates for Aboriginal and Torres Strait islander students to non-Indigenous students over the next decade. But the big question remains as to what type of policies are most effective in achieving these important targets.

Gore et al. (2017, p.165) consider the concept of aspirations in their study, finding that whilst Aboriginal and Torres Strait Islander and non-Indigenous students hold similar occupational aspirations, "Indigenous students were much less likely to aspire to attend university". However, Gore et al. (2017) note that the concept of aspirations has become a prominent feature of higher education policy – with aspirations remaining "a key focus in the quest to increase the participation of 'equity target groups' in the design of equity initiatives" (Gore et al., 2017, p.165). However, it has also been noted that the reduction of motivation to aspiration, and aspiration to occupational aspirations, perpetuates the deficit model within which many policy developments are based.

Indeed, a focus on aspirations can be problematic because aspirations are "neither individualistic nor simplistic"; rather, they are complex and heterogeneous, and bound by social, historical and contextual issues (Southgate and Bennett, 2014; Gore et al., 2017). Indeed, Gore (2017, p.165, see also Parkes et al., 2015) found that "Indigenous young people are *rich* in aspirations" thus leading to their call for the need for government policy and university recruitment strategies to move beyond the discourse of raising aspirations: "it is not just about making higher education possible, but rather, making university a place where Indigenous young people will want to pursue and attain their occupational aspirations" (Gore et al., 2017, p.180).

Some potential obstacles Aboriginal and Torres Strait Islander peoples face when attending, or wishing to engage in business-related studies, have been summarised by Hunter et al (2015) as:

- Some Aboriginal and Torres Strait Islander students do not see the relevance of business subjects whilst others are being turned-off by a perceived focus on profits and not enough of a link to serving ones' community;
- Some Aboriginal and Torres Strait Islander students have inadequate numeracy skills;
- There is insufficient Aboriginal and Torres Strait Islander content in the business curriculum (making the curriculum insensitive to Aboriginal and Torres Strait Islander cultures);
- There is inadequate student support;
- There is a lack of mentoring; and
- There are poor links to the world of work (see also, Lombardi and Cooper, 2014, who also focus on accounting).

Understanding these obstacles to engagement are a key basis for investigating specific barriers to participation, retention and success. These issues are explored further, below.

BARRIERS TO PARTICIPATION AND RETENTION

The question of how to make university a place where Aboriginal and Torres Strait Islander young people will want to pursue their aspirations has been the focus of much academic literature. For instance, Oliver, Grote, Rochecouste and Dann (2015, p.23) found various factors perceived to obstruct the retention of Aboriginal and Torres Strait Islander students. These factors include: "a lack of support from some teaching staff, schools and faculties; financial insecurity; and often interrelated issues surrounding university workload, jobs, health, as well as family and community responsibilities."

The issue of retention for Aboriginal and Torres Strait Islander students has often been attributed to a lack of support and understanding – by mainstream institutions and non-Indigenous educators - about the cultural obligations and traditions of Aboriginal and Torres Strait Islander students. But Edwards and McMillan (2015b), reporting on the substantially lower completion rates of Aboriginal and Torres Strait Islander students in higher education in Australia, found that the most commonly cited reasons for non-completion for equity group students are financial difficulty and family obligations (Edwards and McMillan, 2015b).

Family and community are very influential to informing aspirations of Aboriginal and Torres Strait Islander students and their decision to attend university (Parkes, McRae-Williams & Tedmanson, 2015), as well influencing decisions regarding the selection of a particular area of study. But according to Parkes et al., (2015, p.773), "as a consequence of differing values, young Aboriginal Australian people are faced with the harsh reality of a system which is unprepared to consider the priority of extended family." According to this study, 'family connectedness takes precedence over all other things in shaping the dreams and aspirations of young Aboriginal Australian people, even though education and employment are important (Parkes et al., 2015). It is important to note here that family for Aboriginal and Torres Strait Islander peoples refers to extended family, not the nuclear family prioritised by non-Indigenous Australians. However, how to better link family ties with participating and succeeding in higher education is not addressed in this study.

A possible obstacle to increasing the retention rates amongst Aboriginal and Torres Strait Islander students in higher education lies in the curriculum (Maguire & Young, 2015). The lack of Indigenous-related content in the curriculum across all higher education faculties appears to be one factor serving to keep Aboriginal and Torres Strait Islander retention rates relatively low as compared to the retention rates of non-Indigenous students. The effect of this lack of Aboriginal and Torres Strait Islander content on retention, and even possibly on success, is exacerbated when the curriculum ignores or denigrates practices such as non-profits and social and community enterprises which can be more important to the Aboriginal and Torres Strait Islander population (Anderson, 2009; Bunda, Zipin and Brennan, 2012; Devlin, 2009; Rahman, 2013).

Related to this, when Aboriginal and Torres Strait Islander knowledges and perspectives are not included in the curriculum, this can emphasise that these knowledges are not important or relevant. Indeed, one of the recommendations of the Berhendt Review is:

> "That universities develop and implement an Aboriginal and Torres Strait Islander teaching and learning strategy applicable across a range of curriculums, focused on standards of excellence as applied to other curriculum content and feeding into descriptions of graduate attributes..." (Behrendt, Larkin, Griew & Kelly, 2012, p.22)

This goal was also expressed in the Federal Government's *Review of Australian Higher Education:*

> "Higher Education providers should ensure that the institutional culture, the cultural competence of staff and the nature of the curriculum recognises and supports the participation of Indigenous students… Indigenous knowledge should be embedded into the curriculum to ensure that all students have an understanding of Indigenous culture. It is critical that Indigenous knowledge is recognised as an important, unique element of higher education, contributing economic productivity by equipping graduates with the capacity to work across Australian society and in particular with Indigenous communities." (Bradley, Noonan, Nugent and Scales, 2008, p. 33).

This push for curricular inclusion of Aboriginal and Torres Strait Islander ways of knowing – known as the Indigenisation of curriculum (Young, Pearse and Butler, 2011) – has "registered in Indigenous Studies courses and programmes, [but] it has not significantly affected wider academic and professional studies programmes" (Bunda et al., 2012, p. 942). It is only recently that some researchers have focused on the need to integrate Aboriginal and Torres Strait Islander knowledge and examples into business-related curriculum, even at the core of the material being taught (Young, and Maguire, 2017; Young, Sibson and Maguire, 2017).

This imperative to Indigenise aspects of business-related curriculum, is seen by some researchers as key to the corporate social responsibility of universities (Young and Maguire, 2016) and is supported by professional organisations that are increasingly requiring Aboriginal and Torres Strait Islander content within professional higher education programs. Many universities now make reference to the inclusion of Aboriginal and Torres Strait Islander perspectives in their statements of graduate attributes. Furthermore, inclusive and equitable quality education for Aboriginal and Torres Strait Islander peoples is an international priority cited in the United Nations 2030 Sustainable Development Goals (United Nations Department of Economic and Social Affairs, 2015). But what is lacking in the literature is a clear articulation of the extent to which Indigenisation can positively affect the retention and success rates of Aboriginal and Torres Strait Islander students. This latter point is something that that we attempt to address in this study.

STUDENT SUPPORT SERVICES

The establishment of Indigenous Education Units and Aboriginal and Torres Strait Islander Study Centres are valued for the role they can play in "strengthening cultural identities, providing emotional and tangible support, and providing a link between the community and the university" (Sonn, et al, 2000, p. 128). In the Berhendt Review, it was recommended that well-targeted university outreach programs could fill a number of gaps to address barriers to higher education. In response, "universities around the country have extended or developed programs to encourage

and support pre-tertiary Indigenous students to consider higher education an option" (Cairnduf, 2015, p.94).

It has been argued that a number of individual enabling, mentoring, and alternative entry programs have been considered successful in increasing and improving academic outcomes for Aboriginal and Torres Strait Islander students. According to Gore et al., (2017, p.166), such programs "are critical mechanisms to inform and solidify aspirations as well as facilitate access for Indigenous students". But the extent of the hypothesized effects remain not well specified.

In a recent special issue of the *International Journal of Learning in Social Contexts* on the topic of *Indigenous Pathways and Transitions into Higher Education*, a number of initiatives aimed at facilitating Aboriginal and Torres Strait Islander participation and retention in higher education are examined. Examples of programs deemed to be successful at individual institutions include:

The Australian Indigenous Mentoring Program (AIME)	This is a "structured educational mentoring program provided for Indigenous students to access throughout their high school experience" (Priestly, Lynch, Wallace and Harwood, 2015, p.44). This program, designed to 'close the gap' on educational outcomes aims to "support students to complete their high school studies so that they can transition into university, further education and training or employment at the same rate as every Australian child" (Priestly et al., 2015, p.44)
The Community Aspirations Program in Education (CAP-ED)	Developed by the Offices of Indigenous Engagement at Central Queensland University (Fredericks et al, 2015), this program was designed to build the educational aspirations of Indigenous people. This program initiated "taking the university to the community and offering opportunities for people to visit the university. It included short learning sessions designed to introduce potential students to the possibility of tertiary study and provide a pathway into an enabling program for university entrance. CAP-ED is designed to inspire and enable Aboriginal and Torres Strait Islander people – to help them 'see what they can be' and inspire their aspirations to engage in higher education" (Fredericks et al., 2015, p.54).
The Compass Program	Implemented by The University of Sydney, this program was designed to support young Aboriginal and Torres Strait Islander people in their preparation for higher education, with a strong focus on sustained engagement - with students in high school across Years 7 to 12, with Indigenous young people, their families, teachers and communities (Cairnduf, 2015).
The Stellar Program	Jointly implemented by Southern Cross University (SCU) and University of New England (UNE), this program "aims to increase the number of Clarence Valley students participating in university by creating meaningful partnerships between schools, business, government, community organisations and individuals. Stellar is able to create these partnerships because it is driven by the Clarence Valley Industry Education Forum which is strongly connected to the community" (Irwin et al 2015, p.102).
The UniCamps Program	This is run by the University of South Australia's (UniSA) Centre for Regional Engagement (CRE) in partnership with the Mimili Anangu School. This program is aimed at "showing learning pathways through the tertiary sector, leading to a range of careers, either within their community or through pursuing their own interests, this program seeks to capture and maintain Anangu students' interest in diverse educational opportunities" (Thomas et al, 2014, p.23).

Thomas et al (2014) argues that whilst relationship-building – between communities, educational institutions and within the university – takes time, the building of these relationships is an absolutely crucial foundation for implementing and successfully running programs, such as those described above, to enhance the engagement, retention and success of Aboriginal and Torres Strait Islander students in higher education.

BUSINESS RELATED EDUCATION

Whilst research regarding Aboriginal and Torres Strait Islander student engagement in higher education has grown in recent years, there has been little research on why Aboriginal and Torres Strait Islander students are choosing not to study business related higher education. Hunter et al. (2015) recently described business as a 'priority discipline' and, therefore, a key area where targets could be set to address the Behrendt Review recommendation that universities focus "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, p.xvii).

Research indicates that there is a growing need for Aboriginal and Torres Strait Islander students to gain business-related degrees in areas such as accounting, finance, commerce, tourism, marketing and promotions, and information technology (Hunter et al., 2015). The number of Aboriginal and Torres Strait Islander entrepreneurs has almost tripled from 4,600 in 1991 to 12,500 in 2011 (Hunter et al., 2015).

Evidence shows that Aboriginal and Torres Strait Islander entrepreneurs are more likely to employ Aboriginal and Torres Strait Islander workers than other employees, but there is a notable lack of business qualified candidates from Aboriginal and Torres Strait Islander communities (Hunter 2014, p.16). There is Commonwealth Government policy to support and encourage Aboriginal and Torres Strait Islander employment:

> "Indigenous-specific government policies and programs may play a role in Indigenous self-employment. At the Commonwealth level, the Indigenous Employment Program (IEP) has committed some $991 million over the five years to 2014–15 (DEEWR 2011). Some of the key components of the IEP are Indigenous Wage Subsidy, which may assist Indigenous entrepreneurs who employ other Indigenous people; and the Indigenous Small Business Fund and Indigenous Capital Assistance Scheme, both of which offer Indigenous businesses access to commercial finance and appropriate professional and mentoring support services." (Hunter 2013, p8).

Given that Aboriginal and Torres Strait Islander small business owners aspire to support Aboriginal and Torres Strait Islander employment, it becomes necessary to explore what skills or job needs are required. A study by Morrison et al. (2014, p.11-12) found that Aboriginal and Torres Strait Islander entrepreneurs view formal qualifications as essential to achieving business success. They also identify that some of the challenges facing businesses include "the need to improve business practices such as accounting systems and promotions, and access to key business services and advice", all of which require employees to seek these skills from other businesses or through employing a qualified employee, typically from outside of Aboriginal and Torres Strait Islander communities (Morrison et al., 2014, p12, cited in Collins et al., 2016). This equates to job opportunities available for Aboriginal and Torres Strait Islander graduates looking for future employment (Morrison et al 2014).

"These findings are suggestive of a new model of Indigenous business development that involves helping early start Indigenous businesses improve a range of business practices through in-depth skill development, mentoring and network engagement… skill development would not solely focus on financial skills and mentoring would not primarily be by accountants; businesses need a wider range of skills to be taught by mentors and others from several disciplinary backgrounds." (Morrison et al. 2014, p13).

Beyond those businesses owned by Aboriginal and Torres Strait Islander peoples, other organisations, particularly those with Reconciliation Action Plans (RAPs), are looking to employ Aboriginal and Torres Strait Islander graduates with business qualifications. For example, a recent study looking at the importance of formal qualifications and developing 'good business practice' skillsets, reports that:

"…graduates [both Aboriginal and Torres Strait Islander and non-Indigenous] reported that their qualification was a formal requirement for the role they were in, with a further 26 per cent reporting that their qualification was important. These two proportions were highest for Indigenous graduates…" (Richardson et al 2016, p56)

Improving the participation and engagement of Aboriginal and Torres Strait Islander students in business higher education is important for reasons of social equity (Fleming & Grace, 2014; Dang et al., 2016; Young, Sibson & Maguire, 2017). Despite business programs being taught at 39 universities across Australia, Aboriginal and Torres Strait Islander student participation in business higher education remains under represented compared to the non-Indigenous population (Dang et al., 2016) and, also, when compared to other disciplinary areas (Vitartas et al., 2015; Dang, et al., 2016). As noted by Asmar, Page and Radloff (2011, p.4):

"Compared with non-Indigenous students, Indigenous students… were more likely to be studying in the humanities; slightly more likely to be studying education, in a field of health, or in the creative arts; and less likely to be studying science, engineering or business."

This issue is further compounded by studies showing that despite efforts by the Australian Government to increase Aboriginal and Torres Strait Islander student participation in higher education this has not translated to higher completion rates across all disciplines (Edwards & McMillan 2015).

For example, Edwards and McMillan (2015) in their report on equity issues in higher education in Australia track national data on all university students enrolled in a bachelor degree over a nine year time period, from 2005 to 2011. They found that 72.3% of the 2005 students enrolled in the field of 'Management and Commerce' completed their bachelor degrees (Edwards & McMillan, 2015, p. 9). These completion results were found to be situated mid-way between the top-ranked field of study 'Health' (81.6% completion rate) and the lowest-ranked field of study 'Information Technology' (63.3% completion rate). See Table 1.

Table 1. Completion Rate Rankings

Field of Education	Completion Rate
Health	81.6%
Architecture And building	79.1%
Creative arts	75.6%
Education	74.7%
Engineering and related	74.7%
Management and commerce	72.3%
Society and culture	71.8%
Agriculture and environmental studies	66.9%
Information technology	63.3%

Table Source: Adapted from Figure 6 of Edwards and McMillan (2015, p9).

The reasons for this much lower Aboriginal and Torres Strait Islander student engagement in business studies is complex (Vitartas et al., 2015), this is despite the numerous job opportunities presently available to Aboriginal and Torres Strait Islander business students. One barrier to increasing Aboriginal and Torres Strait Islander participation in business schools might be the current lack of information available about these job opportunities for Aboriginal and Torres Strait Islander students who graduate with business and business related degrees (Hunter et al. 2015).

Dang et al. (2016, 23-28; see also Hunter et al, 2015) provide an overview of the multiple factors that impact on Aboriginal and Torres Strait Islander student participation in higher education. The five interrelated factors they identify in their study are:

- Demographic and geographic factors, including issues of remoteness;
- Financial and economic factors, including the high proportion of low SES students;
- Curricular and pedagogical factors, whereby business curricula is dominated by Western practices and epistemologies, and there are complex issues involving educational pathways, institutional support, and teacher-student interaction;
- Sociocultural and socio-political historical factors, such as, first in family at university, a lack of relevance to family and community, and lack of cultural safety in higher education institutions;
- Historical factors, including the unique challenges faced by Aboriginal and Torres Strait Islander students including racist attitudes in the hidden curriculum, cultural issues relating to the curriculum, issues with educational pathways; and
- The perception (which is often a misperception) that business subjects are not pertinent to the lives of Aboriginal and Torres Strait Islander students and their communities.

Dang et al.'s (2016) recommendations for higher education institutional policy relating to improving Aboriginal and Torres Strait Islander student participation and engagement in business-related studies includes:

- The need for enhanced general support strategies of higher education institutions, involving a holistic 'whole-of-university' support structure (see Behrendt et al, 2012; Gore et al., 2017);
- The implementation of strategies that promote culturally inclusive pedagogy which can create cultural safety and ways to guide students through unfamiliar discourses;
- The need for strategies aimed at the development of more culturally informed curricula to assist Aboriginal and Torres Strait Islander students to negotiate the hidden curriculum (see also, Young and Maguire, 2016; Maguire and Young, 2017; Young and Maguire, 2017; Young et al., 2017); and
- The importance of partnerships between universities, schools and other institutions – the value of university-school partnerships.

There are a number of reasons why increasing Aboriginal and Torres Strait Islander student engagement in business-related education is important. Hunter et al. (2015), for example, provide the following reasons:

- Aboriginal and Torres Strait Islander people are under-represented in (well-paid) managerial and professional occupations;
- There has been a substantial recent growth in the number of Aboriginal and Torres Strait Islander owned and operated businesses, affording Aboriginal and Torres Strait Islander students with job opportunities, to help their communities; and
- Non-Indigenous businesses also have a demand for Aboriginal and Torres Strait Islander employees with business-related skills, particularly those organisations implementing Reconciliation Action Plans.

Hunter et al. (2015, p.1) conclude that "Indigenous people with business related qualifications are needed in the Australian economy. The challenge is how to augment the number of Aboriginal and Torres Strait Islander students and support them in successfully completing their courses". Some researchers argue that the Australian economy needs Indigenous ways of thinking and practising to face and overcome looming crises of unsustainability, an issue that is often discussed in the literature on Indigenous tourism businesses (for example, Butler & Hinch, 2007).

Jobs are clearly available, albeit this fact it appears is not well communicate to prospective Aboriginal and Torres Strait Islander students, their families, and their communities. As found by Hunter et al. (2015, pp. 14-17; see also Hunter et al 2014), the fact of the matter is that employment outcomes for Aboriginal and Torres Strait Islander business school graduates are better than for non-Indigenous business school graduates, and better than for Aboriginal and Torres Strait Islander students who graduate from non-business programs.

INTERNATIONAL BEST PRACTICE

These findings correspond to the consensus findings on best practice currently informing leading edge universities and business schools both here and abroad as it concerns improving Indigenous student retention, participation and completion rates (Hanover Research, 2010, 2011, 2015). Much of this accepted current best practice dealing with Indigenous students is informed by the experiences and prototypes developed by Canadian universities and business schools over the past two decades as they struggled to meet the needs of a relatively large Canadian Aboriginal student population (Hanover Research, 2010; Malatest, 2010). These initiatives have not been straightforward as Canada's designation of an Aboriginal population is problematic, a construct designed to collectively represent three distinct and often competing groups of Indigenous peoples in Canada, the First Nations, Metis and Inuit (Government of Canada, 1982).

Nevertheless, Canada and its individual provinces have proven to be world leaders in the area of addressing Indigenous student issues principally because they were forced to deal with issues of equity and fairness quite intensively in their recent history. Throughout the 1980s and 1990s Canadians faced a series of ongoing constitutional crises over the sovereignty rights and uneven human development outcomes of two key minority populations. While much of the focus was initially on the rights of the province of Quebec and the rights of French Canadians, by the mid-1980s these concerns had expanded to include a large segment of the First Nation population (Dunbar, 1995). Canada's constitutional crises peaked in 1995 as Canada avoided, by the narrowest of margins, the breakup of its celebrated federation.

As a result of this, Canadian governments and public institutions at all levels have been furiously engaged with designing programs and initiatives with which to generate equity with respect to the participation rates and measured outcomes for the country's Aboriginal peoples (Government of Canada, 1996). At first these efforts were guided by the federal government's perceived fiduciary responsibility towards each respective Indigenous group. But soon these were reconceptualised as constituting fundamental issues of human rights for all vulnerable groups and peoples (Government of Canada, 1996). Efforts to generate equity are now increasingly being led by the Aboriginal groups involved.

There is increasing cooperation between Canada's Aboriginal populations and their leadership with local, regional, national and international institutions. This has meant that new programs are generated organically. The most recent and most highly touted example of this is Harvard Business School's new offering, Leading People and Investing to Build Sustainable Communities Program. Developed in conjunction with the Aboriginal Financial Officers of Canada and the Native Congress of American Indians, the four day course seeks to provide Indigenous communities with new ideas for managing their businesses and resources and it is not unlike Melbourne Business School's award winning MURRA Indigenous Business Masterclass program. But unlike most business school programs, these brand products are not concerned with issues of retention and completion.

Many claims have been made as to the relative success of organically designed initiatives versus programs designed in house by governments and other non-Aboriginal institutions. To date it should be stated clearly that there is a real paucity of empirical evidence establishing what specific policies relating *to improving the outcomes of Indigenous students* generate the best outcomes. Currently our understanding of what constitutes best practice is an amalgam of studies on optimizing student retention and outcomes across the general tertiary population together with

anecdotal evidence put forward about specific policies concerning Indigenous students in a number of different places and across time.

Empirical research both in North America and Western Europe has found that higher retention rates of students generally throughout their university careers across all programs are directly correlated to the student's overall satisfaction with *the product* their institution or school is offering. Generating satisfaction for the product is comprised of both academic and non-academic factors (Sieke and Barksdale, 2013). While "the majority of factors proven to improve retention are related to academic goals, academic related skills, and academic self-confidence" (Hanover Research, 2010, p. 2), other factors such as the institutional commitment to the student through the social support they offer given the student's socio-economic status, and in particular financial aid, have been found to demonstrate moderate correlation to retention and success (Lotkowski et al, 2004; Hanover Research, 2010, 2011, 2015).

Ultimately for students to persist and succeed in their programs they must be able to find value in what they are doing by 'seeing themselves and their goals' reflected on their university campuses. Students participating and succeeding on campuses is often best achieved through some form of community or mentorship (Tinto, Russo and Kadel, 1994; Nora, 2001, Adelman, 2006; Lee et al, 2014). Thus, the presence of an *appropriate* academic advisor, mentor or tutor "is essential in encouraging students in the progress and success of is their academic careers." (Hanover Research, 2010, p. 2).

Programs designed with the mentorship principle in mind, such as empowerment programs that provide participants with the necessary individual and interpersonal tools they need through effective mentoring and intervention, for example as practiced at the University of Saskatchewan in Canada, are claimed to produce higher retention and success rates. "(A)necdotal evidence suggests that a physical Aboriginal student services program on campus, partnerships with Elders and Aboriginal community leaders, other postsecondary institutions, and local employers, and peer counselling and mentoring all have a positive impact on Aboriginal student retention (Hanover Research, 2014, pp. 24).

These principles are exemplified in a number of programs throughout Canada that report better outcomes, but again it must be reiterated that to date this evidence is self-reported and anecdotal. The Ch'nook Initiative and Aboriginal Management Program at the University of British Columbia Saunders School of Business is a case in point. Recognized as the pioneer and leader in Canada in addressing the very low participation and success rate for Aboriginal students in business education, this program since 2002 has attempted to address many of the impediments that serve to constrain students from small regional communities within the province seeking higher education. It offers flexible alternatives to Aboriginal students throughout British Columbia through a series of agreements it has entered into with twenty-five associated institutions and academic partners, as well as regional partners through the Ch'nook Business Education Accord (http://www.sauder.ubc.ca/Programs/Chnook).

These Canadian Aboriginal students, who tend to be older when beginning their tertiary education, are given the opportunity to first build their skill sets and confidence closer to home. Only when they feel able to cope with radical changes in their lifestyles and environment do they pursue their studies within the larger centres farther away from home. This gradual migration process removes important psychological barriers to success by reducing the pressure of transitioning to an urban university setting.

The Ch'nook model appears to provide the template for the recently adopted Master of Māori and Indigenous Business (MMAIBus) soon to be provided by six cooperating universities in New Zealand. Together the University of Auckland, Auckland University of Technology, Massey University, University of Otago, Victoria University of Wellington and The University of Waikato will offer a part time, online degree program aimed at participants already working within the Maori economy (Massey University, 2017).

Another model has been that provided by the Purdy Crawford Business Chair established in 2010 and it's *In Business: A National Mentorship Program for Indigenous Youth*, a high school Mentorship Program at Cape Breton University in Nova Scotia (Cape Breton University, 2017). What began as a small regional mentorship program seeking to encourage high school students (Year 11 and Year 12) to study business through effective mentoring during their preparatory high school years, The Purdy Crawford Business Chair has now evolved into a national program that successfully attracts Canadian Aboriginal students to study business from across the country. Such innovative programs are reported to have resulted in higher participation, retention and completion rates of disadvantaged Canadian Aboriginal students (Hanover Research, 2014).

CONCLUSIONS

As this review of policy, research reports and academic literature has illustrated, researchers have spent some effort examining the causes of low participation and success rates of underrepresented student groups in Australian higher education schools, including Aboriginal and Torres Strait Islander students. As well, approaches and policies that might serve to increase participation and success rates have received some attention as have the conditions within Australian business schools that may perpetuate these outcomes. However, the causes of this under representation and the effectiveness of suggested policies with which to mediate these outcomes still require further in-depth analysis.

The research described in this report supplements and compliments the reviewed literature, with a focus on Australian business schools and an emphasis on the relative representation and performance of Aboriginal and Torres Strait Islander students. The research results reveal that many of the suggested policies reviewed above overlap with some of our findings. Certainly, the literature reveals that the demand side of the market is waiting and, at present, demand is greater than the supply of Aboriginal and Torres Strait Islander business students. This gap bodes well for Aboriginal and Torres Strait Islander business school graduates, in terms of labour compensation, employment opportunities, and career advancement. This gap, therefore, needs to be filled and addressed through policy directed towards the supply side.

This project on improving Aboriginal and Torres Strait Islander participation, retention and success in business-related higher education is, therefore, timely and necessary. In the chapters that follow, we build an evidence base for informing recommendations to increase Aboriginal and Torres Strait Islander student engagement in business-related higher education. The outcomes of this project are meant to benefit current, commencing, and future Aboriginal and Torres Strait Islander students in business-related higher education throughout Australia and the wider community.

CHAPTER 3. RESEARCH METHODOLOGY

The project employs a mixed-methods approach to examining the participation and success rates and the barriers to participation and success. This Australia-wide project is informed by the micro analysis of statistical indicators, alongside a qualitative study that involves online surveys conducted with Aboriginal and Torres Strait Islander students and interviews with Aboriginal and Torres Strait Islander staff. Specifically, this study involved four methodological components:

1. Quantitative analysis of micro data analysis:

2. Scoping study of Australian Business Schools strategies and initiatives;

3. Online surveys with Aboriginal and Torres Strait Islander university students and alumni; and

4. In-depth interviews with Aboriginal and Torres Strait Islander university staff.

The aim of this project is to build an evidence base to inform recommendations for improving the participation and success of Aboriginal and Torres Strait Islander students in business-related tertiary education.

The project employs a mixed-methods approach to examining the participation and success rates and the barriers to participation and success. This Australia-wide project is informed by the micro analysis of statistical indicators and a survey of business schools on policies in place to improve the participation, retention and success of Aboriginal and Torres Strait Islander. This is accompanied by a qualitative study that involves online surveys conducted with Aboriginal and Torres Strait Islander students and interviews with Aboriginal and Torres Strait Islander staff. Specifically, this study involved four methodological components:

- Quantitative micro data analysis model;
- Scoping study of Australian business schools strategies and initiatives;
- Online surveys with Aboriginal and Torres Strait Islander university students and alumni; and
- In-depth interviews with Aboriginal and Torres Strait Islander university staff.

MICRO DATA ANALYSIS MODEL

Previous research considering Aboriginal and Torres Strait Islander student participation and success has tended to cite broad statistical comparisons, contrasting participation and success rates of Aboriginal and Torres Strait Islander student university populations against non-Indigenous student populations. While informative, these previous studies provide little guidance on relative participation and success rates (as measured pass rates, withdrawal rates and completion rates) at an institutional level, nor as this information relates to the primary interest of this project, the relative participation and success in business schools. Furthermore, where broadly considering the university experience, previous research has largely neglected to explain underlying variables that may impact on those persistently low participation and success rates. This unexplained lag in Aboriginal and Torres Strait Islander participation and success in Australian business schools (Hunter et al 2015; Dang et al 2016) is, therefore, both contemporary and fundamentally important.

Examining and trying to explain the participation and success gaps between Aboriginal and Torres Strait Islander students and non-Indigenous students necessitated a multi-stage quantitative analysis of national enrolment records of all Aboriginal and Torres Strait Islander students enrolled in business-related higher education studies across 39 Australian universities. In building an evidence base to inform our research, and in order to evaluate strategies and initiatives to close these gaps, the micro-data analysis sought to explore both participation and success rates at an aggregate level by State and Territory, and at the university business school-level.

Success rates were further scrutinised within the context of previously cited variables thought by researchers to potentially contribute (whether negatively or positively) to persistent gaps between Aboriginal and Torres Strait Islander and non-Indigenous business student's participation and success (see Literature Review). The variables included in our research were:

- Socio-economic status;
- Gender;
- Age; and
- First in family.

This data was retrieved from the Australian Bureau of Statistics (ABS), sourced from the "Higher Education Statistics Collection", conducted by the Australian Government Department of Education and Training, using data from the relevant years, which is approved under the *Higher Education Support Act 2003*. The data was collected from educational institutions including Universities, Colleges and TAFE institutions across Australia. The ABS considered the data to be 100 percent accurate. However, our analysis suggests a 98 percent confidence interval on the accuracy of the retrieved data.

The analysis is based on 2015 calendar year data published in 2016. All students studying with Business Degree major and/or minor were considered for the analysis. The fields of study, as defined by the ABS, are Management and Commerce (including all business-related majors). The data also included students studying a double degree (for example, Engineering and Management or Business and Information Technology or Design-Communication and Marketing).

The ABS provides a rich source of demographic data that was extracted and categorised to engage in socio-economic analysis. The extraction and categorisation and related analysis of the data carried out for this project, builds upon various hypotheses about what one means by participation and success, and what variables might be the key determinants of relative differences in participation and success between Aboriginal and Torres Strait Islander and non-Indigenous business students.

> In our analysis, participation rates and success rates have been treated as our key dependent variables.

There are a number of factors related to the variable construction that impact our research:

Participation rate analysis	This was done by constructing participation rates for Aboriginal and Torres Strait Islander students and non-Indigenous university students, and business students for every Australian university, by state and then nationally. These estimates were then used to estimate the relative participation rates for these two cohorts of students.
Success rate analysis	To establish the relationship between the success rate to socio economic status, gender, age and first in family, only the business school student population was used. The method treats the two student populations of Aboriginal and Torres Strait Islander students and non-Indigenous students separately to present a comparative analysis. We focus on two measures of success: the pass rate and the retention in a given year, with a focus on the pass rate.
Socio-economic status analysis	There was no SES indicated for about 1 percent of the student population. This error could be accounted to a data capture method or where SES is not disclosed by students.
Age analysis	Regarding age, approximately 2% of the population were considered outliers such as extremely low age brackets (below 12 years) and extremely high age brackets (60 years and above). As per advice received from ABS, all ages below 15 years were considered as 15 years and all ages above 60 years were considered as 61 years. Our analysis is based on a five-year age range brackets.
First in family analysis	The first in family analysis is the only data that considers three variables as opposed to two. This means that the analysis considers the influence of SES in conjunction with parent/guardian level of education. If any one of the parents and/or guardians has tertiary education then the student record has not been considered as first in family. This is consistent with O'Shea's (2016:289-2) observations: "Within Australia, data on this particular student grouping is currently only collected at an institutional level, systematic analysis is also hampered by the fact that there is no common definition of what constitutes being 'first-in-family'. This term is loosely applied and usually only in reference to parental educational biography."

BUSINESS SCHOOLS INITIATIVES ANALYSIS

All Australian business schools were invited to provide information on the strategies and initiatives that they have in place to increase the participation, and the success (pass and retention rates) of Aboriginal and Torres Strait Islander students enrolled in their programs. The results were then categorised into themes so that we could engage in a systematic quantitative analysis related to the themed initiatives for determining relative participation and success rates of Aboriginal and Torres Strait Islander business students. Of the 39 business schools in Australia, 25 responded to the email survey, equating to a 64% response rate. Please see Chapters 4 and 5 for the themed categories of business school initiatives aimed at improving participation and success rates, respectively. The business schools analysis, alongside key themes drawn from the literature, informed the development of the questions for the surveys and interview methods, discussed below. The analysis and discussion of the results are contained in Chapters 4 and 5 of this report.

We also scrutinised university websites for information on policy and policy initiatives on participation and success rates. University policies were also themed so that we could engage in a systematic quantitative analysis relating the themed initiatives for determining relative participation and success rates of Aboriginal and Torres Strait Islander business students. The analysis and discussion of the results of this process are contained in Chapters 4 and 5 of this report. In both cases described above, we test, at the macro level, for policy effectiveness. But this is only from a correlational perspective.

UNIVERSITY WEB-DERIVED ANALYSIS

To supplement our understanding of the relationship of current policy and relative participation, we supplement our survey-based derivation of policy initiatives with a website-based derivation of policy initiatives. In this case, we analysed the policies or programs specified on university websites in Indigenous education statements, strategic plans and initiatives, to increase participation rates. Such policies and initiatives were then categorized for analytical purposes. Here we have university-wide initiatives specified on websites as opposed to what business school Dean's offices specify that they are actually undertaking. For the website derived policy initiatives, this might be more of a wish list as compared to what transpires into actual policy. But this website derived policy analysis might shed some light on what we've gained from our survey-based business school specific analysis.

STUDENT, ALUMNI AND STAFF METHODOLOGIES

After gaining approvals from the University of Newcastle Human Research Ethics Committee (UON HREC), which included the completion of the National Ethics Application Form (NEAF), The Deputy Vice-Chancellors (Academic and Research) and Pro Vice-Chancellors (Aboriginal and Torres Strait Islander) of all 39 Australian Universities offering business programs were contacted by email inviting their institution to participate in the project. Following UON HREC protocol, organisational consent was required from each institution with clear instructions for their involvement in the project. In short, institutional participation involved distributing project information and recruitment materials to:

- A representative from the business school and/or faculty at the university;
- A representative from the Indigenous Education Unit at the university;
- A representative from Student Services to circulate surveys to all Aboriginal and Torres Strait Islander students enrolled at the university; and
- A representative from Alumni Services to circulate surveys to all Aboriginal and Torres Strait Islander graduates of the university.

Of the 39 Australian universities approached to participate in the project, 23 universities agreed to being involved in the study. This response rate of 59% determined the institutions through which online surveys could be sent out to Aboriginal and Torres Strait Islander students and alumni, as well as the IEU that could be contacted with an invitation to participate in interviews. These methodologies are described in details below.

THE SURVEY PROCESS

Two surveys were administered to capture in-depth insights into the views of current Aboriginal and Torres Strait Islander students and successful Aboriginal and Torres Strait Islander alumni in relation to their experiences of higher education, with a key focus on their reasons for choosing (or not choosing) to study business-related higher education. The survey of Aboriginal and Torres Strait Islander alumni is considered essential to a 'success-focused' approach (Devlin, 2009) for providing valuable insight into the experiences of successful graduates, including determining the factors that led to their success and how they overcame any challenges that they faced.

The student and alumni surveys contained a combination of both closed-ended and open-ended questions. The surveys consisted of questions relating to participation, retention and success; including the family and educational background of alumni and students, as well as the effectiveness of various initiatives to support Aboriginal and Torres Strait Islander students in business-related higher education. The survey design evolved from consultation between Aboriginal and non-Aboriginal members of the research team. The surveys, whilst not an example of a 'decolonised' methodology recommended by some for research with Indigenous people (Tuhiwai Smith 2012), nor a common method for gaining qualitative data (Denzin and Lincoln, 2008) were deemed necessary for the Australia-wide collection of student and alumni data within the limited time frame of this project.

To overcome these issues, open-ended questions were predominantly used in the surveys to ensure that study participants were able to provide answers that allowed for the personal views and experiences to be voiced (Fontana & Frey, 2008) This aspect of the survey design was, therefore, specifically aimed at gaining experiential accounts of students and alumni in relation to

their participation in tertiary education and the challenges that they face, and overcome, at university. Such a survey format represented a qualitative questionnaire whereby all respondents are asked "the same series of pre-established questions with a limited set of response categories" (Fontana & Frey, 2008, p.124). The surveys strategy and online questions for students and alumni are presented in Figure 44, Figure 45 and Figure 47.

The online surveys were administered over a six-week period between 10 July and 18 August, 2017. Surveys were distributed by email by the staff member or team identified by each individual participating university. The email distributed to Aboriginal and Torres Strait Islander students and alumni of each participating university, provided a link to an online survey facilitated by Survey Monkey.

From the 23 universities participating in the project, the survey response rate was:

- 237 responses from Aboriginal and Torres Strait Islander students; and
- 192 responses from Aboriginal and Torres Strait Islander alumni.

Whilst this response rate was lower than anticipated, the data gained in the surveys provides rich insight into the experiences of the Aboriginal and Torres Strait Islander students and alumni participants. Given the qualitative nature of this part of the project and the fact that only a few universities dominated the percentage of responses (see Chapter 6 for details), we do not make claims of representativeness or generalisability of the data collected. Rather, the results of the surveys provide insights into the higher education experiences and challenges of these 429 individuals.

THE INTERVIEW PROCESS

To supplement the survey data, in-depth semi-structured interviews were held with Aboriginal and Torres Strait Islander staff based in university management, including university Indigenous Education Centres. The interviews were designed to elicit deeper insights into Aboriginal and Torres Strait Islander student preferences, and recommendations for engaging and retaining students in business-related education.

These semi-structured interviews contained a number of open ended questions within an interview schedule. Whilst all interviewees were asked the same series of questions, the interviews were flexible to the extent that the interviewer was able to reformulate the questions as required and engage in probing, when necessary, to elicit further relevant information from the interviewee (Sarantakos, 2005). The interview questions for staff are provided in Figure 47.

From the 23 universities participating in this study, 20 interviews were conducted with Aboriginal and Torres Strait Islander university staff. These interviewees were based at 16 of the participating 23 universities, and ranged from Pro Vice-Chancellors (Indigenous) and Managers of Indigenous Education Units to Indigenous Liaison Officers and specialists in higher education management for Aboriginal and Torres Strait Islander student participation, retention and success.

Each interview was conducted by the Research Project Officer, an Aboriginal woman, and were held in person or via video or telephone conference. The interviews took between 45-60 minutes, and all interviews were digitally recorded and transcribed. Interviewees were sent copies of their transcript for review prior to each transcript being subjected to analysis.

The insights into the higher education landscape and the engagement of Aboriginal and Torres Strait Islander students in business education discussed by the staff, supplement and further expand on the themes presented in the chapter that examines the student and alumni survey data. However, whilst one focus of the interviews was to gain further in-depth insight into the barriers to Aboriginal and Torres Strait Islander student engagement in business-related higher education, the overarching aim was to identify opportunities. Our engagement with these higher education experts and their insights into barriers and opportunities is important to the development of recommendations for this study.

But the insights of these experts represent one voice amongst many in the Aboriginal and Torres Strait Islander space. Hence, without further analysis, we cannot determine the representative nature of the opinions related to us in the in-depth interviews. Also, the opinions and insights related to policy have not been tested for policy effectiveness in terms of participation and success. This latter step is critical, but not addressed in this study.

THE SURVEY AND INTERVIEW ANALYSIS

The analysis of the surveys and interviews comprised a number of stages.

For the surveys, the first step involved a detailed reading of the textual material and an initial analysis of key themes emerging in the open-ended questions (See Figure 47). The purpose of this analysis was to identify relevant concepts in the data and to group them into categories (open coding). For this analytical step, we used first order coding (i.e., terms and language adequate at the level of meaning of the respondents). Following this, we used axial coding wherein we explored relationships between and among these categories and gathered them into higher-order themes.

The data was then entered into the qualitative data analysis software QSR NVivo and we further coded the data using NVivo to keep track of emerging categories. This allowed for referencing to similar concepts and their representative examples that could be collapsed into fewer categories and themes, as well as the collections of examples that needed to be allocated into more fine-grained categories. We worked on questions and continued to explore new concepts until we had a clear sense of the developing relationships among categories and their related concepts. We made statements of findings only if we corroborated a given finding across multiple respondents. The representative quotes for the participating universities, presented in this report, therefore, feature only representative findings.

For the interviews, two members of the research team carried out a detailed reading of the transcripts. Both researchers independently subjected the transcriptions to thematic, textual and content analysis, with core themes and issues elicited from the data. The benefit of having two members of the research team involved in the analysis ensured that the identification of themes was a less biased process and to overcome the issue of themes being abstract constructs (Sarantakos, 2005). The thematic coding process was informed by themes that emerged from the literature review, as well as being induced from the data itself. The interviews, the results of which are provided in Chapter 7, provide rich insight into the current higher education landscape for Aboriginal and Torres Strait Islander students, as reported by specialists in Aboriginal and Torres Strait Islander Education.

WORD CLOUD ANALYSIS

Using NVivo software a word analysis was conducted for all surveys and interviews to estimate word frequency, where the latter can be indicative of particular themes. These data were then filtered to eliminate trivial words that have no relationship to policy, policy initiatives, and barriers to and facilitators of success. The remaining words were then used to generate word clouds using the WordItOut software. Word clouds provide some inside into dominant themes with respect to policy, policy initiatives, and barriers to and facilitators of success.

CONCLUSIONS

The remaining chapters of this report present the findings of this mixed methods project. The research design, described above, aims to provide detailed insight into the disadvantages and challenges faced by Aboriginal and Torres Strait Islander students in the higher education context to develop recommendations to enhance opportunity. The project is aimed at engaging and supporting Aboriginal and Torres Strait Islander peoples in business-related higher education. By building an evidence base through the methodologies described in this chapter, the outcomes of this project will benefit current, commencing, and future Aboriginal and Torres Strait Islander students in business-related higher education throughout Australia as well as the broader Australian community.

CHAPTER 4. MICRO DATA ANALYSIS OF PARTICIPATION RATES

We use micro data to determine the relative participation rates of Aboriginal and Torres Strait Islander students in Australian business schools, broken down by university. This is compared with the participation rate of non-Indigenous students. These participation rates are then related to the socio-economic status (SES) of the students and to business schools' initiatives meant to attract Aboriginal and Torres Strait Islander students to business schools.

Note: For ease of reading, all figures are presented within this discussion, whilst all tables are found at the end of the sections.

AUSTRALIA-WIDE PARTICIPATION RATES

One hypothesis of this study is that socio-economic status is positively related to participation rates and success in business schools. This is because the capabilities attached to students from higher SES backgrounds is viewed to facilitate greater success.

It is important to note that Aboriginal and Torres Strait Islander peoples represent 2.8% of the Australia population in the 2016 Census. This is an increase from 2.5% in 2011, and 2.3% in 2006.

Of the Aboriginal and Torres Strait Islander population in 2016:

- 91% were of Aboriginal origin;
- 5% were of Torres Strait Islander origin; and
- 4% were of both Aboriginal and Torres Strait Islander origin.

Therefore, the Aboriginal population comprised 2.5% of Australia's population in 2016 and the Torres Strait Islander population makes up 0.3%. The largest catchment area for Aboriginal and Torres Strait Islander peoples is New South Wales. The smallest is in Tasmania, followed by South Australia. More details on the distribution of the Aboriginal and Torres Strait Islander peoples, drawn from the 2016 Census, can be found in Figure 1 (below) and Table 2.

Figure 1. Indigenous Australian Population as a Percentage (%) of Total Indigenous Australian Population across States

Legend:
- Total Aboriginal Population as % of State or Territory Population
- Total Aboriginal Population in State or Territory as % of Aboriginal Population in Australia
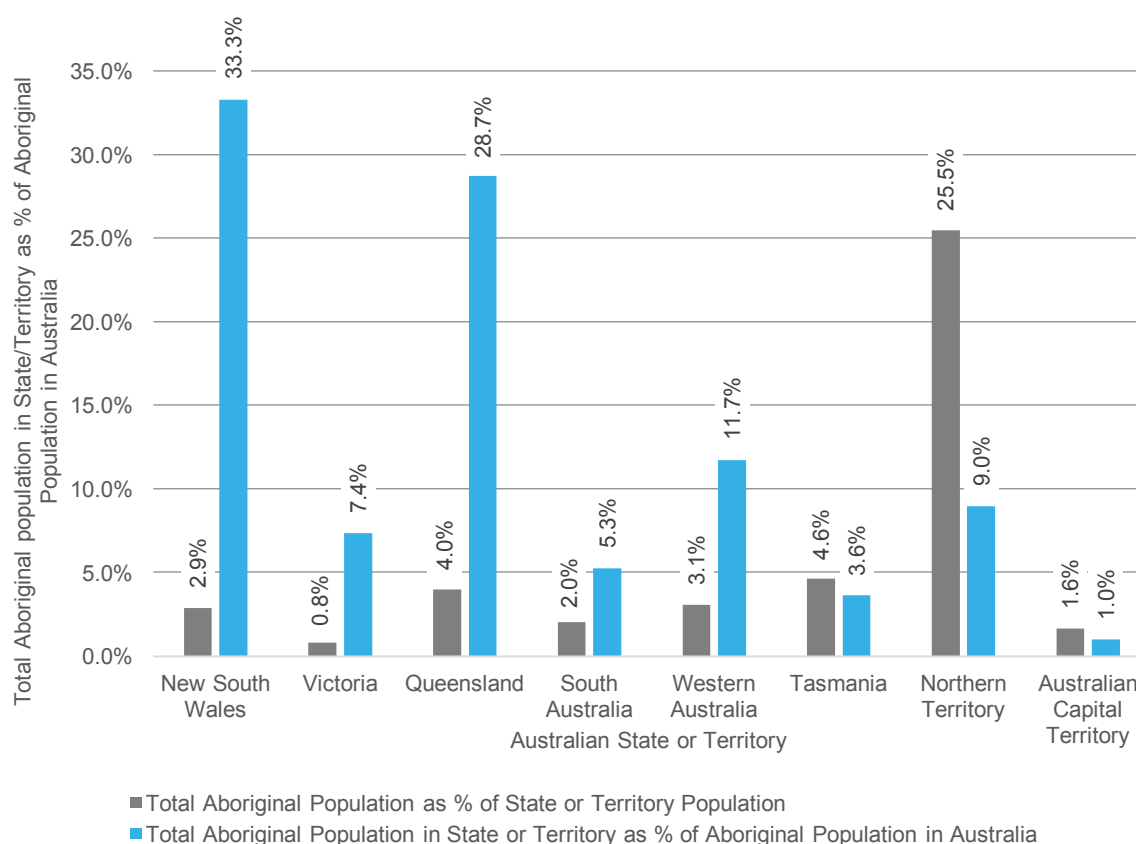
BUSINESS SCHOOL PARTICIPATION RATES

Business school participation findings are presented in:

- Figure 2;
- Table 3; and
- Table 4.

A basic finding of this study on participation rates is that Aboriginal and Torres Strait Islander students have lower participation rates than non-Indigenous students in Australian business schools on average and almost across all Australian business schools except for in Bond and Murdoch universities. But these business schools had only 15 and 24 Aboriginal and Torres Strait Islander business students respectively. The average for all Australian business school is 41 students, the median is 35 (See Figure 2). The latter splits the population in half.

> The participation rate for Aboriginal and Torres Strait Islander students is 15% compared to 23% for non-Indigenous students (see Table 2).

Hence, the Aboriginal and Torres Strait Islander participation rate is less than 70% of the non-Indigenous participation rate (percentage of Aboriginal and Torres Strait Islander students in business schools divided by the percentage of non-Indigenous students in business schools).

These findings reiterate those of Hunter et al (2015). Although the latter study's estimates are not directly comparable to our own, it suggests a participation rate of 11% for Aboriginal and Torres Strait Islander students and a participation rate of 19% for non-Indigenous students during a similar timeframe. Here, the Aboriginal and Torres Strait Islander participation rate is less than 60% of the non-Indigenous participation rate.

Figure 2. Business School Participation Rates for Indigenous and Non-Indigenous Students

% Non-Indigenous Students in Business School
% Indigenous Students in Business School
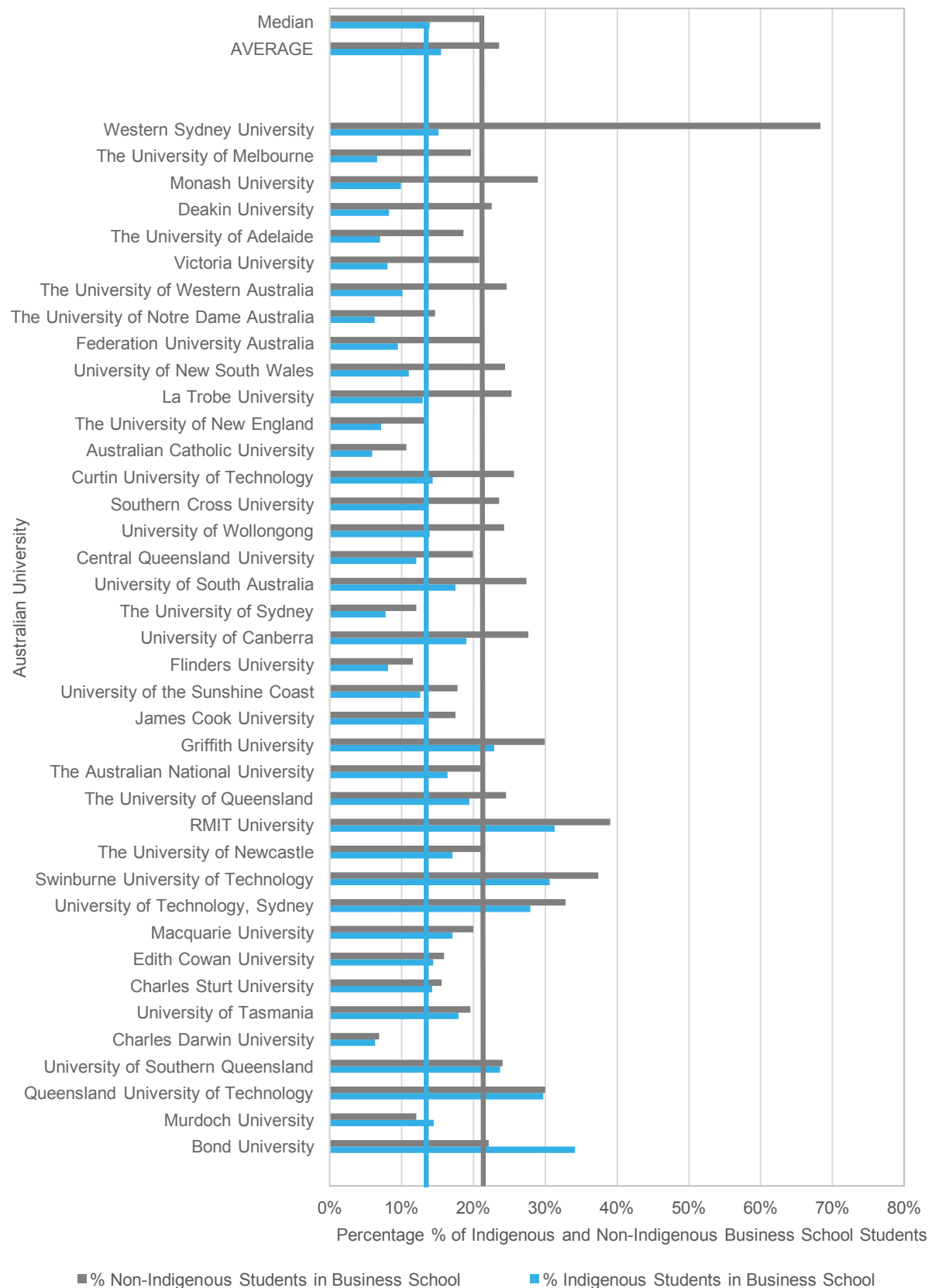
DOES SOCIO-ECONOMIC STATUS IMPACT PARTICIPATION?

We also examine the relationship between relative participation rates and students' socio-economic status. One hypothesis is that higher SES students have the better skill sets to do business school degrees as they typically come from schools that provide better and more analytical and statistical skills than what is typically provided for low SES students. They might be more attracted to business schools for this reason.

Another but related hypothesis would be that there should be a negative relationship between the percentage of low SES Aboriginal and Torres Strait Islander students and relative participations rates.

However, there are greater number of low SES Aboriginal and Torres Strait Islander students than higher SES students. The former provides business schools with a larger catchment area. Hence, one might hypothesize that there should be a positive relationship between low SES Aboriginal and Torres Strait Islander students and participation rates. In this case one would be attracting students who do not necessarily have the skills sets to succeed on their own (on average) in business schools.

From Table 6, there is a positive relationship between relative participation rates and the ratio of the percentage of Aboriginal and Torres Strait Islander business school students who are low SES relative to the percentage of non-Indigenous students who are high SES. Table 6 shows there is a fairly strong correlation of 18%.

Figure 3 (below), reveals that although there is much variation about the trend line that illustrates the average relationship between participation rates and low SES status, this positive relationship nevertheless exists on average.

Figure 3. Relative Participation Rates and Relative Low SES

Figure 3 scatter plot: X-axis "Relative participation rates: Indigenous / Non-Indigenous" (0% to 180%), Y-axis "Relative low SES: Indigenous / Non-Indigenous" (0.0 to 8.0). Trendline equation: $y = 0.9537x + 1.1558$, $R^2 = 0.03325$.
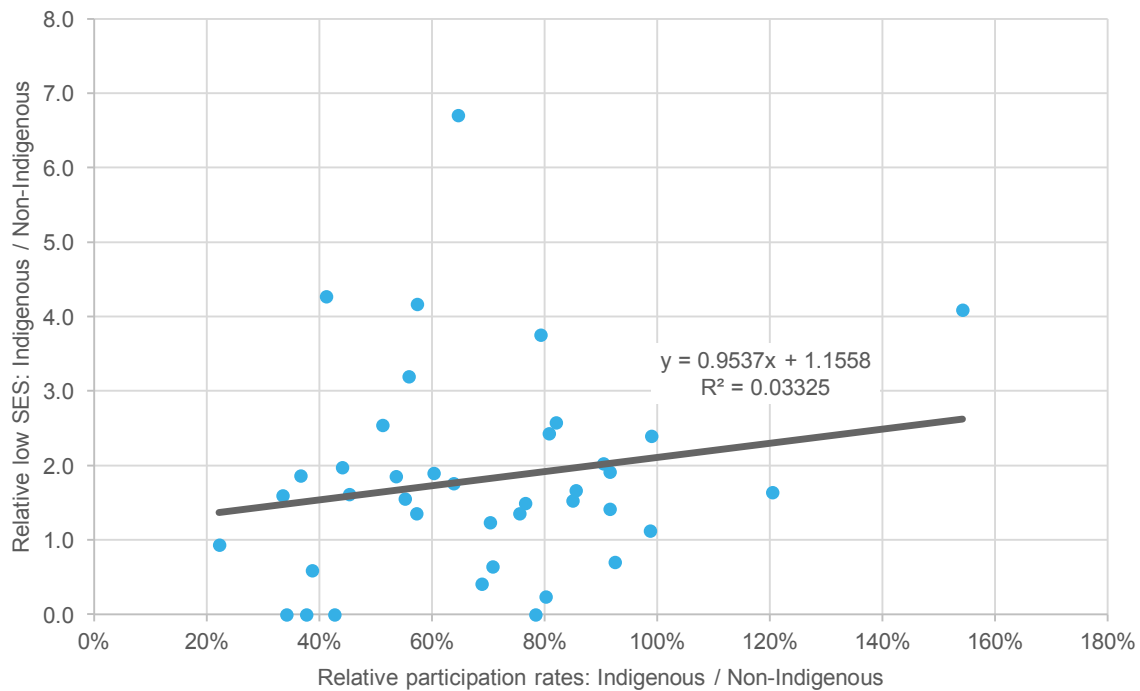
In discussing the relationship between low SES participation rates, it is useful to dig down and assess the importance of the low SES to both the Aboriginal and Torres Strait Islander business school student population and their non-Indigenous cohorts.

In viewing:

- Figure 4;
- Table 5; and
- Table 6.

Almost without exception the percentage of low SES Aboriginal and Torres Strait Islander business school students is far greater than their non-Indigenous business school student cohorts.

Business schools with the greatest number of low SES Aboriginal and Torres Strait Islander business students' representation (Table 5 and Figure 4) include:

The University of Wollongong	65%
Central Queensland University	64%
University of Newcastle	53%,
University of New England	53%,
La Trobe University	50%
University of Tasmania	49%

Those with zero (0%) low SES representation include:

- Monash University;
- University of Notre Dame Australia;
- The Australian National University; and
- The University of Adelaide.

The above estimates, suggest that having a much greater low SES representation facilitates increasing the participation rates of Aboriginal and Torres Strait Islanders in business schools.

However, our estimates also reveal that this poses challenges to business schools in terms of the success of their Aboriginal and Torres Strait Islander students given that they *typically* come equipped with relatively poor educational backgrounds.

Figure 4. SES Distribution by Indigenous and Non-Indigenous Low SES Business School Population
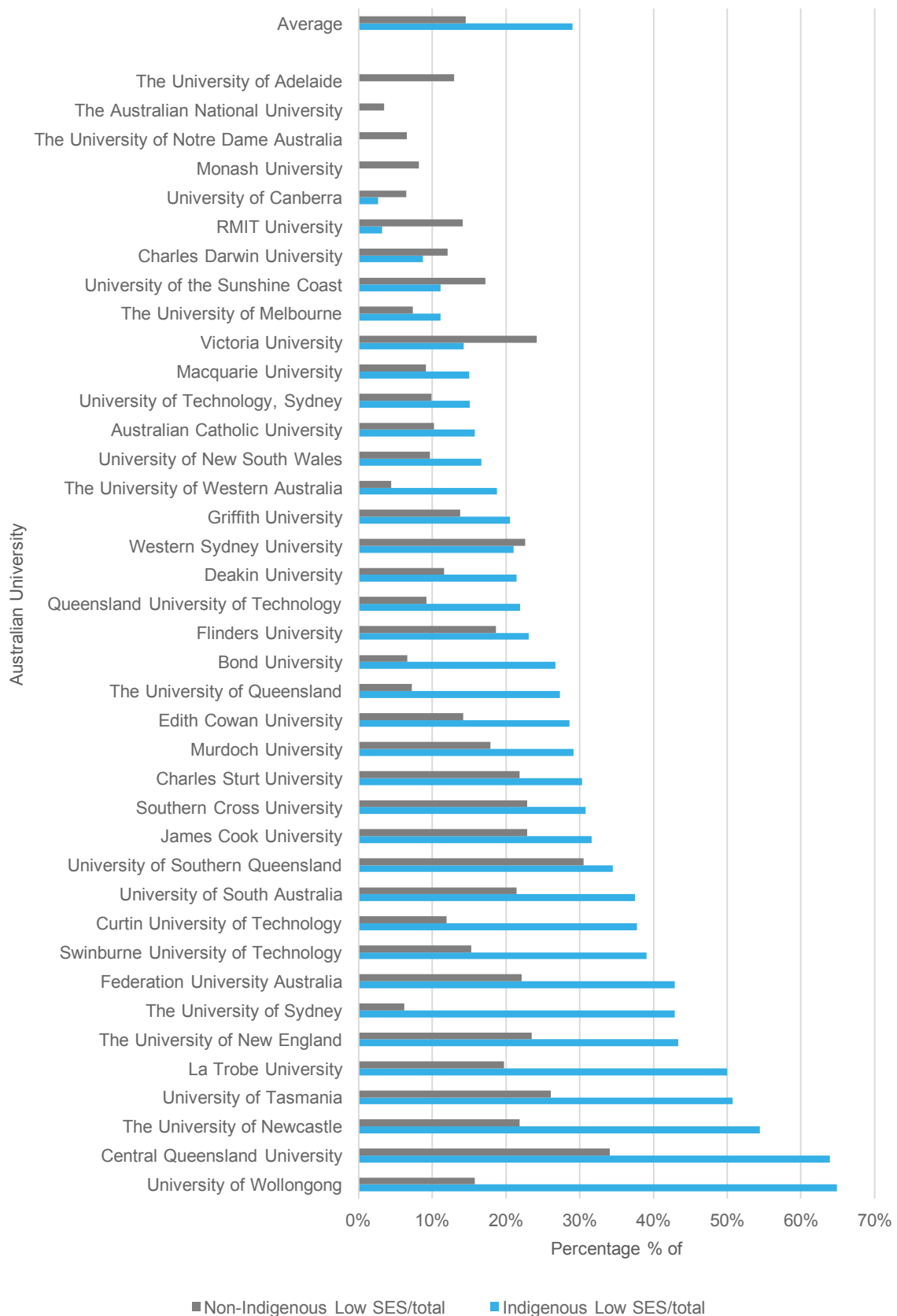
BUSINESS SCHOOL PARTICIPATION RATE INITATIVES: A SURVEY-BASED APPROACH

As outlined in Chapter 2, Methodology, we surveyed Australian business schools on their policies to increase the participation rate of Aboriginal and Torres Strait Islander students in business schools. These policy categories have been coded to facilitate quantitative analysis (Figure 5 below).

Figure 5. Business School Participation Initiatives Coding Chart

Code	Description
A	Preparation / enabling programs
B	Alternative entry pathways
C	Outreach
D	Scholarships
E	Equity working groups

This survey initiative was endorsed by the Australian Business Deans Council. Only 25 of the 39 universities contacted responded (see Table 5). Of those not responding (N/A in Table 5), are 4 of the 8 universities with a 90% or greater relative participation rate. Table 5 references the business school participation rate initiatives.

One hypothesis we test is whether increasing the number of university initiatives designed to increase Aboriginal and Torres Strait Islander student participation rates (relative to non-Indigenous student participation rates) in business schools has a positive effect on relative participation rates. Schools might increase the number of programs in the hope that there is strength in numbers or to meet university key performance indicators (KPIs).

One simple approach to test this hypothesis is to correlate the number of programs with the relative participation rates. There is a fairly strong but *negative* correlation between the number of programs and the relative participation rate, as shown in Figure 6 (below) and Table 7.

Some other findings from Figure 6 (below) and Table 7 include:

- As the number of initiatives increase, the relative participation rate diminishes.
- Many of the business schools with high Aboriginal and Torres Strait Islander business student participation rates had only one initiative.
- Conversely, the business schools with the lowest Aboriginal and Torres Strait Islander participation rates had notably more initiatives, with as many as four participation-related initiatives.

Simply having a larger number of well-intentioned programs does not yield higher participation rates in business schools for Aboriginal and Torres Strait Islander students relative to non-Indigenous students.

Figure 6. Business School Initiatives to Increase Indigenous Participation Rates
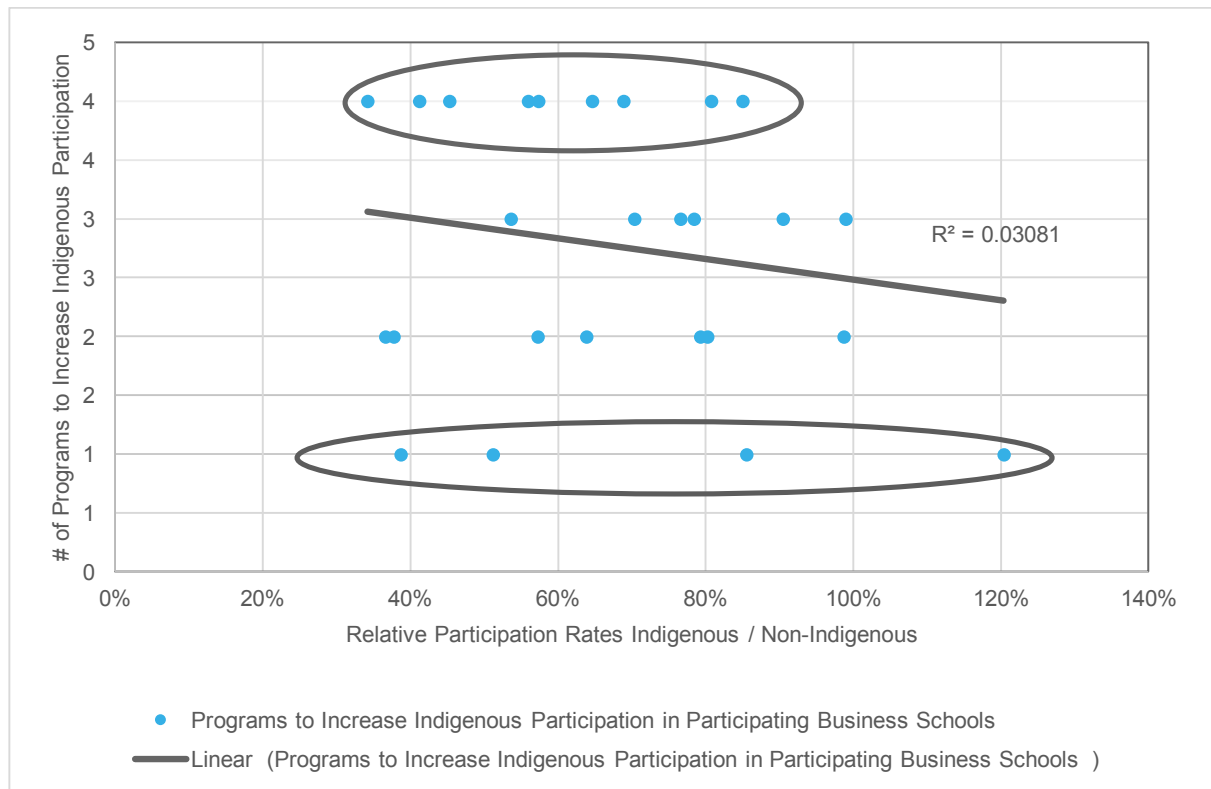
WHAT BUSINESS PARTICIPATION INITIATIVES WORK?

Figure 7 (below) presents the results of an analysis of the top performing business schools with regards to relative participation rates. One must note that a number of the top performing business schools did not respond to our survey. As it relates to this Figure:

- The grey columns indicate the number of reporting business schools adopting a particular policy or group of policies.
- The blue column presents the percentage distribution of policies across business schools.

What dominates these top performing participation business schools are:

- Preparation/enabling policies (coded A at Figure 7); and
- Alternative entry pathways (coded B at Figure 7).

However, most business schools, irrespective of their participation rates have adopted these policies. But we have no evidence on the quality of these programs across Australian business schools. Differences in quality can affect the effectiveness of these programs across business schools. These programs probably represent necessary but not sufficient environmental conditions to increase Aboriginal and Torres Strait Islander relative participation rates.

One outstanding hypothesis to test is if differences in the quality of identical programs has a substantive effect on relative participation rates. This particular analysis also can't examine policy initiatives that do not exist, but might be relatively effective if they did exist. Here, we have the possibility of omitted but hypothetical variables being of critical importance. Although this must be noted, this important issue cannot be addressed in this paper.

Figure 7. Business School Survey: Pyramid of Initiative Importance and Participation Rates at Top Business Schools (Greater Than 80%, Relative Participation Rate)
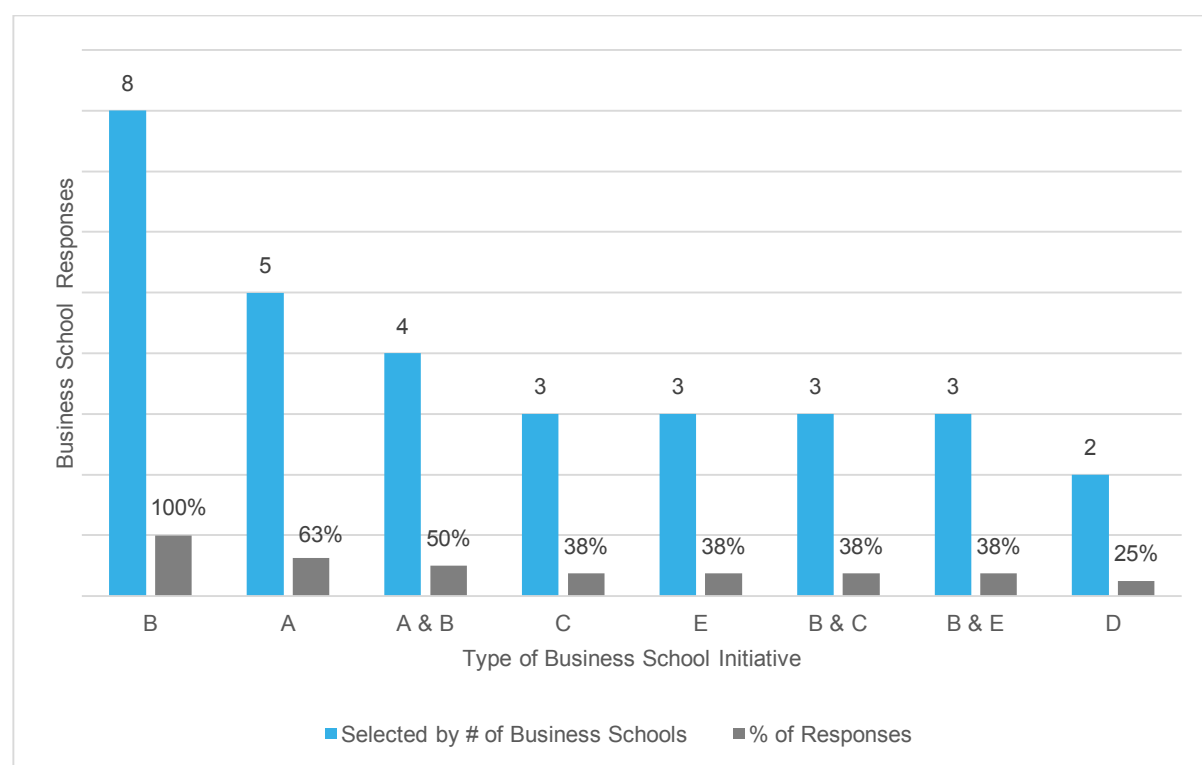
DO BUSINESS SCHOOL SCHOLARSHIPS WORK?

Business school initiatives such as Scholarships (coded D at Figure 7) can also be important, especially when attempting to recruit students from low SES cohorts.

> 53% of the University of Newcastle's Aboriginal and Torres Strait Islander business school students comprise of low SES students and the provision of scholarships has been identified as increasing its Aboriginal and Torres Strait Islander participation rate. Yet, how the program is bundled together can affect the effectiveness of specific programs.

Simply offering scholarships is not enough. For instance, in the absence of outreach programs (coded C at Figure 7), students may have no way of knowing that such programs exist in these business schools, making outreach an important element to consider together with offering scholarships.

Figure 6 shows that there are high participation rate business schools that do not offer scholarships. On the flip side, there are low participation rate business schools that do offer scholarship initiatives (See Figure 8). That said, given the high prevalence of low SES Aboriginal and Torres Strait Islander students, providing scholarships could further aid students and increase participation rates, even in high participation rate business schools.

Figure 8. Business School Survey: Number of Participation-Related Initiatives and Rates Relative to low SES Business Students (Low SES Indigenous/Total Non-Indigenous)

Chart: Number of Business School Initiatives (y-axis, 0.0 to 4.5) versus Percentage % of Low SES Participants (x-axis, 0% to 180%). Trendline equation: $y = 3.6168x - 1.8769$, $R^2 = 0.61196$.
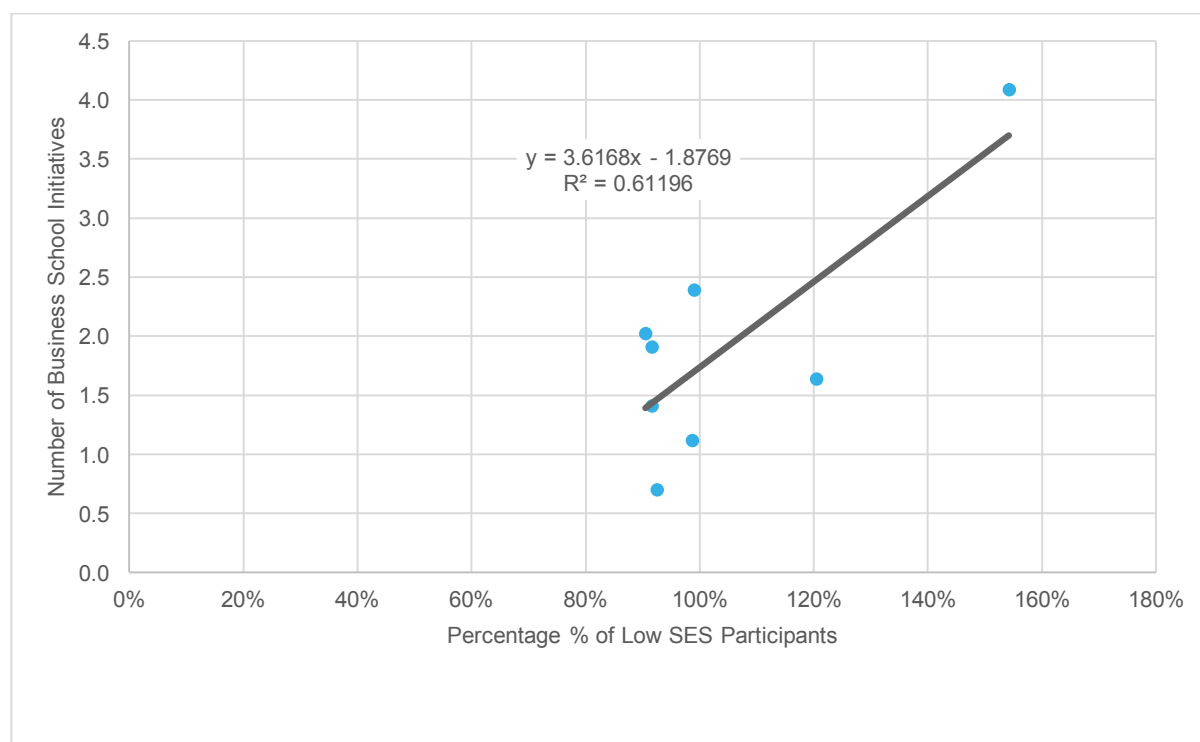
WEBSITE-DERIVED STUDY OF UNIVERSITY-WIDE PARTICIPATION RELATED INITIATIVES

As stated in Chapter 2, Methodology, we supplemented our understanding of the relationship of current policy and relative participation, by conducting an iterative website-based derivation review of the policy initiatives for each university. The website derived policy analysis helps to illuminate on what we've gained from our survey-based business school analysis. These website derived policy and initiative categories have been coded to facilitate quantitative analysis (Figure 9, below).

Figure 9. Web Derived University-Wide Participation Related Initiative Codes

Code	Initiative
A	Indigenous outreach programs
B	Indigenous tutoring
C	Indigenous scholarships
D	Indigenous student / cultural ambassadors
E	Indigenous graduate employment

Table 8 and Table 9 reference the web derived participation rate initiatives.

One hypothesis we test, as with the survey-based approach, is whether increasing the number of university initiatives designed to increase Aboriginal and Torres Strait Islander student participation rates (relative to non-Indigenous student participation rates) in business schools has a positive effect on relative participation rates. One simple approach to test this hypothesis is to correlate the number of programs with the relative participation rates. There is a fairly strong negative correlation between the number of programs and the relative participation rate (Figure 10 and Table 8).

Web-derived summary of findings:

- As the number of initiatives increase, the relative participation rate diminishes.
- Many of the business schools with high Aboriginal and Torres Strait Islander business student participation rates had only one initiative.
- Conversely, many of the business schools with the lowest Aboriginal and Torres Strait Islander participation rates had notably more initiatives, with as many as five participation-related initiatives.

As with the survey-based approach, simply having a larger number of well-intentioned programs does not yield higher participation rates in business schools for Aboriginal and Torres Strait Islander students relative to non-Indigenous students.

Figure 11 presents the results of an analysis of the top performing business schools with regards to relative participation rates. What dominates these top performing participation business schools are:

- Indigenous outreach programs (coded A);
- Indigenous scholarships (coded C);
- Indigenous student / cultural ambassadors (coded D); and
- A combination of outreach programs and scholarships (coded A and C).

However, most business schools, irrespective of their success rates have adopted these policies individually, such as the University of Western Australia and Victoria University. But we have no evidence on the quality of these programs across Australian business schools. Differences in quality can affect the effectiveness of these programs across business schools. Also, for this website policy analysis, we don't know for sure if these programs have been implemented.

It is important to note that these programs are different from what was identified as critical by the survey-based analysis:

- Preparation/enabling policies; and
- Alternative entry pathways.

It might very well be that a combination of these might be most effective depending on the target Aboriginal and Torres Islander student population. Scholarships, for example, would be critical to attract more LSES Aboriginal and Torres Islander students.

> Overall, these programs probably represent necessary but not sufficient environmental conditions to increase Aboriginal and Torres Strait Islander relative participation rates.

Also, as with our survey-based analysis, one outstanding hypothesis to test is if differences in the quality of identical programs has a substantive effect on relative participation rates.

This particular analysis also can't examine policy initiatives that do not exist, but might be relatively effective if they did exist. Here, again the possibility of critical omitted but hypothetical variables can be of critical importance. Although this must be noted, this important issue cannot be addressed in this paper.

Figure 10. Web-Derived Programs and Relative Participation Rates

Figure 10 scatter plot with trendline:
y = -0.0723x + 0.8727
R² = 0.1208

X-axis: Number of University-Wide Initiatives
Y-axis: Indigenous and Non-Indigenous Participation Rates
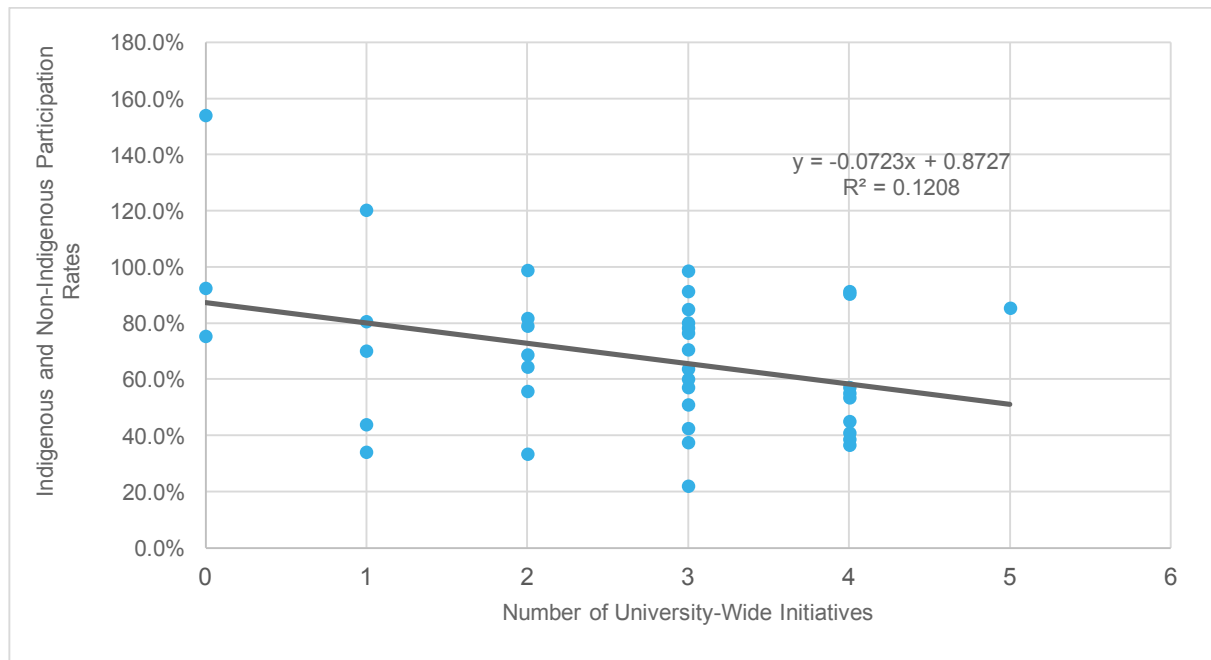
Figure 11. Number of University-Wide Initiative Occurrences, Top 10 Highest Business Schools by Highest Relative Participation Rate

Figure 11 bar chart:
X-axis: University-Wide Participation Initiatives
Y-axis: Number of Occurances

A: 9
C: 9
B: 4
A, B, C: 4
A, C: 3
D: 2
E: 2
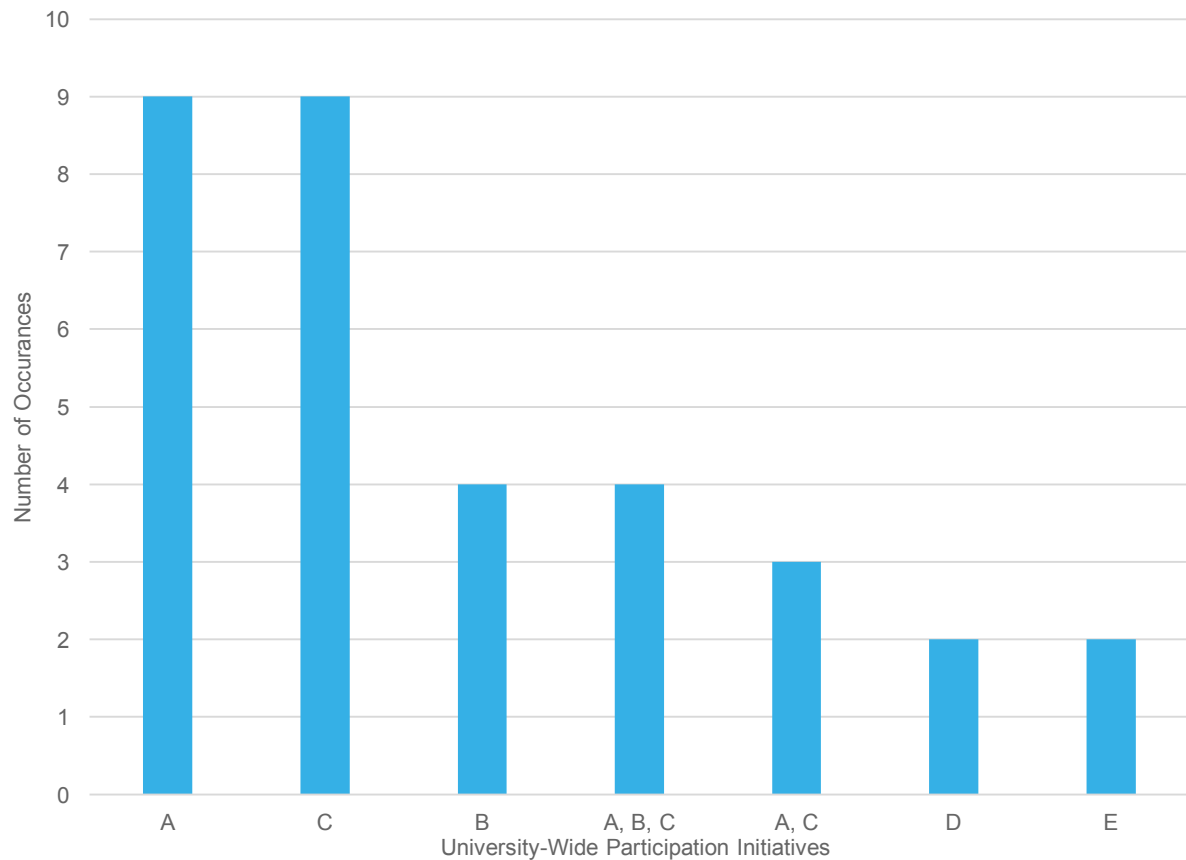
POLICY IMPLICATIONS FOR INCREASING PARTICIPATION RATES

Participation rates for Aboriginal and Torres Strait Islander students in business schools continue to lag behind participation rates in the university.

There are certain business school initiatives that appear to have some effect increasing Aboriginal and Torres Strait Islander participation rates (these relate to initiatives or programs that business schools stipulate that they actually have in place—derived from our survey-based analysis):

- Preparation/enabling initiatives; and
- Alternative entry pathways.

Scholarships are also important when business schools target low SES Aboriginal and Torres Strait Islander students. There is some positive relationship between higher relative participation rates and the percentage of students who are from the low SES cohort.

It is important to reiterate that our website derived initiatives or programs that appear to have some effect are:

- Indigenous outreach programs;
- Indigenous scholarships; and
- Indigenous student / cultural ambassadors.

But these initiatives need to be put in context of other initiatives that might be in place in business schools.

Simply adopting these initiatives, on their own, has no apparent effect in increasing Aboriginal and Torres Strait Islander participation rates.

Scholarships, for example, will only benefit low SES Aboriginal and Torres Strait Islander students if this initiative is coupled with other initiatives such as targeted outreach programs that highlight scholarships and post-graduation opportunities.

But as we will discover from our discussions on success, simply achieving high participation rates in the absence of aiding students to pass their programs will have negative repercussions on the overall success rates. University initiatives developed to increase relative participation rates need to be integrated with initiatives directed towards increasing relative success rates.

It is also imperative that one investigate the quality of the initiatives and programs that are in place. An initiative or program might be effective if it is deployed at a high enough level of quality.

> University participation initiatives like preparation/enabling programs and alternative entry pathways appear to have some affect. Scholarships are important in attracting low SES Aboriginal and Torres Strait Islander students, but only if students are made aware of these programs.

CHAPTER 4. APPENDIX TABLES

Note: Indigenous in the tables refers to the collective group of Aboriginal and Torres Strait Islander People.

Table 2. Indigenous Population Across Australian States

	Total Indigenous Population as % of State/Territory Population	Total Indigenous Population in State/Territory as % of Aboriginal Population in Australia	Total Indigenous Population
Australia	2.80%	100.00%	649,171
Australian Capital Territory	1.60%	1.00%	6,508
New South Wales	2.90%	33.30%	216,176
Northern Territory	25.50%	9.00%	58,248
Queensland	4.00%	28.70%	186,482
South Australia	2.00%	5.30%	34,184
Tasmania	4.60%	3.60%	23,572
Victoria	0.80%	7.40%	47,788
Western Australia	3.10%	11.70%	75,978

Table 3. Participation Rate Estimates and Number of Indigenous Business Students by Percentages

	% Indigenous Business Students	% Non-Indigenous Business Students	% Indigenous / % Non-Indigenous Business Students	Total Indigenous Business Students	% of Total Indigenous Business Students
New South Wales					
University of Wollongong	14%	24%	57.3%	37	2%
Western Sydney University	15%	68%	22.2%	81	5%
Charles Sturt University	14%	16%	91.5%	89	6%
Macquarie University	17%	20%	85.5%	40	2%
Southern Cross University	14%	24%	57.3%	52	3%
The University of New England	7%	13%	53.6%	30	2%
University of New South Wales	11%	24%	45.2%	26	2%
The University of Newcastle	17%	21%	80.7%	70	4%
The University of Sydney	8%	12%	64.6%	15	1%
University of Technology, Sydney	28%	33%	85.0%	53	3%
NSW Totals	**14%**	**22%**	**63.3%**	**493**	**31%**
Victoria					
Deakin University	8%	23%	36.6%	42	3%
Federation University Australia	9%	21%	44.1%	7	0%
La Trobe University	13%	25%	51.2%	18	1%
Monash University	10%	29%	34.2%	9	1%
RMIT University	31%	39%	80.2%	31	2%
Swinburne University of Technology	31%	37%	81.9%	41	3%
The University of Melbourne	7%	20%	33.5%	9	1%
Victoria University	8%	21%	38.7%	7	0%
VIC Totals	**13%**	**27%**	**47.2%**	**164**	**10%**
Queensland					
James Cook University	13%	17%	75.6%	78	5%
Central Queensland University	12%	20%	60.3%	36	2%
University of Southern Queensland	24%	24%	98.6%	92	6%
Bond University	34%	22%	154.2%	15	1%
Griffith University	23%	30%	76.5%	156	10%
Queensland University of Technology	30%	30%	98.9%	146	9%
The University of Queensland	19%	24%	79.2%	45	3%
University of the Sunshine Coast	13%	18%	70.7%	27	2%
QLD Totals	**20%**	**25%**	**79.6%**	**595**	**37%**

a. Relative Indigenous Business School Students, determined as a percentage (% of Total Indigenous Students in Australian Business Schools)

	% Indigenous Business Students	% Non-Indigenous Business Students	% Indigenous / % Non-Indigenous Business Students	Total Indigenous Business Students	% of Total Indigenous Business Students
Western Australia					
The University of Western Australia	10%	25%	41.2%	16	1%
Murdoch University	14%	12%	120.4%	24	1%
Edith Cowan University	14%	16%	90.4%	35	2%
Curtin University of Technology	14%	26%	55.9%	45	3%
The University of Notre Dame Australia	6%	15%	42.7%	3	0%
WA Totals	**13%**	**20%**	**65.0%**	**123**	**8%**
Australian Capital Territory					
University of Canberra	19%	28%	68.8%	38	2%
The Australian National University	16%	21%	78.3%	10	1%
ACT Totals	**18%**	**25%**	**73.1%**	**48**	**3%**
Northern Territory					
Charles Darwin University	6%	7%	92.5%	24	1%
Northern Territory Totals	**6%**	**7%**	**92.5%**	**24**	**1%**
Tasmania					
University of Tasmania	18%	20%	91.5%	71	4%
TAS Totals	**18%**	**20%**	**91.5%**	**71**	**4%**
South Australia					
Flinders University	8%	12%	70.3%	13	1%
The University of Adelaide	7%	19%	37.7%	11	1%
University of South Australia	17%	27%	63.8%	48	3%
SA Totals	**12%**	**20%**	**59.9%**	**72**	**4%**
Multi-State					
Australian Catholic University	6%	11%	55.1%	19	1%
MULTI-STATE Totals	**6%**	**11%**	**55.1%**	**19**	**1%**

a.   Relative Indigenous Business School Students, determined as a percentage (% of Total Indigenous Students in Australian Business Schools)

Table 4. Participation Rate Estimates at the State Level

	% Indigenous Business Students	% Non-Indigenous Business Students	% Indigenous / % Non-Indigenous Business Students
Australian Capital Territory	18%	25%	73.10%
New South Wales	14%	22%	63.30%
Northern Territory	6%	7%	92.50%
Queensland	20%	25%	79.60%
South Australia	12%	20%	59.90%
Tasmania	18%	20%	91.50%
Victoria	13%	27%	47.20%
Western Australia	13%	20%	65.00%

Table 5. Ranked Participation Rate, Program, and Low SES Estimates

Rank#		% Indigenous Business Students	% Non-Indigenous Business Students	% Indigenous / % Non-Indigenous Business Students	Programs to Increase Indigenous Participation	% Indigenous Low SES
1	Bond University	34%	22%	154.2%	N/A	27%
2	Murdoch University	14%	12%	120.4%	A	29%
3	Queensland University of Technology	30%	30%	98.9%	A, B, E	22%
4	University of Southern Queensland	24%	24%	98.6%	A, B	24%
5	Charles Darwin University	6%	7%	92.5%	N/A	8%
6	University of Tasmania	18%	20%	91.5%	N/A	49%
7	Charles Sturt University	14%	16%	91.5%	N/A	30%
8	Edith Cowan University	14%	16%	90.4%	A, B, C	29%
9	Macquarie University	17%	20%	85.5%	B	15%
10	University of Technology, Sydney	28%	33%	85.0%	B, C, D, E	15%
11	Swinburne University of Technology	31%	37%	81.9%	N/A	39%
12	The University of Newcastle	17%	21%	80.7%	A, B, C, D	53%
13	RMIT University	31%	39%	80.2%	B, E	3%
14	The University of Queensland	19%	24%	79.2%	B, E	27%
15	The Australian National University	16%	21%	78.3%	A, C, D	0%
16	Griffith University	23%	30%	76.5%	A, B, D	21%
17	James Cook University	13%	17%	75.6%	N/A	31%
18	University of the Sunshine Coast	13%	18%	70.7%	N/A	11%
19	Flinders University	8%	12%	70.3%	A,, B, D	23%
20	University of Canberra	19%	28%	68.8%	N/A	3%
21	The University of Sydney	8%	12%	64.6%	B, C, D, E	40%
22	University of South Australia	17%	27%	63.8%	C, E	38%
23	Central Queensland University	12%	20%	60.3%	N/A	64%
24	University of Wollongong	14%	24%	57.3%	A, ,B, C, ,D	65%
25	Southern Cross University	14%	24%	57.3%	C, D	38%
26	Curtin University of Technology	14%	26%	55.9%	A, B, C, D	38%
27	Australian Catholic University	6%	11%	55.1%	N/A	16%
28	The University of New England	7%	13%	53.6%	A, ,B, D	53%
29	La Trobe University	13%	25%	51.2%	B	50%
30	University of New South Wales	11%	24%	45.2%	A, ,B, C, ,D	15%
31	Federation University Australia	9%	21%	44.1%	N/A	43%
32	The University of Notre Dame Australia	6%	15%	42.7%	N/A	0%
33	The University of Western Australia	10%	25%	41.2%	A, B, C, D	19%
34	Victoria University	8%	21%	38.7%	B	14%
35	The University of Adelaide	7%	19%	37.7%	A, B	0%
36	Deakin University	8%	23%	36.6%	C, E	21%
37	Monash University	10%	29%	34.2%	A, B, C, D	0%
38	The University of Melbourne	7%	20%	33.5%	N/A	11%
39	Western Sydney University	15%	68%	22.2%	N/A	21%
	Average	**15%**	**24%**	**65.7%**		**15%**
	Median	**14%**	**21%**	**69%**		**23%**
	Standard Deviation	**7.5%**	**10.1%**	**26.1%**		**17.5%**

Table 6. Relative Participation Rates and Low SES

	Participation Rates: % Indigenous/%Non-Indigenous in Business School	Low SES: (Low SES/Total Indigenous)\(Low SES/Total Non-Indigenous)
Bond University	154.2%	4.1
Murdoch University	120.4%	1.6
Queensland University of Technology	98.9%	2.4
University of Southern Queensland	98.6%	1.1
Charles Darwin University	92.5%	0.7
University of Tasmania	91.5%	1.9
Charles Sturt University	91.5%	1.4
Edith Cowan University	90.4%	2.0
Macquarie University	85.5%	1.7
University of Technology, Sydney	85.0%	1.5
Swinburne University of Technology	81.9%	2.6
The University of Newcastle	80.7%	2.4
RMIT University	80.2%	0.2
The University of Queensland	79.2%	3.8
The Australian National University	78.3%	0.0
Griffith University	76.5%	1.5
James Cook University	75.6%	1.4
University of the Sunshine Coast	70.7%	0.6
Flinders University	70.3%	1.2
University of Canberra	68.8%	0.4
The University of Sydney	64.6%	6.7
University of South Australia	63.8%	1.8
Central Queensland University	60.3%	1.9
University of Wollongong	57.3%	4.2
Southern Cross University	57.3%	1.4
Curtin University of Technology	55.9%	3.2
Australian Catholic University	55.1%	1.6
The University of New England	53.6%	1.9
La Trobe University	51.2%	2.5
University of New South Wales	45.2%	1.6
Federation University Australia	44.1%	2.0
The University of Notre Dame Australia	42.7%	0.0
The University of Western Australia	41.2%	4.3
Victoria University	38.7%	0.6
The University of Adelaide	37.7%	0.0
Deakin University	36.6%	1.9
Monash University	34.2%	0.0
The University of Melbourne	33.5%	1.6
Western Sydney University	22.2%	0.9
Correlation		**0.182**

Table 7. Number of Business School Initiatives to Relative Participation Rates

Business School Ranked by Initiatives	% Indigenous / % Non-Indigenous in Business School	Programs to Increase Indigenous Participation
Murdoch University	120%	1
Queensland University of Technology	99%	3
University of Southern Queensland	99%	2
Edith Cowan University	90%	3
Macquarie University	85%	1
University of Technology, Sydney	85%	4
The University of Newcastle	81%	4
RMIT University	80%	2
The University of Queensland	79%	2
The Australian National University	78%	3
Griffith University	77%	3
Flinders University	70%	3
University of Canberra	69%	4
The University of Sydney	65%	4
University of South Australia	64%	2
University of Wollongong	57%	4
Southern Cross University	57%	2
Curtin University of Technology	56%	4
The University of New England	54%	3
La Trobe University	51%	1
University of New South Wales	45%	4
The University of Western Australia	41%	4
Victoria University	39%	1
The University of Adelaide	38%	2
Deakin University	37%	2
Monash University	34%	4

Table 8. Web Derived University-Wide Participation Related Initiatives

University	University-Wide Initiatives*	Total University-Wide Initiatives	Indigenous Participation Rates	Indigenous / Non-Indigenous Participation Rates
Bond University		0	34%	154.2%
Murdoch University	C	1	14%	120.4%
Queensland University of Technology	A, C	2	30%	98.9%
University of Southern Queensland	A, C, D	3	24%	98.6%
Charles Darwin University		0	6%	92.5%
University of Tasmania	A, B, C, E	4	18%	91.5%
Charles Sturt University	A, C, E	3	14%	91.5%
Edith Cowan University	A, B, C, D	4	14%	90.4%
Macquarie University	A, B, C	5	17%	85.5%
University of Technology, Sydney	A, B, C	3	28%	85.0%
Swinburne University of Technology	A, C	2	31%	81.9%
The University of Newcastle	A	1	17%	80.7%
RMIT University	A, C, E	3	31%	80.2%
The University of Queensland	A, C	2	19%	79.2%
The Australian National University	A, B, C	3	16%	78.3%
Griffith University	A, B, C	3	23%	76.5%
James Cook University		0	13%	75.6%
University of the Sunshine Coast	A, C, E	3	13%	70.7%
Flinders University	A	1	8%	70.3%
University of Canberra		2	19%	68.8%
University of Sydney	A, C	2	8%	64.6%
University of South Australia	B, C, E	3	17%	63.8%
Central Queensland University	A, B, C	3	12%	60.3%
The University of Wollongong	A, B, C	3	14%	57.3%
Southern Cross University	A, B, C, E	4	14%	57.3%
Curtin University of Technology	D, E	2	14%	55.9%
Australian Catholic University	A, B, C, D	4	6%	55.1%
The University of New England	A, B, C, D	4	7%	53.6%
La Trobe University	A, B, C	3	13%	51.2%
The University of New South Wales	A, C, D, E	4	11%	45.2%
Federation University Australia	C	1	9%	44.1%
The University of Notre Dame Australia	A, B, C	3	6%	42.7%
The University of Western Australia	A, B, C, D	4	10%	41.2%
Victoria University	A, B, C, D	4	8%	38.7%
The University of Adelaide	A, B, C	3	7%	37.7%
Deakin University	A, B, C, E	4	8%	36.6%
Monash University	C	1	10%	34.2%
The University of Melbourne	A, C	2	7%	33.5%
Western Sydney University	A, C, E	3	15%	22.2%

* Business School Initiative Codes found at Figure 5

Table 9. Number of Web Derived University-Wide Participation-Related Initiatives

University	Outreach Programs Indigenous Students	Indigenous Tutoring	Scholarships for Indigenous Students	Indigenous Student / Cultural Ambassadors	Indigenous Graduate Employment	Total Programs
	A	B	C	D	E	
The University of Notre Dame Australia	1	1	1			3
University of the Sunshine Coast	1		1		1	3
University of Technology, Sydney	1	1	1			3
Federation University Australia			1			1
The Australian National University	1	1	1			3
The University of New England	1	1	1	1		4
The University of Melbourne	1		1			2
The University of New South Wales	1		1	1	1	4
Central Queensland University	1	1	1			3
The University of Queensland	1		1			2
Griffith University	1	1	1			3
La Trobe University	1	1	1			3
Macquarie University	1	1	1	1	1	5
University of Sydney	1		1			2
Bond University						0
RMIT University	1		1		1	3
University of Canberra			1	1		2
Australian Catholic University	1	1	1	1		4
Western Sydney University	1		1		1	3
The University of Wollongong	1	1	1			3
The University of Western Australia	1	1	1	1		4
Monash University			1			1
Curtin University of Technology			1	1		2
Queensland University of Technology	1		1			2
The University of Adelaide	1	1	1			3
Murdoch University			1			1
University of South Australia		1	1		1	3
Flinders University	1					1
Swinburne University of Technology	1		1			2
University of Tasmania	1	1	1		1	4
The University of Newcastle	1					1
Southern Cross University	1	1	1		1	4
Charles Sturt University	1		1		1	3
Charles Darwin University						0
University of Southern Queensland	1		1	1		3
Deakin University	1	1	1		1	4
Edith Cowan University	1	1	1	1		4
James Cook University						0
Victoria University	1	1	1	1		4
Total	30	18	34	10	10	

CHAPTER 5. MICRO DATA ANALYSIS OF SUCCESS RATES

Simply increasing Aboriginal and Torres Strait Islander student participation rates up to par with non-Indigenous students is not enough.

In order for Aboriginal and Torres Strait Islander students to flourish, it is vitally important that Aboriginal and Torres Strait Islander students do not fail out of business school programs and achieve relative pass rates similar to that of their non-Indigenous cohorts.

Note: For ease of reading, all figures are presented within this discussion, whilst all tables are found at the end of the chapter.

PASS RATES AND SUCCESS

Pass rates are calculated based on data on the number of students who fail their course in a given year and withdraw from their course. Increasing the withdrawal rate reduces the pass rate just as would increasing the failure rate.

It is clear from Table 10 and Table 11, that the pass rates for Aboriginal and Torres Strait Islander students in business schools are well below that of non-Indigenous students - almost universally so.

- Table 10. Pass Rates in Business Schools, presents data for all business school by State; whereas,
- Table 11. Ranked Business School Relative Pass Rates*, ranks the business schools by pass rates.

Figure 12 presents the business school data in a manner that highlights the variation in pass or success rates across business schools for both Aboriginal and Torres Strait Islander students and non-Indigenous students. The variation is similar for both groups of students and is not large. This variation is captured by the standard deviation (this value above and below the average represents 66 percent of the population). Figure 12 also highlights the relatively low Aboriginal and Torres Strait Islander pass rates across business schools.

Figure 12. Pass Rates in Business Schools for Indigenous and Non-Indigenous Students
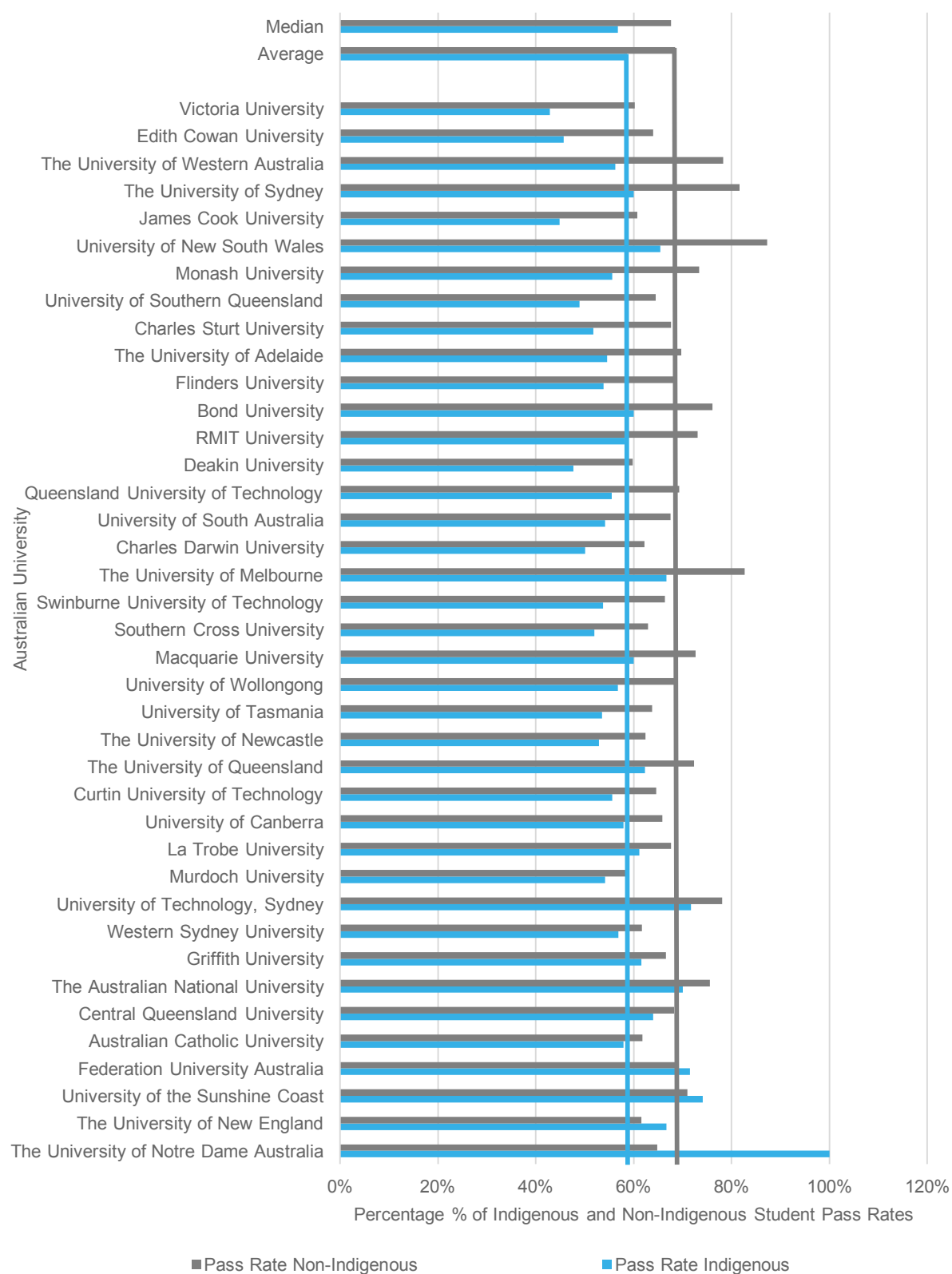
BUSINESS SCHOOL PASS RATE RANKINGS

Table 11 ranks business schools by relative pass rates. As previously noted, success rates refer to the Aboriginal and Torres Strait Islander student pass rate divided by the non-Indigenous pass rate.

The business schools with the greatest pass rates compared to non-Indigenous students (relative pass rate) include:

University of Notre Dame, Australia	154%
University of New England	108%
Federation University	104%
University of the Sunshine Coast	104%

However, these business schools have noticeably relatively few Aboriginal and Torres Strait Islander students. The University of Notre Dame had only 3 Aboriginal and Torres Strait Islander students. This is in contrast to the 1,609 Aboriginal and Torres Strait Islander student population in all Australian business schools.

> Business schools with relatively higher Aboriginal and Torres Strait Islander pass rates tend to have relatively lower Aboriginal and Torres Strait Islander participation rates.

From Table 11, the business schools with 90% and above relative pass rates encompassed 29% of all Aboriginal and Torres Strait Islander students. Of these, one-third attended Griffith University's business school, with a pass rate of 92%.

One can speculate or infer that low participation rate business schools have higher capability Aboriginal and Torres Strait Islander students. But what one needs to achieve is Aboriginal and Torres Strait Islander participation rates at par with non-Indigenous participation rates coupled with Aboriginal and Torres Strait Islander success rates at par with the non-Indigenous student success rates in business schools.

WITHDRAWAL RATES AND SUCCESS

> Withdrawal is a product of a student exiting a course, to avoid failing a course. It is indicative of an environment wherein a student believes that he or she does not have the skill set to do well enough. Of course, not withdrawing and then failing is not a mark of success. But withdrawal is an early warning sign of a problem in the system.

Withdrawal analysis findings are found in:

- Table 12. Withdrawal Rates and Pass Rates
- Table 13. Withdrawal and Pass Rates by State/Territory Ranked by Indigenous / Non-Indigenous Withdrawal Rates
- Table 14. Withdrawal Rates and Pass Rates for all Business Schools Ranked by Withdrawal Rates[1]

These tables present estimates meant to document the extent of withdrawal rates and to determine the extent to which differences in withdrawal rates between Aboriginal and Torres Strait Islander students and non-Indigenous students are responsible for differences in pass rates.

The first thing to note is that Aboriginal and Torres Strait Islander students' withdrawal rates are higher than non-Indigenous withdrawal rates, on average by about 4%. There is considerable variation across business schools, with five business schools with Aboriginal and Torres Strait Islander withdrawal rates falling below that of the non-Indigenous students.

On average, about one-third or 33% of the differences in pass rates are attributable to the higher withdrawal rates amongst Aboriginal and Torres Strait Islander students in business schools. This is determined by applying the typically lower non-Indigenous withdrawal rates to the Aboriginal and Torres Strait Islander student estimates (for this methodology see Altman & Lamontagne, 1992).

The same data is presented in Table 13 organised by state. This finding does not suggest that a partial solution to the relatively low pass rates amongst Aboriginal and Torres Strait Islander students is to encourage them not to withdraw.

Instead, these relatively high withdrawal rates suggest that there is a capability issue problem amongst a large percentage of Aboriginal and Torres Strait Islander students that needs to be addressed. If it is, then one would expect that withdrawal rates would diminish organically as additional Aboriginal and Torres Strait Islander students decide to continue with the course once they believe that they have the capabilities or skills to succeed.

RELATIVE PASS RATES AND SOME OF THEIR DETERMINANTS

There are several variables or determinants that the literature has argued impacts upon student success in higher education. These include:

- Socio-economic status;
- Gender;
- Age; and
- First in family.

Two key questions that may be raised are:

1. To what extent do these possible determinants apply to Aboriginal and Torres Strait Islander students?
2. Also, if we are able to improve any of the above determinants, will this close the relative success gap between Aboriginal and Torres Straits Islander students compared to their non-Indigenous counterparts?

We seek to explore these questions as they relate directly to Aboriginal and Torres Strait Islander business students participating in Australian business school-related higher education.

DOES LOW SOCIO-ECONOMIC STATUS IMPACT SUCCESS?

Another possible determinant of the relative low pass rates amongst Aboriginal and Torres Strait Islander students could be a relatively high percentage of Aboriginal and Torres Strait Islander students coming from low SES cohorts. The latter needs to be determining empirically.

The hypothesis here is that low SES students have weaker capabilities or skill sets required to succeed in business school.

The SES analysis can be found in:

- Table 15. Pass Rates Indigenous / Non-Indigenous Across SES Cohorts;
- Table 16. Indigenous Relative Pass Rates Across SES Cohorts; and
- Table 17. Percentage Distribution Across SES Cohorts.

Table 15 and Table 16 present estimates on the pass rates amongst Aboriginal and Torres Strait Islander students in business schools. Amongst the Aboriginal and Torres Strait Islander students, the higher SES students ranging from medium to high socio-economic status, are more successful than low SES students. This is almost universal across business schools.

The same can be said for non-Indigenous students (Table 16). What stands out from these estimates is that gaps between the low SES and higher SES students are greater amongst the Aboriginal and Torres Strait Islander students than amongst non-Indigenous students. Bearing in mind the variations across business schools, and focusing on averages:

- The ratio of the High SES to low SES pass rate amongst Aboriginal and Torres Strait Islander students is 1.19 (a 20% difference). For the non-Indigenous students, this ratio is 1.07 (a 7% difference).
- For High SES to medium SES, amongst the Aboriginal and Torres Strait Islander students, the ratio is 1.09; amongst the non-Indigenous students the ratio is only 1.02.
- For medium SES to low SES, amongst Aboriginal and Torres Strait Islander students, the ratio is 1.15; amongst the non-Indigenous students the ratio is only 1.04.

SES status affects pass rates for both Aboriginal and Torres Strait Islander students and non-Indigenous, but is much more important amongst Aboriginal and Torres Strait Islander students. This effect is greatest for both groups with respect to the high SES relative to the low SES students. The results for low SES students are presented graphically in Figure 13 and Figure 14.

> Key findings show that across Australian business schools:
>
> High SES Aboriginal and Torres Strait Islander students are more successful than low SES students.
>
> High SES non-Indigenous students are more successful than low SES.

Figure 13. Relative Pass Rates and % Indigenous Low SES Business Students
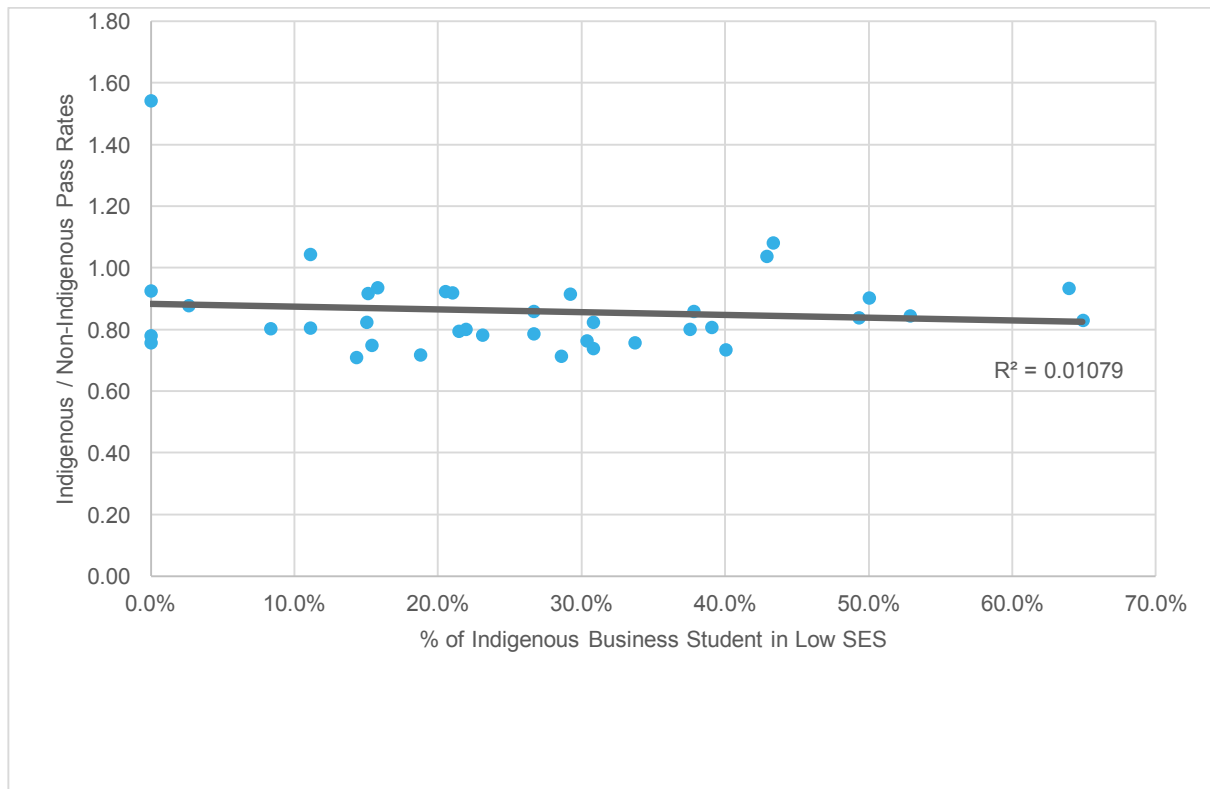
Figure 14. Indigenous Pass Rates and Percentage of Indigenous Business Low SES Students
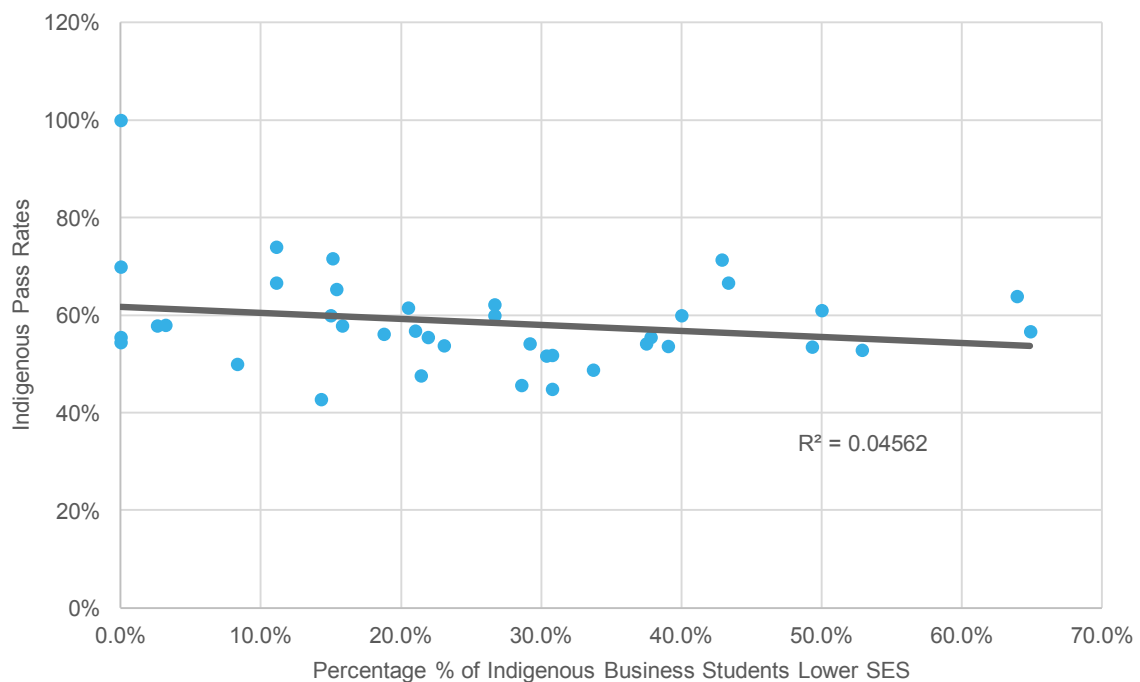
It is clear that SES matters for Aboriginal and Torres Strait Islander pass rates. But a related and important question is, what is the relative pass rate for Aboriginal and Torres Strait Islander business students relative to non-Indigenous students across our SES cohorts?

Estimates for non-Indigenous cohorts are presented in Table 17 and Figure 15 (below). Once again, we have some important variations across business schools and states. But overall, on average, the ratio of the success rate for High SES Aboriginal and Torres Strait Islander business students to High SES non-Indigenous business students (relative success) is about 90 percent. The ratio for the medium SES and low SES cohorts is also about 90%.

> On average, the pass rate for Aboriginal and Torres Strait Islander students is about 10% less than for non-Indigenous for High SES, Medium SES and low SES cohorts.

This does not mean that somehow SES does not affect academic performance in terms of success or pass rates. Rather, it does mean that SES is an issue across students irrespective of whether or not they are Aboriginal and Torres Strait Islander students. What is critically important is that Aboriginal and Torres Strait Islander students have a relative success deficit of a similar size irrespective of their SES background.

Figure 15. Non-Indigenous Pass Rates and % of Non-Indigenous Business Students in Low SES
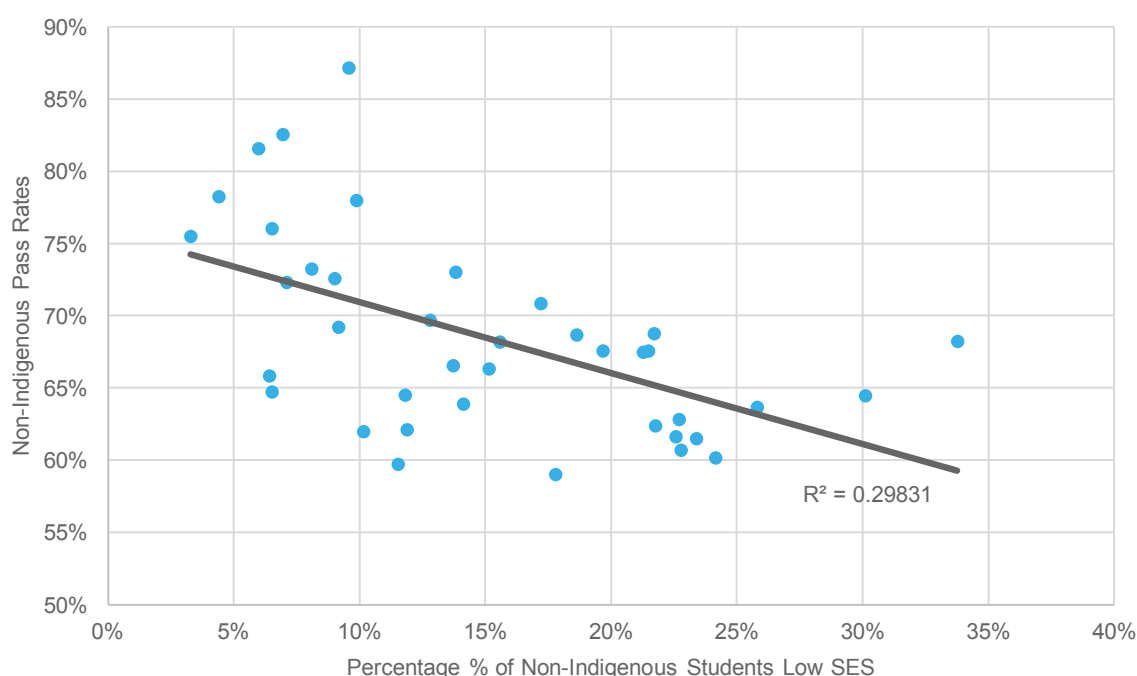
DOES SES DISTRIBUTION CHANGE THINGS?

The next question is does the distribution of Aboriginal and Torres Strait Islander students across SES cohorts as compared to this distribution amongst non-Indigenous students statistically cause the lower pass rate amongst Aboriginal and Torres Strait Islander students in business schools?

Using a methodology applied by Altman and Lamontagne (1992), estimates are constructed to address this question and are presented in Table 17.

Estimates are presented on the actual relative success or pass rates and the hypothetical relative Aboriginal and Torres Strait Islander students pass rates, had Aboriginal and Torres Strait Islander students been distributed across SES cohorts (high, medium, and low) in the same manner (same percentage distribution) as non-Indigenous students.

Although there is some variation about the average, it is clear that there is not much difference between the actual relative success rate and the hypothetical, 86% compared to 88% respectively.

This simply means that the distribution of Aboriginal and Torres Strait Islander students across SES cohorts, where the 'ideal' distribution is given by the distribution of the non-Indigenous business student population, is not the statistical cause of the relative success gap of Aboriginal and Torres Strait Islander students in business schools.

Key findings:

The lower success or pass rate of Aboriginal and Torres Strait Islander business students relative to non-Indigenous business students cannot be explained by there being a differential distribution of the student population across SES cohorts between Aboriginal and Torres Strait Islander business students and non-Indigenous students.

SES contributes to an explanation of relative success across SES cohorts *within* the Aboriginal and Torres Strait Islander business student population and *within* the non-Indigenous business student population.

RETENTION RATES AS A MEASURE OF SUCCESS

We have focused on pass rates in a given year (2015) as a proxy for success. However, estimates for pass rates, wherein Aboriginal and Torres Strait Islander business students do less well than their non-Indigenous counterparts across Australia's 39 universities, can be supplemented by estimates for retention rates.

Our retention findings are presented in tables:

- Table 18. Percentage of Indigenous and Non-Indigenous Students Retained Across SES Cohorts in Business Schools;
- Table 19. Ratios (Percentage of Indigenous: Non-Indigenous) Students Retained;
- Table 20. Percentage of Indigenous & Non-Indigenous Students Retained by Rank of Most Retained Indigenous Students;
- Table 21. Retention and Pass Rates Compared; and
- Table 22. Hypothetical* Retention Rates for Indigenous Students

In addition, the following figures further illustrate our findings:

- Figure 16. Percentage Retained by Indigenous Students;
- Figure 17. Retention and Pass Rates Compared;
- Figure 18. Indigenous Retention vs. Pass Rates;
- Figure 19. Non-Indigenous Retention vs. Pass Rates; and
- Figure 20. Hypothetical and Actual Retention Rates.

What is clear from these tables is that Aboriginal and Torres Strait Islander business students are characterized by lower retention rates than non-Indigenous business students. On average, Aboriginal and Torres Strait Islander business students' retention rate is 89 percent of non-Indigenous business students' retention rate (Table 18 and Table 19).

There is some variation across business schools. This is illustrated in Figure 16.

Figure 16. Percentage Retained by Indigenous Students

Legend: ■ Non-Indigenous Students Retained %   ■ Indigenous Students Retained %

X-axis: Percentage of Students Retained
Y-axis: Australian University

Figure 17. Retention and Pass Rates Compared

Figure 17. Retention and Pass Rates Compared

Categories (top to bottom): Average, Federation University Australia, Victoria University, Murdoch University, Central Queensland University, University of Tasmania, Edith Cowan University, Charles Darwin University, RMIT University, University of Southern Queensland, The University of Notre Dame Australia, Bond University, The University of Melbourne, Deakin University, Charles Sturt University, University of Technology, Sydney, Flinders University, Curtin University of Technology, University of South Australia, Swinburne University of Technology, University of Canberra, James Cook University, Southern Cross University, Griffith University, The University of New England, University of New South Wales, La Trobe University, Queensland University of Technology, The University of Queensland, The University of Adelaide, University of Wollongong, Macquarie University, The University of Sydney, The University of Newcastle, Australian Catholic University, Western Sydney University, University of the Sunshine Coast, The Australian National University, The University of Western Australia, Monash University

Y-axis: Australian University
X-axis: Percentage % of Indigenous and Non-Indigenous Students

Legend:
- Pass Rate Non-Indigenous
- Non-Indigenous Students Retained %
- Pass Rate Indigenous Students
- Indigenous Students Retained %

In Table 19, we rank all business schools by the retention rates of Aboriginal and Torres Strait Islander business students. Here, one can see clearly that that there are some business schools where Aboriginal and Torres Strait Islander business students do exceptionally well and even better their non-Indigenous student counterparts, such as at Murdoch University and the University of Western Australia, for example. But these business schools also have few Aboriginal and Torres Strait Islander business students.

In Table 20, we compare retention rates and pass rates. This comparison is further illustrated in Figure 18 and Figure 19. Pass rates are almost always less than retention rates for both Aboriginal and Torres Strait Islander business students and non-Indigenous business students.

- On average, pass rates are 59% and 73% respectively compared to retention rates of 68% and 82% respectively.
- This yields ratios of Aboriginal and Torres Strait Islander business students to non-Indigenous business student pass rates and retention rates of 80% and 89% respectively.

Noticeably, Aboriginal and Torres Strait Islander business students fare relatively better in terms of retention rates as compared to pass rates. The relatively low pass rates for both Aboriginal and Torres Strait Islander business students and non-Indigenous business students typically don't translate, on a one-to-one basis, such that failing students proportionally give up on their university education journey.

But is important to note both the lower pass and retention rates amongst Aboriginal and Torres Strait Islander business students. Figure 18 and Figure 19 illustrate in more detail the differences in pass and retention rates between Aboriginal and Torres Strait Islander business students and non-Indigenous business students as well as the differences between pass and retention rates amongst Aboriginal and Torres Strait Islander business students and amongst non-Indigenous business students.

As with the pass rates, we examine the extent to which the distribution of Aboriginal and Torres Strait Islander business students across SES cohorts as compared to the distribution of non-Indigenous students makes a difference to the retention rates of Aboriginal and Torres Strait Islander business students. Table 19:

- Reveals some positive relationship between SES cohorts and retention rates *amongst* the Aboriginal and Torres Strait Islander business students and *amongst* the non-Indigenous students. This relationship is most pronounced amongst the Aboriginal and Torres Strait Islander business students going from the medium to the high SES cohort. There is *considerable* variation of this relationship across business schools;
- Clearly shows that, just like with the pass rates, discussed above, on average, the ratio of the retention rate of Aboriginal and Torres Strait Islander business students to the retention rate of non-Indigenous business students is quite similar across all SES cohorts. As usual there is some variation about the mean across all business schools.

Figure 18. Indigenous Retention vs. Pass Rates

Figure 19. Non-Indigenous Retention vs. Pass Rates

Bar chart showing Percentage of Non-Indigenous Students (x-axis, 0% to 100%) by Australian University (y-axis).

Legend:
- ■ Pass Rate Non-Indigenous
- ■ Non Indigenous Students Retained %

Universities listed (top to bottom): Average, Federation University Australia, Victoria University, Murdoch University, Central Queensland University, University of Tasmania, Edith Cowan University, Charles Darwin University, RMIT University, University of Southern Queensland, The University of Notre Dame Australia, Bond University, The University of Melbourne, Deakin University, Charles Sturt University, University of Technology, Sydney, Flinders University, Curtin University of Technology, University of South Australia, Swinburne University of Technology, University of Canberra, James Cook University, Southern Cross University, Griffith University, The University of New England, University of New South Wales, La Trobe University, Queensland University of Technology, The University of Queensland, The University of Adelaide, University of Wollongong, Macquarie University, The University of Sydney, The University of Newcastle, Australian Catholic University, Western Sydney University, University of the Sunshine Coast, The Australian National University, The University of Western Australia, Monash University

DOES THE SES DISTRIBUTION IMPACT ABORIGINAL AND TORRES STRAIT ISLANDER BUSINESS STUDENT RETENTION RATES?

This brings us to our assessment of the contribution of the differential distribution of the student population across SES cohorts to differential retention rates.

Table 22, presents our estimates of the distribution of Aboriginal and Torres Strait Islander business students and non-Indigenous population across SES cohorts. It is clear that the Aboriginal and Torres Strait Islander business students are much more heavily concentrated in the low SES cohort and much less concentrated in the high SES cohort. As usual, there is variation in this distribution from the average across all business schools.

The big question is, what would the Aboriginal and Torres Strait Islander business students' retention rate be if these students had the same distribution across SES cohorts as did the non-Indigenous business students?

The response to this question is presented in Table 22 and Figure 20. There is just about no difference between the average hypothetical retention rate for Aboriginal and Torres Strait Islander business students (using the non-Indigenous business students' distribution across SES cohorts) and the actual retention rates. But, of course, there is some variation across business schools. As with differences in pass rates, differences in retention rates are *not* a function of the differential distribution across SES cohorts.

This is because there is a similar gap in the success rate (here the retention rate) for all SES cohorts. Where you are situated amongst the three SES cohorts can make a difference to retention rates amongst Aboriginal and Torres Strait Islander business students and amongst non-Indigenous business students. But the *differential* in retention rates can't be explained by any differential distribution amongst SES cohorts between Aboriginal and Torres Strait Islander business students and non-Indigenous business students.

Key findings:

There is a lower retention rate amongst Aboriginal and Torres Strait Islander business students as compared to their non-Indigenous counterparts.

The pass rate is lower than the retention rate for both Aboriginal and Torres Strait Islander and non-Indigenous business students.

The relatively lower retention rate amongst Aboriginal and Torres Strait Islander business students is not related to the differential distribution of Aboriginal and Torres Strait Islander business students as compared to non-Indigenous students.

Figure 20. Hypothetical and Actual Retention Rates
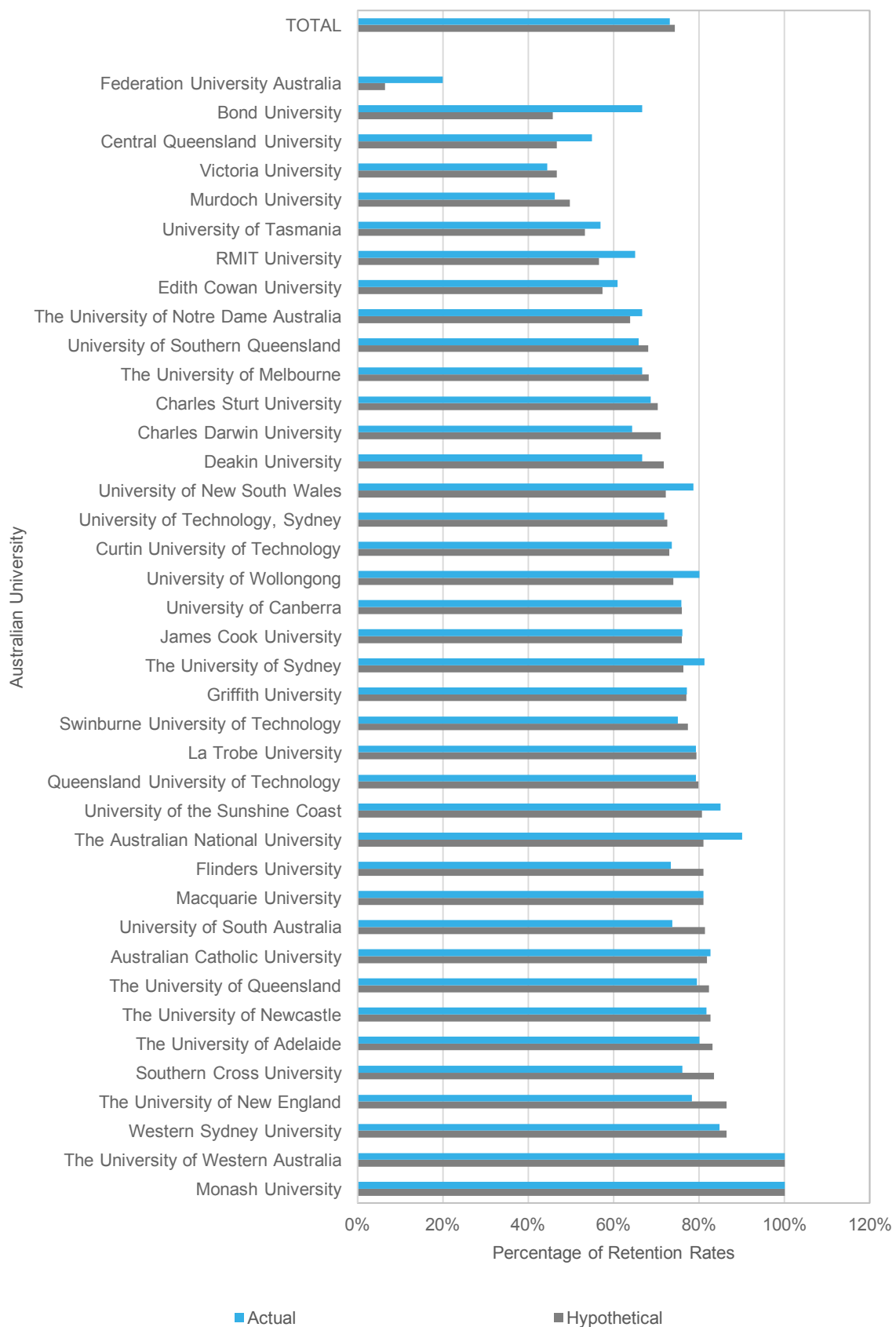
DOES GENDER IMPACT SUCCESS?

It is important to determine the gender composition of the Aboriginal and Torres Strait Islander to non-Indigenous student cohorts.

Estimates to address these questions are presented in:

- Table 23. Female Pass Rates for Indigenous and Non-Indigenous Business Students;
- Table 24. Female Relative Pass Rates;
- Table 25. Gender: Ranking Institution by Indigenous Female/Male Relative Pass Rates; and
- Figure 21. Female Indigenous and Non-Indigenous Pass Rates

Women represent about 50% of the student population amongst both the Aboriginal and Torres Strait Islander student and non-Indigenous student cohorts in business schools. But there is considerable variation around the average. Overall, Aboriginal and Torres Strait Islander female participation is greater than that of the male. So, females are similarly and equitably represented in both the Aboriginal and Torres Strait Islander student and non-Indigenous student cohorts in business schools.

It follows that if one divides the gender pass ratio for Aboriginal and Torres Strait Islander students by that for non-Indigenous students, this comes to about 1 (Table 23). There is no gender pass gap, from this perspective. Hence, the distribution of women relative to men in business schools plays no role in generating the success gap or deficit between Aboriginal and Torres Strait and non-Indigenous students.

However, when one examines the pass rate of Aboriginal and Torres Strait Islander female students relative to the pass rate of non-Indigenous female students there is a success gap. Female Aboriginal and Torres Strait Islander students' average pass rate is 86% of that of female non-Indigenous students (Table 23 and Table 24).

In terms of pass rates amongst the Aboriginal and Torres Strait Islander business students, the pass rates are similar for both women and men. The same is true amongst the non-Indigenous student population in business schools (Table 23).

Table 24 ranks business schools by this relative pass rate. There are some business schools where the female Aboriginal and Torres Strait Islander pass rate exceeds that of female non-Indigenous pass rate. But this is not what dominates the business school landscape. This point stands out in Figure 21.

This further illustrates the fact that the statistical cause of the success gap between Aboriginal and Torres Strait Islander and non-Indigenous students is related to the persistent success gap between these two groups across SES cohorts and, as we can see here, between Aboriginal and Torres Strait Islander and non-Indigenous women in business schools.

Key findings:

The distribution of women relative to men in business schools plays no role in generating the success gap or deficit between Aboriginal and Torres Strait Islander and non-Indigenous business students.

The success gap is related to the persistent success gap between Aboriginal and Torres Strait Islander female and male business students and their non-Indigenous counterparts.

Figure 21. Female Indigenous and Non-Indigenous Pass Rates
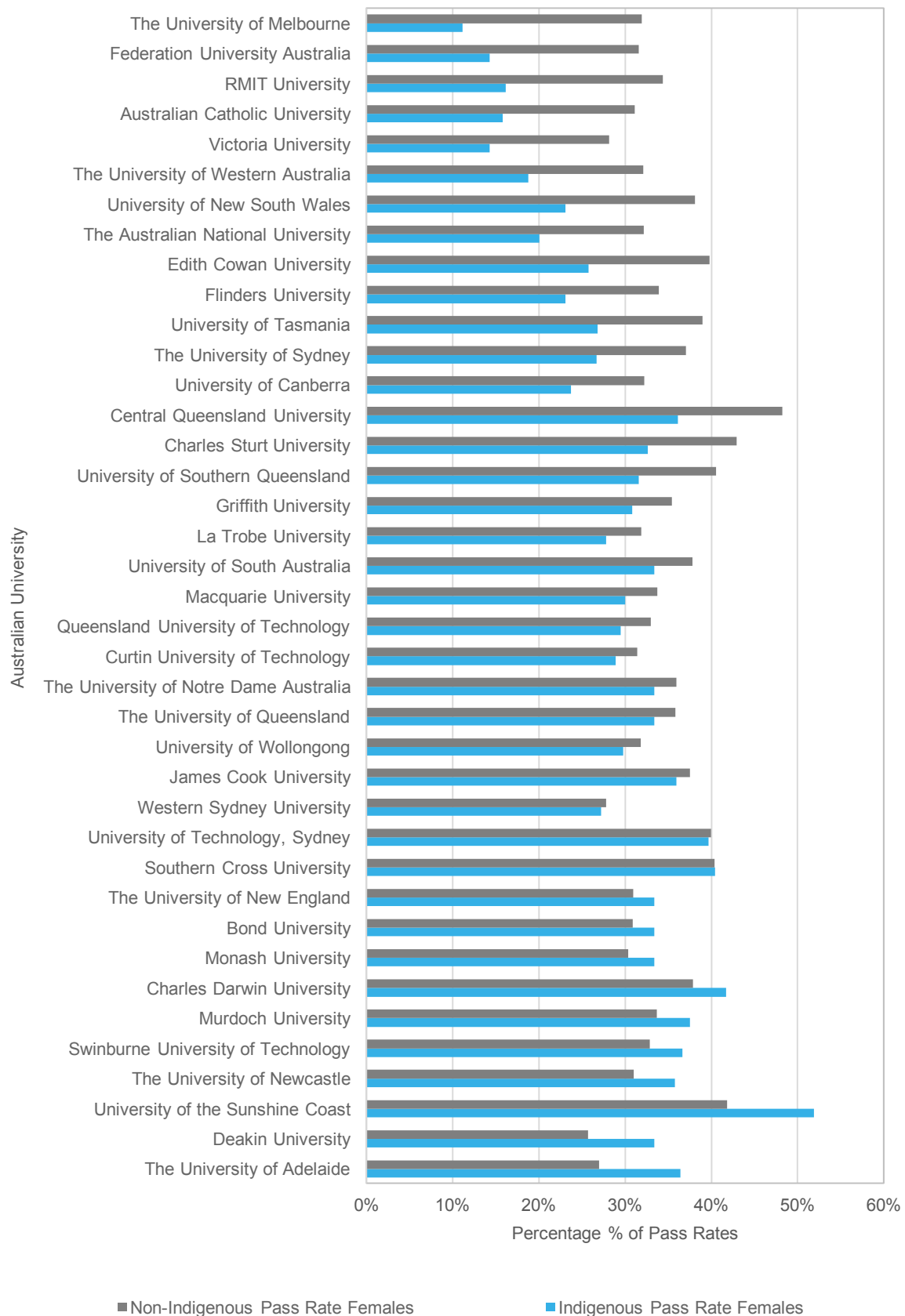
DOES AGE IMPACT SUCCESS?

Another possible determinant of pass rates is the age distribution of the Aboriginal and Torres Strait Islander business school population and this distribution relative to that of the non-Indigenous population. One hypothesis would be that age might be a proxy of experience and accumulated educational capabilities (a form of human capital formation). If age distribution is skewed towards the older population, then one would expect, given this assumption, higher success or pass rates. Our findings are presented in:

- Table 26. Age Distribution of Indigenous Students in Australian Business Schools;
- Table 27. Age Distribution of Non-Indigenous and Torres Islander Students in Australian Business Schools;
- Table 28. Ratios of Aboriginal and Torres Islander Students to Non-Indigenous Students; and
- Table 29. Hypothetical Pass[a] Rates Assuming Non-Indigenous Distribution of Population;

- Figure 22. Average Age Distribution and Pass Rates (below); and
- Figure 23. Actual and Hypothetical Pass Rates for Indigenous Students Based on the Non-Indigenous Age Distribution.

Figure 22. Average Age Distribution and Pass Rates
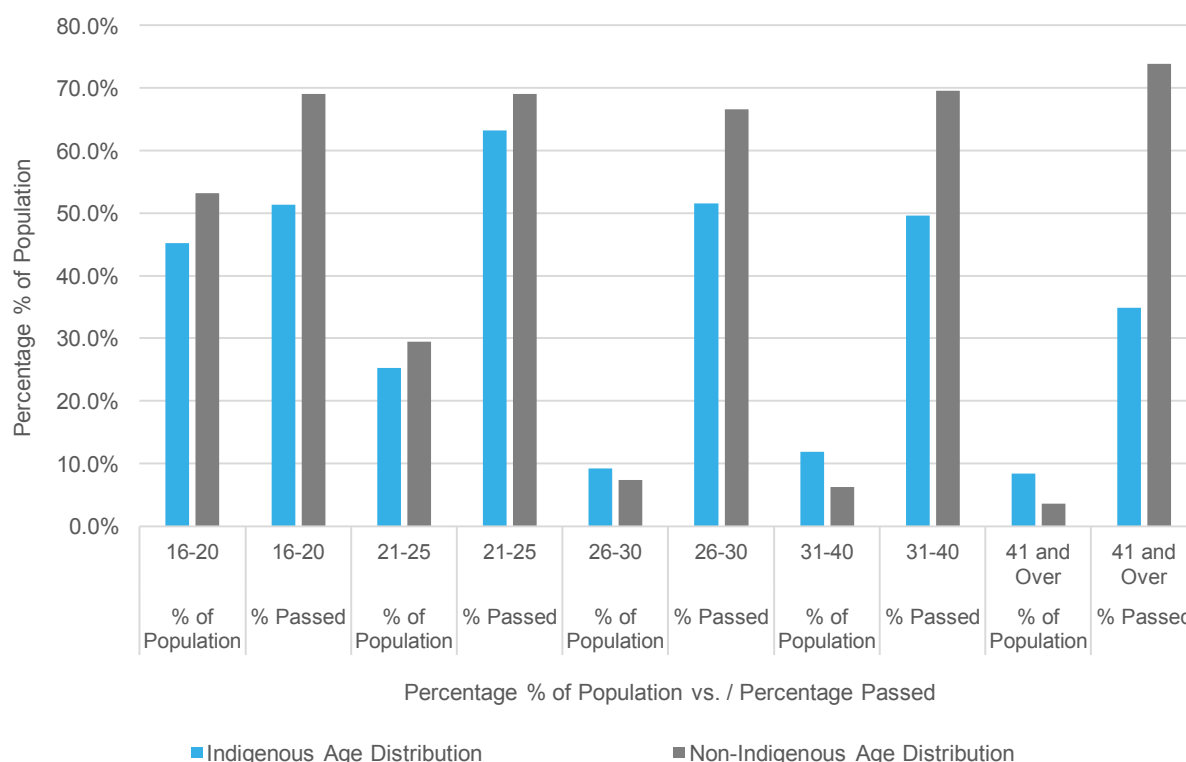
There also much variation across business schools. In terms of the distribution of the student population across age cohorts:

- For both Aboriginal and Torres Strait Islander and non-Indigenous business students, on average, about half are between 16 and 20 years old;
- For Aboriginal and Torres Strait Islander business students about 70% are between 16 and 25 years of age (Table 26); and
- About 80% of non-Indigenous students fall in this age bracket (Table 27).
- Table 28 and

Figure 22, presents the estimates for the ratio of Aboriginal and Torres Strait Islander business students' age distribution to that of the non-Indigenous business students as well as the relative success or pass rate for each age cohort. It is clear that Aboriginal and Torres Strait Islander business students do consistently less well than non-Indigenous business students across all age cohorts. Even though there are some differences in pass rates across age cohorts—age makes a difference—what's of vital importance is the success or pass gaps between Aboriginal and Torres Strait Islander and non-Indigenous business students within age cohorts.

This raises the question of whether the different distribution of the Aboriginal and Torres Strait Islander and non-Indigenous business students across age cohorts is an important determinant of the success or pass gap between Aboriginal and Torres Strait Islander and non-Indigenous business students. To determine this, we estimate the Aboriginal and Torres Strait Islander business student's pass rate assuming their actual pass rates across age cohorts, but assuming the non-Indigenous business students' distribution across age cohorts (Table 28).

On average, had the Aboriginal and Torres Strait Islander business students been distributed in accordance with the non-Indigenous business students' distribution across age cohorts, their pass rate (hypothetically) would have been lower than their actual pass rate—they would have been worse off. On average, age cohort distribution differences do not affect differences in pass rates between Aboriginal and Torres Strait Islander and non-Indigenous business students (see Figure 23).

It is the unambiguous differences in pass rates between Aboriginal and Torres Strait Islander and non-Indigenous business students within age cohorts that are responsible for the differences in success or pass rates. But one should note that there are some differences across business schools. For some business schools the distribution across age cohorts has an effect, with the hypothetical pass rates being greater than the actual one (Figure 23). This is the case for:

- Southern Cross University;
- Deakin University;
- The University of Canberra;
- Monash University;
- The University of New South Wales; and
- The University of New England.

But even in these cases, for the most part, these differences are small. What dominates the determination of differentials in pass rates is the differential pass rate between Aboriginal and Torres Strait Islander and non-Indigenous business students within age cohorts.

> ## Key finding:
>
> On average, age cohort distribution differences do not affect differences in pass rates between Aboriginal and Torres Strait Islander and non-Indigenous business students.

Figure 23. Actual and Hypothetical Pass Rates for Indigenous Students Based on the Non-Indigenous Age Distribution
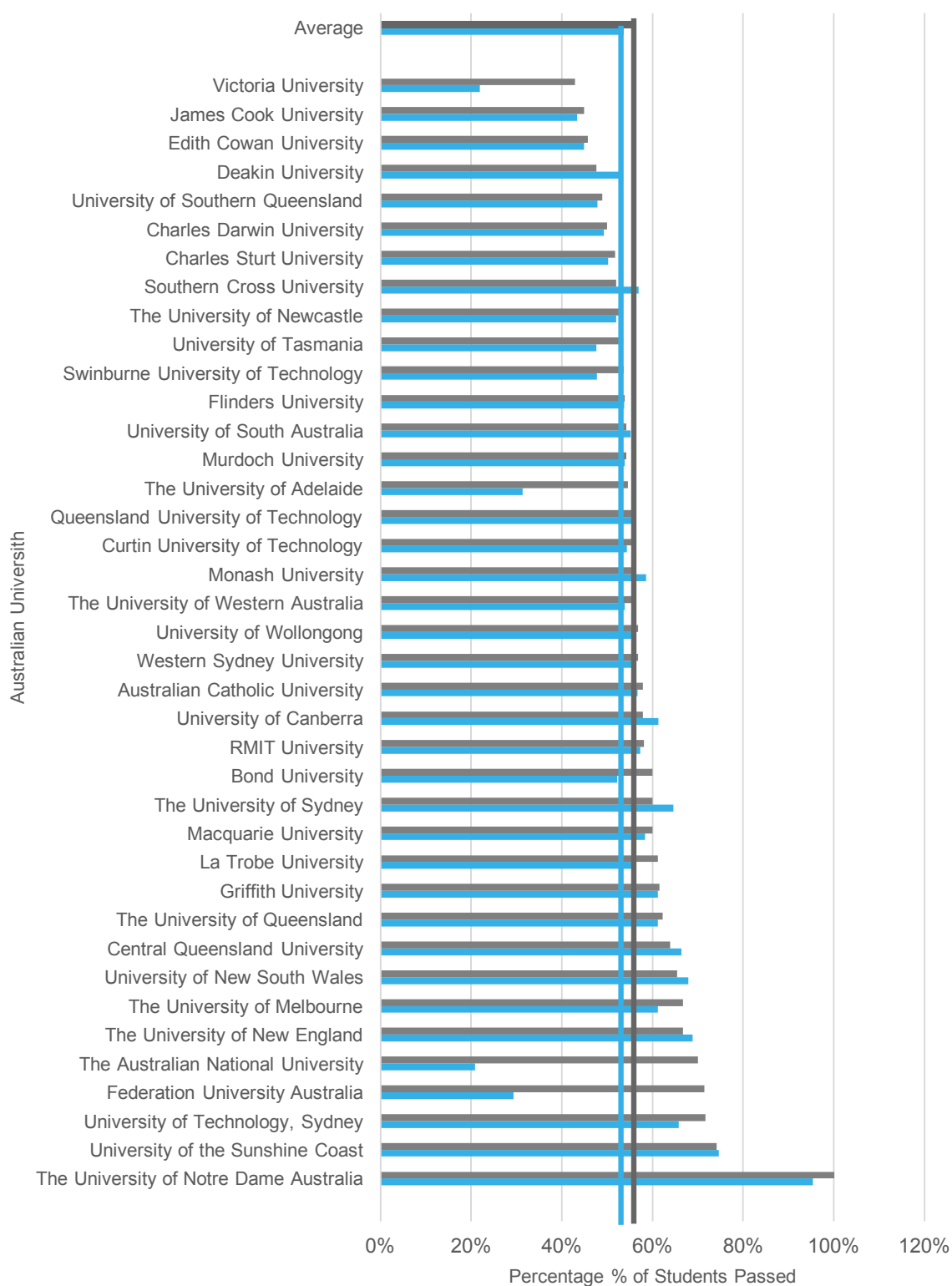
■ Actual Indigenous Total % of Passed ■ Hypothetical Pass Rates Assuming Non-Indigenous Distribution of Population

DOES FIRST-IN-FAMILY IMPACT SUCCESS?

It can be argued that whether or not a student is first-in-family going to university should affect success or pass rates. Students in families where other members have gone to universities have a better chance of having insights on how to succeed in university, generally speaking. This should give non-FIF students some advantage over students who are the first in their family to attend university.

One can hypothesize that if Aboriginal and Torres Strait Islander students are disproportionately FIF compared to non-Indigenous students than this could help explain the success or pass rate deficit between these two groups of students.

To examine this hypothesis, we first need to investigate the extent to which the Aboriginal and Torres Strait Islander business students are distributed differently from the non-Indigenous business students with respect to FIF and non-FIF cohorts. We also need to determine the extent to which there are differential success or pass rates between FIF and non-FIF cohorts. Our results are presented in:

- Table 30. First-in-Family Indigenous Business School Students;
- Table 31. First-in-Family Non-Indigenous Business School Students;
- Table 32. First-in-Family Pass Rates for Business Students;
- Table 33. First-In-Family Actual and Hypothetical Pass Rates;
- Figure 24. Percentage of Indigenous Business Students First-in-Family; and
- Figure 25. Actual and Hypothetical Pass Rates of Indigenous Business Students Applying the FIF/Non-FIF Distribution of the Non-Indigenous Business Student Population.

Most students in Australian business schools are FIF, for both Aboriginal and Torres Strait Islander and non-Indigenous students (See Table 30, Table 31 and Figure 24).

Figure 24. Percentage of Indigenous Business Students First-in-Family

Figure 24. Percentage of Indigenous Business Students First-in-Family

Legend:
- ■ % Non Indigenous Students - Business School FIF
- ■ % Indigenous Students - Business School FIF

X-axis: Percentage % of Students FIF (0%, 20%, 40%, 60%, 80%, 100%, 120%)

Y-axis: Australian University

Categories (top to bottom):
Average, The University of Melbourne, Australian Catholic University, Queensland University of Technology, Federation University Australia, La Trobe University, University of Canberra, Western Sydney University, Macquarie University, Griffith University, University of Wollongong, Curtin University of Technology, University of South Australia, Charles Darwin University, Murdoch University, University of New South Wales, Southern Cross University, Charles Sturt University, University of Southern Queensland, RMIT University, Edith Cowan University, James Cook University, The University of Queensland, University of Technology, Sydney, The University of Newcastle, University of Tasmania, The University of Adelaide, Flinders University, The Australian National University, The University of Notre Dame Australia, The University of Western Australia, University of the Sunshine Coast, Bond University, Victoria University, Swinburne University of Technology, Monash University, Deakin University, The University of Sydney, The University of New England

As usual, there is some variation across business schools. Amongst Aboriginal and Torres Strait Islander business students the pass rate is, on average:

- 56% for FIF; and
- 62% for non-FIF students.

For non-Indigenous students, the pass rate is 68% for both FIF and non-FIF business students.

As expected, there is some variation across Australian business schools (Table 32). Comparing Aboriginal and Torres Strait Islander against non-Indigenous business students, there is a success gap for both FIF and non-FIF students.

On average, the relative pass rate (Aboriginal and Torres Strait Islander divided by the non-Indigenous business student pass rate) is lower for FIF students as compared to non-FIF students: 0.82 and 0.91 respectively. Of course, these ratios vary across Australian business schools.

To accurately determine the extent to which Aboriginal and Torres Strait Islander business student pass rates would be affected by how these students are distributed across FIF and non-FIF cohorts, as with determining the age cohort effect on pass rates, we apply the non-Indigenous business student distribution across the FIF and non-FIF cohorts to the Aboriginal and Torres Strait Islander business student population.

But we maintain the Aboriginal and Torres Strait Islander business student pass rates for FIF and non-FIF cohorts. This tests the hypothesis that a different distribution of Aboriginal and Torres Strait Islander business students across FIF and non-FIF cohorts will change these students' success or pass rates. On average, changing this distribution (applying the non-Indigenous business student distribution) has no effect on the Aboriginal and Torres Strait Islander business student pass rate and, therefore, no effect on the relative pass rate.

The average actual pass rate is the same as the hypothetical pass rate (Table 33, Figure 26). Overall, the success gap here is, on average, a product of the success gap within FIF and non-FIF cohorts. However, there is variation across business schools. The University of New South Wales and the University of Queensland stand out here.

Figure 25. Actual and Hypothetical Pass Rates of Indigenous Business Students Applying the FIF/Non-FIF Distribution of the Non-Indigenous Business Student Population

BUSINESS SCHOOL SURVEY SUCCESS RELATED INITIATIVES

With regards to success related initiatives, we surveyed Australian business schools on their policies to increase the success of Aboriginal and Torres Strait Islander students in business schools. The business schools' Dean's office specified those policies/initiatives which they adopted to increase Aboriginal and Torres Strait Islander success rates, bringing them at par with the non-Indigenous participation rates.

These policies were categorized as below. These policy categories were then coded to facilitate quantitative analysis:

- Figure 26 (see below) codes the success-related initiatives;
- Table 34. Business Schools – Relative Actual Pass Rates[a] and Success ;
- Table 35. Business School Initiatives – Number of Success-Related .

As with the survey on participation rate policy, this survey initiative was endorsed by the Australian Business Deans Council (ABDC). Only 25 of the 39 universities contacted responded (see Table 34). Of those not responding (N/A in Table 34), are 5 of the 12 universities with a 90% or greater relative pass rate.

Figure 26. Business School Success-Related Initiative Codes

Code	Description
A	Indigenous course content
B	Indigenous tutoring
C	Indigenous academic staff
D	Staff Indigenous cultural awareness training
E	Support for Indigenous culture and events
F	Indigenous recognition and cultural protocol
G	Indigenous research
H	Indigenous services and support through Indigenous unit
I	Indigenous professional staff role
J	Indigenous portfolio role
K	Indigenous student ambassadors
L	Elder in residence
M	Degree specifically for Indigenous students
N	Paid Indigenous internship
O	Mentoring for Indigenous students
P	Improve Indigenous representation in decision-making

DOES QUANTITY OF BUSINESS SCHOOL INITIATIVES MATTER?

One hypothesis we test is whether increasing the number of business school initiatives designed to increase Aboriginal and Torres Strait Islander student success rates (relative to non-Indigenous student participation rates) in business schools has the expected positive effect.

As with business school initiatives to increase Aboriginal and Torres Strait Islander participation rates, business schools might increase the number of university wide initiatives in the hope that there is strength in numbers or to meet university KPIs. To test the above hypothesis, we correlate the number of business school initiatives with the relative success rates.

There is a small but negative correlation between the number of business school initiatives and the relative participation rates (Table 34 and Table 35). Figure 27 shows that:

- As the number of business school initiatives increase, the relative pass rate diminishes;
- Amongst our top performing business schools, we have schools with only one or three initiatives; and
- Amongst those business schools that are the poorest performers, there are a number with a multiplicity of initiatives (see also Table 34).

As with participation rate-related business school initiatives, simply having a larger number of well-intentioned initiatives does not yield higher pass rates in Australian business schools for Aboriginal and Torres Strait Islander students relative to non-Indigenous students (See below in Figure 27).

Figure 27. Business School Success-Related Initiatives Survey: Pass Rate and Number of Business School Initiatives
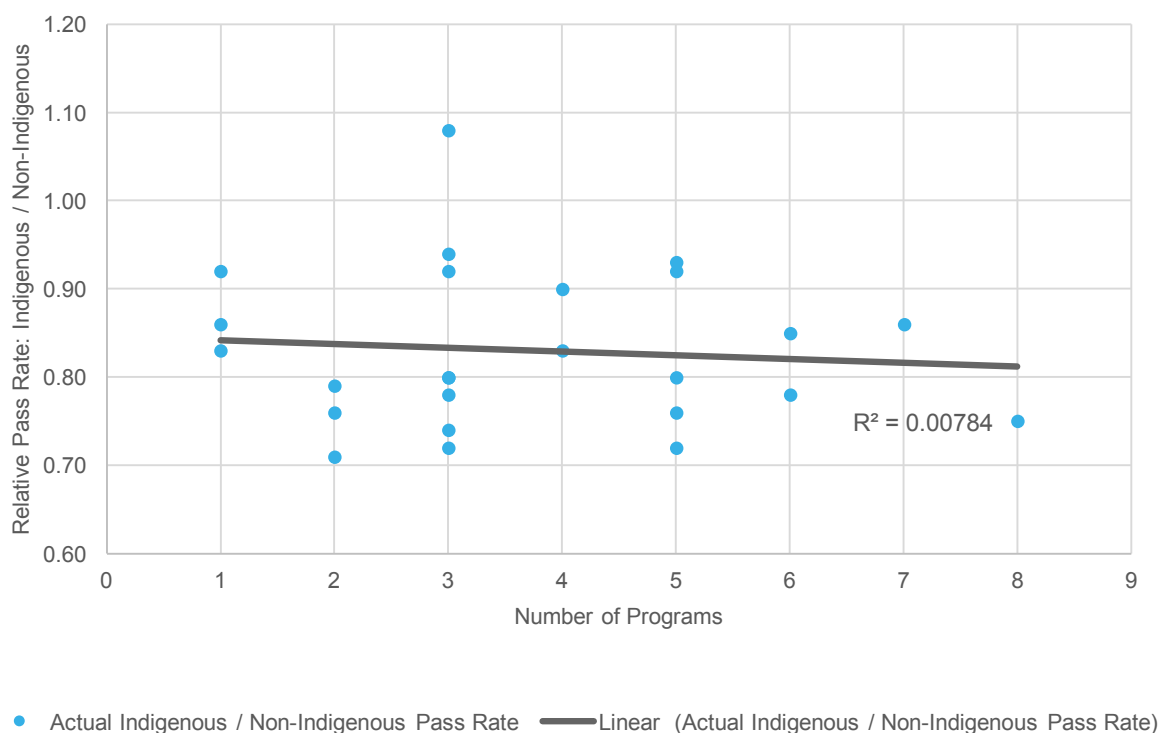
SUCCESS REQUIRES QUALITY, NOT QUANTITY

Figure 28 presents the results of an analysis of the top performing business schools with regards to relative success or pass rates (a 90% or above relative pass rate). One should note that a number of the top performing business schools did not respond to our survey.

- The grey columns indicate the number of reporting business schools adopting a particular policy or group of policies.
- The blue column presents the percentage distribution of policies across business schools.

What dominates these top performing business schools are:

- Aboriginal and Torres Strait Islander services and support through an Indigenous Education Unit (IEU);
- Aboriginal and Torres Strait Islander course content;
- Aboriginal and Torres Strait Islander professional staff role;
- Aboriginal and Torres Strait Islander tutoring; and
- Aboriginal and Torres Strait Islander academic staff.

However, most business schools, irrespective of their pass rates have adopted many of these policies.

As with the participation rate-related university initiatives, we have no evidence on the quality of these programs across Australian business schools.

Differences in quality can affect the effectiveness of these initiatives across business schools. Some of these business school initiatives probably represent necessary but not sufficient policy environments to increase Aboriginal and Torres Strait Islander relative pass rates. Other Australian business school initiatives can also be important.

But consistent with the literature is that Australian business school initiatives that increase the capabilities of Aboriginal and Torres Strait Islander students for business schools are critical as are the university wide initiatives that provide a sense of belonging and a sense of home for Aboriginal and Torres Strait Islander students in business schools.

Figure 28. Business School Success-Related Initiatives: Pyramid of Initiatives Importance and Relative Pass Rates of Top Performing Universities (Greater 90% and Greater Relative Pass Rate)
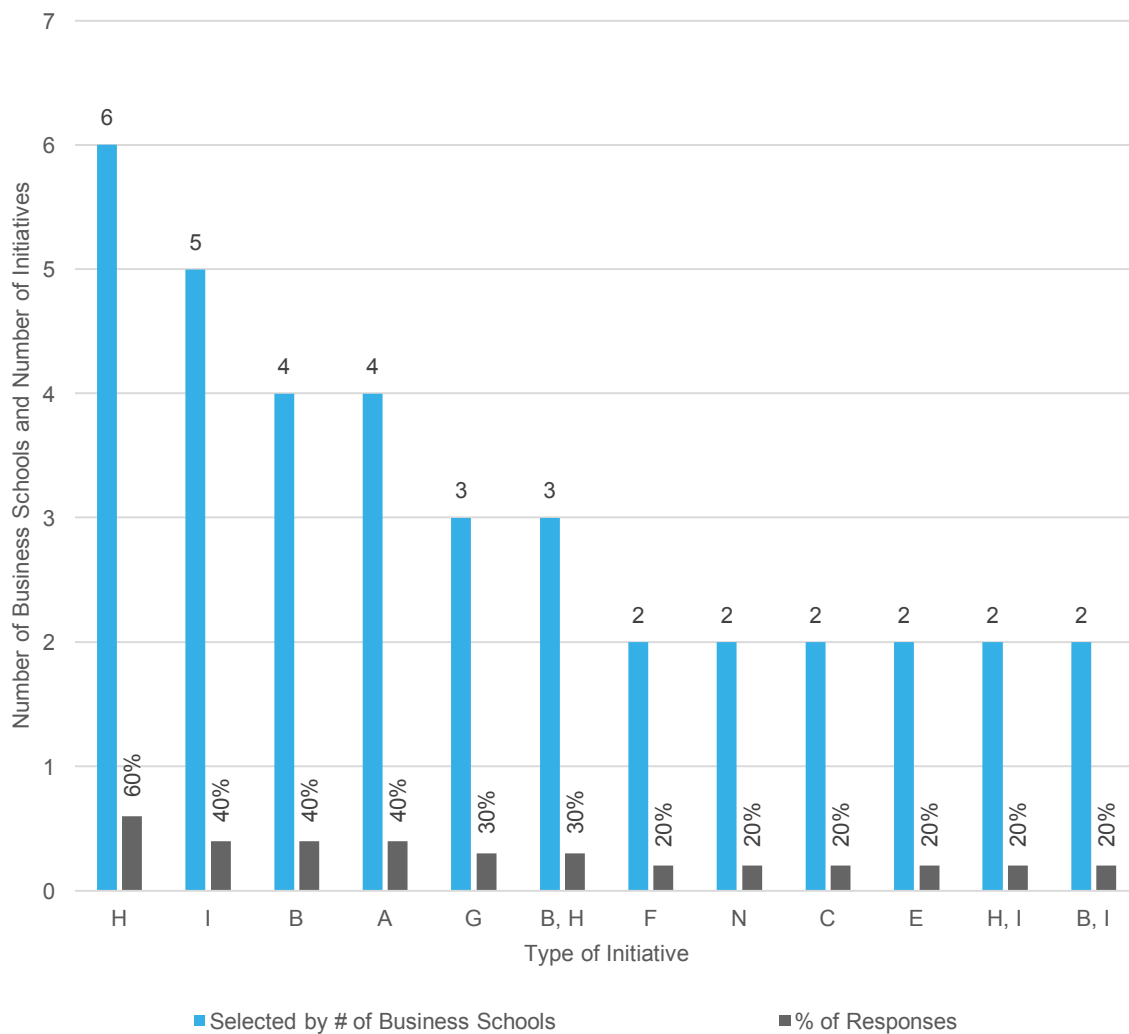
POLICY IMPLICATIONS TO IMPROVE SUCCESS RATES

With regards to the success gap, the evidence suggests, drawing from our SES analysis, that there is a capabilities or skills gap with respect to Aboriginal and Torres Strait Islander students relative to non-Indigenous students. But there is also a success gap within SES cohorts. We therefore have more than a capability gap that is rooted in a skills deficit specifically related to succeeding in business school education.

However, one needs to better deconstruct and understand the general success gap across SES cohorts. Part of this generalized gap can be a product of Aboriginal and Torres Strait Islander students not obtaining the business school related skills irrespective of their SES cohort origins.

Based on our evidence, to have some effect on improving the success of Aboriginal and Torres Strait Islander students, business schools could place emphasis and improving the delivery and quality of:

- Aboriginal and Torres Strait Islander services and support through Indigenous Education Units;
- Aboriginal and Torres Strait Islander course content;
- Aboriginal and Torres Strait Islander professional staff role;
- Aboriginal and Torres Strait Islander tutoring; and
- Aboriginal and Torres Strait Islander academic staff.

There is a need for business school initiatives that address the skill gap as well as for business school initiatives that build Aboriginal and Torres Strait Islander confidence to succeed in a university environment and develop a sense of belonging and community.

The latter is also related to the fact that Aboriginal and Torres Strait Islander students have a larger percentage of FIF cohorts attending university as compared to the non-Indigenous cohorts. FIF are less familiar with the university environment and what's required to achieve success and the resources to tap into to achieve success.

WEBSITE DERIVED UNIVERSITY-WIDE SUCCESS RELATED INITIATIVES

To supplement our understanding of the relationship of current policy and relative success as measured in in pass rates, we supplement our survey-based derivation of policy initiatives with a website-based derivation of policy initiatives. In this case, we analyse the policies or programs specified on university websites in Indigenous education statements, strategic plans and initiatives, to increase success rates. Such policies and initiatives were then categorized for analytical purposes.

Here we have university-wide initiatives specified on websites as opposed to what business school Dean's offices specify that they are actually undertaking. For the website derived policy initiatives, this could be more of a wish list as compared to what transpires into actual policy. But this website derived policy analysis might shed some light on what we've learned from our survey-based business school specific analysis.

These website derived initiative categories have been coded to facilitate quantitative analysis in the Figure below.

Figure 29. Web Derived University Wide Success Related Initiative Codes

Code	Description
A	Indigenous course content
C	Support for Indigenous culture and events
D	Indigenous academic staff
E	Staff/student Indigenous cultural awareness training
G	Indigenous recognition and cultural protocol
H	Indigenous research
I	Indigenous services / support through the Indigenous unit
J	Indigenous services / support outside the Indigenous unit
K	Child support for Indigenous students
L	Non-academic support for Indigenous students
M	Indigenous professional staff role
N	Indigenous portfolio role
P	Elder in residence
Q	Degree specifically for Indigenous students
R	Paid Indigenous internship / cadetship / traineeship
S	Mentoring for Indigenous students
U	Improve Indigenous representation in decision-making
V	Programs for Indigenous student preparation and enabling

The following provides an analysis of the web derived university wide analysis:

- Table 36. University-Wide Web Derived Initiatives – Impact on Retention and Pass Rates;
- Figure 30. Web Derived University Wide Success Related Initiatives and Relative Pass Rates; and
- Figure 31. Number of Web Derived University Wide Success Related Initiative Occurrences amongst Top 10 Most Relatively Successful Business Schools.

One hypothesis is to test, as with the survey-based approach, whether increasing the number of university initiatives designed to increase Aboriginal and Torres Strait Islander success rates (relative to non-Indigenous student participation rates) in business schools has a positive effect on relative success rates. One simple approach to test this hypothesis is to correlate the number of programs with the relative success rates. There is very little correlation between the number of programs and the relative success rate (Figure 31).

Key Findings:

As the number of initiatives increase, this has little effect on success rates.

The most success business schools have at least between 8 and 10 initiatives or programs.

As with the survey-based approach, simply having a larger number of well-intentioned programs does not yield higher participation rates in business schools for Aboriginal and Torres Strait Islander students relative to non-Indigenous students. There is a threshold number of programs that appear to be necessary to relative success. These initiatives should be of critical importance.

WHAT UNIVERSITY-WIDE INITIATIVES WORK?

Table 36, presents the results of an analysis of the top performing business schools with regards to relative success rates. Figure 30 presents the frequency of occurrences of programs.

What dominates these top performing participation business schools are:

- Indigenous course content;
- Indigenous academic staff;
- Staff / Student Indigenous cultural awareness / competence training;
- Support for Indigenous culture and events;
- Indigenous recognition and cultural protocol;
- Indigenous research;
- Non-academic support for Indigenous students;
- Paid Indigenous internship / cadetship / traineeship;
- Mentoring for Indigenous students; and
- Programs for Indigenous student preparation and enabling.

However, most business schools, irrespective of their success rates have adopted these policies individually, such as Edith Cowan University, University of Western Australia and Victoria University. But we have no evidence on the quality of these programs across Australian business schools. Differences in quality can affect the effectiveness of these programs across business schools. Also, for this website policy analysis, we don't know for sure if these programs have been implemented.

It is important to note that these programs overlap with those initiatives or programs identified as critical by the survey-based analysis.

It might very well be that some combination of these initiatives or programs might be most effective depending on the nature of the Aboriginal and Torres Islander business school population.

> Overall, these programs or a subset of these probably represent necessary but not sufficient environmental conditions to increase Aboriginal and Torres Strait Islander relative success rates.

Also, as with our business school survey-based analysis, one outstanding hypothesis to test is that differences in the quality of identical programs has a substantive effect on relative participation rates. This particular analysis also can't examine policy initiatives that do not exist, but might be relatively effective if they did exist. Here, we have the possibility of critical omitted but hypothetical variables that can be of critical importance. This important issue cannot be addressed in this paper.

Figure 30. Web Derived University Wide Success Related Initiatives and Relative Pass Rates

$y = 0.0012x + 0.8366$
$R^2 = 0.0006$

(Y-axis: Indigenous / Non-Indigenous Pass Rates, 0% to 180%)
(X-axis: Number of University-Wide Initiatives, 0 to 18)

- Indigenous / Non-Indigenous Success Rates ——— Linear (Indigenous / Non-Indigenous Success Rates)

Figure 31. Number of Web Derived University Wide Success Related Initiative Occurrences amongst Top 10 Most Relatively Successful Business Schools
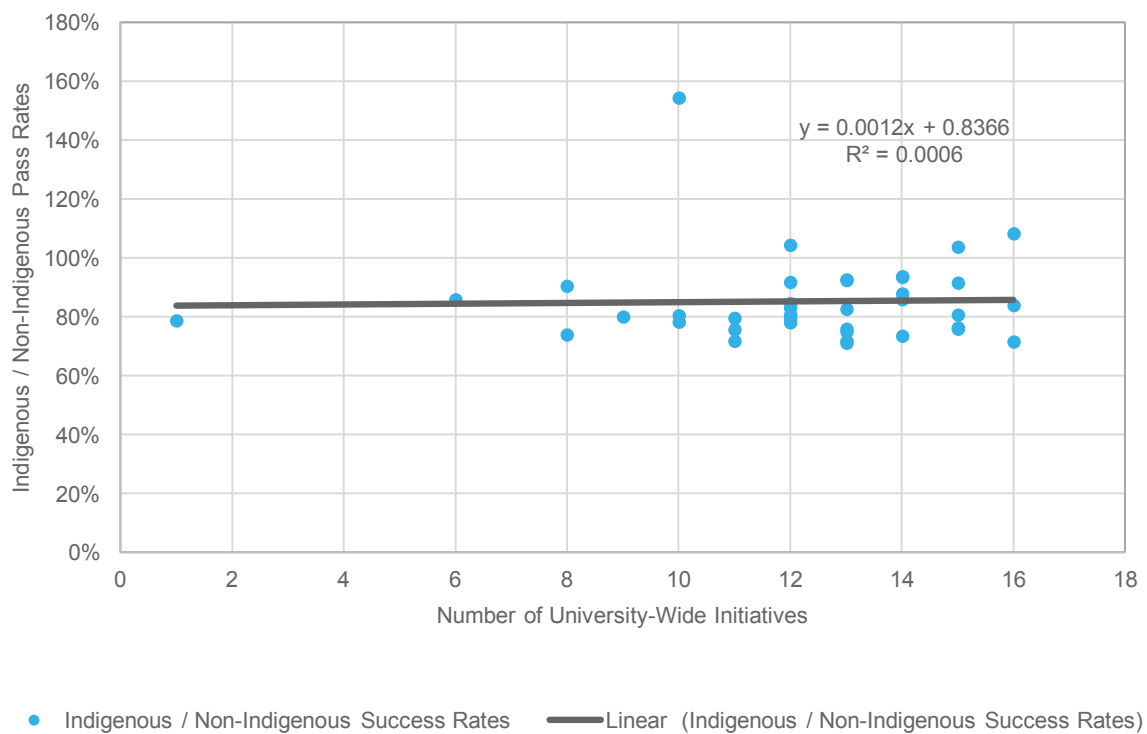
(Y-axis: Number of Occurances, 0 to 11)
(X-axis: University-Wide Success Initiatves)
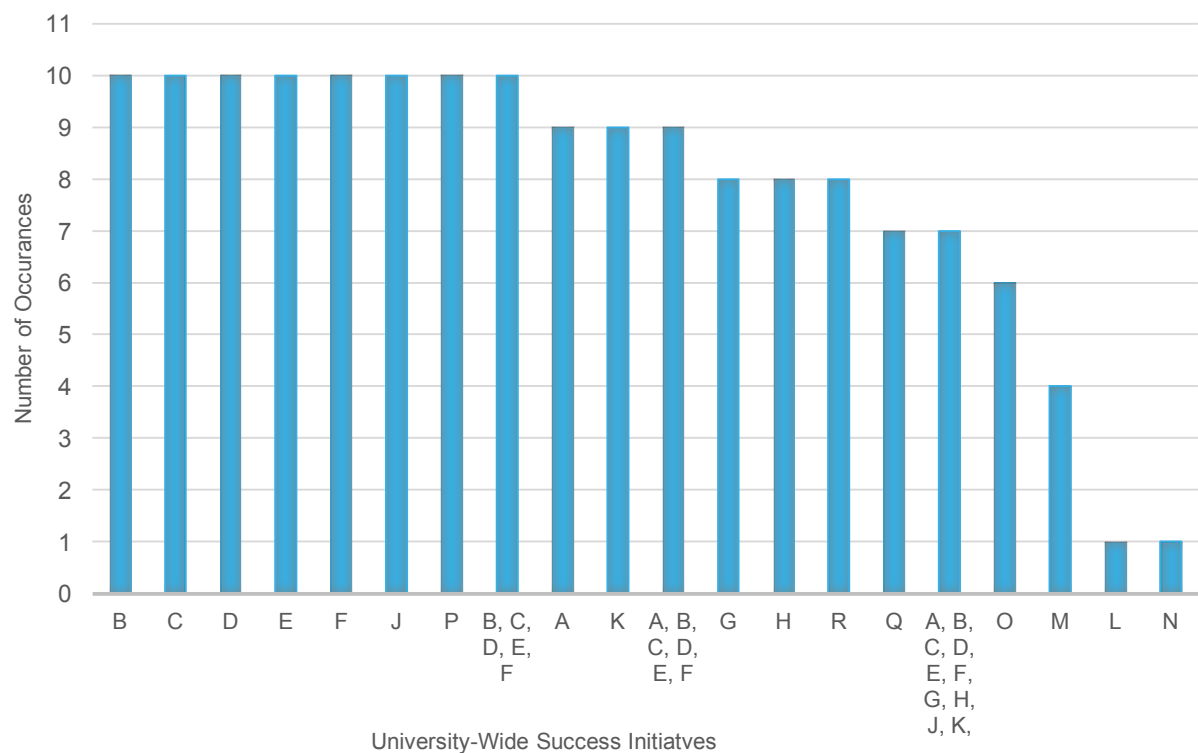
SUMMARY OF SUCCESS RATE ANALYSIS

- Pass rates for Aboriginal and Torres Strait Islander students in Australian business schools are universally well below that non-Indigenous students.
- Retention rates for Aboriginal and Torres Strait Islander students in Australian business schools are universally well below that non-Indigenous students.
- Higher SES Aboriginal and Torres Strait Islander students are more successful than the low SES students across Australian business schools.
- SES status, gender, first-in-family, and age affects pass rates for both Aboriginal and Torres Strait Islander students and non-Indigenous students, but are much more important amongst Aboriginal and Torres Strait Islander students.

There is a success gap between Aboriginal and Torres Strait Islander business students and non-Indigenous business students that can't be explained by SES, age distribution, FIF, and gender, for example.

This persistent success gap goes well beyond these traditional variables that have been traditionally singled out as the main culprits responsible for the success gap between Aboriginal and Torres Strait Islander and non-Indigenous students.

Based on our evidence, to have some effect on improving the success of Aboriginal and Torres Strait Islander students, business schools could place emphasis on improving the delivery and quality of:

- Indigenous course content;
- Indigenous academic staff;
- Staff / Student Indigenous cultural awareness / competence training;
- Support for Indigenous culture and events;
- Indigenous recognition and cultural protocol;
- Indigenous research;
- Non-academic support for Indigenous students;
- Paid Indigenous internship / cadetship / traineeship;
- Mentoring for Indigenous students; and
- Programs for Indigenous student preparation and enabling.

The manner in which programs and initiatives are bundled can also be critically important to their overall effectiveness. University wide initiatives also need to address Aboriginal and Torres Strait Islander student:

- Skill gaps in order to boost student confidence to succeed; and
- Need for an environment where they develop a sense of belonging and community.

As with participation rate-related business school initiatives, simply having a larger number of well-intentioned business school initiatives does not yield higher pass rates in Australian business schools for Aboriginal and Torres Strait Islander students relative to non-Indigenous students.

Opportunity exists for business schools and universities to collaborate in a nationwide discussion to create uniform assessment protocols to appropriately assess the quality of the participation and success rate related business school initiatives over time. We need a much more nuanced analysis of which initiatives and what bundle of these are most effective. We need to determine which initiatives need improvement and those that that need to be created to improve relative pass rates and ultimately bridge the success gap.

Given that prior analysis focused on traditional variables as the prime cause of the success gap, it is likely that current policy may not be as effective as it might otherwise be.

We now know that the success gap exists across all cohorts. It goes well beyond SES factors, FIF issues, age distribution, and gender. Policy must be more targeted to eliminate this fundamentally important and persistent success gap.

CHAPTER 5. APPENDIX TABLES

Table 10. Pass Rates in Business Schools

	Total Indigenous Students	Total Non-Indigenous Students	Pass Rate Indigenous	Pass Rate Non-Indigenous	Pass Rate: Indigenous / Non-Indigenous
New South Wales					
University of Wollongong	37	3,475	57%	68%	83%
Western Sydney University	81	9,771	57%	62%	92%
Charles Sturt University	89	2,982	52%	68%	76%
Macquarie University	40	4,837	60%	73%	83%
Southern Cross University	52	1,834	52%	63%	83%
The University of New England	30	1,570	67%	62%	108%
University of New South Wales	26	5,870	65%	87%	75%
The University of Newcastle	70	2,562	53%	62%	85%
The University of Sydney	15	2,983	60%	82%	74%
University of Technology, Sydney	53	6,803	72%	78%	92%
NSW Totals	**493**	**42,687**	**58%**	**71%**	**81%**
Victoria					
Deakin University	42	7,101	48%	60%	80%
Federation University Australia	7	1,221	71%	69%	104%
La Trobe University	18	4,954	61%	68%	90%
Monash University	9	6,994	56%	73%	76%
RMIT University	31	6,542	58%	73%	79%
Swinburne University of Technology	41	7,938	54%	66%	81%
The University of Melbourne	9	3,424	67%	83%	81%
Victoria University	7	2,784	43%	60%	71%
VIC Totals	**164**	**40,958**	**55%**	**69%**	**80%**
Queensland					
James Cook University	78	1,881	45%	61%	74%
Central Queensland University	36	1,941	64%	68%	94%
University of Southern Queensland	92	2,990	49%	64%	76%
Bond University	15	460	60%	76%	79%
Griffith University	156	7,962	62%	67%	92%
Queensland University of Technology	146	8,135	55%	69%	80%
The University of Queensland	45	5,673	62%	72%	86%
University of the Sunshine Coast	27	1,419	74%	71%	104%
QLD Totals	**595**	**30,461**	**57%**	**68%**	**83%**
Western Australia					
The University of Western Australia	16	3,299	56%	78%	72%
Murdoch University	24	1,165	54%	59%	92%
Edith Cowan University	35	2,466	46%	64%	72%
Curtin University of Technology	45	6,681	56%	65%	86%
The University of Notre Dame Australia	3	1,150	100%	65%	154%
WA Totals	**123**	**14,761**	**54%**	**67%**	**80%**

	Total Indigenous Students	Total Non-Indigenous Students	Pass Rate Indigenous	Pass Rate Non-Indigenous	Pass Rate: Indigenous / Non-Indigenous
Australian Capital Territory					
University of Canberra	38	2,713	58%	66%	88%
The Australian National University	10	1,185	70%	76%	93%
ACT Totals	**48**	**3,898**	**60%**	**69%**	**88%**
Northern Territory					
Charles Darwin University	24	362	50%	62%	80%
NT Totals	**24**	**362**	**50%**	**62%**	**80%**
Tasmania					
University of Tasmania	71	3,277	54%	64%	84%
TAS Totals	**71**	**3,277**	**54%**	**64%**	**84%**
South Australia					
Flinders University	13	1,364	54%	69%	78%
The University of Adelaide	11	2,312	55%	70%	78%
University of South Australia	48	4,834	54%	68%	80%
SA Totals	**72**	**8,510**	**54%**	**68%**	**79%**
Multi-State					
Australian Catholic University	19	2,268	58%	62%	94%
MULTI-STATE Totals	**19**	**2,268**	**58%**	**62%**	**94%**

Table 11. Ranked Business School Relative Pass Rates*

	Total Indigenous Students	Total Non-Indigenous Students	Relative Pass Rate* Indigenous	Relative Pass Rate* Non-Indigenous	Relative Pass Rate*	Relative Pass Rate* Rank
The University of Notre Dame Australia	3	1,150	100%	65%	154%	1
The University of New England	30	1,570	67%	62%	108%	2
University of the Sunshine Coast	27	1,419	74%	71%	104%	3
Federation University Australia	7	1,221	71%	69%	104%	4
Australian Catholic University	19	2,268	58%	62%	94%	5
Central Queensland University	36	1,941	64%	68%	94%	6
The Australian National University	10	1,185	70%	76%	93%	7
Griffith University	156	7,962	62%	67%	92%	8
Western Sydney University	81	9,771	57%	62%	92%	9
University of Technology, Sydney	53	6,803	72%	78%	92%	10
Murdoch University	24	1,165	54%	59%	92%	11
La Trobe University	18	4,954	61%	68%	90%	12
University of Canberra	38	2,713	58%	66%	88%	13
Curtin University of Technology	45	6,681	56%	65%	86%	14
The University of Queensland	45	5,673	62%	72%	86%	15
The University of Newcastle	70	2,562	53%	62%	85%	16
University of Tasmania	71	3,277	54%	64%	84%	17
University of Wollongong	37	3,475	57%	68%	83%	18
Macquarie University	40	4,837	60%	73%	83%	19
Southern Cross University	52	1,834	52%	63%	83%	20
Swinburne University of Technology	41	7,938	54%	66%	81%	21
The University of Melbourne	9	3,424	67%	83%	81%	22
Charles Darwin University	24	362	50%	62%	80%	23
University of South Australia	48	4,834	54%	68%	80%	24
Queensland University of Technology	146	8,135	55%	69%	80%	25
Deakin University	42	7,101	48%	60%	80%	26
RMIT University	31	6,542	58%	73%	79%	27
Bond University	15	460	60%	76%	79%	28
Flinders University	13	1,364	54%	69%	78%	29
The University of Adelaide	11	2,312	55%	70%	78%	30
Charles Sturt University	89	2,982	52%	68%	76%	31
University of Southern Queensland	92	2,990	49%	64%	76%	32
Monash University	9	6,994	56%	73%	76%	33
University of New South Wales	26	5,870	65%	87%	75%	34
James Cook University	78	1,881	45%	61%	74%	35
The University of Sydney	15	2,983	60%	82%	74%	36
The University of Western Australia	16	3,299	56%	78%	72%	37
Edith Cowan University	35	2,466	46%	64%	72%	38
Victoria University	7	2,784	43%	60%	71%	39
Average	41	3,774	59%	68%	86%	
Median	35	2,983	57%	68%	83%	
Standard Deviation	35	2,465	10%	7%	14%	

* Relative Pass Rate = Indigenous / Non-Indigenous

Table 12. Withdrawal Rates and Pass Rates

	Total Indigenous Business Students	Indigenous Actual Pass Rates	Non-Indigenous Actual Pass Rates	Indigenous New Pass Rates (Assumes Non-Indigenous W/drawl Rates)	New / Actual	Indigenous Withdrawn / F+W	Non-Indigenous Withdrawn / F+W	%Indigenous / Non-Indigenous Withdrawal	% of Success Differences Attributable to Differences in Withdrawal
New South Wales									
University of Wollongong	37	57%	68%	66%	1.16	37.5%	18.4%	1.16	76.8%
Western Sydney University	81	57%	62%	58%	1.02	5.7%	1.9%	1.02	22.8%
Charles Sturt University	89	52%	68%	53%	1.03	14.0%	13.3%	1.03	9.8%
Macquarie University	40	60%	73%	63%	1.06	25.0%	15.9%	1.06	26.7%
Southern Cross University	52	52%	63%	53%	1.01	4.0%	2.2%	1.01	6.6%
The University of New England	30	67%	62%	61%	0.91	10.0%	31.5%	0.91	119.1%
University of New South Wales	26	65%	87%	68%	1.03	22.2%	35.1%	1.03	10.4%
The University of Newcastle	70	53%	62%	57%	1.07	39.4%	43.3%	1.07	41.4%
The University of Sydney	15	60%	82%	62%	1.03	16.7%	22.4%	1.03	9.1%
University of Technology, Sydney	53	72%	78%	72%	1.00	0.0%	0.7%	1.00	-2.0%
NSW Totals	493	58%	71%	60%	1.04	17.3%	13.4%	1.04	18.6%
Victoria									
Deakin University	42	48%	60%	53%	1.12	22.7%	17.7%	1.12	48.4%
Federation University Australia	7	71%	69%	69%	0.97	0.0%	9.4%	0.97	88.1%
La Trobe University	18	61%	68%	67%	1.10	28.6%	6.7%	1.10	94.4%
Monash University	9	56%	73%	61%	1.09	25.0%	11.8%	1.09	29.3%
RMIT University	31	58%	73%	58%	1.00	7.7%	14.3%	1.00	-0.2%
Swinburne University of Technology	41	54%	66%	54%	1.00	0.0%	0.0%	1.00	0.0%
The University of Melbourne	9	67%	83%	73%	1.09	33.3%	12.6%	1.09	38.1%
Victoria University	7	43%	60%	43%	1.00	0.0%	0.1%	1.00	0.0%
VIC Totals	164	55%	69%	56%	1.03	13.5%	9.3%	1.03	10.2%
Queensland									
James Cook University	78	45%	61%	49%	1.10	16.3%	14.2%	1.10	28.4%
Central Queensland University	36	64%	68%	64%	1.00	0.0%	0.8%	1.00	-4.3%
University of Southern Queensland	92	49%	64%	51%	1.05	21.3%	21.8%	1.05	16.6%
Bond University	15	60%	76%	63%	1.05	16.7%	7.3%	1.05	19.0%
Griffith University	156	62%	67%	61%	0.99	16.7%	25.6%	0.99	-15.9%
Queensland University of Technology	146	55%	69%	56%	1.01	23.1%	37.5%	1.01	4.7%
The University of Queensland	45	62%	72%	66%	1.06	35.3%	29.2%	1.06	34.2%
University of the Sunshine Coast	27	74%	71%	73%	0.98	14.3%	18.9%	0.98	36.6%
QLD Totals	595	57%	68%	58%	1.03	19.4%	25.9%	1.03	14.7%
Western Australia									
The University of Western Australia	16	56%	78%	63%	1.12	28.6%	20.9%	1.12	30.4%
Murdoch University	24	54%	59%	57%	1.05	36.4%	37.3%	1.05	53.5%
Edith Cowan University	35	46%	64%	49%	1.07	21.1%	22.4%	1.07	18.7%
Curtin University of Technology	45	56%	65%	55%	0.98	20.0%	32.1%	0.98	-11.6%
The University of Notre Dame Australia	3	100%	65%	100%	1.00		0.0%	1.00	0.0%
WA Totals	123	54%	67%	59%	1.10	24.6%	26.5%	1.10	38.4%

	Total Indigenous Business Students	Indigenous Actual Pass Rates	Non-Indigenous Actual Pass Rates	Indigenous New Pass Rates (Assumes Non-Indigenous W/drawl Rates)	New / Actual	Indigenous Withdrawn / F+W)	Non-Indigenous Withdrawn / F+W)	%Indigenous / Non-Indigenous Withdrawal	% of Success Differences Attributable to Differences in Withdrawal
Australian Capital Territory									
University of Canberra	38	58%	66%	62%	1.07	18.8%	12.3%	1.07	48.8%
The Australian National University	10	70%	76%	73%	1.04	33.3%	22.4%	1.04	52.5%
ACT Totals	48	60%	69%	64%	1.05	21.1%	14.7%	1.05	37.4%
Northern Territory									
Charles Darwin University	24	50%	62%	50%	1.00	0.0%	1.5%	1.00	0.0%
NT Totals	24	50%	62%	50%	1.00	0.0%	1.5%	1.00	0.0%
Tasmania									
University of Tasmania	71	54%	64%	63%	1.18	42.4%	28.1%	1.18	95.8%
TAS Totals	71	54%	64%	63%	1.18	42.4%	28.1%	1.18	95.8%
South Australia									
Flinders University	13	54%	69%	53%	0.99	0.0%	24.8%	0.99	-3.5%
The University of Adelaide	11	55%	70%	57%	1.04	20.0%	17.1%	1.04	13.6%
University of South Australia	48	54%	68%	58%	1.06	22.7%	15.2%	1.06	25.9%
SA Totals	72	54%	68%	56%	1.04	18.2%	17.2%	1.04	14.6%
Multi-State									
Australian Catholic University	19	58%	62%	60%	1.04	12.5%	10.4%	1.04	60.8%
MULTI-State Totals	19	57%	62%	60%	1.04	12.5%	10.4%	1.04	60.8%
Average		**55%**	**67%**	**59%**	**106%**	**19%**	**16%**	**1.06**	**27.8%**

Table 13. Withdrawal and Pass Rates by State/Territory Ranked by Indigenous / Non-Indigenous Withdrawal Rates

	Total Indigenous Business Students	Indigenous Actual Pass Rates	Non-Indigenous Actual Pass Rates	Indigenous New Pass Rates*	New / Actual	Indigenous Withdrawal / F+W	Non-Indigenous Withdrawn / F+W	% Indigenous / Non-Indigenous Withdrawal Rate	% of Success Differences Attributable to Differences in Withdrawal
Australian Capital Territory	48	60%	69%	64%	1.05	21%	15%	1.05	37%
Multi-State	19	58%	62%	60%	1.04	13%	10%	1.04	61%
New South Wales	493	58%	71%	60%	1.04	18%	13%	1.04	19%
Northern Territory	24	50%	62%	50%	1.00	0%	2%	1.00	0%
Queensland	595	57%	68%	58%	1.03	19%	26%	1.03	15%
South Australia	72	54%	68%	56%	1.04	18%	17%	1.04	15%
Tasmania	71	54%	64%	63%	1.18	42%	28%	1.18	96%
Victoria	164	55%	69%	56%	1.03	14%	9%	1.03	10%
Western Australia	123	54%	67%	59%	1.10	25%	27%	1.10	38%

*Indigenous New Pass Rates, assumes non-Indigenous Withdrawal Rates

Table 14. Withdrawal Rates and Pass Rates for all Business Schools Ranked by Withdrawal Rates[1]

	Total Indigenous Business Students	Indigenous Actual Pass Rates	Non-Indigenous Actual Pass Rates	Indigenous New Pass Rates	New / Actual	Indigenous Withdrawn / (F+W)	Non-Indigenous Withdrawn / (F+W)	Withdrawal Rate[1]	% Of Pass Rate Differences[2]
University of Tasmania	71	54%	64%	63%	1.18	42.4%	28.1%	1.18	95.8%
University of Wollongong	37	57%	68%	66%	1.16	37.5%	18.4%	1.16	76.8%
Deakin University	42	48%	60%	53%	1.12	22.7%	17.7%	1.12	48.4%
The University of Western Australia	16	56%	78%	63%	1.12	28.6%	20.9%	1.12	30.4%
James Cook University	78	45%	61%	49%	1.10	16.3%	14.2%	1.10	28.4%
La Trobe University	18	61%	68%	67%	1.10	28.6%	6.7%	1.10	94.4%
Monash University	9	56%	73%	61%	1.09	25.0%	11.8%	1.09	29.3%
The University of Melbourne	9	67%	83%	73%	1.09	33.3%	12.6%	1.09	38.1%
The University of Newcastle	70	53%	62%	57%	1.07	39.4%	43.3%	1.07	41.4%
Edith Cowan University	35	46%	64%	49%	1.07	21.1%	22.4%	1.07	18.7%
University of Canberra	38	58%	66%	62%	1.07	18.8%	12.3%	1.07	48.8%
University of South Australia	48	54%	68%	58%	1.06	22.7%	15.2%	1.06	25.9%
Macquarie University	40	60%	73%	63%	1.06	25.0%	15.9%	1.06	26.7%
The University of Queensland	45	62%	72%	66%	1.06	35.3%	29.2%	1.06	34.2%
University of Southern Queensland	92	49%	64%	51%	1.05	21.3%	21.8%	1.05	16.6%
Bond University	15	60%	76%	63%	1.05	16.7%	7.3%	1.05	19.0%
Murdoch University	24	54%	59%	57%	1.05	36.4%	37.3%	1.05	53.5%
The Australian National University	10	70%	76%	73%	1.04	33.3%	22.4%	1.04	52.5%
Australian Catholic University	19	58%	62%	60%	1.04	12.5%	10.4%	1.04	60.8%
The University of Adelaide	11	55%	70%	57%	1.04	20.0%	17.1%	1.04	13.6%
University of New South Wales	26	65%	87%	68%	1.03	22.2%	35.1%	1.03	10.4%
The University of Sydney	15	60%	82%	62%	1.03	16.7%	22.4%	1.03	9.1%
Charles Sturt University	89	52%	68%	53%	1.03	14.0%	13.3%	1.03	9.8%

1 Withdrawal Rates: Indigenous / Non-Indigenous Withdrawal Rates.
2 Percentage of Pass Rate Differences: Attributable to differences in withdrawal

	Total Indigenous Business Students	Indigenous Actual Pass Rates	Non-Indigenous Actual Pass Rates	Indigenous New Pass Rates	New / Actual	Indigenous Withdrawn / (F+W)	Non-Indigenous Withdrawn / (F+W)	Withdrawal Rate[1]	% of Pass Rate Differences[2]
Western Sydney University	81	57%	62%	58%	1.02	5.7%	1.9%	1.02	22.8%
Southern Cross University	52	52%	63%	53%	1.01	4.0%	2.2%	1.01	6.6%
Queensland University of Technology	146	55%	69%	56%	1.01	23.1%	37.5%	1.01	4.7%
Swinburne University of Technology	41	54%	66%	54%	1.00	0.0%	0.0%	1.00	0.0%
The University of Notre Dame Australia	3	100%	65%	100%	1.00		0.0%	1.00	0.0%
Charles Darwin University	24	50%	62%	50%	1.00	0.0%	1.5%	1.00	0.0%
Victoria University	7	43%	60%	43%	1.00	0.0%	0.1%	1.00	0.0%
RMIT University	31	58%	73%	58%	1.00	7.7%	14.3%	1.00	-0.2%
University of Technology, Sydney	53	72%	78%	72%	1.00	0.0%	0.7%	1.00	-2.0%
Central Queensland University	36	64%	68%	64%	1.00	0.0%	0.8%	1.00	-4.3%
Flinders University	13	54%	69%	53%	0.99	0.0%	24.8%	0.99	-3.5%
Griffith University	156	62%	67%	61%	0.99	16.7%	25.6%	0.99	-15.9%
University of the Sunshine Coast	27	74%	71%	73%	0.98	14.3%	18.9%	0.98	36.6%
Curtin University of Technology	45	56%	65%	55%	0.98	20.0%	32.1%	0.98	-11.6%
Federation University Australia	7	71%	69%	69%	0.97	0.0%	9.4%	0.97	88.1%
The University of New England	30	67%	62%	61%	0.91	10.0%	31.5%	0.91	119.1%
Average	41	59%	68%	61%	1.04	18%	17%	1.04	29%
	36	56%	68%	60%	1.04	21%	15%	1.04	19%

1 Withdrawal Rates: Indigenous / Non-Indigenous Withdrawal Rates.
2 Percentage of Pass Rate Differences: Attributable to differences in withdrawal

Table 15. Pass Rates Indigenous / Non-Indigenous Across SES Cohorts

	HSES	MSES	LSES
New South Wales			
University of Wollongong		0.89	0.82
Western Sydney University	1.29	0.92	0.68
Charles Sturt University	0.94	0.82	0.57
Macquarie University	0.96	0.72	0.70
Southern Cross University		0.74	1.17
The University of New England	1.57	0.96	1.02
University of New South Wales	0.72	0.86	0.59
The University of Newcastle		0.82	0.86
The University of Sydney	0.60	1.26	0.43
University of Technology, Sydney	0.88	1.02	0.84
NSW Totals	**0.92**	**0.83**	**0.77**
Victoria			
Deakin University	0.63	0.79	0.97
Federation University Australia		1.10	1.05
La Trobe University	1.45	1.10	0.68
Monash University	1.02	0.54	
RMIT University	0.85	0.72	1.49
Swinburne University of Technology	0.98	0.64	1.00
The University of Melbourne	0.60	1.24	1.25
Victoria University	0.82	0.83	
VIC Totals	**0.81**	**0.77**	**0.90**
Queensland			
James Cook University	1.11	0.77	0.62
Central Queensland University	0.72	1.07	0.90
University of Southern Queensland	0.79	0.78	0.72
Bond University		0.83	0.60
Griffith University	0.87	0.93	0.97
Queensland University of Technology	0.72	0.81	0.96
The University of Queensland	0.96	0.80	0.82
University of the Sunshine Coast		1.01	1.44
QLD Totals	**0.79**	**0.85**	**0.85**
Western Australia			
The University of Western Australia	0.64	0.71	0.86
Murdoch University	1.67	0.96	0.73
Edith Cowan University	0.91	0.60	0.84
Curtin University of Technology	0.90	0.96	0.78
The University of Notre Dame Australia	1.55	1.53	
WA Totals	**0.89**	**0.80**	**0.79**

	HSES	MSES	LSES
Australian Capital Territory			
University of Canberra	0.89	0.81	1.71
The Australian National University	1.05	0.81	
ACT Totals	**0.90**	**0.81**	**1.64**
Northern Territory			
Charles Darwin University	0.77	0.85	0.83
NT Totals	**0.77**	**0.85**	**0.83**
Tasmania			
University of Tasmania	1.07	0.73	0.88
TAS Totals	**1.07**	**0.73**	**0.88**
South Australia			
Flinders University	0.35	1.23	0.50
The University of Adelaide	0.70	0.85	
University of South Australia	0.81	0.83	0.79
SA Totals	**0.66**	**0.90**	**0.75**
Multi-State			
Australian Catholic University	0.80	1.14	0.56
Multi-State Totals	**0.80**	**1.14**	**0.56**
Average	**0.91**	**0.89**	**0.88**

Table 16. Indigenous Relative Pass Rates Across SES Cohorts

	HES / MSES	HSES / LSES	MSES / LSES
New South Wales			
University of Wollongong			1.14
Western Sydney University	1.45	1.99	1.37
Charles Sturt University	1.21	1.80	1.49
Macquarie University	1.44	1.44	1.00
Southern Cross University			0.66
The University of New England	1.71	1.63	0.95
University of New South Wales	0.83	1.25	1.50
The University of Newcastle			0.95
The University of Sydney	0.50	1.50	3.00
University of Technology, Sydney	0.88	1.11	1.26
NSW Totals	**1.23**	**1.37**	**1.12**
Victoria			
Deakin University	0.78	0.68	0.86
Federation University Australia			1.13
La Trobe University	1.33	2.25	1.69
Monash University	1.88		
RMIT University	1.21	0.64	0.53
Swinburne University of Technology	1.58	1.07	0.67
The University of Melbourne	0.50	0.50	1.00
Victoria University	1.00		
VIC Totals	**1.10**	**1.00**	**0.91**
Queensland			
James Cook University	1.42	1.78	1.25
Central Queensland University	0.69	0.82	1.19
University of Southern Queensland	0.98	1.11	1.13
Bond University			1.27
Griffith University	0.92	0.92	1.00
Queensland University of Technology	0.92	0.82	0.89
The University of Queensland	1.20	1.19	0.99
University of the Sunshine Coast			0.71
QLD Totals	**0.96**	**1.00**	**1.04**
Western Australia			
The University of Western Australia	0.90	0.75	0.83
Murdoch University	1.78	2.33	1.31
Edith Cowan University	1.47	1.14	0.78
Curtin University of Technology	0.93	1.24	1.33
The University of Notre Dame Australia	1.00		
WA Totals	**1.15**	**1.26**	**1.10**

	HES / MSES	HSES / LSES	MSES / LSES
Australian Capital Territory			
University of Canberra	1.11	0.59	0.53
The Australian National University	1.33		
ACT Totals	**1.14**	**0.63**	**0.55**
Northern Territory			
Charles Darwin University	0.95	1.00	1.05
NT Totals	**0.95**	**1.00**	**1.05**
Tasmania			
University of Tasmania	1.44	1.17	0.81
TAS Totals	**1.44**	**1.17**	**0.81**
South Australia			
Flinders University	0.30	0.75	2.50
The University of Adelaide	0.83		
University of South Australia	1.01	1.14	1.13
SA Totals	**0.76**	**0.99**	**1.30**
Multi-State			
Australian Catholic University	0.71	1.50	2.10
Multi-State Totals	**0.71**	**1.50**	**2.10**
Average	**1.09**	**1.19**	**1.15**

Table 17. Percentage Distribution Across SES Cohorts

	Indigenous Business Students			Non-Indigenous Business Students		
	LSES	MSES	HSES	LSES	MSES	HSES
New South Wales						
University of Wollongong	37.5%	56.3%	6.3%	14.3%	59.1%	26.6%
Western Sydney University	25.6%	59.0%	15.4%	21.7%	57.7%	20.6%
Charles Sturt University	39.3%	33.9%	26.8%	18.8%	50.1%	31.2%
Macquarie University	11.8%	35.3%	52.9%	6.9%	30.7%	62.3%
Southern Cross University	34.3%	62.9%	2.9%	17.8%	61.3%	20.9%
The University of New England	38.9%	44.4%	16.7%	21.4%	52.1%	26.5%
University of New South Wales	14.3%	57.1%	28.6%	7.9%	33.9%	58.3%
The University of Newcastle	47.5%	50.0%	2.5%	18.4%	60.2%	21.3%
The University of Sydney	25.0%	50.0%	25.0%	5.0%	27.0%	68.0%
University of Technology, Sydney	21.4%	50.0%	28.6%	8.6%	36.9%	54.5%
NSW Totals	**31.9%**	**49.3%**	**18.8%**	**12.9%**	**43.9%**	**43.2%**
Victoria						
Deakin University	13.9%	55.6%	30.6%	9.9%	45.6%	44.5%
Federation University Australia	100.0%	0.0%	0.0%	19.5%	62.4%	18.1%
La Trobe University	26.3%	50.0%	23.7%	18.9%	57.1%	24.0%
Monash University	16.7%	50.0%	33.3%	7.6%	39.6%	52.7%
RMIT University	0.0%	53.8%	46.2%	12.5%	40.1%	47.5%
Swinburne University of Technology	58.3%	33.3%	8.3%	12.8%	49.2%	38.0%
The University of Melbourne	0.0%	37.5%	62.5%	6.0%	29.9%	64.1%
Victoria University	25.0%	25.0%	50.0%	23.4%	50.3%	26.3%
VIC Totals	**21.2%**	**48.3%**	**30.5%**	**12.0%**	**44.3%**	**43.6%**
Queensland						
James Cook University	36.8%	57.9%	5.3%	21.4%	67.8%	10.8%
Central Queensland University	60.7%	39.3%	0.0%	31.5%	53.6%	15.0%
University of Southern Queensland	24.0%	66.0%	10.0%	25.2%	54.2%	20.6%
Bond University	50.0%	16.7%	33.3%	6.6%	69.4%	23.9%
Griffith University	21.4%	56.0%	22.6%	13.5%	60.2%	26.3%
Queensland University of Technology	16.4%	47.5%	36.1%	8.6%	43.0%	48.4%
The University of Queensland	3.8%	53.8%	42.3%	7.2%	37.3%	55.5%
University of the Sunshine Coast	0.0%	94.1%	5.9%	14.9%	76.7%	8.3%
QLD Totals	**24.2%**	**55.8%**	**20.0%**	**14.1%**	**51.3%**	**34.7%**
Western Australia						
The University of Western Australia	8.3%	66.7%	25.0%	4.5%	33.8%	61.7%
Murdoch University	16.7%	83.3%	0.0%	15.7%	58.6%	25.7%
Edith Cowan University	35.7%	57.1%	7.1%	13.0%	63.7%	23.3%
Curtin University of Technology	24.0%	56.0%	20.0%	10.4%	51.4%	38.2%
The University of Notre Dame Australia	0.0%	50.0%	50.0%	6.0%	33.7%	60.2%
WA Totals	**22.0%**	**61.0%**	**16.9%**	**9.5%**	**48.4%**	**42.1%**

	Indigenous Business Students			Non-Indigenous Business Students		
	MSES	HSES	MSES	HSES	MSES	HSES
Australian Capital Territory						
University of Canberra	13.6%	40.9%	45.5%	5.1%	30.7%	64.2%
The Australian National University	33.3%	33.3%	33.3%	3.1%	20.8%	76.2%
ACT Totals	**19.4%**	**38.7%**	**41.9%**	**4.4%**	**27.2%**	**68.5%**
Northern Territory						
Charles Darwin University	33.3%	55.6%	11.1%	11.5%	69.7%	18.9%
NT Totals	**33.3%**	**55.6%**	**11.1%**	**11.5%**	**69.7%**	**18.9%**
Tasmania						
University of Tasmania	53.6%	21.4%	25.0%	26.4%	45.6%	28.0%
TAS Totals	**53.6%**	**21.4%**	**25.0%**	**26.4%**	**45.6%**	**28.0%**
South Australia						
Flinders University	18.2%	63.6%	18.2%	16.7%	60.5%	22.8%
The University of Adelaide	8.3%	50.0%	41.7%	11.7%	44.0%	44.2%
University of South Australia	28.6%	57.1%	14.3%	19.0%	52.6%	28.4%
SA Totals	**21.6%**	**56.9%**	**21.6%**	**16.5%**	**51.3%**	**32.2%**
Multi-State						
Australian Catholic University	15.8%	47.4%	36.8%	10.3%	42.3%	47.4%
MULTI-STATE Totals	**15.8%**	**47.4%**	**36.8%**	**10.3%**	**42.3%**	**47.4%**
TOTAL	**26.6%**	**51.4%**	**22.1%**	**12.8%**	**46.0%**	**41.3%**

Table 18. Percentage of Indigenous and Non-Indigenous Students Retained Across SES Cohorts in Business Schools

	Indigenous Students					Non-Indigenous Students			
	Total Retained Students	% Students Retained	% LSES	% MSES	% HSES	% Retained Students	% LSES	% MSES	% HSES
New South Wales									
University Of Wollongong	16	80%	86%	82%	50%	86%	84%	86%	87%
Western Sydney University	39	85%	77%	85%	100%	82%	83%	83%	80%
Charles Sturt University	57	69%	65%	61%	88%	74%	76%	73%	74%
Macquarie University	17	81%	100%	75%	82%	85%	90%	86%	85%
Southern Cross University	35	76%	71%	81%	100%	73%	67%	75%	74%
The University Of New England	18	78%	64%	89%	100%	76%	79%	76%	73%
University Of New South Wales	22	79%	75%	92%	60%	89%	93%	89%	89%
The University Of Newcastle	40	82%	90%	74%	100%	84%	81%	86%	82%
The University Of Sydney	13	81%	100%	75%	75%	91%	93%	91%	91%
University Of Technology, Sydney	28	72%	67%	74%	73%	88%	86%	88%	88%
NSW Totals	**285**	**77%**	**74%**	**77%**	**80%**	**84%**	**82%**	**84%**	**85%**
Victoria									
Deakin University	36	67%	56%	63%	85%	82%	83%	81%	82%
Federation University Australia	1	20%	33%	0%	0%	71%	70%	70%	79%
La Trobe University	38	79%	77%	79%	82%	84%	86%	83%	83%
Monash University	6	100%	100%	100%	100%	93%	92%	93%	93%
RMIT University	13	65%	0%	70%	60%	86%	86%	87%	86%
Swinburne University Of Technology	12	75%	88%	57%	100%	76%	72%	77%	76%
The University Of Melbourne	8	67%	0%	75%	71%	89%	87%	89%	89%
Victoria University	4	44%	33%	25%	100%	76%	76%	77%	76%
VIC Totals	**118**	**69%**	**66%**	**67%**	**77%**	**84%**	**81%**	**83%**	**85%**

	Indigenous Students				Non-Indigenous Students			
	Total Retained Students	% Students Retained	% LSES	% MSES	% HSES	% Retained Students	% LSES	% MSES	% HSES
Queensland									
James Cook University	38	76%	93%	67%	100%	72%	69%	73%	69%
Central Queensland University	28	55%	63%	50%	0%	74%	74%	75%	72%
University Of Southern Queensland	50	66%	57%	67%	83%	77%	77%	77%	77%
Bond University	6	67%	100%	33%	67%	81%	89%	79%	83%
Griffith University	84	77%	78%	78%	73%	82%	83%	82%	81%
Queensland University Of Technology	61	79%	77%	78%	81%	88%	85%	88%	88%
The University Of Queensland	27	79%	33%	78%	92%	91%	89%	91%	91%
University Of The Sunshine Coast	17	85%	0%	94%	100%	80%	79%	80%	81%
QLD Totals	**311**	**73%**	**70%**	**72%**	**78%**	**83%**	**79%**	**82%**	**86%**
Western Australia									
The University Of Western Australia	12	100%	100%	100%	100%	90%	90%	90%	91%
Murdoch University	6	46%	50%	71%	0%	76%	72%	77%	77%
Edith Cowan University	14	61%	71%	57%	50%	80%	75%	81%	79%
Curtin University Of Technology	25	74%	75%	74%	71%	84%	82%	85%	84%
The University Of Notre Dame Australia	2	67%	0%	100%	50%	84%	82%	86%	84%
WA Totals	**59**	**69%**	**72%**	**73%**	**56%**	**84%**	**79%**	**84%**	**85%**

	Indigenous Students					Non-Indigenous Students			
	Total Retained Students	**% Students Retained**	**% Low-SES**	**% Med-SES**	**% High-SES**	**% Retained Students**	**% Low-SES**	**% Med-SES**	**% High-SES**
Australian Capital Territory									
University Of Canberra	22	76%	100%	100%	63%	83%	86%	84%	83%
The Australian National University	9	90%	100%	100%	75%	93%	100%	94%	93%
ACT Totals	**31**	**79%**	**100%**	**100%**	**65%**	**86%**	**89%**	**86%**	**86%**
Northern Territory									
Charles Darwin University	9	64%	75%	63%	100%	70%	65%	71%	72%
NT Totals	**9**	**64%**	**75%**	**63%**	**100%**	**70%**	**65%**	**71%**	**72%**
Tasmania									
University Of Tasmania	29	57%	63%	38%	70%	52%	50%	53%	53%
TAS Totals	**29**	**57%**	**63%**	**38%**	**70%**	**52%**	**50%**	**53%**	**53%**
South Australia									
Flinders University	11	73%	67%	78%	100%	61%	66%	62%	54%
The University Of Adelaide	12	80%	50%	75%	100%	85%	87%	85%	85%
University Of South Australia	28	74%	57%	80%	100%	83%	83%	83%	82%
SA Totals	**51**	**75%**	**58%**	**78%**	**100%**	**79%**	**81%**	**79%**	**79%**
Multi-State									
Australian Catholic University	19	83%	100%	82%	78%	81%	85%	81%	81%
MULTI Totals	**19**	**83%**	**100%**	**82%**	**78%**	**81%**	**85%**	**81%**	**81%**
TABLE TOTALS	**912**	**73%**	**71%**	**73%**	**77%**	**82%**	**79%**	**82%**	**84%**

Table 19. Ratios (Percentage of Indigenous: Non-Indigenous) Students Retained

	% Students Retained	% LSES	% MSES	% HSES
New South Wales				
University of Wollongong	0.93	1.02	0.95	0.57
Western Sydney University	1.03	0.93	1.03	1.25
Charles Sturt University	0.93	0.85	0.83	1.19
Macquarie University	0.95	1.11	0.87	0.97
Southern Cross University	1.04	1.05	1.09	1.35
The University of New England	1.03	0.81	1.17	1.36
University of New South Wales	0.88	0.80	1.03	0.67
The University of Newcastle	0.97	1.12	0.86	1.22
The University of Sydney	0.89	1.07	0.82	0.83
University of Technology, Sydney	0.81	0.77	0.83	0.82
NSW Totals	**0.91**	**0.90**	**0.92**	**0.94**
Victoria				
Deakin University	0.81	0.67	0.77	1.03
Federation University Australia	0.28	0.48	0.00	0.00
La Trobe University	0.95	0.90	0.95	0.98
Monash University	1.08	1.09	1.07	1.08
RMIT University	0.75	0.00	0.80	0.70
Swinburne University of Technology	0.99	1.21	0.74	1.31
The University of Melbourne	0.75	0.00	0.84	0.80
Victoria University	0.58	0.44	0.33	1.31
VIC Totals	**0.83**	**0.81**	**0.81**	**0.90**
Queensland				
James Cook University	1.05	1.34	0.91	1.45
Central Queensland University	0.74	0.85	0.67	0.00
University of Southern Queensland	0.85	0.75	0.88	1.09
Bond University	0.83	1.12	0.42	0.80
Griffith University	0.94	0.95	0.95	0.90
Queensland University of Technology	0.90	0.90	0.89	0.93
The University of Queensland	0.87	0.38	0.86	1.00
University of the Sunshine Coast	1.07	0.00	1.18	1.23
QLD Totals	**0.88**	**0.88**	**0.88**	**0.92**
Western Australia				
The University of Western Australia	1.11	1.12	1.11	1.10
Murdoch University	0.61	0.70	0.93	0.00
Edith Cowan University	0.76	0.95	0.70	0.63
Curtin University of Technology	0.87	0.92	0.87	0.85
The University of Notre Dame Australia	0.79	0.00	1.16	0.60
WA Totals	**0.82**	**0.91**	**0.87**	**0.65**

	% Students Retained	% LSES	% MSES	% HSES
Australian Capital Territory				
University of Canberra	0.91	1.17	1.20	0.76
The Australian National University	0.97	1.00	1.07	0.81
ACT Totals	**0.92**	**1.13**	**1.16**	**0.75**
Northern Territory				
Charles Darwin University	0.91	1.15	0.89	1.39
NT Totals	**0.91**	**1.15**	**0.89**	**1.39**
Tasmania				
University of Tasmania	1.10	1.26	0.71	1.32
TAS Totals	**1.10**	**1.26**	**0.71**	**1.32**
South Australia				
Flinders University	1.21	1.01	1.26	1.84
The University of Adelaide	0.94	0.57	0.88	1.18
University of South Australia	0.89	0.69	0.96	1.22
SA Totals	**0.89**	**0.69**	**0.96**	**1.22**
Multi-State				
Australian Catholic University	1.02	1.18	1.01	0.97
Multi-State Totals	**1.02**	**1.18**	**1.01**	**0.97**

Table 20. Percentage of Indigenous & Non-Indigenous Students Retained by Rank of Most Retained Indigenous Students

	Indigenous Students Retained %	Non-Indigenous Students Retained %
Monash University	100%	93%
The University of Western Australia	100%	90%
The Australian National University	90%	93%
University of the Sunshine Coast	85%	80%
Western Sydney University	85%	82%
Australian Catholic University	83%	81%
The University of Newcastle	82%	84%
The University of Sydney	81%	91%
Macquarie University	81%	85%
University of Wollongong	80%	86%
The University of Adelaide	80%	85%
The University of Queensland	79%	91%
Queensland University of Technology	79%	88%
La Trobe University	79%	84%
University of New South Wales	79%	89%
The University of New England	78%	76%
Griffith University	77%	82%
Southern Cross University	76%	73%
James Cook University	76%	72%
University of Canberra	76%	83%
Swinburne University of Technology	75%	76%
University of South Australia	74%	83%
Curtin University of Technology	74%	84%
Flinders University	73%	61%
University of Technology, Sydney	72%	88%
Charles Sturt University	69%	74%
Deakin University	67%	82%
The University of Melbourne	67%	89%
Bond University	67%	81%
The University of Notre Dame Australia	67%	84%
University of Southern Queensland	66%	77%
RMIT University	65%	86%
Charles Darwin University	64%	70%
Edith Cowan University	61%	80%
University of Tasmania	57%	52%
Central Queensland University	55%	74%
Murdoch University	46%	76%
Victoria University	44%	76%
Federation University Australia	20%	71%
Average	**73%**	**82%**

Table 21. Retention and Pass Rates Compared

	Indigenous Students Retained %	Non-Indigenous Students Retained %	Ratio Students Retained %	Pass Rate Indigenous	Pass Rate Non-Indigenous	Ratio Pass Rate
New South Wales						
University of Wollongong	80%	86%	0.93	57%	68%	0.83
Western Sydney University	85%	82%	1.03	57%	62%	0.92
Charles Sturt University	69%	74%	0.93	52%	68%	0.76
Macquarie University	81%	85%	0.95	60%	73%	0.83
Southern Cross University	76%	73%	1.04	52%	63%	0.83
The University of New England	78%	76%	1.03	67%	62%	1.08
University of New South Wales	79%	89%	0.88	65%	87%	0.75
The University of Newcastle	82%	84%	0.97	53%	62%	0.85
The University of Sydney	81%	91%	0.89	60%	82%	0.74
University of Technology, Sydney	72%	88%	0.81	72%	78%	0.92
NSW Totals	**77%**	**84%**	**0.91**	**58%**	**71%**	**0.81**
Victoria						
Deakin University	67%	82%	0.81	48%	60%	0.80
Federation University Australia	20%	71%	0.28	71%	69%	1.04
La Trobe University	79%	84%	0.95	61%	68%	0.90
Monash University	100%	93%	1.08	56%	73%	0.76
RMIT University	65%	86%	0.75	58%	73%	0.79
Swinburne University of Technology	75%	76%	0.99	54%	66%	0.81
The University of Melbourne	67%	89%	0.75	67%	83%	0.81
Victoria University	44%	76%	0.58	43%	60%	0.71
VIC Totals	**69%**	**84%**	**0.83**	**55%**	**69%**	**0.80**
Queensland						
James Cook University	76%	72%	1.05	45%	61%	0.74
Central Queensland University	55%	74%	0.74	64%	68%	0.94
University of Southern Queensland	66%	77%	0.85	49%	64%	0.76
Bond University	67%	81%	0.83	60%	76%	0.79
Griffith University	77%	82%	0.94	62%	67%	0.92
Queensland University of Technology	79%	88%	0.90	55%	69%	0.80
The University of Queensland	79%	91%	0.87	62%	72%	0.86
University of the Sunshine Coast	85%	80%	1.07	74%	71%	1.04
QLD Totals	**73%**	**83%**	**0.88**	**57%**	**68%**	**0.83**
Western Australia						
The University of Western Australia	100%	90%	1.11	56%	78%	0.72
Murdoch University	46%	76%	0.61	54%	59%	0.92
Edith Cowan University	61%	80%	0.76	46%	64%	0.72
Curtin University of Technology	74%	84%	0.87	56%	65%	0.86
The University of Notre Dame Australia	67%	84%	0.79	100%	65%	1.54
WA Totals	**69%**	**84%**	**0.82**	**54%**	**67%**	**0.80**

	Indigenous Students Retained %	Non-Indigenous Students Retained %	Ratio Students Retained %	Pass Rate Indigenous	Pass Rate Non-Indigenous	Ratio Pass Rate
Australian Capital Territory						
University of Canberra	76%	83%	0.91	58%	66%	0.88
The Australian National University	90%	93%	0.97	70%	76%	0.93
ACT Totals	**79%**	**86%**	**0.92**	**60%**	**69%**	**0.88**
Northern Territory						
Charles Darwin University	64%	70%	0.91	50%	62%	0.80
NT Totals	64%	70%	0.91	50%	62%	0.80
Tasmania						
University of Tasmania	57%	52%	1.10	54%	64%	0.80
TAS Totals	**57%**	**52%**	**1.10**	**54%**	**64%**	**0.80**
South Australia						
Flinders University	73%	61%	1.21	54%	69%	0.80
The University of Adelaide	80%	85%	0.94	55%	70%	0.80
University of South Australia	74%	83%	0.89	54%	68%	0.80
SA Totals	**75%**	**79%**		**54%**	**68%**	**0.80**
Multi-State						
Australian Catholic University	83%	81%	1.02	58%	62%	0.80
Multi-State Totals	**83%**	**81%**	**1.02**	**58%**	**62%**	**0.80**
Total	**73%**	**82%**	**0.89**	**59%**	**68%**	**0.80**

Table 22. Hypothetical* Retention Rates for Indigenous Students

	Hypothetical*	Actual*	Hypothetical* / Actual*
New South Wales			
University of Wollongong	74%	80%	0.9
Western Sydney University	86%	85%	1.0
Charles Sturt University	70%	69%	1.0
Macquarie University	81%	81%	1.0
Southern Cross University	83%	76%	1.1
The University of New England	86%	78%	1.1
University of New South Wales	72%	79%	0.9
The University of Newcastle	83%	82%	1.0
The University of Sydney	76%	81%	0.9
University of Technology, Sydney	73%	72%	1.0
NSW Totals	**78%**	**77%**	**1.0**
Victoria			
Deakin University	72%	67%	1.1
Federation University Australia	6%	20%	0.3
La Trobe University	79%	79%	1.0
Monash University	100%	100%	1.0
RMIT University	57%	65%	0.9
Swinburne University of Technology	77%	75%	1.0
The University of Melbourne	68%	67%	1.0
Victoria University	47%	44%	1.1
VIC Totals	**71%**	**69%**	**1.0**
Queensland			
James Cook University	76%	76%	1.0
Central Queensland University	47%	55%	0.8
University of Southern Queensland	68%	66%	1.0
Bond University	46%	67%	0.7
Griffith University	77%	77%	1.0
Queensland University of Technology	80%	79%	1.0
The University of Queensland	82%	79%	1.0
University of the Sunshine Coast	81%	85%	0.9
QLD Totals	**74%**	**73%**	**1.0**
Western Australia			
The University of Western Australia	100%	100%	1.0
Murdoch University	50%	46%	1.1
Edith Cowan University	57%	61%	0.9
Curtin University of Technology	73%	74%	1.0
The University of Notre Dame Australia	64%	67%	1.0
WA Totals	**66%**	**69%**	**0.9**

*Based on the Non-Indigenous Distribution of Students across SES Cohorts

	Hypothetical*	Actual*	Hypothetical* / Actual*
Australian Capital Territory			
University of Canberra	76%	76%	1.0
The Australian National University	81%	90%	0.9
ACT Totals	**76%**	**79%**	**1.0**
Northern Territory			
Charles Darwin University	71%	64%	1.1
NT Totals	**71%**	**64%**	**1.1**
Tasmania			
University of Tasmania	53%	57%	0.9
TAS Totals	**53%**	**57%**	**0.9**
South Australia			
Flinders University	81%	73%	1.1
The University of Adelaide	83%	80%	1.0
University of South Australia	81%	74%	1.1
SA Totals	**82%**	**75%**	**1.1**
Multi-State			
Australian Catholic University	82%	83%	1.0
Multi-State Totals	**82%**	**83%**	**1.0**
Total	**74%**	**73%**	**1.0**

*Based on the Non-Indigenous Distribution of Students across SES Cohorts

Table 23. Female Pass Rates for Indigenous and Non-Indigenous Business Students

	Indigenous					Non-Indigenous		
	% Of Indigenous Students Who Are Female	% Of Non-Indigenous Students Who Are Female	Pass Rate Females	Pass Rate Males	Pass Rate: Female / Male	Pass Rate Females	Pass Rate Males	Pass Rate: Female / Male
New South Wales								
University Of Wollongong	54.1%	44.8%	30%	27%	1.10	32%	36%	0.87
Western Sydney University	48.1%	43.5%	27%	30%	0.92	28%	34%	0.82
Charles Sturt University	62.9%	62.5%	33%	19%	1.71	43%	25%	1.74
Macquarie University	45.0%	44.8%	30%	30%	1.00	34%	39%	0.86
Southern Cross University	73.1%	63.6%	40%	12%	3.50	40%	23%	1.79
The University Of New England	43.3%	52.5%	33%	33%	1.00	31%	31%	1.01
University Of New South Wales	38.5%	43.1%	23%	42%	0.55	38%	49%	0.77
The University Of Newcastle	61.4%	47.6%	36%	17%	2.08	31%	31%	0.99
The University Of Sydney	53.3%	44.6%	27%	33%	0.80	37%	45%	0.83
University Of Technology, Sydney	56.6%	49.6%	40%	30%	1.31	40%	38%	1.05
NSW Totals	**55.8%**	**47.5%**	**33%**	**25%**	**1.31**	**35%**	**37%**	**0.94**
Victoria								
Deakin University	69.0%	41.6%	33%	14%	2.33	26%	34%	0.75
Federation University Australia	28.6%	43.6%	14%	57%	0.25	32%	37%	0.85
La Trobe University	38.9%	44.7%	28%	33%	0.83	32%	36%	0.89
Monash University	44.4%	40.3%	33%	22%	1.50	30%	43%	0.71
RMIT University	29.0%	45.3%	16%	42%	0.38	34%	39%	0.89
Swinburne University Of Technology	63.4%	48.5%	37%	17%	2.14	33%	34%	0.98
The University Of Melbourne	11.1%	38.7%	11%	56%	0.20	32%	51%	0.63
Victoria University	28.6%	44.7%	14%	29%	0.50	28%	32%	0.87
VIC Totals	**48.8%**	**43.7%**	**27%**	**27%**	**1.00**	**31%**	**38%**	**0.82**
Queensland								
James Cook University	76.9%	57.7%	36%	9%	4.00	37%	23%	1.10
Central Queensland University	63.9%	69.1%	36%	28%	1.30	48%	20%	0.90
University Of Southern Queensland	62.0%	62.1%	32%	17%	1.81	41%	24%	1.70
Bond University	46.7%	38.3%	33%	27%	1.25	31%	45%	1.00
Griffith University	46.2%	50.8%	31%	31%	1.00	35%	31%	3.50
Queensland University Of Technology	49.3%	45.9%	29%	26%	1.13	33%	36%	1.00
The University Of Queensland	51.1%	48.2%	33%	29%	1.15	36%	37%	0.50
University Of The Sunshine Coast	66.7%	55.6%	52%	22%	2.33	42%	29%	2.10
QLD Totals	**55.8%**	**51.7%**	**33%**	**24%**	**1.37**	**36%**	**32%**	**0.80**

	Indigenous					Non-Indigenous		
	% Of Indigenous Students Who Are Female	% Of Non-Indigenous Students Who Are Female	Pass Rate Females	Pass Rate Males	Pass Rate: Female / Male	Pass Rate Females	Pass Rate Males	Pass Rate: Female / Male
Western Australia								
The University of Western Australia	25.0%	39.3%	19%	38%	0.50	32%	46%	1.10
Murdoch University	62.5%	53.9%	38%	17%	2.25	34%	25%	0.90
Edith Cowan University	62.9%	59.7%	26%	20%	1.29	40%	24%	1.70
Curtin University of Technology	48.9%	46.5%	29%	27%	1.08	31%	33%	1.00
The University of Notre Dame Australia	33.3%	52.8%	33%	67%	0.50	36%	29%	3.50
WA Totals	**52.0%**	**48.2%**	**28%**	**25%**	**1.13**	**33%**	**34%**	**1.00**
Australian Capital Territory								
University of Canberra	44.7%	47.1%	24%	34%	0.69	32%	34%	1.10
The Australian National University	50.0%	41.3%	20%	50%	0.40	32%	43%	0.90
ACT Totals	**45.8%**	**45.3%**	**23%**	**38%**	**0.61**	**32%**	**37%**	**1.70**
Northern Territory								
Charles Darwin University	75.0%	61.3%	42%	8%	5.00	38%	24%	1.10
NT Totals	**75.0%**	**61.3%**	**42%**	**8%**	**5.00**	**38%**	**24%**	**1.10**
Tasmania								
University Of Tasmania	59.2%	58.7%	27%	27%	1.00	39%	25%	1.00
TAS Totals	**59.2%**	**58.7%**	**27%**	**27%**	**1.00**	**39%**	**25%**	**1.00**
South Australia								
Flinders University	23.1%	46.9%	23%	31%	0.75	34%	35%	0.50
The University of Adelaide	63.6%	36.4%	36%	18%	2.00	27%	43%	2.10
University Of South Australia	70.8%	54.0%	33%	21%	1.60	38%	30%	0.80
SA Totals	**61.1%**	**48.1%**	**32%**	**22%**	**1.44**	**34%**	**34%**	**1.30**
Multi-State								
Australian Catholic University	26.3%	48.9%	16%	42%	0.38	31%	31%	1.10
MULTI-STATE Totals	**26.3%**	**48.9%**	**16%**	**42%**	**0.38**	**31%**	**31%**	**1.10**
Average	50.2%	49.0%	29.5%	29.0%	1.02	34.5%	33.9%	1.02

Table 24. Female Relative Pass Rates

	Relative Pass Rates[a]	Female Relative Pass Rates[b]
New South Wales		
University Of Wollongong	1.26	0.93
Western Sydney University	1.12	0.98
Charles Sturt University	0.98	0.76
Macquarie University	1.16	0.89
Southern Cross University	1.95	1.00
The University Of New England	0.99	1.08
University Of New South Wales	0.70	0.61
The University Of Newcastle	2.11	1.15
The University Of Sydney	0.96	0.72
University Of Technology, Sydney	1.25	0.99
NSW Totals	**1.39**	**0.94**
Victoria		
Deakin University	3.10	1.30
Federation University Australia	0.30	0.45
La Trobe University	0.94	0.87
Monash University	2.13	1.10
RMIT University	0.43	0.47
Swinburne University Of Technology	2.19	1.12
The University Of Melbourne	0.32	0.35
Victoria University	0.57	0.51
VIC Totals	**1.23**	**0.89**
Queensland		
James Cook University	3.64	0.96
Central Queensland University	1.44	0.75
University Of Southern Queensland	1.07	0.78
Bond University	1.25	1.08
Griffith University	0.29	0.87
Queensland University Of Technology	1.13	0.89
The University Of Queensland	2.31	0.93
University Of The Sunshine Coast	1.11	1.24
QLD Totals	**1.72**	**0.90**
Western Australia		
The University Of Western Australia	0.45	0.58
Murdoch University	2.50	1.11
Edith Cowan University	0.76	0.65
Curtin University Of Technology	1.08	0.92
The University Of Notre Dame Australia	0.14	0.93
WA Totals	**1.13**	**0.85**

a. Pass Rates: (Indigenous Female / Indigenous Male) / (Non-Indigenous Female / Non-Indigenous Male) Business School Pass Rates
b. Female Pass Rates: (Indigenous Female / Non-Indigenous Female) Business School Pass Rates)

	Relative Pass Rates[a]	Female Relative Pass Rates[b]
Australian Capital Territory		
University of Canberra	0.63	0.74
The Australian National University	0.44	0.62
ACT Totals	**0.36**	**0.71**
Northern Territory		
Charles Darwin University	4.55	1.10
NT Totals	**4.55**	**1.10**
Tasmania		
University of Tasmania	1.00	0.69
TAS Totals	**1.00**	**0.69**
South Australia		
Flinders University	1.50	0.68
The University of Adelaide	0.95	1.35
University of South Australia	2.00	0.88
SA Totals	**1.11**	**0.93**
Multi-State		
Australian Catholic University	0.34	0.51
MULTI-STATE Totals	**0.34**	**0.51**
Average	**1.00**	**0.86**

a. Pass Rates: (Indigenous Female / Indigenous Male) / (Non-Indigenous Female / Non-Indigenous Male) Business School Pass Rates
b Female Pass Rates: (Indigenous Female / Non-Indigenous Female) Business School Pass Rates

Table 25. Gender: Ranking Institution by Indigenous Female/Male Relative Pass Rates

	(Indigenous Female / Male) / (Non-Indigenous Female / Male) Pass Rates	Indigenous Female / Non-Indigenous Female Pass Rates
The University of Adelaide	0.95	1.35
Deakin University	3.10	1.30
University of the Sunshine Coast	1.11	1.24
The University of Newcastle	2.11	1.15
Swinburne University of Technology	2.19	1.12
Murdoch University	2.50	1.11
Charles Darwin University	4.55	1.10
Monash University	2.13	1.10
Bond University	1.25	1.08
The University of New England	0.99	1.08
Southern Cross University	1.95	1.00
University of Technology, Sydney	1.25	0.99
Western Sydney University	1.12	0.98
James Cook University	3.64	0.96
University of Wollongong	1.26	0.93
The University of Queensland	2.31	0.93
The University of Notre Dame Australia	0.14	0.93
Curtin University of Technology	1.08	0.92
Queensland University of Technology	1.13	0.89
Macquarie University	1.16	0.89
University of South Australia	2.00	0.88
La Trobe University	0.94	0.87
Griffith University	0.29	0.87
University of Southern Queensland	1.07	0.78
Charles Sturt University	0.98	0.76
Central Queensland University	1.44	0.75
University of Canberra	0.63	0.74
The University of Sydney	0.96	0.72
University of Tasmania	1.00	0.69
Flinders University	1.50	0.68
Edith Cowan University	0.76	0.65
The Australian National University	0.44	0.62
University of New South Wales	0.70	0.61
The University of Western Australia	0.45	0.58
Victoria University	0.57	0.51
Australian Catholic University	0.34	0.51
RMIT University	0.43	0.47
Federation University Australia	0.30	0.45
The University of Melbourne	0.32	0.35

Table 26. Age Distribution of Indigenous Students in Australian Business Schools

	Total Indigenous Business Students	16-20	16-20	21-25	21-25	26-30	26-30	31-40	31-40	41 and Over	41 and Over	Indigenous Total Pass Rate	% of Population 40 and Below
	All	% of Population	% Passed	% of Population	% Passed	% of Population	% Passed	% of Population	% Passed	% of Population	% Passed		
New South Wales													
University of Wollongong	37	56.8%	52%	24.3%	56%	2.7%	100%	5.4%	50.0%	10.8%	75%	56.76%	89.2%
Western Sydney University	81	56.8%	52%	23.5%	63%	13.6%	55%	4.9%	100.0%	1.2%	0%	56.79%	98.8%
Charles Sturt University	89	18.0%	50%	22.5%	50%	20.2%	67%	27.0%	50.0%	12.4%	36%	51.69%	87.6%
Macquarie University	40	52.5%	62%	40.0%	56%	7.5%	67%	0.0%	0.0%	0.0%	0%	60.00%	100.0%
Southern Cross University	52	50.0%	50%	28.8%	47%	7.7%	25%	5.8%	100.0%	7.7%	100%	51.92%	92.3%
The University of New England	30	40.0%	58%	13.3%	75%	10.0%	100%	30.0%	66.7%	6.7%	50%	66.67%	93.3%
University of New South Wales	26	76.9%	65%	19.2%	80%	3.8%	0%	0.0%	0.0%	0.0%	0%	65.38%	100.0%
The University of Newcastle	70	42.9%	53%	35.7%	52%	10.0%	43%	7.1%	80.0%	4.3%	33%	52.86%	95.7%
The University of Sydney	15	80.0%	50%	20.0%	100%	0.0%	0%	0.0%	0.0%	0.0%	0%	60.00%	100.0%
University of Technology, Sydney	53	45.3%	63%	18.9%	70%	15.1%	75%	11.3%	83.3%	9.4%	83%	71.70%	90.6%
NSW Totals	**493**	**46.2%**	**55%**	**25.6%**	**58%**	**11.4%**	**61%**	**10.8%**	**66.0%**	**6.1%**	**59%**	**57.81%**	**93.9%**
Victoria													
Deakin University	42	19.0%	50%	23.8%	60%	19.0%	50%	26.2%	27.3%	11.9%	60%	47.62%	88.1%
Federation University Australia	7	85.7%	67%	0.0%	0%	0.0%	0%	14.3%	100.0%	0.0%	0%	71.43%	100.0%
La Trobe University	18	61.1%	55%	33.3%	67%	0.0%	0%	5.6%	100.0%	0.0%	0%	61.11%	100.0%
Monash University	9	55.6%	40%	11.1%	100%	11.1%	100%	22.2%	50.0%	0.0%	0%	55.56%	100.0%
RMIT University	31	64.5%	55%	19.4%	67%	16.1%	60%	0.0%	0.0%	0.0%	0%	58.06%	100.0%
Swinburne University of Technology	41	0.0%	0%	34.1%	71%	14.6%	83%	22.0%	44.4%	29.3%	27%	53.66%	70.7%
The University of Melbourne	9	55.6%	60%	33.3%	67%	11.1%	100%	0.0%	0.0%	0.0%	0%	66.67%	100.0%
Victoria University	7	57.1%	50%	0.0%	0%	0.0%	0%	42.9%	33.3%	0.0%	0%	42.86%	100.0%
VIC Totals	**164**	**36.0%**	**54%**	**24.4%**	**68%**	**12.8%**	**67%**	**16.5%**	**40.7%**	**10.4%**	**38%**	**54.88%**	**89.6%**

	Total Indigenous Business Students	16-20	16-20	21-25	21-25	26-30	26-30	31-40	31-40	41 and Over	41 and Over	Indigenous Total Pass Rate	% of Population 40 and Below
	All	% of Population	% Passed	% of Population	% Passed	% of Population	% Passed	% of Population	% Passed	% of Population	% Passed		
Queensland													
James Cook University	78	32.1%	40%	37.2%	52%	11.5%	44%	6.4%	40.0%	12.8%	40%	44.87%	87.2%
Central Queensland University	36	16.7%	83%	27.8%	60%	19.4%	43%	19.4%	71.4%	16.7%	67%	63.89%	83.3%
University of Southern Queensland	92	12.0%	45%	22.8%	52%	23.9%	36%	26.1%	58.3%	15.2%	50%	48.91%	84.8%
Bond University	15	86.7%	62%	13.3%	50%	0.0%	0%	0.0%	0.0%	0.0%	0%	60.00%	100.0%
Griffith University	156	48.1%	57%	28.8%	62%	6.4%	80%	7.7%	66.7%	9.0%	64%	61.54%	91.0%
Queensland University of Technology	146	62.3%	53%	21.2%	61%	6.2%	67%	7.5%	54.5%	2.7%	50%	55.48%	97.3%
The University of Queensland	45	64.4%	62%	31.1%	57%	2.2%	100%	2.2%	100.0%	0.0%	0%	62.22%	100.0%
University of the Sunshine Coast	27	51.9%	64%	22.2%	83%	3.7%	100%	18.5%	80.0%	3.7%	100%	74.07%	96.3%
QLD Totals	**595**	**44.4%**	**55%**	**26.6%**	**59%**	**9.9%**	**53%**	**10.9%**	**61.5%**	**8.2%**	**55%**	**56.64%**	**91.8%**
Western Australia													
The University of Western Australia	16	68.8%	55%	31.3%	60%	0.0%	0%	0.0%	0.0%	0.0%	0%	56.25%	100.0%
Murdoch University	24	25.0%	50%	37.5%	44%	12.5%	67%	8.3%	100.0%	16.7%	50%	54.17%	83.3%
Edith Cowan University	35	25.7%	33%	20.0%	57%	11.4%	50%	25.7%	44.4%	17.1%	50%	45.71%	82.9%
Curtin University of Technology	45	55.6%	48%	33.3%	73%	6.7%	33%	2.2%	0.0%	2.2%	100%	55.56%	97.8%
The University of Notre Dame Australia	3	66.7%	100%	33.3%	100%	0.0%	0%	0.0%	0.0%	0.0%	0%	100.00%	100.0%
WA Totals	**123**	**43.1%**	**49%**	**30.1%**	**62%**	**8.1%**	**50%**	**9.8%**	**50.0%**	**8.9%**	**55%**	**53.66%**	**91.1%**
Australian Capital Territory													
University of Canberra	38	52.6%	50%	21.1%	75%	7.9%	67%	13.2%	60.0%	5.3%	50%	57.89%	94.7%
The Australian National University	10	0.0%	0%	50.0%	60%	10.0%	100%	20.0%	100.0%	20.0%	50%	70.00%	80.0%
ACT Totals	**48**	**41.7%**	**50%**	**27.1%**	**69%**	**8.3%**	**75%**	**14.6%**	**71.4%**	**8.3%**	**50%**	**60.42%**	**91.7%**
Northern Territory													
Charles Darwin University	24	29.2%	43%	16.7%	50%	12.5%	33%	16.7%	75.0%	25.0%	50%	50.00%	75.0%
NT Totals	**24**	**29.2%**	**43%**	**16.7%**	**50%**	**12.5%**	**33%**	**16.7%**	**75.0%**	**25.0%**	**50%**	**50.00%**	**75.0%**

| | Total Indigenous Business Students | 16-20 | 16-20 | 21-25 | 21-25 | 26-30 | 26-30 | 31-40 | 31-40 | 41 and Over | 41 and Over | Indigenous Total Pass Rate | % of Population 40 and Below |
	All	% of Population	% Passed	% of Population	% Passed	% of Population	% Passed	% of Population	% Passed	% of Population	% Passed		
South Australia													
Flinders University	13	38.5%	60%	30.8%	75%	30.8%	25%	0.0%	0.0%	0.0%	0%	53.85%	100.0%
The University of Adelaide	11	9.1%	0%	36.4%	100%	9.1%	100%	27.3%	33.3%	18.2%	0%	54.55%	81.8%
University of South Australia	48	33.3%	50%	27.1%	69%	12.5%	83%	6.3%	33.3%	20.8%	30%	54.17%	79.2%
SA Totals	**72**	**30.6%**	**50%**	**29.2%**	**76%**	**15.3%**	**64%**	**8.3%**	**33.3%**	**16.7%**	**25%**	**54.17%**	**83.3%**
Multi-State													
Australian Catholic University	19	57.9%	55%	15.8%	67%	0.0%	0%	10.5%	100.0%	15.8%	33%	57.89%	84.2%
MULTI-STATE Totals	**19**	**57.9%**	**55%**	**15.8%**	**67%**	**0.0%**	**0%**	**10.5%**	**100.0%**	**15.8%**	**33%**	**57.89%**	**84.2%**
Average		**45.3%**	**51.4%**	**25.3%**	**63.2%**	**9.3%**	**51.6%**	**11.8%**	**49.6%**	**8.4%**	**34.9%**	**58.3%**	**91.6%**

Table 27. Age Distribution of Non-Indigenous and Torres Islander Students in Australian Business Schools

	Total Indigenous Business Students	16-20		21-25		26-30		31-40		41 and Over		Non-Indigenous Pass Rate	% of Population 40 and Below
	All	% of Population	% Passed	% of Population	% Passed	% of Population	% Passed	% of Population	% Passed	% of Population	% Passed		
New South Wales													
University of Wollongong	3475	61.9%	66%	28%	73%	4.2%	66%	1.7%	68%	3.7%	76%	68%	96.3%
Western Sydney University	9771	51.7%	58%	34%	65%	7.2%	66%	3.3%	69%	3.4%	69%	62%	96.6%
Charles Sturt University	2982	20.1%	70%	28%	63%	18.0%	69%	13.3%	68%	20.5%	71%	68%	79.5%
Macquarie University	4837	61.8%	73%	30%	72%	4.5%	72%	1.8%	72%	1.7%	69%	73%	98.3%
Southern Cross University	1834	36.1%	63%	26%	63%	15.0%	61%	8.6%	61%	14.5%	66%	63%	85.5%
The University of New England	1570	20.8%	62%	27%	56%	16.4%	61%	13.1%	67%	22.9%	64%	62%	77.1%
University of New South Wales	5870	74.5%	88%	24%	87%	0.8%	65%	0.3%	76%	0.2%	86%	87%	99.8%
The University of Newcastle	2562	46.3%	61%	38%	63%	8.0%	63%	3.2%	67%	4.5%	70%	62%	95.5%
The University of Sydney	2983	66.0%	81%	32%	84%	1.4%	61%	0.4%	65%	0.6%	63%	82%	99.4%
University of Technology, Sydney	6803	63.3%	78%	30%	78%	4.1%	73%	1.3%	74%	0.8%	71%	78%	99.2%
NSW Totals	**42687**	**55.3%**	**72%**	**30%**	**72%**	**6.4%**	**66%**	**3.3%**	**68%**	**4.6%**	**69%**	**71%**	**95.4%**
Victoria													
Deakin University	7101	44.9%	60%	34%	59%	9.9%	59%	4.8%	60%	6.4%	62%	60%	93.6%
Federation University Australia	1221	32.8%	59%	24%	66%	10.2%	72%	7.5%	79%	25.1%	82%	69%	74.9%
La Trobe University	4954	60.2%	66%	32%	69%	4.1%	69%	1.6%	76%	2.0%	80%	68%	98.0%
Monash University	6994	66.9%	71%	30%	78%	1.9%	78%	0.8%	80%	0.9%	79%	73%	99.1%
RMIT University	6542	62.5%	72%	31%	74%	3.9%	76%	1.6%	84%	1.1%	80%	73%	98.9%
Swinburne University of Technology	7938	21.9%	66%	34%	66%	17.3%	66%	10.3%	69%	16.6%	66%	66%	83.4%
The University of Melbourne	3424	83.5%	83%	15%	83%	0.8%	81%	0.2%	90%	0.1%	67%	83%	99.9%
Victoria University	2784	40.8%	56%	39%	63%	9.8%	64%	4.4%	66%	6.4%	62%	60%	93.6%
VIC Totals	**40958**	**51.5%**	**69%**	**31%**	**69%**	**7.5%**	**66%**	**3.9%**	**69%**	**6.1%**	**69%**	**69%**	**93.9%**

	Total Indigenous Business Students	16-20	16-20	21-25	21-25	26-30	26-30	31-40	31-40	41 and Over	41 and Over	Non-Indigenous Pass Rate	% of Population 40 and Below
	All	% of Population	% Passed	% of Population	% Passed	% of Population	% Passed	% of Population	% Passed	% of Population	% Passed		
Queensland													
James Cook University	1881	53.9%	59%	27%	60%	6.6%	62%	4.9%	67%	8.0%	74%	61%	92.0%
Central Queensland University	1941	31.1%	61%	24%	65%	18.5%	73%	11.1%	75%	15.5%	77%	68%	84.5%
University of Southern Queensland	2990	25.0%	61%	25%	62%	20.2%	66%	12.9%	67%	16.9%	73%	64%	83.1%
Bond University	460	64.1%	76%	25%	76%	3.7%	71%	2.6%	80%	4.1%	73%	76%	95.9%
Griffith University	7962	58.0%	63%	26%	70%	8.3%	72%	3.5%	76%	4.7%	77%	67%	95.3%
Queensland University of Technology	8135	59.6%	70%	29%	67%	6.1%	69%	2.2%	69%	2.7%	81%	69%	97.3%
The University of Queensland	5673	67.0%	72%	30%	73%	2.0%	69%	0.3%	74%	0.5%	64%	72%	99.5%
University of the Sunshine Coast	1419	56.9%	67%	26%	74%	6.5%	74%	3.2%	82%	7.0%	84%	71%	93.0%
QLD Totals	**30461**	**54.9%**	**67%**	**27%**	**68%**	**8.1%**	**69%**	**4.0%**	**72%**	**5.6%**	**76%**	**68%**	**94.4%**
Western Australia													
The University of Western Australia	3299	72.4%	79%	24%	77%	2.2%	67%	0.5%	79%	0.8%	88%	78%	99.2%
Murdoch University	1165	36.2%	57%	35%	58%	12.7%	59%	7.3%	67%	8.8%	66%	59%	91.2%
Edith Cowan University	2466	41.1%	63%	30%	62%	12.4%	65%	6.6%	70%	9.6%	68%	64%	90.4%
Curtin University of Technology	6681	55.0%	63%	28%	64%	8.5%	67%	4.0%	72%	4.6%	73%	65%	95.4%
The University of Notre Dame Australia	1150	60.3%	63%	35%	67%	2.4%	79%	0.7%	69%	1.6%	60%	65%	98.4%
WA Totals	**14761**	**55.5%**	**67%**	**29%**	**66%**	**7.6%**	**66%**	**3.7%**	**71%**	**4.7%**	**70%**	**67%**	**95.3%**
Australian Capital Territory													
University of Canberra	2713	44.3%	64%	37%	67%	9.7%	64%	3.9%	71%	5.1%	75%	66%	94.9%
The Australian National University	1185	67.1%	73%	29%	81%	2.1%	72%	0.8%	86%	0.8%	83%	76%	99.2%
ACT Totals	**3898**	**51.2%**	**68%**	**35%**	**70%**	**7.4%**	**64%**	**3.0%**	**72%**	**3.8%**	**76%**	**69%**	**96.2%**
Northern Territory													
Charles Darwin University	362	23.5%	65%	31%	59%	13.8%	56%	12.7%	68%	18.5%	62%	62%	81.5%
NT Totals	**362**	**23.5%**	**65%**	**31%**	**59%**	**13.8%**	**56%**	**12.7%**	**68%**	**18.5%**	**62%**	**62%**	**81.5%**

	Total Indigenous Business Students	16-20	16-20	21-25	21-25	26-30	26-30	31-40	31-40	41 and Over	41 and Over	Non-Indigenous Pass Rate	% of Population 40 and Below
	All	% of Population	% Passed	% of Population	% Passed	% of Population	% Passed	% of Population	% Passed	% of Population	% Passed		
Tasmania													
University of Tasmania	3277	37.5%	65%	19%	62%	9.3%	53%	6.6%	61%	27.6%	66%	64%	72.4%
TAS Totals	**3277**	**37.5%**	**65%**	**19%**	**62%**	**9.3%**	**53%**	**6.6%**	**61%**	**27.6%**	**66%**	**64%**	**72.4%**
South Australia													
Flinders University	1364	47.1%	68%	31%	68%	9.1%	65%	3.8%	79%	9.1%	75%	69%	90.9%
The University of Adelaide	2312	66.1%	70%	27%	67%	4.1%	69%	1.4%	86%	1.6%	79%	70%	98.4%
University of South Australia	4834	40.4%	65%	27%	67%	11.8%	67%	8.2%	72%	12.7%	75%	68%	87.3%
SA Totals	**8510**	**48.5%**	**67%**	**28%**	**67%**	**9.3%**	**67%**	**5.6%**	**74%**	**9.1%**	**75%**	**68%**	**90.9%**
Multi-State													
Australian Catholic University	2268	58.0%	60%	33%	64%	4.7%	67%	2.4%	65%	1.9%	69%	62%	98.1%
MULTI-STATE Totals	**2268**	**58.0%**	**60%**	**33%**	**64%**	**4.7%**	**67%**	**2.4%**	**65%**	**1.9%**	**69%**	**62%**	**98.1%**
Average		**53.2%**	**69.1%**	**29.5%**	**69.0%**	**7.4%**	**66.6%**	**6.3%**	**69.6%**	**3.6%**	**73.9%**	**69.0%**	**92.7%**

Table 28. Ratios of Aboriginal and Torres Islander Students to Non-Indigenous Students

	16-20 % of Population	16-20 % Passed	21-25 % of Population	21-25 % Passed	26-30 % of Population	26-30 % Passed	31-40 % of Population	31-40 % Passed	41 and Over % of Population	41 and Over % Passed	Indigenous Total % of Passed	% of Population 40 and Below
New South Wales												
University of Wollongong	0.92	0.79	0.85	0.76	0.64	1.52	3.18	0.74	2.93	0.99	0.83	0.93
Western Sydney University	1.10	0.90	0.68	0.98	1.88	0.83	1.49	1.44	0.36	0.00	0.92	1.02
Charles Sturt University	0.90	0.71	0.80	0.79	1.12	0.97	2.03	0.73	0.60	0.51	0.76	1.10
Macquarie University	0.85	0.85	1.32	0.78	1.66	0.93	0.00	0.00	0.00	0.00	0.83	1.02
Southern Cross University	1.39	0.79	1.12	0.74	0.51	0.41	0.67	1.64	0.53	1.51	0.83	1.08
The University of New England	1.92	0.94	0.50	1.34	0.61	1.63	2.29	1.00	0.29	0.78	1.08	1.21
University of New South Wales	1.03	0.74	0.79	0.92	4.91	0.00	0.00				0.75	1.00
The University of Newcastle	0.93	0.88	0.94	0.82	1.24	0.68	2.26	1.19	0.95	0.47	0.85	1.00
The University of Sydney	1.21	0.62	0.63	1.18							0.74	1.01
University of Technology, Sydney	0.72	0.80	0.62	0.90	3.64	1.02	8.65	1.13	11.26	1.17	0.92	0.91
NSW Totals	**0.84**	**0.76**	**0.84**	**0.81**	**1.79**	**0.91**	**3.22**	**0.97**	**1.31**	**0.85**	**0.81**	**0.98**
Victoria												
Deakin University	0.42	0.83	0.70	1.01	1.93	0.85	5.45	0.45	1.87	0.97	0.80	0.94
Federation University Australia	2.62	1.14					1.90	1.27			1.04	1.34
La Trobe University	1.01	0.82	1.04	0.97			3.48	1.31			0.90	1.02
Monash University	0.83	0.56	0.38	1.28	5.98	1.29	28.78	0.63			0.76	1.01
RMIT University	1.03	0.77	0.63	0.90	4.14	0.79					0.79	1.01
Swinburne University of Technology	0.00	0.00	1.01	1.09	0.85	1.25	2.14	0.65	1.76	0.41	0.81	0.85
The University of Melbourne	0.67	0.73	2.17	0.81	14.63	1.24	0.00	0.00			0.81	1.00
Victoria University	1.40	0.90	0.00	0.00	0.00	0.00	9.78	0.51			0.71	1.07
VIC Totals	**0.70**	**0.79**	**0.79**	**0.98**	**1.70**	**1.01**	**4.17**	**0.59**	**1.70**	**0.55**	**0.80**	**0.95**

	16-20 % of Population	16-20 % Passed	21-25 % of Population	21-25 % Passed	26-30 % of Population	26-30 % Passed	31-40 % of Population	31-40 % Passed	41 and Over % of Population	41 and Over % Passed	Indigenous Total % of Passed	% of Population 40 and Below
Queensland												
James Cook University	0.60	0.68	1.40	0.86	1.74	0.72	1.31	0.59	1.60	0.54	0.74	0.95
Central Queensland University	0.54	1.36	1.17	0.92	1.05	0.58	1.75	0.95	1.07	0.87	0.94	0.99
University of Southern Queensland	0.48	0.75	0.91	0.85	1.18	0.55	2.02	0.87	0.90	0.69	0.76	1.02
Bond University	1.35	0.81	0.52	0.66	0.00	0.00	0.00	0.00	0.00	0.00	0.79	1.04
Griffith University	0.83	0.91	1.13	0.89	0.78	1.11	2.19	0.88	1.91	0.83	0.92	0.96
Queensland University of Technology	1.05	0.75	0.72	0.91	1.02	0.97	3.41	0.79	1.02	0.62	0.80	1.00
The University of Queensland	0.96	0.86	1.03	0.78	1.12	1.45	6.64	1.34	0.00	0.00	0.86	1.01
University of the Sunshine Coast	0.91	0.96	0.84	1.13	0.57	1.35	5.71	0.98	0.53	1.19	1.04	1.04
QLD Totals	**0.81**	**0.82**	**0.97**	**0.86**	**1.23**	**0.76**	**2.70**	**0.86**	**1.48**	**0.72**	**0.83**	**0.97**
Western Australia												
The University of Western Australia	0.95	0.69	1.30	0.78	0.00	0.00	0.00	0.00	0.00	0.00	0.72	1.01
Murdoch University	0.69	0.88	1.07	0.77	0.98	1.12	1.14	1.50	1.89	0.76	0.92	0.91
Edith Cowan University	0.63	0.53	0.66	0.92	0.92	0.77	3.89	0.63	1.79	0.74	0.72	0.92
Curtin University of Technology	1.01	0.76	1.19	1.14	0.79	0.50	0.56	0.00	0.48	1.38	0.86	1.02
The University of Notre Dame Australia	1.11	1.59	0.95	1.49	0.00	0.00	0.00	0.00	0.00	0.00	1.54	1.02
WA Totals	**0.78**	**0.73**	**1.05**	**0.94**	**1.07**	**0.76**	**2.67**	**0.70**	**1.91**	**0.78**	**0.80**	**0.96**
Australian Capital Territory												
University of Canberra	1.19	0.78	0.57	1.12	0.82	1.05	3.34	0.85	1.03	0.66	0.88	1.00
The Australian National University	0.00	0.00	1.72	0.74	4.74	1.39	23.70	1.17	23.70	0.60	0.93	0.81
ACT Totals	**0.81**	**0.74**	**0.78**	**0.98**	**1.13**	**1.16**	**4.86**	**1.00**	**2.18**	**0.66**	**0.88**	**0.95**
Northern Territory												
Charles Darwin University	1.24	0.66	0.53	0.85	0.91	0.60	1.31	1.10	1.35	0.80	0.80	0.92
NT Totals	**1.24**	**0.66**	**0.53**	**0.85**	**0.91**	**0.60**	**1.31**	**1.10**	**1.35**	**0.80**	**0.80**	**0.92**

	16-20 % of Population	16-20 % Passed	21-25 % of Population	21-25 % Passed	26-30 % of Population	26-30 % Passed	31-40 % of Population	31-40 % Passed	41 and Over % of Population	41 and Over % Passed	Indigenous Total % of Passed	% of Population 40 and Below
Tasmania												
University of Tasmania	1.09	0.84	0.82	1.03	0.15	0.00	2.98	0.93	0.82	0.61	0.84	1.07
TAS Totals	**1.09**	**0.84**	**0.82**	**1.03**	**0.15**	**0.00**	**2.98**	**0.93**	**0.82**	**0.61**	**0.84**	**1.07**
South Australia												
Flinders University	0.82	0.89	0.99	1.10	3.38	0.39	0.00	0.00			0.78	1.10
The University of Adelaide	0.14	0.00	1.36	1.49	2.24	1.45	19.70	0.39	11.06	0.00	0.78	0.83
University of South Australia	0.82	0.77	1.01	1.04	1.06	1.25	0.76	0.46	1.64	0.40	0.80	0.91
SA Totals	**0.63**	**0.74**	**1.06**	**1.14**	**1.65**	**0.96**	**1.48**	**0.45**	**1.83**	**0.33**	**0.79**	**0.92**
Multi-State												
Australian Catholic University	1.00	0.91	0.48	1.04	0.00	0.00	4.34	1.55	8.53	0.48	0.94	0.86
MULTI-STATE Totals	**1.00**	**0.91**	**0.48**	**1.04**	**0.00**	**0.00**	**4.34**	**1.55**	**8.53**	**0.48**	**0.94**	**0.86**
Average	**85.0%**	**74.3%**	**85.8%**	**91.6%**	**124.8%**	**77.5%**	**189.0%**	**71.3%**	**234.5%**	**47.2%**	**84.4%**	**98.9%**

Table 29. Hypothetical Pass[a] Rates Assuming Non-Indigenous Distribution of Population

	Hypothetical Pass Rates[a]	Actual Pass Rates[b]	Hypothetical / Actual
New South Wales			
University of Wollongong	56.1%	56.8%	0.99
Western Sydney University	55.9%	56.8%	0.98
Charles Sturt University	50.2%	51.7%	0.97
Macquarie University	58.3%	60.0%	0.97
Southern Cross University	57.0%	51.9%	1.10
The University of New England	68.8%	66.7%	1.03
University of New South Wales	67.8%	65.4%	1.04
The University of Newcastle	51.9%	52.9%	0.98
The University of Sydney	64.6%	60.0%	1.08
University of Technology, Sydney	65.7%	71.7%	0.92
NSW Totals	**56.9%**	**57.8%**	**0.98**
Victoria			
Deakin University	53.0%	47.6%	1.11
Federation University Australia	29.4%	71.4%	0.41
La Trobe University	55.8%	61.1%	0.91
Monash University	58.5%	55.6%	1.05
RMIT University	57.3%	58.1%	0.99
Swinburne University of Technology	47.7%	53.7%	0.89
The University of Melbourne	61.1%	66.7%	0.92
Victoria University	21.9%	42.9%	0.51
VIC Totals	**57.7%**	**54.9%**	**1.05**
Queensland			
James Cook University	43.4%	44.9%	0.97
Central Queensland University	66.4%	63.9%	1.04
University of Southern Queensland	47.8%	48.9%	0.98
Bond University	52.2%	60.0%	0.87
Griffith University	61.1%	61.5%	0.99
Queensland University of Technology	56.1%	55.5%	1.01
The University of Queensland	61.1%	62.2%	0.98
University of the Sunshine Coast	74.6%	74.1%	1.01
QLD Totals	**56.3%**	**56.6%**	**0.99**
Western Australia			
The University of Western Australia	53.9%	56.3%	0.96
Murdoch University	53.8%	54.2%	0.99
Edith Cowan University	44.9%	45.7%	0.98
Curtin University of Technology	54.3%	55.6%	0.98
The University of Notre Dame Australia	95.3%	100.0%	0.95
WA Totals	**53.2%**	**53.7%**	**0.99**

a Hypothetical Pass Rates, assumes Non-Indigenous Distribution of Population
b Actual Pass Rates, assumes Total % of Passed

	Hypothetical Pass Rates[a]	Actual Pass Rates[b]	Hypothetical / Actual
Australian Capital Territory			
University of Canberra	61.2%	57.9%	1.06
The Australian National University	20.8%	70.0%	0.30
ACT Totals	**59.1%**	**60.4%**	**0.98**
Northern Territory			
Charles Darwin University	49.2%	50.0%	0.98
NT Totals	**49.2%**	**50.0%**	**0.98**
Tasmania			
University of Tasmania	47.6%	53.5%	0.89
TAS Totals	**47.6%**	**53.5%**	**0.89**
South Australia			
Flinders University	53.7%	53.8%	1.00
The University of Adelaide	31.3%	54.5%	0.57
University of South Australia	55.2%	54.2%	1.02
SA Totals	**55.3%**	**54.2%**	**1.02**
Multi-State			
Australian Catholic University	56.7%	57.9%	0.98
MULTI-STATE Totals	**56.7%**	**57.9%**	**0.98**
Average	**53.6%**	**56.4%**	**0.95**

a Hypothetical Pass Rates, assumes Non-Indigenous Distribution of Population
b Actual Pass Rates, assumes Total % of Passed

Table 30. First-in-Family Indigenous Business School Students

	Total Indigenous Business Students	Total Non-FIF Indigenous Business Students	% Indigenous FIF Business Students	% Indigenous Non-FIF Business Students
New South Wales				
University of Wollongong	37	35	95%	5%
Western Sydney University	81	74	91%	9%
Charles Sturt University	89	86	97%	3%
Macquarie University	40	37	93%	8%
Southern Cross University	52	50	96%	4%
The University of New England	30	30	100%	0%
University of New South Wales	26	25	96%	4%
The University of Newcastle	70	69	99%	1%
The University of Sydney	15	15	100%	0%
University of Technology, Sydney	53	52	98%	2%
NSW Totals	**493**	**473**	**96%**	**4%**
Victoria				
Deakin University	42	42	100%	0%
Federation University Australia	7	6	86%	14%
La Trobe University	18	16	89%	11%
Monash University	9	9	100%	0%
RMIT University	31	30	97%	3%
Swinburne University of Technology	41	41	100%	0%
The University of Melbourne	9	7	78%	22%
Victoria University	7	7	100%	0%
VIC Totals	**164**	**158**	**96%**	**4%**
Queensland				
James Cook University	78	76	97%	3%
Central Queensland University	36	34	94%	6%
University of Southern Queensland	92	89	97%	3%
Bond University	15	15	100%	0%
Griffith University	156	146	94%	6%
Queensland University of Technology	146	125	86%	14%
The University of Queensland	45	44	98%	2%
University of the Sunshine Coast	27	27	100%	0%
QLD Totals	**595**	**556**	**93%**	**7%**
Western Australia				
The University of Western Australia	16	16	100%	0%
Murdoch University	24	23	96%	4%
Edith Cowan University	35	34	97%	3%
Curtin University of Technology	45	43	96%	4%
The University of Notre Dame Australia	3	3	100%	0%
WA Totals	**123**	**119**	**97%**	**3%**

	Total Indigenous Business Students	Total Non-FIF Indigenous Business Students	% Indigenous FIF Business Students	% Indigenous Non-FIF Business Students
Australian Capital Territory				
University of Canberra	38	34	89%	11%
The Australian National University	10	10	100%	0%
ACT Totals	**48**	**44**	**92%**	**8%**
Northern Territory				
Charles Darwin University	24	23	96%	4%
NT Totals	**24**	**23**	**96%**	**4%**
Tasmania				
University of Tasmania	71	70	99%	1%
TAS Totals	**71**	**70**	**99%**	**1%**
South Australia				
Flinders University	13	13	100%	0%
The University of Adelaide	11	11	100%	0%
University of South Australia	48	46	96%	4%
SA Totals	**72**	**70**	**97%**	**3%**
Multi-State				
Australian Catholic University	19	15	79%	21%
MULTI-STATE Totals	**19**	**15**	**79%**	**21%**
Average			**95%**	**5%**

Table 31. First-in-Family Non-Indigenous Business School Students

	Total Non-FIF Non-Indigenous Business Students	Total FIF Non-Indigenous Business Students	% FIF Non-Indigenous Business Students	% Non-FIF Non-Indigenous Business Students
New South Wales				
University of Wollongong	3475	3197	92%	8%
Western Sydney University	9771	9061	93%	7%
Charles Sturt University	2982	2803	94%	6%
Macquarie University	4837	4145	86%	14%
Southern Cross University	1834	1711	93%	7%
The University of New England	1570	1413	90%	10%
University of New South Wales	5870	4777	81%	19%
The University of Newcastle	2562	2378	93%	7%
The University of Sydney	2983	2262	76%	24%
University of Technology, Sydney	6803	5887	87%	13%
NSW Totals	**42687**	**37634**	**88%**	**12%**
Victoria				
Deakin University	7101	6417	90%	10%
Federation University Australia	1221	1115	91%	9%
La Trobe University	4954	4459	90%	10%
Monash University	6994	6025	86%	14%
RMIT University	6542	5587	85%	15%
Swinburne University of Technology	7938	7404	93%	7%
The University of Melbourne	3424	2705	79%	21%
Victoria University	2784	2567	92%	8%
VIC Totals	**40958**	**36279**	**89%**	**11%**
Queensland				
James Cook University	1881	1755	93%	7%
Central Queensland University	1941			
University of Southern Queensland	2990	2802	94%	6%
Bond University	460	406	88%	12%
Griffith University	7962	7137	90%	10%
Queensland University of Technology	8135	6986	86%	14%
The University of Queensland	5673	4941	87%	13%
University of the Sunshine Coast	1419	1299	92%	8%
QLD Totals	**30461**	**25326**	**83%**	**17%**
Western Australia				
The University of Western Australia	3299	2795	85%	15%
Murdoch University	1165	1106	95%	5%
Edith Cowan University	2466	2289	93%	7%
Curtin University of Technology	6681	6026	90%	10%
The University of Notre Dame Australia	1150	1025	89%	11%
WA Totals	**14761**	**13241**	**90%**	**10%**

	Total Non-FIF Non-Indigenous Business Students	Total FIF Non-Indigenous Business Students	% FIF Non-Indigenous Business Students	% Non-FIF Non-Indigenous Business Students
Australian Capital Territory				
University of Canberra	2713	2391	88%	12%
The Australian National University	1185	907	77%	23%
ACT Totals	**3898**	**3298**	**85%**	**15%**
Northern Territory				
Charles Darwin University	362	328	91%	9%
NT Totals	**362**	**328**	**91%**	**9%**
Tasmania				
University of Tasmania	3277	2875	88%	12%
TAS Totals	**3277**	**2875**	**88%**	**12%**
South Australia				
Flinders University	1364	1279	94%	6%
The University of Adelaide	2312	2010	87%	13%
University of South Australia	4834	4447	92%	8%
SA Totals	**8510**	**7736**	**91%**	**9%**
Multi-State				
Australian Catholic University	2268	1994	88%	12%
MULTI-STATE Totals	**2268**	**1994**	**88%**	**12%**
Average			**87%**	**13%**

Table 32. First-in-Family Pass Rates for Business Students

	FIF Pass Rates Indigenous	Non-FIF Pass Rate Indigenous	FIF Pass Rates Non-Indigenous	Non-FIF Pass Rates Non-Indigenous	FIF Pass Rates[a]	Non-FIF Pass Rates[b]
New South Wales						
University of Wollongong	57.1%	50.0%	67.8%	64.7%	0.84	0.77
Western Sydney University	58.1%	44.4%	62.0%	56.8%	0.94	0.78
Charles Sturt University	51.2%	66.7%	66.6%	62.9%	0.77	1.06
Macquarie University	56.8%	100.0%	71.7%	72.5%	0.79	1.38
Southern Cross University	50.0%	100.0%	62.5%	58.5%	0.80	1.71
The University of New England	66.7%	0.0%	61.2%	60.1%	1.09	0.00
University of New South Wales	64.0%	100.0%	86.2%	85.3%	0.74	1.17
The University of Newcastle	52.2%	0.0%	62.2%	61.4%	0.84	0.00
The University of Sydney	53.3%	0.0%	79.7%	76.5%	0.67	0.00
University of Technology, Sydney	71.2%	100.0%	78.2%	75.1%	0.91	1.33
NSW Totals	**57.1%**	**63.6%**	**70.6%**	**72.2%**	**0.81**	**0.88**
Victoria						
Deakin University	47.6%	0.0%	59.3%	57.4%	0.80	0.00
Federation University Australia	66.7%	100.0%	68.3%	60.0%	0.98	1.67
La Trobe University	62.5%	50.0%	67.5%	65.9%	0.93	0.76
Monash University	55.6%	0.0%	72.8%	69.4%	0.76	0.00
RMIT University	60.0%	0.0%	71.8%	70.8%	0.84	0.00
Swinburne University of Technology	53.7%	0.0%	65.8%	64.8%	0.82	0.00
The University of Melbourne	71.4%	50.0%	78.1%	76.3%	0.91	0.66
Victoria University	42.9%	0.0%	60.8%	52.3%	0.71	0.00
VIC Totals	**55.1%**	**50.0%**	**67.6%**	**67.1%**	**0.81**	**0.75**
Queensland						
James Cook University	44.7%	50.0%	60.5%	58.4%	0.74	0.86
Central Queensland University	64.7%	0.0%				
University of Southern Queensland	48.3%	66.7%	63.7%	60.2%	0.76	1.11
Bond University	60.0%	0.0%	75.1%	74.1%	0.80	0.00
Griffith University	61.6%	60.0%	66.8%	60.3%	0.92	0.99
Queensland University of Technology	57.6%	42.9%	68.5%	71.2%	0.84	0.60
The University of Queensland	61.4%	100.0%	71.1%	72.9%	0.86	1.37
University of the Sunshine Coast	74.1%	0.0%	71.5%	62.7%	1.04	0.00
QLD Totals	**57.0%**	**51.4%**	**67.7%**	**67.4%**	**0.84**	**0.76**

a FIF Pass Rates: First-in-family Indigenous / First-in-family Non-Indigenous
b Non-FIF Pass Rates: Non-FIF Indigenous / Non-FIF Non-Indigenous

	FIF Pass Rates Indigenous	Non-FIF Pass Rate Indigenous	FIF Pass Rates Non-Indigenous	Non-FIF Pass Rates Non-Indigenous	FIF Pass Rates[a]	Non-FIF Pass Rates[b]
Western Australia						
The University of Western Australia	56.3%	0.0%	78.0%	73.3%	0.72	0.00
Murdoch University	52.2%	100.0%	58.7%	55.9%	0.89	1.79
Edith Cowan University	47.1%	0.0%	63.8%	59.3%	0.74	0.00
Curtin University of Technology	53.5%	100.0%	64.1%	61.1%	0.83	1.64
The University of Notre Dame Australia	100.0%	0.0%	65.6%	56.0%	1.53	0.00
WA Totals	**52.9%**	**75.0%**	**66.7%**	**64.3%**	**0.79**	**1.17**
Australian Capital Territory						
University of Canberra	52.9%	100.0%	65.5%	64.7%	0.81	1.54
The Australian National University	70.0%		73.2%	67.4%	0.96	
ACT Totals	**56.8%**	**100.0%**	**67.6%**	**66.0%**	**0.84**	**1.52**
Northern Territory						
Charles Darwin University	47.8%	100.0%	62.2%	52.9%	0.77	1.89
NT Totals	**47.8%**	**100.0%**	**62.2%**	**52.9%**	**0.77**	**1.89**
Tasmania						
University of Tasmania	51.4%	100.0%	63.5%	60.5%	0.81	1.65
TAS Totals	**51.4%**	**100.0%**	**63.5%**	**60.5%**	**0.81**	**1.65**
South Australia						
Flinders University	53.8%	0.0%	68.6%	67.9%	0.79	0.00
The University of Adelaide	54.5%	0.0%	68.9%	68.4%	0.79	0.00
University of South Australia	52.2%	100.0%	67.1%	64.6%	0.78	1.55
SA Totals	**52.9%**	**100.0%**	**67.8%**	**66.4%**	**0.78**	**1.50**
Multi-State						
Australian Catholic University	53.3%	75.0%	61.7%	59.0%	0.86	1.27
Multi-State Totals	**53.3%**	**75.0%**	**61.7%**	**59.0%**	**0.86**	**1.27**
Average	**55.9%**	**61.7%**	**68.2%**	**68.1%**	**0.82**	**0.91**

a FIF Pass Rates: First-in-family Indigenous / First-in-family Non-Indigenous
b Non-FIF Pass Rates: Non-FIF Indigenous / Non-FIF Non-Indigenous

Table 33. First-In-Family Actual and Hypothetical Pass Rates

	Indigenous Actual Pass Rates	Indigenous Hypothetical Pass Rates	Indigenous Hypothetical / Actual
New South Wales			
University of Wollongong	56.6%	56.8%	1.00
Western Sydney University	57.1%	56.9%	1.00
Charles Sturt University	52.1%	51.7%	1.01
Macquarie University	62.9%	60.0%	1.05
Southern Cross University	53.4%	51.9%	1.03
The University of New England	60.0%	66.7%	0.90
University of New South Wales	70.7%	65.4%	1.08
The University of Newcastle	48.4%	51.4%	0.94
The University of Sydney	40.4%	53.3%	0.76
University of Technology, Sydney	75.0%	71.7%	1.05
NSW Totals	**57.9%**	**57.3%**	**1.01**
Victoria			
Deakin University	43.0%	47.6%	0.90
Federation University Australia	69.6%	71.4%	0.97
La Trobe University	61.3%	61.1%	1.00
Monash University	47.9%	55.6%	0.86
RMIT University	51.2%	58.1%	0.88
Swinburne University of Technology	50.0%	53.7%	0.93
The University of Melbourne	66.9%	66.7%	1.00
Victoria University	39.5%	42.9%	0.92
VIC Totals	**54.5%**	**54.9%**	**0.99**
Queensland			
James Cook University	45.1%	44.9%	1.00
Central Queensland University			
University of Southern Queensland	49.5%	48.9%	1.01
Bond University	53.0%	60.0%	0.88
Griffith University	61.5%	61.5%	1.00
Queensland University of Technology	55.5%	55.5%	1.00
The University of Queensland	66.3%	62.2%	1.07
University of The Sunshine Coast	67.8%	74.1%	0.92
QLD Totals	**56.1%**	**56.6%**	**0.99**
Western Australia			
The University of Western Australia	47.7%	56.3%	0.85
Murdoch University	54.6%	54.2%	1.01
Edith Cowan University	43.7%	45.7%	0.96
Curtin University of Technology	58.0%	55.6%	1.04
The University of Notre Dame Australia	89.1%	100.0%	0.89
WA Totals	**55.2%**	**53.7%**	**1.03**

	Indigenous Actual Pass Rates	Indigenous Hypothetical Pass Rates	Indigenous Hypothetical / Actual
Australian Capital Territory			
University of Canberra	58.5%	57.9%	1.01
The Australian National University			
ACT Totals	**63.5%**	**60.4%**	**1.05**
Northern Territory			
Charles Darwin University	52.7%	50.0%	1.05
NT Totals	**52.7%**	**50.0%**	**1.05**
Tasmania			
University of Tasmania	57.4%	52.1%	1.10
TAS Totals	**57.4%**	**52.1%**	**1.10**
South Australia			
Flinders University	50.5%	53.8%	0.94
The University of Adelaide	47.4%	54.5%	0.87
University of South Australia	56.0%	54.2%	1.03
SA Totals	**57.1%**	**54.2%**	**1.05**
Multi-State			
Australian Catholic University	56.0%	57.9%	0.97
MULTI-STATE Totals	**65.0%**	**57.9%**	**0.97**
Average	**56.2**	**56.6**	**1.00**

Table 34. Business Schools – Relative Actual Pass Rates[a] and Success Initiatives[b]

	Total Indigenous Business Students	Relative Actual Pass Rate[a]	% Low SES Indigenous Students	Indigenous Pass Rate	Business School Initiatives
The University of Notre Dame	3	1.54	0.0%	100%	N/A
The University of New England	30	1.08	43.3%	67%	B, H, I
University of the Sunshine Coast	27	1.04	11.1%	74%	N/A
Federation University Australia	7	1.04	42.9%	71%	N/A
Australian Catholic University	19	0.94	15.8%	58%	B, I, N
Central Queensland University	36	0.94	63.9%	64%	N/A
The Australian National University	10	0.93	0.0%	70%	A, C, D, E, I
Griffith University	156	0.92	20.5%	62%	A, H, I
Western Sydney University	81	0.92	21.0%	57%	N/A
University of Technology, Sydney	53	0.92	15.1%	72%	B, F, G, H, M
Murdoch University	24	0.92	29.2%	54%	I
La Trobe University	18	0.90	50.0%	61%	A, E, F, H
University of Canberra	38	0.88	2.6%	58%	N/A
Curtin University of Technology	45	0.86	37.8%	56%	A, B, G, H, L, M, O
The University of Queensland	45	0.86	26.7%	62%	H
The University of Newcastle	70	0.85	52.9%	53%	C, F, G, H, J, N
University of Tasmania	71	0.84	49.3%	54%	N/A
University of Wollongong	37	0.83	64.9%	57%	B, H, N, O
Macquarie University	40	0.83	15.0%	60%	H
Southern Cross University	52	0.83	30.8%	52%	N/A
Swinburne University of Technology	41	0.81	39.0%	54%	N/A
The University of Melbourne	9	0.81	11.1%	67%	N/A
Charles Darwin University	24	0.80	8.3%	50%	N/A
University of South Australia	48	0.80	37.5%	54%	A, H, I
Queensland University of Technology	146	0.80	21.9%	55%	B, H, K, N
Deakin University	42	0.80	21.4%	48%	G, H, O
RMIT University	31	0.79	3.2%	58%	A, H
Bond University	15	0.79	26.7%	60%	N/A
Flinders University	13	0.78	23.1%	54%	A, B, C, G, H, O
The University of Adelaide	11	0.78	0.0%	55%	B, H, O
Charles Sturt University	89	0.76	30.3%	52%	N/A
University of Southern Queensland	92	0.76	33.7%	49%	A, B, H, M, N
Monash University	9	0.76	0.0%	56%	H
University of New South Wales	26	0.75	15.4%	65%	E, B, F, H, K, M, N, O
James Cook University	78	0.74	30.8%	45%	N/A
The University of Sydney	15	0.74	40.0%	60%	G, H, J
The University of Western Australia	16	0.72	18.8%	56%	E, F, H
Edith Cowan University	35	0.72	28.6%	46%	A, E, F, G, O
Victoria University	7	0.71	14.3%	43%	H, I

a Relative Actual Pass Rate: Indigenous Actual Pass Rate / Non-Indigenous Actual Pass Rate
b Codes provided at Figure 29

Table 35. Business School Initiatives – Number of Success-Related Initiatives

University	Total Success-Related Initiatives in Business Schools	Actual Pass Rates (Indigenous / Non-Indigenous)
University of New South Wales	8	0.75
Curtin University	7	0.86
University of Newcastle	6	0.85
Flinders University	6	0.78
University of Technology, Sydney	5	0.92
Queensland University of Technology	5	0.80
Australian National University	5	0.93
Edith Cowan University	5	0.72
University of Southern Queensland	5	0.76
University of Wollongong	4	0.83
La Trobe University	4	0.90
University of Sydney	3	0.74
University of New England	3	1.08
Australian Catholic University	3	0.94
Griffith University	3	0.92
Deakin University	3	0.80
University of South Australia	3	0.80
University of Western Australia	3	0.72
University of Adelaide	3	0.78
Monash University	2	0.76
RMIT University	2	0.79
Victoria University	2	0.71
Macquarie University	1	0.83
University of Queensland	1	0.86
Murdoch University	1	0.92
Correlation		**0.00784**

Table 36. University-Wide Web Derived Initiatives – Impact on Retention and Pass Rates

University	University-Wide Success-Related Initiatives	Total Initiatives	Indigenous Success Rates	Indigenous/ Non-Indigenous Success Rates
The University of Notre Dame Australia	B, C, D, E, F, J, O, P, R	10	100%	154%
The University of New England	A, B, C, D, E, F, G, H, J, K, M,N, O, P, Q, R	16	67%	108%
University of the Sunshine Coast	A, B, C,D, E, F, G, H, J, K, P, Q	12	74%	104%
Federation University Australia	A, B, C, D, E, F, G, H, J, K, M, O, P, Q, R	15	71%	104%
Australian Catholic University	A, B, C, D, E, F, G, H, J, K, M, P, Q, R	14	58%	94%
Central Queensland University	A, B, C, D, E, F, G, H, J, K, O, P, Q, R	14	64%	94%
The Australian National University	A, B, C, D, E, F, H, J, K, N, P, Q, R	13	70%	93%
Griffith University	A, B, C, D, E, F, G, H, J, K, M, O, P	13	62%	92%
University of Technology, Sydney	A, B, C, D, E, F, G, J, K, O , P, R	12	72%	92%
Murdoch University	A, B, C, D, E, F, G, H, J, K, L, O, P, Q, R	15	54%	92%
La Trobe University	A, B, E, F, G, H, J, K	8	61%	90%
University of Canberra	A, B, C,D, E, F, G, H, J, K, M, P, Q, R	14	58%	88%
Curtin University of Technology	A, B, C, D, E, F, G, H, J, K, M, O, P, R	14	56%	86%
The University of Queensland	A, C, E, F, H, J	6	62%	86%
The University of Newcastle	A, B, C, D, F, G, J, K, L, M, P, Q	12	53%	85%
University of Tasmania	A, B, C, D, E, F, G, H, J, K, M, N, O, P, Q, R	16	54%	84%
The University of Wollongong	A, B, C, D, E, G, H, J, K, O Q, R	12	57%	83%
Macquarie University	A, B, C,D, E, F, G, H, J, K, O, P, Q	13	60%	83%
Swinburne University of Technology	A, B, C, D, E, F, H, J, K, O, Q, R	12	54%	81%
The University of Melbourne	A, B, C,D, E, F, G, H, J, K, L, M, P, Q, R	15	67%	81%
Charles Darwin University	A, C, D, E, F, H, O, P, Q, R	10	50%	80%
University of South Australia	A, B, C, D, E, F, H, J, K, O, P, Q	12	54%	80%
Queensland University of Technology	A, B, C, D, F, G, H, K, Q	9	55%	80%
Deakin University	A, B, C, F, G, H, J, K, N, Q, R	11	48%	80%
RMIT University	A, B, C,D, E, F, H, J, K, O, Q, R	12	58%	79%
Bond University	J	1	60%	79%
Flinders University	A, ,B, D, E, F, H, J, K, Q, R	10	54%	78%
The University of Adelaide	A, B, C, D, E, F, G, H, O, P, Q, R	12	55%	78%
Charles Sturt University	A, B, C, D, E, F, G, H, K, M, N, O, P, Q, R	15	52%	76%
Southern Cross University	A, B, C, D, E, G, H, J, K, N, P, Q, R	13	49%	76%
University of Southern Queensland	A, B, C, D, E, F, G, H, J, K, M, N, P, Q, R	15	49%	76%
Monash University	A, B, C, D, E, F, H, J, K, Q, R	11	56%	76%
The University of New South Wales	A, B, C,D, E, F, G, H, J, K, O, P, R	13	65%	75%
James Cook University	A, B, C, D, E, H, I, K	8	45%	74%
University of Sydney	B, C,D, E, F, G, H, I, J, K, L, P, Q, R	14	60%	74%
Western Sydney University	B, C,D, E, G, H, J, K, M, O, Q	11	56%	72%
The University of Western Australia	A, B, C, D, E, F, G, J, K, O, P, Q, R	13	56%	72%
Edith Cowan University	A, B, C, D, E, F, G, H, J, K, L, N, O, P, Q, R	16	46%	72%
Victoria University	A, B, C, D, E, F, G, J, K, O, P, Q, R	13	43%	71%

a Web derived university wide success imitative codes provided at Figure 29

CHAPTER 6. STUDENT AND ALUMNI SURVEY ANALYSIS

In this chapter, we present the results of the surveys with Aboriginal and Torres Strait Islander continuing and commencing students and alumni.

Following the reporting of descriptive information regarding each student sample, the results focus on the reasons why the students and alumni taking part in the research choose to study particular degree programs at university, and the challenges and successes that they face during their university experiences.

STUDENT SURVEY RESULTS

From the 23 universities that agreed to participate in this research, the 237[1] Aboriginal and Torres Strait Islander students who responded to the online survey were undertaking their studies at 13 of the universities (Table 37).[2] Our survey response rate was dependent on individuals within each participating university circulating information about the online surveys to their Aboriginal and Torres Strait Islander students.

Although this survey contains useful information, the survey is not representative of the population we are researching, which is Aboriginal and Torres Strait Islander students, particularly those in business schools. This is clear from Table 37. For example, 30% of student survey respondents are studying at Deakin University. However, within Deakin University's business school, Aboriginal and Torres Strait Islander students only represent 2.6% of all Aboriginal and Torres Strait Islander business school students in Australia.

The top three universities, in terms of student survey respondents, comprise 67% of the total respondents, but only 7.4% of all Aboriginal and Torres Strait Islander business school students in Australia. Also, only 16% of the total respondents were studying business-related education (that is, Management and Commerce using the ABS fields of study). In addition, 78% of student respondents are female, a percentage that is well above their representation in business schools.

However, the purpose of inviting all Aboriginal and Torres Strait Islander students at universities to respond to the online surveys was to allow us to gain insight into the reasons why Aboriginal and Torres Strait Islander students outside of business schools did not choose business as their field of study. These results also provide some insights as to why the participation rate of Aboriginal and Torres Strait Islander students in business schools is relatively low.

The Table 37 and Figure 32, below, identify the universities at which the student respondents were based, and the distribution of student respondents by the Australian State in which they reside.

The majority of student respondents were female (78%) and identified as either Aboriginal (95%), both Aboriginal and Torres Strait Islander (3%), and Torres Strait Islander (2%) (See Figure 33).

The student respondents ranged in age from 18 years to over 60 years, with the average (median) age of respondents being 27 years. Note that 187 of the 237 respondents reported their age (see Figure 35).

Over half (69%) of the students indicated that they were the first member of their family to attempt university at either the undergraduate or postgraduate level (Figure 36).

---

[1] 238 students completed the online survey, however, one respondent did not identify as Aboriginal or Torres Strait Islander and has, therefore, been excluded from the results.
[2] This project was approved by the UON Human Research Ethics Committee (Approval No. H-2017-0092). Following protocol of the ethics agreement, the surveys were distributed by the individual institutions who had provided organisational consent to participate in the study. Over the three week period of survey distribution, the research team sent weekly reminders to participating universities to email the survey the survey to their students.

Table 37. Student Respondents by Institution

University	Number of Student Respondents	% of Student Respondents	Indigenous Business Students as % of Australian Total[a]
Deakin University	71	30%	2.6%
University of South Australia	64	27%	3%
Murdoch University	24	10%	1.5%
The University of Queensland	10	4.2%	2.8%
The University of Melbourne	9	3.8%	0.6%
University of Canberra	6	2.5%	2.4%
The University of Newcastle	3	1.3%	4.4%
University of Wollongong	2	0.8%	2.3%
Swinburne University of Technology	2	0.8%	2.5%
Central Queensland University	1	0.4%	2.2%
University of the Sunshine Coast	1	0.4%	1.7%
Australian Catholic University	1	0.4%	1.2%
University Not Reported	43	18.1%	NA
Total Responses	**237**	**100%**	**27.2%[a]**

a Based on identified universities.

Figure 32. Student Respondents by State of Residence (n=194)
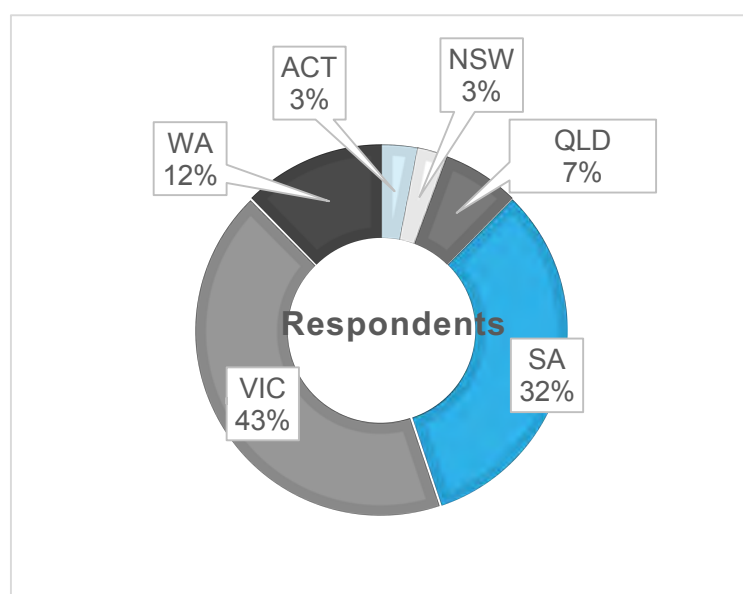
## Figure 33. Student Respondents by Gender (n=237)
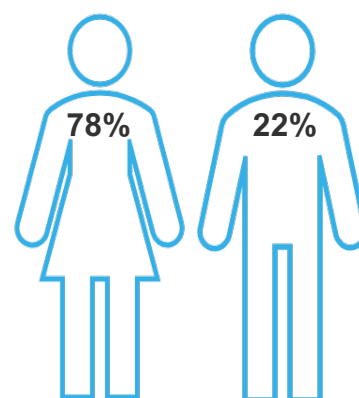
Figure 34. Student Respondents - Indigeneity (n=237)

Both Aboriginal and Torres Strait Islander 3%

Torres Strait Islander 2%

Identity

Aboriginal 95%
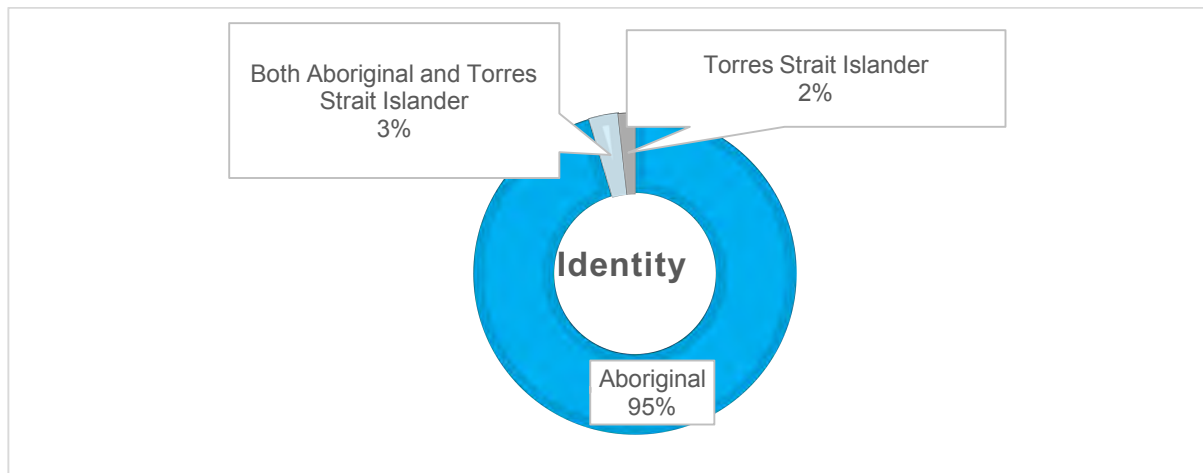
Figure 35. Student Respondents by Age Group

Percentage Age Distribution of Reporting Respondants
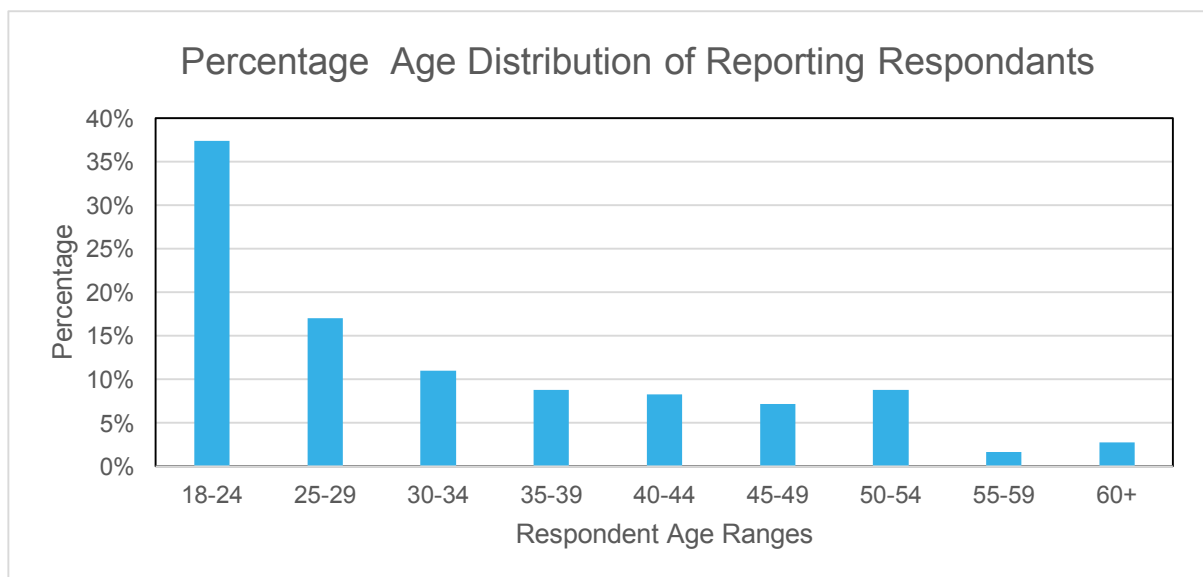
Figure 36. Student Respondents - First in Family (n=196)

No 31%

Yes 69%
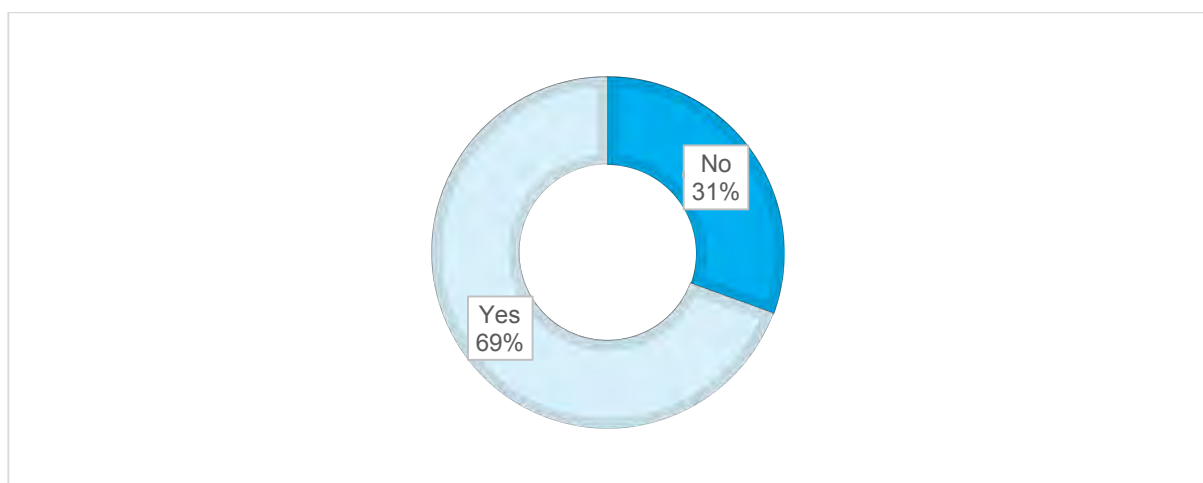
STUDENT FIELDS OF STUDY

The areas of study in which student respondents were enrolled are categorised according to the ABS Fields of Study categories. Out of the sample of 237 Aboriginal and Torres Strait Islander students, the majority of students were enrolled in Mixed Programs (25%), followed by Society and Culture/Arts/Humanities/Social Sciences (17%), Health (16%), Management and Commerce (16%) and Education (9%). See below at Table 38.

Table 38. Student Respondents by Field of Study

Field of Study	Number
Natural and physical sciences	3
Information technology	5
Engineering and related technologies	3
Architecture and building	0
Agriculture, environmental and related studies	0
Health	38
Education	23
Management and commerce	38
Society and culture/arts/humanities/social sciences	40
Creative arts	11
Food, hospitality and personal services	1
Mixed programmes	59
Not mentioned	16
Total	237

Student respondents were asked, in an open-ended question, to explain why they chose a particular field of study. The findings indicate that for these students, their attachment to family and community, and how they define their relationship with their community, plays a very significant role in choosing their field of study.

The results reveal that for the student respondents, they were passionate about 'making a difference' within, and for, community, as well as 'helping' Aboriginal and Torres Strait Islander peoples and communities. Consequently, the respondents mostly chose degrees that fit in with these passions. Others provided more personal reasons, such as, pursuing personal development goals or improving their career. These themes, with representative quotations from the student respondents, are provided in Table 39.

Table 39. Reasons Student Respondents Selected a Particular Field of Study

Concept	Representative Quotations
Make a difference within, and for, community	Felt like I could contribute to making a difference within the Aboriginal community. The rates of people taking their own lives are too high and my training will hopefully assist in helping community talk about their worries in a culturally safe space and way.
	Passion to try and help improve Aboriginal health.
	Grew up in a small rural community that lacked necessary medical facilities to ensure the well-being of the community. The community helped drive my passion for understanding and practicing medicine in a rural environment.
	I am passionate about the laws and making changes for my peoples.
Be helpful to people and within community	I enrolled because I want to help people in need and make sure that all are comfortable whilst in pain.
	I've always worked in the health sector and I love being able to help my people in relation to better health choices or harm reduction with drug and alcohol clients.
	I've always wanted to help people and this bachelor degree will allow me to do that in a professional way.
	I have a passion in helping young people.
	I wanted to always study [law] and take back education to community.
Make changes to the ways in which Aboriginal and Torres Strait Islander peoples are perceived by broader society	Because I am passionate for the future of Aboriginal people. I want to break the stereotype of Aboriginal people undertaking higher education. I want to someday be working for the government alongside people like Kyam Maher and other Aboriginal leaders.
	I hope to challenge systemic oppression.
	Thought it would give me a good platform to speak my mind from. Particularly to talk about issues our people face.
	Be a face in the mainstream industry to support my Aboriginal community to access services comfortably. Role model for my children and family. Change legal position of First Nations.
To pursue personal goals, such as career prospects	To further my usual occupation/career.
	To help improve my work.
	Opportunity to extend my career pathway.
	To further develop my knowledge and career progression.
	To assist my current career pathway.
	To improve my career prospects moving into a corporate environment rather than continue with a lifetime of repetition & limited chances for growth.
	I hope to manage my own florist business or be a business partner in a creative/design/artistic field one day

Following on from asking student respondents why they chose their particular field of study, another open-ended question asked them to reflect on why they did not consider business-related higher education.

> For the 74% of student respondents not studying business, the main barriers to participation were negative perceptions of business degree outcomes including: limited community applicability, limited knowledge of program purpose, and negative perceptions of business.

For example, as illustrated in Table 40, the student respondents highlighted that by studying business they believed that they could not be helpful to their people and their communities. Also reported was a misunderstanding or, indeed, a lack of understanding about the type of content covered in business courses. Negative perceptions of business within their communities was also raised as a barrier to studying this field.

It also has been inferred from the students that some respondents believe that specific courses relating to Indigenous business need to be designed. Additionally, other respondents described restrictive and negative experiences of studying business, for example: "[I] started a business degree when I first left school however found I could not relate to the content as I came from a low socio-economic background."

Table 40, also highlights that for some of the student respondents who were not studying business, they could still see the benefits of a business degree. In particular, the entrepreneurial opportunities that a business degree might be able to provide them was raised in the surveys.

This particular theme, relating to the view that business education can lead to entrepreneurial opportunities, also emerged within the responses from the sample of students who were enrolled in business-related programs (14% of the student respondents).

Table 40. Reasons Student Respondents Did Not Study Management and Commerce

Concept	Representative Quotation
It is not as helpful for people and community as other fields of study	I didn't see how studying business would contribute directly to my community, there are other more pressing matters. No I have never considered studying business, It just isn't what I am looking for in a career path that would give back to my Aboriginal community. I have never considered studying business at university, as I did not think it was the best way to make changes for the greatest number of people. However I think it's more important now to improve my clinical skills, and be able to contribute directly to improved health outcomes at this stage before moving on to more managerial behind the scenes work. I did want to at one point, I decided not to because I feel as though working personally with children can make a greater impact on many lives.
Misunderstanding and/or lack of understanding of what course contains	Never considered business, sounds boring to me, lots of computer work although that's where it seems to have the higher incomes without having the shift work so if I had my time again I would certainly consider it. [Business] would need too many pre-requisites. I haven't ever considered studying business and I think that is because I don't really know much about it. It's never been an area that has interested me. To be honest I don't know what the content would contain. I didn't consider [business or commerce]. I don't think I have the sales or profit mindset to do a business, and I have disliked the confrontation that arises from managing things. I have never considered studying business because it seemed foreign to me. I never had family that owned businesses, it was mainly Aboriginal corporations that were government funded. If there were more role models that mentored me, my pathway might have been quite different.
Negative perceptions of business by individuals and within community	Never considered studying business, my sister studied business and in my perspective it just leads to extreme formal wear and never achieving goals, also very cut throat. Now going back to where my passion really lies which is driven by love and compassion rather than money and corruption. I studied business in my undergraduate and did not enjoy the course. The content is very individualistic and misaligns to my values. I never considered studying business. I think our society is saturated by business people.
It is good when you have your own business	I can see the advantage of having some business experience, especially since I plan to have a business of my own eventually in the future. I do one day want to own my own business.

As illustrated in Table 41, below, the reasons for choosing to study business tend to be based on more personal outcomes, such as, developing and/or improving careers, gaining transferable skills to allow for various job opportunities, as well as entrepreneurial motives relating to the desire to own a business.

Table 41. Reasons Student Respondents Enrolled in Management and Commerce Selected Course

Concept	Exemplar Quote
Develop/improve career opportunities	To assist my current career pathway. Hoping to transition career. To progress my career. To further my usual occupation/career.
Various job opportunities	I chose Business because it is a highly transferable skill which can be utilised in many areas of the workforce. I chose Commerce as a pathway to employment and the potential to earn. Business skills are used in almost any industry you work in and to do a double degree with business and spend the extra year to better your career is the reason I chose it. I chose business to engage with broader issues in society. Became a strategy consultant with KPMG and lecturer after this pathway.
Entrepreneurial motives	To potentially own my own creative leadership business. To further my career in current job. Thought I wanted to be an accountant. To gain business skills so can eventually have own business. I have completed my certificate three in business. Would like to gain an advanced diploma in business management to have the qualifications needed to help my family businesses.

STUDENT CHALLENGES IN HIGHER EDUCATION

Given that a key aim of this study is to understand the challenges faced by Aboriginal and Torres Strait Islander students which may impact on their completion of higher education, we asked student respondents to consider the challenges that they had, or are, facing in their university experience. The overarching theme that emerged in the surveys was that Aboriginal and Torres Strait Islander students are dealing with a range of different problems, and many reported that they did not have appropriate support to deal with the challenges they face in higher education.

The predominant challenges that student respondents described can be separated into two broad categories:

- Personal issues (see Table 42 below). In relation to personal issues:
  - Trying to find a balance between work, study and life was repeatedly reported as being overwhelming;
  - Student respondents also reported feelings of isolation and a lack of self-confidence in their ability to complete their studies;
  - The results also reveal that one of the most challenging issues that can hinder completion outcomes for these students is financial constraints.

- Support issues (see Table 43). With regards to support:
  - Lack of support was often related to inadequate support related to personal, emotional and financial issues discussed above;
  - The student respondents also reported that course structures and course content, including assessment tasks, are also stressful;
  - Therefore, more support is needed to address these study-related concerns and improve pass rates.

The findings reveal that each of these challenges can have an impact on whether these respondents believe that they can succeed in their studies or complete their degrees, with many current students indicating that they felt, at some time during their degree, that they may not complete their studies.

Table 42. Student Respondent Challenges: Personal Issues

Personal Issues	Representative Quotations
Work/Life/Study Balance	Gets very overwhelming when having to study work and being a single parent.
	I work full time and have family so studying is very challenging. Having children with special needs makes it more difficult. I just received a formal letter advising of the uni's desire to exclude me due to non-performance.
	When balancing motherhood and studying and the work load of assessments are in front of you with no idea how you'll adapt to the huge workload ahead.
Personal and/or family health concerns and/or death	Possibly due to mental health.
	During a period in which I had uncontrolled hypothyroidism.
	When you lose both your parents over the course of your studies, it's very hard to get back on track and value why to complete this degree any more.
Financial constraints	I was worried about money. Financially it is very daunting and not the easiest. I found that finding and applying for scholarships was very hard and time consuming. I wasn't lucky enough to receive any so I am living off my savings from my gap year employment as uni requires a lot of time restricting my ability to work
	Financially has been difficult, requiring me to work full time while studying full time. It is definitely difficult trying to balance finances and study, trying to succeed at both.
	Mostly due to financial stress. The stress of needing to work part time and do well enough to get my GPA up for entry into Honours is extremely stressful.
Lack of self-confidence and/or low self-esteem	I felt like I'm not good enough for uni and should drop out during stressful times.
	Mainly because I don't feel like I'm as intelligent as others are. I also feel like with all my other responsibilities that I have including work and sport, I struggle with time sometimes.
	[When] I failed a subject and felt really silly. I had studied really hard but just couldn't understand it.
Feelings of isolation	I feel isolated and with my disability not understanding. I find that most of the units aren't [sic] really user friendly
	I appreciate this survey is being conducted as I am able to voice my opinions. As Aboriginal students are not only oppressed by mainstream but are destroyed by their own too.
	Due to my lecturers being in too much conflict with the Native Title groups involved with this course.

Table 43. Student Respondent Challenges: Support Issues

Support Issues	Representative Quotations
Not getting proper support	[IEU name] is full of useless people who make you want to give up, but I will stick it out to the end. It's all set up to make black people fail. Applying for Indigenous or [university Name] scholarships are a waste of time and energy. There is no support from Abstudy. I'm disgusted by there [sic] significant lack of support. Such a demoralising experience dealing with Abstudy… They are the reason for not being able to complete the course in the prescribed timeframe. I have suffered lateral violence for the first time in my life through the centre. I was not supported by the director and I no longer attend the centre during business hours and only attend during afterhours. Sometimes I feel like we could have a lot more support. There have been a number of occasions when I have felt like I may not finish. When I worked at the [IEU and university Name] I was not supported by management to complete my studies, because of this I only managed to complete 2 units for the entire year. I constantly felt overwhelmed and under supported. Since leaving there I have been able to do much better.
Study-related support issues	The intensive study blocks are overwhelming. From my first experience of not enjoying my first option I am a bit worried about how I will go this semester. Lack of support for country students, quite vague instructions issued for completing assignments. Due to the complexity of the assessments but I managed to complete my assessments. Because of the nature of the degree and the study load and the financial burden of studying.

STUDENT SUPPORT IN HIGHER EDUCATION

We asked student respondents to reflect on the support that helped them to achieve at university. The overarching theme is that both tangible and intangible support from family, and from their university, was of the highest priority.

Our findings suggest that emotional and financial support from family and university are the two most important factors to help students to feel that they can succeed in their studies. As one respondent, who has received both tangible and intangible support from the university, mentioned: *"The university has shown compassion towards me in terms of financial hardship aide and emotional support. If not for this I would have dropped out."*

In terms of tangible support, scholarships were discussed as the main source of financial assistance (and, indeed, the main reason why many students chose particular universities and/or programs of study). Scholarships provided by Universities and/or Indigenous Education Units can help students to start and continue their studies, and go some way to addressing the often-mentioned issue of financial constraints and hardship. Another tangible support service noted in the surveys, are tutoring services that can assist students to feel confident in their studies and lead to successful outcomes in their assessment tasks.

This type of support becomes increasingly important if business schools reach out to lower socio-economic cohorts of the Aboriginal and Torres Islander population to attract more students.

In terms of intangible support, the emotional support provided by family, friends and community, as well as university support services (such as, counselling and career services) were described as providing encouragement, motivation and confidence. In so doing, intangible support is important in assisting students to overcome the various challenges that they face as well as to succeed in their studies.

The importance of both tangible and intangible support is illustrated in the following respondent quotes: "The Indigenous Student Services division provided me with good support and regularly checked in with how I was going." Many student respondents described the Indigenous Education Unit at their university as providing a very inspirational environment. This point is highlighted in the following student respondent statement: "I enjoy learning in an environment where other Aboriginal and Torres Strait Islander people from across Australia come to study various degrees, masters etc."

The emphasis that student respondents place on the need for support was also explained as facilitating them to balance and negotiate the new lifestyle of being a university student. Appropriate support gives them a broader sense of scope, opportunities, and encouragement. For example:

> *"The support from the university changed my mind. Not only about stopping my current university studies but my whole future as a university student. I now feel more confident than ever and have more motivation and determination than before because I know I am supported and I feel as though I have no reason to stop studying."*

The findings also reveal that when student respondents did not get the support they need, the lack of support can affect them, both emotionally and mentally. For example: "[I] felt very isolated during the application process and do not feel there is much support at the university for postgrad students. I feel very alone and as if I am a token in my study at the moment."

To address issues of isolation, it is important for students to be provided with information on how to access student support in the early stages of their studies. As described by one respondent, access to information can influence their study outcomes:

> *"I told the university that I was Aboriginal but it was only in my second year that they started sending me any info about the services/support available to Indigenous students. Also, no one mentioned when I was applying that there was an Aboriginal-specific program option or tutoring scheme (which I would have been interested in)."*

A WORD CLOUD ANALYSIS OF STUDENT SURVEYS

In addition to determining the themes across the student survey data set, NVivo was used to generate frequencies to words used in the student surveys. These words were then ranked by level of importance (i.e., frequency). Words that were merely descriptive and with no relationship to policy, participation, failure or success were deleted. The remaining words were used to generate a Word Cloud, present in Figure 37, below. This Word Cloud provides further information on word themes derived from the student surveys. The font size of the words reflects the frequency of their use.

What stands out, and further supports the themes described above, is the importance of community, support, family, and studying. Further down the list are friends, financial, tutoring, children, amongst others. Thus, the Word Cloud analysis highlights the overarching importance of community, support, family, and studying, as well friends, children, and financial support as key determinants of participation and success for Aboriginal and Torres Islander students in business schools. This suggests that policy should be informed by these word variables and their underlying meaning.

Figure 37. Word Cloud Analysis of Student Surveys

SUMMARY OF STUDENT SURVEY FINDINGS

The student survey respondents within this sample of 237 Aboriginal and Torres Strait Islander university students indicated similar reasons for choosing (or not choosing) to participate in a business-related program at university.

For the 76% of non-business student respondents, the main barriers to participation in business-related higher education were negative perceptions of business degree outcomes, including:

- Limited community applicability and relevance;
- Limited knowledge of program purpose, including course content or career outcomes; and
- Negative perceptions of business by individuals and within community.

For the 14% of business student respondents enrolled in business programs, their reasons for participating in business-related higher education related to a more individualistic career-centric view, including:

- Developing and/or progressing careers;
- Gaining business skills for various job opportunities; and
- Entrepreneurial motivations.

For all student respondents, the main challenges faced in their higher education experiences, regardless of their field of study, were attributed to personal and support issues.

The most important reported support issues emerging from the student surveys were the need for both emotional and financial support from university, family and community.

The reported personal issues impacting on success and completion are diverse and include:
- Work/life/study balance;
- Personal and/or family health concerns;
- Financial constraints;
- Lack of self-confidence and/or low self-esteem; and
- Feelings of isolation.

The reported study related issues impacting on success and completion, include:
- Limited personal, emotional and financial support; and
- Limited program and/or course specific support.

ALUMNI SURVEY RESULTS

From the 23 universities that agreed to participate in this research, online surveys were distributed and completed by 191[3] Aboriginal and Torres Strait Islander university alumni. Given that some alumni respondents had attended more than one university, the range of institutions they had studied at is greater than the number of respondents. This is similar for the degree programs identified, as the alumni respondents may have completed more than one degree at any given university.

These respondents also completed their studies in different points in time. Hence, their comments may not be pertinent to today's educational environment, which has changed significantly over time.

It is important to also note that the distribution of alumni survey respondents is not representative. As illustrated in Table 44, 50% of the respondents are from four universities that comprise only 18% of Aboriginal and Torres Strait Islander business students.

As with the student surveys, Deakin University recruited the most alumni respondents but, as noted above, within Deakin University's business school, Aboriginal and Torres Strait Islander business students comprise only 2.6% of the Aboriginal and Torres Strait Islander business student population. Additionally, as with the student surveys, the alumni respondents are from all university disciplines, only 12% of which are from business disciplines (Table 45).

However, as with the student respondents, the results do provide some insights as to why the participation rate of Aboriginal and Torres Strait Islander students in business schools are relatively low, as well as the challenges that students did face during their studies and the ways that they overcame these challenges.

The alumni survey results provide a 'success-focused approach' (Devlin, 2009) that give insights into the experiences of successful graduates to determine factors that led to their success, as well as how they overcame any challenges they faced.

Table 44 and Figure 39, identify the universities at which the alumni respondents had studied, and the distribution of student respondents by the Australian State/Territory in which they reside.

The majority of alumni respondents were female (63%) and identified as either Aboriginal (94%), both Aboriginal and Torres Strait Islander (3%), and Torres Strait Islander (3%). The alumni respondents ranged in age from 18 years to over 60 years, with the median age of alumni respondents being 37 years. Over two thirds (79%) of the alumni respondents indicated that they were the first member of their family to attempt university at either the undergraduate or postgraduate level.

---

[3] 192 alumni completed the online survey, however, one respondent did not identify as Aboriginal or Torres Strait Islander and has, therefore, been excluded from the results.

Figure 38. Alumni Respondents by Gender (n=191)
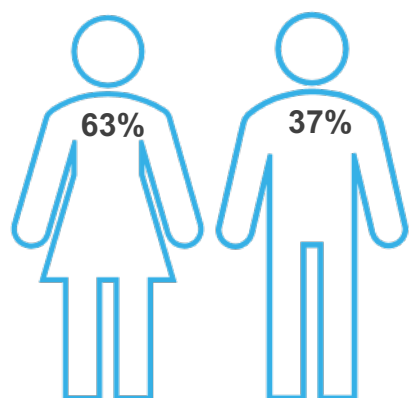
Figure 39. Alumni Respondents by State of Residence

RESPONDENTS BY STATE

WA 12%
ACT 8%
MULTI-STATE 1%
NSW 15%
NT 1%
QLD 28%
VIC 27%
SA 8%
TAS 0%
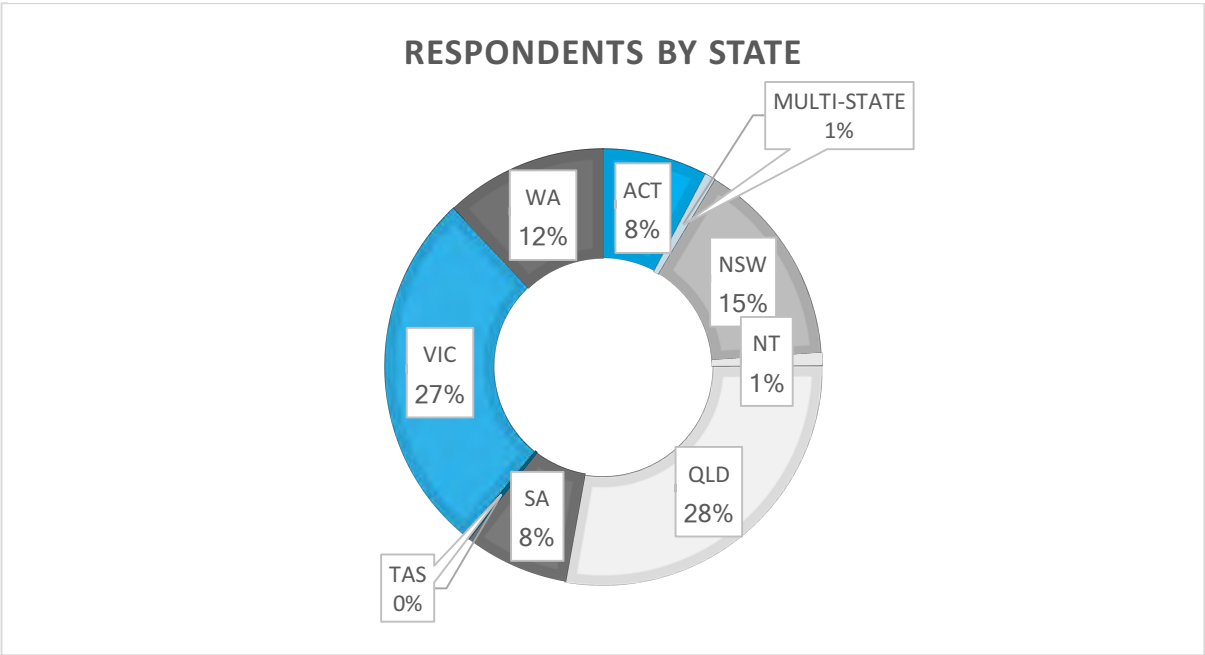
Figure 40. Alumni Indigeneity (n=190, 1=not Indigenous, 1=not reported, total 192)
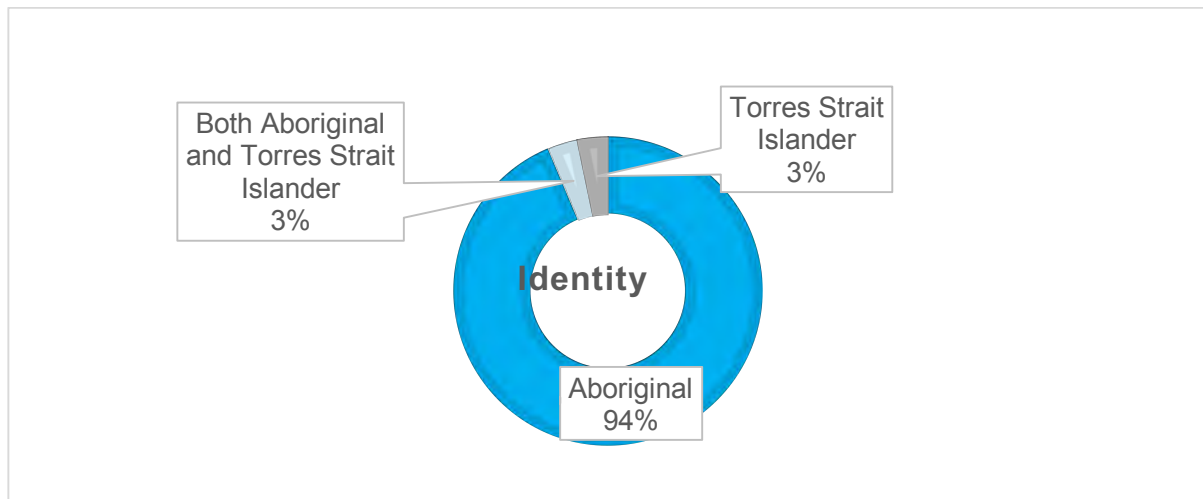

Figure 41. Alumni Respondents Age Range by Percentages (n=152, 38=not reported)
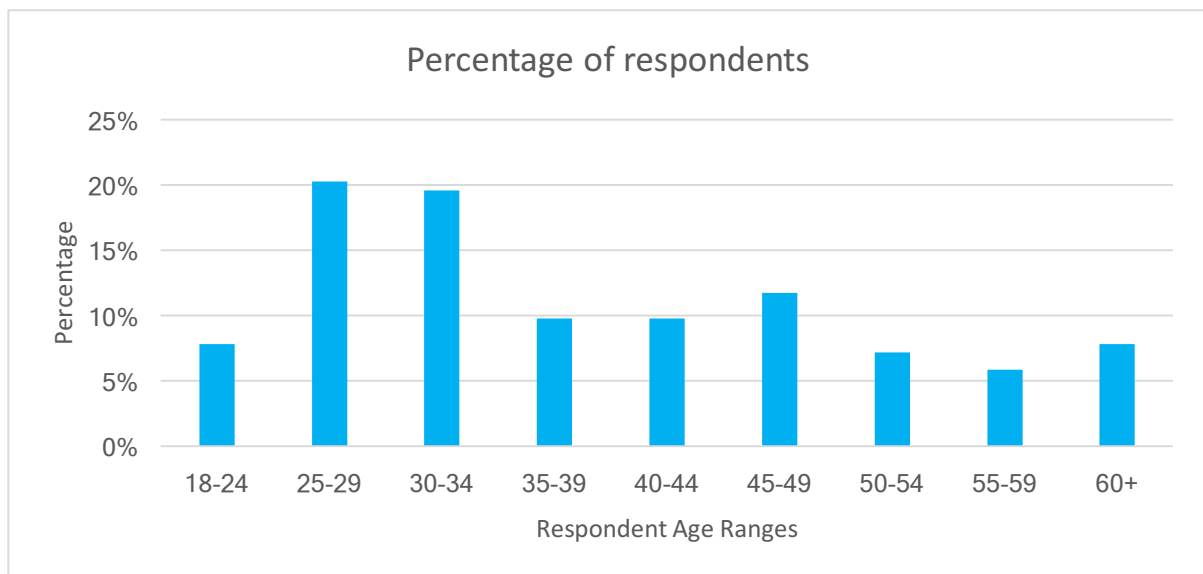

Figure 42. Alumni Respondents: First in Family (n=191, 1=not reported), total 192)
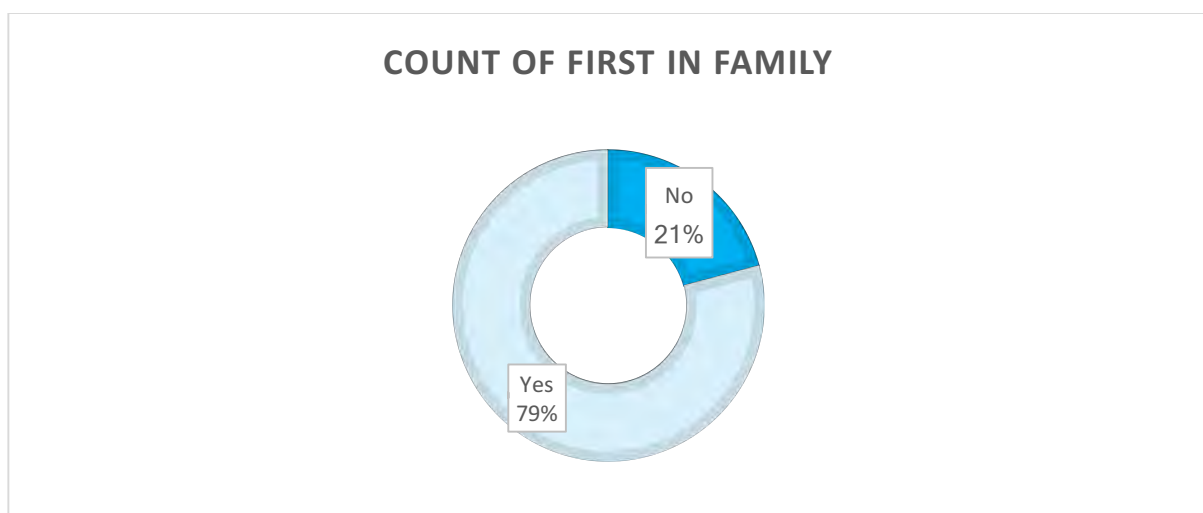
Table 44. Alumni Respondents by University Affiliation

	Number of Alumni Survey Responses*	% of Responses	% of Indigenous Business Students
Deakin University	46	19%	2.6%
Queensland University of Technology	42	17%	9.1%
University of Newcastle	18	7%	4.4%
Murdoch University	17	7%	1.5%
University of South Australia	14	6%	3.0%
University of Canberra	12	5%	2.4%
University of Melbourne	11	5%	0.6%
Griffith University	10	4%	9.7%
University of Queensland	9	4%	2.8%
Australian National University	6	2.4%	0.6%
University of Southern Queensland	5	2%	5.7%
Curtin University	5	2%	2.8%
Edith Cowan University	4	1.6%	2.3%
University of New South Wales	4	1.6%	1.6%
James Cook University	4	1.6%	4.8%
University of New England	4	1.6%	4.8%
Macquarie University	3	1.2%	2.5%
RMIT University	3	1.2%	1.9%
University of Technology, Sydney	3	1.2%	3.3%
University of Sydney	3	1.2%	0.9%
University of Adelaide	3	1.2%	0.7%
University of Wollongong	3	1.2%	2.3%
Australian Catholic University	2	0.8%	1.2%
Charles Sturt University	2	0.8%	5.5%
Monash University	2	0.8%	0.6%
Flinders University	2	0.8%	0.8%
University of Western Australia	2	0.8%	1.0%
University of Ballarat	1	0.4%	0.4%
Central Queensland University	1	0.4%	2.2%
Charles Darwin University	1	0.4%	1.5%
La Trobe University	1	0.4%	1.1%
University of Tasmania	1	0.4%	4.4%
Total	**246**	**100%**	**100%**

*n = 246 (71 respondents had completed a second or third qualification in the same or a different institution)

ALUMNI RESPONDENTS FIELDS OF STUDY

The 191 alumni respondents reported their successful completion of 214 degree programs at one or more of the universities identified above. The Aboriginal and Torres Strait Islander alumni had completed studies at either the Bachelor, Masters or PhD level. The levels of qualification and the fields of study are illustrated in Table 45 and Table 46:

- Of the 160 alumni respondents who had completed a Bachelor Degree, 76% had graduated from fields of study other than Management and commerce; and
- Of the 54 alumni respondents who had completed a Research Higher Degree (Masters or PhD), 95% had graduated from fields of study other than Management and Commerce.

Table 45. Alumni Respondents by Highest Attainment by Field of Study

Alumni Respondent Field of Study	Bachelor	Masters	Doctorate
Agriculture, environmental and related studies	0	0	0
Architecture and building	3	1	0
Creative arts	3	2	0
Education	28	6	2
Engineering and related technologies	3	0	0
Food, hospitality and personal services	1	0	0
Health	38	17	1
Information technology / communication	9	3	0
Law	13	7	0
Management and commerce	23	2	1
Natural and physical sciences	5	3	0
Society and culture / arts / humanities / social sciences	34	8	1

Table 46. Alumni Respondents by Fields of Study

Field of Study (Bachelor Degree)	
Natural and physical sciences	5
Information technology/communication	9
Engineering and related technologies	3
Architecture and building	3
Agriculture, environmental and related studies	0
Health	38
Education	28
Management and commerce	23
Society and culture/arts/humanities/social sciences	34
Law	13
Creative arts	3
Food, hospitality and personal services	1
Field of Study (Master's Degree)	
Natural and physical sciences	3
Information technology/communication	3
Engineering and related technologies	0
Architecture and building	1
Agriculture, environmental and related studies	0
Health	17
Education	6
Management and commerce	2
Society and culture/arts/humanities/social sciences	8
Law	7
Creative arts	2
Food, hospitality and personal services	0
Field of Study (PhD Degree)	
Natural and physical sciences	0
Information technology/communication	0
Engineering and related technologies	0
Architecture and building	0
Agriculture, environmental and related studies	0
Health	1
Education	2
Management and commerce	1
Society and culture/arts/humanities/social sciences	1
Law	0
Creative arts	0
Food, hospitality and personal services	0

Table 46. Alumni Respondents by Fields of Study

FIELD OF STUDY REASON

In an open-ended question, the alumni respondents were asked to explain why they chose to study particular degree/s. The overarching theme related to one's individual passion and their desire to advocate for, and implement, change within community.

Thus, the findings indicate that the alumni respondents chose particular fields of study because they are passionate about playing an effective and transformative role within communities and, in particular, to make a difference for Aboriginal and Torres Strait Islander people in broader society. This theme is best illustrated in the following quote from an alumni respondent:

> *"[I chose to study] Education because I wanted to empower myself with the tools to implement change. Growing up in the minority, my experiences with racism and prejudice ignited a passion for growth that could only come through education - that of my own and that of others."*

This overarching theme is further illustrated in Table 47. The table highlights that the key themes emerging from the alumni responses to the question regarding their choice of university degree were very similar to those that emerged in the student responses. For example, reasons relating to pursuing personal goals and/or improving career opportunities were mentioned by respondents. However, a new theme that emerged in the alumni responses was the desire to take on further studies to be a role model to younger people within Aboriginal and Torres Strait Islander communities.

Table 47. Alumni Respondents by Field of Study Reason

Concept	Representative Quotation
Make a difference within, and for, community	I am passionate about improving the health and wellbeing of my people. I am passionate about making a difference in closing the gap and reducing the lower life expectancy of my people. I am passionate about raising education and awareness around reducing mental health and mental illness issues throughout Australia. I was interested in going back to my community to teach my people. I felt an obligation to help my community move forwards as one.
Being helpful to people and within community	Because I was an enrolled nurse prior to it and wanted to further myself. Also I like helping people and this is the ultimate way you can help a person. Passionate about helping people. Nursing is diverse and exciting. Passion for caring for people. Because I wanted to be a registered nurse, felt I would be able to help create a more cultural safe health service for the Aboriginal Community. I wanted to be able to assist Aboriginal communities with understanding business and financial reporting requirements.
Make changes to the ways by which Aboriginal and Torres Strait Islander peoples are perceived by broader society	To prove I could produce a body of work that innovative and worthy of the academy. Influence decision making on Aboriginal issues. I experienced a lack of communication between science, industries and local communities back home. I saw there was a gap in appropriate Indigenous people to liaise between the two groups especially through the [named] proposal. I felt passionate about using these skills to balance development and conservation of land and sea for Indigenous people.
Be a role model	To gain employment in a needed industry. To be a role model for other Indigenous people and to advocated on their behalf in a mainstream setting. Second time around I saw it as an opportunity to educate the next generation and be a positive role model.
To pursue personal goals, such as, career prospects	Interest and future career aspirations. Personal interest and career progression. Relevant to my work and interests. Passion for social justice and job security.

ALUMNI CHALLENGES IN HIGHER EDUCATION

The findings reveal that the alumni respondents faced many different challenges in their studies. Their challenges can be categorised as:

- personal issues (Table 48); and
- study related issues (Table 49).

Personal issues refer to the struggles the respondents reported as experiencing in trying to balance life, work and study. Other difficulties mentioned as key challenges that they faced in their studies included financial constraints and health concerns. Additionally, some alumni respondents mentioned that being the first person in their family to study at university made it more difficult in comparison to other students. Also, the lifestyle changes that result from studying, such as, moving to new places and fitting into new environments, was also described as a challenge for the alumni respondents.

Table 48. Alumni Respondent Challenges: Personal Issues

Personal Issues	Representative Quotations
Work/Life/Study Balance	I worked full time and doing the course put extra strain on my ability to find time to study.
	About halfway through I failed a subject, and then took a semester off. I wasn't sure whether I would return. I had some family problems at the time.
	Mainly because of lack of money to live, the need to work which meant I couldn't study enough and the immense stress of my final year.
	I found it difficult to manage working and studying. Having to live away from my support network definitely made it harder for me and I thought about stopping almost every semester.
Personal and/or family health concerns and/or death	My younger sister passed away during second semester. I remember sitting in the library contemplating why and what's the point of all this, there are more important things to worry about then completing an assignment.
	Again, the pressures of having my brother to care for and my father passing away were the biggest challenges. It made me want to focus on family more so than myself and my education.
	I was diagnosed with a heart condition, diabetes, and cancer all within a month. I missed one of my exams and got the other one mixed up. I got lost one day and walked around the uni very confused.
Financial constraints	I have dropped out 4 times and come back when family and money allow me to.
	Several times due to financial hardships mostly and when I became pregnant.
	During my PhD. Mainly due to the length of time and financial hardship.
Lack of self-confidence/low self-esteem	A combination of being a slow learner and being out of the education system for some time not understanding I.T. processes made my University time difficult.
	Due to having not had the appropriate level of academic background. Schooling standards in my childhood in my home town (preschool - year 10) were at a very low standard. I felt outcast from the learning system and rejected when asking for help from my lecturer.

First in Family	The need to become the first person in my immediate family to obtain a degree.
	It was mid second year and I was struggling heavily with one Statistics unit. No matter how hard I worked, I could not grasp the information. I felt like I could not talk to anyone in my family about my struggles as they had not been in that situation before.
	I was however the first person in my large extended family to finish year 12 let alone go to university, so pretty much had to finish.
Fit into New Lifestyle	The reason I believe I failed is that I was away from home and didn't understand what university life was all about. The expectations were very different and I wasn't aware.
	Physically and mentally it was hard to pretend that everything was ok when I was constantly jumping at shadows. It was also hard trying to juggle uni with raising 2 teenage boys who were struggling to fit into their new environment after moving to Wollongong from a tiny rural town of just over 120 people.
Experiences of Discrimination	Yes. In my second year it was especially hard as the racism I faced was particularly bad. It was during World Expo 88 when there were Indigenous rallies in Brisbane while the international visitors were there for the Expo. Other students and a few lecturers regularly made racist comments and showed a lack of understanding and a disregard for my personal wellbeing.
	Found racism from others students and uni staff difficult to deal with yet also found racism from other Indigenous students difficult to deal with.
	Going to lectures with young people who were potentially going to teach my daughter scared me because of their racist, ill-conceived, uneducated and arrogant views - I told them so. I'm scared that they're either today's or tomorrow's teachers.
Feelings of isolation	There was never any meeting or networking with other Indigenous business students to know what other student I could ask questions.
	I did not know about the Indigenous centre at the uni at that time and was feeling isolated in my studies. I did not know what career progression options would be available at that time.
	The first year was difficult. Financially the burden was huge. The social isolation was awful.
	It was very difficult being away from home, family and friends and very intimidating learning public transport routines in the city. Appreciated that Abstudy paid for a return flight home each year!

The alumni respondents described study related issues as a challenge, particularly in dealing with difficulties in coursework, such as, assessment tasks. The alumni respondents also reported finding it difficult to be connected to community and, therefore, their sense of belonging was often impaired and, as a result, there were strong feelings of isolation. It was explained by one respondent that often it is hard to make networks: "Strongly because of the supervisor and the faculty lack of support and knowledge about Indigenous world views and othering." Moreover, in many cases, alumni respondents reported that they felt discriminated against, not only by other students, but also by other Aboriginal and Torres Strait Islander students at their universities.

The issue of not getting adequate support whilst at university was described in the alumni surveys as one of the key challenges relevant to their ability to continue and complete their studies. According to the alumni respondents, whilst support is definitely needed for study-related issues, this support needs to be comprehensive and cognisant of Aboriginal and Torres Strait Islander worldviews. These issues are illustrated in Table 49 below.

Table 49. Alumni Respondent Challenges: Support Issues

Study Issues	Exemplar Quotes
Study related issues	Worry about requirements and passing grades.
	I failed two units accounting and data analysis, I never did accounting or data analysis at school or work the failure rate for both units was 50% and I didn't know I should have split up those units in different semesters.
	One subject was hard for me and I failed twice. You need to allow the option of multiple pathways of study relating to full-time and part-time as I did both.
Not getting adequate support	Strongly because of the supervisor and the faculty lack of support and knowledge about Indigenous world view and othering.
	I felt like this because when my mother was diagnosed with cancer, and the uni staff were encouraging met to take a leave of absence from the course when I had one subject to go. However, if they provided more comprehensive support and understood that this maybe major but if I don't finish I most likely won't come back if she passes to finish the course.
	The major thing for me was when the presentation and final marks actually proved the course coordinator wrong on all counts that the research area was important and that I it exceed the expectation and focus of the assessment team. If there are experience course coordinators in the field and who also understand the theory is highly important.
	I did not have access to a computer for home study. It would be good to know of services that can help with second hand computers or where to borrow a computer (and help with internet access) which is essential with study.
	The course coordinator is extremely demeaning and unsupportive.

ALUMNI SUPPORT IN HIGHER EDUCATION

The alumni respondents highlight the importance of the support that they received from different sources, namely:

The Indigenous Education Unit at their university.	According to the alumni respondents, these centres are essential to providing many different types of support.
	The alumni respondents describe these centres as a place to receive tutoring, and some financial support, as well as a place to feel connected to community.
	As one respondent states: "I had a lot of encouragement and support from lecturers and support staff at [IEU NAME] which was fantastic. It was like another extended family away from home."
Their family and friends.	The support that the alumni respondents received from their family and friends was also described as important.
	In particular, the role that family and friends play in encouraging and motivating students to succeed and continue with their studies.
	One respondent stated: "Family encouraged me to succeed. I felt supported to succeed as my Mum really motivated me and supported my study. I had good friends doing similar courses which helped."
Their teachers, mentors and/or lecturers.	Academic staff at universities, including lecturers and mentors, helped the alumni respondents to increase their learning on individual subjects.
	As one stated: "I found that most of my lecturers over the years have been the guiding force behind my success. Having lecturers who understand that not all students learn the same and offer alternatives or adjustments has been the key for my education. Also lecturers that are willing to listen and understand when a student is under pressure, giving allowances in deadline etc. when necessary."
	They were also described as being vital in encouraging and inspiring them to finish their degrees.

	As mentioned by one respondent: "On second occasion very supportive. Staff were obviously helpful as was administrative staff."
Other university staff.	Some alumni respondents also described the support they received from professional staff at their university as important to their success, particularly those staff that who made themselves available to offer support.
Employers.	Some alumni respondents also discussed the importance of their employer's support to their success.
	This support, for students engaging in postgraduate studies, was discussed in terms of flexible work arrangements that can assist to make balance between work and study.
	On the other hand, if employers do not provide such support, completing studies can be difficult.
	As noted by one respondent: "Previous workplace employed me as an Indigenous Cadet (Anti-Discrimination Commission Qld) and I was provided many hours to study and work hours were scheduled around my uni timetable. While in full time work completing my Grad Dip Legal Prac I found it incredibly difficult to manage study hours with full time hours and travel time to attend classes in Brisbane."
University Financial Support.	The alumni respondents also highlighted the importance of financial support, particularly in the form of university scholarships, as facilitators of their success.
	One respondent notes: "I was also lucky enough to have a scholarship for regional Aboriginal students. This helped a lot with my ability to live away from home."

TYPES OF SUPPORT

Based on the findings above, the support that alumni respondents described can be categorised as 'type of support' and 'source of support'. The type of support can be grouped as tangible and intangible support, as explained below.

TANGIBLE SUPPORT

For the alumni respondents, tangible support is the provision of financial assistance, material goods, and/or services. The types of tangible support described by the alumni respondents are presented as follows:

Tutoring services / academic support	This type of support assisted alumni respondents to succeed in their courses and facilitate completion of their degrees. For instance, alumni respondents described the importance of tutoring service to help them in areas of academic skill development, such as: • refining writing skills; • learning how to use referencing; and • learning how to write and structure assignments and essays. One respondent noted that the need for tutoring services and academic support should be culturally appropriate and sensitive to individual needs: *"Accessing tutoring services that are culturally friendly is important as it can impact on the outcome of the student studies"*.
Financial support	Another form of tangible support considered as significant in supporting the alumni respondents to commence university and succeed in their studies is described by the following respondent: *"Receiving scholarships gave me the motivation to keep going when I wanted to give up. Felt a responsibility to succeed from the community who provided scholarships. Financial hardship is something most Indigenous students experience and having access to student loan schemes help reduce stress"*.

INTANGIBLE SUPPORT

The support that the alumni respondents received from their universities, through tutoring services, their lecturers, teachers, and mentors, as well as their family and friends, were described by alumni respondents as vital to improving and developing the abilities to assist them to succeed in their studies. For instance, intangible support can play an important role in boosting self-confidence and improve their emotional well-being.

The intangible moral support provided by these groups of people was described as helping alumni respondents to:

- feel more confident;
- navigate the university system;
- organise workloads;
- speed up learning,
- be more disciplined;
- manage intense times of stress;
- feel motivated and encouraged; feel a sense of belonging; and
- make networks.

The importance of intangible support in leading to outcomes, such as those noted above, is expressed by an alumni respondent in the following quote:

"My teachers were very encouraging, and had a lot of time for me. The Indigenous centre staff were great also and their support helped me feel more confident. The ITAS [Indigenous Tutorial Assistance Scheme] program was incredibly valuable, I was paired with a tutor who was inspiring and helpful."

"Overall … I was made to feel like I mattered and belonged at university. Growing up as an Indigenous person I was all too aware of how different outcomes for Indigenous Australians are in education, and this coupled with the poor outcomes many of my Indigenous family members have lived and the racism and stereotyping I have experienced throughout my life resulted in low self-esteem in relation to my Indigeneity and my ability to gain a higher education. At [name of university] I was treated as though I was intelligent and worthy of the time of my peers and teachers in a way that I have not experienced before."

However, whilst some alumni respondents found Indigenous Education Centres to be very supportive, others proposed that a specific plan for Aboriginal and Torres Strait Islander student success is necessary:

"I used the normal structures for student support because there was no strategy, processes, or structures for Aboriginal students. This sounds strange when there were Indigenous support units, but they had no strategic intelligence to be able to develop a system of support based on post-colonial philosophy, for example."

Finally, there was a very strong recommendation made by one alumni respondent in relation to the need for systemic change in the higher education system:

"If universities are genuinely serious about attracting, retaining and Aboriginal students succeeding then everything within and outside the powers and realm of universities must be done. This includes recognising and make amends for their role in the injustice and disadvantage experienced by Aboriginal people including reconciling the roles the people they honour within their institutes and the recognition that received because of those actions. Universities must play a role throughout every sector of education; play a role in advocating with and for Aboriginal peoples and education; support the development and implementation of curriculum and pedagogy grounded in Aboriginal ways of knowing and being; grow and strengthen the capacity and number of Aboriginal staff and academics; Aboriginal peoples teaching and educating on Aboriginal topics; provide opportunities for the Aboriginal community to engage with the university in ways that are meaningful and beneficial; and honour graduates with the respect and gratitude they have shown universities. It is not a privilege for Aboriginal people to attend university, but a privilege for the university to have Aboriginal people attend their university."

A WORD CLOUD ANALYSIS OF STUDENT SURVEYS

In addition to determining the themes across the student survey data set, NVivo was used to generate frequencies to words used in the alumni surveys. These words were then ranked by level of importance (i.e., frequency). Words that were merely descriptive and with no relationship to policy, participation, failure or success were deleted. The remaining words were used to generate a Word Cloud, present in Figure 43. This Word Cloud provides further information on word themes

derived from the surveys with Aboriginal and Torres Strait Islander alumni. The font size of the words reflects the frequency of their use.

What stands out is the importance of support, family, Indigenous, and financial (and scholarship). Also of importance are friends, encouragement, tutors and health, amongst others. The Word Cloud analysis highlights the overarching importance of support, family, Indigenous (and Aboriginal), and financial as key determinants of participation and success of Aboriginal and Torres Islander students in business schools. As illustrated in the Word Cloud, there is considerable overlap between the dominant words in the student's surveys and alumni surveys.

A key point of commonality goes beyond SES, and strongly relates to the importance of family and community (both of which are related), the importance of encouragement, and the significance of being Indigenous as determinants of participation and success.

Figure 43. Word Cloud Analysis of Alumni Survey Responses

SUMMARY OF ALUMNI SURVEY FINDINGS

The alumni survey respondents within the sample of 191 Aboriginal and Torres Strait Islander university alumni had completed a range of degree programs, at varying levels of attainment, at various points in time. Taking a 'success focused' approach to understanding the experiences of successful Aboriginal and Torres Strait Islander graduates, including the factors that led to their success and the challenges that they overcame revealed the following key findings:

Their reasons for choosing a particular field of study related to a passion for advocating for and implementing change within their communities and within broader society, including:

- Making a difference within, and for, community;
- Being helpful to individual people, groups, and communities;
- Making changes to the ways by which Aboriginal and Torres Strait Islander peoples are perceived by broader society;
- Becoming a role model for younger Aboriginal and Torres Strait Islander peoples; and
- Pursuing personal goals and career prospects

For all alumni respondents, the main challenges reported were complex personal issues and not having appropriate support to assist them to succeed in their studies. The reported personal issues faced during their studies were diverse, and include:

- Work/life/study balance;
- Personal health concerns;
- Family and/or friend heath concerns;
- Financial constraints;
- Lack of self-confidence and/or low self-esteem;
- First in family to attend university;
- Challenges of fitting into a new lifestyle;
- Experiences of discrimination; and
- Feelings of isolation.

The issue of not getting adequate support whilst at university was described in the alumni surveys as one of the key challenges they faced. Further, it was noted that support needs to be comprehensive to address study-related issues, as well as being cognisant of Aboriginal and Torres Strait Islander worldviews and experiences.

The alumni respondents described both tangible and intangible support as contributing to their successful completion, including support provided by:

- Indigenous Education Units;
- Family and friends;
- University academic and professional staff;
- Employers; and
- University financial support.

Figure 44. Student Survey Questions

1. Did you receive a Participant Information Statement inviting you to participate in this survey?
   - ○ Yes
   - ○ No

2. Have you read and understood the Participant Information Statement?
   - ○ Yes
   - ○ No

3. Are you:
   - ○ male
   - ○ female
   - ○ other

4. Are you:
   - ○ Aboriginal
   - ○ Torres Strait Islander
   - ○ Both Aboriginal and Torres Strait Islander
   - ○ Neither Aboriginal nor Torres Strait Islander

5. What year were you born? (*Open question*)

6. Did you move to study at university? If so, where from? (*Open question*)

7. What is/was the occupation of your parents / guardians?

   Parent/Guardian 1

   Parent/Guardian 2 (if applicable)

8. What is the highest level of education attained by each of your parents / guardians? (If you have one parent or guardian, leave 'Parent / Guardian 2' blank)

	Parent/Guardian 1	Parent/Guardian 2
Did not complete secondary school	☐	☐
Completed secondary school	☐	☐
Completed a trade or apprenticeship	☐	☐
Completed an undergraduate degree	☐	☐
Completed some other non-university qualification	☐	☐

9. When did you finish school?
   ○ Never attended school
   ○ Primary School
   ○ Year 7
   ○ Year 8
   ○ Year 9
   ○ Year 10
   ○ Year 11
   ○ Year 12

10. What was the last school you attended (if applicable)?

School Name	
Town/Suburb, State	

11. What pathway did you follow to access university?
    ○ Completed Year 12 at high school and gained an entrance rank/score
    ○ Completed Year 12 at TAFE and gained an entrance rank/score
    ○ Completed a Certificate 4
    ○ Completed a Diploma
    ○ Completed an enabling /bridging course
    ○ Other (please specify)

12. In what year did you complete the study needed to access University (e.g., your schooling/TAFE course/bridging course/similar) (*Open question*)

13. Which university are you currently attending? (*Open question*)

14. Did you study full-time or part-time?
    ○ Full-time
    ○ Part-time

15. What year of your degree are you currently in?
    ○ First year (or equivalent)
    ○ Second year (or equivalent)
    ○ Third year (or equivalent)
    ○ Fourth year (or equivalent)
    ○ Fifth year (or equivalent)
    ○ Masters by coursework
    ○ Master by research
    ○ PhD
   ○ PhD

16. Why did you choose to study at the university you are currently attending? (*Open question*)

17. Which field of study are you currently enrolled in?
    - ○ Natural and Physical Sciences
    - ○ Information Technology
    - ○ Engineering
    - ○ Architecture and Building
    - ○ Health Sciences
    - ○ Education
    - ○ Business/Commerce
    - ○ Arts/Humanities/Social Sciences
    - ○ Creative Arts
    - ○ Food, Hospitality and Personal Services
    - ○ Another field (please specify) (*Open answer*)

18. Why did you choose the field of study you are currently enrolled in? (*Open question*)

19. We are interested in learning about why some students choose to study business/commerce at university, and others do not. If you are studying business, why did you choose to? If you are not studying business, did you ever consider studying business? If so, what changed your mind? If you did not consider studying business, why not?

20. Did you feel supported to come to university? If so, how? If not, why not? (Please consider, where appropriate, support from teachers, family, community, financial support, and so on when answering this question). (*Open question*)

21. Did you access any of your university's services whilst at university?
    - ○ Career services
    - ○ Financial services
    - ○ Indigenous tutoring services
    - ○ Peer Assisted Study Sessions (PASS)
    - ○ Child care
    - ○ Counselling services
    - ○ Learning support services
    - ○ Academic support services
    - ○ Other (please specify)(*Open answer*)

22. If you selected any of the above university services, did the services help you? If so, how? If not, why not? (*Open question*)

23. Have you ever felt like you may not complete your current course of study? If so, when have you felt like that, and why? (*Open question*)

24. If you have ever thought you would stop your current university studies, but then decided to keep going, what changed your mind? (*Open question*)

25. If you intend to withdraw from your current university studies, what do you plan to do instead? (Please tick all that apply)
   ○ Study the same course at a different university
   ○ Study the same course at the same university
   ○ Study a different course at the same university
   ○ Study a different course at a different university
   ○ Study at TAFE (or similar)
   ○ Work
   ○ Travel
   ○ Care for own children
   ○ Care for a family member (other than won children)
   ○ Not sure
   ○ Other (please specify) (*open answer*)

26. Please make any further comments here. (*Open question*)

Figure 45. Alumni Survey Questions

1. Did you receive a Participant Information Statement inviting you to participate in this survey?
   - ○ Yes
   - ○ No

2. Have you read and understood the Participant Information Statement?
   - ○ Yes
   - ○ No

3. Are you:
   - ○ male
   - ○ female
   - ○ other

4. Are you:
   - ○ Aboriginal
   - ○ Torres Strait Islander
   - ○ Both Aboriginal and Torres Strait Islander
   - ○ Neither Aboriginal nor Torres Strait Islander

5. What year were you born? (*Open question*)

6. Did you move to study at university? If so, where from? (*Open question*)

7. What is/was the occupation of your parents/guardians?

Parent/Guardian 1	
Parent/Guardian 2 (if applicable)	

8. What is the highest level of education attained by each of your parents / guardians? (If you have one parent or guardian, leave 'Parent / Guardian 2' blank)

	Parent/Guardian 1	Parent/Guardian 2
Did not complete secondary school	☐	☐
Completed secondary school	☐	☐
Completed a trade or apprenticeship	☐	☐
Completed an undergraduate degree	☐	☐
Completed some other non-university qualification	☐	☐

9. What was the last school you attended (if applicable)?

School Name	
Town/Suburb, State	

10. When did you finish school?
    - ○ Never attended school
    - ○ Primary School
    - ○ Year 7
    - ○ Year 8
    - ○ Year 9
    - ○ Year 10
    - ○ Year 11
    - ○ Year 12

11. What pathway did you follow to access university?
    - ○ Completed Year 12 at high school and gained an entrance rank/score
    - ○ Completed Year 12 at TAFE and gained an entrance rank/score
    - ○ Completed a Certificate 4
    - ○ Completed a Diploma
    - ○ Completed an enabling /bridging course
    - ○ Other (please specify)

12. Which university/ies did you attend? (*Open question*)

13. Why did you choose to study at the university/ies that you attended? (*Open question*)

14. What degrees did you complete? (*Open question*)

15. What did you major in? (*Open question*)

16. Why did you choose to study your major/s and degree/s? (*Open question*)

17. Did you study full-time or part-time?
    - ○ Full-time
    - ○ Part-time

18. Did you feel supported to come to university? If so, how? If not, why not? (Please consider, where appropriate, support from teachers, family, community, financial support, and so on when answering this question). (*Open question*)

19. Did you feel supported to succeed at university? If so how? If not, why not? (Please consider, where appropriate, support from lecturers, your university's Indigenous Entre, family friends, community, financial support, and so on when answering this question). (*Open question*).

20. Did you access any of your university's services whilst at university?
   ○ Career services
   ○ Financial services
   ○ Indigenous tutoring services
   ○ Peer Assisted Study Sessions (PASS)
   ○ Child care
   ○ Counselling services
   ○ Learning support services
   ○ Academic support services
   ○ Other (please specify)(*Open answer*)

21. If you selected any of the above university services, did the services help you? If so, how? If not, why not? (*Open question*)

22. Did you ever feel like you would not complete your university study? If so, when did you feel like that, and why? What changed your mind? (*Open question*)

23. Please make any further comments here. (*Open question*)

CHAPTER 7. IN-DEPTH INTERVIEW ANALYSIS OF UNIVERSITY STAFF

In this section, we draw on interviews with Aboriginal and Torres Strait Islander staff to examine the barriers to participation and effective participation in business-related higher education from the perspectives of Aboriginal and Torres Strait Islander staff working in the higher education sector.

This chapter commences with an exploration of various reasons for the under representation of Aboriginal and Torres Strait Islander students in business-related higher education.

These findings add to the evidence already presented in the literature and the survey data but, importantly, this chapter provides the foundation for an exploration of the opportunities to increase participation in business-related higher education, as well as enhancing the engagement and success of students who choose to pursue business-related higher education at Australian universities.

STAFF VIEWS ON BARRIERS TO PARTICIPATION IN BUSINESS-RELATED HIGHER EDUCATION

As outlined in previous chapters, the reasons for the under representation of Aboriginal and Torres Strait Islander students in business-related higher education are complex. This claim was certainly substantiated by the interviewees who discussed a range of reasons for why business remains less attractive to students compared to the more common fields of study, such as health and education. The findings, presented below, focuses on six key barriers that interviewees drew upon to explain why Aboriginal and Torres Strait Islander people are less likely to participate in business-related higher education.

The staff we interviewed identified the following key participation barrier findings:

- Business programs offer limited 'community' applicability compared to other fields of study (see Table 50):
  o Outcomes of other fields of study provide opportunities to actively engage in and with community;
  o Outcomes of other fields of study have clearer job opportunities and career pathways; and
  o Other fields of study have associations that have been effective in creating demand.

- Entry to other fields of study are perceived as more accessible (see Table 51):
  o There are specific initiatives, namely scholarships, that have made other fields of study more desirable;
  o University enabling and pathways programs for Aboriginal and Torres Strait Islander students are not focused on developing skills for business degrees; and
  o The prerequisites for a business degree, namely mathematics, present an obstacle.

- The perception that student's view business programs as having limited entry routes, including graduate pathways (see Table 52):
  o Limited understanding of what a business degree involves; and
  o Limited clarity regarding graduate roles.

- Negative perceptions of business within community and histories of lived experience (see

- Table 53):
    - Business is viewed as big business;
    - Big business is viewed as unethical;
    - Business perceived as an uncomfortable and discriminatory space degree; and
    - University, generally, is daunting with many Aboriginal and Torres Strait Islander people first in family.

- Curricula and pedagogical issues (see Table 54):
    - Business academics are not culturally competent; and
    - The business curriculum reflects white values and practices.

Each of the above findings are illustrated on the following tables, drawing on key quotes from the interviews with Aboriginal and Torres Strait Islander staff at Australian universities.

Table 50. Barrier 1. Limited Community Applicability

Barrier 1.	Exemplar Quotes
Outcomes of other fields of study provide opportunities to actively engage in and with community	'Aboriginal culture is all about being part of your community… and being active in your community.' 'The lived experience of Aboriginal and Torres Strait Islander people, generally, is that they want to engage with their community or their family.' 'Health workers are physically actively engaged in community… and as a social worker, you are there actively engaged in community.' 'Education and health are really critical for community.' 'The health sector is an area of interest from a cultural perspective in that they're able to give back to their community.' 'In areas like education and health… it's really obvious to see how that contribution can be made.' 'They want to make sure that they're getting themselves on a pathway that is going to be able to give back to their community.'
Outcomes of other fields of study have clearer job opportunities and career pathways	'Our mob always kind of believes that the only way forward would be to be a teacher or a nurse and that they were kind of the only career paths for Aboriginal people.' 'In terms of business, there's no real clear pathway for Aboriginal students to follow. Unlike nursing. If you get into nursing, you know you're going to go to nursing. If you get into teaching, then you're going to go to a school somewhere.'
Other fields of study have associations that have been effective in creating demand	'There's been a push by the professions as well as Indigenous health professionals to build the numbers up and get that support. In addition, there's been increasing push from education and Indigenous educators both at school, TAFE and university levels around pushing people into education or encouraging people into education.' 'There's a lot of promotion around Aboriginal and Torres Strait Islander health, and so like, you know, to be a nurse or to be a doctor or to be a health worker is a real obvious contribution to what an impact that makes to communities.'

Table 51. Barrier 2. Accessibility of Entry into Other Fields of Study

Barrier 2.	Exemplar Quotes
There are initiatives, namely scholarships, that have made other fields of study more desirable	'There is a lot of scholarships in terms of education… and there are a lot of scholarships available for Indigenous students going into health" "the scholarship numbers in health and education far outweigh those in business" 'I mean you have government that's funding teaching and nursing programs, well why aren't government funding business scholarships?'
University enabling and pathway programs for Aboriginal and Torres Strait Islander students are not focused on developing skills for business degrees	'Pathway programs are actually designed for health and education, most of them, by and large across the country, the enabling programs are designed for health and education. They're not designed for business.' 'Very few foundation programs, or enabling programs have any mathematics in them that lead to any sort of business engagement.'
The prerequisites for a business degree, namely mathematics, presents an obstacle	'Indigenous students tend not to, by and large, again, very big generalisation… do not take mathematics in high school and they tend to go through some sort of process of, 'I don't need to do maths. By and large, they don't do maths, so they don't meet the minimum entry requirements for business degrees and that's a huge challenge as well.' 'I found the maths component to be quite a large barrier for our students.'

Table 52. Barrier 3: Business Program Graduate Pathways Limitations

Barrier 3.	Exemplar Quotes
Limited understanding of what a business degree involves	'Business has a bit of mystique related to what does it actually do, it's such a broad field.' 'Business programs need to be promoted, prospective students need to know about what they will do, what a degree in business does, and how it can relate back to your community" A business degree is "quite easy to apply for, but where do you go from there? What do you actually get into – is it something that I can use in my community, if I go back home? Where can I actually use it?'
Limited clarity regarding graduate roles	'What will I be, what job can I do?' 'We tend to have historically lots of contact with the education area, because we all know what a teacher does.'

Table 53. Barrier 4: Negative Perceptions of Business and Histories of Lived Experience

Barrier 4.	Exemplar Quotes
Business is viewed as big business and big business is viewed as unethical	'We wouldn't be the only community who looks at business as being big business. And big business is involved in some pretty unethical activity.' 'Because of this negative perception of big business as unethical that 'if you say to someone 'I'm a business person', it kind of comes with a bit of cultural baggage in a way.' 'I think from a white perspective, business seems to be such a, I don't know, maybe a bit of an egotistical discipline… It's not [seen as being] about community. It's perceived to be… more about individuals than the community. It's not [seen as] a real community focused sort of industry.'
Business perceived as an uncomfortable and discriminatory space.	'There's a great need, particularly for Indigenous people to gain qualifications in business, but they're probably not comfortable because there's limited other Indigenous students, and isolation, racism and also just a lack of understanding from academics about where their communities are at and so forth. I guess it's not comfortable for those students'
University, generally, is daunting with many Aboriginal and Torres Strait Islander people first in family.	'We're still in a backlog of Aboriginal people having never experienced walking into a university before… many of them are first family members that have never been to the university. University life is very daunting… and the challenges and the anxieties related to Indigenous students are pretty much 20 times the challenges that other people would experience, and it just continually impacts on student studies, anything from sorry business, to cultural obligations, to what's called longing for country, getting homesick, there needs to be developed more supportive ways that still encourage self-determination.'

Table 54. Barrier 5: Curricula and Pedagogical Issues

Barrier 5.	Exemplar Quotes
Business academics are not culturally competent.	'I think business is more of a struggle, because business, law, type of subjects, academics from universities are still not culturally, I guess, au fait with a great deal of Indigenous competencies within curriculum, so their students are less likely to go to a new space knowing that.'
The business curriculum reflects "white" values and practices.	'I think there's… a great deal of racism that's still attached to, I guess, the rest of mainstream academic communities, and so looking at some of the highly sensitive material that they talk about quite openly in class, such as higher rates of Indigenous incarceration, that sort of thing, and make it come from a more positive angle.'

As illustrated in the tables, there are a range of reasons why business-related higher education is not appealing to Aboriginal and Torres Strait Islander people. As summarised by one interviewee:

There is a great need, particularly for Indigenous people to gain qualifications in business, but they're probably not comfortable because there's limited other Indigenous students, and isolation, racism and also just a lack of understanding from academics about where their communities are at and so forth. I guess [business schools] are not comfortable for those students (Heather).

Clearly, Aboriginal and Torres Strait Islander non-participation in business-related higher education is complex and there are multiple factors at play. Whilst lack of community applicability was raised by many of the Aboriginal and Torres Strait Islander staff that we spoke to, one interviewee said:

It's not just the community… community is one answer, there is no doubt about that. Because there are no defined role models, or clear role models in the business space, it's very tricky. But it's also government programs and the more Aboriginal and Torres Strait Islander teacher's program and the peak bodies like Indigenous Allied Health Australia, Indigenous Doctor's Association, the Aboriginal and Torres Strait Islander Health Workforce Association and also… the Aboriginal and Torres Strait Islander Nurses and Midwives, those peak bodies have been established and designed specifically to develop an Indigenous health workforce across the country. There is nothing like for business. (Paul)

This quote leads to our consideration of the opportunities that business schools and faculties can progress to increase Aboriginal and Torres Strait Islander participation in business-related higher education.

STAFF RECOMMENDATIONS TO INCREASE PARTICIPATION IN BUSINESS-RELATED HIGHER EDUCATION

The interviewees were asked to consider what needs to be done to encourage more Aboriginal and Torres Strait Islander people to participate in business-related higher education. The findings reveal four overarching opportunities, which are presented below.

Key participation recommendations include:

- Promote business programs as applicable to community (see Table 55).
    - Link business studies outcomes to community;
    - Make clear that business graduates can give back to community; and
    - Promote the broader benefits of business studies.

- Showcase Aboriginal and Torres Strait Islander business role models (see Table 56).
    - Promote successful business people within community;
    - Employ Aboriginal and Torres Strait Islander academic staff;
    - Employ Aboriginal and Torres Strait Islander professional staff;
    - Involve Aboriginal and Torres Strait Islander students in mentoring; and
    - Involve Aboriginal and Torres Strait Islander students as ambassadors.
- Business schools and faculties need to contribute to building aspirations (see Table 57):
    - School outreach is key to positioning business as a career pathway;
    - Develop programs targeted as high school students; and
    - Engage with family and community to break down barriers.

- Business schools and faculties need to ensure their staff are culturally competent (seeTable 58):
    - Business staff must be culturally aware and culturally competent; and
    - Business curriculum must be culturally appropriate.
      Each of the above findings are illustrated in the following Tables, drawing on key quotes from the interviews with Aboriginal and Torres Strait Islander staff at Australian universities.

Each of the above findings are illustrated in the following tables, drawing on key quotes from the interviews with Aboriginal and Torres Strait Islander staff at Australian universities.

Table 55. Recommendation 1: Promote Business Program Community Applicability

Recommendation 1.	Exemplar Quotes
Link business studies outcomes to community	'What is needed is promotion about what they do, what a degree in business does and how it can relate back to your local community.' 'Ensconcing business and the discipline of business studies in that same [giving back to family and community] narrative, I think, is really important.' 'I think the point about sort of articulating a narrative that allows students to see themselves as giving back through business I think is a really important thing.'
Make clear that business graduates can give back to community	'The benefits of business education probably needs to be spoken about or promoted a little bit more for students looking to go into business and probably in the broader benefits that that can achieve for your local communities.' 'If you are an Aboriginal accountant, you can then assist Aboriginal organisations with looking after their books. So, you're working it back into community. You're getting the opportunity to learn to then contribute back to community. It's all that linking back to community that's important to people.' 'You'll find there's a mainstream business course which any student can undertake, but it also has little relevance to Indigenous people. So, what often Indigenous communities want is, if you want the qualifications, equal qualifications in business, we want them [business program outcomes] relevant to our communities.'
Promote the broader benefits of business studies	'There is a real need to promote the importance of Indigenous leadership, and entrepreneurship in any programs… [that business graduates] can build up the capacity of our community … those types of courses would be very attractive to students.' 'Pushing university recruitment and primarily marketing really to build that narrative around Indigenous entrepreneurship.' 'It is important that we promote [the value of business education] more. And as I'm going out to schools I'm talking about that, you know, we need CEOs to run our Aboriginal medical services, you need a business qualification not a medical qualification.' 'Providing Aboriginal people and Torres Strait Islanders with the idea that not only do Aboriginal people succeed in sort of business studies but they also go on to have quite fulfilling careers in the corporate sector or in their own sort of business enterprises.'

Table 56. Recommendation 2: Showcase Business Role Models

Recommendation 2.	Exemplar Quotes
Promote successful business people within the community	'Business is not recognised as a career pathway because there are no defined role models, or clear role models in the business space.' 'Role models are important for showcasing where Indigenous people have those skills and additionally drawing on Indigenous examples of where those skills are, not just all non-Indigenous white Anglo examples' 'Presenting role models to people who are actively engaged in business, or commerce… [is] really important… Because we see a lot of it [promoting of role models] in terms of Aboriginal nurses, paramedics, doctors. We don't see that many of Aboriginal people, Torres Strait Islander people… who are engaged in business or commerce. That's not a high profile.'
Promote academic staff as role models	'People look at Indigenous academics and think, well maybe one day I could do that, I could be an academic. And it's also pathways for students as well that are studying in business, that you know, it just doesn't stop. Once one journey starts at university, it doesn't finish when I stand on a podium to get my degree, it's also about looking beyond that. So, the pathways, you know, if I want to become an academic within the business school…'
Involve Aboriginal and Torres Strait Islander students in mentoring	'We've established a student mentoring program here. The idea behind that is for the students to be showcasing who they are at the first level. So, then the next step is obviously that we try and get them to as many networking events and opportunities at the next level of actual professionals out in the field where they can see kind of real life experiences where other Indigenous people have got to in the business sector.'
Involve Aboriginal and Torres Strait Islander students as ambassadors	'It's about promoting those successful people, using those role models that have either successfully completed their studies already or look at those models and businesses that have been set up and you know have those people, those ex-students that have been successful come back and be role models.' 'I think it's been good to have business schools identify past alumni role models… [and] bringing those role models into to the classroom.'

Table 57. Recommendation 3. Business Schools and Faculties Contribute to Building Aspirations

Recommendation 3.	Exemplar Quotes
School outreach is key to positioning business as a career pathway	"Any aspirations program you can really promote that within the primary and high schools. I think the earlier that you catch students and the earlier you start to get the word out the better off you'll be in terms of [students] knowing what their options are.' 'More Aboriginal students are graduating from year 12 than ever before and when we go out into schools they're just crying out for information. They just [need] to know about opportunities because their world experience has been so limited up to this point that I think – yeah, the faculties need to be working with the future students teams and the engagement teams to better showcase what they've got on offer.' 'Doing school visits [is essential] now and I'm trying to plant the seeds for students in years eight, nine and ten… We also have the business experience day here for students in years ten, eleven and twelve about business.'
Develop programs targeted at high school students	'Part of our engagement strategy is to target the [high school] students who are on a pathway to university.' 'Our program has a strong focus on business, [it is] a week-long camp we run and basically you get an idea of, or the students get an idea of, what university is, what it's like to study in university, what it's like to live on or around campus. Then what it's like in industry… We have a specific business inspired camp, and I guess the big focus on that is I guess articulating what a business degree can do for community.'
Engage with community and family to break down barriers	'Business schools need to get out and work with Indigenous people within probably their own sectors and then go out and visit communities and hear what communities want, rather than what the universities dictate.' 'We're looking at and engaging with the community, but also encouraging them to come in [to the university]. Because the one thing that has always been the case from an Aboriginal perspective is that universities are only for the rich, non-Aboriginal kids. Which obviously is not the case, [so there is a need for] breaking down that little barrier – that university is for everybody' 'The biggest thing is we obviously try to break down the barriers… Probably the biggest thing we do is educate the families and the communities as well. So we have, I guess, a generation at the moment where they will be the first in family to university. So a big part of our strategy is to educate their families, their parents, and their grandparents and the community they're surrounded by to make sure that I guess they're part of the building the aspiration of the students, and motivating the students.'

Table 58. Recommendation 4. Business Schools and Faculties Contribute to Ensuring Cultural Competency

Recommendation 4.	Exemplar Quotes
Business staff must be culturally aware and culturally competent	'Cultural competency must be a mandatory practice for all university staff'
	'At the moment we're not prepared to market [business programs] a great deal, because we don't feel that they're culturally competent'
	'You cannot afford complacency when you're actually in the public sphere. You've got the future of 80 to 100 students in one lecture theatre; all it takes is one wrong sentence, and you've lost that student… [Staff cultural competency] could very well mean the difference between retaining a student and that student leaving this university.'
Business curriculum must be culturally appropriate	'There is racism within the curriculum and business studies needs to rethink the ways that sensitive cultural issues are discussed.'
	'There is a great deal of racism attached to particular subject areas.'
	'I have tried to encourage the School of Business and Law to specifically think about their Indigeneity of the curriculum.'

Overwhelmingly, the interviewees stressed the need for a shift in the ways that business programs are promoted in the recruitment of students, particularly that graduates of business programs can, and do, actively engage in giving back to community. Therefore, as highlighted in Tables 30-33, increasing the visibility of successful business graduates and promoting the community applicability of a business degree through positive showcasing would be invaluable to increasing Aboriginal and Torres Strait Islander engagement.

The recommendation for endorsing successful Aboriginal and Torres Strait Islander business people as role models within communities was seen as a key initiative that would increase participation in business-related higher education. As noted by one interviewee:

"I think we need to actually have a lot more role models that have undertaken business and commerce, or management and commerce studies, and who have sort of shown how that is benefitting them, their families and their communities. So, we need to get more of those kind of spokespeople out there and we also need to kind of demonstrate how business economics actually does have a significant impact on, you know, community in terms of jobs but also economic sustainability and independence and self-sufficiency and not getting tied to the welfare" (Joanne).

This interviewee further argued that Aboriginal and Torres Strait Islander business people need to be advocating business and the ways it gives back to communities:

"Yes we're into business, yes we're about making profit but we do it because we are trying to advance our communities and we are doing it because we want our families to be not welfare dependent. So I think it's those – there's the opportunity to be economically independent and then individually, but there's also how they're giving back to the communities" (Joanne).

Many interviewees expressed the need to engage and locate suitable role models. Some examples of quotes included:

"Now we're into the second generation of people working for government that have long time superannuation funds, who have capacity, and are generating business, who are business people, who are in some cases individual millionaires based on their business interests, who are philanthropic, doing philanthropic work, who are doing economic development, who are members of chambers of commerce" (Gillian).

"It's important that for those individuals that have succeeded in their journey, once they have finished their degree and if they're working up within their companies or businesses that they are able to be leaders within their own community, but also pass on what they've learnt as well… I think for a lot of Aboriginal and Torres Strait Islander people, you know, seeing positive images of people, whether that be on a poster or visual, and knowing where their journey has taken them" (Jonathon).

STAFF RECOMMENDED STRATEGIES FOR INCREASING RETENTION AND SUCCESS IN BUSINESS SCHOOLS

This section reports on the various strategies that the interviewees saw as essential for augmenting the retention and success of Aboriginal and Torres Strait Islander students in business-related higher education. Before discussing the specific strategies recommended by the interviewees, it is important to note that, at the same time as discussing the opportunities presented above, and the recommendations presented below, many interviewees were very critical of business schools and Faculties across Australia and their ongoing lack of commitment to developing strategies aimed at increasing Aboriginal and Torres Strait Islander Engagement in business-related higher education. In relation to this critique, two overarching themes emerged: first, that business schools and faculties do not have any strategies; and, second, that business schools and faculties are too often deflecting to Indigenous Education Units. These criticisms must be considered here to further inform the recommendations of this project.

In relation to the first criticism, many interviewees commented that most existing engagement and retention strategies were not driven by schools or faculties but, rather, by the Indigenous Education Unit (IEU). In relation to this, interviewees suggested that business schools typically tend to not see that increasing the participation of Aboriginal and Torres Strait Islander students is important. This view is summarised in this interviewee statement:

"Now, I have to be honest, I don't know if there's any strategy or plan within the business school that they have essentially targeting Aboriginal and Torres Strait Islander students or potential students. I do know that the current Indigenous academic that does sit in the business school has been trying to re-engage and start promoting or doing some promotion to encourage Aboriginal and Torres Strait Islander students to want to come and study business. But again, it's always an issue that's pushed to one side and not seen as an important issue" (Jonathon).

At the same time that many interviewees held the view that "business schools don't really do anything" (Gillian), there was also concern expressed regarding the dependence of business schools and faculties on IEUs for dealing with Aboriginal and Torres Strait Islander student retention and success problems. Whilst it will be discussed below that reciprocity between faculties and IEUs was identified as a key success factor, the issue is that this often leads to deflection, wherein business schools and faculties don't take responsibility for their Aboriginal and Torres

Strait Islander students. In other words, business schools and faculties often fail to take accountability for their Aboriginal and Torres Strait Islander students. This particular concern is highlighted in each of the following statements:

"Too often faculties, inside universities, the faculties will say, "This is an Indigenous matter, so let the Indigenous unit take care of it." That is just a cop out that is just rubbing their hands and saying, "This is not my issue, this is someone else's issue." Even though they pay lip service, and I'll tell you many universities pay lip service to this stuff, but not many actually have many actions on it…"(Paul).

At one particular university, the interviewee discussed the IEU as responsible for driving strategies for participation and retention, but also noted that business schools and faculties must be actively involved in providing formal support to students:

"Just breaking down the barrier of the Aboriginal students is different in some way, the faculty kind of back away from things because they don't know how to handle things. But kind of removing that stereotype that they perceive that there's going to be some big major cultural issue when it may just be about grades or something, it's not actually – yeah, just because they're Aboriginal doesn't mean that it's always going to be cultural or it's always going to be something that we [the IEU] need to specifically be involved in… I guess instilling confidence within the faculty that they can actually handle this on their own as well, they don't need the Indigenous Education Unit to hold their hand during the process" (Nicole).

Another interviewee referred to this as the need for shared accountability, which can develop through collaborative and inclusive models of student support:

"There needs to be shared accountability, and I think that the Aboriginal and Torres Strait Islander Indigenous spaces at universities are there to provide the expertise and the knowledge, the connections to community, the expert advice as far as curriculum, as far as research connections and student and community engagements, and the cultural implications that come with that. But we're not discipline experts and like, you know, we have our own discipline expertise that we come with, but we're not appointed discipline experts… That's the faculty's responsibility and that's a responsibility that they need to take. I mean, my background is business and I have a Master's in business and whatever else, and research business degrees, so I can very well provide input into that, and I'm happy to, however it's not my primary role. It's the faculty's role to provide that discipline knowledge" (Gayle).

Indeed, it is these concerns that led to one of the major findings for increasing Aboriginal and Torres Strait Islander student retention and success in business-related higher education being that business schools and faculties must engage with IEUs to drive strategies to increase participation, and that engagement must be based on a collaborative model driven by inclusive practices. As explained by one interviewee, a collaborative model is crucial:

"You need to have good relationships with everybody, around the traps, not only from the Indigenous side but the mainstream as well. Those relationships, they're important not only in the planning and the delivery of any support and programs that we have… [There

is a need to] develop a relationship or some form of partnership and work towards that collaborative approach and work out how best to engage Aboriginal students. So, I think that the first step would be to develop that partnership with the support units" (Daniel).

In terms of the need for inclusive practices, interviewees discussed that business schools and Faculties must take responsibility for the development of strategies and initiatives for Aboriginal and Torres Strait Islander participation, retention and success:

"The reality is, is if you don't have some sort of inclusive process where the faculties do take responsibility, there will be always be this tension between the Indigenous area of the faculty where they say, 'We're not sure who is responsible for it.' The faculties really have to take responsibility for it and lead it" (Paul).

"It can't be just in an Aboriginal centre, because that's not inclusive practice. Whilst Aboriginal centres are very important and have an important place and space within higher education, there needs to be Aboriginal recruitment in every nook and cranny of a university and in a whole range of positions" (Heather).

In relation to this, interviewees warned of the need for a whole-of-university approach to ensuring the engagement and success of Aboriginal and Torres Strait Islander people in higher education. Without collaboration and shared accountability between schools and faculties and IEUs, there can be negative outcomes that lead to further isolation and segregation for Aboriginal and Torres Strait students, two outcomes that are paradoxical to the widening participation agenda. As argued by one interviewee:

"Something that's entirely led by the Indigenous centre, generally it does lead to, for lack of a better word, a ghettoization of the activity. But when it's entirely run by the school there's a lack of awareness around the kind of circumstance and external stuff that needs to be taken into consideration in terms of retaining students particularly. So, for me, I mean, the stuff in Indigenous higher education, there is an argument around where the primary drive should come from and I've always been of the opinion that it needs to be somewhere between the two, between the school or faculty and the Indigenous centre working together otherwise you don't get the same kind of buy in that's needed to get the students through their courses of study" (Harold).

With these issues in mind, the next section investigates the recommendations made by the interviewees for enhancing the retention and success of Aboriginal and Torres Strait Islander students in business-related higher education. Given the role that the interviewees play at the level of strategy development for universities, they were asked to recommend what business schools and faculties could be doing to improve the retention and success of Aboriginal and Torres Strait Islander students in business related higher education. These recommendations are delineated below.

STAFF RECOMMENDATIONS TO INCREASE RETENTION AND SUCCESS

The key recommendations discussed by the Aboriginal and Torres Strait Islander staff in relation to increasing Aboriginal and Torres Strait Islander business student retention and success included:

- Business schools and faculties to actively collaborate with IEUs (see Table 59).
    - Engagement to drive student support programs;
    - Engagement to drive student participation strategies; and
    - Collaborative and inclusive models of engagement are essential.

- Business schools and faculties to employ Aboriginal and Torres Strait Islander staff (see Table 60):
    - Aboriginal and Torres Strait Islander academic staff are essential; and
    - Aboriginal and Torres Strait Islander professional staff are essential.

- Business schools and faculties to modify pathways and program content (see Table 61):
    - Need for business specific enabling programs; and
    - Need for business curriculum to be indigenised.

- Business schools and faculties to utilise industry engagement efforts Table 62):
    - To increase graduate opportunities and guarantee career pathways;
    - To develop internships and cadetships;
    - To develop mentoring programs; and
    - To provide funding for scholarships.

- Business schools and faculties to provide appropriate formal support (see Table 63):
    - Need for targeted strategies that are business course/unit specific; and
    - Need for an Aboriginal support officer based in the school or Faculty.

- Student needs must be at the centre of business school strategies and initiatives (see Table 64):
    - Need to avoid deficit discourses and drive change for self-determination; and
    - Need to take student-centred approaches to student engagement.

Each of the above findings are illustrated in Tables 34 to 38, drawing on key quotes from the interviews with Aboriginal and Torres Strait Islander staff at Australian universities.

Table 59. Recommendation 1: Indigenous Education Unit Collaboration

Recommendation 4.	Exemplar Quotes
Engagement to drive student support programs	To ensure that Indigenous students can succeed, business schools really need to… work with the Aboriginal Education Centre a lot more in making sure that the students that they've got are looked after and supported. That would definitely increase the numbers and prospects of future students that are going through.' 'There's been a history of [the IEU] just independently just driving initiatives but there is a need for greater engagement with faculties… if we can help those faculties and centres become more culturally friendly and increasing cultural competency to support students then our students I think are going to succeed much better than just solely relying on [the IEU].' 'We've put a lot of time into, having strong relationship with the schools and faculties. One thing we did was set up faculty working groups. Every quarter we meet up with the faculties to discuss our students and what programs we're currently running and how we could change or improve the support that we're providing, and how the schools and faculties can assist in doing so.'
Engagement to drive student participation strategies	'It's got to be collaborative [between the business school/Faculty and the IEU. I think that's where you see there's a real partnership so you know I think we make each other be accountable… It's also about making those students comfortable in using the School of Business, not just feeling as though they've got to be based at the Aboriginal centre.'

Table 60. Recommendation 2: Staff Employment

Recommendation 2.	Exemplar Quotes
Aboriginal and Torres Strait Islander academic staff are essential	'It's important to grow the Indigenous academic workforce within those schools.' 'There is a need to have an identified position within the faculties…. a position created within all the faculties, and within the business school faculty, that is an Indigenous academic/professor.' 'An Indigenous academic inside the faculty actually plays a very important role in terms of getting the Aboriginal and Torres Strait Islander students together inside that faculty'
Aboriginal and Torres Strait Islander professional staff are essential	'The main way of connecting with students is to have as many Aboriginal faces being employed at the university, and that sets a standard, and it sets the comment, 'Well, they're proactive in closing the gap within employment so this is probably a centre that I would like to come to.' 'I think it all boils down to increasing Indigenous employment within the university… It's just so obvious… it's obviously a feeling that it's safe, it's comfortable and you won't be judged, and there's no racism and all that sort of thing… The reason is because there's black faces… Where there's a black face, black people will come.'

Table 61. Recommendation 3: Modify Pathways and Program Content

Recommendation 3.	Exemplar Quotes
Need for business specific enabling programs	There needs to be a specific [enabling] program designated for potential students, for potential applicants, that are looking at wanting to go into a Business Degree and develop some kind of program.' 'Most Aboriginal students will come through alternative pathways. So, ensuring that that is at least flagged in that learning experience so that there is a possibility to go into business and what that might mean.' 'Enabling programs [needs to be] specific to business… There are electives that you can take that if you want to do business, but [there should be] more promotion, like, you know, come in, do this program and this is the pathway into a business degree'
Need for business curriculum to be Indigenised	'We have a university-wide policy to ensure that Indigenous specific subjects and topics are covered in all of our university units.' 'Indigenisation of the curriculum would be a key thing for any university to think about, particularly in the maths space, or the business space. To understand that there are a huge number of Indigenous businesses, so that's important.' 'Indigenisation of the curriculum, whether it's through a particular course or having guest speakers, is important.' 'Students are very passionate about their culture so if they had subjects within the course that were Indigenous specific, they would definitely enjoy those courses a lot more.'

Table 62. Recommendation 4: Engage with Organisations and Industry

Recommendation 4.	Exemplar Quotes
To increase graduate opportunities and guarantee graduate career pathways	'Promoting opportunities and success within business industry from an Aboriginal and Torres Strait Islander perspective, and then showing how that contributes back to communities and how that's advancing the socio and economic outcomes of communities.' 'There needs [to be] a lot of goodwill from organisations as well… being involved in career expos… [Allowing for] more of a holistic view of potential students seeing that there is a pathway for them… [providing] potential that there are roles and positions available – or set aside – for a percentage of Aboriginal graduates.' Engaging with organisations to present to students about career pathways in business.' 'The success rate [from cadetship programs for] graduate placements has been quite strong.'
To develop internships and cadetships	'Business schools… could advertise that if they do a degree within the business school they could actually get an internship with them that would be a huge thing for our students.' 'I have a database of students desperately waiting to be a part of [a] cadetship program.' 'Internships and opportunities to work in corporations or out in Indigenous businesses is also important because that offers them some employment experience.'
To develop mentoring programs	'Mentoring would be such a valuable resource for our students to get that experience or just to have a mentor, just to have somebody to go and kind of chat with. It works in other faculties so I can't see why it wouldn't work in business.'
To provide funding for scholarships	'Having scholarships is it's important [for their success]. Having additional financial support through scholarships certainly helps them balance their sort of financial and study as well.' 'There is a need to work more closely with organisations to raise profile and raise more money from donors so that we can provide more scholarships for Indigenous students in business'

Table 63. Recommendation 5: Provide Appropriate Formal Support

Recommendation 5.	Exemplar Quotes
Need for targeted strategies that are business course/unit specific	'The [business school] should be able to target and have a much targeted strategy for ensuring that their students are successful in that space.' 'The business school [must be] willing to commit their own financial funds to provide tuition to our business students… and not rely on [the IEU] budget.' 'A key to their success is the tutorial support. Students said that that's a significant success to getting their degrees completed successfully.'
Need for an Aboriginal support officer based in the school or faculty	'I'm based in Business and Law and my role is to support our current students that are enrolled in business units… so I support the students and I regularly make contact with those students to see how they're progressing with their studies.'

Table 64. Recommendation 6: Make Student Needs Central to Business School Initiatives

Recommendation 6.	Exemplar Quotes
Need to avoid deficit discourses and drive change for self determination	'Must be a focus on What are the needs of the students.' 'We need to find strategies that build self-confidence and self-determination, and they're the ones that in the end work.' 'Removing that deficit model I think is a really strong way to retain and see the progression of students.'
Need to take student-centred approaches to student engagement	'We are moving away from the word support and moving into the terms engagement and opportunities and personal development and professional development.' 'Nurturing cultural identity is critical.' 'Allowing students to express their cultural identity and to create networks around that… are also critical to the student's success.'

One of the most discussed recommendations raised by the interviewees is the need for Aboriginal and Torres Strait Islander staff to be employed within business schools and/or faculties. This is seen as of the utmost importance for increasing the participation, retention and success of Aboriginal and Torres Strait Islander students in business-related higher education, and this strategy serves multiple outcomes:

> *"If you had a couple of Aboriginal academics in business, if you were greeted by a student services officer in business that was Aboriginal, there is more chance of you not only enrolling in that course, but succeeding in that course" (Heather).*

> *"It just makes it so much easier [for the students]. You can go and identify with them. They're experts or they're professionals in their disciplines [and] they add value by being Indigenous. So, they do their job like everybody else but being an Aboriginal person within a Business Faculty has spinoffs for non-Indigenous students as well… The academic knows their discipline but when a question comes up in the classroom about Indigenous business or trade or whatever it is they can answer that from that perspective as well" (Katherine).*

Yet, many interviewees noted the failure of business schools and/or faculties to meet their stated KPIs on Indigenous employment and that there remain very few Aboriginal and Torres Strait Islander academic staff within business schools and faculties across Australia. As voiced by interviewees:

> *"It's ridiculous to say that universities can't have an Indigenous academic in their faculty, it's just rubbish, it's a lie. The truth is that they done' want one… I think there's a resistance… for whatever reason and then people say, 'We can't find anyone with qualifications', well grow your own. Develop a program that makes sure that you are successful, don't fiddle around and say 'I'd like to, but I can't'. That's just an excuse." (Paul).*

> *"They've got to look at where are Indigenous people employed in their schools. Where are their Indigenous staff? Because I don't see that happening. I don't see them [business schools and/or faculties] recruiting Indigenous people in their schools" (Gillian).*

To address this issue, interviewees offered various recommendations for ways to increase Aboriginal and Torres Strait Islander staff within business school and faculties, with a particular focus on opportunities to development of Aboriginal and Torres Strait academics:

> *"There needs to be a stronger push to try and get Indigenous academics, whether it be through whatever pathway a university has in their early academic [career] – or by identifying current students that are achieving well, that are thinking about becoming an academic" (Jonathan).*

> *"It's important to grow the Indigenous academic workforce within those schools. I think what doesn't tend to happen – I mean, you'll have Aboriginal graduates who finish in the business school, they go off into these amazing jobs in the corporate sector, and they're not interested in coming back into higher education. I think tapping those people on the shoulder to consider the ways in which they might give back either by teaching or some kind of community engagement type role would be a useful starting point"* (Harold).

Indeed, having a specific strategy aimed at increasing Aboriginal and Torres Strait Islander academics in business was seen as fundamental. As one interviewee said, 'If you can't find one, develop one' (Paul). One interviewee discussed a program in which PhD scholarships are offered for Aboriginal and Torres Strait Islander people to become lecturers within the business school whilst doing a PhD at the same time. This program is specifically aimed at attracting 'an Aboriginal person to become a lecturer, but also support him or her to… do their full qualifications and become a graduate with a PhD" (Linda). Similarly, another interviewee proposed that Aboriginal and Torres Strait Islander students should be encouraged to become lecturers:

> *"It requires probably not so much an overhaul, but the encouragement of our graduates to say, 'Okay, well… how about coming back into the university as a lecturer?' And we've got the education component of it, then we've got the employment component of that as well. So they do a full cycle of studying at the university, and they come back to the university… Those lecturers, they can come in and talk about what is it that drives them to succeed in the university, what is it that makes them stay, and what is it that makes them encourage students coming into the university"* (Tony).

The above-mentioned recommendation also relates to the need for role models in business, revealing that, as well as showcasing successful Aboriginal and Torres Strait Islander entrepreneurs to encourage student participation in business-related higher education, Aboriginal and Torres Strait Islander academics are important role models for Aboriginal and Torres Strait Islander students in business.

At the same time as boosting Aboriginal and Torres Strait Islander employment, interviewees argued for the need for employers to recognise the specific culturally specific responsibilities of Aboriginal and Torres Strait Islander people and to ensure that strategies are in place to retain staff. For example, "It's about retaining staff as well, and the majority of Indigenous staff at [Universities] has relocated from another state. So things like cultural leave is really important to keep staff feeling happy and meeting their cultural obligations".

Whilst the above themes could be clearly identified within the interviews, there were also people who discussed the overlaps between each theme. For example, one interviewee explained that having Aboriginal and Torres Strait academic staff within a business school and/or faculty can assist other non-Indigenous staff in the development of cultural competency by helping staff to "understand the complex needs of Aboriginal students in that space" (Paul).

At the same time, another interviewee explained that having Aboriginal and Torres Strait academic staff within a business school and/or faculty can assist with curricula and pedagogical issues seen to be ingrained in the business curriculum, whereby Aboriginal and Torres Strait Islander academic staff can assist non-Indigenous business academics to develop "new curriculum, embedding Indigenous perspectives and Indigenous ways of knowing" (Linda). But, interviewees also warned

that the Aboriginal and Torres Strait academic staff within business schools and/or faculties must not be pigeonholed as the experts on Indigenous topics – they should not only be teaching courses with Indigenous content, and rather they should be teaching any area of business.

A WORD CLOUD ANALYSIS OF STAFF INTERVIEWS

NVivo is used to generate frequencies to words used in the staff interviews. These words were then ranked by level of importance (frequency). Words that were merely descriptive and with no relationship to policy, participation, failure or success were deleted. The remaining works were used to generate a Word Cloud, present in Figure One, below. This provides us with some information on word themes derived from staff interviews. The font size of the words reflect the frequency of their use.

What stands out, is the importance of Community, Support, Engagement, Faculty, Programs, Education, and Health. We also have the importance of Scholarships, but is of lesser importance than the former words, based on the frequency of use. Further down the list is Culture, Pathways, and Internships, amongst others.

The word cloud analysis highlights the overarching importance of Community, Support, Health, and Engagement based on the staff interviews inquiring into participation and success of Aboriginal and Torres Island students in business schools. This suggests that policy should be informed by these word variables and their underlying meaning.

Figure 46. Word Cloud Analysis of Staff Interviews

CONCLUSION

This chapter has presented the findings of the interviews with twenty Aboriginal and Torres Strait Islander staff in various management positions at sixteen universities in Australia. Each of these interviewees is an expert in Aboriginal and Torres Strait Islander higher education. Their knowledge of the issues and opportunities for Aboriginal and Torres Strait Islander students provide invaluable insights into the types of strategies and initiatives that business schools and faculties could establish to improve Aboriginal and Torres Strait Islander participation, retention and success in business-related higher education.

As noted above, the insights of these experts represent the voices of these individual interviewees, and without further analysis we cannot determine the representative nature of these opinions related to us in the in-depth interviews. The opinions and insights of our interviewees have not been related to policy nor been tested for policy effectiveness in terms of participation and success. And this latter step is critical area for further research on Aboriginal and Torres Strait Islander student participation, retention and success in business-related higher education.

Figure 47. University Staff Interview Schedule

- The interviewer provides the participant with an overview of the project. It is key to state 'Participation is voluntary.' Remind participants that they have received a 'Participant Information Statement' and already signed a 'Consent Form', and ask if they have any questions regarding these.
- 'The project aims to build an evidence base to inform recommendations to business schools to engage, retain and succeed Indigenous students.' 'Initiatives and strategies designed and implemented by the interviewee's university will be discussed during the interview.'
- 'It is entirely up to you [the interviewee] whether or not to answer any question, and how much detail to provide.' 'You [the interviewee] may withdraw from the interview at any time.'
- 'The interview will be tape recorded and transcribed. The tape recordings will not be shared with anyone who is not a member of the project team. You will not be identified in the transcription.'
- 'Directly after the discussion has taken place, you [the interviewee] will be given the opportunity to review, edit or erase any part of the audio recording to which you have contributed.'
- 'The discussion will take 45-60 minutes.'

Interview Questions

- Statistics show that a greater percentage of students enrolled in the health sciences, education, and humanities are Indigenous, than the percentage of students enrolled in business related studies. Why, in your experience, are Indigenous students more attracted to these fields of study, than to business?
- What, do you think, needs to be done to engage more Indigenous students in business related higher education?
- Can you provide some insight to the strategies and initiatives your university implements to engage, retain and succeed Indigenous students?
- Are these strategies and initiatives driven by central university teams, faculties, or schools?
- In your opinion, are the strategies and initiatives best driven by central university teams, faculties or schools?
- Are there any strategies and/or initiatives that are specific to your university's business school? Can you please describe these strategies?
- Has/have this/these strategies been assessed? If so, what were the findings? If not, in your opinion, how effective are the strategies?
- What recommendations would you make to business school Deans of Australian Universities Business to improve the engagement, retention and success of Indigenous students in business-related higher education?
- Do you have any further comments?

Closing

- Thank the participant
- 'If you have any future questions or concerns, the Chief Investigator and Human Ethics Committee contact details are on the Participant Information Statement.'
- 'Would you [the interviewee] like to review, edit or erase any part of the audio recording of this interview?'

CHAPTER 8. KEY FINDINGS

Our findings confirm that a substantial systemic participation and success (pass and retention rate) gap exists for Aboriginal and Torres Strait Islander business students compared to their non-Indigenous cohorts.

This gap is across almost every business school in Australia, especially where Aboriginal and Torres Strait Islander business student numbers are relatively large.

The participation gap is negatively affected by the extent to which low socio-economic status Aboriginal and Torres Strait Islander students are not attracted to business schools. But attracting a larger percentage of such students without providing adequate support to them will result in increasing the success gap.

Previously cited success determinants, such as socio-economic status (SES), gender, age, and first-in-family (FIF) status, thought to significantly affect Aboriginal and Torres Strait Islander success rates were explored.

Our findings reveal that these variables do not explain the success gap. Even if all things were equal there would be only a moderate *(*or marginal) improvement for Aboriginal and Torres Strait Islander student success rates as compared to non-Indigenous business school students.

As such, greater resolve on the part of all levels of society will be required to address the underlying challenges faced by Aboriginal and Torres Strait Islander students in business schools, even across the socio-economic divide.

A number of initiatives to reduce the participation and success gap are discussed and assessed in the following chapter.

PARTICIPATION FINDINGS

1. MICRO DATA PARTICIPATION RATES

In 2015, there were 1,609 Aboriginal and Torres Strait Islander students in Australian business schools, compared to 147,182 non-Indigenous students in Australian business schools.

With regards to participation:

- 15% of the Aboriginal and Torres Strait Islander student population were enrolled in Australian business schools.
- 24% of the non-Indigenous student population were enrolled in Australian business schools.
- This participation gap holds true for almost all business schools in Australia, although there was some variation about this average ratio across Australian business schools.
- There is also a lower rate of participation of Aboriginal and Torres Strait Islander students in business school programs compared to other disciplines, such as teaching and nursing.

2. BUSINESS SCHOOLS PARTICIPATION RATE INITIATIVES

Our research identifies a number of initiatives and policies that have been adopted to increase the participation of Aboriginal and Torres Strait Islander students in Australian business schools. These are:

- Preparation / enabling programs;
- Alternative entry pathways;
- Outreach programs;
- Scholarships; and
- Equity working groups.

Based on a statistical analysis of the relationship between initiatives and participation rates, the initiatives and policies that appear to be most effective are:

- Preparation / enabling programs; and
- Alternative entry pathways.

3. BARRIERS TO PARTICIPATION

For the Aboriginal and Torres Strait Islander student and alumni survey respondents, the main reasons for engaging in higher education are to:

- Make a difference within their Aboriginal and Torres Strait Islander communities;
- Contribute to their broader communities;
- Improve the perception of Aboriginal and Torres Strait Islander people within broader society by being a positive role model; and
- Achieve personal goals, such as improving their career prospects.

The student respondents not enrolled in business-related higher education, identify negative perceptions towards business and business degrees as the main barriers to enrolling in business programs, such as:

- Lack of community applicability and relevance;
- Limited understanding of program purpose, course content or career outcomes; and
- Negative perceptions of business within their communities.

For the student respondents enrolled in business-related programs, their reasons for participating in these programs relate to:

- A strong interest in job opportunities and career development; and
- Developing entrepreneurial skills.

The interviews conducted with Aboriginal and Torres Strait Islander university staff identify several possible barriers to participation for Aboriginal and Torres Strait Islander students in business-related education.

There are some identified possible barriers that are the same as those identified by current students and alumni. These relate to the need for business schools to better communicate job opportunities, promote what a business education involves, and how a business education relates to Aboriginal and Torres Strait Islander students and their communities.

There are some possible barriers discussed by Aboriginal and Torres Strait Islander staff that were not identified by the students and alumni survey respondents. These are:

- Other fields of study have associations that have been effective in creating demand;
- University enabling and pathway programs do not adequately focus on developing skills and capabilities for business education. This relates, for example, to inadequate skills in mathematics;
- Insufficient Aboriginal and Torres Strait Islander role models for students, in terms of academic staff, support staff, 'ambassadors' to students, and success stories and leaders from the business community;
- The need for more scholarships. These are more available in other fields of study; and,
- The scarcity of Indigenous course content.

Although many Australian business schools have initiatives related to pathways, scholarships, and role models, these comments suggest that the quality of these initiatives are typically not up to par if one wishes to increase Aboriginal and Torres Strait Islander student participation rates.

There are currently no clearly identified widespread initiatives to establish Aboriginal and Torres Strait Islander clubs or associations within Australian business schools.

There are currently no clearly identified widespread initiatives to increase Indigenous course content within business programs, which can assist Aboriginal and Torres Strait Islander students being able to better identify with business course content.

4. LOW SES PARTICIPATION OPPORTUNITIES

When discussing the impact of socio-economic status, our micro data findings indicate that low SES Aboriginal and Torres Strait students offer universities the opportunity to increase participation rates because they are the largest catchment of candidates.

- There is an unequivocally positive relationship between the percentage of low SES Aboriginal and Torres Strait students in Australian business schools and the participation rate in business schools.

- These is also an unequivocally negative relationship between the percentage of low SES Aboriginal and Torres Strait students in business schools and the success gap. As the percentage of low SES Aboriginal and Torres Strait students in Australian business schools increases, the participation gap narrows. This is because there is a larger catchment area for Aboriginal and Torres Strait students in low SES cohorts.

- Top ranked universities, in terms of pass rates, have much higher percentages of high SES Aboriginal and Torres Strait Islander students, but had fewer than 10% Aboriginal and Torres Strait Islander students. These are easy wins in terms of pass rates, but severely limit the ability of a business school to reduce the participation gap.

Increasing Aboriginal and Torres Strait students in business schools requires attracting more students from the low SES cohorts.

Yet, this requires efforts to support these students through Business School related capabilities so that they are equipped for success.

Greater access to scholarships is required for low SES students.

SUCCESS FINDINGS

1. THE "SUCCESS GAP"

Business school pass and retention rates were evaluated to assess success rates, with a focus on pass rates. Aboriginal and Torres Strait Islander students were compared relative to their non-Indigenous cohorts.

In 2015, on average, Aboriginal and Torres Strait Islander business students pass rates lagged significantly behind the pass rates for non-Indigenous business students. There was, however, some important variation about the average:

- 59% pass rate for Aboriginal and Torres Strait Islander.
- 68% pass rate for non-Indigenous business students.
- 80% is the ratio of the pass rate for Aboriginal and Torres Strait Islander to that of non-Indigenous students.
- There is a success gap of 20% with regards to pass rates.

In 2015, on average, Aboriginal and Torres Strait Islander students were more likely to drop out of business schools compared to non-Indigenous cohorts. There was a higher retention rate, on average, for non-Indigenous business students. But there is some important variation around the average:

- 73% retention rate for Aboriginal and Torres Strait Islander business students.
- 82% retention rate for non-Indigenous business students.
- 89% is the ratio of the retention rate for Aboriginal and Torres Strait Islander business students to that of non-Indigenous students.
- There is a success gap of 11% with regards to retention rates.

Our findings support existing research on what we refer to as the "success gap".

We also identify the pass and retention differential between Aboriginal and Torres Strait Islander business students and non-Indigenous business students across all Australian universities.

Given the detailed nature of our analysis and the determinants of the success gap (whereby our analysis focused on the pass rate), our findings contrast with, and build upon, previous research.

> Our findings reveal that, on average, a notable pass rate gap exists between Aboriginal and Torres Strait Islander students compared to non-Indigenous students, irrespective of the students' relative socio-economic status, age, gender or first-in-family status.

In the context of SES, the micro-data reveals that high to medium SES Aboriginal and Torres Strait Islander students achieve higher pass rates compared to low SES Aboriginal and Torres Strait Islander students. The same pattern is detected for non-Indigenous business students.

Similar observations can be made when comparing younger students versus older students, FIF students to non-FIF students, and men and women, within the Aboriginal and Torres Strait Islander business student population and within the non-Indigenous business student population.

> When Aboriginal and Torres Strait Islander business students are compared to non-Indigenous business students by SES cohorts, by FIF cohorts, and by gender, we discovered that a relative pass rate or success rate gap exists across the board.

These results show that there exists a profound and systemic success gap between Aboriginal and Torres Strait Islander business students and non-Indigenous business students.

Therefore, simply improving SES-related performance, albeit of importance, is not the ultimate solution.

> Current policy does not clearly focus on the systemic success gap as this has not been previously well documented or analysed.

2. BUSINESS SCHOOL INITIATIVES

A quantitative analysis of business school initiatives provides an insight into the types of initiatives that appear to improve Aboriginal and Torres Strait Islander business student success. This analysis reveals that the quality (not the quantity) of business school initiatives is essential to achieving better outcomes. There is also no empirical relationship (correlation of close to zero) between the number of initiatives or programs and success rates.

The most successful success rate initiatives identified are:

- Aboriginal and Torres Strait Islander course content;
- Aboriginal and Torres Strait Islander professional staff role;
- Aboriginal and Torres Strait Islander tutoring; and
- Aboriginal and Torres Strait Islander academic staff.

But most business schools have adopted other initiatives and policies as well. These include:

- Support for Indigenous culture and events;
- Indigenous recognition and cultural protocol;
- Indigenous research;
- Indigenous services and support for Indigenous units;
- Indigenous portfolio role;

- Elder in residence;
- Degrees specifically for Indigenous students;
- Paid Indigenous internship;
- Mentoring for Indigenous students; and
- Improve Indigenous representation in decision-making.

3. BARRIERS AND FACILITATORS OF RETENTION AND SUCCESS

The Aboriginal and Torres Strait Islander student and alumni respondents identified similar challenges to their success in higher education, regardless of their field of study.

These include:

- Not having appropriate emotional and financial support;
- Challenges with dealing with complex personal issues;
- Inadequate support dealing with personal and family health concerns;
- Inadequate support to deal with lack of self-confidence/low self-esteem; and
- Inadequate support to deal with a sense of isolation.

> Current policy and initiatives do not address most of these concerns.

4. STAFF INTERVIEW SUGGESTIONS FOR INCREASING SUCCESS

Interviews held with Aboriginal and Torres Strait Islander staff provide suggestions for improving Aboriginal and Torres Strait Islander student success in business-related higher education. It is important to note that these suggested policies have not been tested for effectiveness, and are based on the opinions of the staff that we spoke to. The suggestions include:

- Business schools and faculties to prioritise collaborating with Indigenous Education Units (IEUs):
  - o Engage with IEUs to drive student support programs;
  - o Engage with IEUs to drive student participation strategies; and
  - o Collaborate with IEUs to devise inclusive models of engagement.

- Business schools and faculties to employ Aboriginal and Torres Strait Islander staff:
  - o Aboriginal and Torres Strait Islander academic staff are essential; and
  - o Aboriginal and Torres Strait Islander professional staff are essential.

- Business schools and faculties to modify pathway and program content:
  - o Need for business specific enabling programs; and
  - o Need for business curriculum to be indigenised.

- Business schools and faculties to increase industry engagement:
    - To increase graduate opportunities and guarantee career pathways;
    - To develop internships and cadetships;
    - To develop mentoring programs; and
    - To provide funding for scholarships.

- Business schools and faculties to provide appropriate formal support:
    - Need for targeted strategies that are business course/unit specific; and
    - Need for an Aboriginal support officer based in the school or Faculty.

- Student needs must be at the centre of business school strategies and initiatives:
    - Need to avoid deficit discourses and drive change for self-determination; and
    - Need to take student-centred approaches to student engagement.

CHAPTER 9. RECOMMENDATIONS AND KEY IMPACT INDICATORS

The micro-data analysis found that high performing business schools with less Aboriginal and Torres Strait Islander initiatives often achieved better pass rates comparable to lower performing business schools with more initiatives in place to advance Aboriginal and Torres Strait Islander participation, retention and success.

This finding suggests that quality (not quantity) of initiatives is key to addressing the Aboriginal and Torres Strait Islander student success gap in business-related higher education.

Key recommendations to improve participation and success relate to:

1. Scholarships and other financial support.

2. Emotional support for students.

3. Student support from IEUs and *most importantly* business schools.

4. Improving learning, skills and capabilities for students.

5. Include Aboriginal and Torres Strait Islander specific course content.

6. Increase staffing levels of academic and professional Aboriginal and Torres Strait Islander peoples.

7. Improve the negative perception of business with the use of Aboriginal and Torres Strait Islander success stories and role modelling.

8. Foster career guidance and promote job opportunities.

9. Establish Aboriginal and Torres Strait Islander student clubs in business schools.

10. Implement an ongoing role for the Community of Practice.

11. Test the effectiveness (or quality) of these, and any other, initiatives or programs.

12. Develop policy outside of the conventional policy box.

It is critically important to test for the effectiveness of the Australian, Business School initiatives listed below. Many of the policy recommendations provided are largely already in place and some appear to have met with some success. But there is little detailed and robust analysis on how these programs have been implemented and if they have been implemented in the most effective manner possible.

1.   SCHOLARSHIPS

This recommendation is largely already in place in many Australian business schools. Business school and faculty driven scholarships to attract low SES, rural and regional Aboriginal and Torres Strait Islander students to university will serve to tap into the pool of low SES students and increase participation overall. Such initiatives have been employed in distinguished business schools internationally, such as Harvard University. But there is also a need to develop programs that address the financial needs of students in other SES cohorts, some of whom also appear to be financially stressed.

2.   EMOTIONAL SUPPORT

There is no evidence that such a program is widespread in Australian business schools. Students identify the stress and isolation that many face in university. This might be greater in business schools where many lack the necessary capabilities to succeed. Therefore personal and emotional support needs to be provided. This is especially important for success but, also, to improve participation. If prospective students are aware of such support, this might encourage students to enrol in business school programs. Some suggestions include:

- Providing tangible and intangible support, not only from the Indigenous Education Unit (IEU), but also from within the business school;
- Developing engagement activities that specifically include Aboriginal and Torres Strait Islander student social media groups and peer-to-peer discussion boards, which will also serve to encourage overall student engagement at university;
- Business schools need to collaborate with the IEU to determine how best to support the challenges faced by students studying through part-time and external study modes.

3.   HIGH SCHOOL STUDENT SUPPORT

This recommendation largely is already in place in many business schools. Some suggestions to enhance this initiative include:

- To increase participation rates it is critical that accurate and trustworthy information is effectively provided to prospective students, family, and community;
- This information should be provided in early and later high school years, as well as during a student's tenure at university.

- The Australian Business Deans Council is launching a summer school initiative for Aboriginal and Torres Islander high school students to expose these students business school environments and education.

4.   LEARNING AND SKILL/CAPABILITY GUIDANCE

This recommendation is largely already in place in many business schools. However, anecdotal evidence suggests that learning and skill/capability guidance is not rigorously applied. Business specific capability skills are necessary for achieving success in business-related courses, and beyond in the workplace. Tutoring, mentoring and peer assisted learning programs need to be developed and promoted to increase skills and confidence, particularly for students enrolled in business programs that require mathematical skills, i.e. accounting and finance.

5.   COURSE CONTENT, DELIVERY AND PERCEPTION

There is no evidence that a program of Indigenisation is widespread in business schools nor is their evidence of when and how this might be effective. But there is an unabiding hypothesis that well placed indigenizing can be effective in improving participation and success rates.

Business schools need to ensure that they provide flexible course delivery, through both online and face-to-face modes of teaching to better meet the needs of Aboriginal and Torres Strait Islander students.

Overturning the perception that business is a negative pursuit is key to increasing participation and success for many Aboriginal and Torres Strait Islander students and their broader communities. It is recommended that this could include:

- Embedding Aboriginal and Torres Strait Islander perspectives and knowledge into business course content—relevance of business education to Aboriginal and Torres Strait Islander communities;
- Business school and faculty driven engagement with successful Aboriginal and Torres Strait Islander business people (including, business associations, business entrepreneurs and business executives) is important for providing mentoring to undergraduate students;
- Business schools need to foster a sense of belonging, community, and place amongst Aboriginal and Torres Strait Islander business students.

6.   IMPROVE STAFFING

There is no evidence that such a program is widespread in business schools. It is recommended that this could include:

- Aboriginal and Torres Strait Islander peoples being employed as academic and professional staff. Such staffing is needed within business schools and faculties for the dual purpose of providing culturally appropriate content and being role models for students, but more so for the latter. However, this can be achieved, in part, through effective support, engagement and collaboration with IEUs;

- IEUs are widespread throughout Australian universities, however, relationships between IEUs and business schools need to be strengthened, to be more effective.

7.   ROLE MODELS AND SUCCESS STORIES

There is no evidence that such a program is widespread in business schools. It is recommended that this could be achieved by:

- Business schools engaging with Aboriginal and Torres Strait communities and university IEUs to increase the visibility and applicability of business-related education, including the positive showcasing of Aboriginal and Torres Strait Islander success stories and role models;
- Storytelling can positively communicate the ways by which Aboriginal and Torres Strait Islander businesses and business executives have contributed to community, society, and the environment. Aboriginal and Torres Strait Islander success stories can particularly help to provide relevance and role modelling opportunities.

8.   FOSTER CAREER GUIDANCE AND OPPORTUNITIES

There is no evidence that such a program is widespread in business schools. It is recommended that this could include:

- Providing information on the career opportunities for Aboriginal and Torres Strait Islander students;
- Early stage primary and high school career guidance to promote the visibility of business education and its importance to future careers and to communities;
- Ongoing career development and career guidance is needed to establish the applicability of business courses and the gaining of industry relevant transferable skills;
- Prospective students, their family, and high school guidance counsellors need to be well informed of the career advantages of pursuing business higher education.

9.   ESTABLISH A STUDENT COMMUNITY

There is no evidence that such a program is widespread in business schools. Aboriginal and Torres Strait Islander student clubs and/or associations led by Aboriginal and Torres Strait Islander students in business schools can help to foster a sense of community and identity, and reduce the sense of isolation amongst Aboriginal and Torres Strait Islander students.

The Australian Business Deans Council is supporting initiatives to establish Aboriginal and Torres Islander student clubs in business school to help establish a sense of community and provide more voice to these students.

10. ONGOING ROLE FOR THE COMMUNITY OF PRACTICE

Each business school should establish and maintain a Community of Practice (CoP) to develop and inform initiatives and programs to enhance the Aboriginal and Torres Strait Islander student experience at university. A CoP can play an important role in advising on new policy and the implementation of new policy initiatives. This provides voice to Aboriginal and Torres Strait Islander peoples and communities and takes advantage of the expertise and networks embodied in the CoP.

11. EVALUATE THE EFFECTIVENESS OF BUSINESS SCHOOL INITIATIVES

There is currently no nationwide evaluation tool or framework to assess the effectiveness and quality of existing Australian business school practices and initiatives. It is recommended a framework is developed for assessment and evaluation. See next section on Key Impact Indicators.

12. DEVELOP "OUTSIDE-THE BOX" INITIATIVES

Given that one of our key findings is that traditional variables or factors cannot explain the persistent success gap between Aboriginal and Torres Strait Islander students and non-Indigenous students, it is imperative that policy is developed to address this success gap that goes beyond SES, first in family, age, and gender factors.

KEY IMPACT INDICATORS

As part of this report, the research team worked to develop a set of Key Impact Indicators to determine the extent to which Australian business schools are capable of meeting their targets to increase effective participation and success in business-related higher education for Aboriginal and Torres Strait Islander peoples, particularly those from low SES backgrounds. The following Key Impact Indicators are recommended:

MEASURING SUCCESS

Increase relative participation rates and relative pass rates	Such measures should separately account for Aboriginal and Torres Strait Islander students from low SES backgrounds, as this group offers the most opportunity to increase the number of Aboriginal and Torres Strait Islander students participating in business-related programs.
	Measure participation rates in the context of the catchment area of the business school. One would expect higher participation rates in business schools where there is a relatively large Aboriginal and Torres Strait Islander population.
Increase retention rates	There is little point measuring completion rates in business schools if student drop-out rates (withdrawal rates) are high, because students are struggling to pass programs and succeed at developing business-related skills.
Increase capability sets	Increase capability sets required in business schools and "soft" professional skills.
	Such improvements could be done through end of first year not-for-credit assessment on mathematical and analytical skills.
	Implementation of end of second year not-for-credit assessment of "soft" professional skills, followed by mentoring to develop these skills.
Annual exit surveys	Implementation of annual exit surveys on business school program satisfaction and student recommendations.
Compare feedback	Assess individual business school performance using existing feedback mechanisms, such as the 'Australian Graduate Destination Survey'.

MEASURING AND CONTRIBUTING TO SUCCESS

- Undertake comparative and longitudinal analysis across Australian business schools on policy effectiveness (i.e., type of controlled experiment on policy effectiveness).
- Locate policies and initiatives not currently undertaken.
- Run viability and effectiveness pilots to determine potential effectiveness.
- Develop new measures of success (i.e., related to current and potentially other pertinent measures of success).

DEVELOP NEW MEASURES OF SUCCESS

Three measures of success are suggested:

1. Relative Average Rate measurement (see Table 65).
2. Comparison of Relative Average Rate Measurement overtime.
3. Giving greater weight to changes in Relative Pass Rate changes (*preferable*).

Relative Average Rate Measurement takes into account the average relative participation rates and relative pass rates of each business school. The Average Relative Rate is different from a ranking generated by pass and participation rates on their own because it represents a combination of participation and pass rates. This acts as an indicator of the joint success of the two domains identified by communities and government as important to narrowing the success gap. The formula to determine this is:

Relative Average Rate = <u>(Relative Participation Rate + Relative Pass Rate)</u>
2

- Relative Participation Rate = Participation Rate of Aboriginal and Torres Strait Islander business students / Participation Rate of Non-Indigenous business students
- Relative Pass Rate = Pass Rate of Aboriginal and Torres Strait Islander business students / Pass Rate of Non-Indigenous business students

An example of how this would apply to Australian business schools can be viewed at Table 65. A measure of success here is 1.0.

- A result equal to 1.0, means Aboriginal and Torres Strait Islander students are on par with non-Indigenous students. The University of Notre Dame Australia comes closest to this result with an Average Relative Rate of 0.99 (Table 65).
- A result below 1.0, means Aboriginal and Torres Strait Islander students are below their non-Indigenous cohorts. Most business schools in Table 1 obtain this result, with the exception of Bond University and Murdoch University with Average Relative Rates of 1.17 and 1.06, respectively.
- Business schools, such as Bond University and Murdoch University that achieve a higher Average Relative Rate above 1.0, are those whose Aboriginal and Torres Strait Islander students achieve relatively higher relative participation and pass rate averages as compared to their non-Indigenous cohorts.
-

By comparing these rates over time, a business school could gauge their performance.

However, this approach places undue weight on participation rates, irrespective of what transpires once the student enters a business school program. It might be argued that an Aboriginal and Torres Strait Islander student's ability to pass a tertiary program should be given greater weight.

A preferred additional step is to take into consideration the negative impact of increasing participation rates on relative pass rates overtime. Such an approach would assign business schools currently showing a negative change in relative pass rate with an automatic 0.0 for the change in the Average Relative Rate.

To illustrate, over time a hypothetical business school has the following results:

- Relative participation rate from 2018 to 2019 of 0.50 to 0.80
- Relative pass rate from 2018 to 2019 of 0.7 to 0.50

If the Relative Average Rate measures were calculated the Average Relative Rate would increase despite a diminishing relative pass rate:

- 2018, (0.50 + 0.70) / 2 = 0.6
- 2019, (0.8 + 0.50) / 2 = 0.65

The above hypothetical scenario, shows an average change of 0.6 to 0.65, an 8.3% improvement in the Average Relative Rate. Under these circumstances the business school has been successful, despite relative declining pass rates. If the preferred additional step is employed, that same hypothetical business school would instead obtain a 0% rate of (as opposed to 8.3%) improvement over time.

It is hoped this methodology would ultimately encourage Australian business schools to approach Aboriginal and Torres Strait Islander participation and success in a more holistic manner, where business schools consider the implications of increasing participation rates at the expense of pass rates and work to provide the resources necessary to support student success.

These measures or a subset of these should be published on an annual basis so that all Australians higher education policy makers are aware of the current state and the changing state of Aboriginal and Torres Islander student participation, retention and success in Australian business schools.

These measures could be one point of contact, information and policy interchange between government, business school researchers, and Aboriginal and Torres Islander peoples and communities.

Table 65. Relative Pass[1] & Relative Participation[2] Rates, Ranked By Average[3] Relative Rate

Institution Ranked By Average[3] Relative Rate	Relative Participation Rate[1] (Part)	Relative Part. Rank	Relative Pass Rate[2] (Pass)	Relative Pass. Rank	Average Relative Rate[3]	Average Relative[3] Rank
Bond University	1.54	1	0.79	28	1.17	1
Murdoch University	1.20	2	0.92	11	1.06	2
The University of Notre Dame Australia	0.43	32	1.54	1	0.99	3
Queensland University of Technology	0.99	3	0.80	25	0.90	4
University of Technology, Sydney	0.85	10	0.92	10	0.88	5
University of Tasmania	0.92	6	0.84	17	0.88	6
University of the Sunshine Coast	0.71	18	1.04	3	0.88	7
University of Southern Queensland	0.99	4	0.76	32	0.87	8
Charles Darwin University	0.92	5	0.80	23	0.86	9
The Australian National University	0.78	15	0.93	7	0.86	10
Griffith University	0.77	16	0.92	8	0.84	11
Macquarie University	0.85	9	0.83	19	0.84	12
Charles Sturt University	0.92	7	0.76	31	0.84	13
The University of Newcastle	0.81	12	0.85	16	0.83	14
The University of Queensland	0.79	14	0.86	15	0.83	15
Swinburne University of Technology	0.82	11	0.81	21	0.81	16
Edith Cowan University	0.90	8	0.72	38	0.81	17
The University of New England	0.54	28	1.08	2	0.81	18
RMIT University	0.80	13	0.79	27	0.80	19
University of Canberra	0.69	20	0.88	13	0.78	20
Central Queensland University	0.60	23	0.94	6	0.77	21
James Cook University	0.76	17	0.74	35	0.75	22
Australian Catholic University	0.55	27	0.94	5	0.74	23
Flinders University	0.70	19	0.78	29	0.74	24
Federation University Australia	0.44	31	1.04	4	0.74	25

Notes:
1 Relative Participation Rate (Part.) = % Aboriginal and Torres Strait Islander Business Students / % Non-Indigenous Business Students enrolled in Australian business schools.
2. Relative Pass Rate (Pass.) = Aboriginal and Torres Strait Islander Business Student Pass Rate / Non-Indigenous Business Students Pass Rate for those enrolled in Australian business schools.
3 Average Relative Rank = (Part + Pass) / 2

Institution Ranked By Average[3] Relative Rate	Relative Participation Rate[1] (Part)	Relative Part. Rank	Relative Pass Rate[2] (Pass)	Relative Pass. Rank	Average Relative Rate[3] (Relative)	Average Relative[3] Rank
University of South Australia	0.64	22	0.80	24	0.72	26
Curtin University of Technology	0.56	26	0.86	14	0.71	27
La Trobe University	0.51	29	0.90	12	0.71	28
University of Wollongong	0.57	24	0.83	18	0.70	29
Southern Cross University	0.57	25	0.83	20	0.70	30
The University of Sydney	0.65	21	0.74	36	0.69	31
University of New South Wales	0.45	30	0.75	34	0.60	32
Deakin University	0.37	36	0.80	26	0.58	33
The University of Adelaide	0.38	35	0.78	30	0.58	34
Western Sydney University	0.22	39	0.92	9	0.57	35
The University of Melbourne	0.33	38	0.81	22	0.57	36
The University of Western Australia	0.41	33	0.72	37	0.57	37
Monash University	0.34	37	0.76	33	0.55	38
Victoria University	0.39	34	0.71	39	0.55	39

Notes:
1 Relative Participation Rate (Part.) = % Aboriginal and Torres Strait Islander Business Students / % Non-Indigenous Business Students enrolled in Australian business schools.
2. Relative Pass Rate (Pass.) = Aboriginal and Torres Strait Islander Business Student Pass Rate / Non-Indigenous Business Students Pass Rate for those enrolled in Australian business schools.
3 Average Relative Rank = (Part + Pass) / 2

CHAPTER 10.

COMMUNITY OF PRACTICE FEEDBACK ON RESEARCH FINDINGS AND RECOMMENDATIONS

One of the outcomes of this study is to promote and grow the sharing of ideas, knowledge and research by initiating and fostering a Community of Practice (CoP) comprising a network of key stakeholders, including university business school academic and professional staff, and Indigenous students, communities and business groups.

To this end, a number of key stakeholders were invited to be involved in the CoP to evaluate and provide feedback on the Initial Findings and Recommendations of the project.

Some of the feedback from the CoP is incorporated in the above chapters.

In this chapter we highlight additional relevant insights that did not emerge directly from the statistical, survey and interview data or that compliments and supplements the narrative presented in this report.

Continued engagement with the project CoP, and with key stakeholders beyond the CoP, is essential to establishing a network with which to share the outcomes of this research, and to promote and implement the initiatives for business schools to operationalise in order to increase the participation, success and retention of Aboriginal and Torres Strait Islander peoples in business-related higher education.

COMMUNITY OF PRACTICE FEEDBACK ON BARRIERS TO PARTICIPATION

- There is a lack of Aboriginal and Torres Strait Islander academic staff in business schools;
- Further research could map the Indigenous course content being incorporated into courses within all Australian business schools;
- Further research could examine the level of involvement of Aboriginal and Torres Strait Islander people in the development and delivery of business course content;
- Further research could investigate the ways by which other faculties, with greater participation of Aboriginal and Torres Strait Islander students, are respectfully and competently embedding Indigenous content into their courses.

COMMUNITY OF PRACTICE FEEDBACK ON STAFF INTERVIEW SUGGESTIONS FOR INCREASING SUCCESS

- These findings provide for a way forward and it is essential that the research is circulated and discussed within business schools and faculties throughout Australia.
- In order for these findings to address the gap in higher education, there must be a long-term commitment to the recommendations and sufficient resourcing to ensure that any initiatives are implemented.

COMMUNITY OF PRACTICE FEEDBACK ON REPORT RECOMMENDATIONS

1. SCHOLARSHIPS

Scholarships could be named after prominent Aboriginal and Torres Strait Islander business people who have completed a business degree at that particular institution. For example, Dr Sharlene Leroy-Dyer (a member of the project research team) was the first Aboriginal person to graduate from the University of Newcastle with a PhD in Management.

2. EMOTIONAL SUPPORT

- There is also a need for cultural support as Aboriginal and Torres Strait Islander students navigate their transition to and experience of university, at the same time as negotiating their individual identity. As noted by Gina Milgate, "some students may be on a cultural journey, learning about their identity and how that fits within a business school and university".

- Engaging university Elders in Residence and an on-campus Aboriginal and Torres Strait Islander community with on-campus activities can assist with the provision of both emotional and cultural support.

3. HIGH SCHOOL STUDENT SUPPORT

- business schools must develop sustainable relationships with and have a presence in high schools.
- Aboriginal and Torres Strait Islander alumni could assist in building relationships with high schools.
- There should be a sense of belonging for high school students at universities, which could be established through initiatives, such as, summer school programs.

4. LEARNING AND SKILL/CAPABILITY GUIDANCE

- business schools need to see the importance of forging links between Aboriginal and Torres Strait Islander cultures to potential students.
- Academics in business schools need to build their cultural awareness, competency and confidence to design and deliver courses that incorporate and embed Indigenous perspectives, knowledges and experiences.

5. COURSE CONTENT

- Embedding Indigenous-related content into business school courses requires staff training to build cultural competency and confidence to design and deliver Indigenised course content.
- Embedding Indigenous perspectives, knowledges and experiences into course content can be best achieved through including Aboriginal and Torres Strait Islander people and business experts in course content design, and as guest lecturers in course delivery.
- Learning on country and having community involvement in business school on campus activities.
- Further research should examine whether Indigenised course content impacts on Aboriginal and Torres Strait Islander student retention and success.

6. STAFFING

Aboriginal and Torres Strait Islander staff should also be employed by university management in business related roles. In addition to providing role models within management to assist with increasing the participation and retention of Aboriginal and Torres Strait Islander students, this would also provide for the opportunity for Aboriginal and Torres Strait Islander students to engage in internships in the business of university management.

7. ROLE MODELS AND SUCCCESS STORIES

- There is the potential for private sector organisations to support business schools in their efforts to promote role models and success stories, for example, the Indigenous Chamber of Commerce and Indigenous Business Australia.
- Role models and success stories need to be made visible in order to recruit and retain Aboriginal and Torres Strait Islander students in business schools. These stories could be communicated on business school websites and other communication and marketing materials.
- The attendance of Aboriginal and Torres Strait Islander staff at business school graduations could inspire students to complete their degrees and engage in further postgraduate business-related studies.

9. ESTABLISH A STUDENT COMMUNITY

- The establishment of this initiative is dependent on the number of Aboriginal and Torres Strait Islander students enrolled in business schools at each university.

10. ONGOING ROLE FOR THE COMMUNITY OF PRACTICE

- The Community of Practice should not just be focused on informing initiatives and programs, but also be included in the processes and evaluation of initiatives.
- A forum involving the CoP and other key stakeholders would be beneficial for further discussion of, and engagement with, the recommendations of this report.

REFERENCES

Adelman, C. (2006). The *Toolbox Revisited: Paths to Degree Completion from High School through College.* Washington, D.C.: U.S. Department of Education, 2006. Retrieved from: http://www.ed.gov/rschstat/research/pubs/ toolboxrevisit/index.html

Altman, M. and Lamontagne, L. (1996). "Gender Pay Inequality and Occupational Change in Canada, 1900-1930," *Journal of Socio-Economics* 25 (3): 285-309.

Anderson, C. (2009). Critical Indigenous studies: From difference to density. *Cultural Studies Review,* 15, 80-100.

Asmar, C., Page, S., & Radloff, A. (2011). Dispelling myths: Indigenous students' engagement with university. *AUSSE Research Briefing: Australasian Survey of Student Engagement* (ACER), 10, 1-15.

Australian Bureau of Statistics (2015). *Higher Education Statistics Collection.*

Australian Institute of Aboriginal and Torres Strait Islander Studies, (2015), "Indigenous Australians: Aboriginal and Torres Strait Islander people", Institute of Aboriginal and Torres Strait Islander Studies. Retrieved from: https://aiatsis.gov.au/explore/articles/Indigenous-australians-aboriginal-and-torres-strait-islander-people

Bajada, C. & Trayler, R. (2014). A fresh approach to Indigenous business education, *Education and Training*, 56, 7, 613-634. Retrieved from: https://doi.org/10.1108/ET-07-2014-0079.

Behrendt, L., Larkin, S., Griew, R., and Kelly, P. (2012). *Review of higher education access and outcomes for Aboriginal and Torres Strait Islander people: Final report.* Department of Industry, Innovation, Science, Research and Tertiary Education. Canberra, ACT: Australian Government Publishing Service.

Bradley, D., Noonan, P., Nugent, H., and Scales, B. (2008). A Review of Australian Higher Education Final Report. Retrieved from:

http://www.deewr.gov.au/HigherEducation/REview/Documents/PDF/Higher%20Education%20Review_one%document_02.pdf

Bunda, T., Zipin, L., and Brennan, M. (2012). Negotiating university equity from Indigenous standpoints: A shaky bridge. *International Journal of Inclusive Education,* 16, 941-957.

Butler, R. & Hinch, T. (eds). (2007). Tourism and Indigenous Peoples: Issues and Implications. Burlington, MA: Butterworth-Heinemann.

Cadzow, A. (2010). A NSW Aboriginal Education Timeline 1788–2007. Retrieved October, 2016, from http://ab-ed.boardofstudies.nsw.edu.au/files/timeline1788-2007.pdf

Cairnduf, A. (2015). Bunga Burrabugu: To Make Tomorrow. *Learning Communities: International Journal of Learning in Social Contexts,* 17, 94-101.

Canada. Department of Justice (1982). *Constitution Act, 1982, Canadian Charter of Rights and Freedoms*. Government of Canada. Retrieved from: *http://www.solon.org/Constitutions/Canada/English/ca_1982.html*.

Canada. Royal Commission on Aboriginal Peoples. (1996). *Report of the Royal Commission on Aboriginal Peoples*. Five volumes. Ottawa: The Commission.

Cleverley, J., & Mooney, J. (2010). Taking our place: Aboriginal education and the story of the Koori Centre at the University of Sydney. Sydney, NSW: Sydney University Press.

Collins J., Morrison, M., Krivokapic-Skoko, B., Butler, R., and Basu PK. (2016), Chapter 20: Indigenous small business in the Australian Indigenous economy, in Sanders, W (ed.), *Engaging Indigenous Economy: Debating Diverse Approaches*. Australian National University Press and Centre for Aboriginal Economic Policy Research. ISBN: 9781760460044, DOI: http://dx.doi.org/10.22459/CAEPR35.04.2016

Commonwealth of Australia (2017). *Closing the Gap Prime Minister's Report 2017*. Department of the Prime Minister and Cabinet, Canberra.

Cuthill, M. & Jansen, D. (2013). Initial results from a longitudinal impact study focusing on a higher education 'widening participation' program in Australia. *Widening Participation and Lifelong Learning*, 15, 7-21.

Dang, T.K.A., Vitartas, P., Ambrose, K. & Millar, H. (2016). Improving the participation and engagement of Aboriginal and Torres Strait Islander students in business education. *Journal of Higher Education Policy and Management*, 38, 19-38.

Department of Education, Employment and Workplace Relations (DEEWR) (2011) *The New Indigenous Employment Program*, DEEWR, Canberra.

Denzin, N. and Lincoln, Y. (2008). Introduction: The discipline and practice of qualitative research. In N. Denzin and Y. Lincoln (eds), *Collecting and Interpreting Qualitative Materials* (pp.1-43). London: Sage.

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

Devlin, M. (2013). Bridging socio-cultural incongruity: conceptualising the success of students from low socio-economic status backgrounds in Australian higher education. *Studies in Higher Education*, 38, 939-949.

Devlin, M. & McKay, J. (2016). Teaching students using technology: Facilitating success for students from low socioeconomic status backgrounds in Australian universities. *Australasian Journal of Educational Technology*, 32, 92-106.

Devlin, M., Nelson, K., Kift, S., Smith, L. & McKay, J. (2012). *Effective teaching and support of students from low socioeconomic backgrounds: Resources for Australian higher education*. Retrieved 20 October, 2017, from http://vhost48.hosted-sites.deakin.edu.au/assets/final-conceptual-framework.pdf

Devlin, M. & Orchard, A. (2013). *Inclusive teaching for university students from low socioeconomic status backgrounds: Recent national research findings*. La Trobe University: Research Online. Retrieved 20 October, 2017, from http://arrow.latrobe.edu.au:8080/vital/access/manager/Repository/latrobe:35180.

Dunsmuir, M. (1995). Constitutional Activity from Patriation to Charlottetown (1980-1992). Https://lop.parl.ca/content/lop/researchpublications/bp406-e.htm

Edwards, D. and McMillan, J. (2015a). Completing University in Australia – A cohort analysis exploring equity group outcomes. *Joining the Dots Research Briefing*, vol. 3(3), May, Australian Council for Educational Research.

Edwards, D. and McMillan, J. (2015b). Completing University in a Growing Sector: Is equity an Issue? Australian Council for Educational Research. Retrieved 20 October, 2017. From http://research.acer.edu.au/higher_education/43/.

Fleming, M. & Grace, D. (2014). Increasing participation of rural and regional students in higher education. *Journal of Higher Education Policy and Management*, 36, 483-495.

Fleming, M. & Grace, D. (2015). Aspiration, achievement and access: The ACT Indigenous Success pathway to university. *Learning Communities: International Journal of Learning in Social Contexts,* 17, 74-83.

Foley, D. (2006). Does business success make you any less Indigenous? Proceedings: *Regional frontiers of Entrepreneurial Research,* 8-10 February, Swinburne University, Melbourne, 241-257.

Foley, D. (2009). Building Castles without foundations: Indigenous business education in Australia, pp. 57-65, cited in *Indigenous issues in Australian universities: research, teaching, support.* Edited by Frawley, J., Nolan, M., and White, N., Darwin, N.T., Charles Darwin University Press.

Fontana, A. and Frey, J. (2008). The interview: From neutral stance to political involvement. In N. Denzin and Y. Lincoln (eds), *Collecting and Interpreting Qualitative Materials* (pp.115-159). London: Sage.

Frawley, J., Smith, J. & Larkin, S. (2015). Beyond Bradley and Behrendt: Building a stronger evidence-base about Indigenous pathways and transitions into higher education. *Learning Communities: International Journal of Learning in Social Contexts,* 17, 8-11.

Fredericks, B., Lamey, T., Mikecz, M & Santamaria, F. (2015). Enabling people to see what they can be: The Community Aspirations Program (CAP-ED). *Learning Communities: International Journal of Learning in Social Contexts,* 17, 24-63.

Fricker, A. (2015). Speaking with one voice: A partnerships approach in RMIT's 'I Belong' Program. *Learning Communities: International Journal of Learning in Social Contexts,* 17, 30-44.

Gale, T. & Parker, S. (2015). To aspire: a systematic reflection on understanding aspirations in higher education. *The Australian Educational Research,* 42, 139–153.

Gale, T. and Parker, S. (2010). *Student transition into higher education*. ALTC Good Practice Report. Surry Hills, Australia: Australian Learning and Teaching Council

Gore, J., Patfield, S., Holmes, K., Smith, M., Lloyd, A., Gruppetta, M., Weaver, N. & Fray, L. (2017). When higher education is possible but not desirable: Widening participation and the aspirations of Australian Indigenous school students. *Australian Journal of Education,* 61, 164-183.

Hall, L. & Wilkes, M. (2015). 'It's a safe environment for us Indigenous students': Creating a culturally safe learning space for Indigenous pre-tertiary students. *Learning Communities: International Journal of Learning in Social Contexts,* 17, 112-122.

Hanover Research, (2010). Best Practices in Student Retention. Washington, D.C. From: http://www.algonquincollege.com/academic-success/files/2014/12/Best-Practices-in-Student-Retention.pdf?file=2014/12/Best-Practices-in-Student-Retention.pdf.

Hanover Research, (2010). *Overview of Student Retention Theories, Strategies and Practices at Peer Institutions*. Washington, D.C. Retrieved from:

http://www.algonquincollege.com/academic-success/files/2014/12/Overview-of-Student-Retention-Theories-Strategies-and-Practices-at-Peer-Institutions.pdf?file=2014/12/Overview-of-Student-Retention-Theories-Strategies-and-Practices-at-Peer-Institutions.pdf.

Hanover Research, (2011). *Predicting College Student Retention. Washington*, D.C. Retrieved from: http://www.algonquincollege.com/academic-success/files/2014/12/Predicting-College-Student-Retention-Literature-Review-1.pdf?file=2014/12/Predicting-College-Student-Retention-Literature-Review-1.pdf.

Hanover Research, (2014). *Strategies for Improving Student Retention*. Washington D.C. Http://www.hanoverresearch.com/media/Strategies-for-Improving-Student-Retention.pdf.

Hunter, B. (2014). *Indigenous employment and businesses: whose business is it to employ Indigenous workers?* Working Paper 95, Centre for Aboriginal Economic policy Research, The Australian National University, Canberra. Retrieved 20 October, 2016. From http://caepr.anu.edu.au/sites/default/files/Publications/WP/CAEPR_Working_Paper_95.pdf

Hunter, B., Radoll, P., Schwab, R., Crawford, H., Biddle, N. & Gray, M. (2015). *Business-related studies and Indigenous Australian Students*: *Working Paper*. The Centre for Aboriginal Economic Policy Research (CAEPR), Australian National University, College of Arts and Social Sciences. Retrieved from:

caper.anu.edu.au/publications/working.php.

Irwin, T., Callahan, R. & Duroux, B. (2015). Creating meaningful partnerships to increase student confidence and motivation towards learning: The Stellar Program. *Learning Communities: International Journal of Learning in Social Contexts,* 17, 102-111.

Kahu, E. and Nelson, K. (2017). Student engagement in the educational interface: understanding the mechanisms of student success. *Higher Education Research and Development,* Retrieved 20 October, 2017. Retrieved from:

http://www.tandfonline.com/doi/abs/10.1080/07294360.2017.1344197.

Karimshah, A., Wyder, M., Henman, P., Tay, D., Capelin, E. and Short, P. (2013). Overcoming adversity among low SES students: A study of strategies for retention. *The Australian Universities' Review*, 55, 5-14.

Larkin, H., Nihill, C. and Devlin, M. (2014). Inclusive Practices in Academia and Beyond. In K. Fraser (ed.), *The future of learning and teaching in next generation learning spaces* (pp.147-171). Bingley, UK: Emerald Publishing Group.

Lee, C., Dickson, D.A., Conley, C.S. and Holmbeck, G.N. (2014). A Closer Look at Self-Esteem, Perceived Social Support, and Coping Strategy: A Prospective Study of Depressive Symptomatology Across the Transition to College. *Journal of Social and Clinical Psychology,* 33, 6, 560-585. Retrieved from: https://doi.org/10.1521/jscp.2014.33.6.560.

Leroy-Dyer, S. (2016). Private-sector employment programs for Aboriginal and Torres Strait Islander peoples: Comparative Case Studies. PhD Thesis, Faculty of Business and Law, The University of Newcastle.

Lizzio, A. & Wilson, K (2013). Early intervention to support the academic recovery of first-year students at risk of non-continuation. *Innovations in Education and Teaching International*, 50, 109-120.

Lombardi, L and Cooper B.J. (2014). An investigation into the role of educators, employers and the accounting profession in providing opportunities for Indigenous Australians to enter the field of accounting. Global Research Perspectives Program (GRPP), CPA Australia. Retrieved from: https://www.cpaaustralia.com.au/~/media/corporate/allfiles/document/professional-resources/education/providing-opportunities-for-Indigenous-australians-to-enter-accounting-report.pdf?la=en.

Lotkowski, V.A., Robbins, S.B., Noeth, R.J. (2004). The Role of Academic and Non-Academic Factors in Improving College Retention. ACT Policy Report. Retrieved from: http://citeseerx.ist.psu.edu/viewdoc/download?doi=10.1.1.216.4499&rep=rep1&type=pdf.,

Low, Remy Yi Siang (2015). Raised parental expectations towards higher education and the double bind. *Higher Education Research & Development*, 34, 205-218.

Maguire, A. and Young, T. (2015). Indigenisation of the Curriculum: Current Teaching Practices in Law, *Legal Education Review.*

Marginson, S. (2016). The worldwide trend to high participation higher education: dynamics of social stratification in inclusive systems. *Higher Education,* 72, 413-434.

Massey University (2017). Master of Māori and Indigenous Business. Retrieved from: http://www.massey.ac.nz/massey/learning/programme-course/programme.cfm?prog_id=93562

McKay, J. & Devlin, M. (2014). 'Uni has a different language ... to the real world': demystifying academic culture and discourse for students from low socio-economic backgrounds. *Higher Education Research & Development*, 33, 949-961.

Morrison, M., Collins, J., Basu PK., Krivokapic-Skoko, B. (2014). *Determining the Factors Influencing the Success of Private and Community-owned Indigenous Business Across Remote, Regional and Urban Australia*. Project Number LP110100698. Australian Research Council and Indigenous Business Australia. Retrieved from:

https://www.csu.edu.au/__data/assets/pdf_file/0005/1777064/Final-Report-to-IBA-and-ARC-Linkage-LP110100698-Morrison-Collins-Basu-and-Krivokapic-191214.pdf

Nelson, K., Kift, S., & Clarke, J. (2012). A transition pedagogy for student engagement and first-year learning, success and retention. In I. Solomonides, A. Reid & P. Petocz (eds.), *Engaging with learning in higher education* (pp.117-144). Faringdon: Libri.

Nora, A.(2001). 'The Depiction of Significant others in Tinto's 'Rites of Passage:' A Reconceptualization of the Influence of Family and Community in the Persistence Process. *Journal of College Student Retention: Research, Theory, and Practice,* 3, 41-56.

O'Shea S.E. (2016). "Supporting and engaging students who are the first in their families attend university: A practise paper", *The All Ireland Journal of Teaching and Learning in Higher Education*, 8(2), 289-1-298-15

Oliver, R. Grote, E., Rochecouste, J. and Dann, T. (2015). Indigenous student perspectives on support and impediments at university. *The Australian Journal of Indigenous Education*, 45, 23-35.

Parkes, A., McRae-Williams, E. and Tedmanson, D. (2015). Dreams and aspirations of mobile young Aboriginal Australian people. *Journal of Youth Studies*, 18, 763-776.

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

Priestly, A., Lynch, M., Wallace, C., and Harwood, V. (2015). Pathways to success: AIME's educational mentoring model. *Learning Communities: International Journal of Learning in Social Contexts,* 17, 44-53.

Rissman, B., Carrington, S., and Bland, D. (2013). Widening participation in university learning. *Journal of University Teaching & Learning Practice,* 10, 2-23.

Rubin, M., Denson, N., Kilpatrick, S., Matthews, K., Stehlik, T., and Zyngier, D. (2014). "I am working-class": Subjective self-definition as a missing measure of social class and socio-economic status in higher education research. *Educational Researcher*, 43, 196–200.

Sarantakos, S. (2005). *Social Research* (3rd edition). New York: Palgrave MacMillan.

Siekpe, J. and Barksdale, T. (2013). Assessing Student Retention: Towards a Parsimonious Model. *Review of Higher Education & Self-Learnin*g, 6, 44-52.

Smith, J., Trinidad, S. and Larkin, S. (2015). Participation in higher education in Australia among under-represented groups: What can we learn from the Higher Education Participation Program to better support Indigenous learners? *Learning Communities: International Journal of Learning in Social Contexts,* 17, 12-29.

Sonn, C., Bishop, B. and Humphries, R. (2000). Encounters with the dominant culture: Voices of Indigenous students in mainstream higher education. *Australian Psychologist*, 35, 128-135.

Southgate, E. and Bennett, A. (2014). Excavating widening participation policy in Australian higher education: Subject positions, representational effects, emotion. *Creative Approaches to Research,* 7, 21-45.

Stewart, J., and Warn, J. (2017). Between two worlds: Indigenous leaders exercising influence and working across boundaries. *Australian Journal of Public Administration,* 76, 3-17.

Thomas, K., Ellis, B., Kirkham, R. and Parry, L. (2014). Remote Indigenous students: Raising their aspirations and awareness of tertiary pathways. *Australian and International Journal of Rural Education*, 24, 23-35.

Tinto, V., P. Russo, and Kadel, S. (1994). Constructing Educational Communities: Increasing Retention in Challenging Circumstances. *Community College Journal,* 64, 26-30.

Tuhiwai Smith, L. (2012). *Decolonizing Methodologies: Research and Indigenous Peoples* (2nd edition). London: Zed Books.

Universities Australia (2017). *Indigenous Strategy 2017-2020*. Canberra, Australia. Retrieved from: http://iaha.com.au/universities-australia-release-Indigenous-strategy-2017-2020/

Vitartas, P., Ambrose, J., Millar, H. and Dang, T.K.M. (2015). Fostering Indigenous students' participation in business education. *Learning Communities: International Journal of Learning in Social Contexts,* 17, 84-93.

Wilks J. & Wilson K (2014). *'Can't be what you can't see': The Transition of Aboriginal and Torres Strait Islander Students into higher education*, Literature Review 2014, The University of Notre Dame Australia, Broome.

Wilks, J. and Wilson, K. (2015). A profile of the Aboriginal and Torres Strait Islander higher education student population. *Australian Universities' Review*, 57, 17-30.

Young, T. and Maguire, A. (2016). Decolonising tourism education thorough Indigenisation: Responsive efforts to the corporate social responsibility of Australian Universities. Conference Proceedings of the *BEST EN Think Tank XVI: Corporate Responsibility in Tourism,* 12-15 July, 2016, Berlin, Germany: Zenat Centre for Sustainable Tourism, Eberswalde University for Sustainable Development.

Young, T. and Maguire, A. (2017). 'Indigenisation of Curriculum: Trends and Issues in Tourism Education', in P. Benckendorff (ed.), *International Handbook of Teaching and Learning in Tourism* (pp.455-463), Cheltenham, UK: Edward Elgar Publishers.

Young, T., Sibson, R. and Maguire, A. (2017). Educating managers for equity and social justice: integrating Indigenous knowledges and perspectives in Australian sport, recreation and event management curricula, *Journal of Hospitality, Leisure, Sport and Tourism Education,* 21, 135-143.