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Building the evidence to improve completion rates for Indigenous students

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2022

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Abbreviations

ATAR	Australian Tertiary Admission Rank
DESE	Department of Education, Skills and Employment
FiF	First-in-Family
Go8	Group of Eight
ITAR	Indigenous Tutorial Assistance and Retention Program
ITAS	Indigenous Tutorial Assistance Scheme
NCSEHE	National Centre for Student Equity in Higher Education
RA	Research Assistant
SES	Socioeconomic Status
TAFE	Technical and Further Education
UA	Universities Australia
UQ	The University of Queensland

Executive summary

Background

This research project has focused on success factors for Aboriginal and Torres Strait Islander¹ university completion rates. While the number of Indigenous students participating in higher education continues to grow, Indigenous student completion rates remain very low relative to non-Indigenous students. The national data indicates that, while Indigenous students typically can take longer to graduate, the nine-year completion rates for Indigenous students remain around 47 per cent — significantly below the 74 per cent for non-Indigenous students (Universities Australia, 2020, p. 24). Some universities have higher Indigenous student completion rates than the national average. However, research-based evidence of these universities as “success models” is limited.

Methods

The project involved a mixed-methods approach (combining qualitative and quantitative methods) to identify and analyse the multifaceted dimensions and range of strategies used at four Go8 (universities A, B, C, D) and one non-Go8 university (university E) to support Indigenous student completions. In compliance with ethical clearance, the universities are not identified within this report. The five universities were chosen because of their high completion rates compared to the national average. Through collaboration with an expert Indigenous reference group and staff at universities, the project involved documenting evidence to demonstrate success factors that support Indigenous student completions at these five universities and to highlight areas to strengthen Indigenous student completion rates at universities more generally. Working closely with staff at the selected universities, qualitative data was collected from Indigenous graduates. The project additionally involved interviews with Indigenous and non-Indigenous staff who support Indigenous students and with non-completed Indigenous students to explore their perspectives on what works and what can be improved to support Indigenous student completions. A total of 66 interviews were undertaken. Quantitative data was obtained through direct request to the Department of Education, Skills and Employment (DESE). Enrolment and student outcome data aggregated from the five selected universities was also analysed.

Key findings

Key findings from the project were:

- Indigenous centres/units at universities are key for building a sense of community and belonging for Indigenous students.
- The physical space of Indigenous centres/units is particularly significant to provide a space where Indigenous students can connect with each other, with staff and with their own cultural identities.
- ITAS (Indigenous Tutoring Assistance Scheme) is an important strategy to assist Indigenous students to complete their degrees.
- Faculties need to collaborate further with Indigenous centres to support Indigenous students to complete their degrees.
- More Indigenous perspectives in the classroom are needed to support Indigenous students' learning outcomes and to provide examples of engaging with Indigenous knowledges and cultural contexts in teaching and learning.
- Indigenous students experience racism in the classroom and more work needs to be done to address this.

¹ While acknowledging the diversity among and between Aboriginal and Torres Strait Islander people, in this report the term “Indigenous” is used to refer to both Aboriginal and Torres Strait Islander people.

- More cultural competency training of staff and students is needed to ensure faculties and classrooms are culturally safe spaces for Indigenous students.
- Non-completed students reported a range of factors influencing their decisions to leave university, including negative experiences living at college, mental health concerns and “burnout”, poor fit of the degree with their interests and a lack of a cohort of Indigenous students.
- Compared to national Indigenous enrolments, the selected institutions enrolled higher percentages of Indigenous students who were younger, studying internally, studying full-time, from metropolitan postcodes, from high SES postcodes, admitted on the basis of their secondary education, and/or studying in the Society and Culture or Natural and Physical Sciences broad fields of education. They were more likely to disclose their ATAR and, when they did, their ATAR was likely to be higher.

Outputs

An output of the project was an online, national roundtable to share the findings from the project and receive feedback on the proposed strategies and conceptual model of best practice to strengthen Indigenous student completions. The project findings have also established strategies that can be adopted by all universities across Australia to strengthen and improve completion rates of Indigenous students.

Recommendations

The findings of this project inform eight high-level recommendations under the following two broad categories:

- Key stakeholder recommendations
- Australian Government recommendations.

Key stakeholder recommendations

1. University leadership needs to ensure more cultural competency training opportunities for academic staff, professional staff, and students.
2. University academic staff should ensure their classrooms are strongly anti-racist and address any issues of racism within the classroom.
3. University leadership and Indigenous centre staff should work together to ensure strong scholarships are in place for Indigenous students.
4. University faculties and academics should work collaboratively with Indigenous centre/unit staff and Indigenous academics to ensure Indigenous perspectives are strongly embedded in course curricula.
5. University Indigenous centre/unit staff should continue to develop and strengthen strategies that build a sense of belonging and connection for Indigenous students within the university.
6. University leadership should ensure there are targets and initiatives in place to continue to grow the number of Indigenous academic staff within universities.

Australian Government recommendations

7. The Australian Government Department of Education, Skills and Employment (DESE) could test the feasibility of including a separate analysis of the national Indigenous student population in the annual cohort analysis of higher education students.
8. The Australian Government Department of Education, Skills and Employment (DESE) could extend the timeframe reporting of Indigenous student higher education award completion to a minimum of 10 years in order to optimise the opportunity to capture data on successful completion and better acknowledge and reflect the familial, cultural, social and employment obligations that Indigenous students face.

Introduction

Completion rates for Indigenous students remain significantly lower than non-Indigenous students (UA, 2020). Group of 8 (Go8) universities tend to have higher Indigenous student completions than non-Go8 universities (Pechenkina et al., 2011). However, research-based evidence of these universities as “success models” is limited. While the number of Indigenous students participating in higher education continues to grow, Indigenous student completion rates remain very low relative to non-Indigenous students. The national data indicates that, while Indigenous students typically can take longer to graduate, the nine-year completion rates for Indigenous students remain around 47 per cent — significantly below the 74 per cent for non-Indigenous students (Universities Australia, 2020, p. 24). Some universities have higher Indigenous student completion rates than the national average. Pechenkina et al. (2011) report that “Go8 universities dominate the high completion category therefore those universities can be further studied as ‘success models’ to learn what factors determine Indigenous students’ academic success. These ‘models of success’ can then be replicated and implemented elsewhere” (p. 65).

This success-focused approach, rather than the historical focus on why students fail, is supported by extensive previous research (e.g., Andersen et al., 2008; Devlin, 2009; Martin et al., 2017). As Fredericks et al. (2015) note “what constitutes ‘success’ remains an important question that must be addressed from the different perspectives of the Indigenous student, the institution, the government and the broader Indigenous community” (p. 17). For example, non-completion is not necessarily considered a failure (Cunninghame & Pitman, 2020) and, for some Indigenous students, even partial completion of a course may be counted as a success in terms of enabling them to contribute work-related skills at a higher level than before (Asmar et al., 2011, p. 12). However, the *2016 Graduate Outcomes Survey* (Quality Indicators for Learning and Teaching, 2016) highlighted that the “gap” in employment rates comparing Indigenous and non-Indigenous peoples closes when they have a bachelor-level qualification. This being the case, much work is still to be done to achieve parity between Indigenous and non-Indigenous students in terms of completion rates.

A number of research projects have been undertaken at universities across Australia that provide evidence of some of the multifaceted challenges Indigenous students face in completing university degrees, including family and community responsibilities, financial difficulties, ill health, lack of social support, academic disadvantage and issues surrounding personal wellbeing (e.g., Andersen et al., 2008; Asmar et al., 2011; Barney, 2016; Fredericks et al., 2015; Hearn et al., 2019; Page et al., 2017). Certainly, it is acknowledged in previous research that “student characteristics have a major effect on completion rates, which is likely to be equally or perhaps more important than the level of support offered” (Pechenkina et al., 2011, p. 66). Discipline-specific discussion on strengthening Indigenous undergraduate completion rates in nursing has been done by Milne et al. (2016), who highlight that key strategies for Indigenous student success include “multifaceted, layered support, underpinned by the principles of respect, relationships, and responsibility” (p. 387). However, Milne et al. (2016) note that there is minimal evidence of effectiveness of educational strategies to strengthen Indigenous student success rates in completing undergraduate studies and, further, there is a sparsity of research on what “models of success” for Indigenous student completions across the disciplines might look like.

This project aims to build and strengthen the evidence base about success factors to increase completion rates for Aboriginal and Torres Strait students in higher education.

Specifically, the key research questions addressed in this project are:

1. What are the effective strategies/support mechanisms that universities with high completion rates employ to support Indigenous student completions?

2. What do Indigenous students and staff report are the success factors that influence Indigenous student completions?
3. What are the implications for policy and practice to improve Indigenous student completions nationally? For example, how can Australian universities better support Indigenous students to complete degrees?

The findings from this project identify “what works” in effective strategies to support Indigenous student completions to highlight the strengths within these universities and assist in improving and implementing stronger programs to support Indigenous student completions nationally.

Importantly, the project responds to the Universities Australia *Indigenous Strategy 2017-2020* (2017), which states that “universities can and must do more to improve Indigenous success in higher education” (p. 17) and there is a need to commit to “achieve equal completion rates by field of study by 2028” (p. 14). The project also responds to the *Review of Higher Education Access and Outcomes for Aboriginal and Torres Strait Islander People: Final Report* (Behrendt et al., 2012) which notes universities need to shift away from a focus on access to focus more on successful completions by identifying what strategies universities with consistently high success rates employ. The project also responds to the Commonwealth Government’s (Department of Education and Training, 2017) call for more evidence on strategies that can improve higher education completions and The University of Queensland’s *Strategic Plan 2018-21*, which emphasises the need to increase the completion of Indigenous students at UQ (UQ, 2018). Finally, the project responds to findings from NCSEHE-funded research by Shalley et al. (2019) that calls for “further commitment to improved data” in relation to Indigenous student completions (p. 2).

Positioning of the project team

The project team consisted of six Indigenous team members and one non-Indigenous team member. The project was led by Bronwyn Fredericks, an Aboriginal woman from south-east Queensland, who has over 30 years of experience working in and with the tertiary sector, state and federal governments, and Indigenous community-based organisations. Katelyn Barney was the project manager. She is a non-Indigenous researcher who grew up on Jagera and Turrubal lands and this project builds on her prior research collaborations in Indigenous higher education. Tracey Bunda is a Ngugi/Wakka Wakka woman who has undertaken research projects on Indigenous higher education and negotiating university equity from Indigenous standpoints. Brenna Bernardino was the research assistant on the project and worked with the project manager, project team and expert Indigenous reference group. She is a Torres Strait Islander researcher in health and education. Kirsten Hausia is an Aboriginal woman whose mother is Yamatji from Perth, Western Australia, and has research skills in educational leadership and guidance/counselling. Anne Martin is a proud Yuin woman who has worked with Indigenous university students since the 1990s and has strong expertise in equity-related policy issues. Jacinta Elston is an Aboriginal woman from Townsville. Her research focuses on Indigenous higher education and health. She has contributed many years of service on state and federal ministerial appointments, and to boards of Aboriginal community-controlled organisations.

Collaboration with an expert Indigenous reference group

An Indigenous reference group was established to guide the development of the project and ensure that further Indigenous expertise across the higher education sector was embedded into the design of the project. The members of the expert Indigenous reference group were Inala Cooper, Braedyn Edwards, John Page, Marnee Shay, and Narelle Urquhart. Three reference group meetings were held to provide progress updates on the project, to receive feedback on the proposed research interview questions and to discuss key themes identified after analysing the data. Regular correspondence via emails with the reference group was also conducted to provide updates on the project.

Impact of COVID-19 pandemic and restrictions on the research

The project was mostly able to progress as planned despite COVID-19 with some minor changes to the original project plan. The interviews with staff, Indigenous graduates and caregivers/parents of students occurred via online or telephone. The reference group meetings also had most members participating via online rather than face-to-face. The originally planned face-to-face national roundtable shifted to an online roundtable. We had fewer graduates and non-completed students interviewed than we had hoped because at the time of this project and the data collection many parts of Australia were in “lockdown” and information on managing the spread of the COVID-19 pandemic was being developed, understood and implemented by health professionals and communities (e.g., Eades et al., 2020; Moodie et al., 2021; Power et al., 2020). We acknowledge the significant impact of COVID-19 on many Indigenous communities (e.g., Best & Fredericks, 2021; Dudgeon et al., 2020; Finlay & Wenitong, 2020; Fredericks & Bradfield, 2020, 2021). The COVID-19 pandemic has additionally had significant impact on work environments, including the university sector (e.g., Best & Fredericks, 2021; Fredericks et al., 2021; Hill et al., 2021; Holt & Worrell, 2021; Kennedy, 2021; Kennedy et al., 2021; Madsen et al., 2021; O’Sullivan, 2021).

Background

Bachelor degree completion rates for Indigenous students remain significantly lower than non-Indigenous students (UA, 2020). Page et al. (2017) point out “despite Indigenous student enrolment numbers increasing, Indigenous students are still less likely to complete their undergraduate degrees ... [which is] a clear indication that there is still a lot of work to be done” (p. 29). Further, Asmar et al. (2015) argue that “better national and institutional data are needed to address the current gaps in knowledge relating to Indigenous student populations in Australia” (p.15).

Indigenous student success in higher education

The body of research on Indigenous student success in higher education continues to grow (e.g., Andersen et al., 2008; Barney, 2016 & 2018; DiGregorio et al., 2000; Fredericks et al., 2015, 2016; Oliver et al., 2015; Shalley et al., 2019). Substantial research has been conducted in New Zealand on Māori and Pacific tertiary student success. Role modelling, Indigenous approaches to teaching and learning, and resistance to everyday colonialism and racism are emphasised as important success factors for Māori and Pacific university students by Mayeda et al. (2014). Bennett (2003) found that Māori students who held a strong cultural identity were more likely to cope with emerging problems in their university studies, while Curtis et al. (2012) argue that having mentors, culturally relevant course content and networking opportunities with other Māori and Pacific students are key in assisting Indigenous students to feel connected to the university.

In Canada, Pidgeon (2008) argues that it is important to broaden notions of “success” and that success for many Aboriginal nations in Canada is more than just completing a degree; it is “connected to empowerment of self and community, decolonization and self-determination” (p. 340). Oloo’s (2007) research with Canadian Aboriginal students found that it was important for students to develop strong relationships with faculty staff and engage with culturally relevant curricula in order to achieve success.

Native American students interviewed by Guillory and Wolverton (2008) discussed the importance of financial support and academic programs specifically for Native American students as key success factors. Shield (2004) found that integrating culture into the student experience for Native Americans in higher education, such as in a model or framework, can be culturally meaningful and support student retention and success.

In the Australian context, Devlin (2009) argues that a focus on Indigenous student higher education success is needed, rather than the historical focus on why students fail. Asmar et al. (2011) found that even partial completion of a university course can be considered a “success” which can improve employment skills and increase finances. As Cunninghame and Pitman (2019) note, the benefits to partial completion are “far broader than employment outcomes” (p. 14), and include opportunities for engagement, making friends, career guidance, and personal growth. This highlights the need to explore how “success” is defined for students who leave their degrees early in order to overcome the deficit discourse of non-completion (Cunninghame & Pitman, 2019, p. 14). Fredericks et al. (2015) point out that a key component to understanding whether Indigenous students are successful is exploring how success is defined. This is supported by the *Review of Higher Education Access and Outcomes for Aboriginal and Torres Strait Islander People: Final Report* (Behrendt et al., 2012, p. 87), which notes that withdrawal from university studies does not necessarily equal failure but can instead represent a process that is “cyclical rather than linear” (also see Day et al., 2015; Kinnane et al., 2014; Walker, 2000). Further, Hill et al. (2018) suggest that understanding the experiences and “transformative learning” of Indigenous students throughout their degree may influence their degree completion or conception of “success”. Lydster and Murray (2019b, p. 115) found that some Indigenous students defined success beyond their GPA and instead focused on university as a “stepping stone” to future efforts,

with skills such as motivation, confidence and having a connection to culture identified as key to being successful. Certainly, there are multiple understandings of success in this context.

Importance of Indigenous centres, culturally safe spaces, tailored support, and teaching and learning approaches

The importance of Indigenous support services to assist Indigenous students in undertaking and completing degrees is highlighted in the literature (e.g., Morgan, 2001; Oliver et al., 2015). Andersen et al. (2008) point to the essential role Indigenous units/centres play in supporting Indigenous students. They discuss the “ingredients” for Indigenous student success, which includes recruitment of dedicated staff, cultural and academic comfort for Indigenous students, the centrality of Indigenous centres, and keeping institutions’ Indigenous support mechanisms continually under review to ensure these mechanisms “stay responsive to current students’ needs and aspirations” (2008, p. 5; also see DiGregorio et al., 2000). Page et al. (2017) found that successful strategies to support Indigenous students acknowledged students’ culture, recognised students as novice university learners, prioritised family support for students, and encouraged participation in study groups. Page et al. (2017) also suggest that Indigenous students are more likely to succeed in universities where acknowledgement is given to the importance of sharing responsibilities, partnerships, and the establishment of Indigenous centres (also see Oliver et al., 2015). Similarly, Lydster and Murray (2019a) point out that Indigenous centres and participation in tuition programs at universities remain key contributors to Indigenous student success. Yet, at the same time, Uink et al. (2021, p. 10) acknowledge that Indigenous student success is a “whole-of-university” responsibility which should focus on “multiple levels of the university (governance and management, teaching and pedagogy and direct student support)”.

Linked closely with this is the importance of culturally safe learning spaces and orientation processes for Indigenous students. Providing positive learning environments as well as carefully managing each student’s orientation process when beginning university study is suggested by Di Gregorio et al. (2000) as being essential. The recruitment of and nurturing of Indigenous staff is also highlighted as vital to improve Indigenous student higher education access and success (Andersen et al., 2008; also see Page & Asmar, 2008). Similarly, Bandias et al. (2014) argue that “Indigenous higher education students, in particular, require targeted assistance in their first year of study” (p. 196). The importance of tailored academic support for Indigenous students who are at risk of leaving higher education is highlighted by Day et al. (2015). They argue that there is a need to evaluate the impact of support services and equip students with competencies to persist with university study. Elsewhere Nakata et al. (2004) argue for the need to equip Indigenous students with tools for managing their engagements with the content of Western disciplines. They make a case for more focused research around Indigenous students’ approaches to processing intellectual content while developing their own Indigenous standpoints. Extending this work, Martin et al. (2017) argue that effective teaching and pedagogy can be used to support the learning of Indigenous students and make a difference in their retention and success in higher education. They argue that “effective teachers and pedagogy do not make all the difference to the persistence of Indigenous students. But they do make a difference” (2017, p.1168). Similarly, Walker (2000) found a positive association between Indigenous student retention, academic outcomes and culturally relevant course content, while Sharrock and Lockyer (2008) argue that flexible course delivery can be an effective strategy to strengthen Indigenous student retention rates.

Withdrawal and challenges for Indigenous students

A complex range of factors contributing to why Indigenous students consider withdrawing from their degrees has been identified in the literature. Drawing on the Australasian survey of student engagement, Asmar et al. (2015) argue that Indigenous students are more likely

to seriously consider leaving their institution than their non-Indigenous peers due to “the overlapping, cumulative effects of health, financial, family and other pressures over time” (p. 25). They also note that positive responses by Indigenous students in relation to engagement and satisfaction are not necessarily accompanied by the overall levels of persistence and completion one would expect. Hearn et al. (2019) explored Indigenous students’ decisions to withdraw from the University of Adelaide and found that “students who were responsible for their parents, children and extended family agreed that they were likely to withdraw” (p. 6). This aligns with Rochecouste et al. (2014), who reported that Indigenous students have certain obligations in relation to family that can impact on their success at university. Hill et al. (2018) also identified that family is a paradox for Indigenous students, arguing that it can act as both a source of motivation and an obstacle to success. Walker (2000) identified interlinked and other factors that negatively impact on Indigenous student retention and success, which include personal and family issues, worry about failing the course, financial and course difficulties, and work demands. Further, Walker notes that factors such as “cultural insensitivity by staff”, an “unwelcoming university environment” and “racism on campus” can be key factors in Indigenous students’ decisions to leave university (2000, p. 14). Lydster and Murray (2019b) also explored challenges faced by Indigenous students and why some students discontinued their studies. They found that the main challenges included the transition from secondary to tertiary education and not being prepared academically. Family responsibilities and being dislocated from kinship networks were also factors discussed by Indigenous students in relation to why they discontinued their studies (Lydster & Murray, 2019b).

Indigenous student completions

There is less literature focusing directly on Indigenous student completion. Pechenkina et al. (2011, p. 65) focus on analysing higher education student and staff statistics from 2004 to 2008, noting that “Go8 universities dominate the high completion category therefore those universities can be further studied as ‘success models’ to learn what factors determine Indigenous students’ academic success”. Shalley et al. (2019) explore the multifaceted dimensions associated with successful completions at two regional universities using quantitative methodologies. They found that full-time study and a “multi-mode design (combining both internal and external elements of course work)” were associated with higher award completion success of Indigenous students at CDU/CQUniversity (Shalley et al., 2019, p. 2). Shalley et al. (2019) also point out that Indigenous student completion rates now have clear Indigenous Student Success Program (ISSP) funding implications for Australian universities and that the Commonwealth Government continues to call for “more evidence on strategies that can improve higher education completions” (p. 5). The Review of Higher Education Access and Outcomes for Aboriginal and Torres Strait Islander People: Final Report (Behrendt et al., 2012) highlights the need to shift away from a focus on access towards successful educational outcomes for Indigenous students and to identify what strategies universities with consistently high success rates employ. Further, the Indigenous Strategy Annual Report (JA, 2020, p. 19) states that “bachelor degree completion rates for Indigenous students remain a challenge compared to non-Indigenous students”. This research project responds to and builds on this research by focusing on a number of universities with high completion rates and examining the strategies they employ to support higher education completions.

The role of staff and universities to support Indigenous student completions

A number of researchers note the important role university staff and the broader university environment can play in improving completion rates for Indigenous students. Rather than placing the burden on students to respond to issues they face with difficulty, Naylor and Mifsud (2019) suggest that universities can take the lead to support students by addressing structural inequalities (p. 259). Andersen et al. (2008) suggest that to improve Indigenous

student success, universities must work together with their Indigenous students and Indigenous centres. Hill et al. (2018) observe the significant potential for universities to positively impact Indigenous students' lives, noting that universities can act as sites of transformation for them, not only as Indigenous students, but also as individuals and as part of families that make up communities. University staff perspectives on how to support Indigenous students to complete their degrees are also emerging. West et al. (2014) explore academic staff perceptions of factors that enable Indigenous student success to complete their nursing programs. Drawing on interviews with academic staff across five Queensland universities, West et al. (2014) identified key enablers of success, including student motivation and determination to complete the degree, student perception of identity and how it is facilitated by their institution, a welcoming and supportive environment, strong partnerships between the nursing school and the Indigenous centre, students' personal attributes combined with academics' understandings of their needs, and increased Indigenous course content.

Existing models of success

A limited number of published "models of success" in relation to Indigenous students exist. Rossingh and Dunbar (2012) discuss the development of a model designed to provide a cycle of continuous improvement to retain Indigenous students during their first year of higher education at Charles Darwin University. Drawn from existing literature on Indigenous support from other universities, the model focuses on mapping the student experience to "channel feedback from the experiences of Indigenous students in their first year" (Rossingh & Dunbar, 2012, p. 65). Best and Stuart (2014) explore how to successfully graduate Indigenous nursing students at the University of Southern Queensland (USQ) and highlight the development of the Indigenous nursing support model: Helping Hands. They argue that four elements underpin success for Indigenous nursing students: the availability of Indigenous academics, Indigenous health content in the nursing curriculum, Indigenous-specific recruitment materials, and individual mentoring and nurturing of Indigenous students. Hill et al. (2020, p. 21) discuss the development of an "evidence based, evidence generating framework for enhancing Indigenous student success" at Murdoch University:

The framework is used to support success officers, to collaborate with students, and to identify the students' strengths and vulnerabilities at specific times in their university career. In response to the use of this innovative student success system a variety of supports and interventions may be provided. (Hill et al. 2020, p. 31)

Also drawing on the case study of the Kulbardi Aboriginal Centre at Murdoch University, Uink et al. (2021, p. 7) emphasise the need for a whole-of-university approach driven by an Indigenous centre and the development of a model of student success that "spans multiple levels of the university (i.e., management and governance, teaching and pedagogy and direct student support)". They suggest that the model could be considered and further developed by other Indigenous units/centres across Australia.

Methods

The project involved a mixed-methods approach (combining qualitative and quantitative methods) to identify and analyse the multifaceted dimensions and range of strategies used at four Go8 (universities A, B, C, D) and one non-Go8 university (university E) to support Indigenous student completions. The research project was approved by the UQ Human Ethics Research Committee (2020/HE002936). The five universities were chosen because of their high completion rates compared to the national average. The project involved documenting evidence to demonstrate success factors that support Indigenous student completions at these five universities and to highlight areas to strengthen Indigenous student completion rates at universities more generally. Additionally, a conceptual model and strategies were developed for strengthening and improving Indigenous student completions through engagement with an expert reference group and staff at universities. The project comprised four phases with a focus on collaboration throughout (see Table 1 below).

Table 1. Timeline of project

ACTIVITIES	PARTNERS
Phase 1: Establishing the research project (September 2020–January 2021)	Project team/reference group
Phase 2: Undertaking multi-site data collection (February–May 2021)	Project team members
Phase 3: Developing a conceptual model of best practice (June–July 2021)	Project team/reference group/key stakeholders
Phase 4: Sharing results and embedding outcomes (August– September 2021)	Project team/reference group/key stakeholders

Phase one: Establishing the research project (September 2020–January 2021)

An Indigenous research assistant (RA) was recruited during this phase to support data collection and administrative tasks for the project. The first Indigenous reference group meeting was held at UQ (and via online) to ensure that the goals, approaches and outcomes of the project were firmly established, understood and agreed upon. At this meeting, the reference group members provided feedback on the planned data collection, outcomes and timeline. An annotated bibliography of literature relating to the project was then undertaken to inform the interview questions. A crucial aspect of this phase was completing all required ethical clearance processes.

Phase two: Undertaking multi-site data collection (February–May 2021)

This phase involved a second reference group meeting held at UQ (and via online) to discuss project progress, refine interview questions, and develop plans for the national roundtable held in August 2021. Each reference group member identified key staff at their university to recruit participants for data collection. Qualitative data was then collected, interviews being undertaken with 35 Indigenous graduates, 26 staff who support Indigenous students and five Indigenous non-completed students. Staff participants were identified through project team members and networks at universities, while graduates were invited by staff to participate in an interview. The interviews were transcribed by a professional transcription service and then analysed using NVivo data analysis software. Quantitative data was also requested from the Department of Education, Skills and Employment University Statistics team to provide a comprehensive perspective on completion rates at the five selected universities in comparison to the sector. This data was collated and analysed by an additional research assistant Daniel Griffiths and then discussed and refined in discussion with the project team.

The information was then presented along with an overview of the qualitative data findings from the project, including the suggested strategies and conceptual model. Attendees were then moved into a “breakout room” activity via Zoom for the attendees to provide feedback on the proposed strategies and conceptual model. The attendees were divided into small groups and were asked to consider the following two questions:

1. Do you have any feedback on or suggestions for the strategies and conceptual model?
2. What would need to happen to make these strategies embedded within your institution?

Each group returned to the main group and shared their perspectives briefly. The attendees were then followed up after the meeting for any additional feedback.

The following section describes the data collected as part of the research.

Qualitative data collection: Interviews

The qualitative part of this project involved in-depth qualitative interviews with Indigenous graduates from five universities, staff who support Indigenous students and non-completed students (see Table 2 below). The purpose of these interviews was to explore success factors to support Indigenous student completions. Interviews were undertaken online (via Zoom or Skype) or telephone due to COVID-19 restrictions; details of the interview questions are included in Appendix 1. Informed consent was obtained from participants and interviews were audio recorded with their permission. The semi-structured interviews were approximately 30 minutes in length. Table 3 highlights the overall participant type and number of people involved from each university.

Table 2. Participant type, number of interviews

PARTICIPANT TYPE	INTERVIEWS
Staff	26
Graduates	35
Non-completed students	5

Table 3. Participant type, number of interviews, university

PARTICIPANT	A	B	C	D	E
Staff	5	7	6	4	4
Graduates	12	11	3	3	6
Non-completed students	0	3	1	0	1

Qualitative data analysis

All recorded interview data was transcribed by a professional transcription service and then de-identified with names, locations and institutions replaced with pseudonyms. The transcripts were then imported into NVivo 12. Line-by-line coding was then conducted with each transcript to enable initial themes to be identified from the data. The themes were then repeatedly examined and analysed for consistent themes and sub-themes. This process was complemented by reflective journals that involved interrogating and examining the themes. The themes identified in the data were then shared with the project team and the reference group at the third reference group meeting, the focus of which was to receive feedback on the data and themes presented. The themes were then shared and discussed with attendees at the national roundtable.

Quantitative data collection: Statistical findings from cohort analysis

National higher education student data was collected by direct request to the DESE. Enrolment and student outcome data aggregated from five selected universities (labelled hereafter in tables and figures as “selected”) was included in the project. Equivalent datasets were also collected for the national Indigenous domestic bachelor student population of Table A and B institutions (labelled in tables and figures as “sector”). For some analyses, this data was compared to publicly available data for the national population of domestic bachelor students at Table A and B institutions (including Indigenous and non-Indigenous students) in response to broader higher education aims to achieve parity for Indigenous access, participation and success. All enrolment and completion data was collated in Excel. Data was then imported into JASP software for statistical analysis where appropriate.

Quantitative data analysis

The project utilised the aggregated data from five selected universities to analyse enrolment rates and student outcomes across the selected universities over time. Additionally, these rates were compared with those of Indigenous students across the sector. When analysing trends in completion rates between four, six and nine years, selected and sector rates were compared to those from all domestic bachelor students at Table A and B institutions. Chi-squared analyses of independence were utilised to determine the statistical significance of differences in completion rates between sub-categories of student characteristics.

Limitations

There are inevitably some methodological limitations to this research. The qualitative aspects of the research involved graduates, university staff and non-completed students being asked for their views based on their experiences and these responses are by nature subjective. Many of the key staff across the university sites used their personal and professional networks to identify eligible participants for the study. As a result, many of the Indigenous graduates and non-completed students who participated in the research had a strong relationship with their university Indigenous centre/unit. Therefore, we were less likely to capture the experiences of Indigenous students who did not interact or interacted very little with the Indigenous centre/unit at their university. It was difficult to recruit Indigenous graduates and non-completed students because after leaving university they could only be contacted via their university email which many did not use. Each of the five university sites were originally considered case studies for comparative purposes; however, due to the small sample, we have analysed the themes in the data across the five university sites rather than comparing them. In relation to the quantitative data, it is important to note that data from selected universities was not independent from national data, preventing appropriate chi-squared statistical analyses that compared selected universities to broader populations. Certainly, student enrolment data collected reflect the often-complex nature of student engagement with university study.

However, the wider body of knowledge regarding Indigenous student completions and student success, consisting of other research both national and international, also informs the findings included within this report. Care has been taken to ensure that findings derived from quantitative and qualitative interview data are also supported by other research and/or other relevant data. Therefore, it is reasonable to assume that these findings are generally transferable to the wider context of success factors leading to higher completion rates for Indigenous students.

Findings

This section presents the findings in four main sections: graduate interviews, staff interviews, non-completed student interviews and quantitative cohort analysis findings.

Qualitative interviews

Graduate interviews

Thirty-six Indigenous graduates from across five universities were interviewed as part of this study. Twenty-four of the graduates had transitioned straight from school into university, six had a gap year before starting university and six were non-school leavers/mature-age students. Thirteen of the interviewees had attended outreach programs while at school and 22 had relocated to attend university. While the interviewees undertook diverse degrees, including health, communication, and science, 14 had studied for a Bachelor of Arts. Thirty interviewees had family members who had attended university (although some of these were parents or siblings attending at the same time as the interviewee).

Themes in the graduate interview data

Graduate perspectives on success factors to support completion

Graduates discussed a number of success factors that support university completion and these are detailed below within themes:

- importance of Indigenous centres/units at universities
 - sense of community and belonging
 - physical space: facilities, food
 - ITAS (Indigenous Tutoring Assistance Scheme)
- influence of family (and other family members attending university).

The presence of an Indigenous centre/unit on campus was a key success factor discussed by graduates. The phrase “safe space” was used by many interviewees:

The [Indigenous centre/unit] firstly provided a space where I felt safe to be able to explore the academic world.

I just felt safer to talk to those guys [in the Indigenous centre] and not feel judged than when talking to the other ... outside uni, I guess.

It was safe to be able to speak ... mostly freely ... from a standpoint as a Black person and an Aboriginal man.

It was a safe space. And 'cause [the university] is so big and full of so many people, I often found, I mean this is probably a bit of a scenario, but if I did have the chance to go from the lecture theatre and drop into the [Indigenous centre/unit], I would.

That was actually a safe space. I had somewhere to go to study where I felt quite comfortable.

It's like you always have a safe space to go and hang out with other friends.

Many graduates spoke about the sense of community and belonging they experienced by engaging with the Indigenous centre/unit:

I think the [Indigenous] unit provides community, like our sense of belonging and other students similar to you.

I was so embedded within a community.

Like this [Indigenous centre/unit] becomes a sort of — the de facto family for people while they're living here to do their studies. Especially for people who come from interstate ... we become the support network for each other and a family for each other.

Which is why places like [the Indigenous centre/unit] are so good, it gives them a place to connect with and to then, I guess, hold onto and feel supported by it. It's a sense of structure, which can be very hard when you've got travel shock and culture shock.

I just developed a lot of social anxiety and had poor mental health ... I was feeling so insecure and vulnerable ... The only place that I did have, like on campus, was the [Indigenous centre] ... and I felt safe in that space. It was like "this is a community of people".

It was just good to have that community and people to talk to about your degree, I suppose.

This is particularly important for students still learning about their own cultural identities:

Being somebody who isn't as connected with their own mob in their own culture, having the mob at the uni made me feel connected.

I found as I started going there more often, I got more comfortable with who I was, I realised there were lots and lots of clever people like me, which was really reaffirming ... So, I didn't connect with community until I'd already moved out of home and moved up to university — that's been interesting.

The physical facilities of the Indigenous centre/unit on campus were discussed by graduates as particularly important for their success:

I didn't really have the ... best study space at home. So, I would always come into the [Indigenous centre/unit] 'cause studying around an academic space was easier for me to keep in the academic space in my brain.

I lived there. I was there all the time and it was a space, like having access to resources.

I went there pretty much every day. I studied there every day, just because it was a place for people in [the student association] to meet and to socialise and study.

It's a place to just stop and do a bit of work or to hang out and talk to people and stuff — the actual building that the [Indigenous centre/unit] is in was the only building that I spent any time in.

Having those facilities definitely helps and not having to worry about printing and all that sort of stuff and having to pay for all of that and, yeah, just having that safe space to go and get stuff done when you needed to.

I think I would go there, but I also would go there in between my uni classes as well as, like, a little hub and just to hang out with other mob as well, so that helped a lot too — that was nice.

Importantly, the food provided was noted by some of the graduates:

There's usually, like, some sort of food or, like even, a fridge in the [Indigenous centre/unit] so that I could actually eat during the day. That was really helpful.

If I was low on funds, I'd just go there and take a couple of slices of bread, or during winter, they'd cook up a big feed for all of us so we'd get there with an empty container, take some dinner home.

The Indigenous Tutorial Assistance Scheme (ITAS)² administered by the Indigenous centres/units was also discussed by graduates as being particularly important for the successful completion of their degrees:

Definitely having ITAR tutoring helped. [The Indigenous centre/unit] organises that; you get, I think it's two hours, per subject per week of free tutoring ... it was the familiarity of having that every week, seeing the same person, building that closer relationship than I ever had with a lecturer.

They offered ITAS which I found really helpful and I just happened to have a really great tutor there as well. That was really helpful having a tutor that I could trust and also help support me in a way that I needed to.

The Indigenous Tutorial, yeah, Scheme. That was amazing. That was, yeah, really, really valuable and helped me so much. Now I myself am an ITAS tutor for other Indigenous students now. It's the best thing ever.

I used the ITAS support a lot and I really tried to maximise that where possible. [The Indigenous centre] was incredible in providing that kind of support.

Without doubt the ITAR tutoring scheme, or the ITAS at that time, was integral because I have been out of university for so long. I'd forgotten how to write an essay and all that sort of stuff, so I'd found a great tutor.

This illustrates the importance of ITAS to support Indigenous students to succeed at university (also see Lydster & Murray, 2019a; Wilks et al., 2017), alongside the importance of Indigenous centres/units more generally in providing a safe space that builds a sense of community and belonging. The physical space and facilities provided by Indigenous centres/units on campuses for Indigenous students to study and socialise are also greatly valued.

Another key success factor for many graduates was the influence of their parents and other family members encouraging them to attend and complete their university studies:

I always knew that I wanted to go to uni because education is really important in my family and really valued and pushed on from my mum and my grandma. I always knew I was going to uni.

There was still an expectation [from my family] to study at university.

My family primarily — you know, mum, dad, my brother wanting me to succeed.

Obviously family was a big motivator for me, having that support network always to fall back on, just to give me that extra motivation.

I've been pretty lucky that mum kind of really pushed education on me from a very young age ... So, I've been very lucky in always knowing that was going to be my path and ... I had the capacity at the time to excel in the education system so straight out of high school I went into uni.

Linked with this, a number of graduates interviewed had family members who had attended university:

I had an older sister [who was] kind of my motivator and drive to go to university as well.

² ITAS has provided Australian government funding for one-to-one and group tutorial study support for Aboriginal and Torres Strait Islander students attending Australian universities since 1989 (Wilks et al., 2017). Some interviewees referred to the program as "ITAR" (Indigenous Tutorial Assistance and Retention Program).

All four of my siblings have [gone to uni] ... and my mum went to uni as well.

Actually, my older sister completed a bachelor degree.

Others had family members attending university at the same time as them:

My mum went to uni after I left home because I was the baby in the family ... This woman, I'm so proud of her ... because in the same time that it took me to complete a bachelors, she finished her bachelors and her masters. Putting me to shame.

Both my parents ... they're both going back to study further at the moment.

Mum went to uni and did her bachelors in social work when she was in her mid-30s, and she works at [university] now and she's currently doing a PhD. But, yeah, and Pop was the same — he didn't go to uni to do a degree until he was in his, I think, 40s or 50s.

This breaks down the perception that Indigenous students are usually first-in-family to attend university and illustrates the growing number of Indigenous students attending university who have other family members who have attended university before them or alongside them.

Graduate perspectives on what could be improved to support and strengthen Indigenous student completions

Four themes discussed by graduates as areas to improve Indigenous student completions are examined below:

- the need to address racism in the classroom
- the need for cultural competency training of staff and students
- the need for more Indigenous perspectives in the curriculum
- lack of support from faculties/schools.

The need to address racism in university classrooms was highlighted by numerous graduates as something that could and should be improved within the universities. Graduates spoke about their experiences of racism in course content and from peers in the classroom:

I, literally, just had too many scenarios through my degree where I'm very glad that I was a white-passing person and not somebody who looked more visible 'cause that would have made me even more uncomfortable to talk about some of the things they just have no right to talk about.

They often have a week on Indigeneity and things, but sometimes those weeks were really exceptionally difficult because you'd have anyone and everyone just talking about and speculating on Indigenous matters and there were points where I was like "I can't even go into this class", and it was just too much, because otherwise sometimes they just turn to you and they just expect that you have all the answers.

It's not necessarily very blatant experiences of racism that I've found most impactful or that led to most discussions with my fellow students. It was mostly experiences like being called out in class as to speak to a universal Indigenous experience or being called out to act as a representative of a cultural ideal or some way of being.

A couple of the teachers themselves, like, some were older and white; one specifically would always say to her international students, and it's like "oh, so the poor black kids have to do that kind of activities" — it was just really not great.

There is racism in classes. I'm white-presenting; you can't tell that I'm Indigenous when you look at me. In some ways I get the benefits of that, in other ways it means I'm exposed to racism other people might not hear because people keep their mouths shut [when they are aware Indigenous people are present].

From other students. Yeah, just stuff like micro-aggressions and then blatant, just blatant, bad behaviour. Where I actually, I brought [it] to the attention of the program later at the time ... That really bothered me.

So, I think you still end up with these issues in classrooms from other students that even unintentionally make comments like "colonialism was good for Indigenous people".

Due to these experiences, many of the graduates spoke about the need for further cultural competency training for both staff and students:

I feel like all the staff actually in general need to have ... what's it called ... cultural competency training, which is especially for, like for example, Aboriginality, everyone should do that in their first year as one of the mandatory [course requirements].

I think it would be good if it was mandatory because I think if they make it a choice, then certain students have that knowledge and then others don't, and it kind of creates that disconnect and I think it would just be so good, not even as a whole subject, but just as a block in first-year arts that you would do Indigenous Studies in some capacity, just to understand what are the contemporary issues, and so that it's not just like Indigenous people and a few allies fighting for these things.

And I think I really, really, really, really, really, really, really advise that every single tutor and lecturer, but especially the tutors 'cause they're the ones doing the like the teaching tutors in your classroom, no matter what course they teach should really do cultural awareness training. Because they just, they just don't, and they really should.

The one thing that they still need to improve is educating staff.

I think that's probably a cultural area that universities probably need a bit more, I don't know, training and consulting on building subjects that probably are a bit more culturally safe. Yeah, I think that was something that really struck me.

Linked with the issues of racism in the classroom, some graduates spoke about the need for further Indigenous perspectives in the curriculum of university degrees:

Culturally I'd say that I wish that Indigenous knowledge had been a little bit more present in some of my studies, I guess, that it was more a part of the university culture as opposed to just [the Indigenous centre/unit] culture, or even on-campus. I just wish that it had been a bit more present for the full student body and that it had been a bit more ingrained in some of my classes and things like that.

I do think they could improve their programs; the people that they engage with and the speaking events — they could do better to engage with the [traditional owners] or they could engage [the Indigenous centre/unit] and privilege, you know, put focus on Aboriginal and Torres Strait Islander content and knowledges.

I also feel that there needs to be more of a structural understanding within the curriculum and content, especially across arts and health degrees, because that's what I experienced ... The notion that content that involves the human experience or involves discussion of history and culture doesn't necessarily speak to an Indigenous world view or account for ... the Australian Indigenous knowledge systems and experience and history, and that in and of itself can be a problematic space to exist within.

This highlights the importance of including Indigenous perspectives in the curriculum of diverse degrees. As Fredericks et al. (2015) point out, learning content in university contexts often “reflects very little, if any, Indigenous perspectives” (p. 1). Paige et al. (2016) argue that “culturally responsive pedagogy” (p. 26) is needed to support Indigenous students’ learning outcomes and provide examples of engaging with Indigenous knowledges and cultural contexts in teaching and learning.

Due to their experiences in classrooms and the perceived lack of cultural awareness of staff, many of the graduates interviewed noted that they did not access any support from their faculty or school:

Going up to the reception there and it's just, yeah, middle-aged white women ... I didn't exactly wanna have to explain to them, you know, when I had three funerals to go to in one month, but that's what I had to do, and that because of the scenarios and whatnot, like, I got Sorry Business, that I can't do stuff during [that] ... trying to explain that to people who don't understand when you're in the midst of the emotions of that period.

There was only one big cultural barrier that I had and that was applying for leave for a funeral because, depending on your course, there's a certain number of days that you can miss and I maybe took more than the number of days that I was allowed.

I had a level of distrust of the faculty. Just because, I, you know, that just comes from schooling. Yeah, I ... not everybody there, you know, I could, I could tell, or I could sense, were able to engage with Aboriginal people.

Overall, graduates spoke about the important role of Indigenous centres/units in providing a space where they could study and use the resources (printing, computers, study spaces), and also a safe space for students to connect with each other, with staff and with their own cultural identities. They also spoke about the influence of family members encouraging them to attend university, and several graduates interviewed discussed family members who had attended university. The graduates indicated that addressing racism in the classroom, increasing the focus on Indigenous perspectives in university course content, and improving cultural competency training of staff and students would further strengthen Indigenous student completion rates.

Staff interviews

Twenty-five staff from across five universities were interviewed as part of this study. Twenty of the staff identified as Indigenous and five of the staff were non-Indigenous. All of the staff were involved in supporting Indigenous students in some way. Fifteen of the staff interviewed worked in an Indigenous centre/unit while 10 staff were based in faculties outside of the Indigenous centre/unit.

Themes in the staff interview data

Staff perspectives on success factors to support completion

Staff discussed a number of success factors that support Indigenous student completions and these are detailed below within themes:

- importance of Indigenous centres/units at universities
 - sense of community and belonging
 - relationship building between staff and students
 - physical space: facilities, food
 - support for students during the COVID-19 pandemic
 - ITAS and scholarships.

Like many of the graduates interviewed, staff talked about the important role of Indigenous centres/units within universities in supporting Indigenous students to complete their degrees. The terms “safe space” and “safe place” were used by a number of staff:

It's a safe place for them to come and study and meet with other Indigenous students.

It really is just like a safe space for our students.

I feel like a lot of effort here is made to keep the space really culturally nurturing so that the students ... they can come and go, they have access ... it's their place, and it's their space, and I feel like that is consistently reiterated to the students so they feel they have a sense of ownership, which I think is really important.

I think it's about just creating that safe environment.

Similar to the graduates, staff talked about the sense of community and belonging created by the Indigenous centre/unit as being one of the most significant success factors to support Indigenous student completions:

That sense of belonging, trying to create a space that the students feel like they have ownership of in a way; they belong here, it's their place.

One of the things that I found was really essential for students to stick around and complete is actually building the sense of connecting with the university in that sense of community and relationships, so they have a place, and feel like they belong here and there's that support.

[The Indigenous centre/unit] is a really strong community for them. If they don't have one of those, then to maintain momentum in a long-haul degree when you don't feel you really, really belong, that's hard. That's really hard.

It's very much a community in here [the Indigenous centre/unit].

Staff noted that the relationship building between staff and students within the Indigenous centre/unit was a particularly important aspect of building a community to support Indigenous students to complete their degrees:

I've found for the students that are succeeding, [to] that have relationships with staff and feel supported by individual staff members is important. That they've got someone that they can come and have a conversation with.

We know most of our students, especially the ones that use the [Indigenous] centre by name and know all their courses. We know the programs that they study. We know how much longer they've got left to go. It's treating the student as an individual as opposed to just a number.

We work hard to have good relationships with our students and it's quite personal — obviously we find out who their mob is, and where they're from. I've always run the [Indigenous] unit sort of like I run my house ... very open and transparent, friendly, good atmosphere.

The physical space of Indigenous centres/units was also highlighted by staff as important:

The space, the physical space to come here, not have to sit in the library ... but to actually be able to come here and be surrounded by like-minded people, supportive people, to feel that's their place, they can sit there and they don't feel awkward, or observed or whatever. That's crucial, that's number one, just having this space physically.

Just bringing them into the space by that sort of means, means that they will engage in that service, so I think that's been a big thing as well, and obviously making the lounge a good place to be is critical to that as well.

I mean, it's a good space, and we need those computer labs and the kitchen and all that for that. I think that's important.

Similar to the graduates, the importance of providing food to students was noted by staff:

We fill up the cupboards and the students are always free to come in and study, fill their bellies so then they can continue studying.

[The Indigenous centre/unit] also has a massive kitchen that has free food for students and it's not just the usual bread and butter, you've got the porridge and all sorts of stuff.

They just come in, you know, whether it's making themselves a cup of coffee or a cup of tea, we always have food around.

We used to do a weekly cook-up with all of our students on our campus and because of COVID, it's only just starting to come back in.

Certainly the impact of the COVID-19 pandemic on this aspect of Indigenous student support services was noted by staff:

I know a lot of them did actually struggle with that especially during COVID, not being able to come into the centre, and it was actually honestly a struggle as a staff member. A lot of the joy of being a staff member around here is that interaction with the students because the students come in and they utilise the centre ... like hot soups out for lunch on the bench, and just being able to sit around the table and have a yarn is just that really nice family and community environment. That was definitely missing during COVID, and I know a lot of the students missed it, and I know us as the staff members missed it as well.

One of the biggest things that I noticed was there was a major drop off in engagement, we found our students weren't able to still contact us in the normal ways that they would have up to this day in the office and open for a chat or a yarn if something does pop up. Although we felt like we were able to manage it as best as we could during that time ... I feel like both the students and the staff took on almost that resilience to find another way to access support as well.

Importantly, the universities involved in the project did not have a significant drop in Indigenous student enrolments in 2020/2021 and their completion rates have remained strong. Staff discussed some of the innovative ways universities have continued to support Indigenous students during the pandemic and some of the positive impacts in support strategies as a result of COVID-19:

What we've actually done was create a care package that we'd send out to our students that were actually in need once a week. That also included like a gift card at Woolies that they could order their shopping from online.

We had Indigenous trainees ... and we got them to set up a call centre and we had a list of all our students and all their contact details, and they made a call every week. That actually meant we engaged with a lot of students that we'd never engaged with before because really it was the core ones that we'd been in contact with us but this allowed us to make contact [with more students] and get to know them.

We made lots of calls, we got used to using Zoom, and we still use it, so it's carried on, and of course, the whole environment has changed [with] the flexible delivery mode.

We had the most ever ITAS support ... and usage ever in the whole year ... and the great thing is students have not just signed up, they used it. So that was another refreshing thing. So they were doing Zoom consults, tutoring sessions and it's kind of flowed through until this year as well that we're just making that available for them.

Staff, like the graduates, discussed the important role of ITAS before and during the COVID-19 pandemic as a key success factor to support completion:

ITAS, I think it's pretty effective with the one-on-one tutoring ... our tutors are peer to peer. What I mean by peer to peer, someone that either completed the degree or [is] towards the tail end of their degree ... But one great thing about ITAS at the moment, during COVID, [is] we saw a big increase in the intake of that.

I think we do have programs that contribute to that sense of community; one of them is the tutoring program, ITAR. With it, I think something interesting that I've noticed is that when we get older Indigenous students to tutor the younger students ... I think there's this added mentorship value that really helps create that sense of community and belonging.

Just from just seeing how even myself as a student undergoing the ITAS program, and now seeing it as a staff member, I see how it's a critical support strategy that we use here at the university to ensure our students have every chance of success at completing their degrees as well.

We've got some online systems that help us allocate and keep records of the tutors that we do have ... We've got an online training module where they can be inducted into what the ITAR program is.

The ITAR — I know a lot of universities have still got the ITAR; ITAR, the tutoring, is fantastic. It is fantastic.

Scholarships, and additional funding for computers, textbooks and other resources, were also noted as important in supporting Indigenous students to complete their degrees:

We're about offering financial assistance to students — we have a suite of scholarships that we offer ... We also have funding should circumstances come up where students find themselves in financial hardship. We're able to offer them a one-off grant to help them through, whether that's for accommodation or to help with textbooks, or for a new computer or something like that.

We started an initiative where instead of students relying until the census date to receive their scholarship funding, we transfer them \$500 straight up, no questions asked, no receipts or anything about what they spend it on. But it's an initiative to help them start the year off on a positive note, and then so they don't have to wait until census date to receive funding to buy things, like books, or a work desk. We feel like that's been a real positive.

Staff perspectives on what could be improved to strengthen Indigenous student completions

Five themes discussed by staff as areas to improve Indigenous student completions are examined below:

- the need for more Indigenous academic staff
- the need for more faculty support
- the need to address racism in the classroom
- the need for cultural awareness training of staff and students
- the need for more Indigenous perspectives in the curriculum.

The need for more Indigenous staff across universities was highlighted by staff as an aspect that should be improved within universities generally:

We need to increase our Indigenous staff levels as well so that there's people embedded within faculties that would be able to just make it a more culturally safe journey, just someone to bounce stuff off if it's not us in their centralised unit. I think that's a big thing, so yeah, continuing to grow Indigenous staff levels should be a real priority for everyone.

It would be beneficial to have more Indigenous academics working in the space.

Some staff noted that the university they were employed at has a high turnover of Indigenous staff:

We've only had a few Indigenous academics and essentially they've left or are leaving and that's quite stressful for me because I run the Indigenous staff network.

Certainly the pressures placed on Indigenous academic staff within universities can be particularly high and as Page and Asmar (2008) note, “the informal support roles played by the few Indigenous academics have been under-reported and may not be visible, or recognised” (p. 109).

Staff noted that further support for Indigenous students from the faculties was needed and also more collaboration between faculties and Indigenous centre/units to employ a “whole of university” approach to supporting Indigenous student completions:

The faculties just need to do their work and [understand] that the Indigenous centres are not just the tokenistic, let's just tick the box "[Indigenous] centres", you know, and support for the students ... we all have to work together.

I feel like we need to work more closely with our faculties as well to establish almost like a common ground.

I don't necessarily think the faculties are that supportive with certain things.

Can I name a whole bunch of colleagues who are supportive and engaged? Then obviously the answer's yes. Organisationally, though I would say, no. That's a bit sad.

The need for more Indigenous perspectives included in the curriculum in diverse degrees was discussed by staff. Like the graduates, staff noted that this was key in improving Indigenous student completions:

Ensuring that students see themselves within the curriculum ... I think that's another thing as well. Because I do understand, it might be a little bit difficult to embed, it takes a lot more thinking to start embedding our Indigenous culture within the curriculum, but when you see yourself, you do a lot better.

Bringing Indigenous knowledges into subjects. Making them feel that ... our knowledge and knowledge system in academic context, in the science context particularly, being discussed as something valid. Rather than sort of a tokenistic [approach].

It's important that we value Indigenous cultures and knowledges. That's really important.

Staff, like the graduates, noted many experiences of racism students have reported experiencing in university classrooms:

I have found that students are coming to me with incidences of racism — discriminatory peers, curriculum, things like that, and it's always put back on the student to make a formal complaint to go through the whole thing, be re-traumatised, and you know, in some cases, these students are 18 years old and they're upset, and they're feeling like they're not belonging, and now, if they want the thing to change, they've got to be really brave. And we support them with that, but I would like to see some sort of way of addressing these types of things without putting it back on the shoulders of the students; they've got enough to deal with.

I think through Black Lives Matter as well, where they're identifying things that aren't culturally safe and so they bring it back to the unit and then we have to defuse it and then also deal with it through the faculties and things.

The lecturer said "oh we've got three kids, three Indigenous people on scholarship on Zoom here, turn your screens on and let's see you". So, "reveal yourselves as the beneficiaries of our white largesse" ... they're in the hands of the academics, they're in the hands of these classes, so unless we can sit up in that class, pull those academics up ... [it is] so culturally unsafe really, but more so culturally unaware, that your words can be very detrimental.

Similar to the graduates interviewed, many of the staff spoke about the need for further cultural awareness training for both staff and students:

I don't know if this is the right word but "culturally competent" lecturers and staff that kind of can understand to a degree where our Indigenous students come

from ... some type of support in terms of culturally competent lecturers who may understand some of the complexities from Indigenous perspectives or even some of the challenges that some of our Indigenous students face.

If you want to call them “allies” that sit within other faculties, but then there’s some that, yeah, they have a long way to go in their journey around, let’s call it “cultural safety”. They could really benefit from some immersion stuff and not just like an online course – I’m talking about they need to understand the context a lot better, a lot, lot better.

What cultural awareness training do our white tutors get, coming to work with our Indigenous kids?

There’s just not enough education, people don’t know enough about what’s happened, cultural competence and cultural awareness training is pretty pathetic when it’s done, and it’s not done enough.

Overall, staff spoke about the important role of Indigenous centres/units in providing safe spaces that provide students with a sense of community and belonging. They also spoke about the importance of the physical space of Indigenous centres/units, providing food for students and building relationships between staff and students. The role of ITAS and scholarships for supporting Indigenous students to complete their degrees was also highlighted by staff. Like the graduates, staff indicated the need to build the numbers of Indigenous staff within universities, increase support from faculties, address racism in the classroom, increase the focus on Indigenous perspectives in university course content, and improve cultural awareness training of staff and students in order to strengthen Indigenous student completion rates nationally.

Non-completed student interviews

Five non-completed Indigenous students were interviewed as part of this study. Four of the interviewees had transitioned straight from school into university and one started university in their 20s. Three of the students attended university for two years before leaving, one student stayed for three years and another student left university after eight months of study (however this student earned a diploma during this time). Four of the students had family members that had already attended university and all but one of the students had relocated from home to attend university. None of the students participated in any outreach programs before commencing their university studies.

Themes in the non-completed student interview data

Non-completed student perspectives on why they left university study

Non-completed students discussed a number of reasons why they left university study and these are detailed below within themes:

- negative experiences living at college
- mental health concerns and “burnout”
- poor fit of the degree with their interests
- lack of a cohort of Indigenous students.

Some students discussed negative experiences living at residential colleges:

I was suddenly learning a new minor level of independence because it was the first time I’d moved out of home, and going to uni, and trying to manage all of that myself, I just did not handle that well.

But there were so many incidences that happened while we were all at college, like racist stuff, sexist stuff, transphobic, homophobic ... that all happens while you're there, and also dealing with all these really privileged kids and, you know, we're not in the same boat, we're not even in the same lane.

Mental health concerns were also noted by students as impacting on their decision to leave university:

I got to a point where my mental health got so bad that I had to ... I'd gone through depression before and ... I do not want to go back to it, so I'd realised at that point I was like, ... "I'm getting out, I'm getting help, I'm going to figure out what I'm doing with my life".

This was particularly the case for one student due to the impacts of the COVID-19 pandemic:

So last year, when COVID happened, I was like, "Oh, this'll be good because everything is online", so it'll be much easier to stay on top of everything, and it just wasn't, and I just found it so difficult and, so, at the end of last year, I said to [Elder], "I think I need time off uni. I just need six months or something just to get my own shit together". I think like a lot of blackfellas, I've also got lots of mental health issues, and personal struggles, so it was important that I try and take time out and work on those things.

Two students discussed feeling "burnt out" and needing to take a break from study:

I think around halfway through, because I just started withdrawing from everything, and just failing everything, and I was like, "No, this is just ..." yeah, I wasn't even trying at that point, so I was like, "No, that's it", which is kind of sad, thinking back, but sometimes you just need that break.

I think at the time it was just burnout. Straight from high school into uni — I didn't really have that gap year that a lot of other students had ... it was just, realistically, it was just that burnout, and I was like, yeah, kind of done.

Other non-completed students noted that their decision to withdraw from university was in part because of a mismatch between the degree they were enrolled in and their interests:

I left to just take a year off and actually figure out what I wanted to do.

And I had no idea what I was doing. I just was kind of winging it and then I was like, "What the hell? I want to go back home and work. This is pointless. I'm getting a degree for nothing".

I know heaps of students that didn't go up to [the Indigenous centre/unit] and say, "Hey, I'm ready to leave" — we all just left; it wasn't shame[ful] to leave but it was just like, "I'm done", you know, and it's not embarrassing — it's just frustrating because you weren't able to do it and, most likely, it's because people signed up for courses but it wasn't their passion.

Linked with this, some non-completed students discussed pressures they felt from family members or school staff to attend university:

I just went to uni because my parents were just like, "You need to go to uni and do something".

[Family member] started at [university] the year before I did. That's how I got into [university]. [Family member] was like, "There's this course. You'd enjoy it. Come do it".

My mum's in uni doing international politics and [the high school guidance counsellor] was like, "Oh, well that would be really good, you know, help your people", and I was like, "Oh yeah, righto, I'll go", but it wasn't really in my field of interest; it was just kind of something that I knew I wanted to go to uni — I just didn't know what I wanted to study.

Certainly, interviewees discussed the tensions in their decision-making to leave university and the difficult decision to withdraw:

I knew it was a really good uni ... then again, I didn't want to stay and waste my time and money not knowing what I wanted to do.

I'm big on commitment; if I decide that I'm doing something, I want to see it through and it takes a lot for me to back out of that, so that's pretty much what I'd done.

It was really difficult because I was worried that if I left and I just worked full-time, one, I'd get used to the money, and what's really hard to let go of is the regular fortnightly income, [and] two, what if I leave and then at the end of the six months, I'm like, "Actually, I don't want to go back. I just can't be bothered with the study and the work".

Non-completed students also discussed feeling isolated and knowing very few other Indigenous students studying in their degrees:

I'm pretty sure I was one of two or three Aboriginal kids in the cohort of 200 or 300 people, and I didn't know them until — third year is when I met the other blackfellas in the class, so yeah, it was a bit daunting.

Everyone is just a number and there's no connection between people in regards to the establishment and then the student actually going there.

You go into that [classroom] and ... you were the only Indigenous person in your tutorial because then you kind of get left with the pressures of giving that perspective, and that was the weirdest thing for me.

I know a lot of the time it felt like sometimes we were just another statistic.

This links with the need to continue to grow the cohort of Indigenous students studying across diverse degrees so that students can build a community of peers studying similar degrees to them and not feel as isolated.

Non-completed student perspectives on what could be improved to support them to complete their degree

Three themes discussed by non-completed students as areas that could have been improved to support them to complete their degrees are examined below:

- the need for more flexibility and understanding of Indigenous ways of being, knowing and doing
- more career advice
- the need for further Indigenous voices and leadership in the academy.

The need for universities to be more accepting of Indigenous ways of being, knowing and doing:

One thing I know is that there isn't an acceptance of different ways of learning. You go to a university and they all just expect people to learn the same way and that's just culturally different, naturally.

So, it's like a lot of the time we learn it's through story-telling, not through question and answers, so that sometimes just adjusting to the way that certain things might be taught might result in outcomes that's going to better Indigenous education.

Further career advice was also discussed as an aspect that would have assisted students to continue at university:

If they also talked to us about career pathways ... I feel like for me, I think I could have asked, but also just maybe someone could have went through that with me as well.

You kind of focus on exactly what my grade 12 career guidance woman said, like, "Oh this will help your mob", but it's actually not, like, the only way you can help is if you're passionate about what you're doing.

The non-completed students noted that the Indigenous centre/unit did offer them support and the interviewees engaged in varying levels with the Indigenous centre/unit:

I was always at [the Indigenous centre/unit], all the time ... we used to have a weaving workshop and all the sister girls would just come, or we'd just sit down and all have lunches together ... uni games, all the little barbeques that they used to have and stuff; I was always there — the trivia nights, but yeah, I think by the time I'd left, I was just, "No, I just need space".

I think most of the Indigenous centres do a really good job of supporting our students.

The [Indigenous support officer] ... was like having an aunty on board in a sense, if that makes any sense at all — kind of like that person that you can turn to and be like, "Hey, I've got some concerns with this", and then she would always do her best to rectify those situations.

I think the space thing is really good, especially if it's an open space ... For example, they have an Indigenous unit where the staff room is connected to the students' lounge and I think that is really good because if students had a problem with something they can just go in and knock on the door and ask the staff.

The students noted that while they did not feel the Indigenous centre/unit could have done more to support them, further Indigenous voices and leadership in the academy more generally would have improved the learning experience for them:

The only issues I ever had with [university], I think come from the actual establishment itself, not from the [Indigenous centre/unit] ... I think that's the only thing I want to make clear and ... it just wasn't the right place for me, but I think if they need to make any improvements anywhere, it has to be within the actual establishment.

I guess instead of having non-Indigenous people make that decision for Indigenous people, let Indigenous people have a bit of a say on what they want. I think if you start including Indigenous people in the conversation and giving them a voice, then a lot of the time you're going to see that we will, I guess, actually respond to that.

Overall, non-completed students highlighted diverse reasons why they left university study, which included mental health concerns, "burnout", negative experiences in colleges and the lack of a cohort of Indigenous students in their degrees. They also discussed the influence of family members encouraging them to attend university, feeling pressured to attend university and the poor fit of the degree with their interests. The interviewees indicated that providing

further career advice, more understanding of Indigenous ways of being, knowing and doing, and further Indigenous leadership and voices in the university context would have further supported them to complete their degrees.

Quantitative findings: Student enrolments and completions

This section discusses key findings from the cohort analysis, which included data from five universities and national student data. Enrolment and student outcome data, aggregated from the five selected universities (labelled A, B, C, D, and E), was included in the project. Equivalent datasets were also collected for the national Indigenous domestic bachelor student population of Table A and B institutions, and for the national population of domestic bachelor students at Table A and B institutions. The latter includes data from Indigenous and non-Indigenous students in response to broader higher education aims to achieve parity for Indigenous access, participation and success.

Key findings on enrolments

- Indigenous student enrolments are increasing at the selected universities, both in terms of raw numbers and as a percentage of the domestic bachelor student population.
- The rate of increase at the selected universities does not match the rate of the broader sector.
- Compared to national Indigenous enrolments, the selected institutions enrolled higher percentages of Indigenous students who were younger, studying internally, studying full-time, from metropolitan postcodes, from high SES postcodes, admitted on the basis of their secondary education, and/or studying in the Society and Culture or Natural and Physical Sciences broad fields of education. They were more likely to disclose their ATAR³ and, when they did, their ATAR was likely to be higher.

Indigenous student enrolment in a national context

Figure 2 represents Indigenous students commencing in each cohort from 2009 to 2016 at the selected universities, both in terms of raw numbers and as a percentage of Indigenous enrolments across the sector.

³ The ATAR is a commonly used entry criterion for admission to undergraduate university study. It is a nationally comparable percentile ranking given between 0 and 99.95 (in increments of 0.05) denoting a student's ranking relative to their "theoretical" student cohort — all students who were due to finish school in that year (Higher Education Standards Panel, 2016).

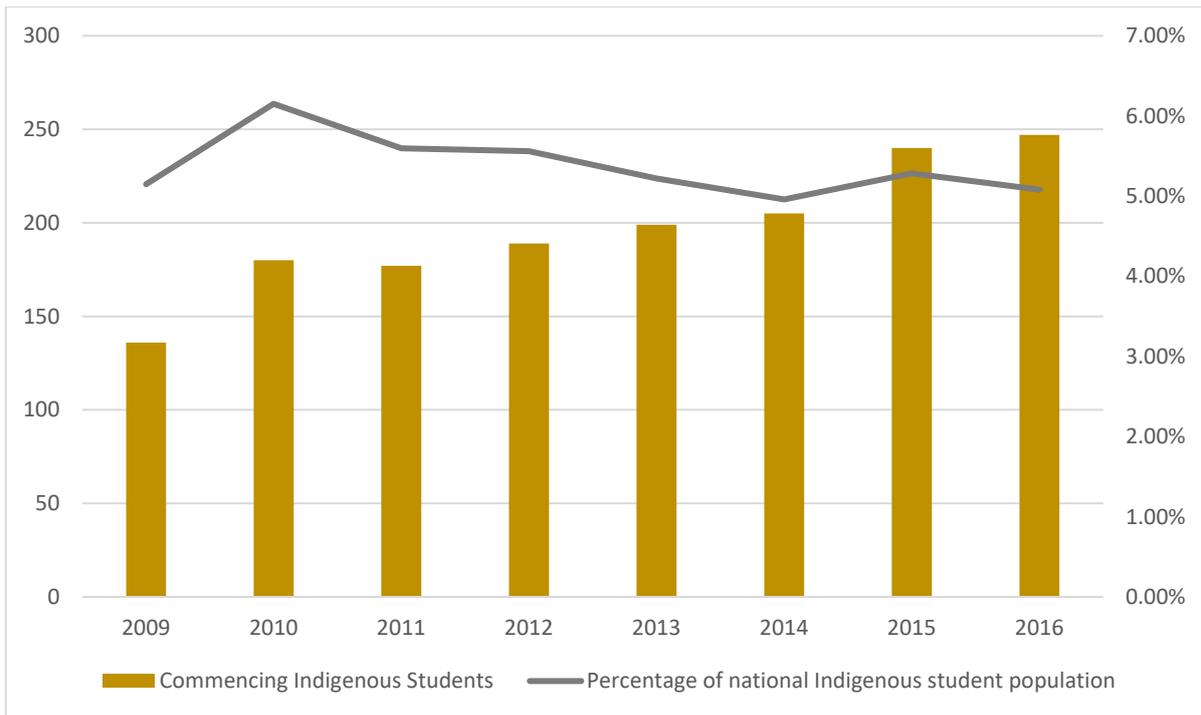


Figure 2. Commencing Indigenous students at selected universities

As shown in Figure 2, commencing student enrolments at the selected universities have increased steadily from 136 students commencing in 2009 to 247 students commencing in 2016.

Across all cohorts, students at the selected universities represented approximately 5.3% of all identified Indigenous students at Australian universities. However, the downward trend apparent in Figure 2 suggests that other institutions are increasing their Indigenous student enrolments even more rapidly.

Indigenous enrolments as a percentage of selected university populations

Figure 3 shows the percentage of commencing students at the selected universities who have identified as Indigenous.

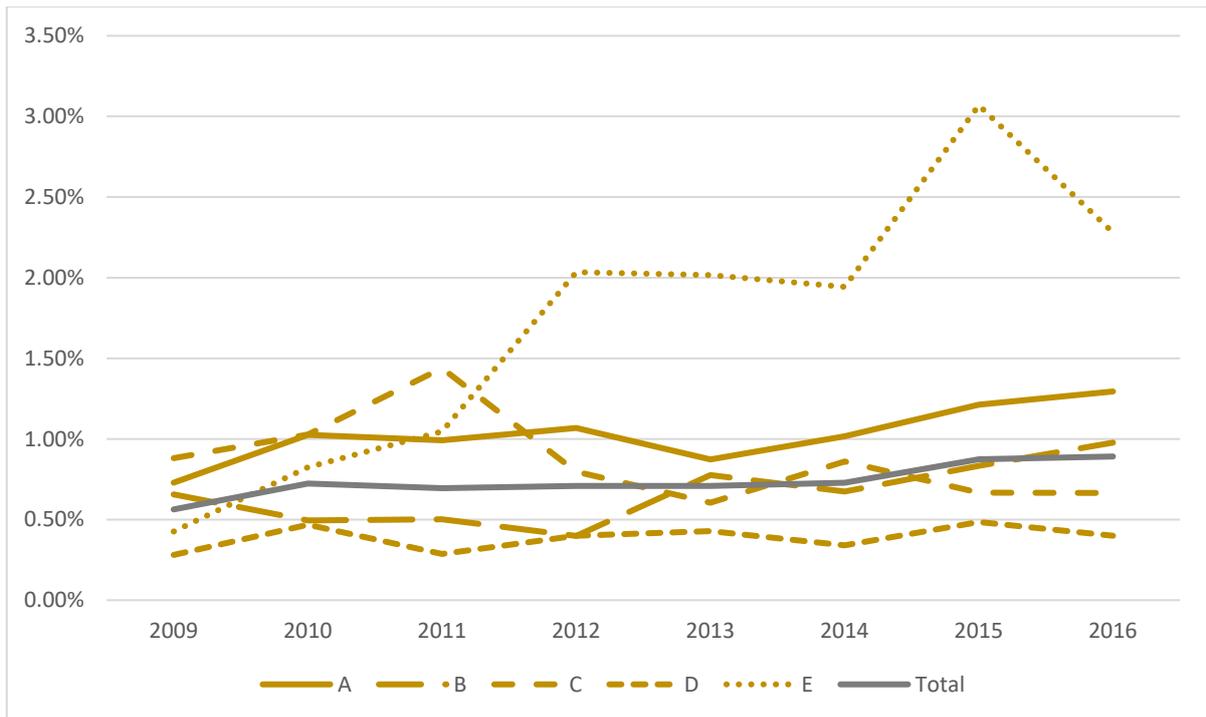


Figure 3. Percentage of students at selected universities who identify as Indigenous

Indigenous students represented 0.74% of all commencing domestic bachelor enrolments at selected institutions between 2009 and 2016. Between cohorts, the percentage has increased from 0.56% in 2009 to 0.89% in 2016.

Indigenous enrolments by student characteristics

This section describes Indigenous student enrolment percentages, broken down by several key DESE categories describing student characteristics. Commencement patterns of Indigenous students at selected universities have been examined from 2009 to 2016. These patterns have been compared to patterns of commencement for Indigenous students across Table A and B institutions. Aggregated percentages across all cohorts are provided in Table 4 below.

When compared to proportions of Indigenous enrolments across Australia, the Indigenous student cohorts at the selected universities showed higher percentages of students were younger (19 and under), male, studying internally, studying full-time, from metropolitan postcodes, from high SES postcodes, admitted on the basis of their secondary education, and/or studying in the Society and Culture or Natural and Physical Sciences broad fields of education. They were more likely to disclose their ATAR and, when they did, their ATAR was likely to be higher.

Conversely, when compared to sector rates, Indigenous student cohorts at selected universities showed lower percentages of students who were older (especially 25 and over), female, studying externally or multi-modally, studying part-time, from regional and remote postcodes, from medium and low SES postcodes, admitted on the “other basis” category, and/or studying in the Health and Education broad fields of education.

Table 4. Percentage of Indigenous enrolments by student characteristic

Age	Selected	Sector
19 and under	66.56%	41.33%
20-24	18.18%	21.52%
25 and over	15.26%	37.15%
Basis of Admission	Selected	Sector
Other basis	53.85%	77.41%
Secondary education	46.15%	22.59%
ATAR	Selected	Sector
ATAR not provided or not required	73.23%	85.99%
ATAR 30-49	0.00%	0.77%
ATAR 50-59	0.83%	1.52%
ATAR 60-69	1.34%	3.24%
ATAR 70-79	5.04%	3.64%
ATAR 80-89	9.82%	3.08%
ATAR 90-94	5.63%	1.10%
ATAR 95-100	4.06%	0.66%
Broad Field of Education	Selected	Sector
Agriculture, Environmental and Related Studies	3.62%	1.45%
Architecture and Building	0.31%	1.25%
Creative Arts	6.51%	7.34%
Education	4.36%	15.60%
Engineering and Related Technologies	2.46%	2.29%
Health	15.66%	20.81%
Information Technology	0.74%	1.79%
Management and Commerce	8.78%	10.64%
Natural and Physical Sciences	12.96%	6.60%
Society and Culture	44.59%	32.23%
Course Level	Selected	Sector
Bachelor graduate entry	1.30%	1.49%
Bachelor honours	6.63%	3.46%
Bachelor pass	92.07%	95.05%
Gender	Selected	Sector
Females	60.39%	67.06%
Males	39.61%	32.94%
Mode of Attendance (Combined Data)	Selected	Sector
Internal	95.30%	61.56%
External/Multimodal combined	4.70%	38.44%
Type of Attendance	Selected	Sector
Full-time	90.08%	76.43%
Part-time	9.92%	23.57%
COMMONWEALTH SCHOLARSHIP INDICATOR	SELECTED	SECTOR
Commonwealth scholarship holder	21.87%	15.05%
No Commonwealth scholarship	78.13%	84.95%
Regional Classification	Selected	Sector
Metro	65.48%	54.44%
Regional	30.20%	38.59%
Remote	4.01%	6.59%
Not classified	0.32%	0.38%
SocioEconomic Status	Selected	Sector
High SES	28.35%	13.17%
Medium SES	46.09%	52.47%
Low SES	24.67%	33.55%
Not classified	0.89%	0.81%

Enrolment trends 2009 to 2016

The percentages in Table 4 are aggregated figures, accounting for all cohorts 2009 to 2016. As part of the analysis, between-cohort enrolment trends were also examined. For graphical representations of enrolment trends between 2009 and 2016, please see Appendix 2. It was found that Indigenous student enrolments have increased relatively consistently across characteristics with some notable exceptions, outlined below.

Enrolment numbers at the selected universities for students with the following characteristics have not increased at national rates between 2009 and 2016:

- students commencing at age 25 or older
- students admitted on the “other basis” category
- some broad fields of study
- external and multi-modal students
- part-time students
- students from remote postcodes.

Enrolment numbers at the selected universities for students with the following characteristics have increased at seemingly higher than national rates between 2009 and 2016:

- students commencing aged 19 and under
- students admitted on the basis of secondary education
- Commonwealth scholarship⁴ holders.

Overall, selected universities appear to enrol students who fit more “standard higher education student profiles” (e.g., school leavers, full-time). Perhaps this is the result of specific targeting, of admissions policies, or student preference/experience. In line with a widening participation agenda, it may be prudent to review factors that underpin lower proportions of other student profiles (regional/remote, older, part-time) at selected universities.

Key findings on student outcomes

The Department of Education, Skills and Employment identifies four possible student outcomes:

Completed – includes students who completed a course (degree) in any year across the given time-period.

Still enrolled – includes students still enrolled in the final year of the cohort period. If a student had a break between the commencing year and the final year in the given time period, they would still be included in this category if they were enrolled in the final year.

Re-enrolled but dropped out – includes students who enrolled after the commencing year at any point in the cohort period but were not enrolled in the final year. For example, this would include a 2005 commencing student, who re-enrolled in 2006, but not enrolled after this time. It would also include a 2005 commencing student, who was not enrolled in 2006, was enrolled in 2007, but was not enrolled in 2008.

Never came back after first year – includes students who never re-enrolled within the given time after their commencing year.

⁴ This refers to the Indigenous Commonwealth Education Costs Scholarship (Indigenous-CECS) and the Indigenous Commonwealth Accommodation Scholarship (Indigenous-CAS).

This section presents outcomes for Indigenous students at selected universities, framed within the context of national outcomes for all Indigenous students, as well as national outcomes for all domestic bachelor students at Table A and B institutions.

- Indigenous students at the selected universities achieved higher completion rates than the national rate for Indigenous students.
- Indigenous students at the selected universities returned for studies after their first year at higher rates than the national rate for Indigenous students since 2009 and the national rate for all domestic bachelor students since 2012.
- Indigenous cohorts at the selected universities who commenced after 2012 have achieved higher completion rates than those who commenced prior to 2012.
- Indigenous students at the selected universities are generally more likely to complete their degree between four and six years, and between six and nine years, than national completion rates for Indigenous and domestic bachelor students.

Figure 4 shows four-, six- and nine-year outcome data for all available cohorts.



Figure 4. Four-, six- and nine-year outcomes for Indigenous students (all available cohorts)

The data represented in Figure 4 suggests that Indigenous students at selected universities have achieved higher retention and completion rates than the national average for Indigenous students at all three timepoints. This data will be unpacked further in the following sections.

Of the four outcomes identified in the DESE’s cohort analysis methodology, this section of this report focuses on two only:

Completed – includes students who completed a course (degree) in any year across the given time-period.

Returned – includes all students who re-enrolled within the given time after their commencing year. This second measure has been reframed from the Never came back after first year category and recalculated by subtracting the percentage of students who did not return after first year from the total. The measure provides a strengths-framed indicator that relates to the experience of students in their first year.

Return rates after first year of studies⁵

Across cohorts, Indigenous students at selected universities return at a higher rate (91.9%) than the national rates for Indigenous students (80.3%) and the national rate for all domestic bachelor students (91.0%). Figure 5 shows the rate at which students return to continue studies after their first year and before the four-year timepoint.

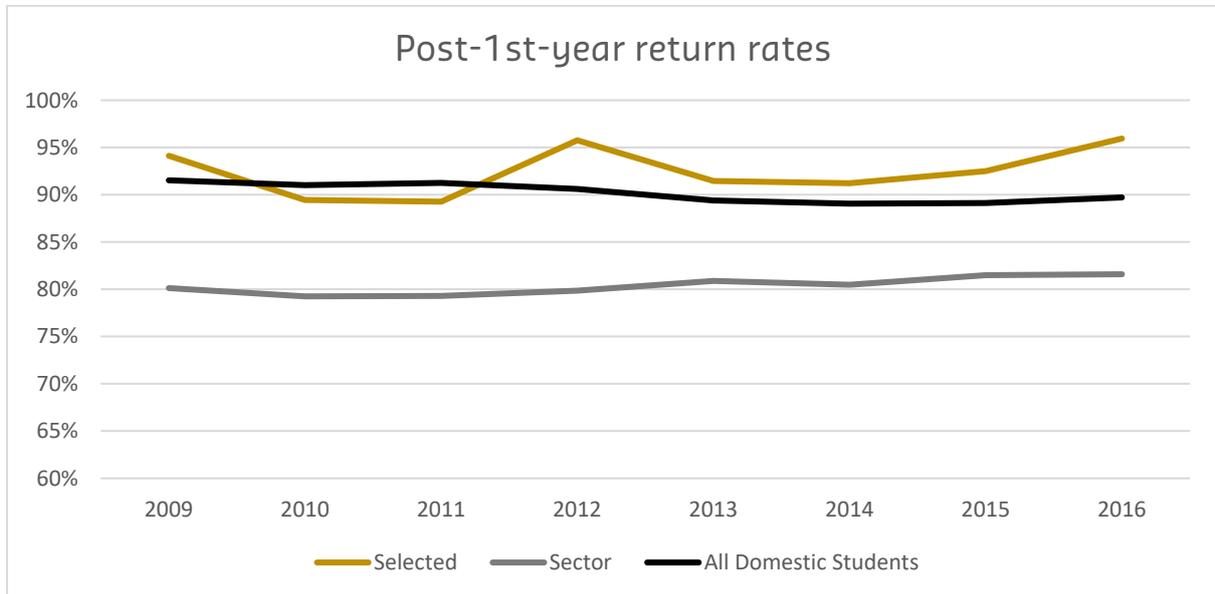
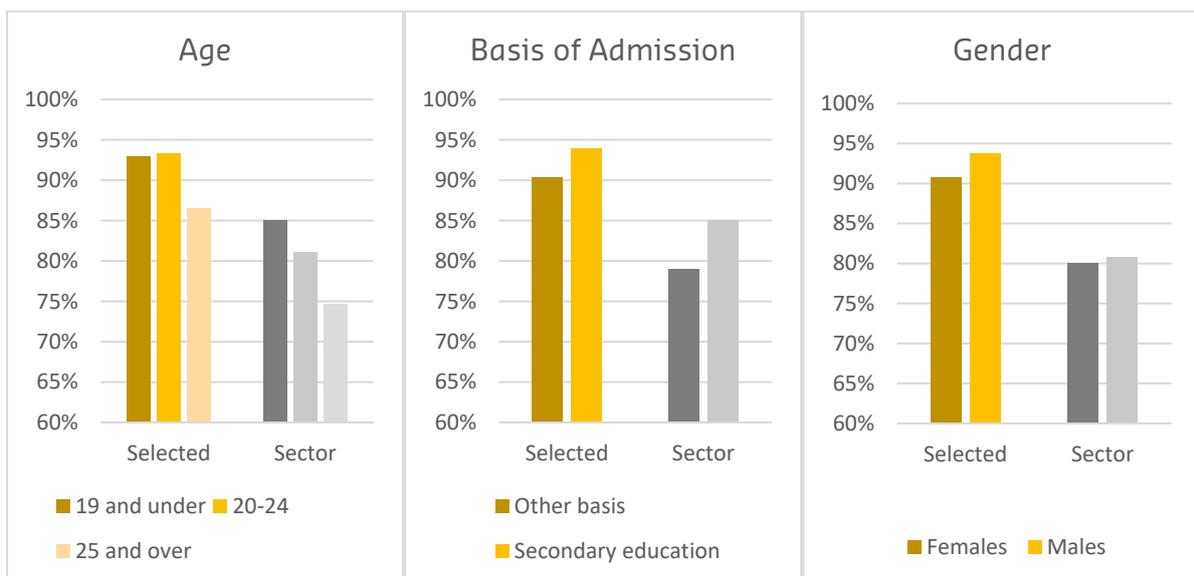


Figure 5. Return rates after first year of studies

As shown in Figure 5, Indigenous students at the selected universities have returned after their first year at a higher rate than the sector average since 2009 and at a consistently higher rate than the national rate for all domestic bachelor students since 2012.

Figure 6 compares the return rates of Indigenous students at selected universities and the sector, broken down by DESE category.



⁵ While this analysis has used four-year outcome data to provide a larger sample, some students who leave during their first year of studies return to studies after the four-year timepoint. As a result, this data represents the minimum percentage of students who continue/return to studies after their commencement year.

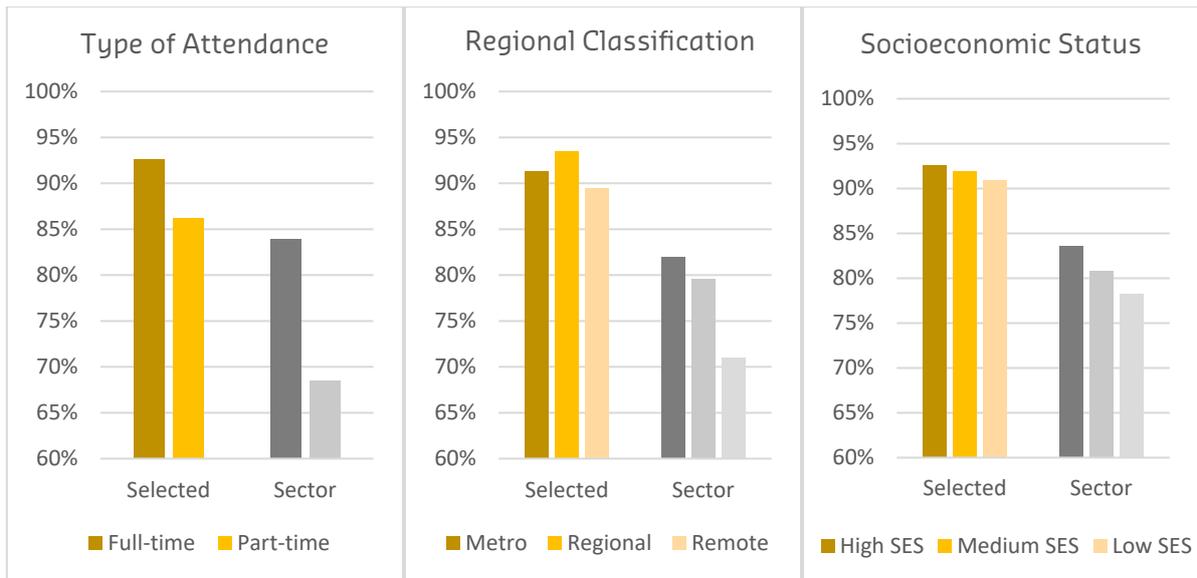


Figure 6. Rates of return for Indigenous students

The results in Figure 6 show that comparisons between characteristic categories at selected universities yield similar results to the broader sector with two notable exceptions:

- Students who are 20-24 years return to studies at a higher rate than those who are 19 and under at selected universities, but not across the sector.
- Students from regional areas return at higher rates than those from metro areas at selected universities, but not across the sector.

Completion rates

Across cohorts, Indigenous students at selected universities complete at a higher rate (37.18%) than the national rates for Indigenous students (26.67%), but at a lower rate than the national average for all domestic bachelor students (45.3%). Figure 7 shows the rate at which yearly student cohorts have completed their studies within four years.

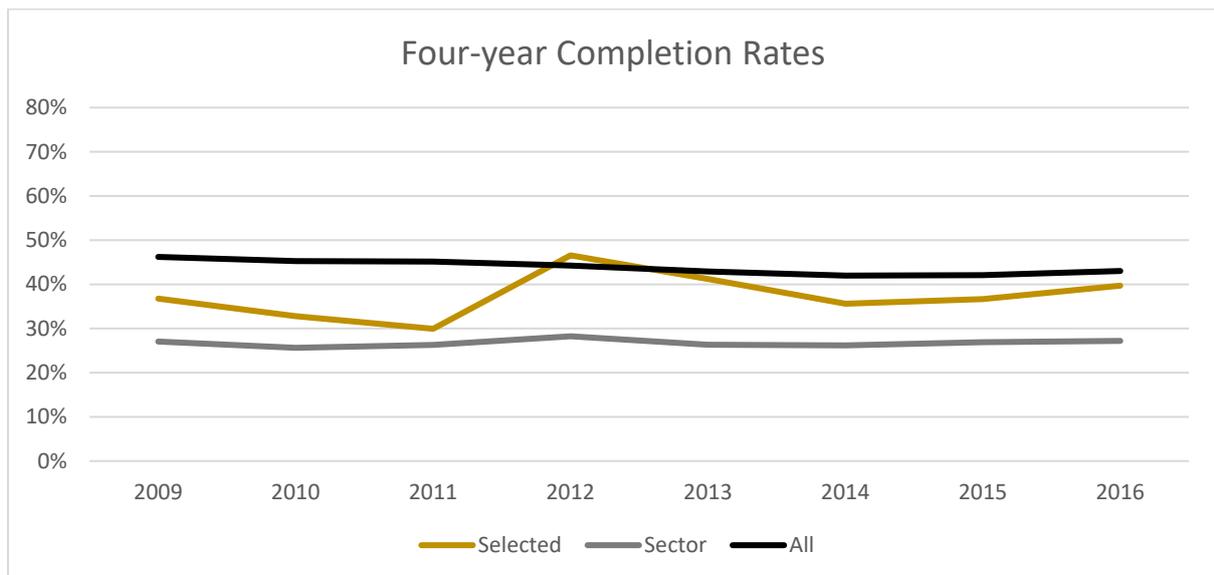


Figure 7. Four-year completion rates by cohort

While completion rates have varied slightly from cohort to cohort, the most notable change in completion rates occurred between the 2011 and 2012 cohorts. The 2012 cohort achieved a higher four-year completion rate than the national rate for domestic bachelor students.

Completion rate trajectories

While four-year completion rates provide a valid indication of student outcomes, it is important to consider completion rates in the longer term. The national data indicates that Indigenous students typically can take longer to graduate than non-Indigenous students (UA, 2020, p. 25). Table 5 shows aggregated completion rate data based on the longest available timepoint. While this is a useful summary, variations in completion rates between cohorts have implications for the generalisability of these results. As Shalley et al. (2019) note, extending the timeframe of reporting of Indigenous student higher education award completion “to a minimum of 10 years which will better acknowledge and reflect the familial, cultural, social and employment obligations that Indigenous students face” (p. 3). For a breakdown of completions by cohort, please refer to Appendix 3.

Table 5. Completion rates of eligible cohorts at each observation point

Observation Point	Cohorts	Commenced	Completed (%)	
4-year	2009-2016	1573	591	(37.6)
6-year	2009-2014	1086	650	(59.9)
9-year	2009-2011	493	327	(66.3)

Figure 8 shows completion trajectories of cohorts, aggregated into clusters based on the latest available timepoint data.

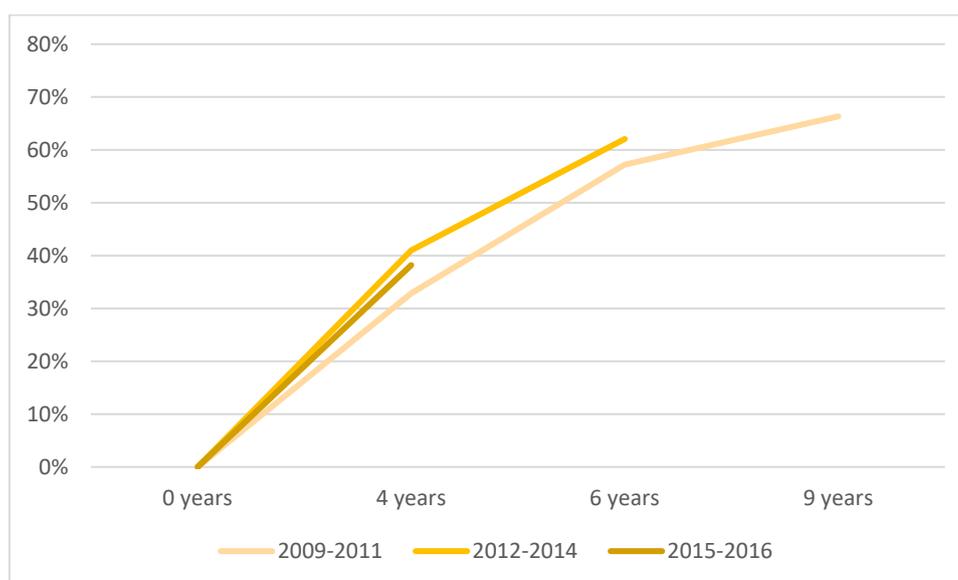


Figure 8. Four-, six- and nine-year completion rates at selected universities

As shown in Figure 8, the available completion rates of more recent cohorts (2012 to 2014, 2015 to 2016) are greater than those of the 2009 to 2011 cohorts.

Due to data availability and the apparent variation between cohort clusters, the remainder of this section will look at the trends in completion in cohorts 2009 to 2011 only. Given the improved four- and six-year outcomes experienced by students after 2011, it is likely that the outcomes described below will have improved in post-2011 cohorts.

Completion trajectories: Cohorts 2009 to 2011

This section explores completion rates at the four-, six-, and nine-year timepoints, with specific reference to the change in completions between each timepoint. Aggregated data from cohorts 2009 to 2011 has been used for Indigenous students from selected universities and the national Indigenous student population. Due to limitations in the ability to aggregate

national data, national domestic bachelor students are represented by the 2010 cohort only (for all appropriate data in tabular form, please see Appendix 4 and Appendix 5).

Figure 9 shows the completion rates for these samples at the four-, six- and nine-year timepoints.

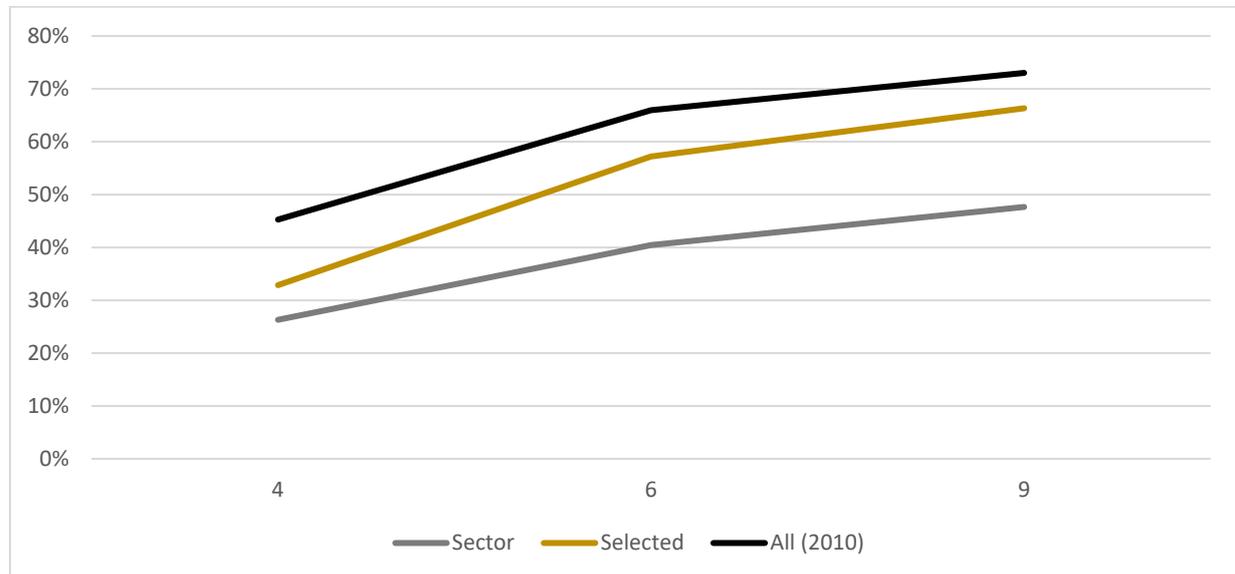


Figure 9. Four-, six-, and nine-year completion rate comparison

Completions at four-year timepoint

At the four-year timepoint, Indigenous students at selected universities achieved higher completion rates (32.86%) than the national average for Indigenous students across the sector (26.31%), but lower completion rates than the national average for all domestic bachelor students (45.27%). While the six- and nine-year completion rates for Indigenous students at selected universities do not reach the national domestic bachelor rate, the data suggests that these students persist with their studies beyond four years at higher rates than national averages.

Completions after four years

Indigenous students at selected universities achieved higher completion rates between four- and six-year timepoints (24.34%) than the averages both for Indigenous students across the sector (14.14%) and for all domestic bachelor students (20.70%).

Additionally, Indigenous students at the selected universities achieved higher completion rates between six- and nine-year timepoints (9.13%) than the averages both for Indigenous students across the sector (7.21%), and for all domestic bachelor students (7.05%).

Student characteristic completion trajectories: 2009 to 2011

The following section reports statistically significant associations between student characteristics and completion rates at selected universities. For graphical representations of this data, please see Appendix 6. Additionally, completion rates at selected universities are compared to the national rates for indigenous students, and for all domestic Bachelor students.

Age

At selected universities, there was a significant association between students' age and their completion rates at four ($\chi^2(2) = 13.530, p < .01$), and nine-years ($\chi^2(2) = 6.358, p < .05$), but not at six years ($\chi^2(2) = 4.981, p = .083$). The odds of students completing by the four-

year timepoint were 2.37 times higher if they were 20-24 than if they were 19 and under ($\chi^2 (1) = 12.622, p < .001$). The odds of students completing by the nine-year timepoint were 1.62 times higher if they were 19 and under than if they were 25 and over ($\chi^2 (1) = 4.087, p < .05$). Students who were 20-24 were 2.38 times more likely to complete than students who were 25 and over at four years ($\chi^2 (1) = 7.984, p < .01$), and 2.11 times more likely to complete at nine years ($\chi^2 (1) = 5.669, p < .05$).

There was a significant association between students' age and the likelihood that they would complete between four and six years $\chi^2 (2) = 7.213, p < .05$. The odds of students completing during this period were 2.11 times higher if they were 19 and under than if they were 20-24 ($\chi^2 (1) = 5.703, p < .05$).

There was no significant association between students' ages and the likelihood that they would complete between six and nine years ($\chi^2 (2) = 0.887, p = .642$).

Figure 10 compares completion rates of Indigenous students at selected institutions, Indigenous students across the nation, and all domestic bachelor students for each age category.

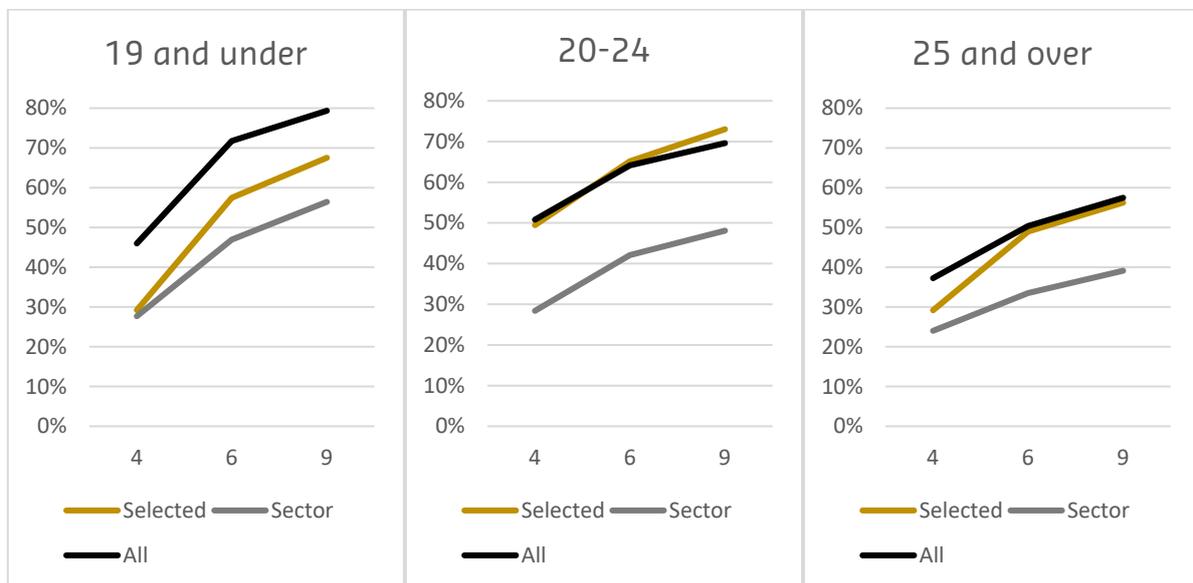


Figure 10. Comparison of completion rates to national figures: Age

Indigenous students at selected universities achieved higher completion rates than the national rate for Indigenous students. While students aged 19 and under completed at a lower rate than the national rate for domestic bachelor students, students aged 20-24 or 25+ appear to have achieved comparable completion rates for at least two of the three timepoints.

Basis of admission

At selected universities, there was no significant association between students' basis of admission and their rates of completion at four years ($\chi^2 (1) = 0.132, p = .717$). However, there were significant associations between students' basis of admission and their rates of completion at six ($\chi^2 (1) = 4.034, p > .05$) and nine years ($\chi^2 (1) = 4.144, p < .05$). Based on the odds ratio, the odds of students admitted on the basis of secondary education were 1.46 times higher at six years and 1.51 times higher at nine years than if they were admitted on the other basis category.

There was a significant association between students' basis of admission and the likelihood that they would complete between four and six years ($\chi^2 (1) = 7.359, p < .01$). Based on the odds ratio, the odds of students completing during this period were 1.77 times higher if they

were admitted based on secondary education than if they were admitted on other basis categories. There was no significant association between students' basis of admission and the likelihood that they would complete between six and nine years ($\chi^2(1) = 0.012, p = .912$).

Figure 11 compares completion rates of Indigenous students at selected institutions, Indigenous students across the nation and all domestic bachelor students for each basis of admission category.

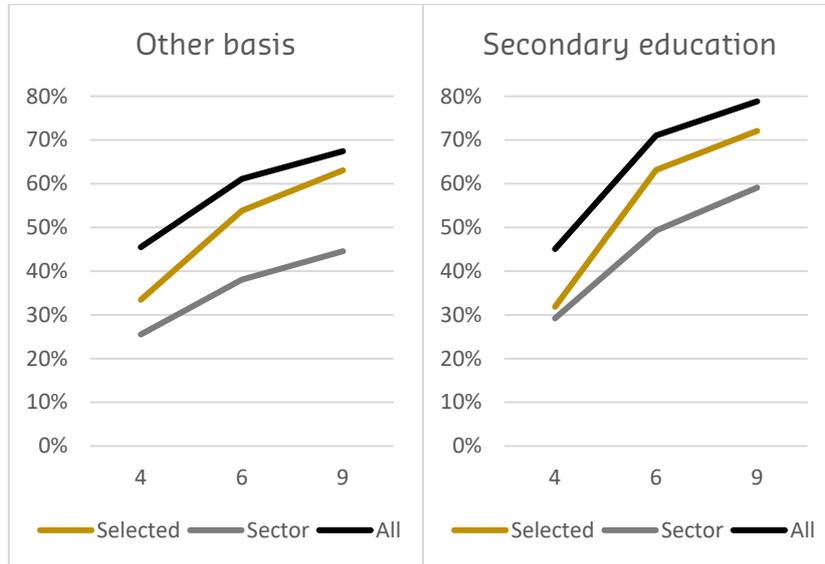


Figure 11. Comparison of completion rates to national figures: Basis of admission

In both categories, Indigenous students at selected universities achieved higher completion rates than the national rate for Indigenous students and lower rates than the national rate for all domestic bachelor students.

Gender⁶

At selected universities, there were no significant associations between students' gender and their completion rates at four ($\chi^2(1) = 0.349, p = .555$), six ($\chi^2(1) = 0.751, p = .386$) or nine years ($\chi^2(1) = 0.410, p = .522$). Similarly, there were no significant associations between students' gender and the likelihood that they would complete between four and six years ($\chi^2(1) = 0.124, p = .724$) or between six and nine years ($\chi^2(1) = 0.192, p = .661$).

Figure 12 compares completion rates of Indigenous students at selected institutions, Indigenous students across the nation and all domestic bachelor students for each gender category.

⁶ Female counts in DESE data may include students who have requested their gender to be recorded as neither male nor female.

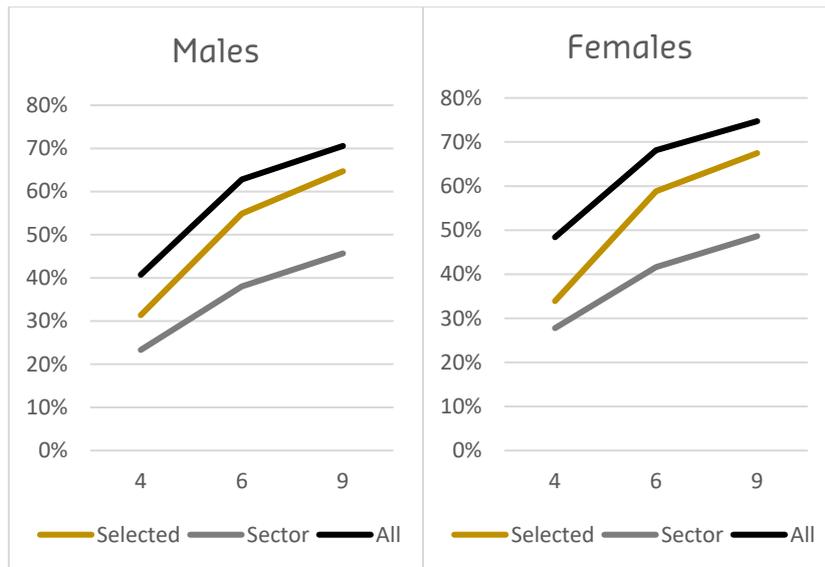


Figure 12. Comparison of completion rates to national figures: Gender

In both categories, Indigenous students at selected universities achieved higher completion rates than the national rate for Indigenous students and lower rates than the national rate for all domestic bachelor students.

Commonwealth scholarship indicator

At selected universities, there were no significant associations between students' Commonwealth scholarship indicators and their completion rates at four ($\chi^2 (1) = 0.912, p = .340$), six ($\chi^2 (1) = 0.715, p = .398$) or nine years ($\chi^2 (1) = 1.065, p = .302$). Similarly, there were no significant associations between students' Commonwealth scholarship indicators and the likelihood that they would complete between six and nine years ($\chi^2 (1) = 0.058, p = .810$).

However, there was a significant association between students' Commonwealth scholarship indicators and the likelihood that they would complete between four and six years ($\chi^2 (1) = 4.081, p < .05$). Based on the odds ratio, the odds of students completing during this period were 1.27 times higher if they were not recipients of a scholarship than if they were scholarship recipients.

Figure 13 compares completion rates of Indigenous students at selected institutions, Indigenous students across the nation and all domestic bachelor students for each Commonwealth scholarship indicator category.



Figure 13. Comparison of completion rates to national figures: Commonwealth scholarship indicator

In both categories, Indigenous students at selected universities achieved higher completion rates than the national rate for Indigenous students.

ATAR⁷

At selected universities, there was no significant association between students' ATAR and their four-year completion rate $\chi^2(5) = 5.894, p = .317$. However, there were significant associations between students' ATAR and their completion rates at six years ($\chi^2(5) = 15.739, p < .01$), and nine-years $\chi^2(5) = 19.544, p < .001$. There was a significant association between students' ATAR and the likelihood that they would complete between four and six years $\chi^2(5) = 19.814, p < .01$. Analysis of completion rates between six and nine years was invalid, as expected frequencies were below 5 for more than 20% of cells.

No statistically significant differences in completion rates were found between successive ATAR bands. For example, the completion rates of students who received ATARs between 70-79 did not differ from those who received ATARs between 80-89.

The completion rates of students who did not provide an ATAR did not differ significantly from students who received an ATAR between 60-69, or 70-79. Students who received an ATAR of 80-89 did not differ significantly from those who did not provide an ATAR, except that they were 3.08 times more likely to complete by the nine-year timepoint than those who did not provide an ATAR ($\chi^2(1) = 6.575, p < .05$).

Compared to students who did not provide an ATAR, students who received an ATAR of 90-04 were 2.89 more likely to complete between four and six years ($\chi^2(1) = 5.775, p < .05$), 3.65 times more likely to have completed by the six-year timepoint, ($\chi^2(1) = 5.941, p < .05$), and 3.58 times more likely at the nine-year timepoint ($\chi^2(1) = 4.584, p < .05$).

Similarly, students who received an ATAR 95-100 were 5.29 times more likely to complete between the four- and six- year timepoints than those without an ATAR ($\chi^2(1) = 14.470, p < .001$). These students 3.22 times more likely to complete by six years ($\chi^2(1) = 4.630, p < .05$) and 10.73 times more likely to complete by nine years ($\chi^2(1) = 8.100, p < .01$) than students who did not provide an ATAR.

⁷ One case missing.

Figure 14 compares completion rates of Indigenous students at selected institutions, Indigenous students across the nation and all domestic bachelor students for each ATAR category.

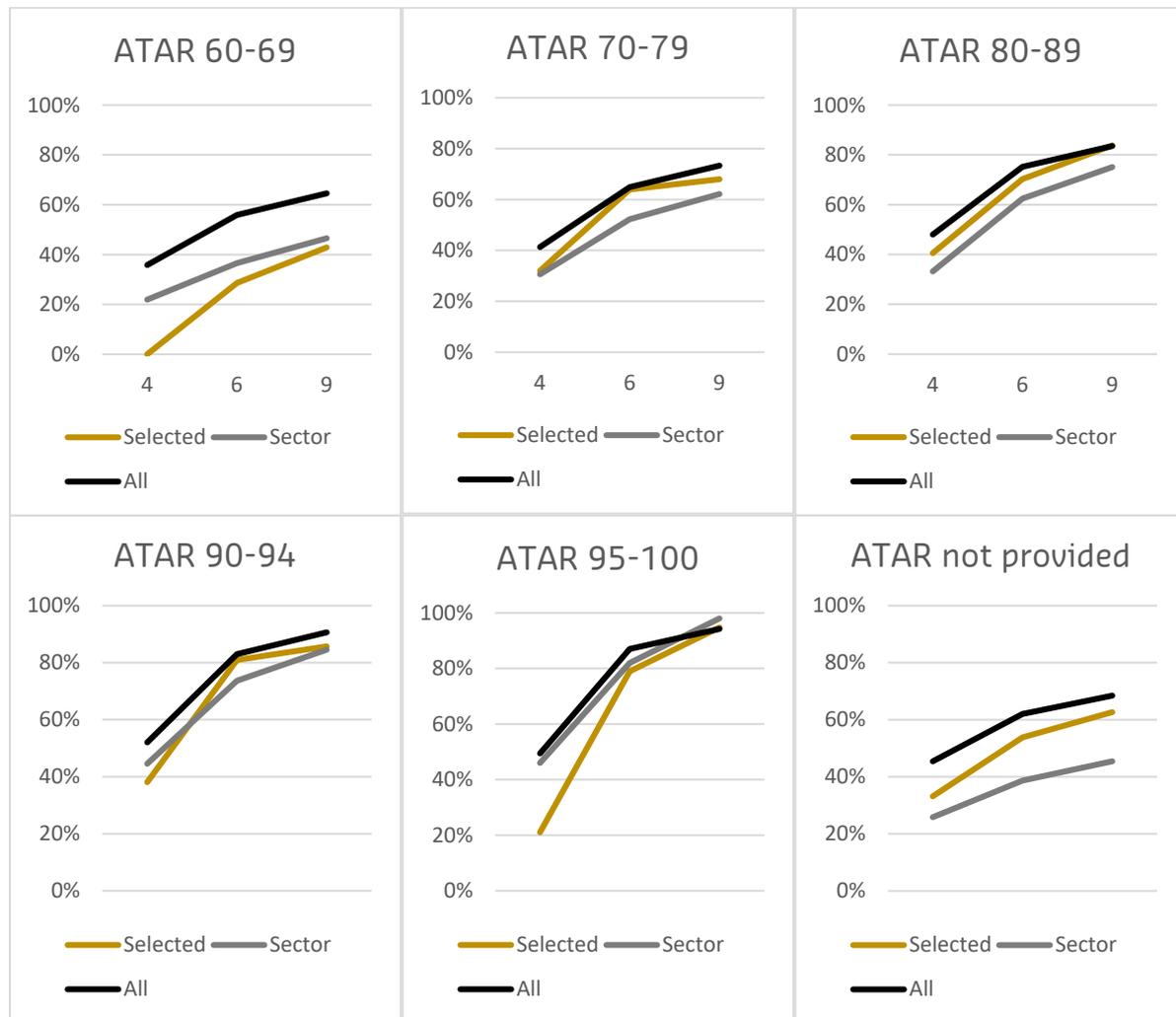


Figure 14. Comparison of completion rates to national figures: ATAR

When comparing selected universities to their broader contexts, students generally completed at a higher rate than the national rate for Indigenous students and at a lower rate than the national rate for all domestic bachelor students. However, several exceptions to this pattern are evident in the data. The completion rate of students with an ATAR between 95-100 was lower at selected universities than all but one national rate. Additionally, students from selected universities with ATARs between 90-94 achieved lower four-year completion rates than both national samples. Most notable, however, is the result pertaining to students with an ATAR between 60-69. This data suggests that Indigenous students from selected universities completed at a lower rate than both national rates at all three timepoints.

Broad field of education

At selected universities, there were no significant associations between students' broad fields of education and completion rates at four ($\chi^2(9) = 9.735, p = .372$) and six years ($\chi^2(9) = 8.354, p = .499$). However, there was a significant association between students' broad fields of education and completion rates at nine years ($\chi^2(9) = 17.614, p < .05$).

Analysis of completion rates between four and six years and analysis between six and nine years was invalid, as expected frequencies were below 5 for more than 20% of cells.

Figure 15 compares completion rates of Indigenous students at selected institutions, Indigenous students across the nation and all domestic bachelor students for each broad field of education.

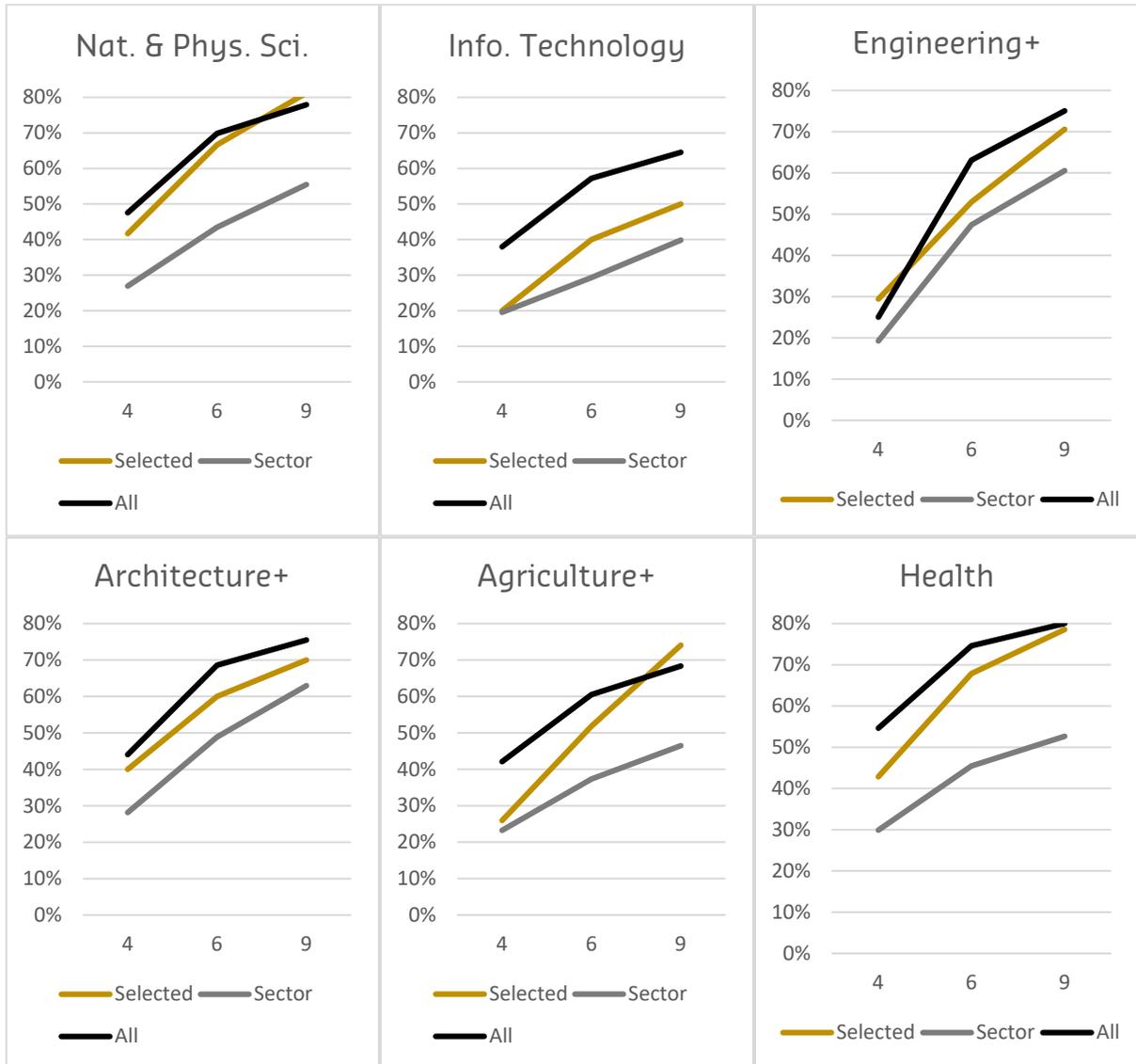




Figure 15. Comparison of completion rates to national figures: Broad field of education

When comparing selected universities to their broader contexts, students generally completed at a higher rate than the national rate for Indigenous students and at a lower rate than the national rate for all domestic bachelor students.

Exceptions to this pattern are evident in the data. The four-year completion rate for Engineering and Related Technologies was higher than the national rate for all domestic bachelor students. The four-year completion rate for Creative Arts was lower than the national rate for Indigenous students. The six-year completion rate for Education was higher than the national rate for all domestic bachelor students. Nine-year completion rates for Natural and Physical Sciences and for Agriculture, Environmental, and Related Studies were higher than national rates for all domestic bachelor students.

Course level

At selected universities, there was a significant association between students' course levels and their completion rates at four ($\chi^2(2) = 16.445, p < .001$), six ($\chi^2(2) = 11.581, p < .01$), and nine years ($\chi^2(2) = 7.284, p < .05$). The odds of bachelor graduate entry students completing, compared to bachelor pass students, were 2.97 times higher at four years ($\chi^2(1) = 6.853, p < .01$), 3.88 times higher at six years ($\chi^2(1) = 6.764, p < .01$), and 3.64 times higher at nine years ($\chi^2(1) = 4.820, p < .05$). The odds of bachelor honours students completing,

compared to bachelor pass students, were 5.70 times higher at four years ($\chi^2 (1) = 10.518, p < .01$) and 4.90 times higher at six years ($\chi^2 (1) = 5.184, p < .05$).

There was no significant association between students' course levels and the likelihood that they would complete between four and six years ($\chi^2 (2) = 0.819, p = .664$). Analysis of completion rates between six and nine years was invalid, as expected frequencies were below 5 for more than 20% of cells.

Figure 16 compares completion rates of Indigenous students at selected institutions, Indigenous students across the nation and all domestic bachelor students for each course level category.

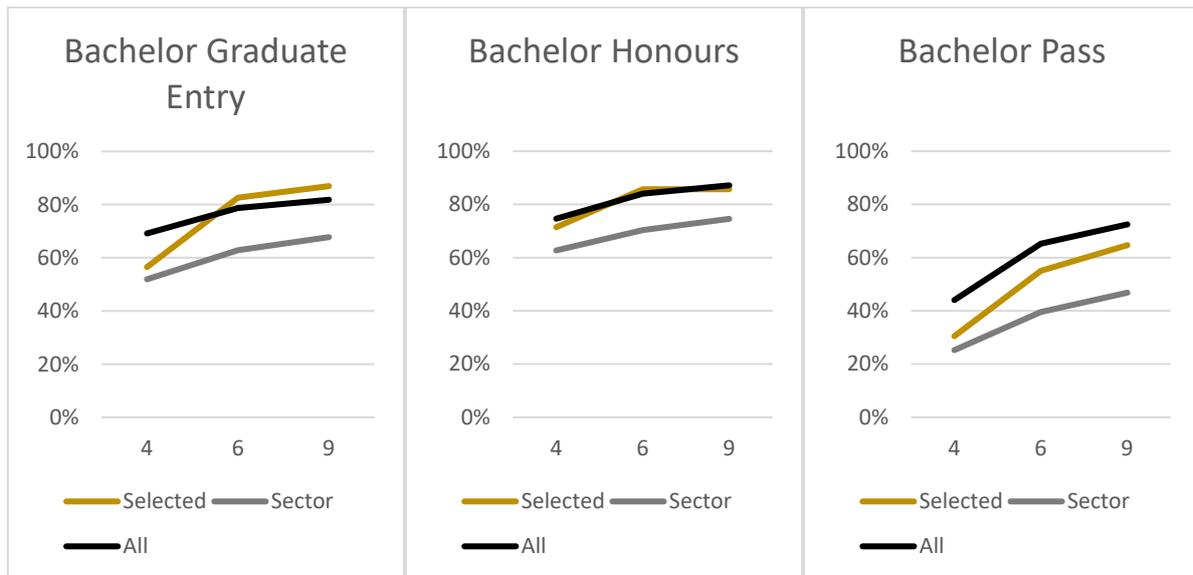


Figure 16. Comparison of completion rates to national figures: Course level

Except for the four-year rate for graduate entry students, students who were engaged in graduate entry or honours courses achieved comparable completion rates to the national rate for all domestic bachelor students. For the majority of the students who completed bachelor pass courses, students generally completed at a higher rate than the national rate for Indigenous students and at a lower rate than the national rate for all domestic bachelor students.

Mode of attendance

At selected universities, no significant associations between students' modes of attendance and their completion rates were found after six years ($\chi^2 (2) = 4.524, p = .104$). All other analyses were invalid, as expected frequencies were below 5 for more than 20% of cells.

Figure 17 compares completion rates of Indigenous students at selected institutions, Indigenous students across the nation and all domestic bachelor students for each mode of attendance.

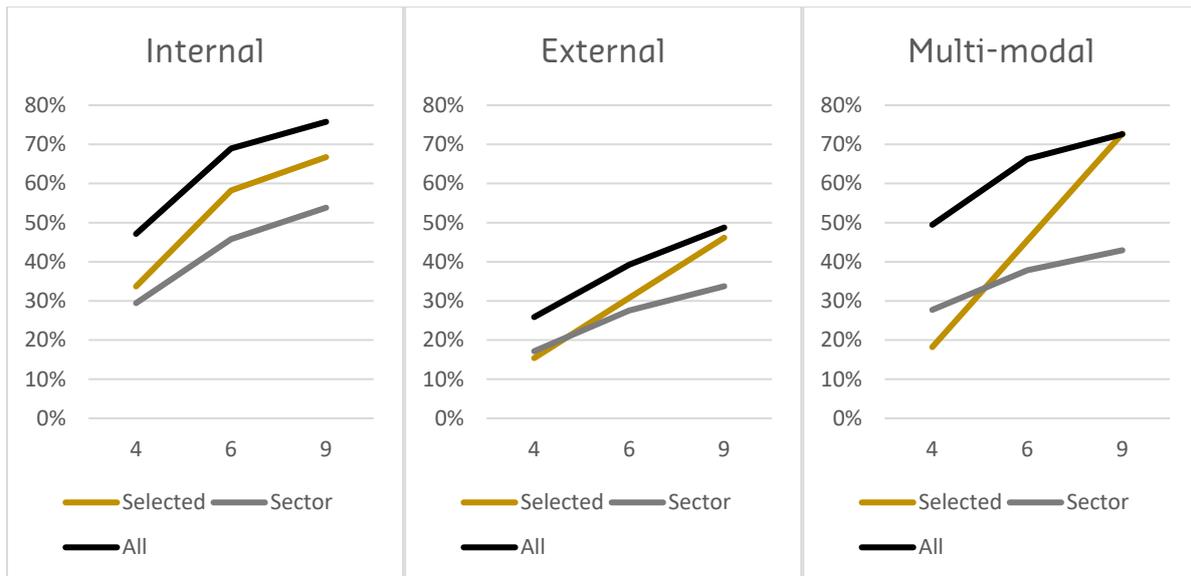


Figure 17. Comparison of completion rates to national figures: Mode of attendance

In all categories, Indigenous students at selected universities achieved higher completion rates than the national rate for Indigenous students and lower rates than the national rate for all domestic bachelor students.

Some exceptions are evident. External and multi-modal students from the selected universities achieved lower four-year completion rates than the national rates for Indigenous students and multi-modal students achieved higher nine-year completion rates than the national rate for all domestic bachelor students.

The patterns for external and multi-modal students are of particular interest, as they suggest that students who engage in these modes are likely to persist over longer periods to complete their studies. For students at selected universities, their comparatively lower completion rates at four-years are somewhat counterbalanced by improved rates at the nine-year timepoint.

Type of attendance

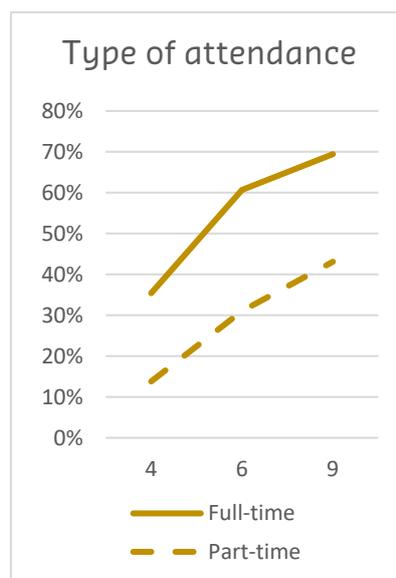


Figure 18. Completion rates for Indigenous students at selected universities: Type of attendance

At selected universities, there was a significant association between students' types of attendance and their completion rates at four years ($\chi^2 (1) = 10.832, p < .001$), six years ($\chi^2 (1) = 18.384, p < .001$) and nine years ($\chi^2 (1) = 15.867, p < .001$). The odds of full-time students completing were 3.43 times higher at four and six years, and 3.00 times higher at nine years, than if they were part-time.

There was no significant association between students' types of attendance and the likelihood that they would complete between four and six years ($\chi^2 (1) = 1.799, p = .180$) or between six and nine years ($\chi^2 (1) = 0.686, p = .408$).

Figure 19 compares completion rates of Indigenous students at selected institutions, Indigenous students across the nation and all domestic bachelor students for each type of attendance.

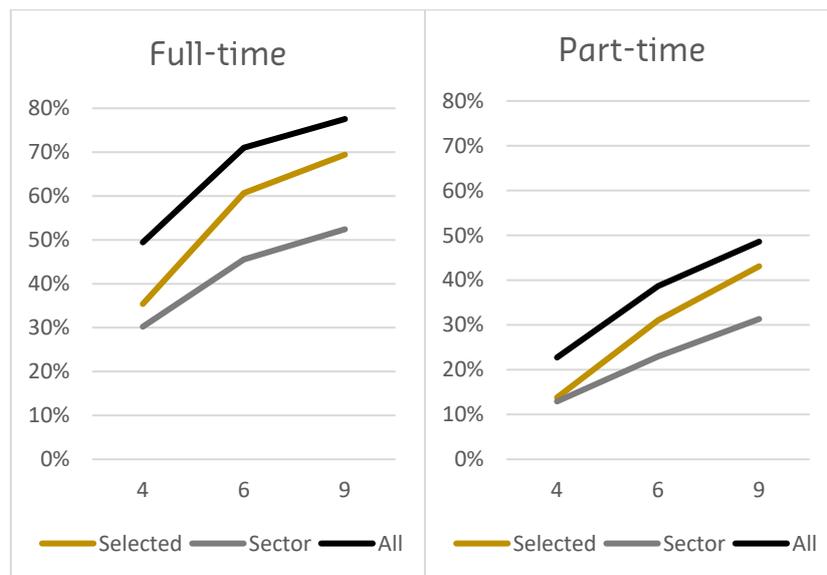


Figure 19. Comparison of completion rates to national figures: Type of attendance

In both categories, Indigenous students at selected universities achieved higher completion rates than the national rate for Indigenous students and lower rates than the national rate for all domestic bachelor students.

As would be expected as a result of the nature of these study loads, nine-year completion rates for part-time students are roughly equivalent to four-year completion rates for full-time students in all three samples.

Regional classification

The Australian Statistical Geography Standard (ASGS) measure is used to assign classification to postcodes. Postcodes can be mapped to multiple categories, meaning that fractions can occur. This violates the assumption of independence for chisquare analyses, rendering them inappropriate for this category. However, a graphical representation of the data is shown in Figure 20.

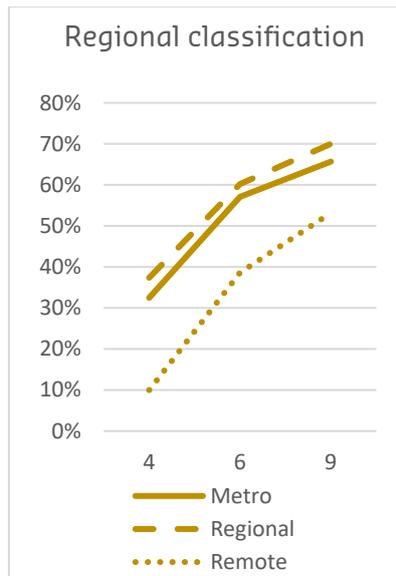


Figure 20. Student completion rates by regional classification at selected universities

Figure 21 compares completion rates of Indigenous students at selected institutions, Indigenous students across the nation and all domestic bachelor students for each regional classification category.

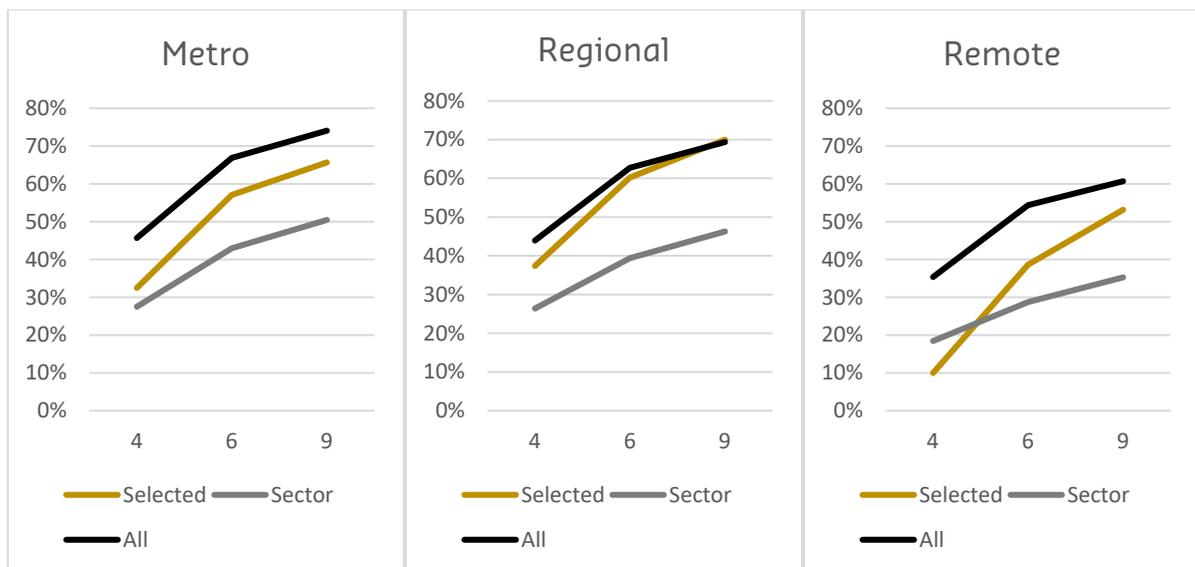


Figure 21. Comparison of completion rates to national figures: Regional classification

In all categories, Indigenous students at selected universities achieved higher completion rates than the national rate for Indigenous students and lower rates than the national rate for all domestic bachelor students.

Two exceptions to this pattern were found. After four years students from remote postcodes achieved lower completion rates than the national rate for Indigenous students and after nine years students from regional postcodes achieved higher completion rates than the national average of all domestic bachelor students.

Socioeconomic status⁸

There were no significant associations between students' socioeconomic status and their completion rates at four ($\chi^2(2) = 0.702, p = .704$), six ($\chi^2(2) = 0.008, p = .996$) and nine years ($\chi^2(2) = 0.757, p = .685$). Additionally, no significant associations were found between students' socioeconomic status and the likelihood that they would complete between four and six years ($\chi^2(2) = 0.686, p = .710$) or between six and nine years ($\chi^2(2) = 1.770, p = .413$).

Figure 22 compares completion rates of Indigenous students at selected institutions, Indigenous students across the nation and all domestic bachelor students for each socioeconomic status.

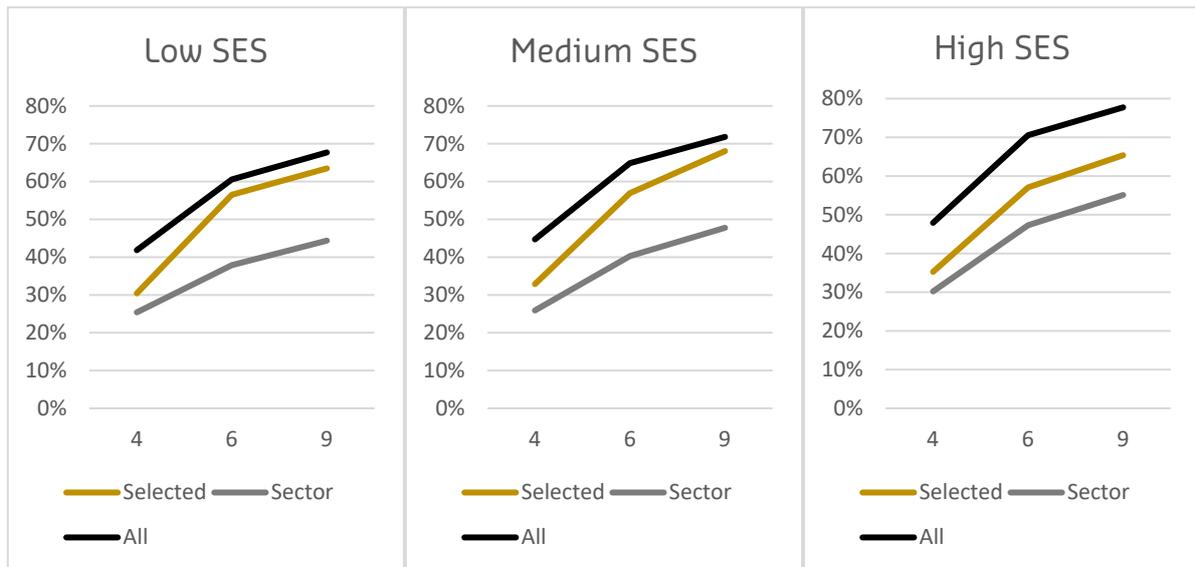


Figure 22. Comparison of completion rates to national figures: Socioeconomic status

In all categories, Indigenous students at the selected universities achieved higher completion rates than the national rate for Indigenous students and lower rates than the national rate for all domestic bachelor students.

⁸ Six cases missing.

Discussion

The universities focused on in this project have higher Indigenous student completion rates than the national average and utilise a range of strategies to support Indigenous students to complete their degrees. The students who attend the five selected universities also have specific characteristics. The previous section discussed the findings that emerged from the research based on data derived from qualitative and quantitative sources. In order to identify from a range of perspectives “what works” to support Indigenous students to complete their degrees, from a range of perspectives, interviews were undertaken with Indigenous graduates, staff who support Indigenous students, and non-completed Indigenous students. In addition to the interviews, a cohort analysis was undertaken to analyse enrolment rates and student outcomes across the selected universities over time, compare enrolment rates, student characteristics, and student outcomes with those of Indigenous students across the sector, and compare these enrolment rates, student characteristics, and student outcomes to those from all domestic bachelor students. As a result, the research project obtained rich findings. This section brings together these findings with the relevant literature to explore the overarching themes in the data.

Student characteristics

As Pechenkina et al (2011) highlights, “student characteristics have a major effect on completion rates, which is likely to be equally or perhaps more important than the level of support offered” (p. 65). The quantitative cohort analysis highlights a number of key findings about the profile of Indigenous students at the selected universities compared to the sector. Compared to national rates for Indigenous students, the commencing Indigenous students at the selected universities are more likely to be young (aged under 19), studying internally, studying full-time, from metropolitan postcodes, from high SES postcodes, and admitted on the basis of their secondary education. In comparison, the rest of the sector is more likely to be enrolling Indigenous students who are older, admitted on an “other” basis, attending externally and/or part time, and from low SES, regional and remote postcodes. The quantitative cohort analysis indicates that students studying at the five selected universities are most likely to be enrolling in the Society and Culture or Natural and Physical Sciences broad fields of education. This was also supported by the qualitative findings, with 14 of the 36 graduates interviewed having studied in arts related courses. Other graduates studied in health, communication, and science fields. Additionally, Indigenous students at the selected universities achieved higher completion rates between six- and nine-year timepoints (9.13%) than the averages both for Indigenous students across the sector (7.21%), and for all domestic bachelor students. This aligns with Shalley et al.’s (2019) finding that Indigenous students at Charles Darwin University and Central Queensland University are taking longer to complete their degrees than their non-Indigenous peers; they emphasise:

This observation, along with the relative completion success of Indigenous students with previous higher education experience (albeit over an extended period of time), should not be viewed as disinterest in, or an inability to succeed, at university. Rather, it could suggest that Indigenous student engagement with universities is not necessarily perceived as a time-restrained activity in the way the Western higher education institutions are currently funded or geared towards. That is, iterative engagement with higher education studies will reflect ebbs and flows in study participation based on a multitude of familial, social, cultural and employment obligations. (p. 51)

The cohort analysis findings demonstrate that age has a significant impact on completion at the selected universities. Students who were 20 to 24 years old upon commencement were more than twice as likely to complete than students who were 25 and over at both 4 years and 9 years. This was supported by the qualitative data with only six of the 36 graduates

interviewed being non-school leavers/mature-age students. This highlights an area for the selected universities to target and consider how they can better encourage and support non-school leavers/mature age students who are over 25 to enrol and complete degrees. Quantitative findings also highlighted that mode of attendance also has an impact on likelihood of university completion. Interestingly, external and multi-modal students from the selected universities achieved lower four-year completion rates than the national rates for Indigenous students suggesting that further support is needed for this cohort. The cohort analysis findings indicate that there were no significant associations between students' Commonwealth scholarship indicators and their completion rates at four, six, or nine years at the selected universities, even though qualitative staff findings highlighted the importance of scholarships to support Indigenous students to complete their degrees. However, the scholarships staff were discussing were specific scholarships for Indigenous students rather than Commonwealth scholarships.

While “admissions decisions are increasingly being made on a range of bases other than ATAR” (Pilcher & Torii, 2018, p. 7), Indigenous students with an ATAR above 80 at the selected universities are more likely to complete than students who did not provide an ATAR. At the high end of the spectrum, students who received an ATAR 95-100 were 3.22 times more likely to complete by six years and 10.73 times more likely to complete by nine years than students who did not provide an ATAR. However, no statistically significant differences were found between students who did not provide an ATAR and those with ATARs in the 60-69 or 70-79 ranges. As Pilcher and Torii (2018) note “despite the expansion of alternative pathways, the ATAR is maintaining its prominence as a marker of student achievement in the school system and the community more broadly — suggesting it may be assuming a role beyond what was intended” (p. 17). Certainly, it is important to note that Indigenous students are a “distinct but quite diverse cohort, with a range of individual interests, behaviours, approaches, capacities, skills and needs” (Day et al., 2015, pp. 505-6) and, therefore, combining these quantitative findings with qualitative findings from interviews with graduates, staff and non-completed students builds a richer understanding of how Indigenous students enrolled in universities with high completion rates progress through and complete their university study.

Not necessarily “first-in-family” and the influence of family

The DESE cohort analysis does not capture data on whether students are first-in-family or first generation to attend university. However qualitative findings from interviews found that many of the graduates interviewed for this study were not first-in-family. A number of the graduates had parents or siblings who had attended university before them and were therefore not “newcomers to university culture” (O’Shea et al., 2017, p. 6). For example, a graduate noted, “My brother did [attend uni] before me, straight out of high school” while another graduate stated, “My mother has, she has an undergraduate in social work with honours”.

As O’Shea (2019) notes “unpacking” terms such as “first-in-family” or “first generation” is important for clarity. Elsewhere O’Shea et al. (2017) point out:

In the Australian context “first-in-family” has ... been variously defined, but most definitions refer to parental education levels. To differentiate from the general term first generation student, first-in-family is defined for this study as: no-one in the immediate family of origin, including siblings or parents, having previously attended a higher education institution or having completed a university degree. (p.2)

This could be more complex in Indigenous families where cousins, aunties, uncles and extended family members could also be considered “immediate” family. In addition, a number of graduates discussed family members who attended university alongside them. For example, one graduate noted,

I do have an aunty and uncle, which is my mum's cousins, who they went back and were mature-age students, and so they're actually doing the same thing. My uncle completed in the middle of last year. And my aunty completed three years ago, just when I started.

Another graduate stated, "there was my aunty as a mature, much later, mature-aged student has her degree. I think she got it while I was doing mine".

Parental encouragement was also discussed by a number of graduates and, certainly, as McCarron and Inkelas (2006) note, "parental encouragement and involvement is one of the best predictors of postsecondary aspirations, especially when factored in conjunction with the family's financial situation" (p. 536). However, a number of non-completed students interviewed noted the pressures they felt from family members to attend university and the negative impact of this pressure.

Importance of Indigenous centres/units: Building a sense of community and belonging

The findings of this study indicate Indigenous centres/units play an important role in supporting Indigenous students to complete their degrees. Qualitative comments from graduates highlighted the ways the Indigenous centre/unit at the university they attended supported them. As one student stated:

I feel that once you start engaging with the [Indigenous] unit and you know that there is so much support that that's there for you, that you don't have to feel shame and asking for [help], then you're like "alright sweet, life's good" and until you do that then you're never gonna know.

Staff also noted the impact that engaging with the Indigenous centre/unit on campus has in supporting Indigenous students to complete their degrees. For example, one staff member stated:

Having our Indigenous support units are almost like a key pillar in ensuring our students are appropriately supported throughout ... [they can] all be in that one place together and know that they're all there for the same reason, to get a degree from the university.

Another staff member also clearly articulated this perspective:

My main thing is, for a student to complete, I think if they have a lot of engagement with our unit ... they know where to go to for support, I find that that is where we'll get students that end up completing and having more success at the university.

This is supported by Pechenkina et al. (2011), who found that "universities with more complex Indigenous support and research infrastructure demonstrate higher Indigenous student completion rates" (p. 64).

The sense of belonging and community that Indigenous centres/units provide was particularly highlighted by graduates and staff. As one student noted: "I think the [Indigenous] unit provides community, like our sense of belonging and other students similar to you". Similarly, a staff member noted:

One of the things that I found was really essential for students to stick around and complete is actually building the sense of connecting with the university in that sense of community and relationships, so they have a place, and feel like they belong here and there's that support ... I think we do have programs that contribute to that sense of community.

As Day et al. (2015) highlight, the pastoral and personal care that is offered by Indigenous centre/units “supports Indigenous identities, values and goals based on the commitment of Indigenous staff to political and cultural tenets of the Indigenous community more generally” (p. 505). The important role of Indigenous centres/units in building a sense of community and belonging is noted in the literature (e.g., Andersen et al., 2008; Kinnane et al., 2014; Oliver et al., 2015). Kinnane et al. (2014) also emphasise the role of Indigenous centres/units in providing “a sense of community” (p. 123). They quote a senior Indigenous staff member working in an Indigenous centre/unit within a university with strong completion rates who stated: “If you look at where Indigenous education is thriving you’ll see strong Indigenous units at the centre of those outcomes”. Walker (2000) also notes that Indigenous centres/units provide a significant place of belonging and states that this contributes to “personal and interpersonal aspects of student persistence and achievement” (p. 148). Elsewhere, Oliver et al. (2015) argue that “clearly Aboriginal centres play an important role in student completion and are of considerable benefit to students” (p. 29).

ITAS

The qualitative data from graduates and staff demonstrates the important role of ITAS in supporting Indigenous students to complete their degrees. Many of the graduates discussed the impact ITAS had on their university experience. For example, a graduate noted:

[ITAS] was really, really helped, [it] was really helpful for me because it kind of...it provided me with that one-on-one support ... just like having someone to help guide me in knowing what was expected of me, like what the quality was expected of me for my assignments and getting that confirmation that my ideas weren't just womba [crazy]!

Another graduate stated:

The Indigenous tutorial scheme. That was amazing. That was, yeah, really, really valuable and helped me so much. Now I myself am an ITAS tutor for other Indigenous students now. It's the best thing ever. One of the best programs I could have had at this university.

Another student noted, “... definitely the ITAR tutoring program, without that I probably would not have gotten through half of my courses that I did”. Staff also noted the importance of the program: “I see how it’s a critical support strategy that we use here at the university to ensure our students have every chance of success at completing their degrees as well”.

This is supported by Lydster and Murray (2019a, p. 140) who draw on interviews with staff and students at Bond University to highlight that ITAS is “consistently referred to in a positive light” and led to “increased confidence amongst students, reduced stress and improved grades”. Similarly, reporting on the perspectives of ITAS tutors and Indigenous students receiving ITAS tutoring in two regional universities, Wilks et al. (2017) note that ITAS tutoring has “enabled many students to manage their transition through university and complete their studies” (p. 14). Further, Nakata et al. (2019) demonstrate that while Indigenous students may initially utilise the tutoring for what could be considered remedial purposes, they then often start to use the tuition in a far more strategic manner, showing their active roles in seeking knowledge and uncovering the “hidden knowledge” regarding how to develop academically (p. 7; also see Whatman et al., 2008, for analysis of the quality and efficacy of ITAS).

Scholarships were another important factor discussed by staff as key in supporting Indigenous students to complete their degrees. As one staff member noted:

Scholarship support ... I think that's a critical piece of it as well, and I think how you continue to grow that ... you come across students that have those sort of barriers, and I think that's a big thing they want to know [about] ... it could be actually a real limiting factor around them coming down to study with us if they're from a regional [area without a scholarship].

This is reiterated by Hill et al. (2020) who emphasise that “the significance of financial assistance cannot be underestimated” (p. 24). Kinnane et al. (2014) highlight that “scholarships to university are offered for Aboriginal and Torres Strait Islander students from universities, governments, non-government and industry sources, for study across a range of disciplines at undergraduate and postgraduate levels” (p. 47). While the quantitative data showed no correlation between students with Commonwealth scholarships and completion, there are a range of other scholarships from other sources administered by universities. As Kinnane et al., (2014) point out: “limited data are available on the full numbers of scholarships awarded or on completion rates for scholarship supported study, indicating a need for further research in this area” (p. 47).

The need to address racism and improve Indigenous perspectives in the curriculum

Experiences of racism in the classroom experienced by Indigenous students was noted by graduates, staff and non-completed students. As one graduate noted: “racism can pervasively impact the student experience and the ability to then engage well ... I think that's something that needs quite significant addressing in tertiary education”. Another graduate stated: “the racism does pop up and it doesn't get addressed and it doesn't change, that has caused a few of my friends to a point where they like change universities and change degrees and all these sorts of things”. Similarly, staff pointed out in interviews that Indigenous students often report incidences of racism in the classroom. For example, one staff member noted: “I have to deal with so many students' experiences of violence in other subjects”. This is echoed by Day et al. (2015) who suggest that “students' perceptions of racism and exclusion ... provide additional emotional burdens and layers of challenge that can complicate the academic aspects of learning” (p. 504). Elsewhere, Rochecouste et al. (2014) note a reluctance of some academic staff “to raise their awareness of Aboriginal knowledge and experience” which contributes to “an ongoing lack of cultural safety provided by ill-informed, culturally incompetent staff” (p. 161). Certainly, as O'Shea et al. (2017) point out, racist “behaviours are not restricted to the university environment but are a microcosm of broader societal attitudes which many Indigenous students experience on a daily basis long before beginning university study” (pp. 5-6; also see Biddle & Priest, 2015).

In addition to this, the importance of including Indigenous perspectives in the curriculum was emphasised by graduates and staff. For example, one graduate stated, “I do think they could improve their programs ... put focus on Aboriginal and Torres Strait Islander content and knowledge”. Another graduate stated:

I wish that Indigenous knowledge had been a little bit more present in some of my studies ... I just wish that it had been a bit more present for the full student body and that it had been a bit more ingrained in some of my classes.

This is reiterated in the literature by Martin (2006) who identifies the need for educational providers to consider Indigenous studies/perspectives in the curriculum and use culturally familiar and relevant materials to enhance the learning experiences of Indigenous students. Certainly, the important work of embedding Indigenous perspectives in curricula is being undertaken at a number of universities across Australia (Jackson et al., 2013; Williamson & Dalal, 2015). Staff also indicated in interviews that the embedding of Indigenous perspectives could be strengthened in university curricula. However, in relation to including Indigenous perspectives in curricula, Page et al. (2017) emphasise that “sustainable

curriculum change requires dedication and resources ... human resources will be required, including experienced Indigenous academics, who can lead the change” (p. 47).

The need for further skills and competence training for staff and students

Graduates and staff also emphasised the need for further cultural awareness or cultural competency⁹ training for university staff and students. For example, a staff member noted the need for “‘culturally competent’ lecturers and staff that can understand to a degree where our Indigenous students come from”. Graduates also noted that further training is needed for staff and students. As one graduate stated:

I’m sick of white people trying to welcome me to Country that’s not theirs. You know, like, it’s an acknowledgement, not a welcome. Not that hard to know the difference, but I can understand when people don’t have the training and whatnot.

Another graduate emphasised, “if there were mechanisms that were more shoved in undergraduate students’ faces, like bad behaviour, racism, all those sorts of things”. As Sherwood and Russell-Mundine (2020) point out, “the experience of racism for many Aboriginal and Torres Strait Islander people must also be considered as an impetus for change if we are to effectively ensure a space where Aboriginal and Torres Strait Islander students can safely study” (p. 136).

The need for further cultural competency training of university staff and students is discussed in the literature (e.g., Carey, 2015; Frawley et al., 2020; Fredericks & Bargallie, 2020a, 2020b; Hollingsworth, 2016; Sherwood & Russell-Mundine, 2020). Both Carey (2015) and Hollingsworth (2016) point out that much care must be taken to ensure the design and delivery of cultural competency training within universities acknowledges “the diversity among Aboriginal and Torres Strait Islander people, and the intercultural nature of their daily lives or the complex and dynamic intersectionality of their complex identities” (Hollingsworth, 2016, p. 33). Certainly, as Fredericks and Bargallie (2020a) note, there is a need for university staff to “critically engage with content that would cover history, race, colonisation and the future ... foster critical thinking, self reflection and discussions about cultural identities, privilege, attitudes, prejudices and propensity to stereotype, challenge racism and promote anti-racism practices” (p. 304).

⁹ In relation to terminology, Fredericks and Bargallie (2020a) note, “training has developed and has come to be known as cultural awareness, cultural competence, cultural responsiveness, cultural safety, cultural sensitivity, cultural humility, cultural capability and a range of other names ... In Australia, the terms ‘cultural competence’ and ‘cultural capability’ have been primarily used in education” (p. 295; also see Sherwood & Russell-Mundine, 2020, for discussion and critique of definitions of cultural competency).

Conclusion

While the five universities focused on in this project have strong completion rates compared to the national average, prior to this research project, the evidence for “what works” to support Indigenous students from successful universities was very limited. The project was a timely and valuable way of addressing this gap by building a stronger evidence base about effective strategies to support Indigenous students to complete their degrees through a high-impact research project with key stakeholder networks. The findings are valuable to the sector as they have developed knowledge of “what works” in terms of strategies that support Indigenous students to complete their degrees and serve to inform and strengthen programs to support Indigenous students through higher education.

Certainly, undertaking university study and completing a degree is not necessarily a linear process. As one staff member noted:

If a student takes a semester off, which a lot of students do, it's not the worst thing in the world because they're taking care of themselves. I think there's maybe some focus with the retention work on always having a student stay in university, when really, we want what's best for them. So, if they want to be in university and there's a few barriers that we can help support them to address, that's great. If they really know that they need a break, that's good too, if they go away with a more positive experience then they come back and they continue, and everything's good.

As Shalley et al. (2019) note, “students can discontinue and re-enter degree courses over time, exit with a different degree type, change their study discipline, change universities within their degree, and change their study intensity between full and part-time, and study modality between internal and external” (p. 1). In addition, withdrawal or departure from university before completion of a degree is not always considered a “failure” but highlights the ways in which engagement with higher education can be “cyclical rather than linear” (Behrendt et al., 2012, p. 87). Non-completed students interviewed highlighted a range of reasons they decided to leave their university degrees including “burnout”, mental health issues, negative experiences in colleges and the lack of a cohort of Indigenous students in their degrees. They also discussed feeling pressured to attend university by family and the poor fit of the degree with their interests.

The importance of Indigenous centres/units as safe spaces where Indigenous students can experience a sense of community and belonging was highlighted in interviews with graduates and staff. As one graduate noted, “I feel like having a place away from the university itself, and in a place where we all feel safe and is culturally accessible, is a great pillar for us”.

Similarly, a staff member noted:

It's all around the space, and the space being safe, and when it's not safe, that completely changes the experience for the students. So, I feel like a lot of effort here is made to keep the space really culturally nurturing so that the students... they can come and go; they have access, it's their place, and it's their space, and I feel like that is consistently reiterated to the students so they feel they have a sense of ownership which I think is really important.

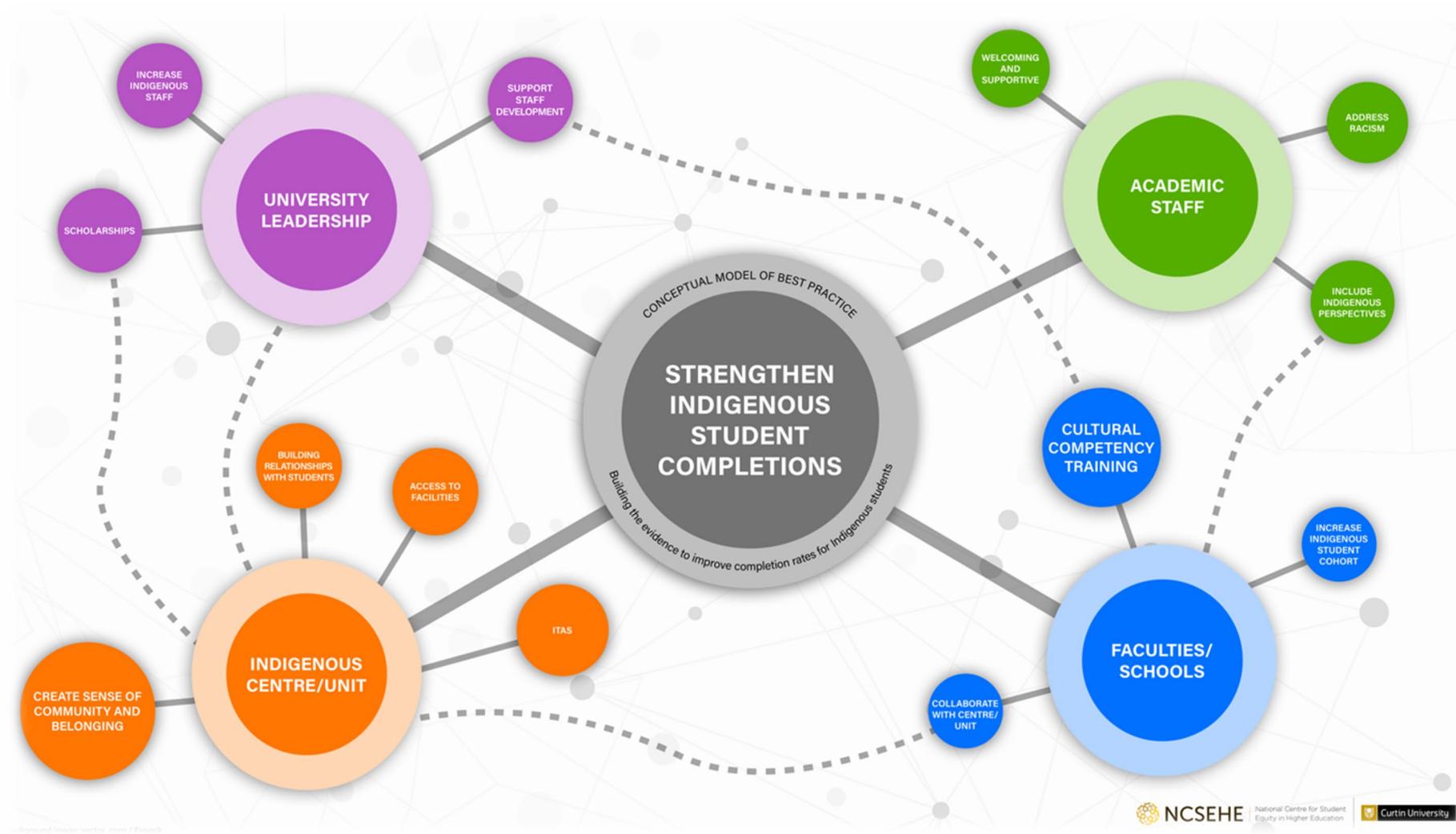
Staff noted a number of changes in support as a result of the COVID-19 pandemic and, while there has not been a drop in enrolments and completion rates at the five universities focused on in this project, what these changes in support mean in the context of a socially distanced COVID-19 context is still unclear. Certainly, Indigenous centre/unit staff have worked innovatively to move face-to-face support to an online delivery format. These shifts include Zoom consults, online yarning circles, online ITAS sessions, and care packages sent to

students. With these shifts, it is important to ensure online initiatives achieve effective engagement with students. Can the important connections and sense of belonging usually made when students engage with the physical space of an Indigenous centre/unit be achieved in this new online space?

Findings from interviews with graduates, staff and non-completed students are particularly valuable, as they provide rich narratives about their experiences in relation to support for Indigenous students to complete their degrees. This material highlights both the strengths of the universities in the study and the areas for improvement within universities generally. The cohort analysis complements the interview data by providing quantitative data about Indigenous student characteristics that contribute towards completion. Overall, compared to national Indigenous enrolments, the selected institutions in this study enrol higher percentages of Indigenous students who are younger, studying internally, studying full-time, from metropolitan postcodes, from high SES postcodes, admitted on the basis of their secondary education (rather than alternative entry or “other” basis), and/or studying in the Society and Culture or Natural and Physical Sciences broad fields of education. They are more likely to disclose their ATAR and their ATAR is likely to be higher. Certainly student characteristics have a significant impact on completion.

Conceptual model of best practice in supporting Indigenous student completions

Drawing on the findings from interviews with staff, university graduates, and non-completed students, and in consultation with the Indigenous reference group and other Indigenous staff who participated in the national roundtable, a conceptual model of best practice in supporting Indigenous student to complete their degrees has been developed. This conceptual model illustrates the need for interconnectedness and relationships between the Indigenous centre/unit, the schools/faculties, individual academic staff and university leadership to ensure a “whole-of-university” approach to supporting Indigenous students.



Strategies to strengthen Indigenous student completions

Along with the conceptual model of best practice, suggested strategies to embed the conceptual model and to strengthen Indigenous student completions rates have been developed from the findings and in consultation with the Indigenous reference group and other Indigenous staff who participated in the national roundtable.

Strategies for Indigenous centres/units

- continue to build a strong sense of community/a safe space:
- ensure strong access to centre/unit facilities, such as computers, study spaces, socialising spaces, food, printing, resources
- build strong relationships with students (e.g., regular “check-ins”, meetings, study nights, cultural sessions)
- ensure ITAS is known as an option to all Indigenous students
- ensure scholarship opportunities are clear and available for Indigenous students.

Strategies for university faculties/schools

- work collaboratively with the university’s Indigenous centre/unit to ensure strong relationships between faculties and Indigenous centre
- ensure professional and academic staff undertake cultural competency training (e.g., AIATSIS Core Cultural Learning Modules) so that staff increase their understandings about Aboriginal and Torres Strait Islander cultures, histories and people
- consider ways to further embed Indigenous perspectives across all faculties
- consider ways to increase Indigenous student cohorts in all faculties (e.g., targeted marketing campaigns, highlight success stories of Indigenous graduates).

Strategies for academic staff

- ensure diverse Indigenous perspectives are embedded in curricula
- ensure classrooms are anti-racist and address racism in classrooms
- provide a welcoming and supportive space for all students.

Strategies for university leadership

- ensure all staff are supported/given time to undertake cultural competency training
- advertise further identified positions across the university to increase numbers of Indigenous academic staff
- offer generous scholarships and “top-up” scholarships for Indigenous students.

Ideas for future research include investigating how the universities involved in the project can increase their enrolments of mature-age students and what effective support for these students looks like, exploring further the role of family in supporting Indigenous students (and the pressures of family) to complete degrees, further considering the impact of living at college for regional and remote Indigenous student completions, and exploring the interrelationships between students and study characteristics and their relative contributions to completion rates. Further consideration could also be given to the role of persistence and determination of Indigenous students at universities with high completion rates to extend the work of Martin et al. (2017) in this area. This work should be led by Indigenous scholars.

Recommendations

The findings of this project inform eight high-level recommendations under the following two broad categories:

- Key stakeholder recommendations
- Australian Government recommendations.

Key stakeholder recommendations

- a. University leadership needs to ensure more cultural competency training opportunities for academic staff, professional staff, and students.
- b. University academic staff should ensure their classrooms are strongly anti-racist and address any issues of racism within the classroom.
- c. University leadership and Indigenous centre staff should work together to ensure strong scholarships are in place for Indigenous students.
- d. University faculties and academics should work collaboratively with Indigenous centre/unit staff and Indigenous academics to ensure Indigenous perspectives are strongly embedded in course curricula.
- e. University Indigenous centre/unit staff should continue to develop and strengthen strategies that build a sense of belonging and connection for Indigenous students within the university.
- f. University leadership should ensure there are targets and initiatives in place to continue to grow the number of Indigenous academic staff within universities.

Australian Government recommendations

- g. The Australian Government Department of Education, Skills and Employment (DESE) could test the feasibility of including a separate analysis of the national Indigenous student population in the annual cohort analysis of higher education students.
- h. The Australian Government Department of Education, Skills and Employment (DESE) could extend the timeframe reporting of Indigenous student higher education award completion to a minimum of 10 years in order to optimise the opportunity to capture data on successful completion and better acknowledge and reflect the familial, cultural, social and employment obligations that Indigenous students face.

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Appendix 1: Interview questions

Interview questions for university staff working with Aboriginal and/or Torres Strait Islander students

- Can you tell me about your role working at this university?
- How do you describe your identity?
- How long have you been working in this role?
- Can you tell me about the strategies/programs or initiatives your university offers to support Indigenous students to complete their degree?
- What do you think makes a difference to support Indigenous students to complete their degrees? Can you give some examples?
- Do you know how support has changed over time?
- Do you think there are areas that could be improved to assist Indigenous students to complete their degrees?
- How effective do you think these programs or initiatives are in assisting Indigenous students to complete their university degree?
- How has Covid-19 changed/impacted support for Indigenous students to complete their degrees?
- Are you aware of other good examples of initiatives that support Indigenous students to complete their degrees?
- Do you feel supported by other colleagues across the Faculties/University?
- How can universities in general better support Indigenous students to complete degrees?
- Are there any areas/ issues regarding your experiences that we haven't talked about and you feel you'd like to discuss?

Interview questions for Indigenous graduates

- How do you describe your identity and, if able to, the Country you are from?
- Can you tell me about your pathway into university and what degree did you enrol in?
- When did you graduate?
- Did you go to uni straight from school or were you a non-school leaver?
- If you were a non-school leaver what age were you when you commenced (20-30, 30-40, 40-50 etc)?
- Have other members of your family attended university?
- Can you tell me about your experience starting uni and going through your degree?
- What were the factors that helped you to successfully complete your degree?
- Can you tell me about the programs or initiatives your university offered that helped you to complete your degree?
- If you were still studying during COVID, what was done to assist you?
- Did you engage with the Indigenous Unit/Center? Can you describe your engagement with the Centre/Unit?
- Were there strategies that the Indigenous centre/unit used that assisted you?
- Was there a difference in the support provided by the Indigenous centre/unit compared to support in the School/Faculty?
- What could have been improved? Were there cultural aspects that were included/could be improved?
- Did you know any Indigenous students who did not complete their degrees? Did you observe anything in relation to reasons those students that didn't complete their degrees?

- Do you have any suggestions for ways universities could better support Indigenous student to complete degrees?
- What have you done since completing your degree?
- Are there any areas/ issues regarding your experiences that we haven't talked about and you feel you'd like to discuss?

Interview questions for non-completed students

- How do you describe your identity and, if able to, the Country you are from?
- Can you tell me about your pathway into university and what degree did you enrol in?
- Did you go to uni straight from school or were you a non-school leaver?
- If you were a non-school leaver what age were you when you commenced (20-30, 30-40, 40-50 etc)?
- Have other members of your family attended university?
- Can you describe your experience starting uni and going through your degree?
- Can you tell me about the programs or initiatives your university offered to assist students to complete their degrees? Did you engage with the Indigenous centre/unit?
- What could have been improved? Were there cultural aspects that were included/could be improved?
- Can you talk about the reasons you left studying at university?
- What were the challenges and tensions in your decision making to leave studying?
- Do you plan on returning to study? If so, would you like to talk to someone about the process?
- If you didn't return to study, what did you do next?
- What resources or support do you think may have helped you to complete your degree?
- How did COVID-19 have an impact on your studies (if relevant)?
- How can universities better support Indigenous student to complete degrees?
- Are there any areas/ issues regarding your experiences that we haven't talked about and you feel you'd like to discuss?

Appendix 2: Enrolment trends

Age

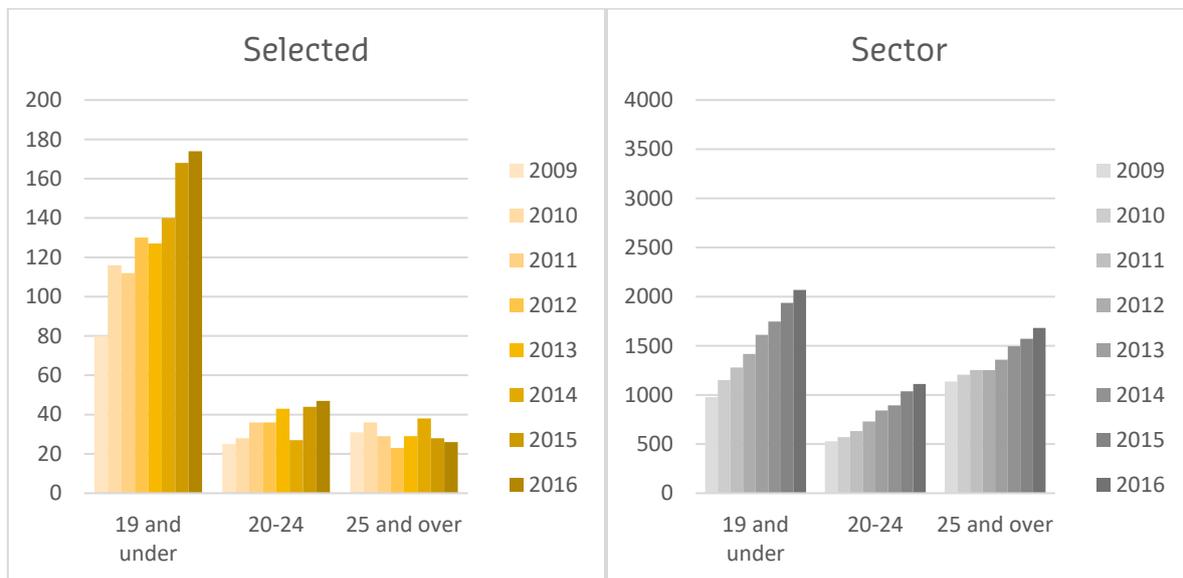


Figure 24. Commencing students by age category

Basis of admission

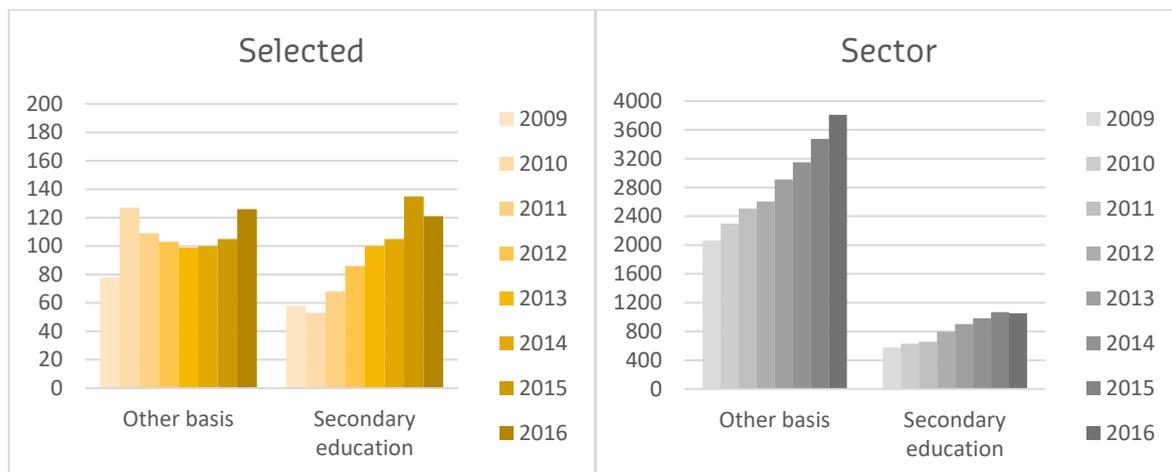


Figure 25. Commencing students by basis of admission category

ATAR

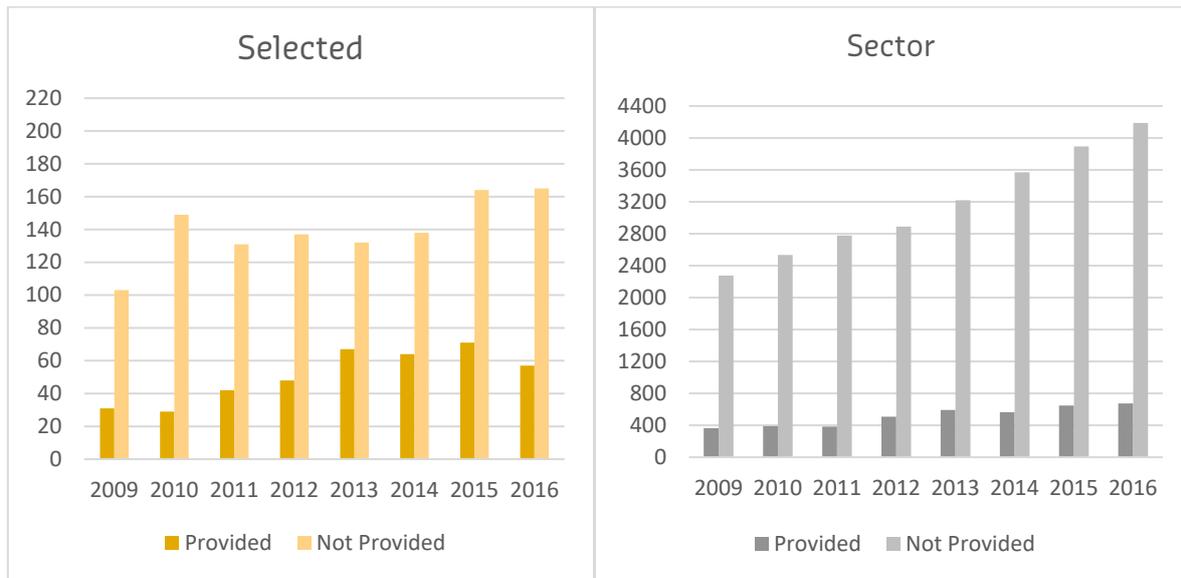


Figure 26. Commencing students by provision of ATAR

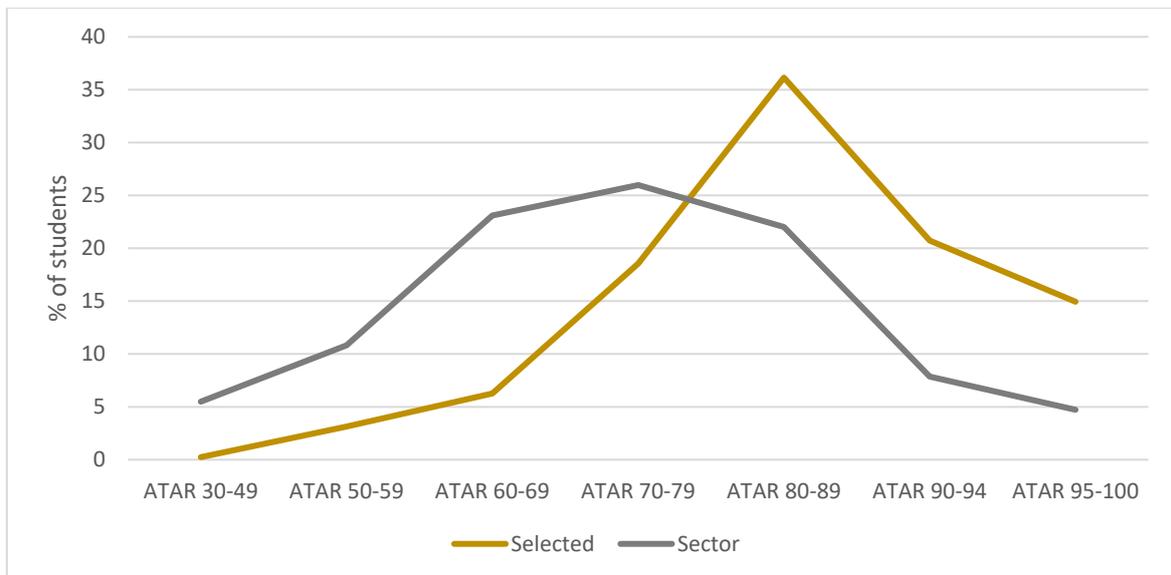


Figure 27¹⁰. ATAR distribution of Indigenous students

¹⁰ Two cases suppressed from either 30-49 or 60-69.

Broad field of education

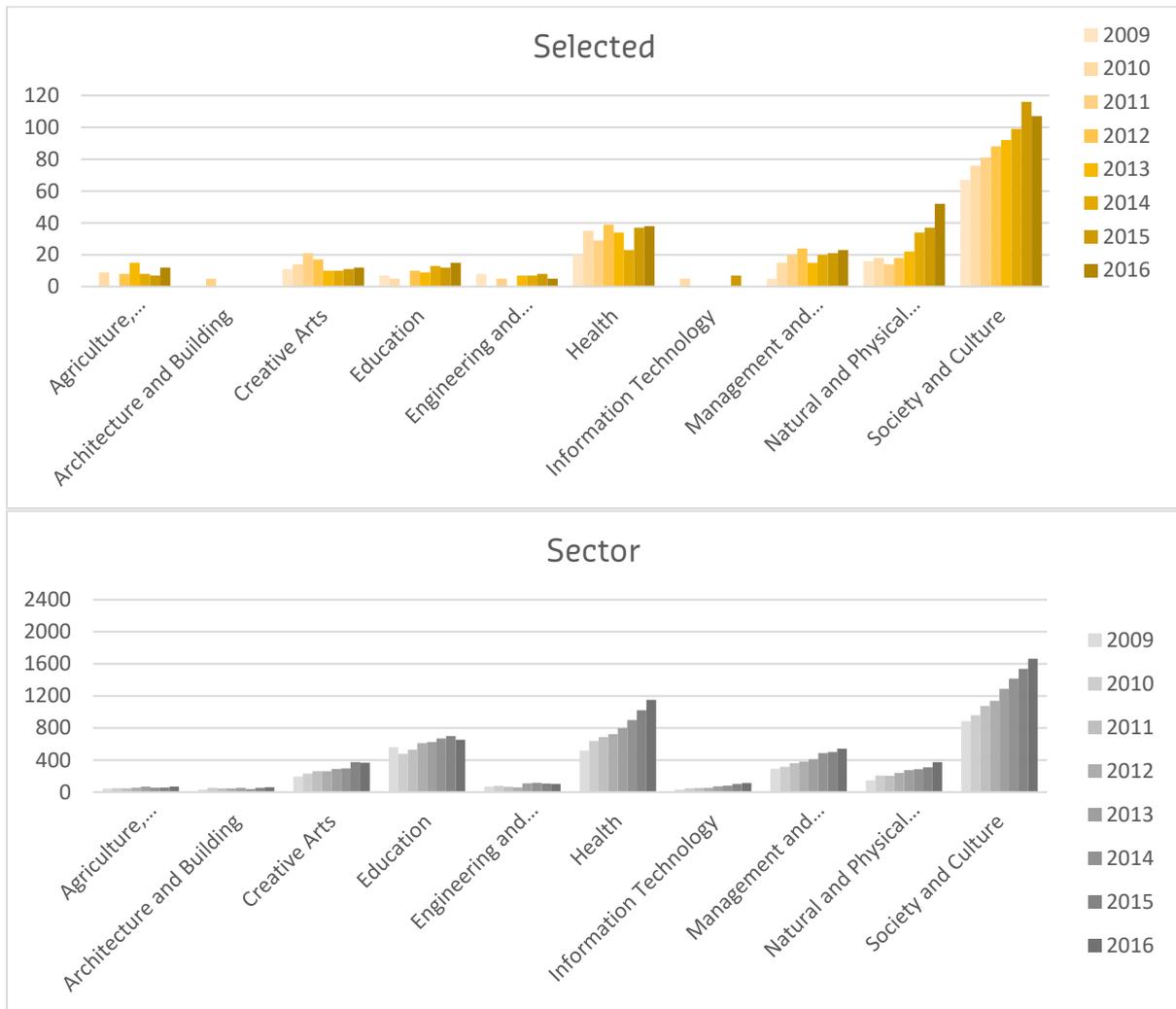


Figure 28. Commencing enrolments by broad field of education

Course level

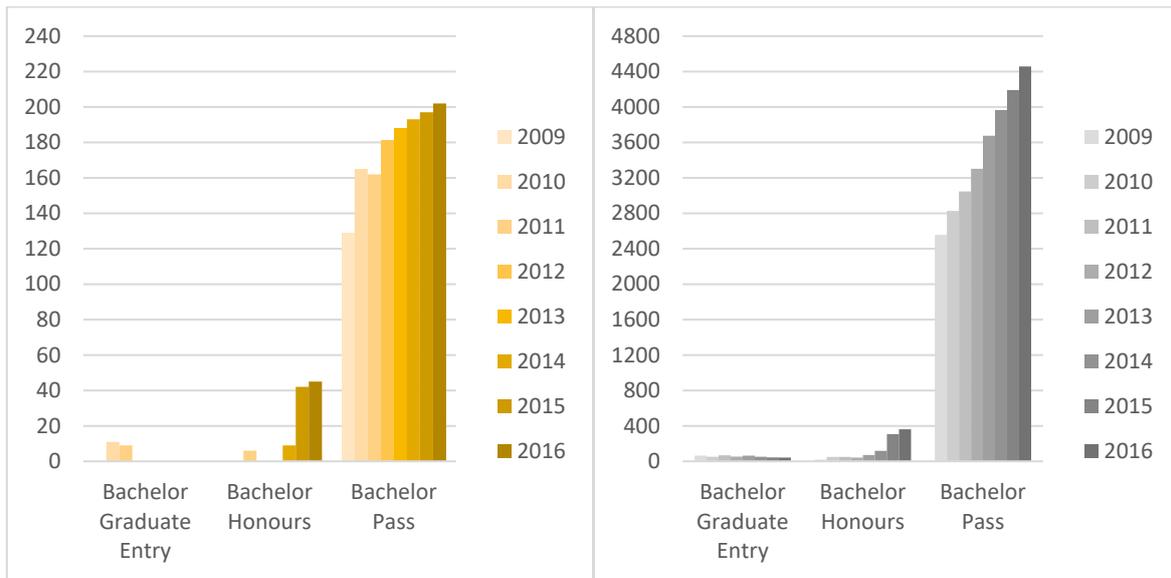


Figure 29. Commencing students by course level

Gender

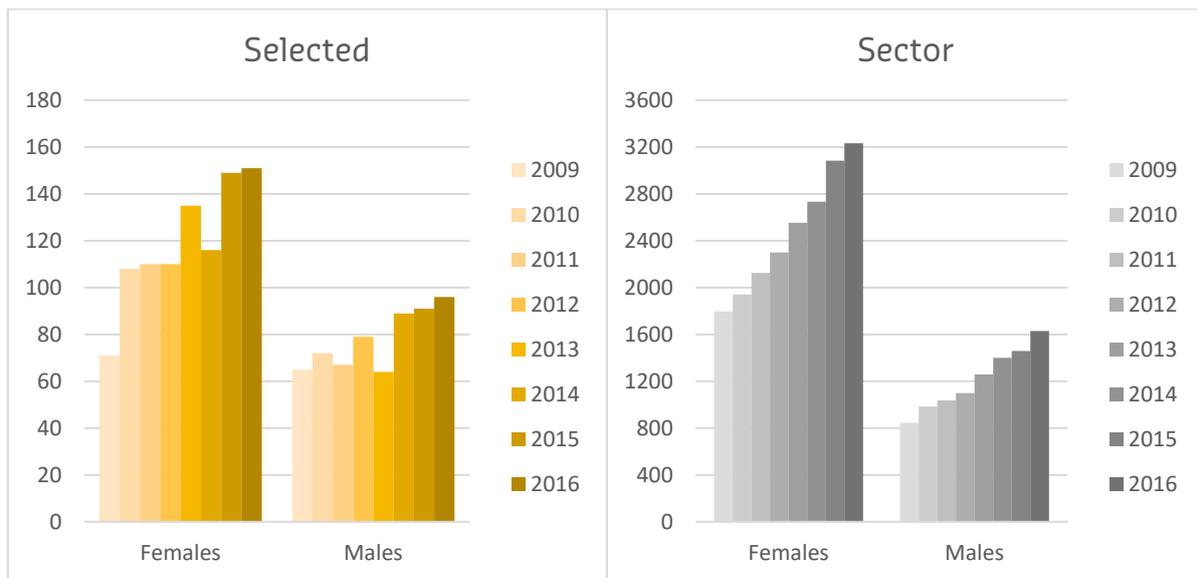


Figure 30. Commencing students by gender

Mode of attendance

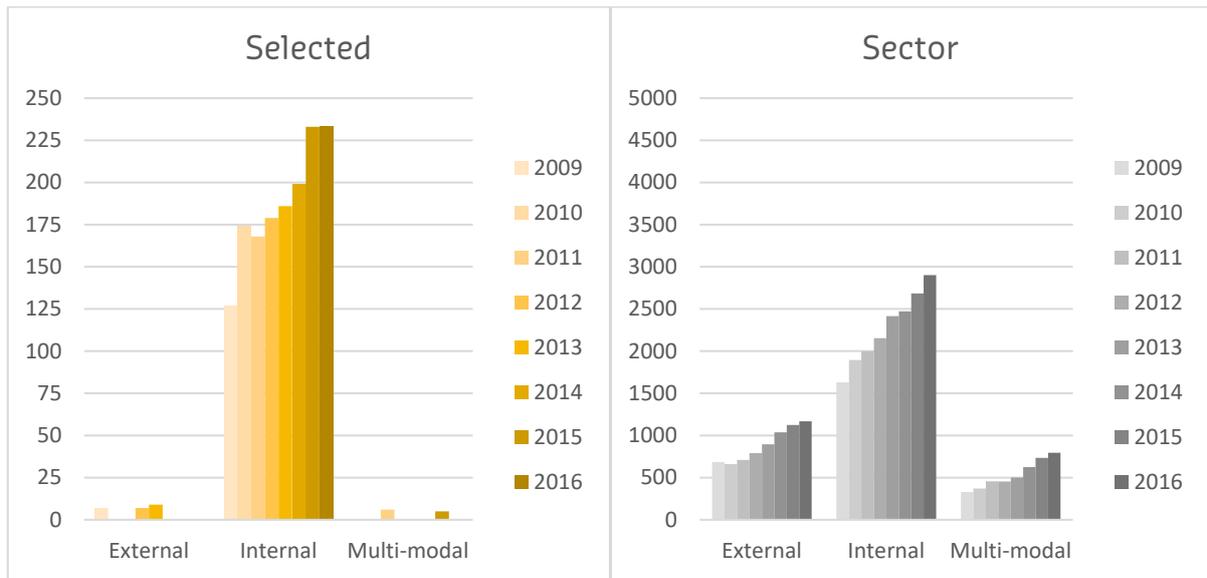


Figure 31. Commencing students by mode of attendance

Type of attendance

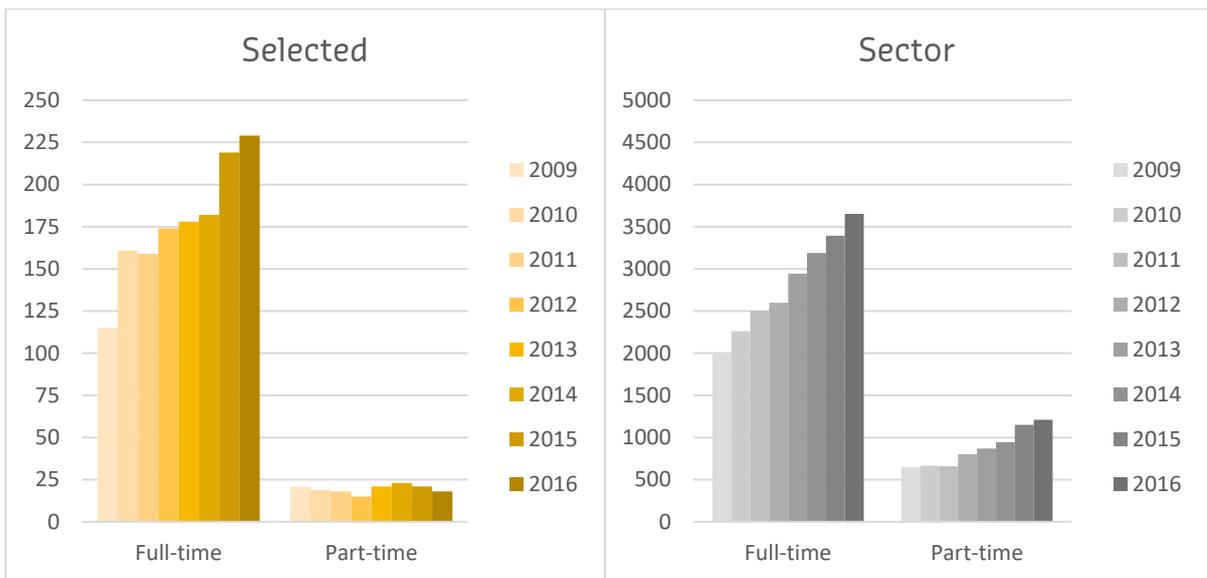


Figure 32. Commencing students by type of attendance

Commonwealth scholarship indicator

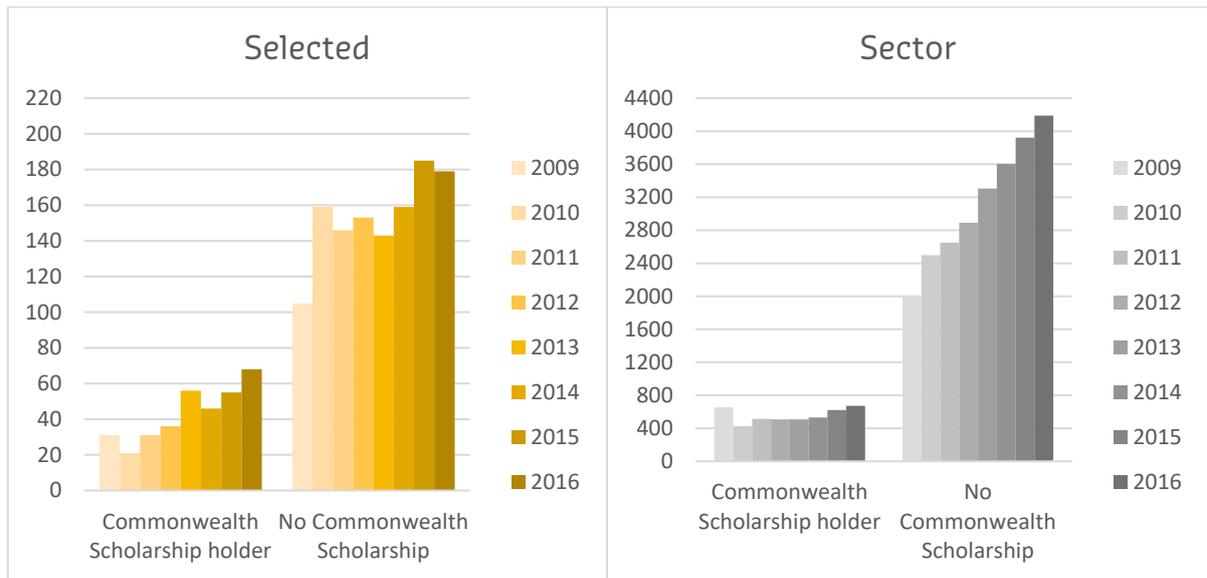


Figure 33. Commencing students by Commonwealth scholarship indicator

Regional classification

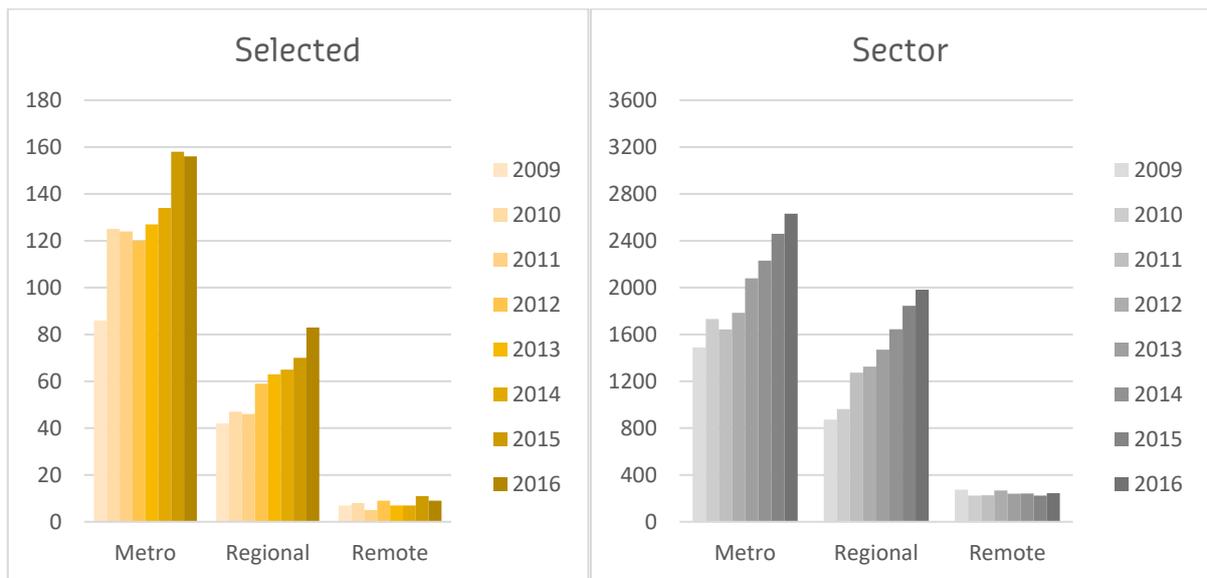


Figure 34. Commencing students by regional classification

Socioeconomic status

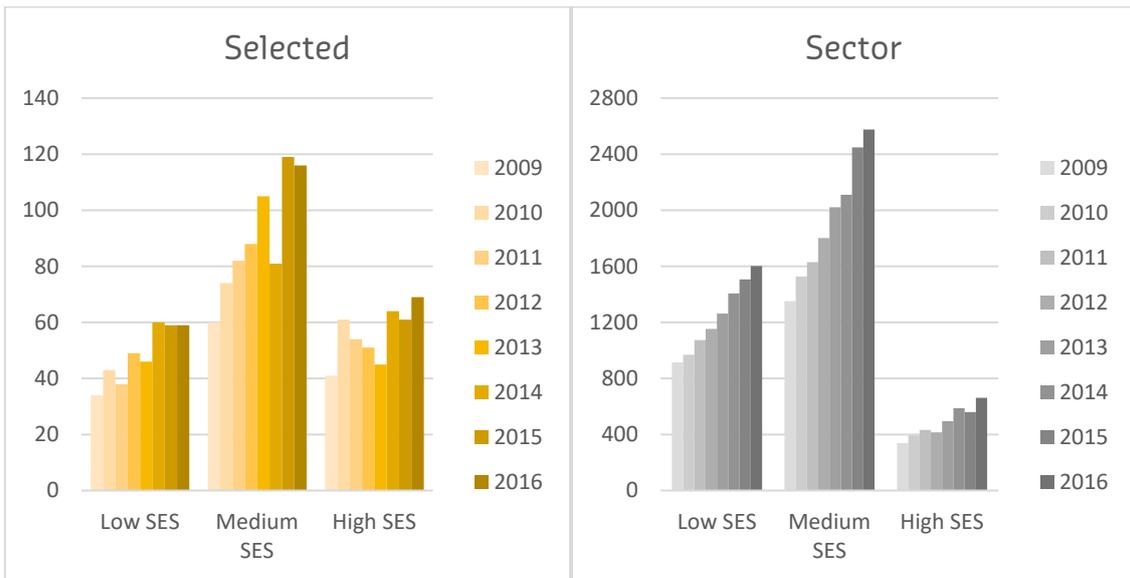


Figure 35. Commencing students by socioeconomic status

Appendix 3: Cohort completions

Table 6. Indigenous student award completions at selected universities

Cohort	Size	4 years	6 years	9 years	Total Completions	Percentage completed (at latest observation point)
2009	136	50	80	93	93	68.4
2010	180	59	107	123	123	68.3
2011	177	53	95	111	111	62.7
2012	189	88	125		125	66.1
2013	199	82	124		124	62.3
2014	205	73	119		119	58.0
2015	240	88			88	36.7
2016	247	98			98	39.7

Appendix 4: Completion rates

Table 7. Completion rates at four, six and nine years

	Selected			Sector			All		
National Total (Domestic students)	4	6	9	4	6	9	4	6	9
National total (Domestic students)	32.86	57.20	66.33	26.31	40.45	47.66	45.27	65.97	73.02
	Selected			Sector			All		
Course Level	4	6	9	4	6	9	4	6	9
Bachelor graduate entry	56.52	82.61	86.96	51.91	62.84	67.76	69.16	78.68	81.82
Bachelor honours	71.43	85.71	85.71	62.71	70.34	74.58	74.64	84.03	87.18
Bachelor pass	30.48	55.04	64.69	25.24	39.55	46.84	44.05	65.26	72.49
	Selected			Sector			All		
Mode of Attendance	4	6	9	4	6	9	4	6	9
Internal	33.69	58.21	66.74	29.43	45.80	53.82	47.12	68.94	75.77
External	15.38	30.77	46.15	17.14	27.56	33.74	25.86	39.25	48.73
Multi-modal	18.18	45.45	72.73	27.71	37.84	42.94	49.45	66.25	72.60
	Selected			Sector			All		
Type of Attendance	4	6	9	4	6	9	4	6	9
Full-time	35.40	60.69	69.43	30.22	45.56	52.43	49.45	71.03	77.55
Part-time	13.79	31.03	43.10	12.92	22.96	31.32	22.73	38.67	48.59
	Selected			Sector			All		
Gender	4	6	9	4	6	9	4	6	9
Males	31.37	54.90	64.71	23.31	38.03	45.67	40.73	62.81	70.56
Females	33.91	58.82	67.47	27.77	41.64	48.63	48.40	68.14	74.72
	Selected			Sector			All		
Age	4	6	9	4	6	9	4	6	9
19 and under	29.22	57.47	67.53	27.68	46.96	56.44	45.98	71.76	79.36
20-24	49.44	65.17	73.03	28.38	42.08	48.09	50.79	64.15	69.61
25 and over	29.17	48.96	56.25	24.01	33.50	39.12	37.24	50.38	57.47
	Selected			Sector			All		
Basis for Admission	4	6	9	4	6	9	4	6	9
Other basis	33.44	53.82	63.06	25.52	38.06	44.55	45.48	61.08	67.43
Secondary education	31.84	63.13	72.07	29.20	49.28	59.10	45.05	71.04	78.82
	Selected			Sector			All		
ATAR	4	6	9	4	6	9	4	6	9
ATAR 60-69	0	28.57	42.86	21.92	36.54	46.54	35.80	55.87	64.57
ATAR 70-79	32.00	64.00	68.00	30.59	52.30	62.17	41.32	64.90	73.35
ATAR 80-89	40.54	70.27	83.78	33.20	62.45	75.10	48.00	75.19	83.55
ATAR 90-94	38.10	80.95	85.71	44.55	73.64	84.55	52.03	83.01	90.64
ATAR 95-100	21.05	78.95	94.74	46.00	82.00	98.00	49.41	87.00	94.22
ATAR not provided or not required	33.16	53.79	62.66	25.84	38.68	45.44	45.41	62.02	68.45

	SELECTED			SECTOR			ALL		
COMMONWEALTH SCHOLARSHIP INDICATOR	4	6	9	4	6	9	4	6	9
Commonwealth scholarship holder	37.35	53.01	61.45	28.42	41.41	48.37	0.00	0.00	0.00
No Commonwealth scholarship	31.95	58.05	67.32	25.84	40.24	47.50	0.00	0.00	0.00
	SELECTED			SECTOR			ALL		
SOCIOECONOMIC STATUS	4	6	9	4	6	9	4	6	9
Low SES	30.43	56.52	63.48	25.40	37.88	44.37	41.85	60.57	67.70
Medium SES	32.87	56.94	68.06	25.90	40.30	47.77	44.70	64.86	71.81
High SES	35.26	57.05	65.38	30.21	47.30	55.11	47.92	70.53	77.74
	Selected			Sector			All		
Regional Classification	4	6	9	4	6	9	4	6	9
Metro	32.47	57.07	65.67	27.51	42.96	50.46	45.68	66.89	74.07
Regional	37.37	60.20	70.00	26.39	39.38	46.29	43.95	62.73	69.38
Remote	9.97	38.62	53.16	18.43	28.73	35.27	35.36	54.35	60.70
	Selected			Sector			All		
Broad Field of Education	4	6	9	4	6	9	4	6	9
Natural and Physical Sciences	41.67	66.67	81.25	26.93	43.45	55.48	47.55	69.85	77.94
Information Technology	20.00	40.00	50.00	19.55	29.32	39.85	37.98	57.23	64.55
Engineering and Related Technologies	29.41	52.94	70.59	19.25	47.42	60.56	25.03	63.12	75.06
Architecture and Building	40.00	60.00	70.00	28.15	48.89	62.96	44.05	68.57	75.49
Agriculture, Environmental and Related Studies	25.93	51.85	74.07	23.24	37.32	46.48	42.10	60.49	68.35
Health	42.86	67.86	78.57	29.91	45.49	52.66	54.63	74.62	80.01
Education	37.50	62.50	62.50	26.91	40.88	46.56	43.09	61.98	68.13
Management and Commerce	32.50	62.50	70.00	24.54	36.91	43.51	43.73	66.38	73.05
Society and Culture	28.13	54.91	61.16	22.04	35.66	42.81	39.35	62.60	70.79
Creative Arts	30.43	54.35	56.52	36.20	48.47	53.58	52.23	68.76	74.60

Appendix 5: Completion rate increase (4-6 years, 6-9 years)

Table 8. Completion rates in periods between four, six and nine years

	Selected		Sector		All	
National Total (Domestic students)	4 -> 6	6 -> 9	4 -> 6	6 -> 9	4 -> 6	6 -> 9
National total (Domestic students)	24.34	9.13	14.14	7.21	20.70	7.05
	Selected		Sector		All	
Course Level	4 -> 6	6 -> 9	4 -> 6	6 -> 9	4 -> 6	6 -> 9
Bachelor graduate entry	26.09	4.35	10.93	4.92	9.52	3.14
Bachelor honours	14.28	0.00	7.63	4.24	9.39	3.15
Bachelor pass	24.56	9.65	14.31	7.29	21.21	7.23
	Selected		Sector		All	
Mode of Attendance	4 -> 6	6 -> 9	4 -> 6	6 -> 9	4 -> 6	6 -> 9
Internal	24.52	8.53	16.37	8.02	21.81	6.84
External	15.39	15.38	10.42	6.18	13.39	9.49
Multi-modal	27.27	27.28	10.13	5.10	16.81	6.34
	Selected		Sector		All	
Type of Attendance	4 -> 6	6 -> 9	4 -> 6	6 -> 9	4 -> 6	6 -> 9
Full-time	25.29	8.74	15.34	6.87	21.58	6.52
Part-time	17.24	12.07	10.04	8.36	15.95	9.92
	Selected		Sector		All	
Gender	4 -> 6	6 -> 9	4 -> 6	6 -> 9	4 -> 6	6 -> 9
Males	23.53	9.81	14.72	7.64	22.09	7.75
Females	24.91	8.65	13.87	6.99	19.74	6.57
	Selected		Sector		All	
Age	4 -> 6	6 -> 9	4 -> 6	6 -> 9	4 -> 6	6 -> 9
19 and under	28.25	10.06	19.28	9.48	25.78	7.60
20-24	15.73	7.86	13.70	6.01	13.36	5.46
25 and over	19.79	7.29	9.49	5.62	13.14	7.09
	Selected		Sector		All	
Basis for Admission	4 -> 6	6 -> 9	4 -> 6	6 -> 9	4 -> 6	6 -> 9
Other basis	20.38	9.24	12.54	6.49	15.60	6.35
Secondary education	31.29	8.94	20.08	9.82	25.99	7.79
	Selected		Sector		All	
ATAR	4 -> 6	6 -> 9	4 -> 6	6 -> 9	4 -> 6	6 -> 9
ATAR 60-69	28.57	14.29	14.62	10.00	20.07	8.70
ATAR 70-79	32.00	4.00	21.71	9.87	23.57	8.45
ATAR 80-89	29.73	13.51	29.25	12.65	27.19	8.36
ATAR 90-94	42.85	4.76	29.09	10.91	30.98	7.63
ATAR 95-100	57.90	15.79	36.00	16.00	37.59	7.22
ATAR not provided or not required	20.63	8.87	12.84	6.76	16.61	6.42

	SELECTED		SECTOR		ALL	
COMMONWEALTH SCHOLARSHIP INDICATOR	4 -> 6	6 -> 9	4 -> 6	6 -> 9	4 -> 6	6 -> 9
Commonwealth scholarship holder	15.66	8.44	12.99	6.96	0.00	0.00
No Commonwealth scholarship	26.10	9.27	14.40	7.26	0.00	0.00
	Selected		Sector		All	
Socioeconomic Status	4 -> 6	6 -> 9	4 -> 6	6 -> 9	4 -> 6	6 -> 9
Low SES	26.09	6.96	12.48	6.49	18.73	7.12
Medium SES	24.07	11.12	14.40	7.47	20.16	6.95
High SES	21.79	8.33	17.09	7.81	22.61	7.21
	Selected		Sector		All	
Regional Classification	4 -> 6	6 -> 9	4 -> 6	6 -> 9	4 -> 6	6 -> 9
Metro	24.60	8.60	15.45	7.50	21.21	7.18
Regional	22.83	9.80	12.99	6.91	18.78	6.65
Remote	28.65	14.54	10.30	6.54	18.99	6.35
	Selected		Sector		All	
Broad Field of Education	4 -> 6	6 -> 9	4 -> 6	6 -> 9	4 -> 6	6 -> 9
Natural and Physical Sciences	25.00	14.58	16.52	12.03	22.30	8.09
Information Technology	20.00	10.00	9.77	10.53	19.25	7.32
Engineering and Related Technologies	23.53	17.65	28.17	13.14	38.09	11.94
Architecture and Building	20.00	10.00	20.74	14.07	24.53	6.92
Agriculture, Environmental and Related	25.92	22.22	14.08	9.16	18.39	7.86
Health	25.00	10.71	15.58	7.17	19.99	5.39
Education	25.00	0.00	13.97	5.68	18.89	6.14
Management and Commerce	30.00	7.50	12.37	6.60	22.65	6.67
Society and Culture	26.78	6.25	13.62	7.15	23.25	8.19
Creative Arts	23.92	2.17	12.27	5.11	16.53	5.83

Appendix 6: Completion trajectories at selected universities

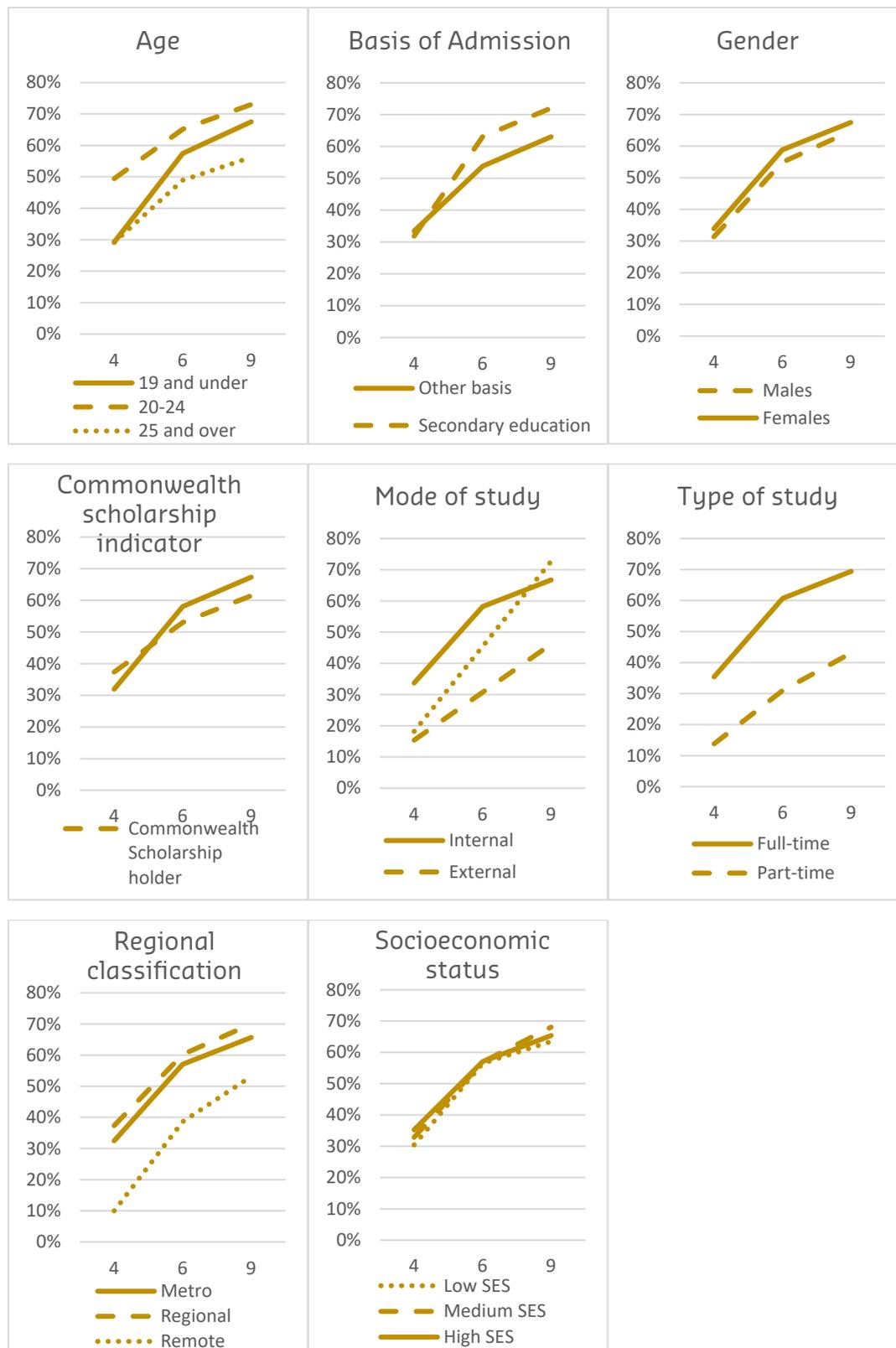


Figure 36. Completion trajectories at selected universities by DESE category