



Australian Government
Department of Education and Training

Improving retention, completion and success in higher education

Higher Education Standards Panel
Discussion Paper, June 2017



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The document must be attributed as *Improving retention, completion and success in higher education*.

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Introduction

In November 2016 the Minister for Education and Training, Senator Simon Birmingham asked the Higher Education Standards Panel (the Panel) to examine:

- the trends and factors driving completions and attrition
- the adequacy of existing data on completions and attrition and improvements that can enhance transparency and institutional accountability
- strategies institutions can pursue to support student success and course completion in higher education
- ways in which the identification of students at risk of non-completion, and the adoption of evidence-based support strategies to maximise their opportunity to succeed, can be systematically embedded in provider practice.

There have been claims that there is a crisis in attrition rates in Australian higher education. In September 2016, following the release of 2015 student data by the Department of Education and Training (the department), media reports stated that high attrition rates are symptomatic of poor admission standards; the lower a student's Australian Tertiary Admission Rank (ATAR) the greater the risk of non-completion; and as a result of the demand driven system, higher student numbers are leading to greater numbers of student drop-outs.

The facts do not support these assertions.

There is a long history of concern about higher education student attrition and the factors driving it. Since the 1950s, when the Australian Government claimed a role in higher education funding, there have been numerous reviews and various recommendations into how to support students in the completion of their degrees. It appears the key turning point in improving student completions was when students began paying a greater contribution of the cost of their course, although with support from income contingent loans.

In this century there have been fluctuations in retention - and significant variations by institution - but no clear worsening of the overall situation. The attrition rate for Australian universities in 2014 is similar to what it was in 2005, despite some movement during that period¹. The attrition rate fell from 15.04 per cent in 2005 down to a low of 12.48 per cent in 2009, before rising over the remainder of the period to 15.18 per cent in 2014.

¹ The Department of Education and Training definition is: "Attrition rate for year(x) is the proportion of students who commenced a bachelor course in year(x) who neither complete nor return to study in year(x + 1)."

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Attrition rates for non-university higher education providers (NUHEPs) are complex to measure and difficult to compare to university attrition rates. It is clear that students at NUHEPs have higher attrition rates and lower completion rates compared to Table A and B universities. However, their record is improving. The normal attrition rate for NUHEPs in 2007 was 35.90 per cent and this has dropped to 26.20 per cent in 2014. The completion gap between universities and NUHEPs has slightly narrowed.

It could be argued that too many students take too long to complete their degrees or, conversely, that many students who look as though they have given up their studies later return to finish them. Certainly, many students who leave their studies in their first year return to higher education and complete their studies within nine years². Recent research by La Trobe University verified this and found a large number of students return to an institution after only one year of absence³. Nevertheless, first year attrition is very highly correlated with overall nine year completion rates. Thus it remains a useful leading indicator both of provider and student cohort performance.

It could be argued that, as increasingly happens in the vocational education sector, students may be satisfied that the courses they have undertaken give them what employers need and that it is not necessarily important that they fail to achieve certification. With respect to degrees this is not persuasive. Completion is important because only when students complete their qualifications is the learning truly portable. Without certification students and the economy as a whole are unlikely to realise the full potential impact on lifetime earnings and productivity gains that higher education offers. The nature of the investment by individuals and taxpayers alike is diminished.

So what factors influence the likelihood of student success? Recent research has found the most likely factors contributing to student attrition are part-time attendance, followed by age and academic preparation, as measured by a person's ATAR. However, these predictors are relatively weak. The La Trobe University study⁴ found much of student attrition is either unpredictable or inevitable. Common reasons cited for withdrawal are personal, including physical or mental health issues, financial pressures and other reasons often beyond institutional control. This may help to explain the relative inelasticity of national attrition data over time.

For this reason, higher education providers necessarily operate on the basis that not all students will complete their degrees and subsequently there will never be nil attrition.

² *Completion Rates of Higher Education Students - Cohort Analysis, 2005-2014*, Department of Education and Training, Canberra, viewed 19 April 2017.

https://docs.education.gov.au/system/files/doc/other/cohort_analysis_2005-2014_0.pdf.

³ Harvey, A et al 2017, *The re-recruitment of students who have withdrawn from Australian higher education*, La Trobe University.

⁴ Harvey, A et al 2017, *The re-recruitment of students who have withdrawn from Australian higher education*, La Trobe University.

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In 2016, Deputy Chief Executive of Universities Australia, Catriona Jackson wrote:

Some have assumed that growing student numbers have been to blame for growing attrition rates, and you can see this is an easy assumption to make. But if this were true, the universities that were enrolling the biggest numbers would also have the biggest drop out rates, and they don't.

What the data actually tells us is that the universities with the highest proportion of mature age and part-time students have the highest attrition rates. And that makes sense. These students are much more likely to be juggling university study with jobs, children or caring for elderly parents.

One thing that is sure is that 15 per cent attrition rate is relatively stable — it is 15 per cent now like it was 15 per cent about a decade ago. Given this has coincided with a huge influx of new students, many from disadvantaged backgrounds, keeping attrition rates pretty stable is a major achievement.

But if we are to get the rates down, we need to dig into the causes, ask who is leaving university before completing their degree and why?⁵

The Panel stands by the view expressed in its November 2016 report, *Improving the Transparency of Higher Education Admissions*, that media coverage of Australian higher education attrition in September 2016 was 'unnecessarily alarmist'. Reports misrepresented the scale of the problem, using raw attrition rates that were unadjusted for the impact of students changing courses or institutions. Nevertheless it is not appropriate to be complacent about the issue. Institutions should seek to reduce the level of non-completion. That is why the Panel, in its earlier report, recommended that further consideration should be given to assessing the factors and approaches that contribute to student success, completion and attrition rates in higher education. The Panel sees it important to interrogate the reason for attrition because it represents a lowering of the return on investment in education both for the individual student and government.

The Panel fully supports the Government's response to our earlier report:

Enrolment is only the first step in the journey to a qualification and productive employment. If we wish to maximise the economic benefits of public investment in higher education, the Government and the public also need to be assured that everything possible is being done to ensure students have the best chance of successfully completing their enrolled units, courses and qualifications⁶.

⁵ Jackson, C 2016, 'The Other Side of Attrition', *The Australian*, viewed 13 September 2016.

⁶ The Australian Government 2016, *Improving the transparency of higher education admissions Australian Government response to the report of the Higher Education Standards Panel*, https://docs.education.gov.au/system/files/doc/other/australian_government_response_to_hesp_admissions_transparency_report_0.pdf

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As indicated above, however, issues of retention, completion and success are not new. There have been countless reports and reviews conducted by government, research agencies, individual institutions and academics. Many providers have processes and strategies in place to assist students to complete their qualifications. These can include detailed and resource intensive interventions designed to identify students at risk of attrition or non-completion and provide the support necessary to assess their risks. Retention – the flipside of attrition – is a key element of those strategies.

The first part of this discussion paper provides a snapshot of the extensive work to date on retention, completion and success. It outlines some recent changes announced as part of the 2017-18 Budget, which have the potential to improve completion rates and reduce attrition rates, and it provides an analysis of the relevant trends and data. The second part of the paper examines how higher education providers and government are supporting students to make the right choices about their higher education and how students are being supported to remain in higher education once enrolled.

The paper reflects on the views of stakeholders who provided the Panel with feedback on retention, completion and success through their submissions to the 2016 work on admissions transparency, as well as the experience of a number of providers the department met with in the course of developing this paper.

The Panel is using this paper to pose a number of questions and flag new ideas for further discussion with Australia's higher education community. Written submissions are invited and the Panel will be conducting targeted hearings to understand, first-hand, stakeholders' thoughts on issues relating to student retention, completion and success.

Questions to guide discussion

Setting expectations of completion

1. What should be the sector's expectations of completion rates (or speed of completion)?

Enhancing transparency

2. What changes to data collection are necessary to enhance transparency and accountability in relation to student retention, completion and success?
3. How could Government websites, such as QILT and Study Assist, be improved to assist students to make the right choices? For instance, how could student success, completions, retention and attrition data be made more accessible? Would a predictor for prospective students, such as a completions calculator, be useful and where would it best be situated?
4. Can we enhance the tracking of students in tertiary education including movements between higher and vocational education (perhaps by linking the Commonwealth Higher Education Student Support Number and the VET sector Unique Student Identifier)?

Supporting students to make the right choices

5. What strategies would further strengthen outreach and careers advice to assist students making decisions about higher education? (A list of strategies that have been suggested in this paper are at p66)

Supporting students to complete their studies

6. What identification, intervention and support strategies are most effective in improving student completion? (A list of strategies that have been suggested in this paper are at p66). How could support strategies be better promoted and more utilised by those students who most need them?
7. What more could be done to encourage institutions to offer intermediate qualifications? Should universities or NUHEPs recognise partial completion of a degree through the award of a diploma, perhaps by using 'nested' degree courses? How much impact would there be on institutions who chose to offer such courses?

Disseminating best practice

8. What new and innovative approaches do evaluations suggest are improving student completion at individual higher education providers?
9. What can we learn about enhancing student success from the international experience?
10. What are the most effective ways for providers to share best practice?
11. How can successful completion strategies be embedded into provider practice?

Regulating

12. What strategies should TEQSA employ to ensure compliance with the Higher Education Standards Framework which requires higher education providers to offer the level of support necessary to ensure student success? Does TEQSA require further powers in this regard?

Sixty years of concern: Previous government reviews on student attrition

The Australian Government began its support for undergraduate students in 1942 although it was limited to science and engineering and only as part of the war effort. In 1946 the Constitution Alteration (Social Services) referendum was successfully passed, giving the Government constitutional power to directly fund universities through the benefits for student's provision (section 51.XXIII A).

A recommendation of the Mills Committee (1950) was that the Government should directly fund twenty-five per cent of universities' recurrent costs. University enrolments expanded significantly in the 1950s (for example, there was a 12 per cent increase in enrolments in 1956 alone). In 1951 the Commonwealth enacted the first States Grants (Universities) Act. The Act provided for a two-tiered funding approach by the Commonwealth. The first tier or basic grant was a stated amount based on the number of full-time students - with a higher amount per student for small universities. There were further acts in 1953, 1955 and 1956 in response to financing concerns and this was the motivating factor for establishing the Murray Committee.

The Murray Review⁷ of 1957 conducted a survey of university students to estimate the total completion rates. The review found the completion rate for a four year degree started in 1951 was 57.7 per cent. It considered this high level of attrition as wastage and considered students as being wasteful if they withdrew or took longer than the shortest period to complete their course. Failing at higher education was considered to impose a cost on Australia. The review found that the reasons for individuals' inability to progress through higher education were due to inadequate preparation in school, the different learning environment in higher education, higher standards of assessment in higher education, the teaching ability of lecturers, lack of student engagement, the pace and quantum of learning and high student staff ratios.

In 1964 the Martin Review⁸ also concluded that progress rates at universities were unsatisfactory. The main reason put forward was a lack of students' academic preparedness. Concerns were raised regarding the admission of students who lacked sufficient academic ability based on their Year 11 matriculation scores. It was suggested that universities should consider setting minimum requirements on course entry based on matriculation scores and publishing these scores to inform future students of academic requirements. Up until the late 1960s any student that passed the matriculation exam was admitted to university.

⁷ Australia Committee on Australian Universities 1957, *Report of the Committee on Australian Universities* [Murray report], Government Printer, Canberra.

⁸ Committee on the Future of Tertiary Education in Australia 1964, *Tertiary education in Australia* [Martin report], Government Printer, Canberra.

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Other recommendations to improve student progress included raising teaching standards and improving examination procedures, and helping students deal with various social, intellectual and emotional issues due to participation in higher education and their personal life. It was considered that the university learning style – where students had greater responsibility for ensuring their own progression, attendance at lectures and tutorials and handing in examination material – represent a difficult adjustment for students coming directly from school, where the learning environment was more rigid and teachers were more directly involved with their students' education. The review suggested that this issue of adjustment should be addressed to improve student progress.

Toward the end of the 1970s the Williams Review⁹ found that completion rates had improved over time to around 70 per cent for the 1971 commencing cohort, suggesting a non-completion rate of 30 per cent. The review noted that a recommendation from the earlier Martin Review to publish matriculation scores and student success had still not been implemented. The review recommended examining university entry requirements, looking at ways to assist students in adjusting to the university learning environment and undertaking further work to investigate high attrition rates for part-time students.

In 1982 a review¹⁰ of student services conducted following recommendations of the Williams Review found that, while all universities had introduced a broad range of support services, their use by students was minimal. The review noted that there was still inadequate monitoring of student progress.

From 1973 to 1987, university became free for all domestic students. They paid no fees and incurred no debt. Prior to this, students were either full fee paying or (much more commonly) qualified for a Commonwealth Scholarship. This meant for most students, for example those on a Commonwealth Scholarship prior to 1973 and all students from 1973 to 1987, the cost of withdrawing was limited to income foregone.

In 1987 the Commonwealth introduced the Higher Education Administration Charge (a student contribution of \$250 in 1987 and \$263 in 1988). From 1989 onwards the public/private share of the costs of study generally shifted, with students asked to fund an increasing proportion of their subsidised higher education through income contingent student loans.

⁹ Committee of Inquiry into Education and Training 1979, *Report of the Committee of Inquiry into Education and Training: volume 1*, Australian Government Publishing Service, Canberra.

¹⁰ Roe, E, Foster, G, Moses, I, Sanker, M & Storey, P 1982, *A report on student services in tertiary education in Australia*, Tertiary Education Institute, University of Queensland, St Lucia.

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As students met an increased share of the costs of their university education, attrition rates fell. The 2002 issues paper *Higher Education at the Crossroads*¹¹ noted that the average first year attrition rate was now 22 per cent while the completion rate remained at 70 per cent. The paper acknowledged that there was no consensus on what would be an appropriate attrition rate. The paper also emphasised that there was social and economic value gained from passing units of study without completion of a qualification. The paper further noted that while many students withdrew after their first year, many returned after several years and went on to complete a qualification in another field or at another institution. A discussion on incentives to improve completions noted the risk to quality from adverse outcomes of incentives such as output measures (e.g. units passed or courses completed).

Attrition was still a cause for concern.

The 2008 Review of Australian Higher Education¹² (the Bradley Review) believed that the non-completion rate of 28 per cent indicated that improving the student experience was worthy of further attention. However, the review noted that some level of attrition should be expected and accepted. A number of drivers of attrition were identified including the availability of support from teachers and the institution, levels of student satisfaction, course content and student's personal experience and expectations. The review noted that international comparisons of completion rates showed Australia performing around the middle of the Organisation for Economic Co-operation and Development (OECD).

The 2011 Higher Education Base Funding Review¹³ stated that the combined introduction of participation targets and the impact of demand driven enrolments could lead attrition rates to rise. The review recommended funding for programs to improve quality and the student experience. The costs of attrition were described both as personal and inefficient from a public policy perspective. The review noted there were a range of personal factors and financial issues that influenced the decision to withdraw.

The 2014 Report of the National Commission of Audit identified the issue of doubtful debts through non-repayment of student loans. It repeated concerns over lowering entry standards and the commercial motivations of providers to increase enrolments.

¹¹ Nelson, B 2002, *Higher education at the crossroads: an overview paper*, Department of Education, Science and Training, Canberra.

¹² Bradley, D, Noonan, P, Nugent, H & Scales, B 2008, *Review of Australian higher education: final report* [Bradley review], Department of Education, Employment and Workplace Relations, Canberra.

¹³ Department of Education, Employment and Workplace Relations, 2011, *Higher education base funding review: final report* [Lomax-Smith Review/Base Funding Review], Department of Education, Employment and Workplace Relations, Canberra.

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David Kemp and Andrew Norton's 2014 Review of the Demand Driven System expressed concern that with the introduction of the demand driven system there was a risk that larger numbers of students enrolling in higher education would not be well prepared. Further the authors noted that this could result in higher attrition rates and consequent waste of public funds. While the review considered it too early to draw strong conclusions regarding the demand driven system, it noted that attrition rates for students with an ATAR below 50 were high and not improving. However, in later work in 2017 Andrew Norton came to the conclusion that the circumstances in which students study have a large impact and found that off-campus and part-time students have non-completion risks that are very similar to those faced by students with ATARs below 50¹⁴.

It is apparent that student attrition and the factors driving it have been of concern since the Commonwealth claimed a role in higher education funding. Substantial resources have been committed over many years to exploring ways to reduce it. The reviews consistently reported drivers of attrition to be:

- the learning environment — not just the change in learning culture from school to higher education but more importantly the mode of learning (off-site, online, part-time)
- the teaching ability of lecturers — many lecturers are not adequately trained in teaching
- lack of student engagement — student/student and student/teacher interaction
- high student staff ratios — and the availability of lecturers and tutors to students
- lack of student support – information and services
- personal factors — such as financial, social, emotional, health or other life events.

Over the years, the recommendations to reduce attrition include:

- better quality student services — course guidance, personal services, advice, emotional support and health services
- more flexible entry requirements—including diverse pathways to higher education
- improved teaching quality and teacher ability — and enhancing teacher accessibility
- a supportive university learning environment — to help students to adjust from school to university and make good career/course choices
- monitoring student progress and study support — and intervening when problems become evident
- making institutions' completion rates transparent — and holding institutions to account for student outcomes.

The Discussion Paper now examines such proposals in greater detail.

¹⁴ Norton, A, January 2017; <http://andrewnorton.net.au/2017/01/>

Implications of the 2017-18 Budget for improving student success

The Panel considers that some of the Government's 2017-18 higher education Budget measures have the potential to give students more information and choice when selecting higher education courses and to provide institutions with more incentives to support students, particularly disadvantaged students, to succeed. The Budget measures have the potential to result in lower attrition and higher completion and retention rates. Examples of these measures are detailed below.

From 1 January 2018 Commonwealth support will be available to students at public universities in approved sub-bachelor courses. This aims to provide students with more choice to select the course that is right for them and to provide more support for underprepared students to transition to bachelor-level study. This policy recognises the importance of standalone paraprofessional or technical qualifications, and the flexibility that shorter sub-bachelor courses allow in meeting workforce demand.

Students could benefit through the Budget measure to provide Commonwealth contributions to work experience in industry units that are credited towards a Commonwealth supported qualification. This removes the disincentive that currently exists for institutions to offer degrees that include work experience in industry components.

It is anticipated that regional students will be further supported through the establishment and maintenance of up to eight community-owned, regional study hubs across mainland Australia. These hubs aim to give regional students the ability to study courses locally delivered by distance from any Australian community.

Acknowledging that success and retention rates for students from low socioeconomic (SES) backgrounds remain lower than those of all domestic students, the Government hopes to give more incentives to institutions to assist less prepared students to succeed in higher education. The Higher Education Participation and Partnership Program (HEPPP) will be reformed to deliver two components – an Access and Participation Fund that involves a loading for each eligible low SES student, with performance funding for improvements in success rates of low SES and Indigenous students, and a National Priorities Pool.

From 1 January 2019, the arrangements for enabling courses will be overhauled with a fixed number of enabling places to be allocated on a cyclical basis through a three year tender process. This will identify higher education providers which achieve high standards of academic preparation and deliver high quality student outcomes, for example measured by student completion rates or student success in further study.

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Institutions will also have more incentive to improve their teaching performance with the introduction of a 7.5 per cent performance-based element to the Commonwealth Grant Scheme. The Government may make one criterion for access to this fund in the future, completion rates. It will also use this performance element to require universities to participate in a number of initiatives, including the reform of admissions information the Panel recommended in its November 2016 report. Improved data collection relating to the cost of teaching and research by field of education will support this measure and the outcomes will eventually be published on the Quality Indicators for Learning and Teaching (QILT) website. This means potential students will have access to up to date information to help them choose where and what to study.

The Government is providing the Tertiary Education Quality and Standards Agency (TEQSA) with funding to support the implementation of the Panel's admissions transparency recommendations including the development of a guidance note on admissions transparency requirements and the conduct of a baseline audit of sector compliance.

In addition, the Government has announced that the administration of the Australian Awards for University Teaching and the Office for Learning and Teaching digital repository will be transferred to Universities Australia. This means the higher education sector will be responsible for the recognition and promotion of quality teaching and learning.

Getting the facts right: the statistics of student success

The department publishes [time series data on four measures of academic progress](#) — attrition, retention, success and completion rates. This chapter provides analysis of the key findings.

Attrition and retention are different measures that look at the commencing cohort of domestic bachelor students in each year and check whether they are still enrolled for their second year of study. Attrition shows the proportion that leaves and retention shows the proportion that remains.

Success looks at the proportion of units of study passed by each commencing cohort in each year. This measure is different to the attrition and retention data in that it looks at the units rather than individual students and it measures students' success in passing units of study.

The measures of attrition and retention focus on the transition from first year to second year of study. Later year attrition is reported in the completion rate cohort analysis, which tracks the first commencing year of a student cohort over a number of years. The completion rate analysis shows that many of the students who withdraw from study later return to higher education and complete a qualification.

The data presented in this paper for analysis is based on the Commonwealth Higher Education Student Support Number (CHESSN) and is restricted to Table A and B higher education providers. The use of CHESSN allows for a straightforward method of tracking each student by a unique identifier. This will restrict the data to domestic students who incur a HELP debt. The data is further restricted to bachelor level students to exclude factors that may affect sub-bachelor and post graduate students that may not be relevant to bachelor level students. The majority of bachelor students are enrolled in Table A and B providers.

The data available from NUHEPs is limited hence the following analysis focuses on Table A and B higher education providers and excludes NUHEPs. A separate section at the end of this chapter relates to NUHEPs and Table C providers.

Attrition

There are two attrition rates published by the department, a normal attrition rate and an adjusted attrition rate. The normal attrition rate is calculated from a count of students commencing in courses and institutions in one year then comparing the number who enrol in the same course at the same institution for their second year of study. The adjusted attrition rate is able to track individuals through their CHESSN and accounts for persons changing course and/or institution. The difference between the measures is that the normal attrition rate is higher as it includes students who change course and/or institution; whereas the adjusted attrition rate only counts students as withdrawing if they leave higher education.

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The normal attrition rate has risen faster than the adjusted attrition rate from around 2006 (see Table 1). The normal attrition rate reflects a range of factors that result in course or institution changes compared to the adjusted attrition rate. A student may change course because they were not able to enrol in their first preference through a tertiary admissions centre. Or the student may find that they were not academically aligned with the demands of the course and have either taken on a more challenging or less demanding course. While it may be ideal to examine all aspects of attrition, the main focus of this paper is the attrition that results in students leaving higher education, and as such the paper is focussed on the adjusted attrition rate.

Table 1: Attrition Rate (%)	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
Normal Attrition Rate	18.86	18.50	18.92	17.80	18.06	19.00	18.94	19.45	20.84	21.01
Adjusted Attrition Rate	15.04	14.62	14.76	12.77	12.48	13.09	12.79	13.43	14.79	15.18
Difference	3.82	3.88	4.16	5.03	5.58	5.91	6.15	6.02	6.05	5.83

The attrition rate in Australia has changed little over the period from 2005 to 2014. The attrition rate fell from 15.04 per cent in 2005 down to a low of 12.48 per cent in 2009, before rising over the remainder of the period to 15.18 per cent in 2014. A breakdown by institution is shown in the Data Appendix, where there are marked differences between institutions. The data above refers to attrition at Table A and B universities. Attrition rates at NUHEPs and Table C universities are discussed in a later section.

A large number of institutions have ended the period with a lower attrition rate than in 2005, some significantly (e.g., the University of Melbourne and the University of New South Wales (UNSW)). However, there are some notable exceptions: Federation University, Swinburne University of Technology (Swinburne) and University of Tasmania have all shown significant rises in attrition rates over the last few years.

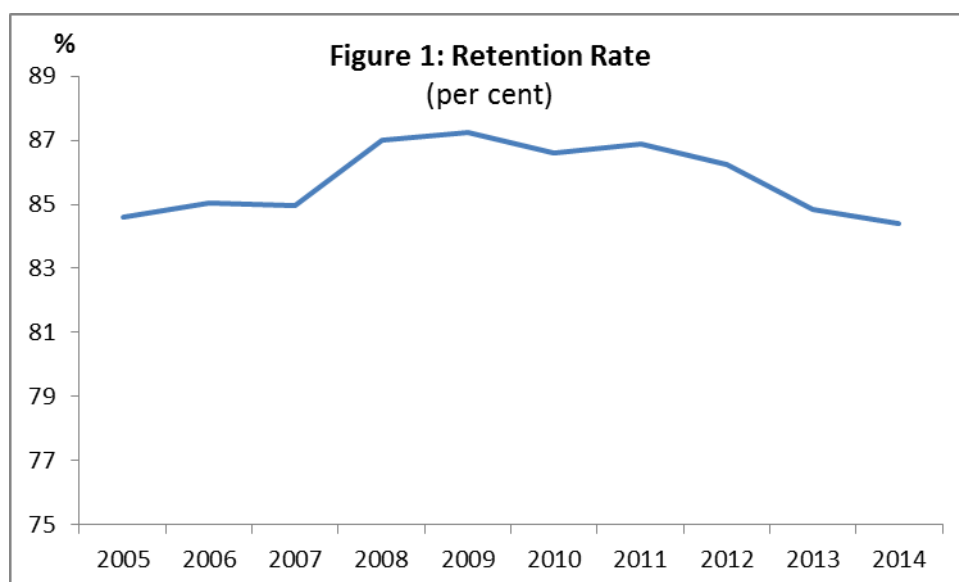
The large changes in attrition rates at Federation University, Swinburne and University of Tasmania have contributed to the recent rise in total attrition. Exclusion of these providers from the total as shown in Table 2 sees the adjusted attrition rate in 2014 drop from 15.18 per cent to 13.63 per cent. While these providers are driving part of the rise in attrition, as shown in the Data Appendix, there are a range of rising and falling attrition rates across all providers.

Table 2: Attrition Rate (%)	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
Adjusted Attrition Rate	15.04	14.62	14.76	12.77	12.48	13.09	12.79	13.43	14.79	15.18
Minus FedU, SUT & UTas	14.97	14.51	14.64	12.54	12.39	12.94	12.64	12.96	13.54	13.63
Difference	0.07	0.11	0.12	0.23	0.09	0.15	0.15	0.47	1.25	1.55

Retention

The retention rate is conceptually the opposite of attrition in that it measures the proportion of students who remain in study. As with attrition there is a normal retention rate and an adjusted retention rate. The adjusted retention rate is examined for the same reasons as the adjusted attrition rate.

The national retention rate for students rose and fell over the period from 2005 to 2014 to finish at 84.41 per cent, an overall decline of 0.19 percentage points¹⁵ (Figure 1). The retention rates of individual higher education providers show a large range of changes over the period. While some providers have increased their retention rate, (e.g. Central Queensland University), or maintained a high retention rate, (e.g. University of Melbourne, at over 95 per cent), there have been significant falls at Federation University, Swinburne and the University of Tasmania. The breakdown of retention rate by university is shown in the Data Appendix.

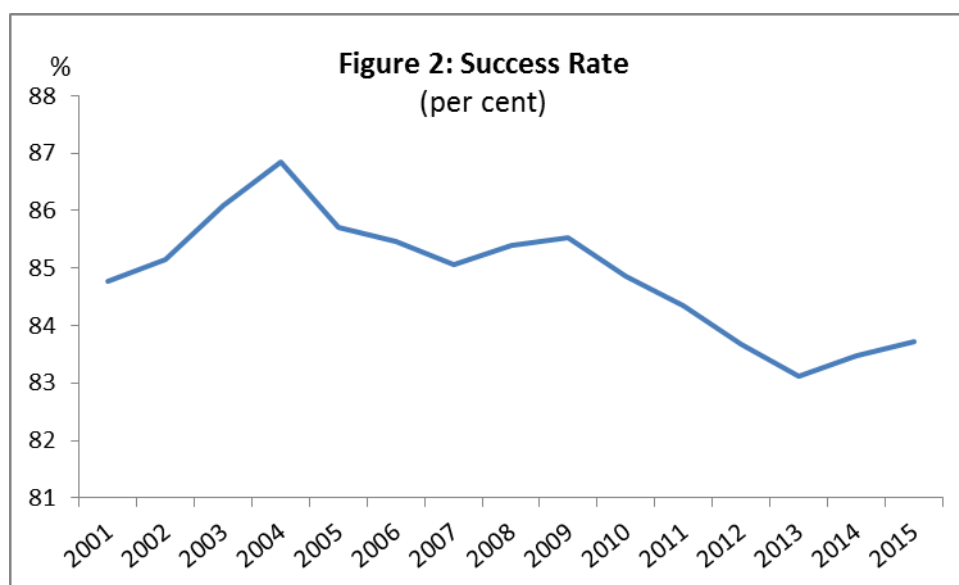


¹⁵ The Department of Education and Training definition is: “The Retention rate for year(x) is the number of students who commenced a bachelor course in year(x) and did not complete in year (x), and continued in year(x+1) (retained students), as a proportion of all students who commenced a bachelor course in year(x) and did not complete in year(x).”

Success

The success rate is a different concept to attrition and retention in that it measures units of study passed by commencing students. However, the success rate is highly correlated with the adjusted attrition rate and adjusted retention rate. This high correlation should be expected as a major factor in a student's decision to discontinue is poor academic performance.

The national success rate of students has fallen in most years from 2004, with small increases in 2014 and 2015¹⁶. The overall decline from the peak of 86.85 per cent in 2004 to 83.72 per cent in 2015 is 3.13 percentage points (Figure 2). The breakdown by university is in the Data Appendix, which shows significant volatility in success rates over time. A few universities increased their success rates (e.g. UNSW and Monash University) though the majority tended to show a minor decline over the period. There were some universities with larger declines (e.g. the University of Canberra, Murdoch University and Swinburne).



¹⁶ The Department of Education and Training definition is: "Success rate for each year is the proportion of equivalent full-time student load (EFTSL) for units of study that are passed divided by all units of study attempted (passed + failed + withdrawn)."

Attrition, success and retention

As noted earlier there is a high correlation across the measures of student progress. The institutions that performed well in one measure of student progress tended to perform well in all. The institutions with relatively low attrition rates have relatively high retention rates and success rates (e.g. the University of Melbourne and UNSW). It is important to look at why these institutions are improving and what strategies the sector can learn from them. The institutions with relatively high attrition rates have relatively low retention rates and success rates.

Further analysis at university level between the success rate in 2014 and the 2014 attrition rate (the proportion of commencing students in 2014 not proceeding to further study in 2015) shows a very high correlation at 0.79. This suggests measures to improve attrition are likely to also improve success rates and vice-versa.

Completion rate analysis

The department has been publishing cohort analysis of commencing students for years 2005 to 2009, including information on completion rates. At four years, the majority of higher education providers have a completion rate less than 50 per cent. These completion rates generally improve as the time period is extended to nine years where the completion rate rises to 73.5 per cent (see Tables 3 to 5). The reason for the improvement in completion rate is that while many students withdraw from study in early years, a large proportion return to complete a qualification.

As with the other measures of progress, the completion rates vary significantly from institution to institution (see Data Appendix). Over time the four year completion rate for Table A and B institutions declined from 47.4 per cent for the 2005-08 cohort to 45.1 per cent for the 2011-14 cohort. However, the completion rates vary significantly across institutions and have changed over time with some improving (e.g. University of Melbourne and RMIT) while others have declined (e.g. Federation University and the Australian Catholic University).

Table 3

Four Year Completion Rate (%)	2005-08	2006-09	2007-10	2008-11	2009-12	2010-13	2011-14
Total for Table A and B institutions	47.4	46.8	46.0	46.8	46.2	45.3	45.1

Table 4

Six Year Completion Rate (%)	2005-10	2006-11	2007-12	2005-10	2006-11
Total for Table A and B institutions	67.0	66.8	66.6	67.2	66.8

Table 5

Nine Year Completion Rate (%)	2005-13	2006-14
Total for Table A and B institutions	73.6	73.5

Re-engagement of students who have withdrawn from Australian higher education

Research by La Trobe University found that around half of non-completers return to higher education within eight years of their initial withdrawal, with a large number of students returning to an institution after only one year of absence¹⁷.

This study suggests that these returns occur despite little effort by institutions to encourage student re-enrolment. Providers may have significant capacity to increase enrolments from previous students through better engagement incentives and systems to support flexibility and promote re-enrolment¹⁸. Unfortunately, it appears that students who withdraw have been unlikely to complete an exit interview and not been contacted personally after their withdrawal.

This is a missed opportunity. Discussions between the Department and a number of universities and private providers confirmed that there appeared to be few concerted strategies in place to re-engage exited students, despite recognition that this was an issue warranting attention.

Non-university higher education providers and Table C providers

The NUHEPs and Table C providers have their student data combined in this section due to the close similarities between them. The NUHEPs and Table C providers differ from the Table A and B providers in a range of respects, most notably in that the composition of domestic commencing students by course level reveals a far higher proportion studying at the sub-bachelor level (see Table 6).

Table 6: Proportion of domestic commencing students by level of study (per cent)

		2007	2008	2009	2010	2011	2012	2013	2014	2015
NUHEPs & Table C	sub-bachelor	23.0	23.5	23.0	24.0	24.0	24.6	21.7	20.2	21.0
	bachelor	46.8	48.8	48.6	50.2	50.0	47.8	49.4	46.9	43.5
	postgrad	28.7	26.3	27.3	25.0	25.2	26.6	28.5	32.1	35.1
Table A&B	sub-bachelor	1.7	1.9	1.8	2.3	2.4	2.6	2.3	1.8	2.5
	bachelor	64.4	63.4	62.6	62.6	62.9	64.2	64.8	64.9	66.3
	postgrad	28.4	28.7	29.1	28.5	28.1	26.8	26.4	26.6	24.6

NUHEPs and Table C providers are generally much smaller than universities. The number of commencing domestic bachelor students at NUHEPs and Table Cs rose from 6000 in 2007 to around 14,000 in 2015 across 108 institutions. Over this period a number of new providers have started, some institutions are no longer registered, many current providers have only a handful of students and few providers have students in each year from 2007 to 2014.

¹⁷ Harvey, A et al 2017, *The re-recruitment of students who have withdrawn from Australian higher education*, La Trobe University.

¹⁸ Harvey, A et al 2017, *The re-recruitment of students who have withdrawn from Australian higher education*, La Trobe University.

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Attrition rate data for NUHEPs and Table C providers presented in Table 7 below refers to around 60 providers whose students are eligible for FEE-HELP and where those students have a CHESSN. The normal and adjusted attrition rates for NUHEPs and Table C combined are higher than for Table A and B (see Table 7). The attrition rates for NUHEPs and Table C peaked in 2009 and in 2014 are below the average for the period.

Table 7: NUHEP and Table C Attrition Rate (per cent)

	2007	2008	2009	2010	2011	2012	2013	2014
Normal	33.10	33.58	39.85	33.51	35.66	34.71	34.64	33.01
Adjusted	27.77	29.99	30.86	28.19	30.04	27.47	28.49	27.95

Looking any deeper into this data is problematic as numbers become very small. There tend to be dominant groups which overwhelm the data and make any analysis and conclusions difficult or not robust. One thing does appear to be clear: namely, that the overall levels of attrition are significantly greater than for Table A and Table B providers.

Where does Australia sit internationally?

International higher education completion rates must be compared with caution because there are a wide variety of higher education systems across the world. A very high completion rate may indicate that a country's higher education system is not flexible enough to allow students to adjust to changing personal or labour market needs by ending their study and taking other options.

Alternatively, it may also mean that courses are too easy. Similarly, completion rates may reflect admission strategies adopted by different higher education systems. Those that are highly selective in their intake might be expected to have higher completion rates. Conversely, countries which adopt a strategy of broader intake and/or a more rigorous assessment method might be expected to have lower completion rates.

According to the 2016 OECD *Education at a Glance* publication, on average across countries with true-cohort data (data on individual students), 69 per cent of students who enter a bachelor or equivalent program graduate within three years of the theoretical duration of the program¹⁹.

Meanwhile, 23 per cent of these students have left the education system and eight per cent are still in education. The United Kingdom had the highest completion rate of 84 per cent, with New Zealand and Denmark (both on 81 per cent) being the only other countries with results above 80 per cent.

In Australia, 70 per cent of new entrants in 2009 who enrolled in a bachelor degree had completed by 2014. This is around the OECD average of 69 per cent.

¹⁹ The theoretical duration of a bachelor's level or equivalent program varies across countries from 3 to 6 years, with 3 years being the most common duration. The theoretical duration for Australia is 3 years.

Factors driving completion and attrition

There have been many studies examining the factors behind student completion and attrition. In 2011, the Australian Learning and Teaching Council funded a whole of university experience investigation into factors underpinning attrition in the first, second, and third year of a business degree at six Australian universities – Griffith University, Monash University, Murdoch University, University of South Australia, University of Southern Queensland and the University of the Sunshine Coast. The research found that factors related to attrition are generally university-specific and reflect both student characteristics and their responses to the specific institutional culture and environment. The only attrition triggers which span most universities and most years of study are where students indicate a lack of clear reason for being at university and express a view that they have insufficient ability to succeed at university²⁰.

A recent study conducted by La Trobe University²¹ found that financial, personal and health-related factors are the most likely reasons for low SES background students, in particular, to feel they need to withdraw from higher education. Low SES students are also more likely to have made initial course and career choices that were less informed and therefore subject to change or cessation.

Research conducted by Federation University Australia²² examined the main factors that contributed to retention and completion of study at regional universities for students from low SES backgrounds. The research provided the context that many are mature aged people and parents who are balancing academic study with other responsibilities, such as paid employment. Many are also the first in their family to attend university, which means there is a lack of familiarity with university life and expectations of them as students. A large number of these students also experience significant financial pressure and the costs of study materials and university travel on top of the usual living expenses, such as supporting a family, often while on a reduced income. They are often required to make difficult choices about their priorities that other students do not have to make.

²⁰Willcoxson, L et al 2011, *The Whole of University Experience: Retention, attrition, learning and personal support interventions during undergraduate business studies*, Australian Learning and Teaching Council.

²¹Harvey A et al 2017, *The re-recruitment of students who have withdrawn from Australian higher education*, La Trobe University.

²²Devlin, M and McKay, J 2017, *Facilitating Success for Students from Low Socioeconomic Status Backgrounds at Regional Universities*, Federation University Australia.

Provider characteristics

Analysis conducted by TEQSA²³ identified that the following provider characteristics correlate with higher attrition at universities and at NUHEPs.

Attrition is higher at a university when:

- the university is smaller
- the university has a larger proportion of external enrolments
- the university admits a greater proportion of students on the basis of prior VET qualifications
- the proportion of postgraduate enrolments is lower
- the proportion of senior academic staff is lower.

Attrition is higher in a NUHEP when:

- the provider has a higher percentage of part-time students
- the provider has a higher proportion of students admitted on the basis of VET qualifications
- the provider has a lower percentage of full-time academic staff
- the provider has a lower percentage of senior academic staff.

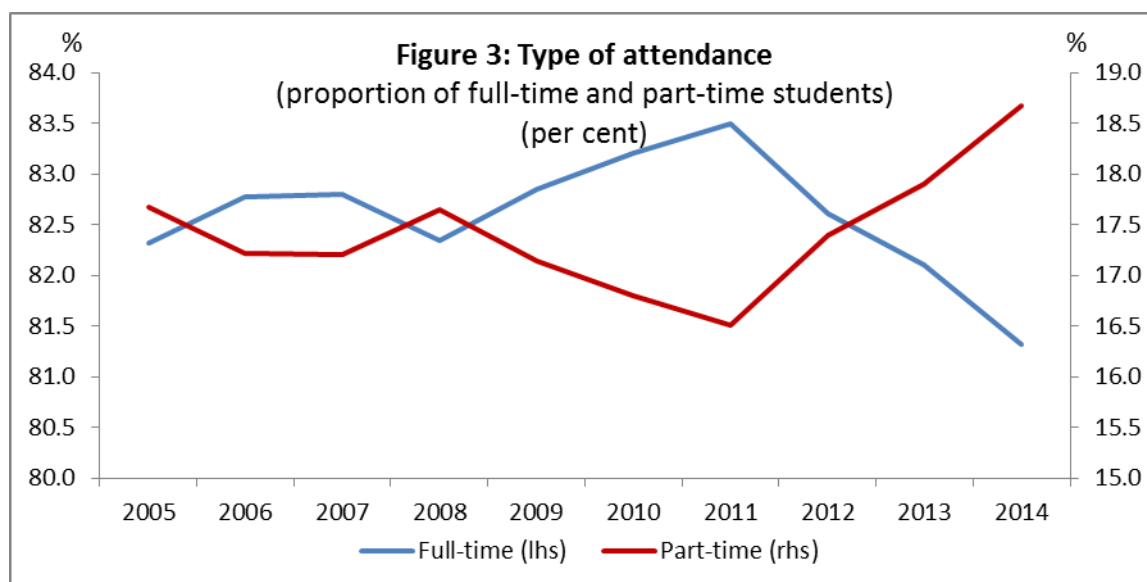
²³ Tertiary Education Quality and Standards Agency 2017, *Characteristics of Australian higher education providers and their relation to first-year student attrition*.

Factors commonly associated with attrition

Every unsuccessful student has their own personal reason for why they have withdrawn from higher education. However, a number of characteristics have been suggested to increase the likelihood that a student will not complete their degree. The following section reviews factors most commonly identified as being associated with attrition. The Panel examines the relationship between these factors and the role of institutions in influencing attrition. Relationships are apparent. However, as is made clear in a later chapter of the Discussion Paper, student characteristics turn out to explain only a small part of overall variables in student attrition.

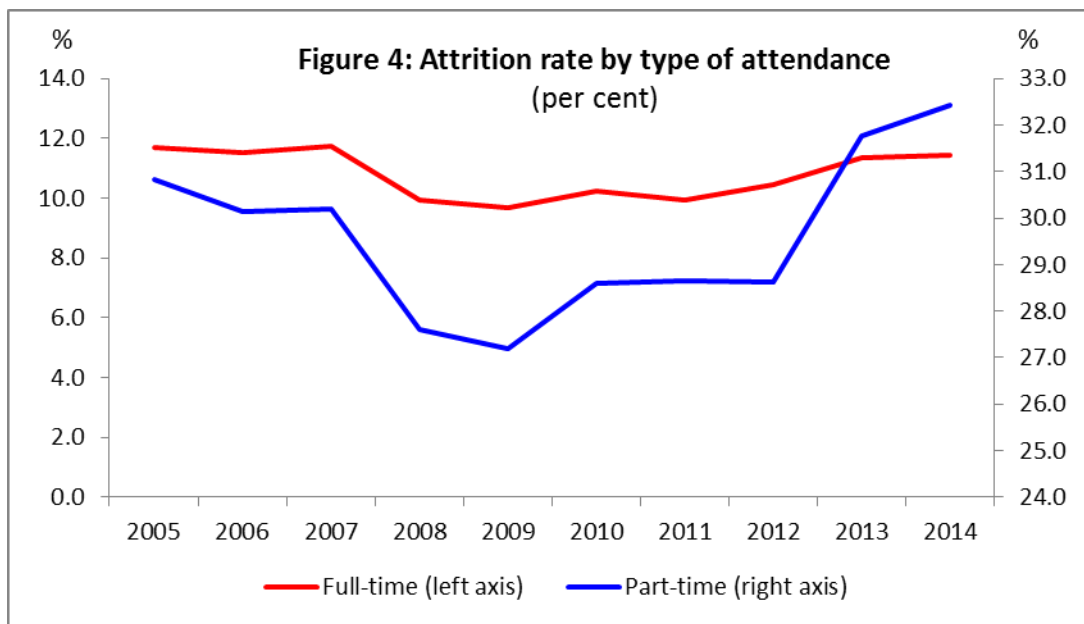
Full-time and part-time

Figure 3 sets out the proportion of full-time and part-time students. Part-time attendance has been increasing since 2011.



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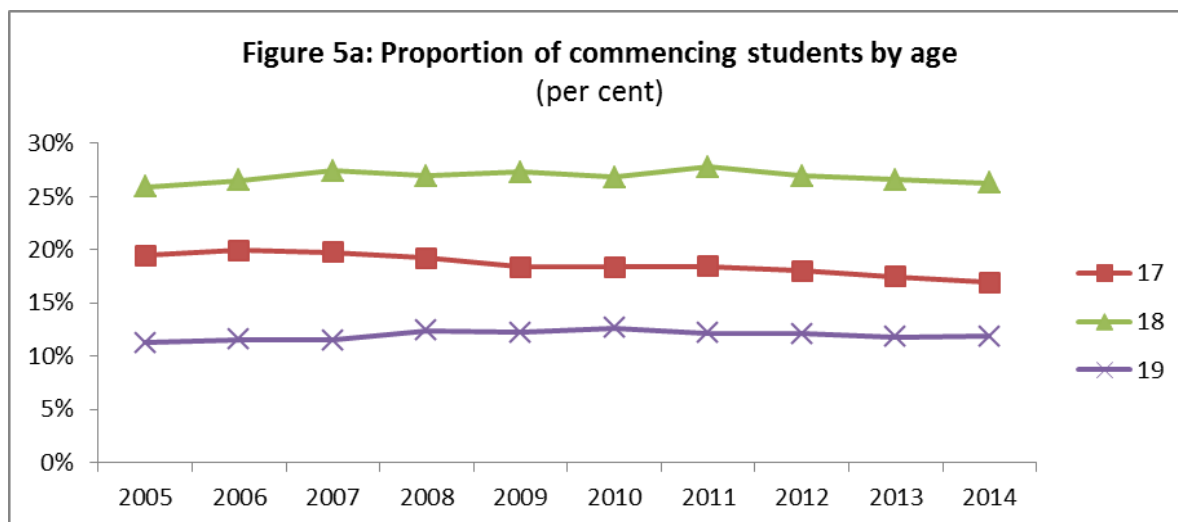
A major influence on attrition and completion rates is the type of attendance. A part-time student has the greatest likelihood of non-completion, as shown by the right hand axis in Figure 4. Looking at the data on commencing students, the proportion of part-time students declined slightly from 2005 to 2011, which shows some correlation with the decline in the attrition rate, and as the proportion of part-time students increased from 2011 there was a corresponding increase in the total attrition rate. However, over time, attrition rates of both part-time and full-time students are changing, trending down from 2005 to 2009 and upward from 2009 to 2014. The changing attrition rates for both full-time and part-time suggests other factors are driving the change in attrition rates.



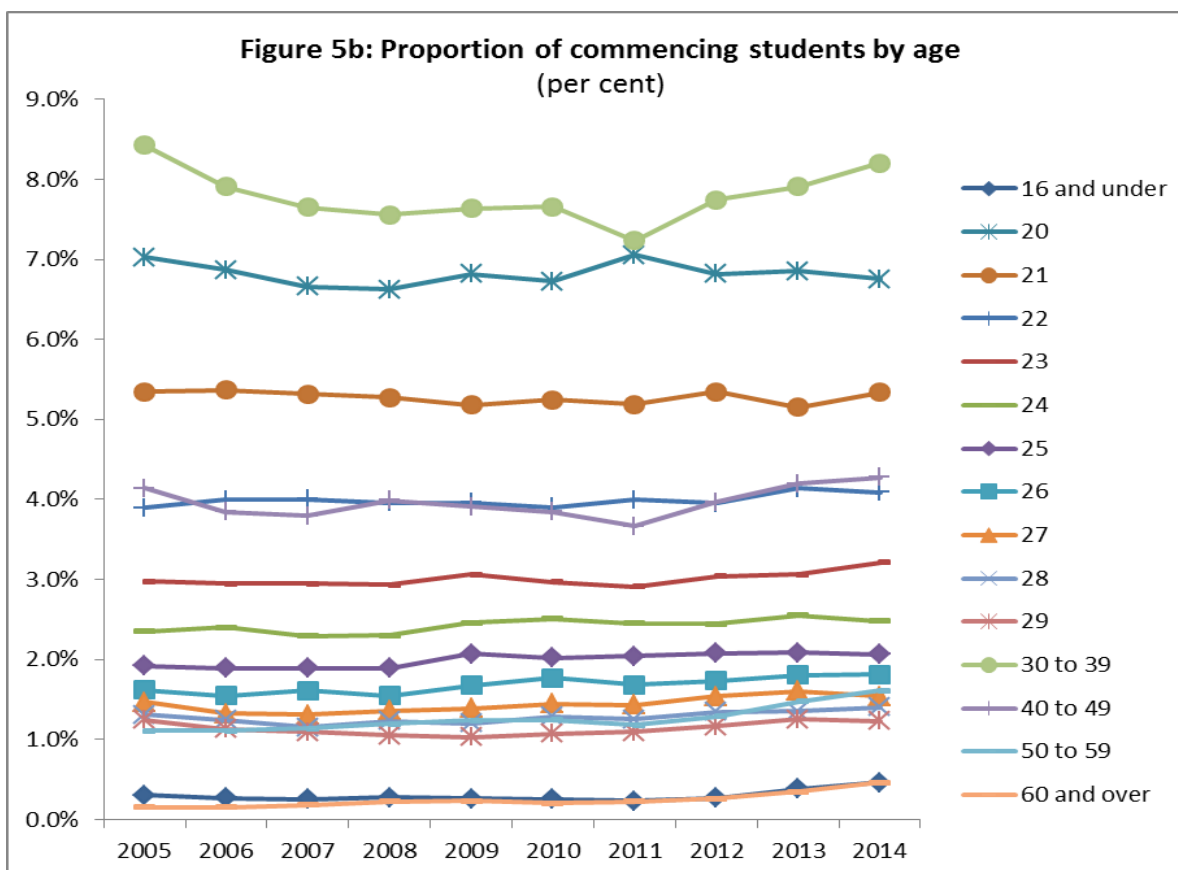
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Age and attrition

As the age of a commencing student rises, the likelihood that the student will withdraw from study increases. The age groups of commencing students are dominated by school leavers 17 to 19 years (see Figure 5a) who comprise over half of total domestic bachelor commencements.

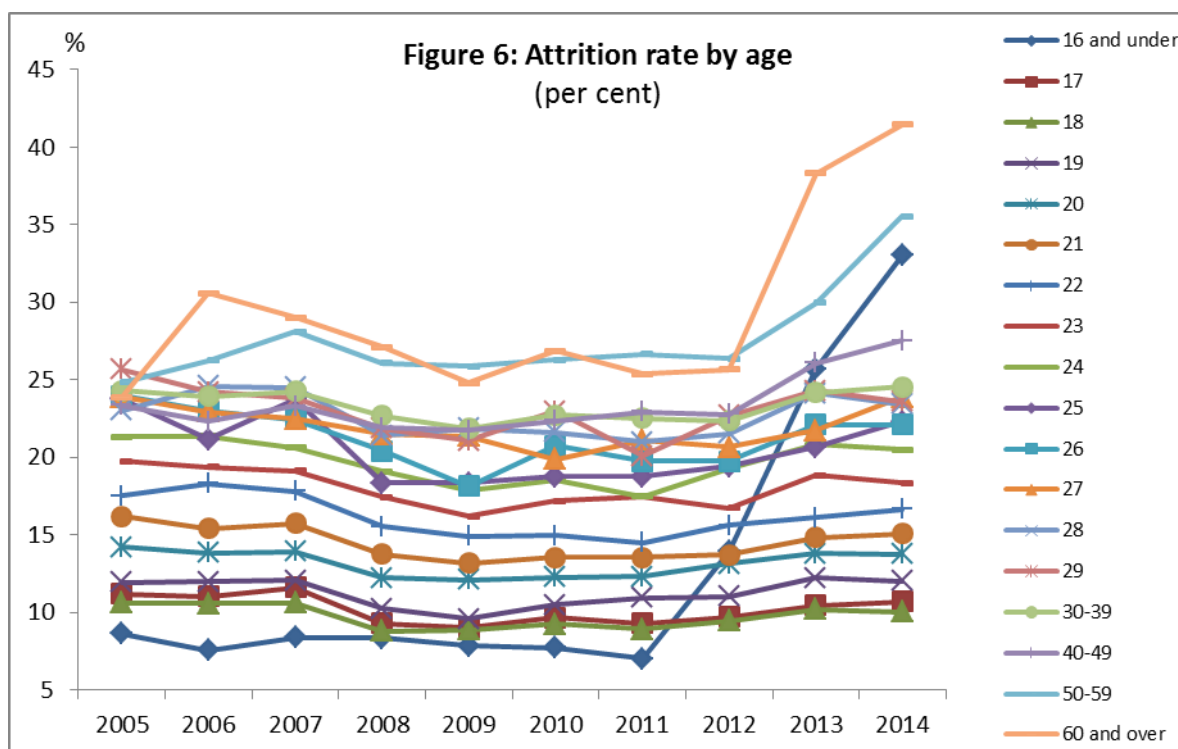


The proportion of commencing students by age shows that the majority of age groups above 30 years have decreased from 2005 to 2014 (see Figure 5b), with the exception of the 60 and over age group.



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The attrition rate by age shows a fairly strong correlation whereby the younger the student the lower the attrition rate (see Figure 6). In most age groups the attrition rate fell over the period from 2005 to 2011, then rose to 2014 (see also Data Appendix). Over the total period most age groups had a lower attrition rate in 2014 than in 2005. The main source of the rise from 2011 to 2014 appears to be from the 30-39 and 40-49 age groups, where there is a rise in the attrition rate with a corresponding rise in the proportion of commencing students. Attrition rates have increased appreciably in recent years for students aged 16 and under, 60 and over and 50 to 59. However, as the numbers of students in these cohorts are small there is a minor impact on the total attrition rate.



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ATAR

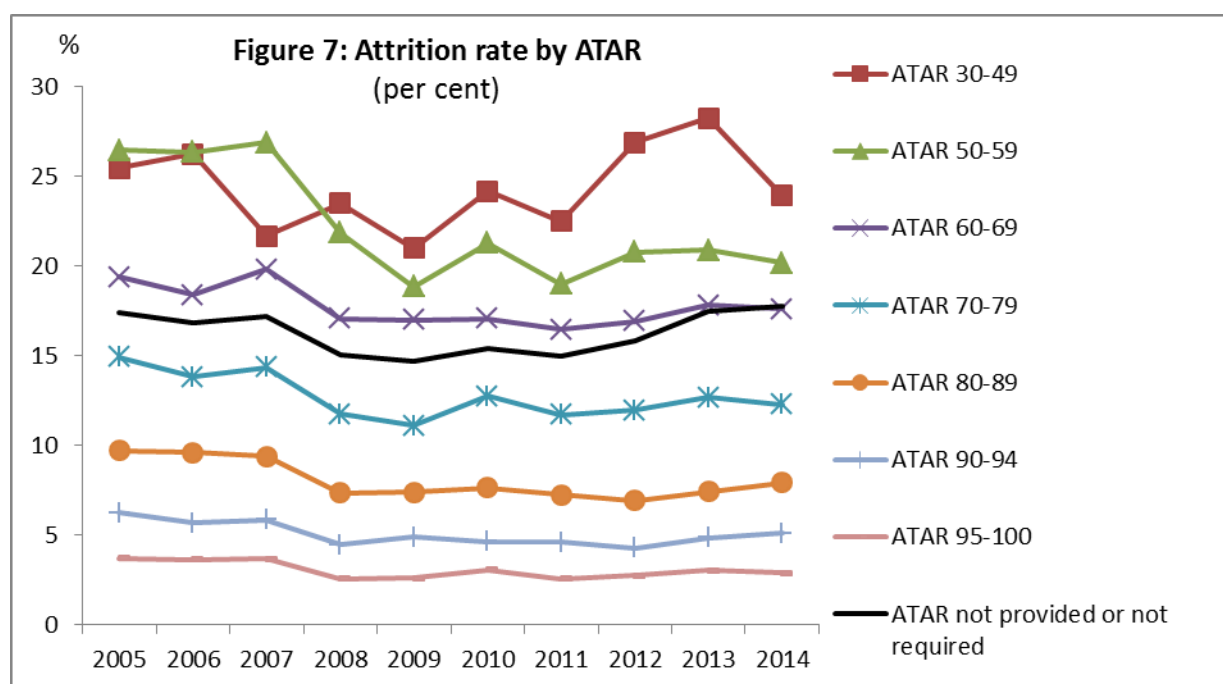
The ATAR of commencing students is another indicator of the likelihood of not completing higher education. Some care is needed when considering ATAR-related data. A student's ATAR is only recorded in the Higher Education Information System (HEIMS) when their ATAR was the primary basis of admission. Students who were admitted on another basis, for instance through a portfolio assessment, audition or principal's recommendation, are unlikely to have an ATAR recorded in HEIMS despite having been awarded a place on the basis of their school results. Some institutions, including most NUHEPs and private universities, select none of their students on the basis of their ATAR. The data on ATAR shows that while there has been growth in the proportion of students with a lower ATAR there has been a significantly larger increase in the proportion of students with no ATAR recorded (see Table 8). Any effect that lower ATAR commencing students may have had on attrition is likely to be overwhelmed by the larger number of students admitted on a basis other than ATAR.

Table 8: Proportion of Commencing Bachelor Students by ATAR

	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
30-50	1.4	1.6	1.5	1.8	1.8	1.6	2.0	2.2	2.4	2.6	2.9
51-60	2.7	3.2	3.2	3.4	3.6	3.2	3.7	4.1	4.2	4.0	3.9
61-70	6.6	7.7	7.4	7.5	7.9	7.3	7.3	7.9	7.7	7.1	6.8
71-80	11.2	10.8	11.2	11.3	11.6	10.9	10.3	10.2	9.8	8.9	8.3
81-90	14.4	13.3	13.3	13.2	12.8	12.8	12.1	12.1	11.4	10.6	9.8
91-100	13.4	12.3	12.8	12.7	12.5	12.8	12.2	11.9	11.5	10.7	10.1
ATAR not available/Not applicable	49.4	48.9	48.1	48.6	48.2	50.9	52.0	51.3	50.2	53.4	55.7
Not a commencing student	0.9	2.3	2.5	1.6	1.5	0.6	0.3	0.3	2.7	2.8	2.6

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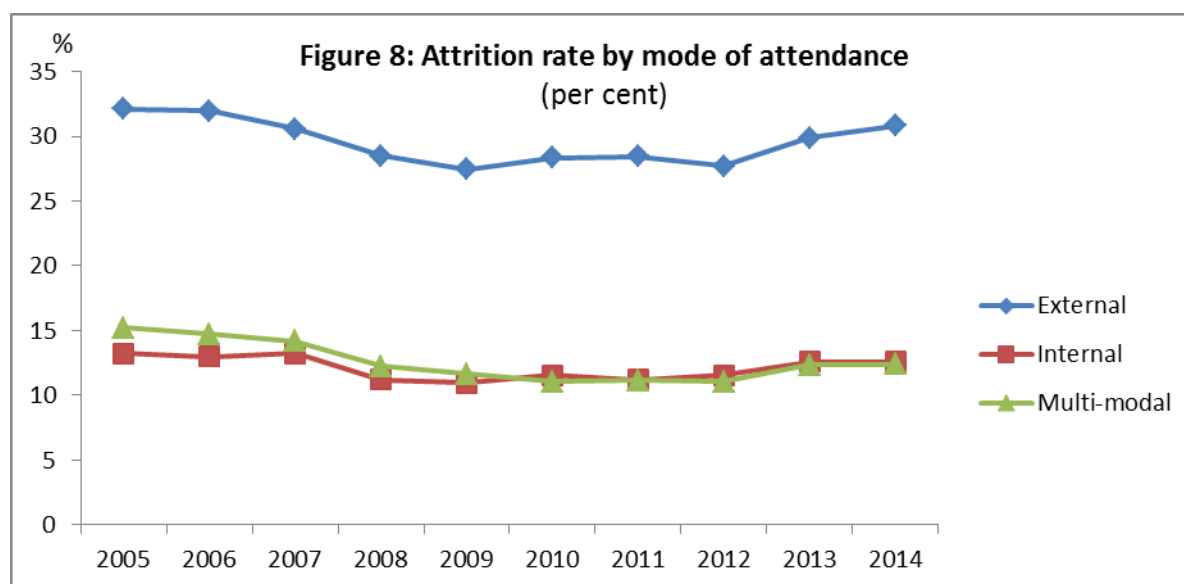
The different attrition rates by ATAR show that the likelihood of withdrawing from study is generally correlated with ATAR (see Figure 7). The non-ATAR attrition rate has changed over time in line with the national attrition rate which is to be expected considering that over half of commencing student are reported as non-ATAR. The other ATAR groups' attrition rates have experienced different changes over the period. The 30-50 ATAR group saw a large increase in their attrition rate in 2010 and 2011 which was largely reversed in 2014. Large changes in the attrition rate of the 30-50 ATAR group (and, similarly, the 50-59 ATAR group) is not surprising due to the small number of students and inherent volatility in the data. Most of the other ATAR groups' attrition rates were largely unchanged in recent years.



Providers have different compositions of ATAR and non-ATAR students recorded which have changed over time. For example, the University of Canberra had 72 per cent of commencing students reported as without an ATAR in 2005 and 35 per cent in 2014. The University of Notre Dame consistently has around 100 per cent of commencing students without an ATAR recorded, while RMIT has ranged between 10 to 20 per cent of students recorded without an ATAR from 2005 to 2014. Some institutions have experienced a positive relationship between rising attrition rates and the proportion of non-ATAR students (0.98 correlation) while others have experienced a negative relationship (-0.92 correlation). This suggests the rise in attrition rates is not closely related to ATAR specific factors.

Mode of attendance

The mode of attendance refers to whether a student is physically attending the institutions' campus for study (internal), or not physically attending but is studying online, by correspondence or other means (external). It is also possible to study through a combination of attendance (multi-modal). There is a strong difference in attrition rate by mode of attendance types, with external students around 2½ times more likely to withdraw from higher education than internal students.



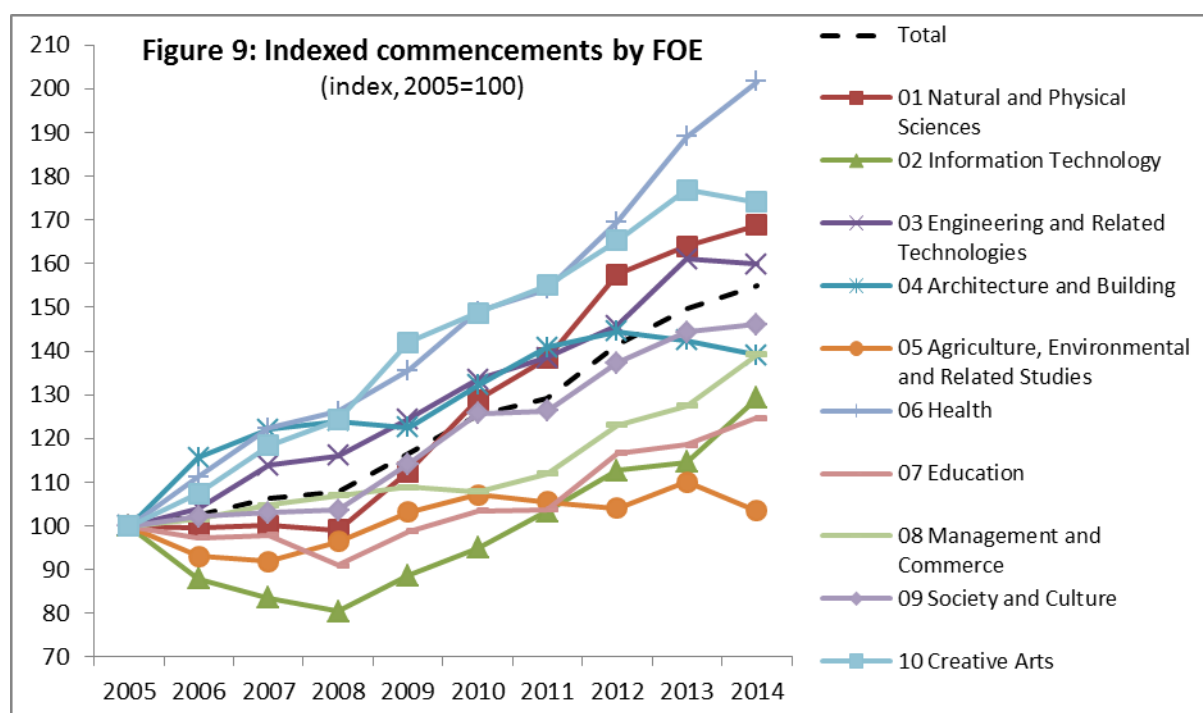
The number of external students has been rising faster than the number of internal students from a low of 8.3 per cent in 2006 to 14.6 per cent in 2014, then easing slightly in 2015 to 14.5 per cent (Figure 8). However, not all universities offer external study. In 2015 there were five universities that did not have external students, and ten with less than 100 external students.

Four universities (University of Tasmania, Swinburne, University of New England and Charles Sturt University) account for over half of all external students. Of these providers, Charles Sturt and New England have a long history of high numbers of external students. In contrast, Swinburne and University of Tasmania have increased their external student numbers significantly in recent years (see Data Appendix), correlating strongly with these institutions' rising attrition rates over the same period.

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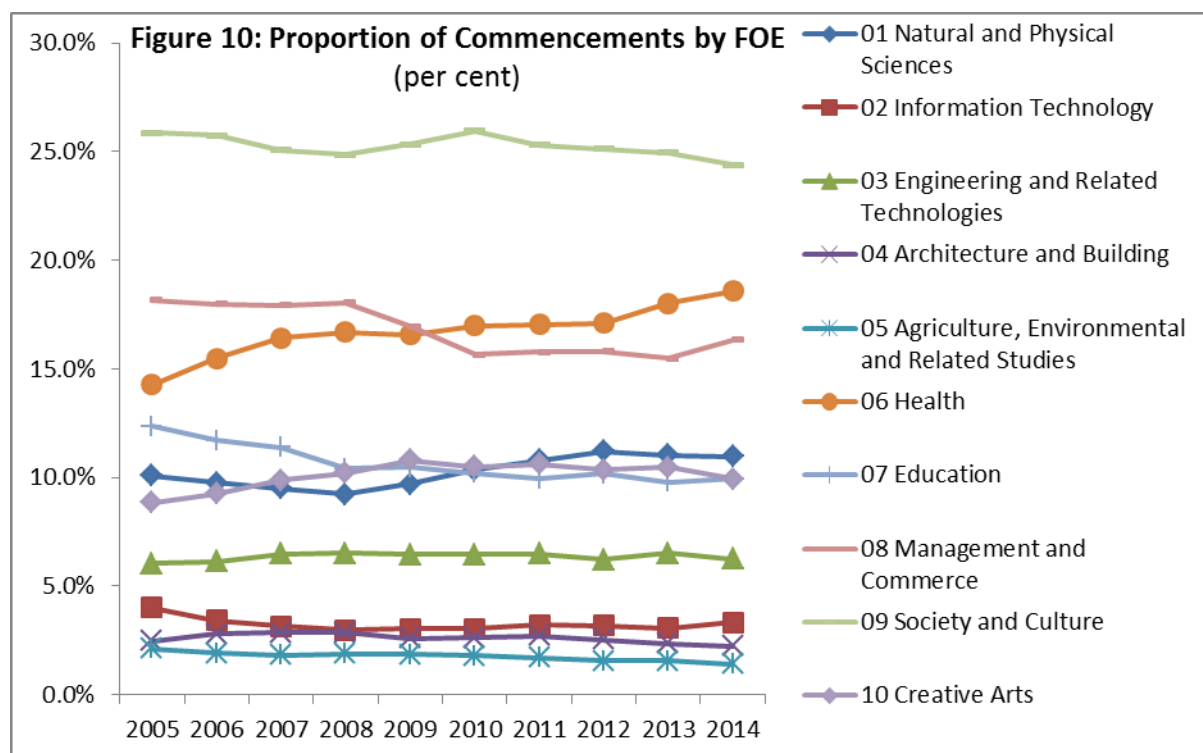
Field of education

The numbers of commencing students in different fields of education have grown at disparate rates from 2005 to 2014 (Figure 9). Health commencements have doubled while Agriculture, Environmental and related studies commencements have remained almost unchanged. The correlation between commencement growth and attrition rates shows a positive relationship for Education and Health, but is not significant for any of the other fields of education (see Data Appendix for individual fields of education, correlation of changes in attrition rates and commencing fields of education over time and a comparison of attrition rates by field of education with and without Federation University, Swinburne and University of Tasmania).



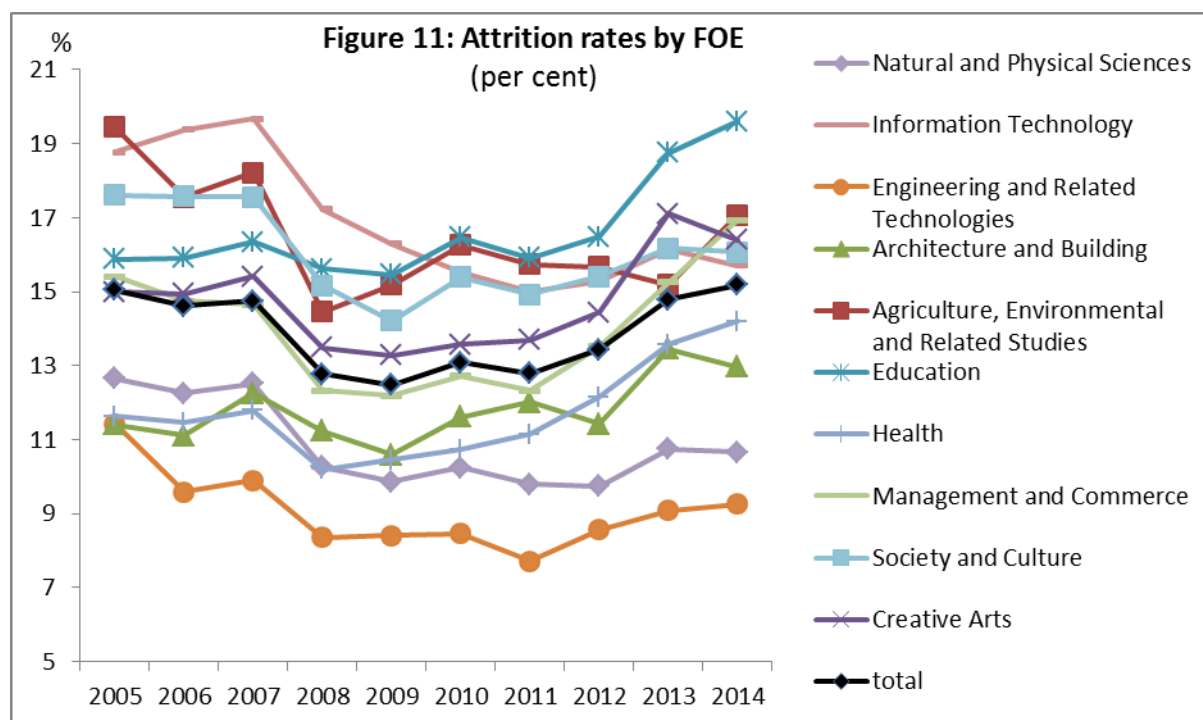
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Despite the remarkable growth differences across fields of education the proportions of students studying different fields of education has remained fairly constant over time (Figure 10). The exceptions are the strong shift toward Health and reductions in the proportions studying Management and Commerce and Society and Culture.



Improving retention, completion and success in higher education

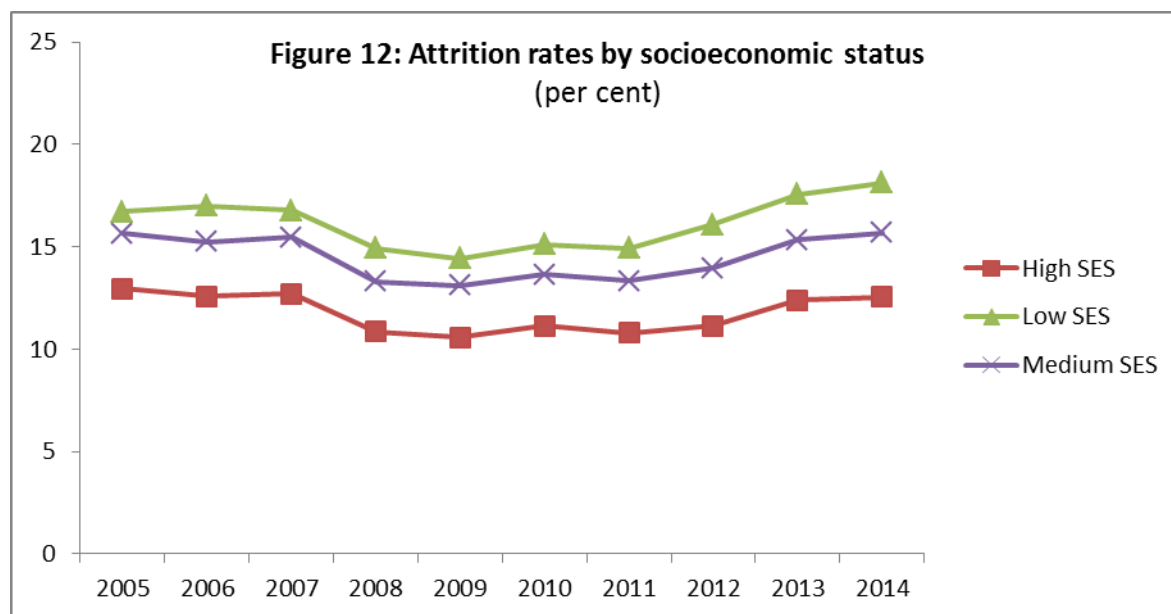
The attrition rates by field of education shows a similar change over time in line with the overall attrition rate (Figure 11). While some fields of education experienced a fall in their attrition rate from 2005 to 2014 (e.g. Information Technology), most fields of education started with a higher attrition rate in 2005 or 2006, fell to a period of low attrition from 2008 then rose from around 2012. The rise in Health attrition rates along with a rise in the number of Health commencements may be driving the overall rise in attrition to a small extent. However, most fields of education are showing a rise in attrition rates in recent years.



As noted earlier, the providers Federation University, Swinburne and University of Tasmania have shown significant rises in attrition rates in the last few years. These providers have also had a large effect on some fields of education through strong rises in student numbers in Health and Education, in line with rising attrition rates in these fields of education. However, the changes over time are more broadly based. The Data Appendix compares attrition rates for field of education for a national total compared to the total excluding Federation University, Swinburne and University of Tasmania.

Socioeconomic status

There is a clear relationship between attrition rates and SES status. High SES students have the lowest attrition rate, followed by medium SES students and low SES students (see Figure 12). The attrition rates across different SES groups have all been rising in recent years. There has been a small increase in low SES students as a proportion of total commencements of around one percentage point which may have partially driven the overall rise in the attrition rate.



The increase in attrition rate is not directly attributable to low SES alone. Examination of attrition rate by provider shows considerable disparity ranging from 2.90 per cent to 38.43 per cent (see Data Appendix for detail). The proportion of low SES students also ranges across providers from 4.1 per cent to 33.9 per cent. The data shows that providers with high proportions of low SES tend to have high attrition rates for low SES. However, these providers also tend to have high attrition rates for all their students. As such, low SES is not the source of rising attrition rates and any effect from the increased proportion of low SES students is limited.

How important are these factors in driving attrition?

The analysis above suggests factors like part-time study, age, low academic achievement, external study, field of education and low socioeconomic status are associated with higher attrition. This begs the question of how important these factors are in influencing attrition and how we should assess the role institutions play in influencing attrition beyond that played by student characteristics? For example, it is well known that many institutions with high attrition also tend to have a high proportion of external students. On the other hand, many institutions with lower attrition tend to have selective intakes of more academically able students.

The Technical Appendix presents the results of regression techniques showing the calculation of attrition rates that take into account key student characteristics. Such analysis allows us to calculate, 'modified' measures of attrition that better reflect institutional differences. Table 9 shows the published adjusted attrition rates and two 'modified' rates which have been adjusted using different regression techniques. While this exercise results in universities with very low attrition rates recording modified rates that are higher, and vice versa, Table 9 shows the relative performance of institutions does not change much at all.

Table 9: Adjusted and ‘modified for student distribution’ institutional attrition rates, domestic bachelor commencing students, 2014 (per cent)

Institution	Adjusted attrition rate	OLS ‘modified’ attrition rate	Logit ‘modified’ attrition rate
The University of Melbourne	3.7	8.6	5.3
University of New South Wales	4.8	9.2	5.9
The University of Sydney	5.9	10.3	7.2
Monash University	6.5	11.8	8.8
The Australian National University	7.3	10.1	7.7
The University of Western Australia	7.7	12.7	10.6
University of Technology Sydney	7.7	10.0	8.0
The University of Notre Dame Australia	9.5	10.4	8.6
Macquarie University	9.7	11.7	9.9
The University of Queensland	9.9	14.3	12.4
RMIT University	10.3	13.2	11.0
University of Wollongong	10.6	12.0	10.0
The University of Adelaide	11.6	14.8	13.1
La Trobe University	11.6	13.7	11.3
Queensland University of Technology	12.0	14.2	12.3
Western Sydney University	14.0	13.4	11.7
Curtin University of Technology	14.1	14.3	12.6
Deakin University	14.4	13.7	11.8
University of Newcastle	14.5	15.1	13.0
Avondale College of Higher Education	15.3	14.3	12.2
Australian Catholic University	15.3	15.8	13.8
Griffith University	16.0	17.3	15.2
University of South Australia	16.1	16.3	14.5
Flinders University of South Australia	17.1	17.8	15.8
University of Canberra	17.3	17.6	15.6
Murdoch University	18.7	16.5	14.4
James Cook University	19.0	20.1	18.3
Victoria University	19.5	18.1	15.6
University of the Sunshine Coast	19.9	20.0	17.9
Edith Cowan University	20.7	17.8	15.6
Eastern College Australia Inc	21.9	13.9	11.5
University of Southern Queensland	22.2	16.6	15.3
University of New England	22.6	15.1	13.8
Charles Sturt University	22.7	15.2	13.2
Federation University Australia	23.3	21.3	18.3
Central Queensland University	23.9	18.9	17.0
Southern Cross University	24.1	20.5	17.8
Christian Heritage College	24.4	21.8	19.1
Swinburne University of Technology	24.7	16.8	14.4
Holmesglen Institute of TAFE	25.8	23.5	22.9
Charles Darwin University	26.1	18.7	16.5
Tabor Adelaide	27.4	18.9	15.3
Melbourne Polytechnic	28.1	24.5	20.8
University of Tasmania	37.7	30.2	25.4
Standard deviation (percentage points)	7.5	4.4	4.3

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It is apparent that student characteristics appear to explain only a small part of the overall variation in student attrition while institutions appear to play a larger role, as shown by Table 10. Also, basis of admission or ATAR is less important than institution, type of attendance, mode of attendance and age in explaining attrition. Measurable factors in the regression analysis, like the student characteristics and institution shown in Table 10 below, explain only a small amount, 22.55 per cent, of the overall variation in attrition. This suggests there are many student traits not measured in the regression analysis, such as motivation and resilience, which might be thought to account for attrition.

Table 10: Ordinary Least Squares linear regression analysis (full model and bivariate linear regressions by student characteristics) for 2014 attrition rate of domestic bachelor commencing students

Student Characteristic	Adjusted R ² (variation explained),
Institution	18.83
Type of attendance (full-time, part-time)	4.94
Mode of attendance (internal/external/multi-modal)	3.12
Age group (<20, 20-24, 25+ years)	2.66
Basis of admission (ATAR group, higher education, mature age etc)	2.51
Field of education (narrow field of education)	1.49
Socio-economic status (SES)	0.29
Indigenous	0.14
Non English Speaking Background	0.08
Gender	0.01
Full model including above variables	22.55

Supporting prospective students to make the right choices

Transparent, comparable information

A major issue the Panel identified about transparency of admissions processes was that prospective students, those who need to make informed decisions about which higher education course they may be eligible for and which higher education course they select and at what institution, lack consistent and comparable information to facilitate the best decision. Having all relevant information upfront would improve their chances of choosing and completing the right course.

The Panel hopes its 14 recommendations combined with the 2017-18 Budget measures, will enable students to consider and apply for higher education in a more informed way. An Admissions Transparency Implementation Working Group, chaired by Professor Kerri-Lee Krause of Victoria University, has been established to give effect to the 14 recommendations. Students will be able to identify the full range of entry requirements, pre-requisites, additional assessments and tests necessary for each course. It should be easier for them to find out about the range of academic and non-academic supports available to them at each institution and the financial and other relevant information needed to make their choices.

In addition to this new information, it is important to note that prospective students have access to the Government's Study Assist website. This website contains information such as government assistance for financing tertiary study, tips for transitioning to tertiary study and how to choose the right course. In the 12 months to 31 March 2017, the site had 2.3 million visitors and 1.7 million unique visitors. Given the high traffic on this website, the Panel is keen to consider if the website should be enhanced to be even more useful to prospective and existing students.

The Grattan Institute confirms that giving students more information helps them make more informed decisions. The Institute is working on a user friendly 'predictor' which would give prospective students an idea of how people with similar characteristics to them succeed in a chosen higher education course. Whether a 'success predictor' would be useful and accessible and how it could be integrated with other information for prospective students, is a question the Panel poses for consideration. Any success predictor has to be judged on the quality of the data that underpins it and, as shown in the regression analysis above, current data only explains a relatively small fraction of the difference in success rates across students.

Adequacy and publication of data

Measuring completion, attrition, retention and student success data captures behaviours and gives a timely, overarching picture of academic progress.

However, when potential students are choosing between different institutions for their preferred course it is unlikely that the progress rates of previous students is part of their decision making process. Perhaps the reason for this is the limited ability of current publications to provide useful information. While acknowledging the likely bias to optimism of potential students, if students were better informed about the likelihood of success for the completion of their preferred course at their preferred provider, it might influence their choice of study.

The department collects a range of data on student demographics and course content in administering the *Higher Education Support Act (HESA) 2003*²⁴. Using this information it is possible to derive measures of student progress by institution and field of education based on a range of student demographics. Presumably this information is not easily accessible nor is it promoted as an information source for students. This is also a problem for researchers and policy analysts.

There is potential for the quality of data on the academic preparation of students to decline over time as the sector continues to shift away from ATAR based admissions. Data on the ATAR of new students is not collected if they are not enrolled on the basis of that ATAR. Without a replacement metric of academic preparation, analysis of success or failure in attrition will not be informed by an adequate understanding of the precursors of success or the value of institutions.

The introduction of longitudinal data and case studies may also assist student analysis and higher education policy making. For example, some students who fail to complete higher education, nevertheless use prior higher education as the basis for successful completion of vocational education and training and vice versa. Tracking students across the tertiary sector would permit enhanced analysis of student pathways across the sector. Currently there is no common student identifier across tertiary education to track tertiary pathways. The Unique Student Identifier tracks students across vocational education and training while the CHESSN tracks students across higher education.

The current data collection does not capture why students decide to leave (nor, indeed, why they choose to return). While the Student Experience Survey asks students if they intend to leave, and the reasons they are considering leaving, there is no follow up to see which students left. It may be worth having a system whereby withdrawing students are asked to describe the reasons for their departure.

Suggestions made by stakeholders through the admissions transparency process include communicating completion and retention information more effectively and making it available on the QILT website or through another interface.

²⁴ The full list can be found here

<http://heimshelp.education.gov.au/sites/heimshelp/dictionary/pages/data-element-dictionary#nav>

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The University of Wollongong (UoW)'s submission stated:

UOW supports the inclusion of retention and completion data, participation and equity data and student/staff ratios on the QILT website. Much of this data was made available on the predecessor to QILT, the My University website.

The Australian Centre for Career Education stated in their submission in response to the question about the best way to make comparable information on student admissions procedures available to the public:

A national website that provides intake data for all institutions, completion rates and employment rates [of graduates] to the general public.

Recommendations 7 to 10 and 13 of the Panel's report on admissions transparency were to develop of a new national admissions information platform that would give prospective higher education students, their families, schools and advisers ready access to information about course options, admission requirements, assessments and application pathways across all higher education providers. Planning for this new admission information platform is underway.

Career and outreach services

Through the Panel's work on the transparency of higher education admissions and in developing this discussion paper, it has become clear that career education in schools and within higher education institutions plays an important role in assisting students to choose the courses most appropriate to their skills, abilities and interests. This subsequently increases their chances of course completion.

The Australian Centre for Career Education's submission to the admissions transparency consultation process stated:

Governments (Federal and State) need to action improving career education services in schools so that student preparation in career decision making commences much earlier than in August of their graduating year 12. The flurry of activity to select courses in two months with little to no preparation is the main reason why we have high attrition rates in first year university courses, lack of completion in second and third year.

What should I study? Improving tertiary pathways by improving support for prospective students, undertaken by the three South Australian universities concluded that 51 per cent of students who entered university straight from school found it difficult to decide what to study. Part of the problem was that school career counsellors are stretched and university school liaison teams on visits not always having the attention of over-stretched Year 12 students²⁵.

La Trobe University's January 2017 report found low SES students were nearly twice as likely as high SES students to leave their studies because of a change in career plans²⁶. This reflects previous research which has highlighted the inadequate levels of careers education provided to students in some secondary schools²⁷.

The Panel stated in its final report:

....while higher education admissions processes are becoming more complex, career education support in schools and within higher education providers appears to be decreasing. As a consequence, students (and their parents and teachers) find it harder to make fully informed decisions²⁸.

The Panel also canvassed the need for career advisors to engage with all secondary school students, rather than just those in the second half of Year 12. It noted that early interaction with students can assist senior secondary subject choice, promote career aspirations throughout a student's high school career, and contribute to more considered decision making.

²⁵ University of South Australia, *Survey shows we need to find more ways to support Year 12s*, February 2017, Media Release <http://www.unisa.edu.au/Media-Centre/Releases/2017-Media-Releases/Survey-shows-we-need-to-find-more-ways-to-support-Year-12s/#.WOHLZf5MTX5>, viewed 21 April 2017.

²⁶ Harvey, A et al 2017, *The re-recruitment of students who have withdrawn from Australian higher education*, La Trobe University.

²⁷ Harvey A et al 2017, *The re-recruitment of students who have withdrawn from Australian higher education*, La Trobe University.

²⁸ Higher Education Standards Panel 2016, *Improving the transparency of higher education admissions*, <https://docs.education.gov.au/node/42146>, viewed 21 April 2017.

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The Panel notes work underway to improve outreach and careers services, at both provider and government levels. Providers are improving student outreach services. For example the UNSW ASPIRE program partners with 54 primary, high and central schools in Sydney and across regional and remote New South Wales. ASPIRE helps build students' confidence to believe they have the talent and mindset to achieve. It aims to develop students' skills and knowledge about university education. UNSW works with schools, communities and parents and carers to build social capital and give students the know-how to make an informed choice about the future they want for themselves. From 2010 to 2016 there has been a 120 per cent increase in university offers to ASPIRE students. Similarly the *Fast Forward Program*, which began in 2004, is a partnership between Western Sydney University and Western Sydney schools which helps students to see the value of continuing their education through to Year 12 and into higher education and gives students a greater preparedness for participation and success in higher education.

In June 2016, the Government committed \$3 million for a new and contemporary National Career Education Strategy. Announced under the *Quality Schools, Quality Outcomes* policy in May 2016 it aims to ensure students are 'work ready', prepared for life beyond school and equipped with the 21st century skills needed for the jobs of today and into the future²⁹. A national working group comprising representatives from schools and industry sectors, parent, career and youth peak bodies is developing the strategy and will provide recommendations to Government by July 2017. Pending Government agreement it will be implemented from late 2017 through to 2020.

The Government's tertiary education digital information kit slated for release mid 2017 is a suite of resources for career advisers to inform students about tertiary study options and government assistance.

Another Government initiative to support career education in schools is an online career education self-assessment tool for schools to assist educators to evaluate and improve their career education strategies. It is available on the *Preparing Secondary Students for Work* website.

It is pleasing to see the work in this area but what strategies would further strengthen outreach and careers advice to assist students making decisions about higher education?

²⁹ Department of Education and Training 2016, *Quality Schools, Quality Outcomes*, Canberra.

Supporting students to complete their studies

In the following pages the Panel presents just a few examples of innovative practice to enhance student success in higher education institutions. We are fully aware that there are many other examples of such initiatives. Indeed, our hope is that responses to the Discussion Paper will help frame a more comprehensive range of interventions that can be promulgated in our report to the Minister.

Identification of students at risk of non-completion

Data collection at admission and extensive research into the complex factors that result in attrition enables providers to make assessments of students at risk of non-completion even before students commence their courses.

A March 2017 study³⁰ conducted by the National Centre for Student Equity in Higher Education (NCSEHE) at Curtin University and led by Dr Ian Li from the University of Western Australia found that:

Students from most of the equity groups, particularly students who identified as Aboriginal or Torres Straits Islander, who have disabilities or who were from rural or remote locations, are more likely to consider leaving university than non-equity students³¹.

Factors such as being first in family to attend university, poor prior academic performance and being externally enrolled could also categorise students as 'at risk'.

First in family students is a collective category currently defined by institutional enrolment data on parental education levels. It is not reported systematically and it traverses established equity groupings. Professor Sarah O'Shea, National Learning and Teaching Fellow, has proposed that the first in family category be considered an encompassing equity group embracing existing equity classifications. She also highlighted that first in family status does not have an implicit negative value and could be regarded as a form of celebration with targeted support and outreach framed in a positive sense. A national approach to recording first in family data may be warranted.

A recently released NCSEHE and The University of Newcastle publication has suggested guidelines for improving student outcomes in online education³², including greater use of data collected at admission to give lecturers a snapshot of their students' characteristics, such as the proportion of poorer and Indigenous students and first in family.

³⁰ Li, I and Carroll, D 2017 *Factors Influencing University Student Satisfaction, Dropout and Academic Performance*, The University of Western Australia.

³¹ Li, I and Carroll, D 2017 *Factors Influencing University Student Satisfaction, Dropout and Academic Performance*, The University of Western Australia.

³² Stone, C 2017 *Opportunity Through Online Learning, Improving Student Access, Participation and Success in Higher Education, National Guidelines*.

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As a student progresses in their course, their risk of non-completion can be further assessed by a range of measurement data. For instance, students' log on data in online student learning environments can be used to determine which students are not accessing course material, assessment items not submitted or failed, and engagement in discussion boards. This is called learning analytics, which is defined by the Society for Research in Learning Analytics as:

the measurement, collection, analysis and reporting of data about learners and their contexts, for purposes of understanding and optimising learning and the environments in which it occurs.

Australia is still at an early stage of development, implementation and understanding of such approaches in higher education and there is great variability across the sector in relation to preparedness and how institutions are thinking about and implementing learning analytics³³. Increasingly, however, there is research focusing on learning analytics as a mechanism for addressing student retention.

Some providers may use the data generated by learning analytics to develop a list of students that require intervention. They then enlist an automated message system or administrative staff, senior students or the students' tutor or lecturer to contact these students and offer them assistance and services to help them get back on track.

Learning analytics can also identify trends across classes, such as a group of students who are not engaging in online discussions or handing in pieces of work. Academics could, for instance, adapt course design and support structures to improve their engagement and performance.

At the University of Wollongong, an experienced learning designer is engaged to work with the university's learning analytics team to provide Moodle, a learning management system that can list support and advice on modifications to pedagogy and curriculum to support the reporting of student progress, with an emphasis on at risk students. The learning analytics delivers information that allows teaching staff to see who is engaging with a range of materials including online materials, the library and other support services. This in turn gives subject coordinators an indication of students at risk of being disengaged from the subject and likely to fail, unless interventions are undertaken. The team can now flag low SES students so that lecturers can target programs to particular students.

Another strategy that can assist to identify students at risk of non-completion is an early assessment task before the census date. This ensures students engage with the need for academic performance before they are locked into a financial commitment.

³³ West, D et al J 2015, *Learning Analytics: Assisting Universities with Student Retention*, Office for Learning and Teaching, Australia.

Provider culture and student engagement

In all their diversity, students come to higher education to learn and that it is within the first year curriculum that students must be inspired, supported, and realise their sense of belonging; not only for early engagement and retention, but also as foundational for later year learning success and a lifetime of professional practice.³⁴

An Office of Learning and Teaching project conducted in 2013 found student support and engagement are critical to learning success, progression and retention. The report made a range of recommendations for institutional practice, including the need:

- to ensure a healthy university culture that embraces diversity and nurtures the structures and systems that foster it
- to maintain appropriate resourcing for academics (especially casual tutors) to support the kinds of programs that make a difference
- to commence intervention programs early, for example during secondary school and prior to students entering university (through programs such as those supported by HEPPP
- to introduce intervention programs that target all students in order to identify those who may not obviously be at risk³⁵.

Australian Learning and Teaching Fellow Dr Jessica Vanderlelie has been developing tools for universities to build stronger, mutually beneficial alumni connections for graduate success³⁶. Dr Vanderlelie suggests institutions talk about the school community and establish a lifelong relationship from day one, if not before. This is similar to universities in the United States where students gain institutional identities or alumni status at enrolment. If Australian institutions consistently considered undergraduate students as alumni, would this strengthen their ability to engage, monitor and support a student to success?

Students as partners and student voice are initiatives that aim to engage students in, and give students responsibility for, the culture of the institution and in student learning processes. These initiatives extend beyond student engagement that fosters active learning; they shift students from a position of learning to learning with academics. Many institutions are adapting these approaches and there are a number of learning and teaching studies highlighting their benefits.

³⁴ Kift, S, *Transition Pedagogy website*, <http://transitionpedagogy.com/>, viewed 21 April 2017.

³⁵ Von Truer, K. et al 2013, *Tracking Student Success: who is falling through the cracks?* Australian Government Office for Learning and Teaching.

³⁶ Vanderlelie, J 2015, *Engaging Alumni*, <http://www.engagingalumni.com/>, viewed 26 April 2017.

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Supporting students to complete their studies generally features in higher education providers' strategic plans. The *UNSW 2025 Strategic Plan* identifies social engagement as one of their strategic priorities and progress measures include graduation rates for Indigenous students and those from low SES backgrounds. *The University of Queensland Strategic Plan 2014-2017* states the University will attract and retain the best students, irrespective of background through improving student retention rates through a pro-active supportive approach. Some universities have specific retention strategies, for instance La Trobe University has a student success and retention strategy³⁷. It notes that responsibility for retention is distributed across the university requiring a whole-of-institution approach.

The Sydney Institute of Business and Technology, part of the Navitas Group, has a detailed Program Progression Policy which outlines the acceptable levels of performance, early intervention strategies, and attendance and progress conditions for all students.

³⁷ La Trobe University, *Success Retention Strategy*, http://www.latrobe.edu.au/_data/assets/pdf_file/0011/738524/Success-Retention-Strategy.pdf, viewed online 21 April 2017.

Learning and teaching

...innovation (in learning and teaching) empowers Australian higher education to respond to the needs of diverse generations of new students who enter university with differing levels of preparedness and expectations...³⁸.

In 2018 the Government, through HESA, is allocating almost \$7 billion for teaching and learning under the Commonwealth Grant Scheme, as part of a total investment of \$18.6 billion through student loans, grants for research, student support and equity programs.

As part of the 2017-18 Budget, the Government is making 7.5 per cent of Commonwealth Grant Scheme funding to universities contingent on their teaching performance. This is an incentive for universities to improve in this area and it will eventually provide metrics for the comparison of teaching quality.

Peak bodies are also taking initiative in the learning and teaching space. The Innovative Research Universities (IRU) has appointed Dr Vanderlelie (noted for her work as an Australian Learning and Teaching Fellow) as the inaugural IRU Vice Chancellors' Fellow. Her mandate is to lead the IRU universities creative approach to improving student and graduate success.

The Australian Technology Network has established a collaborative grants scheme for Excellence in Learning and Teaching. The aim of the grants program is to provide funding to facilitate scholarship and research into learning and teaching, and promote systemic change in the sector.

Awards

The Australian Awards for University Teaching recognise quality teaching practices and outstanding contributions to student learning. As announced in the 2017-18 Budget, responsibility for these awards will sit with Universities Australia, giving the sector more responsibility for recognising and rewarding excellence in teaching and learning.

An example of an institutional program rewarding excellence in learning and teaching is the Australian National University's (ANU) new distinguished educator awards. Up to 15 distinguished educators will be members of the university's new Institute of Innovation in Higher Education - a high-profile platform to generate ideas discussion and mentoring, including the sharing of innovative practice in higher education and the creation and sharing of resources. Members of the program will serve five years and receive an extra \$10,000 per year. Applications for the first round open in August 2017.

³⁸ Kift, S 2016, *The decline and demise of the Commonwealth's strategic investment in quality learning and teaching*, Student Success, Volume 7, Issue 2.

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Teaching quality

While passion, innovation, creativity and commitment are qualities that make a good teacher, a considerable amount of research has been undertaken and published on what constitutes excellent teaching in higher education. Recognition approaches in Australia are being developed.

Australian higher education institutions and learning and teaching leaders understand the value of recognising and promoting good student-focused teaching practice. This is acknowledged by initiatives that formally recognise academics and learning and teaching staff.

A Government Office for Learning and Teaching project supported five universities (the University of Western Australia, Murdoch, Curtin, Edith Cowan and Notre Dame) to produce a quality teaching framework for Australian universities. The resulting Australian University Teaching Criteria and Standards provide guidance on quality teaching and how it can be evidenced. This framework was released in 2014³⁹.

Emeritus Professor Denise Chalmers in her 2015 Australian Learning and Teaching Fellowship continues the task of applying the framework and investigating the feasibility of sector-developed and endorsed Australian Professional Tertiary Teacher Standards. Dr Chalmers's fellowship, *Recognising and rewarding teaching: Australian teaching standards and expert peer review*, is intended to demonstrate how best to enhance and reward university teaching in order to deliver quality student learning outcomes. Her fellowship report and findings are anticipated by late 2017⁴⁰.

The involvement of Australian academics in the Higher Education Academy has grown significantly in the past few years. The genesis of the Higher Education Academy is in the United Kingdom (see International discussion below). Its remit is global, with almost 90,000 Higher Education Academy Fellowships recognising a personal and institutional commitment to professionalism in learning and teaching in higher education. Currently in Australia there are almost 1000 academics that have received professional recognition for teaching excellence, most at the ANU and the Queensland University of Technology. Australian Learning and Teaching Fellow Dr Elizabeth Beckmann at the ANU is examining this development in her fellowship *Professional Recognition and Self-Efficacy in University Teachers as Tools to Enhance Teaching Quality*⁴¹.

The Panel notes the Australian Qualifications Framework Level 8 Graduate Certificate in Teaching was strongly reported as being a requirement for lecturers when the Australian Qualifications Framework Council discussed deleting the Graduate Certificate from the Framework in 2013. The Panel notes university enrolments in the Graduate Certificate in Teaching have been declining over the last five years which is an issue that needs to be addressed at the individual university level.

³⁹ Chalmers D and Cummings R 2014, *Australian University Teaching & Criteria & Standards*, <http://www.olt.gov.au/resource-australian-university-teaching-criteria-and-standards> viewed 26 April 2017.

⁴⁰ Chalmers D and Cummings R 2014, *Australian University Teaching & Criteria & Standards*, <http://www.olt.gov.au/resource-australian-university-teaching-criteria-and-standards> viewed 26 April 2017.

⁴¹ *Australian Learning and Teaching Fellows website*, <http://altf.org/fellows/beckmann-elizabeth/>, viewed 26 April 2017.

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Sharing best practice

The department currently holds an extensive digital library of learning and teaching resources arising from a more than decade long investment through the programs of the Office for Learning and Teaching and its predecessors. Most content relates to student success and some material canvasses retention, completion and attrition. The library has more than 720 items with some 150 ongoing projects due for completion over the next 18 months. The Government announced that from 1 January 2018 Universities Australia will curate the collection to ensure all resources are fully accessible to university researchers and practitioners.

Providers share best practice at annual conferences such as STARS (Students Transitions Achievement Retention and Success). Attendees disseminate and discuss current research, good practice, emerging initiatives and leading edge ideas to enhance students' tertiary learning experiences.

Student Success: A journal exploring the experiences of students in tertiary education (previously titled the *International Journal of the First Year in Higher Education*) is a biannual, open access, peer-reviewed academic journal with one issue linked to the International [STARS Conference](#). This journal enables researchers, tertiary teachers and professional staff the opportunity to disseminate current research and innovative good practices about students' tertiary learning experiences.

The Panel considers the sharing of best practice across universities and non-university higher education providers to be an important element in improving student success and retention. How else can providers share best practice?

Student support services

The Higher Education Standards Framework (discussed in more detail later in this report) requires higher education providers to offer a range of student services including, foundation or transitional programs, academic support services and scholarships. As such, most providers offer these services in increasingly sophisticated ways.

Some of these support mechanisms are detailed below. They are intended to be examples. The Panel is aware that many other institutions operate similar support programs.

Foundation or transitional programs

Foundation or transitional programs aim to help commencing students become accustomed to university life, build social and support networks, develop essential academic skills, and orient themselves to available services including library infrastructure and systems, study skills resources, and student access software systems. Some universities provide specialised transition programs for students entering via pathway programs or bridging courses.

Monash University's *Get Started*⁴² is a tool to help students navigate their way through their first semester. The website lists the 12 teaching weeks and provides information on deadlines and where to go for support if a student needs help as well as checking in on whether the student is managing well.

As part of her National Learning and Teaching Fellowship Dr O'Shea, mentioned earlier, has produced and published *Firstinfamily.com.au*⁴³ website to support first generation university students and their families. The website has tips, stories and key considerations for the young children and teenagers of parents who are learners, the students themselves and the staff involved in teaching and supporting learners.

Academic support services

Academic support services are often offered as part of transition programs, but are also available throughout students' studies. Typically workshop-based, the programs range from discipline-specific to more generic study skills and essay writing workshops, including providing advice on academic integrity requirements. Some universities target promotion of these activities to units with larger numbers of disadvantaged students in addition to making them available to all students. One popular extracurricular learning and support program is peer mentoring. It leverages the experience and maturity of later-year students to provide academic support to commencing and struggling students. Mentors share how they have achieved their own academic success, direct students to the university's crucial resources and support services and serve as a first point of call for all questions.

⁴² Monash University, *Get Started Roadmap*, <https://www.monash.edu/get-started>, viewed 21 April 2017.

⁴³ University of Wollongong, <http://www.firstinfamily.com.au/>, viewed 21 April 2017.

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The University of Technology Sydney (UTS) First Year Experience Program, *Academic Support* supports the participation, retention and success of students from low SES backgrounds and Indigenous students through furthering effective transition practice in the first year curriculum. It also promotes effective practice of linking curriculum and existing co-curricular activities between academic and student support staff. In 2015 the project achieved 20,480 contacts with low SES and Indigenous first year university students and 7709 UTS staff contacts. The number of staff contacts achieved in 2015 was more than double the number achieved in 2014 (3367 UTS staff contacts).

Since 2014 the University of Newcastle has been supporting students academically through *Academic Survival Skills Online*. Students from the university, as well as from other providers and the general public, can access up to nine modules of this free online course which cover areas such as *think like a uni student, make sense of uni texts and lectures, use online libraries for research, plan and write an academic essay and understand referencing and academic integrity*. Over 900 students are enrolled in this course.

Personal support services

Student support services typically include access to health care services, counselling, on-site child care facilities, financial hardship assistance (loans, emergency grants), careers advice, and counselling. These services are important in preventing attrition that may occur due to personal or financial hardship, and contribute to overall student wellbeing and engagement with the university.

The University of the Sunshine Coast (USC) invests in an equity bursaries program which is a one-off semester-based payment to assist Indigenous students and students from recognised equity groups with the costs of study. For 2017, USC anticipates awarding approximately 900 bursaries. The payments are made at the beginning of the semester to assist students with purchasing learning materials such as textbooks and other study-related materials and aids.

The University of Canberra's Faculty of Health Clinics provides services to University of Canberra staff, students and the community. There are student led clinics under the supervision of qualified therapists provided at low-cost in areas such as counselling, nutrition and dietetics, and private practitioners offer services such as physiotherapy and psychology. The University also provides a medical and counselling centre and parenting and breast feeding rooms.

Scholarships

Many institutions offer formal and in-kind support through scholarships to students from identified equity groups. Some are awarded on need alone, while others have academic performance criteria as well. Some scholarships are funded through Commonwealth programs and others funded directly by the institution.

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The University of New South Wales's Shalom Gamarada Scholarship Program offers residence at Shalom College to Aboriginal and Torres Strait Islander students studying at UNSW. Originally concentrating on medical and health science students, in 2011 the program expanded to include students studying other disciplines. Since the program's inception in 2005, it has assisted 67 students. To date 13 students have graduated - 10 doctors, one optometrist, one social worker and one architect⁴⁴.

Research on the effectiveness of scholarships at Deakin University found they assist students to spend more time on their studies, and less time working in paid work, and that they have a strong impact on retention, and some impact on success rates⁴⁵. However, only a very small proportion of students receive scholarships. Scholarships cannot address all of the challenges of complex lives and, as a result, they can only be one of a suite of strategies to support students⁴⁶.

Support for disadvantaged students

Low SES students, those from regional and remote areas and Indigenous students, have been found to:

- have lower perceptions of the value of higher education, have fewer positive past experiences with education, receive less encouragement to attend university, and less support from 'back home' once at university⁴⁷
- be more likely to report financial and family issues as stressors, and to cite these as reasons for dropping out of university⁴⁸
- have lower Year 12 completion rates and lower ATARs than other students⁴⁹, though this does not necessarily reflect lower levels of ability, given the comparable performance of disadvantaged students once they gain university admission.

The Government provides funding through Youth Allowance (Student) and offers programs to support students from disadvantaged backgrounds participate in higher education. A number of these programs are listed below.

⁴⁴ Shalom College homepage, <http://www.shalomcollege.unsw.edu.au/Shalom-Gamarada-Scholarship/default.aspx>, viewed 21 April 2017.

⁴⁵ Zacharias, N 2016, *Moving beyond acts of faith: effective scholarships for equity students*, National Centre for Student Equity in Higher Education.

⁴⁶ Zacharias, N 2016, *Moving beyond acts of faith: effective scholarships for equity students*, National Centre for Student Equity in Higher Education.

⁴⁷ Thomas, G 2014, *Closing the policy-practice gap for low SES students in higher education*, Higher Education Research & Development, 33(4).

⁴⁸ Edwards, D and McMillan, J 2015 *Completing university in a growing sector: Is equity an issue?*

⁴⁹ Department of Education and Training 2016, Final Report of the *Interdepartmental Committee on Access to Higher Education for Regional and Remote Students*, Canberra.

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The Higher Education Participation and Partnerships Program (HEPPP)

The Government's HEPPP provides funding to assist universities listed in Table A of HESA to undertake activities and implement strategies that improve access to undergraduate courses for people from low SES backgrounds, as well as improving the retention and completion rates of those students.

Between 2010 and 2015, HEPPP saw 2679 projects implemented at the 37 HEPPP universities; many projects were specifically in the area of student completion and success.

HEPPP has recently been evaluated, with more than 120 submissions to the review process and, as a result, the Government has made a decision as part of the 2017-18 Budget to reform the program with better targeted funding and a stronger outcomes focus.

From 1 January 2018, the Government will reform HEPPP into two components—the Access and Participation Fund and the National Priorities Pool. The Participation and Partnership components of HEPPP will be combined to form the Access and Participation Fund, with universities required to allocate a minimum amount of funding to partnership activities.

Funding from the Access and Participation Fund will be provided in two streams: a legislated loading of \$985 (indexed) per low SES student will be introduced to provide funding that is certain, calibrated to university need and will facilitate longer term planning and projects, and performance funding (\$13.3 million per year indexed—around 10 per cent of HEPPP funding) for universities that improve their average success rates for low SES or Indigenous students.

The National Priorities Pool will be retained with an allocation of \$9.5 million per year (indexed) and will have a greater focus on rigorous evaluative research and aim to encourage outreach collaboration between universities.

Many of the student support projects mentioned in this report are HEPPP funded.

Support for Indigenous students

The Government and universities have worked together to develop the Indigenous Student Success Program,⁵⁰ which started on 1 January 2017. The program which is worth \$253 million over four years makes universities more accountable for ensuring Indigenous students are not only enrolled but also progressing and completing university studies in greater numbers. Through the program, universities can offer tailored scholarships, tutorial support and safe cultural spaces for Indigenous students to learn. Western Sydney University which has one of the largest Indigenous student populations with more than 700 enrolments will receive \$2.5 million to start the program this year. The University has found that the active engagement of a group of Elders has helped to promote higher education to Indigenous students in schools and encourage those who attend university to succeed.

⁵⁰ Department of Prime Minister and Cabinet, *Indigenous Student Success Program* <https://www.dpmc.gov.au/news-centre/indigenous-affairs/2016-17-budget-indigenous-student-success-higher-education>, viewed 21 April 2017.

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In March 2017, Universities Australia launched the *Universities Australia 2017-2020 Indigenous Strategy*. The strategy notes that historically universities have underperformed against their obligations to Indigenous people with low enrolments, high attrition rates and few Indigenous staff. The strategy commits Universities Australia's members to aim to achieve a number of actions. They include retention and success rates for Aboriginal and Torres Strait Islander students to be equal to those of domestic non-Indigenous students in the same fields of study by 2025 and equal completion rates by field of study by 2028. Universities will develop their own internal strategies and processes to achieve these objectives in ways most appropriate to their own regions, communities and situations⁵¹.

Individual providers also manage their own Indigenous specific initiatives. For instance, the University of South Australia funds the Accelerating Indigenous Higher Education project to engage the National Aboriginal and Torres Strait Islander Higher Education Consortium to determine approaches to improve Indigenous outcomes in STEM disciplines, build the Indigenous academic workforce and support whole-of-university approaches.

Support for students from regional and remote areas

The recently concluded *Interdepartmental Committee on Access to Higher Education for Regional and Remote Students* found that students from regional and remote areas were much more likely than other students to be from low SES backgrounds, and that they faced a number of additional barriers to higher education, including:

- lower Year 12 completion rates and lower ATARs
- distance from campus, affecting choice of institution and mode of attendance
- relocation and accommodation costs for those studying on-campus.

The Committee examined the availability of income support for regional and remote students and their families, and recommended a number of changes to relax income tests for eligibility.

In addition to income support, regional students may have access to scholarships from institutions, including those funded by the HEPPP, if the students are from a low SES background.

In 2016 the Government announced an election commitment, the Rural and Regional Enterprise Scholarships, which will support 1200 regional and remote students to undertake STEM studies. The scholarships are for undergraduate, postgraduate and vocational education students, and valued at up to \$20,000 each. It's anticipated the first scholarships will be awarded for the 2018 academic year.

⁵¹ Universities Australia 2017, *2017-2020 Indigenous Strategy*, <https://www.universitiesaustralia.edu.au/ArticleDocuments/212/FINAL%20Indigenous%20Strategy.pdf.aspx>, viewed 21 April 2017.

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The 2017-18 Budget measure will see the establishment and maintenance of up to eight community-owned, regional study hubs across mainland Australia. Courses will be delivered, by distance, from anywhere in Australia. These hubs aim to give regional students the opportunity to study a greater range of courses while living in or closer to their own community.

In 2016, the HEPPP National Priorities Pool funded 23 projects worth \$4.8 million to reduce barriers to higher education for students from low SES backgrounds from regional and remote Australia. In March 2017 the Government commissioned a review into equity of education access for rural and regional students, from school entry to job success. Emeritus Professor John Halsey of Flinders University is due to complete this review at the end of the year.

In March 2017, guidelines for improving student outcomes in online education were published by HEPPP-funded NCSEHE Equity Fellow, Dr Cathy Stone. The guidelines invite universities to make online learning core business and to provide distance students with at least a similar level of support as those on campus. In developing these guidelines, many of the academic and professional staff interviewed had developed and implemented their own strategies to better support distance students, but most of these approaches have not been shared across the sector⁵².

There is also work taking place at an institution level. Federation University Australia's award winning *Live, Learn, Lead* is a residential support program for regional and rural higher education students, particularly those with multiple attributes of disadvantage. Students are supported to transition into university life through a broad orientation followed by a range of personal and community development opportunities. The program brings together residential communities, student learning journey, student belongingness and broader institutional engagement initiatives. It is delivered across the Ballarat and Gippsland campuses for up to 1000 students within residential accommodation facilities annually.

Support for students with disability

The Higher Education Disability Support Program (DSP) assists Table A universities to reduce barriers to study for domestic university students with disability. The DSP does this by:

- helping universities meet the cost of educational support services and equipment for domestic students with disability who have high cost needs
- encouraging institutions to implement strategies to attract and support students with disability in higher education
- funding the Australian Disability Clearinghouse on Education and Training (ADCET) website which promotes inclusive teaching and learning practices for students with disability.

⁵² O'Keeffe, D 2017, Online guidelines designed to tackle distance dropout rate, *The Australian*, 1 March 2017, p29.

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A 2015 evaluation of the DSP found the program is supporting higher education providers to meet student needs in areas that are of particular concern to students, ie completing course assignments and exams and fully participating in lectures and tutorials. The DSP also contributes to building higher education providers' awareness of and access to contemporary research and practice materials relating to inclusive teaching and learning practices and support for students with a disability. This has primarily occurred via ADCET.

The Government's National Disability Coordination Officer (NDCO) Program works strategically to assist people with disability access and participate in tertiary education and subsequent employment, through a national network of regionally based NDCOs.

In June 2016, the department engaged ACIL Allen Consulting to conduct an evaluation of the NDCO Program to examine its appropriateness, effectiveness and efficiency; its intersection with the National Disability Insurance Scheme (NDIS); and make recommendations on its future operation. Over 500 stakeholders were involved in the consultation process including people with disability, local stakeholders, NDCOs, NDCO host providers and other departmental agencies.

Communication and uptake of support services

There is a question of whether support services offered by higher education providers are communicated in an effective way to students, whether students utilised these services and – most important – whether they are beneficial. Measures of success are too often anecdotal in character. There is a need for greater statistical rigour in designing collection and evaluation metrics that indicate the impact value of investment in support services.

A 2011 report which analyses the survey results of students from six Australian universities looked into the usefulness of student support interventions. It found that in general when students use personal support interventions these are mostly seen as very useful. However, the majority of students have either not used or are not aware of support services available⁵³.

Should providers be more explicit about the support services they have on offer and be required to report on the usage and/or success of those services?

⁵³Willcoxson, L, 2011 *The Whole of University Experience: Retention, attrition, learning and personal support interventions during undergraduate business studies*, Australian Learning and Teaching Council. 2011.

Enrolment information for students

La Trobe University's January 2017 report found far too many students considering a period away from formal study are unaware of the formal leave processes and end up dropping out for the lack of available information⁵⁴.

There are in fact many stages of enrolment, but they are rarely transparent to students. Our research found that many students who left the sector were unaware of their ability to request a period of formal leave. Others were unaware that they were about to be struck off the university system, with their status simply changed to 'absent without leave.'⁵⁵

This has prompted the Panel to ask whether students need to be more aware of options relating to their enrolment, such as their capacity to take leave, defer, obtain credit from former higher education study and recognition of prior learning?

Coordinated nested qualifications

Currently education providers can issue 'nested' qualifications. This means that qualifications such as diploma or associate degrees can be set within a bachelor degree, with appropriate exit points. This can maximise the opportunities of those students who successfully complete one year's worth of courses but do not continue to the next year.

TEQSA has a guidance note on this issue noting required expectations⁵⁶. Initial application for admission should be to the highest qualification within the nest. This means that a diploma, associate degree and bachelor degree course would require admission into the bachelor degree. The course would need to be designed to ensure the integrity of each potential qualification. For example, if after one year, the student decided to retire from university with a one-year diploma, that diploma course would need to meet the requirements of the Australian Qualifications Framework and the Higher Education Standards Framework.

Nested qualifications at NUHEPs are extremely popular and becoming more so at universities. The Panel considers, possibly with the help of TEQSA, the benefits of nested qualifications could be promoted to the sector. The Panel, however, believes that this needs a cautious approach. There needs to be a requirement that any such qualification must be carefully designed to suit the students who opt out as well as those who remain to attain a bachelor qualification.

The Government's new arrangements for sub-bachelor courses announced as part of the 2017-18 Budget could further encourage coordinated nested qualifications. Institutions will be able to enrol students in a Commonwealth Supported Place in a sub-bachelor course and then a bachelor level course.

⁵⁴ Harvey A et al 2017, *The re-recruitment of students who have withdrawn from Australian higher education*, La Trobe University.

⁵⁵ Harvey, A 2017, 'Address attrition rate with many happy returns', *The Australian*.

⁵⁶ TEQSA Guidance Note: Nested Courses, <http://www.teqsa.gov.au/sites/default/files/NestedCoursesGN.pdf>

International experience

Below is a short and selective description of examples of policy and research taking place in a number of countries in relation to higher education retention, completion and success. It is included simply to stimulate discussion and feedback.

Taking into account the differences in higher education systems across the world, the Panel seeks your views on whether Australia can learn from the international experience or international research. Personal experience of successful initiatives at overseas universities are welcomed.

United Kingdom

Now in its second year, the United Kingdom's Teaching Excellence Framework provides the Office for Students with powers to monitor all providers annual data in relation to issues including, graduate employment, progression to professional jobs and postgraduate study, student retention levels, student completion levels, student recruitment levels and degree outcomes, student entry requirements/ Universities and Colleges Admissions Service tariff data, National Student Survey results, number of complaints to the Office of the Independent Adjudicator and Teaching Excellence Framework scores.

In all cases, both the absolute value and changes in the indicators are monitored against benchmarks. Any significant shifts in any of these areas prompts a more detailed and targeted investigation. These are not necessarily in themselves cause for concern – a provider could significantly expand student numbers whilst maintaining quality – but would trigger a more in-depth review⁵⁷.

The Teaching Excellence Framework operates on an opt-in basis. Institutions must provide to the Office for Students (and make public) comprehensive datasets against key specified criteria. The top three tiers of participating institutions (Gold, Silver, Bronze) are permitted to raise student fees by inflation indexed amounts. In the third year the third tier will be permitted to raise fees by only half of the indexed amount⁵⁸. Further, there are some issues with measurement of some criteria, for example, *learning gain*, being measured indirectly through surveys rather than through direct measurement⁵⁹.

⁵⁷ Department for Business, Innovation and Skills 2016, *Success as a Knowledge Economy: Teaching Excellence, Social Mobility and Student Choice*, London, https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/523546/bis-16-265-success-as-a-knowledge-economy-web.pdf viewed 21 April 2017.

⁵⁸ Department for Education 2016, *Teaching Excellence framework: Year Two Specification*, London, https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/556355/TEF_Year_2_specification.pdf accessed 1700 20/03/2017 viewed 20 March 2017.

⁵⁹ Horeau, et al 2015, *Learning gain in higher education*, Higher Education Funding Council for England, Bristol, http://www.hefce.ac.uk/media/HEFCE,2014/Content/Pubs/Independentresearch/2015/Learning_gain,in,HE/Leaning_gain.pdf accessed 1715, viewed 20 March 2017.

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The Teaching Excellence Framework operates in a context informed by the work of the United Kingdom Higher Education Academy on *What Works? Student Retention and Success*⁶⁰, ongoing from 2010⁶¹. This work finds academic excellence, in particular pedagogy, is the key to increasing student retention and success across demographic divides. A number of publications and guides have been produced to facilitate the uptake of new classroom techniques and new pedagogies to achieve specified learning outcomes. It is accepted that a range of appropriate pedagogies may be needed to serve campus-based, online, blended and workplace-based learning environments.

Additionally, the Higher Education Academy runs the *Professional Standards Framework for teaching and supporting learning in higher education 2011*.⁶² This framework underpins the professional recognition and awards processes of the Higher Education Academy.⁶³ The framework is seen as relevant to attrition and retention because it:

Demonstrates to students and other stakeholders the professionalism that staff and institutions bring to teaching and support for student learning.

United States of America

Research from the USA⁶⁴ focuses on models for actions by institutions to improve retention and completion. Tinto identifies the following actions within the control of institutions:

- Setting and managing expectations
- Providing social, academic and financial support
- Academic quality in assessment and feedback and engagement.

Public statements of expectations by the institution and actions by staff and administration affect expectations of students, as does knowing the rules for degree attainment, academic progression and formal advice on these. Support for students academically, socially and financially increases retention and success, particularly for low income students. The quality and timeliness of assessment and feedback is a key way students gauge how likely they are to progress and their tendency to persist.

⁶⁰ Higher Education Academy, *What works? Student retention and success change programme*, United Kingdom, <https://www.heacademy.ac.uk/you/what-works-student-retention-and-success-change-programme-phase-2>, viewed 26 April 2017.

⁶¹ Much of this is congruent with the work of Tinto (2011)

⁶² Higher Education Academy 2011, *The UK Professional Standards Framework*, https://www.heacademy.ac.uk/system/files/downloads/uk_professional_standards_framework.pdf viewed 21 March 2017.

⁶³ Higher Education Academy 2013, *HEA Short Guide*, York, https://www.heacademy.ac.uk/system/files/hea_short_guide_recognition.pdf viewed 21 March 2017.

⁶⁴ Tinto, V 2011, 'From Theory to Action: Exploring the Institutional Conditions for Student Retention', J.C. Smart (ed.), *Higher Education: Handbook of Theory and Research* 25.

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There has been considerable work in the United States on the use of learning analytics⁶⁵ to improve student retention, success and completion⁶⁶. A Course Signals application and dashboard has been developed which enables early identification and intervention where student behaviour recorded in the system indicates the student is at risk of failure.

Another innovation has been the move to three and four semester years. Potentially, this decreases time-to-completion for all students. Some United States colleges are considering incentivising summer semesters to improve retention and completion for part-time students⁶⁷. One method of incentivising is providing free summer semester credits for achieving target levels of ordinary semester credits over the year.

Similarly, there are a number of institutions investigating or using competency-based approaches coupled with recognition of prior experiential learning as ways of decreasing time-to-completion⁶⁸. Competency-based programs focus on mastery of key competencies rather than subject completion.

Europe

The European Commission published *Dropout and Completion in Higher Education in Europe*⁶⁹ in 2015. The collection of documents is a wide-ranging review of the problem and ways of addressing it across countries and types of institution. While identifying a lack of data and consistency in definitions across the European Higher Education Area, the report listed useful practices and case studies on policies and practices to improve student success.

The report identified Denmark, Norway, the Netherlands and England as countries with good practices – though evidence was not particularly persuasive of this selection. Among the policy settings that the report found to be effective in the four countries were:

- a clear and precise definition of study success
- a careful selection of policy instruments pursuing study success
- stimulation of institutional responsibility for study success, not least through carefully designed funding systems
- systematic monitoring and analysis of institutional accomplishments, allowing for benchmarking and exchange of good practice.

⁶⁵ Van Barneveld, A et al 2012, *Analytics in Higher Education: Establishing a Common Language*, <http://net.educause.edu/ir/library/pdf/ELI3026.pdf> viewed 21 March 2017.

⁶⁶ John P, Campbell, et al 2007 *Academic Analytics: A New Tool for A New Era* <http://net.educause.edu/ir/library/pdf/erm0742.pdf> accessed 21 March 2017.

⁶⁷ EvoLLLution 2017, *Incentivizing summer enrollments to drive retention and completion*, <http://evollution.com/attracting-students/retention/incentivizing-summer-enrollments-to-drive-retention-and-completion/> viewed 7 March 2017.

⁶⁸ Educause, *Breakthrough models for college completion*, <https://net.educause.edu/ir/library/pdf/NG1233.pdf> viewed 26 April 2017.

⁶⁹ European Union Commission 2015, *Dropout and Completion in Higher Education in Europe*, Luxembourg, http://ec.europa.eu/dgs/education_culture/repository/education/library/study/2015/dropout-completion-he_en.pdf viewed on 26 April 2017.

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At an institutional level, the report argued that the following practices were promising:

- matching students and study programs. While matching is less of an issue in selective systems of higher education, some institutions in less selective systems have launched a number of initiatives to provide students with a sense of the program before admission
- monitoring student attendance and progression. Research has shown that not all students have the same risk of dropping-out and individual and social characteristics of the student play a role in study success.
- facilitating social integration and student engagement. While many higher education institutions throughout Europe have established special welcome programs for students, some institutions have taken these initiatives one step further and established systems for personal tutoring and peer-mentoring among students, to stimulate to a sense of belonging and create engagement.

Students entering higher education may be unfamiliar with how study programs are organised and how the curriculum is designed. To assist and facilitate student learning, some institutions have developed new curriculum designs, structuring the learning process through the use of new technology, seminars and mandatory activities. A key idea behind several of these initiatives is the closer alignment of program objectives, teaching and learning activities, and examination and assessment of students.

The report noted a number of teaching and learning interventions that improved retention and completion. Curriculum redesign that reduced the number of choices students had to make was one identified approach (Coventry University). Notably, Coventry also passed regulations making on-time submission of work mandatory: late submissions receive zero marks and no exam re-sits are allowed for non-compliant students. Another approach was allowing teaching staff to request professional training from a pedagogical and didactic centre (learning and teaching unit) from one hour to several weeks⁷⁰. At some universities (Norwegian University of Science and Technology, Hedmark, Utrecht) there are mandatory courses in university pedagogy for teaching staff.

A separate 2010 study⁷¹ from the Netherlands revealed that time-for-self-study significantly improved retention and completion. It also found that “... in the curricula employing limited lecturing considerable energy was spent in supporting self-study activities of students and preventing postponement of learning.”

⁷⁰ European Union Commission 2015, *Dropout and Completion in Higher Education in Europe*, Luxembourg, http://ec.europa.eu/dgs/education_culture/repository/education/library/study/2015/dropout-completion-he_en.pdf viewed on 26 April 2017.

⁷¹ Schmidt, H, et al 2010, ‘Learning more by being taught less: a “time-for-self-study” theory explaining curricular effects on graduation rate and study duration’, *Higher Education*, 60.

Regulation

The Higher Education Standards Framework (Threshold Standards) outlines the requirements for the provision of higher education in or from Australia by higher education providers registered under the *Tertiary Education Quality and Standards Agency Act 2011* (TEQSA Act).

The Panel emphasises that TEQSA already possesses a clear mandate to oversight student attrition, retention and completion. A number of clauses explicitly require providers to ensure student success through good teaching and learning and the provision of support services. For instance, section 1.3 of the Threshold Standards, Orientation and Progression includes a number of clauses to support student success, requiring that:

2. *Specific strategies support transition, including:*
 - a. *assessing the needs and preparedness of individual students and cohorts*
 - b. *undertaking early assessment or review that provides formative feedback on academic progress and is able to identify needs for additional support, and*
 - c. *providing access to informed advice and timely referral to academic or other support.*
4. *Processes that identify students at risk of unsatisfactory progress and provide specific support are implemented across all courses of study.*
5. *Trends in rates of retention, progression and completion of student cohorts through courses of study are monitored to enable review and improvement.*
6. *Students have equivalent opportunities for successful transition into and progression through their course of study, irrespective of their educational background, entry pathway, mode or place of study.*

A key factor influencing a student to stay or leave is the design of courses. Standard 3.1.2 requires that:

- The content and learning activities of each course of study engage with advanced knowledge and inquiry consistent with the level of study and the expected learning outcomes, including:*
- a. *current knowledge and scholarship in relevant academic disciplines*
 - b. *study of the underlying theoretical and conceptual frameworks of the academic disciplines or fields of education or research represented in the course, and*
 - c. *emerging concepts that are informed by recent scholarship, current research findings and, where applicable, advances in practice.*

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The Standards also require that teaching and learning activities are arranged to foster progressive and coherent achievement of expected learning outcomes throughout each course of study (3.1.3) and that each course of study is designed to enable achievement of expected learning outcomes regardless of a student's place of study or the mode of delivery (3.1.4).

Standard 5.3.4 also requires that:

Review and improvement activities include regular external referencing of the success of student cohorts against comparable courses of study, including:

a. analyses of progression rates, attrition rates, completion times and rates and, where applicable, comparing different locations of delivery.

Although only one of many factors influencing attrition, clear information for students about the provider and the courses offered is important. The Standards require that representation of the higher education provider, its educational offerings and charges, whether directly or through agents or other parties, is accurate and not misleading (Standard 7.1.1).

In addition, the Standards require that information about admission requirements be transparent and that providers make available:

Information to assist in decisions about courses or units of study, including the course design, prerequisites, assumed knowledge, when and where courses/units are offered, application dates, arrangements for recognition of prior learning, standing credit transfer arrangements, pathways to employment and eligibility for registration to practise where applicable (Standard 7.2.2.a).

In its 2016 report the Panel recommended TEQSA should have an active role in monitoring compliance with guidance to the sector on transparency in higher education admissions, complementing the regular cycle of assessing applications for provider re-registration. The Panel also recommended that TEQSA draft a Guidance Note to providers, canvassing best practice in providing clear information on admissions processes.

These recommendations were accepted by Government and, as mentioned previously, as part of the 2017-18 higher education Budget, TEQSA will be provided with \$3.3 million over four years to work with the higher education sector to implement these recommendations.

For the purposes of this process, the Panel seeks the sector's views on whether TEQSA should have more powers to ensure compliance with the Higher Education Standards Framework in regards to student retention completion and success. Is a specific guidance note necessary? Is further TEQSA intervention required with providers that are deemed to pose greatest risk of having a high level of students who will not complete their studies?

Summary

This paper has suggested strategies and interventions that have a positive impact on student retention, completion and success. However, the empirical evidence is weak. The Panel welcomes your views on what works, what does not work, how is it possible to measure the difference, and what factors account for success?

Below is a list of key interventions that emerge from a literature review of student success. You may not agree that these are significant or believe that other matters are of greater consequence. Please let us know.

Prior to entry

- Raise the aspirations of prospective students through outreach and early intervention
- Provide informed career advice from as early as primary school
- Ensure consistent, comparable information allows prospective students to make informed decisions

Institutional culture

- A healthy university culture that embraces diversity and flexibility
- A supportive university learning environment that puts the student first
- A culture that reinforces the importance of student success
- A strategic plan that includes retention targets
- An institutional retention strategy which includes procedures for the re-engagement of students who have withdrawn from higher education
- A clear student voice

Teaching and learning

- More senior academic staff
- High teacher quality and teacher ability
- A focus on effective learning and teaching strategies
- An early assessment task prior to the student withdrawal census date
- Sharing best practice across the sector
- A willingness to offer nested courses

Support services

- Use data generated at enrolment and through learning analytics to make effective interventions to support at risk students
- High quality student support services (personal, financial, academic)
- Targeted and well communicated student support strategies
- Online support services
- Peer mentoring

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Accountability

- Collect exit data on why students have withdrawn from study
- Hold institutions to account for entry standards and student outcomes.

How to provide feedback

The Higher Education Standards Panel welcomes input to its consideration of these matters. [Appendix B](#) lists the current Panel members.

You may wish to address the questions identified in the paper when submitting your response.

Input to the Panel's consideration should be sent **by close of business Friday 7 July 2017** to:

highered@education.gov.au

Or

Higher Education Standards Panel

C/o: Department of Education and Training

C50MA7

GPO Box 9880

Canberra ACT 2601

Attention: Higher Education Group

Appendix A – Terms of Reference

The Minister for Education and Training, Senator the Hon Simon Birmingham, wrote to the Panel chair on 24 November 2016, thanking the Panel for its work on admissions transparency and commissioning further work on completions and attrition.

The terms of reference posed by the Minister are to identify:

- the trends and factors driving completions and attrition
- the adequacy of existing data on completions and attritions and improvements that can enhance transparency and institutional accountability
- strategies institutions can pursue to support student success and course completion in higher education
- ways in which the identification of students at risk of non-completion and the adoption of evidence-based support strategies to maximise their opportunity to succeed, can be systematically embedded in provider practice.

Appendix B – Higher Education Standards Panel Membership

The Higher Education Standards Panel is a legislative advisory body under the *Tertiary Education Quality and Standards Agency Act (2011)* with responsibility related to Australia's Higher Education Standards.

The current Higher Education Standards Panel members are:

Chair:

Professor Peter Shergold AC

Members:

Professor Greg Craven AO

Dr Krystal Evans

The Hon Phil Honeywood

Emeritus Professor Alan Robson AO, CitWA

Ms Karen Thomas

Observers:

Professor Ian O'Connor

Dr Don Owers AM

Appendix C – Attrition, Retention, Success and Completion Data

To access [Appendix C](https://www.education.gov.au/node/15296), go to: <https://www.education.gov.au/node/15296>

Appendix D – Technical Appendix: Regression analysis

Research suggests student attrition is the result of a mix of personal and education related factors. While institutions may have limited ability to influence personal factors, for example, through student support, they have greater scope to influence education related factors impacting on attrition.

Measuring the influence of institution on attrition is confounded by student characteristics. For example, inspection of adjusted attrition rates in Table A1 (a repeat of Table 10 for ease of exposition) shows many institutions with high attrition also tend to have a high proportion of external students. On the other hand, many institutions with lower attrition tend to have selective intakes of more academically able students. Regression techniques permit calculation of ‘modified’ attrition rates for each institution to allow for the influence of student characteristics. For example, knowing external students have higher attrition, a benchmark is calculated for external attrition and the difference between the actual result and the benchmark can be identified as the institutional effect. In effect, institutions are on a ‘level playing field’. However, there is a caveat that regression techniques fail to capture the influence of many other factors that impact on attrition such as motivation and resilience. Usually these factors are not readily measured and hence not captured by regression models.

Table A1 shows ‘modified for student distribution’ attrition rates for domestic bachelor commencing students for all institutions in receipt of Commonwealth Grant Scheme (CGS) funding. This includes all 37 Table A universities, one Table B university, the University of Notre Dame Australia and, six non-university higher education providers (NUHEPs). ‘Modified’ institutional attrition rates are calculated using the standard Ordinary Least Squares (OLS) technique⁷² and also the logit estimation technique which acknowledges the discrete nature of attrition, that is, a student is either attrited or not attrited. In more technical terms, logit estimation is a closer approximation to the actual attrition behaviour of individual students where attrition takes the value of 1 and non-attrition takes a value of 0.

Controlling for student characteristics certainly makes a difference, as shown by Table A1. Institutions with low adjusted attrition rates generally have higher ‘modified’ attrition rates while institutions with high adjusted attrition rates generally have lower ‘modified’ attrition rates. Controlling for student characteristics reduces variation in institutional attrition rates by just under half. The standard deviation of adjusted institutional attrition rates is 7.5 percentage points which reduces to 4.4 percentage points for the OLS method and 4.3 percentage points for the logit method, as shown by Table A1.

⁷² This approach follows that taken in *Characteristics and Performance Indicators of Australian Higher Education Institutions, 2000*. Where the dependent variable lies within the range of 0.1 to 0.9, as is the case with the attrition rate, then Ordinary Least Squares estimates will give broadly similar results to those generated by logit or probit estimation techniques.

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However, it is interesting to observe, notwithstanding controlling for student characteristics, that institutions with a low adjusted attrition rate still have 'modified' attrition rates that are below average. Conversely, institutions with high adjusted attrition rates still have 'modified' attrition rates that are above average. Controlling for student characteristics appears to make very little difference to the relative performance of institutions in terms of measured attrition rates. The rank correlation coefficient between pairwise comparisons of adjusted, OLS and logit estimates of institutional attrition rates are very high at around 0.90 or higher, as shown by Table A2. While institutions are keen to ensure their mission is reflected, measuring the relative performance of institutions using adjusted attrition rates may be sufficient, avoiding a descent into unresolvable technical arguments.

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Table A1: Adjusted and ‘modified for student distribution’ institutional attrition rates, domestic bachelor commencing students, 2014, per cent

Institution	Adjusted attrition rate	OLS ‘modified’ attrition rate	Logit ‘modified’ attrition rate
The University of Melbourne	3.7	8.6	5.3
University of New South Wales	4.8	9.2	5.9
The University of Sydney	5.9	10.3	7.2
Monash University	6.5	11.8	8.8
The Australian National University	7.3	10.1	7.7
The University of Western Australia	7.7	12.7	10.6
University of Technology Sydney	7.7	10.0	8.0
The University of Notre Dame Australia	9.5	10.4	8.6
Macquarie University	9.7	11.7	9.9
The University of Queensland	9.9	14.3	12.4
RMIT University	10.3	13.2	11.0
University of Wollongong	10.6	12.0	10.0
The University of Adelaide	11.6	14.8	13.1
La Trobe University	11.6	13.7	11.3
Queensland University of Technology	12.0	14.2	12.3
Western Sydney University	14.0	13.4	11.7
Curtin University of Technology	14.1	14.3	12.6
Deakin University	14.4	13.7	11.8
University of Newcastle	14.5	15.1	13.0
Avondale College of Higher Education	15.3	14.3	12.2
Australian Catholic University	15.3	15.8	13.8
Griffith University	16.0	17.3	15.2
University of South Australia	16.1	16.3	14.5
Flinders University of South Australia	17.1	17.8	15.8
University of Canberra	17.3	17.6	15.6
Murdoch University	18.7	16.5	14.4
James Cook University	19.0	20.1	18.3
Victoria University	19.5	18.1	15.6
University of the Sunshine Coast	19.9	20.0	17.9
Edith Cowan University	20.7	17.8	15.6
Eastern College Australia Inc	21.9	13.9	11.5
University of Southern Queensland	22.2	16.6	15.3
University of New England	22.6	15.1	13.8
Charles Sturt University	22.7	15.2	13.2
Federation University Australia	23.3	21.3	18.3
Central Queensland University	23.9	18.9	17.0
Southern Cross University	24.1	20.5	17.8
Christian Heritage College	24.4	21.8	19.1
Swinburne University of Technology	24.7	16.8	14.4
Holmesglen Institute of TAFE	25.8	23.5	22.9
Charles Darwin University	26.1	18.7	16.5
Tabor Adelaide	27.4	18.9	15.3
Melbourne Polytechnic	28.1	24.5	20.8
University of Tasmania	37.7	30.2	25.4
Standard deviation (percentage points)	7.5	4.4	4.3

Table A2: Rank correlation coefficients of institutional attrition rates

	Adjusted	OLS	Logit
Adjusted		0.90	0.89
OLS			0.99
Logit			

Table A3 (a repeat of Table 11 for ease of exposition) shows the influence of student characteristics on attrition, measured using the OLS technique. The full model, including all the student characteristics listed in Table A3, explained 22.55 per cent of the variation in the attrition rate (adjusted R^2). There are two points to note about this result. First, the relatively low proportion of variance explained by the full model is not uncommon in cross-sectional models such as the attrition rate analysis presented here. Second, given the relatively low proportion of variance explained, this suggests there are likely to be many other factors not captured by the model that might account for attrition. As noted above, student traits such as motivation and resilience, not measured by the model, might be thought to contribute to attrition.

The approach taken here is a series of bivariate linear regressions to examine the relationship between each of the explanatory variables and the attrition rate. This shows that institution attended has the largest influence on attrition over all other variables, explaining 18.83 per cent of the variation in attrition. The second largest factor is type of attendance, explaining 4.94 per cent of the variation in attrition. That is, part-time students are more likely to withdraw from their studies than are full-time students. The third most important factor is mode of attendance, explaining 3.12 per cent of the variation in attrition. That is, external students are more likely to withdraw from their studies than are internal or multi-modal students.

It is important to note that Table A3 only shows bivariate relationships and therefore may be overstating the strength of the relationship between particular factors and attrition. For example, it is known that part-time students are more likely to study externally and therefore some of the variation in attrition explained by type of attendance might actually be accounted for by mode of attendance, and vice-versa. Thus the results shown in Table A3 are likely to represent the ‘upper bound’ of the influence of each factor on attrition. This is also the reason that the sum of the adjusted R^2 from the bivariate linear regressions shown in Table A3 is greater than the adjusted R^2 of the full model (22.55 per cent).

A student’s basis of admission including their ATAR score or other basis of admission such as prior higher education experience or mature age entry, for example, explains 2.51 per cent of the variation in attrition. First, basis of admission or ATAR represents or explains only a small part of the attrition story, suggesting there are many other factors that contribute to whether a student continues on with their degree. Second, basis of admission is less important than institution, type of attendance, mode of attendance or age group in explaining attrition. Third, basis of admission appears more important than other factors such as field of education, socio-economic status, Indigenous status, non-english speaking background or gender in accounting for attrition.

Table A3: Ordinary Least Squares linear regression analysis (full model and bivariate linear regressions by student characteristics) for 2014 attrition rate of domestic bachelor commencing students

Student Characteristic	Adjusted R ² (variation explained), %
Institution	18.83
Type of attendance (full-time, part-time)	4.94
Mode of attendance (internal/external/multi-modal)	3.12
Age group (<20, 20-24, 25+ years)	2.66
Basis of admission (ATAR group, higher education, mature age etc)	2.51
Field of education (narrow field of education)	1.49
Socio-economic status (SES)	0.29
Indigenous	0.14
Non English Speaking Background	0.08
Gender	0.01
Full model including above variables	22.55%

Methodology

The datasets used for the analysis were from the Higher Education Student Data Collection as can be found in Table A4 below.

Table A4: Datasets used in attrition analysis

Year	Enrol	Load	Completions
2014	X	X	X
2015	X		X

To obtain the population used for the attrition rate analysis, the following filters were applied. Note the SAS code used to filter the data is contained in brackets.

For the dataset of commencing students in 2014:

- Commencing students (E922 = 1)
- Onshore students for commencing year, that is students term location was Australian or unknown or the student studied at an Australian campus (substr(E319,1,1) = "A" or "X" OR e459 = 1)
- Domestic students (e358 in (1,2,3,8))
- Bachelor courses (e310 in (8,9,10))
- One record per student for commencing year – being the major course in cases where there are more than one (E331 in (1,2))
- No records from Open Learning Universities in commencing year (if E306=3037 then delete)
- Providers currently receiving CGS funding

For the datasets to determine retained or completed students in 2015:

- Any provider for determination of attrition in the following year

A student is counted as attrited if they were a commencing onshore domestic bachelor student in 2014 in a provider currently receiving CGS cluster but in 2015 they had neither completed their course, were continuing their course nor enrolled in any other higher education course. The attrition rate is then calculated as follows.

$$\text{Attrition rate} = \frac{\text{Number of students in denominator who neither complete nor re – enrol in 2015}}{\text{Number of commencing onshore domestic bachelor students in 2014}}$$

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The variables included in the OLS and logit regression analysis were:

- Gender
- Mode of study (internal/mixed mode/external)
- Intensity of studies (full time/part-time)
- Socioeconomic status (low/medium/high)
- Age group (<20, 20-24 years, 25+ years)
- Indigenous status
- NESB status
- Combined Tertiary entrance score and Basis of admission (ATAR group, higher education, mature age etc)
- Narrow field of education
- Institution

The regression analyses answer the question:

'What would the estimated probability of first-year attrition be if the characteristics of the students, course and institution only differed for the characteristic in question, and the rest of the characteristics were the same as the national average?'

Therefore, the institution estimates answer the question:

'What would the estimated institution first-year attrition rate be if the student cohort was the same as the national average?'

The OLS regression model used to estimate attrition probabilities was as follows:

$$\begin{aligned} \text{Attrition}_{ijk} = & \beta_{\text{male}} \text{male} + \beta_{\text{mixedmode}} \text{mixed mode} + \beta_{\text{external}} \text{external} + \beta_{PT} \text{part - time} \\ & + \beta_{\text{lowSES}} \text{low SES} + \beta_{\text{highSES}} \text{high SES} + \beta_{\text{age20-24}} \text{age}_{20-24} + \beta_{\text{age25+}} \text{age}_{25+} \\ & + \beta_{\text{ATSI}} \text{ATSI} + \beta_{\text{NESB}} \text{NESB} + \beta_{\text{ATAR}_{30-60}} \text{ATAR}_{30-60} + \beta_{\text{ATAR}_{61-70}} \text{ATAR}_{61-70} \\ & + \beta_{\text{ATAR}_{71-80}} \text{ATAR}_{71-80} + \beta_{\text{ATAR}_{81-90}} \text{ATAR}_{81-90} + \beta_{\text{ATAR}_{91-100}} \text{ATAR}_{91-100} \\ & + \beta_{\text{SecEdNoATAR}} \text{SecEdNoATAR} + \beta_{\text{VETaward}} \text{VETaward} + \beta_{\text{ProfQual}} \text{ProfQual} \\ & + \beta_{\text{MatureAge}} \text{MatureAge} + \beta_{\text{OtherBasis}} \text{OtherBasisAdm} + \beta_{\text{nFoE}_j} \text{nFoE}_j \\ & + \beta_{\text{Inst}_k} \text{Institution}_k \end{aligned}$$

Where

Attrition_{ijk} = probability of attrition for student i in narrow field of education j in institution k

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While the logit regression model used was:

$$\ln\left(\frac{\text{Attrition}_{ijk}}{1 - \text{Attrition}_{ijk}}\right) = \beta_{\text{male}} \text{male} + \beta_{\text{mixedmode}} \text{mixed mode} + \beta_{\text{external}} \text{external} + \beta_{\text{PT}} \text{part - time} \\ + \beta_{\text{lowSES}} \text{low SES} + \beta_{\text{highSES}} \text{high SES} + \beta_{\text{age20-24}} \text{age}_{20-24} + \beta_{\text{age25+}} \text{age}_{25+} \\ + \beta_{\text{ATSI}} \text{ATSI} + \beta_{\text{NESB}} \text{NESB} + \beta_{\text{ATAR}_{30-69}} \text{ATAR}_{30-69} + \beta_{\text{ATAR}_{61-70}} \text{ATAR}_{61-70} \\ + \beta_{\text{ATAR}_{71-80}} \text{ATAR}_{71-80} + \beta_{\text{ATAR}_{81-90}} \text{ATAR}_{81-90} + \beta_{\text{ATAR}_{91-100}} \text{ATAR}_{91-100} \\ + \beta_{\text{SecEdNoATAR}} \text{SecEdNoATAR} + \beta_{\text{VETaward}} \text{VETaward} + \beta_{\text{ProfQual}} \text{ProfQual} \\ + \beta_{\text{MatureAge}} \text{MatureAge} + \beta_{\text{OtherBasis}} \text{OtherBasisAdm} + \beta_{\text{nFoE}_j} \text{nFoE}_j \\ + \beta_{\text{Inst}_k} \text{Institution}_k$$

Where

Attrition_{ijk} = probability of attrition for student i in narrow field of education j in institution k