NCSEHE | National Centre for Student Equity in Higher Education

Curtin University

INFORMING POLICY AND PRACTICE

2014 Student Equity in Higher Education Research Grants Program Projects

Make tomorrow better.

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NCSEHE
National Centre for Student Equity in Higher Education

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Contents

Foreword

Professor Sue Trinidad & Professor John Phillimore – NCSEHE Program Leaders

Higher education confers significant individual benefits in terms of personal development, career opportunities and lifetime learning. In addition, higher education is key to the social well-being and economic prosperity of Australia. Providing access to higher levels of education to people from all backgrounds enhances social inclusion and reduces social and economic disadvantage. In the interests of individuals and for the nation, higher education equity for all capable people must be seen as an objective of the system.

There has been positive but limited change in access, participation and completion rates for equity students over time. Even with the recent expansion in overall participation rates polarisation remains. This experience is shared internationally and reveals that further data and knowledge is required so that the issues facing equity students can be fully understood. The policy framework needed to achieve the required change will not result from a single policy decision or funding program. The issues facing equity students are multi-faceted and effective policy and practice will come from an understanding of the situations students face and the impact of current policy in higher education as well as other social and economic policies.

In pursuing its objective of improving higher education participation and success for marginalised and disadvantaged people, the National Centre for Student Equity in Higher Education (NCSEHE) funds equity policy and planning research to provide evidence of the impact of policy on equity outcomes. Funding of $1,084,147 has been made available by the NCSEHE during 2014 and 2015 to fund projects at Australian universities and other research organisations.

Informing Policy and Practice: 2014 Student Equity in Higher Education Research Grants Program Projects, reports on the 12 research projects funded under the 2014 grants program and acts as a conduit for discussion on how the research findings may inform student equity policy and practice.

The research reports address different, but related, aspects of higher education student equity and bring evidence-based investigation to the consideration of policy and practice in student equity. This research highlights the complexity of the issues the researchers are attempting to unravel, and that simple statements arising from analysis need to be carefully considered.

The results confirm that more needs to be done to ensure that capable people are not prevented from accessing and completing higher education in pursuit of personal and career objectives.

The NCSEHE welcomes the reports on the 2014 research projects. Funding for the 2015 research projects has been allocated and the work to improve quality information continues. The new information and insights will contribute to public dialogue on equity in higher education and assist the work of the NCSEHE in closing the loop between equity research, policy and practice.

Preface

Ms Lesley Smith – Higher Education Consultant

At one time society was organised according to hereditary privilege. Under this arrangement the demographic and economic environment into which a person was born determined their experience of the economic, social and political systems in place, and their access to resources and opportunities. An individual's talents, aspirations, and endeavours made little difference to their life prospects or achievements. Times have changed and modern Australia seeks to provide opportunities for everyone to create their own future unrestricted by the circumstances into which they were born.

Higher education plays an important role in unlocking human potential. University education results in a positive return on investment for both the public and the individual but inequalities in education reinforce both inter- and intra-generational inequalities across society. Understanding the drivers and issues for inequality in higher education access and completion is essential to designing effective interventions.

By connecting higher education student equity policy, research and practice the NCSEHE improves participation and success for marginalised and disadvantaged people. The 2014 research grants program contributes to the understanding of the performance and experience of equity students and informs discussions about how student equity policy and programs should be developed in the future. The broad aims for higher education for equity students can be achieved by increasing the pool of capable students that present for university entrance, providing advice about higher education options and pathways, and supporting enrolled students through to successful completion of their programs.

Many students deal with circumstances during their primary and secondary education that make it difficult for them achieve university entrance requirements. The Flinders University report, *Educational Outcomes of Young Indigenous Australians*, found that while there are substantial differences between the academic performance at age 15 of Indigenous and non-Indigenous students, there is no significant difference between subsequent educational outcomes. The study found the greatest scope for improvement in educational outcomes for Indigenous students comes from improved educational performance during the early and middle levels of school. Programs that target later years are successful in preventing further educational disadvantage but are not effective in remediating earlier disadvantage.

In other research on education for young Indigenous people, CQUniversity Australia explored current practices dealing with Indigenous enabling courses, particularly in the context of regional, dual-sector universities in *Path+Ways: Towards best practice bridging and Indigenous participation through regional dual-sector universities*. The aim of the project was to develop a best-practice framework for Indigenous enabling education programs, emphasising regional and comprehensive education settings by exploring how Indigenous learning journeys can respect and grow cultural identity, while developing study skills. Strengthening of enabling education for Indigenous Australians is an effective means of offering Indigenous students the best chance of success.

Preface (continued)

The La Trobe University study, *Out of care, into higher education: Raising higher education access and achievement of care leavers*, mapped the higher education sector in relation to care leavers – young people who spent time in out-of home-care before the age of 18. While over-represented in established equity groups, care leavers are rarely discussed in programs to improve university access and participation. Care leavers rarely transition to higher education. Reforms are required including improved data collection, policy reform, and an overarching need for cultural change.

There are individual and societal implications when the opportunity for university education is missed. In addition to unrealised social and economic benefits, the individual misses the opportunity to develop life-long learning proficiency and the impact this skill has on personal resilience. These studies identify opportunities for improvement so that a greater proportion of equity students are able to access university study.

Information and advice during the final years of secondary school assists students to make good choices about how they want to access the higher education system and what path they want to pursue to achieve their goals. The University of Newcastle report, *Choosing university: The impact of schools and schooling*, found that less than a third of the students in low SES schools intend to go to university in the year immediately following school and a fifth were unsure of their educational intentions. University aspirants seek information about career and study options from a broad range of sources compared to non-university aspirants. The student-teacher relationship is crucial to students' experience of and engagement with schooling. The report provides guidance to schools on actions they might implement to improve higher education participation and success.

The Deakin University report, *Student Preferences for Bachelor Degrees at TAFE: The socio-spatial influence of schools*, found that a student who includes a preference for a TAFE degree is most likely to have a relatively low ATAR and come from a high SES government school in a metropolitan area. TAFE bachelor degrees are a second chance option for students from high SES backgrounds with low ATARs as well as being a second chance institution for disadvantaged students. These results demonstrate the operation of the post-secondary education market where informed students make choices that best match their situations and intentions.

The La Trobe University report, *Are Low SES Students Disadvantaged in the University Application Process?*, investigated the sources of inequalities in university participation by focusing on the university application and admission process. Researchers developed an economic model to understand student behaviour and decisions around university applications. There are advantages to high SES students in terms of their understanding of the university application process and how they respond to new information. Conversely, low SES students come from backgrounds where families have less experience and familiarity with higher education and the university application process, leaving them at a disadvantage when informed actions and decisions are required. The research suggests that support should be provided to low SES students towards the end of secondary school to improve student understanding of the university application process and therefore participation in higher education. This new insight reveals an opportunity for intervention in addition to improving actual secondary education achievements for equity students. The intention to choose university study is influenced by a range of factors both inside and outside the school experience. These studies point to the need to take advantage of the important teacher-student relationship and to continue to investigate new ways of engaging students and their influencers in meaningful dialogue about higher education and career options.

Once enrolled at university, equity students may require support to successfully complete their studies. The University of Newcastle study, *Equity Groups and Predictors of Academic Success in Higher Education*, investigated the influence of first in family (FiF) status, socio-economic and demographic contributors to the academic outcomes of students enrolled in a large regional Australian university. While there were no differences between FiF and non-FiF enrolment in degree type, year level of study or hours attended, FiF students scored significantly lower than non-FiF students on coping with the academic workload, intention to continue with the course, and academic skills confidence. Further research is needed to explore the unique challenges FiF students face and to identify the tailored support they need to help overcome them. In another study on FiF university students, a collaborative research project undertaken by the University of South Australia, Flinders University and the University of Adelaide, *Exploring the Experience of being First in Family*, articulates the transformative possibilities of entering higher education, provides practical advice for FiF students on how to negotiate university life successfully, and offers guidelines for academics, university managers and policymakers on how to improve. FiF students lack the 'hot knowledge' that non-FiF students generally acquire from parents or older siblings who have previously attended university such as how to navigate various university systems and procedures and information about the support services available to them.

The University of Southern Queensland report, *Resilience/ Thriving in Post-Secondary Students with Disabilities: An Exploratory Study*, explored and described the lived experiences of students with a self-disclosed disability enrolled at a regional university in Australia. The relationship between academic achievement, resilience, career optimism, academic satisfaction, and wellbeing is not direct. An indirect influence of these factors on academic outcomes may occur in several ways. Given the increasing number of students with psychological/emotional disabilities entering post-secondary settings, universities should re-examine their disability support policies and services as traditional disability support service delivery may no longer be effective as more students choose online and off-campus study.

The National Centre for Vocational Education Research study, *Do individual background characteristics influence tertiary completion rates?*, compared differences in Australian university course completion probabilities for low SES students to determine whether their SES status impacted their chances of completing higher education courses. Socio-economic status continues to play an important part in university completions with low SES students having lower completion rates than their higher SES peers. Students with lower academic achievements at age 15 are further disadvantaged if they are also from a low SES background, whereas higher academic achievement reduces the impact of being from low SES backgrounds. While more students with low SES backgrounds are attending and completing university they are not completing their degrees at the same rate as their high-SES counterparts. According to the *Completing university in a growing sector: is equity an issue?* research completed by the Australian Council for Educational Research, those Bachelor-degree students from a low socio-economic status background, Indigenous background, or regional or remote location are less likely to complete their degree. Low SES students are more likely than their medium or high SES peers to drop out during their first year or later in their degree. Students from equity groups are more likely than average to be in more than one equity category, and also face a higher prevalence of other characteristics linked to lower completions, including type and mode of attendance, age, gender and prior achievement.

Preface (continued)

Many equity students continue to face challenges in completing their degrees and require additional support, however, the great majority of the equity students who commenced their degrees in 2005 have now completed their studies and in 2015 are likely in the workforce or have proceeded to further study. For these students, their higher education will be key in allowing them to unhook themselves from the socio-economic situation into which they were born, realise their potential, and contribute to Australia's social and economic prosperity.

Policy decisions supported by evidence result in better outcomes. For equity students, evidence-based policy means valuable funding can be directed to the programs that have been proven to be most effective. More efficient program delivery means that more students can be supported with the available funds and waste can be avoided. Evidence-based decision-making relies on data being available and in a form that can support analysis. The *Understanding Evaluation for Equity Programs guide to effective program evaluation* developed by the Melbourne Centre for the Study of Higher Education is intended to help equity practitioners to develop evaluation strategies for their programs. The guide embeds evaluation in the good management of equity programs rather than for any imposed performance management structure. The data generated will provide feedback on the alignment of program aims, evaluation criteria, methods and outputs allowing for continuous improvement in program management. Capturing the intended and unintended outcomes of a program provides valuable feedback. Appropriate sharing of data will also allow comparisons between programs. Reliable data on program effectiveness and efficiency can place evidence-based decision-making at the heart of policy development for equity students. Significant improvements in access, participation and completion for equity students have proved difficult to achieve. Ensuring that funds are targeted to proven programs will improve our chances of achieving success.

While progress has been made on university access, participation and completion by disadvantaged people much remains to be achieved. The NCSEHE advocates an evidence-based approach to the further development of policy and programs for equity students and funds research to provide accurate and meaningful information to support decisions. The 2014 NCSEHE Research program will inform policy and practice decisions with the long term aim of ensuring that, no matter the circumstances into which a person is born, an individual's success in life will be determined by their talent, aspirations and endeavour.

LA TROBE UNIVERSITY

Out of care, into university

Raising higher education access and achievement of care leavers

Dr Andrew Harvey, Dr Patricia McNamara, Ms Lisa Andrewartha & Mr Michael Luckman

Around 40,000 children are estimated to require out-of-home care in Australia and this number has risen every year over the past decade (Australian Institute of Health and Welfare, 2014a). Young people up to 18 years who are unable to live with their birth families are placed in different forms of out-of-home care, including kinship care, foster care, residential care, family group homes, and independent living. People who spent time in out-of-home care before the age of 18 are subsequently referred to as care leavers when they transition out of the system (though there are numerous formal and informal definitions of care leaver and these are outlined in the Background section of this report).

Care leavers rarely transition to higher education. They are largely excluded from the level of education that brings the highest wage premiums and lifetime rewards. Despite their extremely low university participation rates, there is no national agenda for improvement. This research project was conducted by La Trobe University and funded through an external research grant provided by the National Centre for Student Equity in Higher Education (NCSEHE) at Curtin University. This report aims to provide the basis for such an agenda by highlighting the nature and extent of the problem, and suggesting practical solutions within both the education and community service sectors. Our research adopted a mixed methods approach and included: a literature review; an examination of national data sets; an online survey of public universities in Australia; and interviews with senior representatives from major out-of-home care service providers. We provide recommendations targeted to the Australian Government, state and territory governments, higher education institutions, and community service organisations.

Our findings reveal three major reforms that are required to improve the access and achievement of care leavers in higher education. First, the collection of nationally consistent data on higher education access and outcomes is essential. One of the reasons this problem is out of mind across the nation is that it is out of sight. Existing data on the education of Australians in out-of-home care is limited. Data are typically held at state or territory level; within human services departments; and only for minors (up to the age of 18 at best).

The Australian Institute of Health and Welfare (AIHW) has proposed a major project linking child protection data with National Assessment Program – Literacy and Numeracy (NAPLAN) data (Australian Institute of Health and Welfare, 2013b). However, despite these advances at primary and secondary school levels, there are no documented plans to collect educational data beyond the age of 18. This gap exists despite the stated priority of 'transitioning to independence' and an acknowledgement within documents supporting the National Framework for Protecting Australia's Children 2009 – 2020 that the transition period continues up to age 25 (FaHCSIA, 2010b, 2011). The latter developmental timeframe indeed appears more consistent with contemporary Australian experience of the same-age general population. Extending the Institute's remit to post-secondary level, and collecting out-of-home care status data at university enrolment level, would be valuable initiatives to begin building the evidence base.

Second, policy reform is required within both the education and community service sectors. Within the higher education sector, there is urgent need for greater recognition of this under-represented student group. The absence of higher education data collection at national level is partly related to

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This report provides a much needed analysis of the policy changes and strategies required to support this under reported and poorly supported equity sub group. The complexity of the layers of disadvantage experienced by vulnerable care leavers and the overrepresentation of Aboriginal and Torres Strait Islander People, are examined through a review of the literature and information from the education and community sectors. Also highlighted are the inadequacy of the data collection, national policy and research into the transition to university of leavers. The report findings provide the basis for reflection in relation to Government and institutional policy and practice. On a practical level, the recommendations and questions in the online survey used to gather data from universities (Appendix B), provide a guide to the policies, support structures, data collection and procedures that universities could introduce to support this group which rarely transitions to higher education. Given the concentration of educational and social disadvantage in specific localities, there is the immediate potential for institution specific strategies tailored to groups such as leavers who are under represented at the institution or that live in close proximity. The report is rich in policy and strategies ideas essential to effect change to access and achievement for people from care backgrounds.

the nature of the national student equity framework established in 1990, and partly to limited advocacy. The framework, *A Fair Chance for All*, identified six disadvantaged groups who were under-represented in higher education: people from socio-economically disadvantaged backgrounds; Aboriginal and Torres Strait Islander People; women, particularly in non-traditional courses and postgraduate study; people from non-English speaking backgrounds; people with disabilities; and people from rural and isolated areas.

The establishment of these six categories has proven both powerful and durable – university admissions policies and national funding have been directed to support the six groups, and no categories have been added to the framework since its foundation. While care leavers are often subsumed within the six broad categories, we believe that the extent and nature of their disadvantage requires tailored policies and specific data collection. Given the low number of care leavers in higher education, data could initially be collected by universities at application or enrolment. Broader reform of the national equity framework could also be considered. Separately, universities need to provide stronger and more transparent support to raise university aspirations and increase the recruitment, access, and achievement of care leavers.

Within the community service sector, further policy and legislative reform is required. Legislative reform is needed to support the transition of people from out-of-home care to adulthood. Current legislation at the level of state and territory jurisdictions does not typically mandate ongoing public support for care leavers once they have reached the age of 18. The lack of post-18 legislative support stands in contrast to the United Kingdom, whose reform program since 2000 is outlined within this report and has enabled care leavers to remain supported as they transition into higher education. The voices we captured from the community service sector were consistent with international research: care leavers require support beyond the age of 18. Equally, community service organisations need access to greater individualised data, and increased capacity to provide education and training to carers and the related workforce.

Finally, there is an overarching need for cultural change. The soft bigotry of low expectations is omnipresent for care leavers. Stakeholder voices, national research, and the international literature all reveal a group underestimated and overlooked by others. In some cases, even those closest to care leavers are either unaware of educational possibilities for them, or unable to explore these possibilities. For Indigenous care leavers, cultural challenges and responsibilities can be particularly acute, and intensive resources are required to support transitions. The rate of Indigenous children in out-of-home care is ten times the rate of non-Indigenous children (Australian Institute of Health and Welfare, 2014a) – providing educational opportunity and support to this group is critical.

Egalitarianism is an empty word if those most marginalised are denied access to the highest, and most profitable, level of education. A national policy for care leavers in higher education requires strengthening the evidence base, reshaping the equity policy framework, and reforming legislation and policy within both the higher education and community service sectors. Through these material reforms, a greater cultural change is possible.

● DISABILITY	○ INTERNATIONAL
○ FIRST IN FAMILY	● LOW SES
● INDIGENOUS	● REGIONAL

FULL REPORT: https://www.ncsehe.edu.au/publications/out-of-care-into-university-raising-higher-education-access-and-achievement-of-care-leavers/

Equity groups and predictors of academic success in higher education

Dr Jill Scevak, Dr Erica Southgate, Dr Mark Rubin, Ms Suzanne Macqueen, Dr Heather Douglas, Mr Paul Williams

Research studies in the United States of America identified differences between First-in-Family (FiF) and non-FiF students. There is contradictory evidence regarding differences in college achievement between FiF and non- FiF students in the USA. Some studies found no differences (Inman & Mayes, 1999; Strage, 1999) and other studies indicated lower GPAs for first-generation students (Martinez, Sher, Krull, & Wood, 2009; Pascarella et al., 2004).

○ DISABILITY	○ INTERNATIONAL
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Australian research on FIF university students is limited in number and in the scope of variables that may impact on achievement and university experience. The limited research on FIF students in the Australian context has covered aspects related to decision-making and enrolment patterns as well as attributions and indicators of success (Luzeckyj et al., 2011). These students were more likely to be enrolled in certain degrees (education, economics and science as opposed to law, medicine and engineering), be older, and come from a rural background.

The aim of this study was to investigate the influence of FiF status, socio-economic and demographic contributors to the academic outcomes of students enrolled in a large regional Australian university.

Key Findings

- FiF students were more likely to be female (69%) than non-FiF students (50%).
- FiF students were more likely to be older than non-FiF students.
- FiF and non-FiF students did not differ in entry pathways to university study.
- There were no significant differences between FiF and non-FiF students in full time or part time enrolment. Similarly there were no differences between FiF and non-FiF enrolment in degree type (Business/Commerce, Engineering/Construction Management, Sciences, Allied Health), year level of study (Year 1-4) or hours attended.
- Before enrolling in university studies FiF students knew

significantly fewer university students than non-FiF students

- FiF students differed significantly from non-FiF in their response to the question "How likely would it be for you to ask a lecturer or tutor for academic help?" FiF students were extremely unlikely to do this. FiF and non-FiF did not differ in their responses to ask a student for academic help. In addition FiF students were significantly less confident than non-FiF students in using Blackboard.
- FiF students worried significantly more about living and educational expenses than non-FiF students
- FiF students did not differ from non-FiF in number of hours enrolled in university study, number of hours spent in independent study approach to learning (surface/deep), seeking student help, degree satisfaction, integration into university and 1st Year GPA and 2nd Year GPA
- FiF students scored significantly lower than non-FiF students on coping with the academic workload, complexity of course material, intention to continue with the course, seeking resource help, academic skills confidence.

Dr Tim Pitman
NCSEHE Senior Research Fellow

This work sheds valuable light on the barriers faced by students who are the First-in-Family (FiF) to attend university. Perhaps due to FiF not being formally recognised as an Australian higher education equity group, research into these students, to date, has been limited. Scevak et al. provide equity practitioners, policymakers and researchers with important information about FiF students, who are also disproportionately represented in other indicators of social disadvantage, including parental occupation and socio-economic status. Critically, as the focus of this project is on the university experience, the findings are a timely reminder that policy and practice cannot afford to focus on higher education access, if it is to the detriment of higher education success. The finding that FiF students are less likely to seek support than other students, when they struggle academically, serves notice that social disadvantage is not left at the door when the student receives their offer to university.

FULL REPORT: https://www.ncsehe.edu.au/publications/equity-groups-and-predictors-of-academic-success-in-higher-education/

Choosing university

The impact of schools and schooling

Professor Jenny Gore, Associate Professor Kathryn Holmes, Professor Max Smith, Mr Andrew Lyell, Mr Hywel Ellis, Dr Leanne Fray

This project, *Choosing university*, sought to identify factors associated with schools and schooling that impact on students' aspirations to attend university. The schools identified for the study were NSW government secondary schools with low levels of socio-economic advantage (average ICSEA$_1$ 911). Students targeted for the study were primarily from low socio-economic status backgrounds.

Taking account of SES, Aboriginality, location, and sex, the *Choosing university* project examined:

- Patterns identifiable in the complex relationships between student background and their aspirations for university; and
- The extent to which and ways in which schools support students' aspirations for university.

The aim was to better understand barriers and enabling conditions over which schools have some control in order to provide insight into possible ways of improving the higher education participation and success of low SES and other marginalised students.

Data used in this study are drawn from 15 NSW government schools and take the form of: (1) surveys of secondary school students; (2) interviews with students from these schools identified as 'university aspirants', 'non-university aspirants', or 'undecided'; (3) interviews with some of their parents, teachers, principals, and school-based careers advisers; and (4) interviews with current university students who had attended the same schools for their secondary studies.

Major findings of this project were:

On choosing university:

1. From our sample of 832 students in 15 disadvantaged secondary schools, a substantial proportion, just over 40%, of the participating students intend to go to university although only 32% plan to go in the year immediately after school.

2. A further 21% of participating students were unsure of their educational intentions, while the remainder planned to complete their formal education at school or TAFE.

3. When examining their independent effect on intention to go to university, sex, SES, and prior achievement were all significantly related:
   a. A greater relative proportion of the female students in our sample indicated an intention to attend university than did male students.
   b. A greater relative proportion of high SES students in our sample indicated an intention to attend university than did low SES students.
   c. A greater relative proportion of students with high prior achievement indicated an intention to attend university than did students with low prior achievement.

4. When considered concurrently in relation to the impact on the intention to go to university, through regression analysis, sex and prior achievement were significant:
   a. Female students in this sample were 1.56 times more likely to indicate an intention to go to university than male students.
   b. Students in the top two prior achievement quartiles were more than three times as likely to indicate an intention to go to university than students in the lower two quartiles.

5. While the schools in this project were all below the national median level of social and economic advantage, participating students were from all four SES quartiles, although not in equal proportions. Although an independent effect was found for SES and nearly 70% of participating students perceived there to be financial barriers to attending university, SES was not significant when considered through the regression analysis, indicating the intersection of SES with other factors. Our results highlight the importance of: designing initiatives to support the participation and success of students from low SES backgrounds without 'essentialising' SES (that is, treating the category 'low SES' as homogeneous); and, taking account of sex and prior achievement and how these variables intersect to shape students' desires for higher education or otherwise.

6. The intention to go to university was related to students' perceptions of travel as a potential barrier, with university aspirants more likely to identify such barriers, possibly signalling their firmer intent to pursue a higher education pathway.

7. University aspirants were more likely to seek information about career and study options from a broad range of sources than non-university aspirants. They were more likely to speak to family and friends, use the internet, attend careers expos, and receive information from educational institutions.

8. In all analyses, Aboriginality and school location (metropolitan/provincial) were not found to be related to educational intention, despite the greater perception of travel barriers among students in provincial schools.

On the impact of schools and schooling:

9. A significant difference was found between participation rates for university aspirants and non-university aspirants in school-based careers activities, with university aspirants reporting higher levels of participation in university open days and careers expos, and more commonly searching online about careers and having received printed information about career and study options.

10. The regression analyses revealed that students in two of the participating schools were significantly more likely to aspire to university and significantly less likely to be undecided, signalling that variation between individual schools can matter for students' educational intentions. For one of these schools, close proximity to a university allowed students to integrate experiences on the university campus with their schooling. For the other, a purpose-built learning space for senior students designed to mimic the independent learning expected at university and TAFE, gave students a clearer sense of learning expectations in higher education. These features of the two schools may help to explain the greater proportion of university aspirants amongst their students.

11. All schools provided a wide range of subject options and pathways for their senior students and the general ethos in each school was supportive of student aspirations. However, interviews with students revealed some differences in student perceptions of school supports. While strong structural supports were in place in all schools, the student–teacher relationship appeared to be crucial in students' experience of and engagement in their schooling.

12. Given the strong relationship of academic achievement with students' intention to attend university, regardless of student SES, school efforts to improve student achievement are imperative for schools wishing to increase the participation of their students in higher education. These efforts could include improving the quality of teaching, offering flexible subject options, and enhancing student–teacher relationships. While schools are already working on these kinds of supports for students, their impact appears to be uneven among university aspirants, non-university aspirants, and students who are still deciding on their educational plans.

Mr Lee Pope
Manager Student Access,
Flinders University

The research by Professor Gore, et al, provides a valuable insight into the influence that schools, educators, peers and parents have on a young person's intention to undertake university studies. The research is a valuable resource for equity practitioners whose work focuses on students from low SES backgrounds in understanding the multiple barriers they face in making decisions regarding their educational futures.

The findings highlight a number of areas for possible improvement from a policy perspective, including:

- A need for greater congruence between Australian Government post-secondary objectives for young people and that of state government's as there appears to be a mismatch at times with the former favouring university education and the latter often favouring VET/Trade pathways. An illustration of greater links between VET and university, including the multiplicity of pathways and options available, may assist in this regard.

- Additional support, in particular financial, social and academic, for students from low SES backgrounds in recognition of often significant barriers faced in higher education attainment. Barriers may include a lack of cultural capital, financial constraints and distance (particularly for regional/rural students).

- Improve teacher education and selection to enable those educators with 'passion' to be a significant factor in the future choices of young people.

● DISABILITY	● INTERNATIONAL
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Footnote: 1 ICSEA is the Index of Community Socio-Educational Advantage created by the Australian Curriculum, Assessment and Reporting Authority (ACARA), which enables meaningful comparisons of NAPLAN test achievement by students in schools across Australia. See http://www.myschool.edu.au/AboutUs/Glossary/glossaryLink for more details.

FULL REPORT: https://www.ncsehe.edu.au/publications/choosing-university-the-impact-of-schools-and-schooling/

Understanding evaluation for equity programs

A guide to effective program evaluation

Dr Ryan Naylor

This guide is intended to help equity practitioners — particularly those who lack experience or confidence in program evaluation — to develop effective evaluation strategies for their programs. It is intended to complement existing institutional guidelines on evaluation, and acts as an initial introduction rather than a definitive guide to the subject.

Measuring the impact of equity programs is essential. Every program can benefit from having an evaluation plan, and evaluation should be a part of equity practitioners' normal business. Evaluation is an opportunity to highlight the strengths and innovations of a program, as well as to identify and address weaknesses. Its primary purpose is to help you maximize your program's effectiveness, not as an imposed performance management structure.

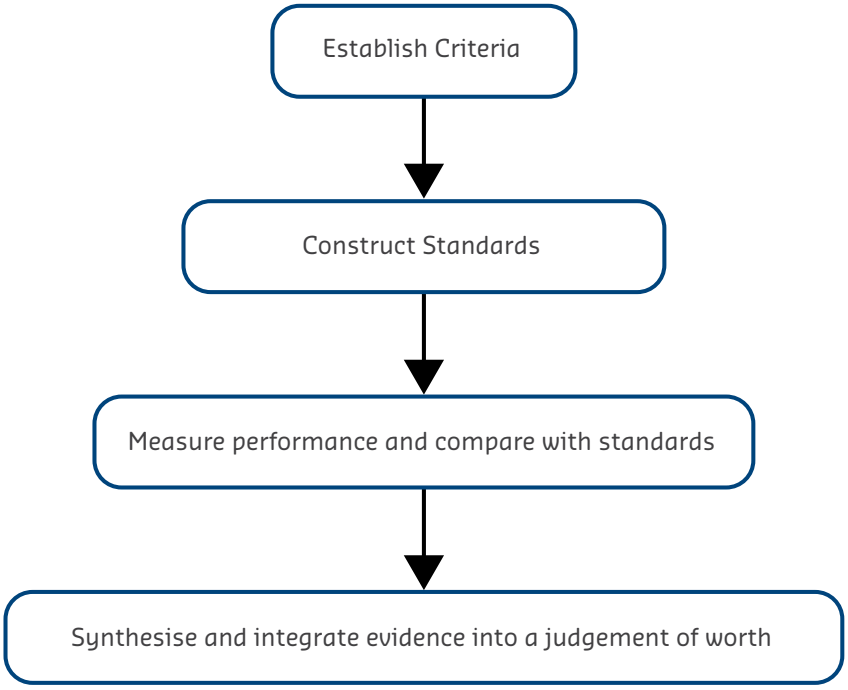
Evaluation involves gathering, reviewing and reflecting on information about your program. It follows a four step process, of establishing criteria; constructing standards; measuring performance and comparing with standards; and synthesising and integrating evidence into a judgement of worth. This same process applies whether you are evaluating a project plan, a pilot, or a fully operational project.

The most important aspect of evaluating a program is that it has clear, unambiguous and measurable aims and objectives. The program aims determine what evaluation questions are asked at each phase of the program's life, which evaluation methods are appropriate to gather evidence to answer those questions, and which indicators and measures should be captured as evidence.

Appropriate alignment between program aims, evaluation criteria, methods and evidence gathered is essential. Having a detailed evaluation plan can be really useful in any program, to ensure this alignment is achieved. There are no easy answers to evaluating equity programs with rigor and detail. Typically, using a mixed methods approach is the one most likely to provide a full understanding of an equity program.

Evaluation should not be a burden. A clear evaluation plan will ensure data is gathered methodically, at time-appropriate intervals, and without wasting time gathering unnecessary data. The purpose of this guide is not to insist that practitioners collect more information.

Equity programs will benefit from formal or informal evaluation throughout their lives. As programs mature, the sorts of evaluation questions being asked should change. Evaluation during the planning phase may strengthen a project by clarifying its aims and improving the alignment between its aims and design, or with institutional targets. It may also establish criteria and standards for evaluation during later phases. Monitoring the program during its operation ensures the program is achieving its aims, and is being delivered effectively and consistently across multiple sites or practitioners. Finally, evaluation during the summative phase seeks to establish which aspects of the program worked and why, and what its impact has been. To fully capture the impact of your project, examining both unintended and intended outcomes can be very useful.



This guide is divided into 3 major parts.

1. Introduction – How do you evaluate an equity program?

This section of the guide provides a brief description of the major concepts in evaluating equity programs, and how to design an evaluation plan for a program.

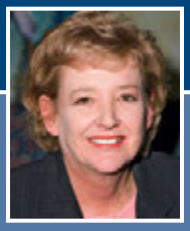
2. When Do You Evaluate An Equity Program?

The next 3 sections provide resources to develop effective evaluation strategies at each of the 3 main phases of an equity program: 1. The planning phase; 2. Monitoring; 3. The summative phase.

3. Further Resources

This section provides references for further reading, and some questions and prompts to assist you in planning specific programs.

DISABILITY	INTERNATIONAL
FIRST IN FAMILY	LOW SES
INDIGENOUS	REGIONAL



Professor Robyn Quin
NCSEHE Adjunct Professor

Equity programs and interventions have been dogged by the struggle to identify, and provide convincing evidence of, what works and what does not. Dr Ryan Naylor's *Understanding Evaluation for Equity Programs: A guide to effective program evaluation* offers the equity practitioner a sensible, user-friendly approach to the evaluation of equity programs from the planning stage, through implementation to judgement and refinement. His simple yet elegant method - establish the criteria; construct the standards, measure and compare, synthesise and judge - provides a sound basis for the development of program- and institution-specific evaluations. The report is a very practical resource. It provides examples of questions to be asked during each phase of a program, suggestions as to the types of evidence that might be gathered and how to go about the collection of such, and advice on the selection of appropriate quantitative and qualitative performance indicators. The program assessment framework provided as an appendix should be the starting point for planning any new equity initiative and the basis for evaluating current programs. The guide is an invaluable tool for every equity practitioner. It will be of great help in providing them with insights into the impact and effectiveness of their institution's programs while at the same time ensuring they collect the evidence necessary to demonstrate impact to funding bodies.

FULL REPORT: https://www.ncsehe.edu.au/publications/understanding-evaluation-for-equity-programs-a-guide-to-effective-program-evaluation/

Are low SES students disadvantaged in the university application process?

Dr Buly Cardak, Dr Mark Bowden and Mr John Bahtsevanoglou

This report investigates the sources of inequalities in university participation by focusing on the university application and admission process. We build on the growing international evidence of differences between high and low socio-economic status (SES) students in their understanding of the university application process.

The report is based on administrative university application data from the Victorian Tertiary Admissions Centre, in Victoria, Australia. Students can apply for up to 12 university programs as part of an application portfolio and this portfolio can be changed multiple times in the lead-up to final closure of applications. The data used in the analysis compares student application portfolios before and after they discover their Australian Tertiary Admission Rank (ATAR). The ATAR is based on final high school achievement and is the key means by which university places are allocated in Victoria. These data provide a unique opportunity to study how students respond to important new information about their admissions prospects.

An economic model is developed to understand student behaviour and decisions around university applications. A key feature of the model is that optimal application portfolios change because the realisation of high school achievement serves to remove an important dimension of uncertainty in the university application process. Having received their ATAR students revise their portfolio which requires the sourcing of new information. The model motivates our focus on student achievement (ATAR) and SES in application decisions.

The empirical analysis focuses on the number of changes made to application portfolios after students discover their ATAR. A critical finding is that high SES students make more changes to their application portfolios than low SES students. This is consistent with international evidence on university application behaviour where disadvantaged students struggle with the application process.

Professor Bruce Chapman AM
Professor of Economics, Australian National University and NCSEHE Advisory Board member

It is well known that young people from low SES backgrounds are much less likely than those from high SES backgrounds to enrol in higher education. There is a range of factors that likely contribute to this outcome, such as difference in parental aspirations and encouragement, and higher income households being able to afford educational supplementary investment instruments, such as tutors and computer technology. Cardak et al. examine another possible factor, the role of SES with respect to the university application process for a Census of young Victorians interested in attending university in 2011. Through a range of different statistical approaches they find compelling evidence that students from high SES backgrounds are more attentive to the application process and more likely to change their strategies in the window immdiately after receiving information concerning ATAR scores. This is a a very significant finding since it implies an important role for policy that is not related to pre-tertiary education inputs and outcomes. Moreover, the paper is a consummate example of rigorous theoretical economic modelling and is a template for all scholars in this important area of educational research. The black box of the factors explaining the SES/university nexus is being opened and there are critical potential lessons for policy.

The empirical analysis is extended to measure the benefits to students of being able to modify their application portfolio after they discover their ATAR. Key themes that emerge from this analysis is that those students who make more changes to their application portfolio reap larger benefits from the opportunity to revise their application portfolios. As high SES students make more changes than low SES students, the former reap more benefit from receiving their ATAR. We also empirically analyse some theoretical claims about application portfolio aggressiveness, diversity and size by Chade and Smith (2006) along the dimension of student SES and achievement or admissions probability.

All of these results point to strong advantages to high SES students in terms of their understanding of the university application process and how they respond to new information in that process. Conversely, low SES students come from backgrounds where families have less experience and familiarity with higher education and the university application process, leaving them at a disadvantage when informed actions and decisions are required. An important implication of our findings is the timing of any possible intervention and support for low SES students. Disadvantaged students seem to respond poorly in the window between discovering their ATAR and finalising their application portfolio. Any policies that seek to bridge the gap in application sophistication between high and low SES students should operate at this final phase of the application window. In the longer term, such practices should be complemented with the enhancement of skills and competency around understanding university education and the application process which should ultimately reduce differences in the window that we have studied.

This research suggests that policy actions should be taken towards the end of high school to improve student understanding of university application processes and thereby outcomes for low SES students. However, this should be seen as complementary to, rather than a substitute for, long term efforts to improve high school achievement. Improving high school achievement and thereby university eligibility will make the implications of this research about information even more important as greater numbers of disadvantaged students qualify for and seek higher education opportunities.

○ DISABILITY	○ INTERNATIONAL
○ FIRST IN FAMILY	● LOW SES
○ INDIGENOUS	○ REGIONAL

FULL REPORT: https://www.ncsehe.edu.au/publications/are-low-ses-students-disadvantaged-in-the-university-application-process/

Path+Ways. Towards best practice bridging and Indigenous participation through regional dual-sector universities

Facilitating Indigenous participation through regional dual-sector universities

Professor Bronwyn Fredericks, Dr Susan Kinnear, Ms Carolyn Daniels, Dr Pamela CroftWarcon and Ms Julie Mann

Regional and remote Indigenous students are under-represented in both higher education and vocational education and training. Enabling education courses are important in lifting participation rates and potentially in encouraging mobility between the sectors, yet there is a clear lack of evidence underpinning their development.

This report provides an overview of the data collection and analysis activities undertaken via a research project funded by the National Centre for Student Equity in Higher Education. The project purpose was to explore current practices dealing with Indigenous enabling courses, particularly in the context of regional, dual-sector universities. In particular, the project examined how these programs vary by institution (and region) in terms of structure, mode and ethos of offering; and direct and indirect impacts of these initiatives on Indigenous student participation and attainment; with a view to designing a best-practice framework and implementation statement.

Through its focus on students accessing Indigenous and mainstream enabling education, the project focussed on range of equity groups including those of low socio-economic status (both school leaver and mature-age categories), regional and/or remote students, Indigenous students and students with disability.

Project aims

The aim of this project was to develop a best-practice framework for Indigenous enabling education programs, emphasising regional and comprehensive education settings.

Furthermore, the research team set out to explore how Indigenous learning journeys can respect and grow cultural identity, whilst simultaneously developing study skills; and consider interpretations of 'success' from the perspectives of the student, their community, the institution and the government.

The principal research questions were:

1. Using insights from both theory and practice, what are the key components of best-practice in preparing regional, rural and remote-based Indigenous students for entry to comprehensive educational pathways?
2. What are the determinants of success for enabling education in an Indigenous context? How should 'success' be interpreted, considering institutional and governmental goals, as well as the ability of Indigenous peoples to pursue their own learning goals?

Methods

This project was based on an interdisciplinary and qualitative approach dealing with the socio-cultural as well as educational aspects of enabling education programs. The key activities included (a) a literature review, (b) desktop data scan, (c) comparative case study, (d) integration and analysis and (e) research translation.

The case studies were populated by undertaking qualitative interviews at three different locations nationally: Central Queensland (CQUniversity), regional Victoria (Federation University Australia[1]), and in the Northern Territory (Charles Darwin University). At each location, both staff and students who had engaged with enabling education programs were

Professor Colleen Hayward AM
Pro Vice-Chancellor (Equity and Indigenous), Edith Cowan University, and NCSEHE Advisory Board member

Education can play a significant role in addressing Indigenous disadvantage provided it is accessible and relevant to those who undertake its journey. Many Indigenous Australians seeking tertiary education pathways benefit from alternate access arrangements but simply providing alternate access does not mean student needs are automatically met. This research investigates enabling courses in three locations with a strong focus on hearing the voices of Indigenous students themselves. In particular, this research seeks to define 'success' in an Indigenous context, overlaid with the contexts of government and institutional priorities. This is about more than enrolment numbers and pass-rates – it is about the journey as well as the destination. That journey may be circuitous and even sporadic but each step is important. Some Indigenous students may experience success through the building of personal aspiration, the self-realisation that they can stick to a program even if they don't pass everything the first time, and the recognition that Education is important. Educators also have a role – indeed a responsibility – to help instil in Indigenous students a sense of pride, affirmation, resilience, self-esteem, self-worth and confidence. This can best happen when Indigenous student voices are heard clearly enough to influence course content, pedagogy and focus.

consulted for their experiences and opinions on the structures, values and outcomes of enabling education for Indigenous students. Additional data were collected from key stakeholders.

Key findings

The review of literature highlighted eight main themes:

1. Education has a key role in addressing Indigenous disadvantage; yet it remains poorly understood.
2. If the educational targets for Indigenous peoples are to be met, there is a need for 'fresh thinking'.
3. Enabling education has a special role to play in the widening participation agenda.
4. The evidence on best-practice teaching in enabling programs is scant.
5. Indigenous approaches to teaching and learning must be recognised.
6. There needs to be more opportunities for a discussion about what constitutes 'success' in Indigenous enabling education.
7. Pursuing best-practice will require taking a comprehensive view.
8. Policy and positioning are both important in the widening participation agenda.

The desktop data scan confirmed that, despite decades of government reporting on Indigenous education attainment rates, very little information is available in terms of the success of enabling education.

The case studies allowed a rich documentation of the lived experiences of students who had participated in enabling programs, of staff who taught into enabling programs as well as from stakeholders. Key themes emerging from the research were clustered around the central category of *Indigenous culture in course content* which was regarded as building strength and increasing identity as well as a sense of place. The lack of cultural understanding within enabling programs appeared to constrain learning. Themes of belonging, strength, resilience, confidence and self-esteem produced feelings of success, allayed fears and increased self-acceptance and feelings of self-worth, and were attributed to the supportive environment of enabling programs. Indigenous enabling programs were considered an '*important*' and '*exciting journey*' that brought about transformation of the inner Self through the building of '*resilience*', '*strength*', '*confidence*', '*self-esteem*', '*self-worth*', '*cultural understanding*' and '*identity*'. Success was experienced across multi-dimensions of student's lived experience including '*cultural identity*', '*voice*', self-realisation, self-acceptance and '*pride*'. Staff considered enabling programs imparted an '*underlying layer of skills*' to students. Moreover, the research found recognition of Indigenous people *as 'yarners' and 'story tellers'* needs consideration when developing curriculum as does incorporating *'both-ways' methodologies*.

Policy and Practice Implications

This research was designed to generate benefits to practitioners (staff running enabling programs), policy makers and prospective Indigenous students from communities in regional, rural and remote locations. In particular, the key project outcomes were identified as:

- Promotion of Indigenous needs and learning styles that will allow students to affirm their Indigeneity whilst participating in tertiary education;
- Creation of a framework to guide the development of Indigenous enabling programs, especially those delivered by current and/or future regional and dual-sector universities; and
- Provision of new information that will assist in achieving a more effective spend on monies made available for Indigenous support programs, in alignment with the governmental targets for participation and student outcomes.

Footnote: 1 Previously known as the University of Ballarat

● INDIGENOUS	○ INTERNATIONAL
○ FIRST IN FAMILY	○ LOW SES
○ INDIGENOUS	○ REGIONAL

FULL REPORT: https://www.ncsehe.edu.au/publications/pathways-towards-best-practice-in-indigenous-access-education/

NCVER

Do individual background characteristics influence tertiary completion rates?

Mr Patrick Lim, National Centre for Vocational Education Research

With a push to increase university undergraduate enrolments, there is the subsequent issue of whether an increase in the enrolment of students from low socio-economic status (SES) backgrounds translates to university completion. This report investigates the issues of university (bachelor degree) completion, and in particular, whether the completion rates of low SES individuals are different from those of high SES individuals. That is, if more people from low SES backgrounds are attending university, are they also completing degrees? And are they completing them at the same rate as their higher SES counterparts?

The key focus of this study was to determine whether there were differences in university completion rates according to socio-economic background.

The study used the Longitudinal Surveys of Australian Youth (LSAY) in conjunction with random effects models to analyse the impact of SES on university completion. The use of LSAY facilitated the application of an individual measure of SES, thus enabling characteristics of the individual to be used, along with a range of other background characteristics.

In terms of university completion, the analysis found that the impact of schools is not insubstantial, with schools accounting for around 30% of the variation in university completion. The results showed that school sector continues to influence course completion, with significant differences observed for low SES students. Low SES students attending government schools had lower completion rates than high SES students attending Catholic and independent schools. Low SES students attending Catholic and independent schools still have lower university completion than their high SES counterparts, but the effect is much less important. Thus, attending a Catholic or independent school cushions the impact that being from low SES has on course completion.

Students with an Asian language background were shown to have the highest chance of completing university.

Regionality is directly related to non-completion, with those from regional areas having the lowest probabilities of completion.

The continued push to increase participation in higher education for students from low socio-economic backgrounds should continue; however, low SES students also need to have access to the required support to ensure that their completion rates continue to match their high SES counterparts. This report shows that low SES students from regional areas, who attended government schools and who are female, may need further support to ensure they complete university at the same rate as their high SES peers.

○ DISABILITY	● INTERNATIONAL
○ FIRST IN FAMILY	● LOW SES
● INDIGENOUS	● REGIONAL

Professor Denise Wood
Professor of Learning, Equity, Access and Participation, CQUniversity Australia

Patrick Lim's report exploring the impact of student background characteristics on tertiary completion rates is timely as the higher education sector grapples with the challenges arising from the widening participation agenda and the imperative for improving the outcomes of students from diverse backgrounds within the constraints of limited time and resources. Lim's findings based on an analysis of the Longitudinal Surveys of Australian Youth (LSAY) provide evidence of the impact of socio-economic status of students on completions, thereby addressing a significant gap in the literature, which has tended to focus on access and participation, with much less attention being given to the outcomes of students from different socio-economic backgrounds. Drawing on the international literature and LSAY analyses, Lim provides a more nuanced approach to understanding the interrelationship of individual student characteristics, such as school attended, geographical location, gender, language background and the number of hours students work while studying with socio-economic status. Not surprisingly, such factors are shown to play a significant role in influencing outcomes for students from low socio-economic backgrounds. The findings and recommendations from Lim's report therefore have relevance to policy makers, teachers and professional staff, and researchers in providing the foundation for further research investigating more targeted strategies aimed at increasing not only access and participation, but crucially, the outcomes of students for students from low socio-economic backgrounds.

FULL REPORT: https://www.ncsehe.edu.au/publications/do-individual-background-characteristics-influence-tertiary-completion-rates/

Flinders UNIVERSITY

Educational outcomes of young Indigenous Australians

Dr Stéphane Mahuteau, Dr Tom Karmel, Professor Kostas Mavromaras and Dr Rong Zhu

Improved educational outcomes are seen as a key lever for addressing the disadvantage faced by Indigenous Australians. Poor educational outcomes have been observed at all levels of education, from early childhood through to tertiary education. While the increase in school retention rates of Indigenous Australians in recent years is encouraging the more critical issues are whether there have been improvements in educational performance at earlier years for Indigenous students and the extent to which educational performance at say, year 10, is flowing through to education outcomes such as year 12 completion.

By tracking two cohorts from the Longitudinal Survey of Australian Youth (LSAY) – the first aged 15 in 2006 and the second in 2009 - we can look at a number of key issues:

- The size of the gap between the Indigenous and non-Indigenous in education performance at the end of compulsory education, as captured by academic performance at age 15 from the Programme for International Student Assessment (PISA). As well as looking at the size of the gap we can also assess the extent to which it is explained by differences in socio-economic status and other background characteristics.
- Whether there has been any improvement in academic performance at age 15 across the two cohorts among Indigenous students.
- The extent to which educational outcomes for Indigenous students are affected by the final years of schooling, given academic performance at age 15. This is important from a policy perspective by allowing us to disentangle the influence of earlier education to that of the latter years of secondary schooling.

The data used in this project come from the Longitudinal Survey of Australian Youth (LSAY), including both the 2006 and 2009 student cohorts. The first wave of each LSAY is the PISA survey. One of the advantages of PISA scores is that they allow over time direct comparisons and between-cohort comparisons. The subsequent waves of LSAY allow us to follow the students throughout their compulsory education and beyond. The latest wave of LSAY was released in 2013 for the 2012 wave of both cohorts. The 2009 cohort has (mostly) left school in the last LSAY observation window.

This makes it the first year when a full comparison between the 2006 and 2009 cohorts can happen. The data allow us to conduct a full set of comparisons between Indigenous students and non-Indigenous students in the two cohorts up to their choice of tertiary education.

Our methodology tackles the sequential nature of students' education pathways by first modelling PISA scores, and then modelling a series of subsequent educational outcomes conditional on PISA, namely:

- School dropout and year 12 completion
- Intention to attend university
- ATAR request
- University participation
- VET participation

The approach we take in modelling PISA is a multi-level one capturing individual background characteristics and school level characteristics, including an estimate of (unobserved) 'school quality' (identified through a random coefficient in the model). This approach allows us to decompose the difference in the average PISA score between Indigenous and non-Indigenous students into a component attributed to differences in personal characteristics, a component due to differences in school characteristics, and a component due to differences in 'returns', that is differences in the coefficients of the characteristic variables. It is the differences in these 'returns' that capture the specific disadvantage associated with being Indigenous, over and above socio-economic and other background characteristics. A policy aim would be to reduce the differences in returns to zero, such that the PISA scores for Indigenous students are the same as non-Indigenous students, after controlling for background characteristics.

We take a similar approach to modelling the subsequent educational outcomes, but with the difference that we also condition on academic achievement at 15 (i.e. PISA). An issue here is that PISA itself is an outcome variable (endogenous) and therefore its inclusion can lead to bias in the coefficients. Our approach is to control for this endogeneity by using the expected PISA score rather the observed score.

Our key findings are that:

- There are very substantial differences between the academic performance at age 15 of Indigenous and non-Indigenous students. Part of this difference can be attributed to differences in socio-economic status and other background variables, and to differences in schools which Indigenous students attend. However, a sizable gap remains between the academic performance at age 15 of Indigenous and non-Indigenous students which is not explained by these factors.
- There was, at best, a very modest improvement in the academic performance of Indigenous students at age 15 between the 2006 and the 2009 cohorts, once we control for background characteristics of the students. The more sophisticated model used provided an estimate of around three points in the PISA literacy scale (the raw difference between non-Indigenous and Indigenous scores across the two cohorts was around 73 points).
- There is no significant difference between the subsequent educational outcomes of Indigenous and non-Indigenous students *once we control for academic achievement at age 15.* This finding is robust across all our educational outcome variables. The finding that Indigeneity does not play a role in exacerbating educational disadvantage in the final years of secondary schooling is very encouraging.

Associate Professor Mike Dockery
NCSEHE Program Leader

There remain stark differences in the educational attainment of Indigenous and non-Indigenous Australians. Lower rates of school retention and poorer school proficiency levels contribute to a markedly lower rate of participation in higher education – something of the order of one-fifth that of non-Indigenous Australians. Mahuteau et al's report provides new evidence on how this relative exclusion from educational achievement develops over the school to work transition using data the Longitudinal Surveys of Australian Youth. The data tracked two cohorts of youth – one aged 15 in 2006 and the other aged 15 in 2009 – and included students' test scores from the Programme for International Student Assessment (PISA) undertaken at age 15. This data allowed a unique decomposition of the factors contributing to the gap in a range of outcomes between Indigenous and non-Indigenous students. The authors find only limited evidence of any improvement in the relative performance and outcomes of Indigenous students between the two cohorts. However, they find no difference in educational outcomes conditional upon academic performance at age 15. This is encouraging as it suggests policies and programs to improve Indigenous students' academic performance in early childhood and primary school provide lasting benefits for later educational outcomes.

An additional finding is that the relatively high VET participation of Indigenous students turns out to be not such a good news story as first thought. In fact Indigenous students are less likely to attend VET than their non-Indigenous counterparts, once background characteristics and school attended are accounted for.

These findings have important policy implications. First, they suggest that the orthodox view that educational disadvantage should be addressed early in the education process is correct. That is, the greatest scope for improvement in educational outcomes for Indigenous students post-school comes from improved educational performance during the early and middle levels of school. And those improvements would be very substantial if the academic achievement at age 15 of Indigenous students were raised to that of non-Indigenous students.

The other policy implication is that current programs over the latter years of secondary school have been successful at ensuring that Indigenous students do not suffer further disadvantage relative to their non-Indigenous counterparts, but have been largely ineffective in remediating earlier disadvantage. Thus, on the basis of this analysis at least, it is suggested that the preponderance of effort in addressing Indigenous educational disadvantage should be before the final years of schooling.

As an aside, the analysis suggests that programs that can address the lower academic achievement of low SES students, and the poorer performance of some schools will benefit Indigenous students particularly, for the simple reason that the Indigenous student population is over represented among the lower SES and the poorer performing schools. For example, if Indigenous students were distributed across schools in the same way as non-Indigenous students then we would expect to see an improvement in year 12 completion and in the proportion participating in university immediately after year 12 of around two percentage points.

There is still a long way to go before the gap between Indigenous and non-Indigenous educational outcomes is closed, and the very modest reduction in the gap at age 15 between the two cohorts is disappointing. However, the benefit in reducing the size of the gap at age 15 on subsequent education outcomes remains substantial. If performance of Indigenous students at age 15 could be increased to that of their non-Indigenous counterparts (that is, increasing the academic achievement at age 15 of low SES Indigenous students to that of low SES non-Indigenous students, for example) according to our analysis there will be a significant flow through to improved educational outcomes: a reduction in the drop-out rate of 15 percentage points, an increase in the proportion requesting an ATAR of 29 per cent, and an increase in the proportion participating at university immediately after leaving school of 22 percentage points.

○ DISABILITY	○ INTERNATIONAL
○ FIRST IN FAMILY	○ LOW SES
● INDIGENOUS	● REGIONAL

FULL REPORT: https://www.ncsehe.edu.au/publications/educational-outcomes-of-young-indigenous-australians/

Student Preferences for Bachelor Degrees at TAFE

The socio-spatial influence of schools

Professor Trevor Gale, Dr Stephen Parker, Dr Tebeje Molla and Ms Kim Findlay with Mr Tim Sealey

This report on Student Preferences for Bachelor Degrees at TAFE (Technical and Further Education) institutions is derived from research commissioned by Australia's National Centre for Student Equity in Higher Education (NCSEHE) hosted at Curtin University and conducted by researchers at Deakin University's Strategic Centre for Research in Educational Futures and Innovation (CREFI). The report focuses on the influence of schools on their students' higher education (HE) preferences – particularly their preferences for TAFE bachelor degrees – as recorded by the Victorian and South Australian Tertiary Admissions Centres (VTAC and SATAC). Influence is researched in terms of a school's socio-economic status, geographical location and sector. The SATAC data set is considerably smaller, at around 8 per cent of the VTAC data set.

Bachelor degrees offered by TAFEs are relatively small in number but a growing higher education option for students in Australia (Gale et al. 2013). The Australian Government's proposal to extend Commonwealth Supported Places (CSPs) to include Australian higher education not delivered by the nation's public universities (Department of Education 2014b), is likely to fuel further growth in TAFE bachelor degree offerings. The recent Report of the Review of the Demand Driven Funding System in Australian higher education (Kemp & Norton 2014), which recommended this change, also makes special mention of non-university degree options as something that would be of particular benefit to students from low socio-economic status backgrounds.

The research reported herein is informed by a review of the international research literature, which indicates three main influences on students' HE preferences: (1) students' families and communities; (2) the socio-spatial location of their schools; and (3) school practices. This report contributes to understandings on the second of these: the influence of school context (their socio-spatial location) on students' preferences for TAFE bachelor degrees.

The research found that the annual rate of student preferences for TAFE bachelor degrees was relatively stable (at around 1,500 per annum) from 2009 to 2012 but rose significantly (by 30%) in 2013. Students from high socio-economic status schools (and with an average ATAR of 56.9) were the group that registered the largest number of preferences. The number of preferences for TAFE bachelor

degrees lodged by students from metropolitan schools exceeded the preferences of students from schools located in all other regions combined. This might reflect the fact that TAFE institutions offering bachelor degrees tend to be located in metropolitan areas.

The research also found that students' preferences for TAFE bachelor degrees increased after announcement of their Australian Tertiary Admission Rank (ATAR), by between 25 and 30 per cent each year. The post-ATAR increase was most noticeable in the Health and Education fields of study and among students from high socio-economic status schools.

The report concludes that while the public perception of TAFE is that it is a sector primarily for students from low SES backgrounds, this is not reflected in students' preferences for TAFE bachelor degrees. Instead, the preferences of students from high socio-economic schools outnumber other SES groups in almost every TAFE-degree field of study. This includes the fields of Health and Education, which are often seen to be typical low SES student choices in universities (Gale & Parker 2013).

○ DISABILITY	○ INTERNATIONAL
○ FIRST IN FAMILY	● LOW SES
○ INDIGENOUS	● REGIONAL

Mr Andrew Norton
Higher Education Program Director, Grattan Institute

One policy implication of this study of school leaver preferences for TAFE is unsurprising but important: even if TAFEs get demand driven public funding for their bachelor-degree courses, they are unlikely to expand rapidly. Victorian TAFEs have more higher education courses and students than TAFEs in other states. Yet only 3.5% of 2013 school leavers included a TAFE bachelor degree in the course preferences they submitted to VTAC. While school leavers are probably not the main TAFE market, this low interest is symptomatic of broader issues. In 2014, Victorian TAFEs had just over 1% of their state's domestic bachelor degree students. In higher education, universities enjoy substantial brand power, as well as the price advantage that comes from government subsidies.

The report also looks at the socio-economic status of school leavers who included a TAFE course preference. As with university applicants, high SES prospective students are statistically over-represented. Enrolment data confirms this finding, with 14% of 2013 Victorian TAFE students coming from low SES postcodes, compared to 38% from high SES postcodes. While the low SES figure is equal to or higher than four of the universities serving metropolitan Melbourne, the TAFEs might have hoped to do better. While there is tough competition for the limited pool of low SES school leavers, articulation from vocational qualifications is a market-expanding equity opportunity.

FULL REPORT: https://www.ncsehe.edu.au/publications/student-preferences-for-bachelor-degrees-at-tafe-the-socio-spatial-influence-of-schools/

University of South Australia

Flinders University

The University of Adelaide

Exploring the experience of being first in family at university

Associate Professor Sharron King, Dr Ann Luzeckyj, Associate Professor Ben McCann and Ms Charmaine Graham

This collaborative research project was conducted by academics across the three major universities in South Australia, i.e. University of South Australia, Flinders University and the University of Adelaide. The project was funded by the National Centre for Student Equity in Higher Education (NCSEHE) at Curtin University and explores the experiences of first in family students in higher education.

There are a number of definitions and terminologies used within the research literature to refer to students who are the first member of their family to attend university. In the US, the term 'first generation' student is generally used to define the cohort whose parents have either not attended university or have not earned a degree (Engle, 2007; Lohfink & Paulsen, 2005). In the UK and Australian literature the term 'first in family' is more commonly used (Crozier & Reay, 2008). For the purposes of this project we have chosen to use the following definition to categorise first in family students: Students who are the first member of their immediate family, including siblings, to attend university.

First in family (FiF) is an under-recognised cohort who are not included as part of any official equity groupings. FiF students may encompass low SES, mature age, regional and remote, and Indigenous students. Research indicates that these cohorts are highly capable when given opportunities to participate and support to succeed (Devlin, Kift, Nelson, Smith & McKay 2012). However, our previous research showed that FiF students experience educational disadvantage because their cultural and social capital does not readily align with that of the university (Luzeckyj, King, Scutter & Brinkworth, 2011). Building on this work, this project used a narrative inquiry approach to enrich our understanding of the FiF student experience, thereby providing FiF students with advice on how to navigate university life successfully and recommendations to university staff and policymakers on how to improve FiF outcomes.

Through the project, the key areas of focus were:

- The factors that influence FiF students' decisions to enrol, attend and continue at university, including their realisation of initial aspirations and ambitions.
- How FiF students experienced university, including the incumbent costs and related constraints of attending university, such as living costs, transport, housing, sacrifices made.
- The impact studying at university had on FiF students' physical, social and mental health and wellbeing.
- How FiF students managed points of transition; e.g. how they managed their first few weeks at university or the transition to final years of study, including how they dealt with differences between their expectations and experiences, what support and help seeking strategies they implemented.

○ DISABILITY	○ INTERNATIONAL
● FIRST IN FAMILY	● LOW SES
● INDIGENOUS	● REGIONAL

- In what ways their self-image or identity was transformed as a result of their attendance at university, including how these transformative experiences impacted upon their day-to-day lives as well as their impact on relationships with significant others (e.g. partners, children, parents, close friends).
- How universities supported or hindered their experiences and/or progress in terms of provision of particular kinds of learning spaces and places and access to teaching and support staff.
- And finally, as these FiF students transitioned out of university, what they considered were the benefits of their university experiences and qualifications for themselves as individuals, for the university and society more broadly.

Our research adopted a mixed methods approach and included: a literature review and the development of an Annotated Bibliography of 155 Australian and International publications on first in family students' experiences in higher education; an examination of survey data from over 5,300 first in family students' expectations and experiences of university study, and in-depth interviews with 18 first in family students who had successfully navigated at least three years of university study.

The key findings can be summarised as follows:

- It is important to recognise the diversity of the first in family cohort. The survey data and participant interviews demonstrated that these first in family students were incredibly diverse both in terms of their age and previous life experience but also in terms of their expectations of what they wanted to achieve at university. We do the students a great disservice if we try to categorise them simply as 'mature age' or 'school leaver' first in family students and do not try to understand the heterogeneous nature of their background and lived experience at university.
- The key motivating factor for these FiF students to attend university was that they all wanted a better life for themselves. A number of students specifically mentioned gaining financial freedom from parental or other income sources, older students in particular chose to come to university for career betterment or advancement. However the main reason, as cited by all FiF students, for choosing their degree program was interest.
- There are significant financial and personal costs associated with university study for first in family students. All of the FiF students that were interviewed in this study had to work in order to support themselves whilst at university. The costs associated with day-to-day living were most acute for students who had to relocate to the city in order to undertake their study or students who had family support commitments. Additional costs associated with travel, textbooks, printing assignments, and costs for childcare or loss of income whilst on placement added to this burden. There were also significant personal costs associated with study at university; these included loss of social interactions with friends and family and reduced health and wellbeing, particularly during peak assessment periods.
- FiF students lacked the 'hot knowledge' that non-FiF students generally acquire from parents or older siblings who have previously attended university. As such, they lacked information on how to navigate various university systems and procedures and were often unaware of the support services available to them. Their main source of information on what university would be like was derived from university websites and recruiting information.
- The cultural capital that these FiF students brought with them to university was often not recognised or valued and as a consequence the FiF students struggled with the 'mismatch' between their habitus (what students bring with them as an embodiment of: their family histories; previous learning environments and not only what they have experienced but how this has been encapsulated in how they behave and who they are) and the new field of university.
- Managing the transition to and across university was different for each student, but they did have things in common. For many of the students transitioning involved needing to overcome the sense that university was an alien place and gain confidence in both their abilities to succeed but also in relation to belonging. The transition for many of the mature age students also involved wanting to demonstrate that they were intelligent enough to be at university which was linked to a sense that they had not performed well at high school.
- Across both the survey and interview data it was apparent that first in family students have realistic expectations of what it takes to succeed at university and they work hard to achieve their goals.

University of South Australia

Dr Sarah O' Shea
Senior Lecturer,
University of Wollongong

Being the first in the family to attend university significantly impacts upon transition into the higher education sector and also, degree completion. Those students who do not have a family history of attending university require both recognition and also targeted support strategies that address potential knowledge gaps. The study conducted by King, Luzeckyj, McCann and Graham (2014) provides a holistic understanding of this first-in-family student experience encompassing not only factors external to the students (costs, transport, housing etc) but also the internal and often highly embodied impacts that this attendance can engender. Such depth of understanding is imperative for institutions that are endeavouring to attract and most importantly, retain this student cohort. Without a comprehensive understanding of how higher education participation impacts on a deeply individual level, institutional responses will remain partial and have limited application. Drawing on mixed methods, the study not only provides rich insight into the multiplicities of this student experience but also, and perhaps more importantly, provides a series of realistic recommendations that institutions can implement immediately to support this cohort. The quantitative and qualitative data generated succeeds in capturing the nuances of first-in-family student experiences and such detail provides an evidence-based framework for effective and timely institutional change.

- For each of these students their sense of becoming a student was shaped by their previous life experience as well as their experience of being the first member in their family to attend university. For some this previous life experience was one of 'not belonging', that is they believed that university was not for 'people like us'. For others there was self-doubt that they were capable of succeeding at university. Some students did not readily identify with the label of 'being a student' as they felt that it did not reflect their whole identity, whilst others were proud of the label and felt that it added a significant dimension to their sense of self.
- All students spoke of being transformed by their university experience, noting increased skills and abilities such as improved confidence, ability to critically analyse and articulate their opinions and perspectives more effectively. In addition, many spoke of how their university experience had increased 'their ambition for life' and opened up their ideas of what was now possible in their future careers.
- The FiF students all discussed the range of supports they utilised to help them succeed in their studies. Families and friends, including new friends they made while at university, were very important forms of support. However, many also spoke highly of lecturing staff and support services which they utilised, including academic and personal (medical or financial) services. Although they all spoke highly of the services, students also discussed the impediments to their studies. These impediments ranged from personal, family and/or health issues to difficulties navigating the academic landscape of higher education, for example, not understanding the language used by staff or not realising what was required of them.
- The FiF students all identified a range of benefits associated with higher education, with three core themes emerging: personal growth; social experiences; and increased understanding of broader society. The benefit of broadening social horizons and academic experiences was not only recognised as beneficial to participants themselves, but also identified as being beneficial to other members of their immediate family. It is important to recognise the role that first in family students have in paving the way and facilitating other family members such as children and siblings to participate in higher education. Participants also identified that their sense of global citizenry, understanding, and inter-cultural competence had increased and believed that more people having access to higher education would be of value to Australian society more broadly.
- A number of the students expressed gratitude for being allowed to attend university and often used the expression of feeling 'lucky' to have this opportunity. They did not necessarily attribute their personal qualities or hard work as the reasons for this 'luck' and ongoing success.

The major outputs from this project are:

- an annotated bibliography of 155 articles of national and international research on the FiF student experience
- data analysis of over 5,300 school leaver and mature age FiF students' expectations and experiences of university study
- nine cameos developed from the 18 narrative inquiry case studies conducted with successful FiF students
- a series of key findings brochures for FiF students, university teaching and professional staff and family and friends of FiF students
- a project website and seminars for university staff as well as ongoing conference papers and publications.

FULL REPORT: https://www.ncsehe.edu.au/publications/exploring-the-experience-of-being-first-in-family-at-university/

UNIVERSITY OF SOUTHERN QUEENSLAND

Resilience/thriving in post-secondary students with disabilities

An exploratory study

Dr Rahul Ganguly, Dr Charlotte Brownlow, Dr Jan Du Preez, Dr Coralie Graham

Across most universities in Australia, students with a disability have been enrolling in greater numbers than ever before. However, the scholarship and research on equity in the Australian higher education sector has largely ignored the needs of these students.

The overarching goal of this study was to explore and describe the lived experiences of students with a self-disclosed disability enrolled at a regional university in Australia. Given the paucity of research on the subject in Australia, the study was conducted in two stages. In stage one, a web-based survey was used to gather data on socio-demographics, disability characteristics, career optimism, wellbeing, academic satisfaction, and resilience from students with self-disclosed disability at one regional Australian university. In stage two, interviews were conducted with 30 students with self-disclosed disabilities (GPA ≥ 5.5) to gain an in-depth understanding of the strategies used by these students to negotiate barriers to participation in higher education settings.

Descriptive statistics and Structural Equation Modelling were used to analyse the survey data. Inductive analysis was done with the interview data. A description of the key findings are listed below. Due to the small sample size and self-reported data, the findings need to be interpreted with some caution. Additionally, this study was conducted at one university, and hence findings cannot be generalised to other universities in Australia.

Ms Jackie Weinman
Senior Disability Advisor, Curtin University, and ATEND National Committee member

Disability Practitioners in the higher education sector have been dealing with ever increasing numbers of students with disability. Koshy and Seymour (2015), using Australian Government data, recently confirmed a growth rate of 73.2% between 2007 and 2014. Despite this growth, there has been limited research attention paid to the disability sector. The research of Dr Ganguly et al. is therefore welcomed, and will help us in our planning to meet future trends and demands.

While Dr Ganguly's results were from a relatively small number of students, the findings reflect the current experience in the sector, such as: the increase in the number of students with psychological disability; the difficulties these students encounter; the reluctance of students to disclose disability and seek assistance; and the predominance of hidden disability. In addition, the report identifies new and emerging topics for consideration, such as: resilience and its relationship to student retention; the urgent need for training and attitudinal change in some university staff; the particular needs of women with disability; the need to improve communication across an educational institution to effectively meet student needs; and the importance of building peer support networks. It is also of particular interest that this research has been conducted at a regional university. It would be valuable to see future research compare regional and city-based locations, and on-campus and online environments. As noted in the report's conclusion, "It is hoped that the current study will provide an impetus for further research (in disability) in higher education." I encourage the sector to take up this challenge.

Key Findings: Stage 1- Web-based Survey

- The sample included 274 students who had self-disclosed their disability either during the university enrolment process and/or registered with the university's Disability Resources Office (DRO) upon enrolment.
- The sample predominantly consisted of mature-age university students with a self-reported disability, a group that has not received much attention in the literature. About 70 per cent of these students were above 30 years of age. The age of the participants ranged from 17 to 72 years, with an average age of 38 years. Additionally, the sample had more female students (n = 178; 65%) than male students (n = 96; 35%).
- Over a third of the sample (n = 94; 34%), who had self-identified their disability/condition during the university enrolment process, reported not self-disclosing their disability to the DRO. Furthermore, nearly 50 per cent of the sample (n = 89) who self-disclosed their disability to the DRO reported not using disability-related support services since their time of self-disclosure.
- Students with self-reported psychological conditions constituted the largest group of survey respondents. 33 per cent of the sample (n = 90) self-identified with a psychological condition as their primary disability category. Further, 55 per cent of the sample (n = 150) had one or more co-morbid conditions. Overall, the sample included more students with self-reported "hidden disabilities" than those with sensory or physical "visible" disabilities.
- In this sample, three out of every four students reported pursuing their education online and/or via an online/on-campus option (n = 208; 76%).
- Students with self-reported GPA ≥ 5.5 scored significantly higher on resilience and academic satisfaction scales, than students with self-reported GPA < 5.5. Although scores on career optimism and wellbeing scale were higher for students with GPA ≥ 5.5 than those with GPA < 5.5, the difference did not approach significance at 0.05 levels.
- The relationship between resilience, academic satisfaction, wellbeing, career optimism and academic achievement was not direct. Although resilience was directly and significantly related to academic satisfaction and wellbeing, it was not directly related to achievement. Similarly, resilience was directly and significantly related to wellbeing and career optimism, but not directly related to achievement.

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FULL REPORT: https://www.ncsehe.edu.au/publications/resiliencethriving-in-post-secondary-students-with-disability-an-exploratory-study/

Completing university in a growing sector

Is equity an issue?

Dr Daniel Edwards and Dr Julie McMillan

This report details the findings from a research project funded by the National Centre for Student Equity in Higher Education (NCSEHE) that explores new data tracking student cohorts through the higher education system – from commencement to completion. In a time of rapid growth in the Australian higher education system, resulting in expanded opportunities for students from disadvantaged backgrounds, it is critical to understand which characteristics are linked to a lower likelihood of completion, in order to target retention policies for 'at-risk' groups at the national and institutional levels.

Approach

The report uses data from the Higher Education Student Collection, and a cohort-tracking approach developed by the Commonwealth Department of Education and Training. This administrative database has linked an individual student identifier – the Commonwealth Higher Education Student Support Number (CHESSN) – to the enrolment of each domestic bachelor student from 2005 onwards. The CHESSN enables research to track the pathways of students within and between courses and institutions. The analyses focus on the completion outcomes of a student cohort that commenced in 2005 and was tracked for a period of nine years, up to 2013. The outcomes of this cohort are compared with other cohorts of students, tracked over a shorter period of time in order to validate findings. The analysis is supplemented by data about students' experience and engagement from the 2013 University Experience Survey.

National-level completion rates

Nearly three-quarters (73.6 per cent) of domestic bachelor students commencing in 2005 had completed a degree by 2013. Nationally, lower completion rates were evident for students with lower Australian Tertiary Admission Ranks (ATAR) (especially below 60), and those who commenced their enrolments as part-time students, external students, in the fields of Information Technology and Agriculture and Environmental Studies, and at the Regional Universities Network, as well as commencers aged 25 and over, and male students. While ATAR is a predictor of the likelihood of completing university, only approximately 40 per cent of commencing students have an ATAR recorded in the cohort-tracking datasets. Because this measure only applies to a minority of students, retention policies might better focus on other factors.

Low-socio-economic-status students

Approximately 69 per cent of students from low-socio-economic-status (SES) backgrounds completed a degree, compared with 78 per cent of students from high-SES backgrounds. Low- SES students were more likely than other students to drop out within the first two years of study or to still be enrolled without completion nine years after commencement.

Non-metropolitan students

Students in metropolitan areas were more likely to complete a degree than those from regional areas and those from remote areas (approximately 75 per cent, 70 per cent and 60 per cent completion respectively).

Indigenous students

The differences between the outcomes of Indigenous and non-Indigenous students are substantial. Indigenous students had a completion rate of around 47 per cent (non-Indigenous students had a rate of 74 per cent). More than one in five Indigenous students in this cohort had dropped out of university before their second year and another quarter had dropped out at some other stage in the nine-year period.

The compounding effects of belonging to multiple at-risk groups

Many students belong to multiple equity groups (low-SES, non-metropolitan or Indigenous students). Students in equity groups are also more likely than average to have other demographic or enrolment characteristics that are associated with lower completion rates, such as studying part-time or externally, or having a low ATAR. The influence of each individual variable on completion is compounded by the introduction of other variables. When analysed by SES, age and type of attendance, completion rates of students become lower the more of the 'at-risk' groups to which a student belongs. Similarly, when examined by region, age and type of attendance all three of these variables compound to influence the likelihood of completion. The particular analyses in this report highlight this dimension of completion that has not previously tracked across such a large cohort of students. The analyses also demonstrate the potential for further exploration of higher education completion at an even finer level of detail to enhance understanding of factors impacting retention and outcomes.

Reasons for attrition

To explore whether students with a lower likelihood of completion are more likely to be disengaged from their university or have more negative experience than others, data from the 2013 University Experience Survey (UES) have been analysed. No meaningful differences were found between equity groups and other students across a range of UES scales relating to student engagement, access to resources and experience of quality of teaching. There were, however, notable differences between equity groups and other students in the rates and reasons given for considering leaving university before graduation. The reasons noted more commonly by equity-group students than other students include finance, family obligations and core issues relating to 'getting by', whereas the issues noted more commonly among advantaged students than equity-group students centre around issues of 'choice' and lifestyle. Of all the data from the UES analyses in this report, this finding is perhaps the most insightful for identifying the different pressures on university students. This analysis highlights the areas in which students from equity groups stand out from their peers when it comes to engagement and retention and offers areas of focus for institutions interested in increasing retention among particular groups.

Professor Gavin Moodie
Adjunct Professor of Education, RMIT University

Edwards and McMillan's report contributes valuable data and analysis for policy and practice. The finding that students from a low socio-economic status background, students from a non-metropolitan region and Indigenous Australians are less likely to complete university because of problems with finance, family obligations and core issues relating to 'getting by' suggests that both national and university policy makers should seek to increase the financial support available to students in need. The findings also invite practitioners to consider whether it is worth intervening with members of groups at risk of dropping out before they start their studies. All universities proactively offer support to Indigenous Australians, students with disability and external students. All universities have strategies for supporting students who are struggling by their own identification or through poor performance. Practitioners might consider whether it would also be appropriate to proactively offer support to students with a low entry score, non-metropolitan students, part time students, students over 25, and students from a low socio-economic status background. While only 40% of students are admitted on the basis of an ATAR, Edwards and McMillan confirm other studies that entry score is a major factor in completions. They show that the differences in completions of students of different socio-economic status backgrounds and for students from non-metropolitan regions are modest when ATAR is taken into account. This suggests that it may be worthwhile allocating a prior attainment score to students without an ATAR. Some 25% of students are admitted on the basis of prior higher education study. All Tertiary Admissions Centres collect these students' prior grades and calculate a grade point average, and some convert these into an entry score. Some 10% of students are admitted on the basis of prior vocational education study and this can be converted into an entry score band if not a precise score, as at least one admissions centre does. It would then be possible to analyse completions for a further 35% of students which would add considerably to the analysis.

Future research

The analyses of this report could be extended to allow for both a broader picture (tracking post-university outcomes for equity-group students) and for a finer grained picture (using data from small subgroups). Further research could explore the graduate outcomes of specific groups of students with low completion rates, as identified in this report. The benefits of university completion for the general graduate population have been repeatedly demonstrated through the Graduate Destination Survey, the Graduate Pathways Survey and the Beyond Graduation Survey. Drawing on this range of data would highlight the difference that a university qualification can offer to disadvantaged students. Preliminary analysis carried out for this project suggests there are few differences in post-completion employment and salary outcomes between equity-group students and others. That is, for students from equity groups, disadvantage is erased by university completion. Further work is also needed to facilitate more-detailed analyses of the data of smaller groups – such as Indigenous students, remote students and students who are affected by multiple compounding factors – without compromising accuracy or confidentiality. Future work must balance the sensitivities involved with the potential policy importance of building this knowledge. Further research could inform targeted interventions to most effectively increase university completion rates.

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FULL REPORT: https://www.ncsehe.edu.au/publications/completing-university-in-a-growing-sector-is-equity-an-issue/

Acronyms

ACARA	Australian Curriculum, Assessment and Reporting Authority
ACER	Australian Council for Educational Research
AIHW	Australian Institute of Health and Welfare
AM	Member of the Order of Australia
ATAR	Australian Tertiary Admission Rank
ATEND	Australian Tertiary Education Network on Disability
CHESSN	Commonwealth Higher Education Student Support Number
CREFI	Centre for Research in Educational Futures and Innovation
CSP	Commonwealth Supported Place
DRO	Disability Resources Office
FiF	First in Family
GPA	Grade Point Average
HE	Higher Education
ICSEA	Index of Community Socio-Educational Advantage
LSAY	Longitudinal Surveys of Australian Youth
LSES	Low Socio-economic Status
MCSHE	Melbourne Centre for the Study of Higher Education
NAPLAN	National Assessment Program - Literacy and Numeracy
NCSEHE	National Centre for Student Equity in Higher Education
NCVER	National Centre for Vocational Education Research
NSW	New South Wales
PISA	Programme for International Student Assessment

SATAC	South Australian Tertiary Admissions Centre
SES	Socio-economic Status
TAFE	Technical and Further Education
UES	University Experience Survey
UK	United Kingdom
US	United States
USA	United States of America
VET	Vocational Education Training
VTAC	Victorian Tertiary Admissions Centre

Biographies

Professor Sue Trinidad

Professor Sue Trinidad is the Director of the National Centre for Student Equity in Higher Education, hosted by Curtin University. An established scholar in the areas of higher education pedagogy and change management, the use of technology and student learning, Sue's research covers higher education and leadership, including the use of technology for regional, rural and remote areas to provide equity access to all students regardless of their geographical location. Prior to becoming the NCSEHE's Director, Sue was Deputy Pro-Vice Chancellor and Dean of Teaching and Learning in the Faculty of Humanities at Curtin during 2007-2012.

Professor John Phillimore

Professor John Phillimore is the Executive Director of the John Curtin Institute of Public Policy (JCIPP) at Curtin University and works on a range of public policy issues including federalism, higher education policy, public sector management, innovation and technology policy, and the Australian welfare state. John is NCSEHE Program Leader for Program 2 – Equity Policy and Research Program and oversees the NCSEHE's Student Equity in Higher Education Research Grants Program.

Ms Lesley Smith

Ms Lesley Smith is an experienced strategic planner and policy analyst who worked for the Western Australian and Victorian governments before joining Curtin University as Director, Strategic Planning. She has substantial experience in policy development and implementation for services for people with disabilities, and works part-time with the Centre while completing her PhD

Dr Andrew Harvey

Dr Andrew Harvey is Director of the Access and Achievement Research Unit at La Trobe University. He has a Bachelor of Arts (Honours) and PhD in Politics. Andrew has published widely in areas of higher education policy, including issues of access, student retention, regionality, and teacher education. He previously served as Director of Regional Operations at La Trobe and Executive Officer of the Australian Council of Deans of Education. Andrew's recent research publications have focussed on: early university offers to under-represented students; the achievement of students from non-English speaking backgrounds; predictors of student attrition; postgraduate student equity; and outcomes of tertiary enabling programs.

Dr Patricia McNamara

Dr Patricia McNamara is Adjunct Senior Lecturer - Social Work in the Department of Clinical and Community Allied Health at La Trobe University. She holds qualifications in education and family therapy and a PhD in Social Work. Patricia has extensive practice experience as a secondary teacher and as a social worker in child and family mental health, education and welfare settings. She has also worked as a social work educator and researcher for many years - primarily at the University of Melbourne and La Trobe University.
Her current research activities focus on out-of-home care pathways to higher education, caregiver skills for adolescent residential programs and the needs of Forgotten Australians (people who grew up in out-of-home care during the twentieth century).

Ms Lisa Andrewartha

Lisa Andrewartha is Research Officer in the Access and Achievement Research Unit at La Trobe University. She has a Bachelor of Applied Science in Psychology (Honours). Lisa has worked across a broad range of research projects designed to improve the access and achievement levels of students who are under-represented in higher education. Lisa's recent research publications have focussed on: students from low socio-economic status backgrounds; care leavers in higher education; outcomes of tertiary enabling programs; and postgraduate student equity.

Mr Michael Luckman

Michael is the Senior Data Analyst in the Access and Achievement Research Unit at La Trobe University. Michael has a Bachelor of Social Science in Sociology (Honours). He has extensive experience working on a range of higher education data analysis projects and has a particular interest in student equity as well as measures of student achievement and retention. Michael's recent research publications have focussed on: equity and academic achievement within a Common First Year curriculum model; predictors of student attrition; and regional student relocation.

Adjunct Professor Norma Jeffery

NCSEHE Adjunct Professor Norma Jeffery has 40 years of experience as an educator, including as the Chief Executive Officer of the Curriculum Council in Western Australia, and later a senior executive position with the Western Australian Department of Education with responsibility for policy, planning and accountability for government schools. Seconded to Curtin University in 2009 to undertake research projects, her work encompasses equity and social inclusion issues for all years of schooling, with a particular focus on the impact of disadvantage on the transition from school to further education.

Dr Jill Scevak

Dr Jill Scevak is a Senior Lecturer in the School of Education at the University of Newcastle, Australia, in the discipline of Educational and Developmental Psychology. She is a registered psychologist and a member of the Australian Psychological Society and an Executive Member of the Newcastle Branch. Jill specialises in studies of individual differences in student learning and higher order thinking, across primary, secondary, undergraduate, postgraduate and doctoral level study. She has published widely in these areas, including studies in mature aged students' and students from diverse backgrounds' adjustment to university study.

Dr Erica Southgate

Dr Erica Southgate is a Senior Lecturer in the School of Education at the University of Newcastle, Australia. She has extensive experience in conducting qualitative, ethnographic and mixed method research on social disadvantage and marginalisation in the fields of health and education. Her most recent publications include an edited book on global perspectives in widening participation in higher education, and scholarly articles on access to high status degrees for people who would be the first in their family to attend university, and the deconstruction of key concepts in higher education policy such as 'aspiration', 'capability' and 'choice'.

Dr Mark Rubin

Dr Mark Rubin is a senior lecturer in social psychology at the University of Newcastle, Australia. He holds an MSc in social psychology and a PhD in psychology. He is best known for his work on social identity and intergroup relations, including research on topics such as counterstereotypicality, ingroup identification, intergroup contact, and self-stereotyping. His other research interests relate to individualism and collectivism, interdependent problem-solving, migration processes, the need for closure, social class, and social integration. For more information about Dr Rubin's work, please visit his research website at: http://bit.ly/QgpV4O

Ms Suzanne Macqueen

Ms Suzanne Macqueen is a Lecturer in the School of Education at the University of Newcastle, Australia. Results from her Master of Education (Research) study on between-class achievement grouping in primary schools have been published in Australian and international journals. She is currently undertaking PhD research on the impact of widening participation initiatives in teacher education through the University of Queensland, with a focus on social justice through narratives of non-traditional students. Suzanne is a member of the Global Education and Research Team, researching in that area as well as other projects with a focus on equity.

Biographies

Dr Heather Douglas

Dr Heather Douglas is a Postdoctoral Research Fellow at the Centre for Health Systems and Safety Research, Australian Institute of Health Innovation, Macquarie University. Heather investigates the role of confidence in decision-making, the measurement of multi-tasking behaviours in health practitioners, and the impact of social capital on the outcomes of community aged care clients. Heather has nine peer reviewed papers with 91 citations since 2010 (Google Scholar). Heather has expertise in the design and administration of psychometric tests, behavioural interviews and the conduct of assessment centres. She also brings experience in quantitative methods, data analysis, research design, and personality theory.

Mr Paul Williams

Mr Paul Williams completed his Bachelor of Psychology (Hons 1, University Medal) at the University of Newcastle in 2010, and is currently a PhD candidate in the Doctor of Clinical Psychology program. Paul's research focuses on how people adjust their behaviour in response to recent successes or failures. Over the past five years Paul has worked as a research assistant, and also been heavily involved in the teaching and development of undergraduate statistics and methodology courses within the psychology discipline. Paul is most interested in whether psychological variables mediate the achievement and attrition of students from under-represented backgrounds.

Dr Tim Pitman

Dr Tim Pitman has worked in higher education since the mid-1990s and has extensive experience in research and student administration. His current area of research is in higher education policy with a focus on access and social inclusion in higher education. Tim also conducts research in the areas of approaches to lifelong learning, experiential learning and the recognition and credentialing of prior learning. He is a regular contributor to higher education policy debate in print, online and on radio.

Professor Jenny Gore

Jenny Gore is a Professor in the School of Education at the University of Newcastle, Australia, where she was Dean of Education and Head of School for six years. Currently Director of the Teachers and Teaching Research Program and Co-Editor of the prestigious international journal, *Teaching and Teacher Education*, Jenny has won more than $5.1 million in research funding. Widely published and cited, her current major research projects include a randomised controlled trial investigating the impact of Quality Teaching Rounds, and a longitudinal study exploring the formation of educational and career aspirations in the middle years of schooling.

Associate Professor Kathryn Holmes

Kathryn Holmes is an Associate Professor in the School of Education at the University of Newcastle, Australia. A founding member of the Teachers and Teaching Research Program and Co-Editor of the prestigious international journal, *Teaching and Teacher Education*, Kath has won more than $2.4 million in research funding. With a PhD in Financial Mathematics and a background in mathematics education, Kath has extensive experience in conducting large-scale longitudinal, mixed methods studies that involve complex statistical analysis. She currently holds an ARC Linkage grant and an OLT grant, among others.

Professor Max Smith

Originally a secondary social sciences and computing studies teacher mostly serving in rural schools, Max Smith held a series of senior departmental positions during his 36-year career with the NSW Department of Education. Joining the School of Education at the University of Newcastle, Australia, as a Professor of Education in 2012, Max has continued to maintain strong professional interest and ongoing research commitments across a variety of public policy contexts. Currently Co-Editor of the prestigious international journal, *Teaching and Teacher Education*, Max is also a founding member of the Teachers and Teaching Research Program at the university.

Mr Andrew Lyell

As a lecturer in the School of Education at the University of Newcastle, Australia, Andrew Lyell works in both undergraduate and postgraduate programs with a focus on technology education. A specialist in information and communications technologies in primary and secondary school settings, Andrew is currently completing his doctoral studies in education, in association with the *Aspirations Longitudinal Study*. His research areas of interest include school-based interventions and their impact on educational and career aspirations, robotics in education, and pedagogy relating to information and communication technologies in the classroom.

Mr Hywel Ellis

With a background in electrical engineering and secondary science teaching, Hywel Ellis has worked for the past ten years as a senior research project manager in the School of Education at the University of Newcastle, Australia. Currently completing a doctoral degree in education, Hywel's research expertise extends from managing large-scale, mixed methods studies to conducting complex quantitative analyses. From 2016, with colleagues from the University of Newcastle, Hywel will play a leading role in a study funded by the National Vocational Education and Training Research Program investigating students' aspirations to undertake VET as a post-school pathway.

Dr Leanne Fray

After working as a teacher in public schools following her undergraduate training in teaching and social science, Dr Leanne Fray completed her PhD in 2012. Currently a project manager in the School of Education at the University of Newcastle, Australia, Leanne previously worked on various other research projects at the university across such disciplines as health and social sciences, including the *Australian Longitudinal Study on Women's Health*. With extensive experience in qualitative data analysis, Leanne provides research support to the Aspirations Longitudinal Study and is currently managing a HEPP-funded project which investigates the aspirations of students for higher education.

Mr Lee Pope

Lee is Manager Student Access at Flinders University. He has qualifications in Financial Planning, a Bachelor of Social Work and a Master of Education (Social Justice in Education). He has had a varied and diverse career spanning more than 25 years that includes positions in commercial finance, social work, economic development and secondary/tertiary education leadership. His current focus and passion is the development, implementation and governance of programs aimed at increasing opportunities for persons from disadvantaged backgrounds to participate in higher education. Lee's academic interests include alternate admissions pathways to higher education and the importance of cultural capital for students from low SES backgrounds.

Dr Ryan Naylor

Dr Ryan Naylor is a Lecturer in Higher Education with the Melbourne Centre for the Study of Higher Education at the University of Melbourne. His current research focuses primarily on student equity and the student experience. His current major projects include an OTL-funded project examining the 21st century student exerience, the Critical Interventions Framework Part II (in collaboration with the University of Newcastle and LaTrobe University, building on his previous work on Part I), researching equity practitioner's attitudes to and capacity for program evaluation, and a research project examining the participation of refugees in Australian higher education. He is also involved in strengthening outcomes for Indigenous learners in the Shepparton area through a partnership with GOTAFE and local community groups. He is a Visiting Fellow at the National Centre for Student Equity in Higher Education.

Biographies

Adjunct Professor Robyn Quin

Professor Robyn Quin was Deputy Vice-Chancellor (Education) at Curtin University from May 2007 until July 2012. Her major responsibilities included teaching and learning, student administrative services, support services, equity and social justice, distance and e-learning, Indigenous studies, library services and the Curtin Vocational Education and Training Centre. She was previously Pro Vice-Chancellor (Engagement) at Edith Cowan University (ECU) and was responsible for community engagement, public relations, corporate communications, marketing, student recruitment, alumni relations, graduations and philanthropy. As one of the NCSEHE's Adjunct Professors, Professor Quin provides the Centre with valuable support by way of being one of a number of external reviewers called upon to review research reports submitted to the NCSEHE by Student Equity in Higher Education Research Grants Program grants recipients.

Dr Buly Cardak

Dr Buly Cardak is Associate Professor in the Department of Economics and Finance, La Trobe Business School, La Trobe University. His research focus is on the Economics of Education, incorporating economic theory and econometric approaches to a wide range of research questions. This includes the equity and access implications of credit constraints and university application and admissions on university participation and completion in Australia. He has studied differences in outcomes between students from public and private schools. His research has been published in leading international and Australian journals, is widely cited and has contributed to the policy debate on higher education in Australia.

Dr Mark Bowden

Dr Mark Bowden is a Senior Lecturer in Economics with the Faculty of Business and Law at Swinburne University of Technology. He has degrees in Economics and Science (applied mathematics), a Masters of Social Science (Economics) and a PhD in Economics obtained at the University of Queensland. Mark's interests are in the areas of economics and sociology of education and psychology of education (teaching and learning). He has published in international journals including Education + Training, Journal of Macroeconomics, Higher Education, Compare: A Journal of Comparative and International Education; Journal of Socio-Economics, Journal of Environmental Management and Computational Economics. Prior to his career in academia he spent over 10 years in industry and government, predominately in the energy sector.

Mr John Bahtsevanoglou

Mr John Bahtsevanoglou is an economist and researcher at Swinburne University of Technology. He also teaches economics at Swinburne, and economics and business studies at RMIT University. John has over 25 years of experience in telecommunications and industry regulation. He has extensive experience in market and industry assessment, pricing and cost analysis, resolution of industry disputes over interconnection and equal access and the development of the regulatory framework for the introduction of next generation network services in the communications sector. He has also published in journals including Education + Training, Accounting and Business Research and Info.

Professor Bruce Chapman AM

Professor Bruce Chapman is Professor of Economics and Director, Policy Impact, Crawford School of Public Policy, Australian National University and a member of the NCSEHE Advisory Board. Professor Chapman is a renowned labour and education economist. His policy experience includes designing the Higher Education Contribution Scheme (HECS) in 1988, as a senior economic adviser to Prime Minister Paul Keating from 1994–1996, and as a consultant to the Organisation for Economic Cooperation and Development and the World Bank. In 2001, Professor Chapman was appointed a Member of the Order of Australia for "contributions to the development of economics, labour market and social policy."

Professor Bronwyn Fredericks

Bronwyn Fredericks PhD is a Professor and the Pro Vice-Chancellor (Indigenous Engagement) and BHP Billiton Mitsubishi Alliance (BMA) Chair in Indigenous Engagement at Central Queensland University, Australia. Prof Fredericks is a Research Lead in the Health Node of the ARC funded NIRAKN, a member of Australian Institute of Aboriginal and Torres Strait Islander Studies (AIATSIS), Native American and Indigenous Studies Association (NAISA) and the American Indigenous Research Association (AIRA). Prof Fredericks holds Adjunct appointments with QUT and Charles Darwin University.

Dr Susan Kinnear

Susan Kinnear PhD is a Senior Research Fellow with the Central Queensland University School of Business and Law, and was previously the Research Leader for Industry, Vocational Education, Access and Training Division. Susan's expertise is in research project management, particularly with respect to studies with regional communities, for clients across industry, the tertiary sector, and local, state and federal government.

Ms Carolyn Daniels

Carolyn Daniels is an emerging researcher working within the Office of Indigenous Engagement at Central Queensland University and undertaking her PhD in the School of Business and Law. Her research has focused on resilience, higher education, career development and the workforce, and health and wellbeing. Carolyn has developed experience in a broad range of multi-disciplinary research projects.

Dr Pamela CroftWarcon

Pamela CroftWarcon DVA has been an educator since the early 1990s and has taught at Kangaroo Point TAFE, Batchelor College, the Institute for Aboriginal Development (IAD), Queensland University of Technology and currently with the Office of Indigenous Engagement at Central Queensland University. She is an advocate of 'bothways' methodology, pedagogy and research, which originated in the 1980s in the Northern Territory. Pamela is a member of AIATSIS, the ISRN, American Indigenous Research Association (AIRA), and an associate member of NIRAKN.

Ms Julie Mann

Julie Mann is an early career researcher, with particular expertise in data collection through consultation. Julie has a working knowledge of the Central Queensland University's Tertiary Enabling Program, and is vitally interested in issues of socio-economic disadvantage. Over the past five years, Julie has developed experience in a range of multidisciplinary research projects. She is currently working in equity within CQUniversity, Australia.

Professor Colleen Hayward AM

Professor Colleen Hayward is a senior Noongar woman with extensive family links throughout the south-west of WA. She is Head of Kurongkurl Katitjin; Edith Cowan University's Centre for Indigenous Education and Research and concurrently holds the position of Pro-Vice-Chancellor, Equity and Indigenous across the university. She has an extensive background in a range of areas including health, education, training, employment, housing, child protection and law & justice as well as significant experience in policy and management. In 2015, Colleen co-authored a book entitled "Teaching Indigenous Students: Cultural awareness and classroom strategies for improving learning outcomes," published by Allen & Unwin.

Mr Patrick Lim

At the time of production Mr Patrick Lim was a Senior Research Officer in the Research Operations branch of the National Centre for Vocational Education Research (NCVER). Patrick has 15 years of experience in mathematical statistics and quantitative research, particularly in the application of statistical techniques to real-life problems. He is experienced in experimental design, linear mixed models, and survey methodology and analysis. Patrick has published research on the topics of measuring socio-economic status (SES) in young people, and the impact that schools have on TER and university entrance. Prior to joining NCVER, Patrick worked for Charles Sturt University, The University of Adelaide and The Victorian Department of Primary Industries as a biometrician and statistician.

Professor Denise Wood

Denise is Professor of Learning, Equity, Access and Participation at Central Queensland University. Her qualifications include a PhD (Education), Master of Educational Technology, Master of Design, Graduate Certificate in Flexible Learning, Graduate Diploma in Social Sciences and a Bachelor of Arts in Social Work. Her research focuses on strategies for increasing the social and educational participation of people from disadvantaged backgrounds and she has been awarded more than $5 million in research income over the last five years for projects involving participatory action research with children and young people with disabilities and Indigenous youth from regional and remote locations. Her role at Central Queensland University is to contribute to the development of policies and strategies aimed at improving access, participation and success of students from diverse backgrounds, especially those from regional locations.

Biographies

Dr Stéphane Mahuteau

Stéphane Mahuteau is a Senior Research Fellow at the National Institute of Labour Studies, Flinders University. He obtained a PhD in Economics from the University of Lyon II, France in 2002. His current research focuses on themes such as labour market outcomes of immigrants, job and skills/qualification matching, economic policy evaluation, the effect of socio-economic background on students' achievement in high schools, "value-added" of high schools and the determinants of students' choices of tertiary education. He produced reports for the Gonski Review of School Funding. In 2013, he undertook a quantitative analysis of illegal work performed by non-residents in Australia on behalf of the Department of Immigration. He is currently a member of the independent research team which has been appointed by the Department of Social Services to evaluate the new National Disability Insurance Scheme.

Dr Tom Karmel

Tom Karmel is currently an adjunct professor at the National Institute of Labour Studies, Flinders University and a member of the Council of the University of Canberra. Tom was the managing director of the National Centre for Vocational Research from 2002 to 2013, after a long career in the Australian Public Service where he held senior positions in the areas of higher education, employment and economic analysis and in the Australia Bureau of Statistics.Tom's main research interests have been in the relationship between education and the labour market.

Professor Kostas Mavromaras

Professor Kostas Mavromaras is the Director of the National Institute of Labour Studies at Flinders University. Prior to Flinders Kostas held appointments at the universities of Melbourne, Aberdeen and Newcastle upon Tyne. He works on the economics of human capital, including employment, skills, education, productivity, growth, age, health, disability, insurance, retirement and several specific workforces. He is the lead CI of the 2013-2017 NDIS trial Evaluation (including the Barkly region), a major evaluation funded by the Australian Government Department of Social Services, and of several ARC projects. Kostas publishes consistently in top international journals and consults widely nationally and internationally.

Dr Rong Zhu

Dr Rong Zhu is a research fellow at the National Institute of Labour Studies, Flinders University. He received his PhD degree in Economics from the University of New South Wales. Rong's research interests include applied econometrics, labour economics, education economics and health economics. His research papers have been published in international refereed journals such as *Oxford Economic Papers*, *Health Economics*, *Regional Science and Urban Economics*, *Economics Letters*, *Applied Economics*, *Economics of Transition*, *China Economic Review* and *Education Economics*.

Associate Professor Mike Dockery

Associate Professor Mike Dockery is Principal Research Fellow with the John Curtin Institute of Public Policy, NCSEHE Program Leader for Program 3 – Student Equity Data and Analysis, and leads the Cooperative Research Centre for Remote Economic Participation's project on Indigenous mobility. Mike is also part of the research team at the Bankwest Curtin Economics Centre, where his research pursuits include the school-to-work transition, the effects of work and other labour market experience on happiness and wellbeing, and Indigenous labour market and social outcomes.

Professor Trevor Gale

Professor Trevor Gale is Head of the School of Education and Chair in Education Policy and Social Justice at the University of Glasgow, Scotland. From 2008 to 2011, he was the founding director of the National Centre for Student Equity in Higher Education. He is chief investigator on two current Australian Research Council projects, including one researching the social justice dispositions of teachers in advantaged and disadvantaged secondary schools in Melbourne and Brisbane, Australia. Trevor is the founding editor of the journal Critical Studies in Education, co-editor (with Kal Gulson) of the new Springer book series Education Policy and Social Inequality and a past president of the Australian Association for Research in Education.

Dr Stephen Parker

Dr Stephen Parker is a Research Fellow in the Centre for Educational Futures and Innovation at Deakin University. He has interests in social justice, public policy, social and political theory and sociology. He has researched and published in higher education policy, student aspirations and student transitions. Stephen is currently a Research Fellow and Project Manager on the ARC Discovery project Social Justice Dispositions Informing Teachers' Pedagogy, and co-editor (with Gulson & Gale) of the forthcoming edited book Education Policy and Social Inequality. Prior to coming to Deakin in 2012, Stephen was a researcher at the National Centre for Student Equity in Higher Education at the University of South Australia.

Dr Tebeje Molla

Dr Tebeje Molla is a research fellow in the School of Education, Deakin University. He has degrees in education policy and sociology from Aarhus and Monash universities. His research focuses on social justice in and through education, transnational educational policy processes, and the dynamics of power, knowledge and policy. Tebeje has published in educational inequality, policy-making and doctoral education. His recent articles appear in Knowledge Cultures, Gender and Education, Journal Education Policy, Discourse, and Higher Education. Tebeje has recently been commissioned to author a monograph on structural inequalities in Ethiopian higher education, as part of the new Springer book series, Education Policy and Social Inequality.

Mr Tim Sealey

Mr Tim Sealey is currently the Research Manager for Parent Engagement at the Australian Research Alliance for Children & Youth (ARACY), based in Canberra. Apart from being a diehard Manchester City fan, Tim's main passions are social inclusion and music. Having grown up in Murray Bridge, South Australia (a low SES environment as defined by postcode), Tim is acutely aware of the need for better measures of social inclusion and of "closing the gap". As a big picture thinker, Tim prefers holistic approaches to social problems rather than specific programs, as the latter tend to be driven by available funds rather than obtainable solutions.

Mr Andrew Norton

Mr Andrew Norton is the Higher Education Program Director at the Grattan Institute. With Dr David Kemp, he was the government-appointed co-reviewer of the demand driven system. The *Review of the Demand Driven System Final Report* was released in April 2014. Mr Norton is the author or co-author of many articles, reports and other publications on higher education issues. These include a widely-used reference report on higher education trends and policies, *Mapping Australian higher education*, *Graduate Winners* on the public and private benefits of higher education, and *Doubtful debt: the rising cost of student loans*.

Associate Professor Sharron King

Associate Professor Sharron King is the Academic Director and Deputy Head of UniSA College. The College provides a Foundation Studies Program and a range of Diplomas as enabling pathways to university degrees. Sharron's background is in Health Sciences and she has a PhD in Higher Education. Her research interests focus primarily on students' transition, health and well-being at university and widening access to university for students who face educational disadvantage. Her current research grants include investigations of first in family students' experiences of university; and the factors impacting on students' success, well-being and retention.

Dr Ann Luzeckyj

Dr Ann Luzeckyj is a Senior Lecturer in Higher Education: First Year Undergraduate Teaching Adviser at Flinders University, a role that allows her to draw on her research interests, knowledge and experience in supporting staff who work with first year students. Ann has worked in higher education for over 20 years in both Australia and England in a range of roles (as a librarian and as an academic). Her research interests include exploring ways to support students entering universtiy from diverse backgrounds and analysing higher education policy. Ann was awarded her Doctorate in Education in 2011.

Biographies

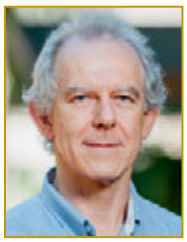
Associate Professor Ben McCann
Associate Professor Ben McCann is Associate Professor of French Studies and Director of Student Experience in the Faculty of Arts at the University of Adelaide. Ben works with staff to support student transition to university and improve curriculum design and pedagogies to enable closer alignments with the university's retention priorities. His role also involves developing appropriate mechanisms for cohort tracking and identification of 'at risk' students. Ben was the co-leader of an OLT-funded project on Staff and Students Expectations and Experience (2009-2012).

Ms Charmaine Graham
Ms Charmaine Graham is a Research Assistant in the UniSA College. She holds qualifications in Business, Law and Psychology and has extensive experience working in human resource managment and employment law, both in Australia and the UK. Charmaine's recent research activities include: the mental well-being of university students; first in famly students' experiences of university; and the financial implications of university study on regional and remote students.

Dr Sarah O' Shea
Dr Sarah O' Shea is a Senior Lecturer with the Faculty of Social Sciences, University of Wollongong, coordinating postgraduate programs in Adult, Vocational and Higher Education. In 2015, Sarah was awarded an OLT National Teaching Fellowship to work with outreach and equity practitioners exploring how higher education institutions can engage with first-in-family learners and their family/community members. Broadly, Sarah's research focuses on student access and participation within the university sector. She favours qualitative methodologies and has largely drawn upon narrative inquiry in studies with students from low-SES backgrounds, Indigenous students, older students and those who are the first in the family to come to university.

Dr Rahul Ganguly
Dr Rahul Ganguly is a Lecturer in Special Education in the School of Linguistics, Adult and Specialist Education at the University of Southern Queensland. He teaches courses on Mathematics for at-risk learners, Autism, and Emotional Behaviour difficulties. Rahul's research interests focus on understanding structural, attitudinal and personal factors that promote desired post-secondary opportunities for students with emotional and behavioural challenges. Presently he is collaborating with Texas Tech University in the United States on a project that examines self-determination and resilience among post-secondary students with disability.

Dr Charlotte Brownlow
Dr Charlotte Brownlow is a Senior Lecturer in the School of Psychology and Counselling at the University of Southern Queensland. Her research interests focus on understandings of diversity and difference and the impacts that these have on the crafting of individual identities, particularly for individuals identifying as being on the autism spectrum.



Dr Jan Du Preez
Dr Jan du Preez is registered as a Psychologist with the Psychology Board of Australia (PsyBA), with area of practice endorsement in counselling psychology. Jan has worked in a variety of settings across the disciplines of educational, counselling and organisational psychology. He is currently employed full-time as a Lecturer in the School of Psychology and Counselling at the University of Southern Queensland. He has research interests in the factors contributing to student success at university, with a particular interest in applying narrative approaches to facilitating student self-efficacy.

Dr Coralie Graham

Dr. Coralie Graham is dually registered as a Registered Nurse and Psychologist and holds a PhD and Post-Graduate Certificate in Tertiary Teaching and Learning. Coralie has worked in a number of roles in both professional capacities, and for the past 9 years at the University of Southern Queensland has been engaged as a Senior Lecturer in the School of Nursing & Midwifery. Coralie teaches courses related to rehabilitation and disability, and her research interests include resilience, cross-cultural communication and community services and legislation related to people with a disability.

Ms Jackie Weinman

Ms Jackie Weinman is a member of the Australian Tertiary Education Network on Disability (ATEND) national committee, a Senior Disability Advisor at Curtin University, and the current chair of the Tertiary Education Disability Access Network (WA). She is an Occupational Therapist and has extensive experience as a Disability Advisor in the higher education sector. Jackie strives to facilitate a supportive, streamlined and successful educational experience for students with disability, particularly through embedding the principles of Universal Design into all aspects of service delivery, and fostering positive attitudes towards disability, particularly hidden disabilities, in the higher education sector.

Dr Daniel Edwards

Dr Daniel Edwards is a Principal Research Fellow, leading the Tertiary Education research program at the Australian Council for Educational Research. Dr Edwards is responsible for coordinating ACER's higher education, and vocational education and training research. He leads a team of researchers with a wide range of expertise in policy research, assessments and surveys. Dr Edwards' research encompasses a range of educational issues, with particular emphasis on higher education. He has a keen interest in all aspects of education policy and has explored issues relating to demand for higher education places (both amongst students and employers), student achievement, student aspirations and pathways, selection policies for entrance to university, and educational 'choice' theories. He also has experience researching wider social issues regarding social stratification and demographic change.

Dr Julie McMillan

Dr Julie McMillan is a Senior Research Fellow at the Australian Council for Educational Research (ACER). Julie has a Bachelor of Arts (Honours) and PhD in Sociology. She has published on topics such as higher education participation, attrition and completions, with student equity being a central focus of this work. In addition, Julie has investigated how to measure socio-economic disadvantage among school and higher education students, as well as developing measures of socio-economic status for the Australian population. These measures are routinely included in a number of major Australian social science data sets and are used by researchers in a range of disciplines, including Education.

Professor Gavin Moodie

Gavin Moodie is an adjunct professor of education at RMIT University and an adjunct professor in OISE at the University of Toronto. He has a bachelor of arts (honours) in philosophy, a bachelor of laws and a PhD in tertiary education policy. Gavin has published extensively in tertiary education policy, particularly on equity and the relations between vocational and higher education. He is currently writing a book for Palgrave Macmillan seeking to understand the effects on universities of the current information revolution by examining the effects on universities of a previous information revolution: Gutenberg's invention of printing in 1450.

NCSEHE
National Centre for Student Equity in Higher Education

Curtin University

About the Centre

Closing the loop between equity policy, research and practice

The National Centre for Student Equity in Higher Education (NCSEHE) began operation in 2008, hosted by the University of South Australia. In May 2013, Curtin University won the bid to take over the Centre and received funding to achieve its aim of informing public policy design and implementation and institutional practice, to improve higher education participation and success for marginalised and disadvantaged people. The NCSEHE's objectives are:

- to be at the centre of public policy dialogue about equity in higher education
- to 'close the loop' between equity policy, research and practice by
  - > supporting and informing evaluation of current equity practice, with a particular focus on identifying good practice
  - > identifying innovative approaches to equity through existing research and the development of a forward research program to fill gaps in knowledge
  - > translating these learnings into practical advice for decision-makers and practitioners alike.

Student Equity and Participation

The NCSEHE's key purpose is "to inform public policy design and implementation, and institutional practice, to improve higher education participation and success for marginalised and disadvantaged people."

In keeping with its purpose, the NCSEHE is connecting Commonwealth student equity policy with the activities of higher education institutions and national equity outcomes, through its input into comparative assessment of institutional strategies, systemic assessments of policy achievements and assessments of national policy-making in view of this evidence.

The Centre's focus is based on three programs of research activity:

1. Equity Policy and Program Evaluation
The Centre is providing leadership and support in developing a national approach and resources to evaluate the impact of initiatives to increase participation of people from LSES backgrounds and other equity groups in higher education.

2. Equity Policy and Planning Research
The Centre is furthering equity policy and planning in Australia, sharing knowledge and capabilities developed in Australia, and providing evidence on the impact of policy on equity outcomes in the system. By enabling national research and engagement on higher education policy and practice, the Centre ensures its research includes analysis of all student equity groups, including people from LSES, Indigenous, remote and rural communities, and people with disability.

3. Student Equity Data
The Centre is providing a central repository for the analysis and availability of national datasets on student equity in higher education. This encompasses:

- compiling and analysing national equity data and survey data on student transition to higher education
- managing a central online website for presenting data on student equity performance in higher education; in particular, the mapping of higher education participation data in Australia
- providing access to sources for data and data-driven research on equity policy and programs from around Australia and the world.

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