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Pathways to higher education in Australia – how attending different secondary school sectors and living in different States relates to attainment of Bachelor or Higher degree qualifications

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Pathways to higher education in Australia – secondary schools by school sector and State

The financial resources of individual Australian states are not equal. Also, the patterns of population in different states in regional and remote areas have different costs to provide infrastructure and services. While the constitutional powers to deliver services such as education rest with individual states, the funding for these services has shifted over time to the Commonwealth Government.

As the Commonwealth Government has increased its share of the tax take in Australia there have been redistributions of income gathered by the federal government. Rather than a simple allocation to each state on a per capita basis, there has been a focus on a needs based distribution.

The goal is to achieve ‘fiscal equalisation’ – giving each State an appropriate share of revenue to allow each State to provide similar levels of infrastructure (e.g. capital works for government schools).

For almost 100 years since the establishment of the Grants Commission in 1933 there have been efforts to achieve fiscal equalisation across all Australian states and territories. In more recent years the primary focus has been on the allocation to the states of the GST revenue collected by the Commonwealth Government.

Using formulas that take into account both population growth and required capital improvements, in 2022-23 the GST revenue allocation to states and territories for school infrastructure was re-weighted from per capita allocations to a needs basis to achieve parity in resources across Australia for the provision of government schools.

The adjustments are shown in Table 1 below.¹

Table 1 Changes in GST distribution to states and territories for government school Infrastructure

State	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Redist
	\$m	\$m	\$m	\$m	\$m	\$m	\$m	\$m	\$m
Schools	-138	-73	140	95	-43	-21	21	20	275

Commonwealth Grants Commission Research Paper 6, 2023

If the Grants Commission is effective in providing fiscal equalisation, we would expect that we would have comparable performance across states for government schools. While the GST distribution is relatively recent, efforts by the Grants Commission to achieve fiscal equalisation have been in place since the 1930's.

In looking at the performance of secondary schools the typical measures used relate to levels of literacy and numeracy achieved at specific stages of schooling (as reported by the NAPLAN tests) and completion rates of study at year 12 level.

In the current study, rather than focusing on measures directly related to secondary schooling, we look at the longer term education outcomes – the highest level of educational qualifications obtained by students who pass through the secondary school systems. In particular the focus is on the relationship between the location and type of school attended for secondary education and the subsequent patterns of achievement of higher level educational qualifications at universities (Bachelor or Higher Degrees).

This is an important area to focus on because the federal government is spending billions of dollars under the recent University Accord with an aspiration that 80% of working age people will have a tertiary qualification by 2050 and school leavers are a very significant pathway to university.²

The current study was made possible by the release of longitudinal census data by the Australian Bureau of Statistics. Using the 2011-2021 Longitudinal Census database we were able to identify people in 2011 who were attending secondary school in that year.

For the 2011 year the data was by sex of student, secondary school sector (government, Catholic and other independent) and state of residence.

For this cohort we were then able to identify the highest level of educational qualification obtained by 2021 in the following levels of qualification:

- Bachelor and Higher Degrees
- Graduate Diploma and Graduate Certificate Level
- Advanced Diploma and Diploma Level
- Certificate Level

The study was focused on finding answers to three questions:

1. *Is there a correlation between the rate at which students progress to Bachelor or Higher Degree qualifications and the sector (Government, Catholic and Independent Other) of the secondary school they attended?*
2. *Do males and females differ in their future education outcomes, and if so, is this difference correlated to the type of secondary school they attended?*
3. *Do future education outcomes of secondary students vary across different education jurisdictions (state and territories)?*

Key findings

The main finding from the study is that in all 3 attributes analysed – school sector, state and sex of student – there are very large and significant differences in outcomes.

- The differences in outcomes by sex, state and school sector are so large and significant that it is very unlikely that any of the aspirations of the University Accord will be met, unless the causes of these differences can be identified and addressed.
- While overall participation in post-school education has increased over recent decades, the disparity between males and females achieving Bachelor or Higher Degrees is also rising. For 25-34 year olds in 1986, 11% of males and 8% of females had a Bachelor or Higher degree. In 2021 for the same age cohort 33% of males and 46% of females had qualifications at this level.
- Victoria, NSW and the ACT have rates of attainment of higher qualifications above the national average for both males and females, while QLD, SA, WA, NT and TAS all have lower rates. There is a difference of 20.32% for males and 23.87% for females between the lowest and highest percentage of students achieving Bachelor or Higher Degree qualifications. For males the highest state/territory was the ACT with 40.45% and the lowest the NT with 20.13% attaining Bachelor or Higher Degree qualifications. For females VIC was the highest with 51.84% and NT the lowest with 27.97% attaining Bachelor or Higher Degree qualifications.
- Across Australia male students from government run secondary schools had the lowest rate of attainment of Bachelor or Higher Degrees (24%), compared to 36% for Catholic secondary schools and 47% for other Independently run schools
- Across Australia female students from government-run secondary schools had the lowest rate of attainment of Bachelor or Higher Degrees (38%), compared to 54% for Catholic secondary schools and 60% for other independent secondary schools.
- Taking the sex of the student, state of residence and sector of school into account the following results were observed:
 - The cohort with the highest rate of Bachelor or Higher degrees were female students from Independent secondary schools in Victoria. Here 68.11% of those who were secondary students in 2011 had a Bachelor or Higher Degree in 2021.
 - The lowest rate of achievement for female students came from students from independent secondary schools in the NT (22%).
 - The highest rate of achievement for male students (63.49%) was for the cohort of males who had attended independent schools in the ACT.
 - The lowest rate of achievement for male students (9.89%) was for the cohort of males who had attended Catholic secondary schools in the NT.

The full results by sex of student, state of residence and school sector attended in 2011

Tables 2 and 3 below shows the attainment rate of Bachelor or Higher Degree achieved by people who were secondary school students in 2011.³

Table 2: Percentage of students who were in secondary school in 2011 who attained a Bachelor or Higher Degree by 2021						
	Female government	Male government	Female Catholic	Male Catholic	Female other independent	Male other independent
ACT	46.05%	34.49%	45.74%	36.69%	54.45%	63.49%
NSW	40.10%	27.32%	54.16%	35.41%	58.25%	47.84%
NT	24.35%	21.60%	35.95%	9.89%	22.00%	26.32%
QLD	28.99%	18.09%	49.56%	32.27%	55.70%	43.88%
SA	32.72%	21.81%	56.64%	38.11%	54.75%	39.60%
TAS	25.97%	18.06%	45.01%	19.69%	54.62%	46.06%
VIC	43.02%	26.86%	59.07%	39.67%	68.11%	51.49%
WA	35.27%	20.53%	51.15%	38.43%	53.89%	43.22%

Source ABS Longitudinal Census database 2011-2016-2021

Table 3 below shows the same data, but it is sorted from highest attainment rate to the lowest.

Table 3: Proportion of secondary students in 2011 who had attained a Bachelor or Higher Degree by 2021 sorted by attainment rate			
STATE or TERRITORY	SEX OF STUDENTS	SCHOOL SECTOR	ATTAINMENT RATE
VIC	Female	OTHER INDEPENDENT	68.11%
ACT	Male	OTHER INDEPENDENT	63.49%
VIC	Female	CATHOLIC	59.07%
NSW	Female	OTHER INDEPENDENT	58.25%
SA	Female	CATHOLIC	56.64%
QLD	Female	OTHER INDEPENDENT	55.70%
SA	Female	OTHER INDEPENDENT	54.75%
TAS	Female	OTHER INDEPENDENT	54.62%
ACT	Female	OTHER INDEPENDENT	54.45%
NSW	Female	CATHOLIC	54.16%
WA	Female	OTHER INDEPENDENT	53.89%
VIC	Female	ALL SECTORS	51.84%
VIC	Male	OTHER INDEPENDENT	51.49%
WA	Female	CATHOLIC	51.15%
QLD	Female	CATHOLIC	49.56%
ACT	Female	ALL SECTORS	48.38%
NSW	Male	OTHER INDEPENDENT	47.84%
NSW	Female	ALL SECTORS	46.29%
TAS	Male	OTHER INDEPENDENT	46.06%
ACT	Female	GOVERNMENT	46.05%
ACT	Female	CATHOLIC	45.74%

Table 3 (continued)			
STATE or TERRITORY	SEX OF STUDENTS	SCHOOL SECTOR	ATTAINMENT RATE
TAS	Female	CATHOLIC	45.01%
QLD	Male	OTHER INDEPENDENT	43.88%
WA	Female	ALL SECTORS	43.78%
WA	Male	OTHER INDEPENDENT	43.22%
SA	Female	ALL SECTORS	43.08%
VIC	Female	GOVERNMENT	43.02%
ACT	Male	ALL SECTORS	40.45%
NSW	Female	GOVERNMENT	40.10%
VIC	Male	CATHOLIC	39.67%
SA	Male	OTHER INDEPENDENT	39.60%
QLD	Female	ALL SECTORS	39.12%
WA	Male	CATHOLIC	38.43%
SA	Male	CATHOLIC	38.11%
ACT	Male	CATHOLIC	36.69%
NT	Female	CATHOLIC	35.95%
TAS	Female	ALL SECTORS	35.93%
NSW	Male	CATHOLIC	35.41%
WA	Female	GOVERNMENT	35.27%
VIC	Male	ALL SECTORS	34.60%
ACT	Male	GOVERNMENT	34.49%
SA	Female	GOVERNMENT	32.72%
NSW	Male	ALL SECTORS	32.40%
QLD	Male	CATHOLIC	32.27%
WA	Male	ALL SECTORS	30.29%
SA	Male	ALL SECTORS	29.21%
QLD	Female	GOVERNMENT	28.99%
NT	Female	ALL SECTORS	27.97%
NSW	Male	GOVERNMENT	27.32%
VIC	Male	GOVERNMENT	26.86%
NT	Male	OTHER INDEPENDENT	26.32%
QLD	Male	ALL SECTORS	26.16%
TAS	Female	GOVERNMENT	25.97%
NT	Female	GOVERNMENT	24.35%
TAS	Male	ALL SECTORS	23.01%
NT	Female	OTHER INDEPENDENT	22.00%
SA	Male	GOVERNMENT	21.81%
NT	Male	GOVERNMENT	21.60%
WA	Male	GOVERNMENT	20.53%
NT	Male	ALL SECTORS	20.13%
TAS	Male	CATHOLIC	19.69%
QLD	Male	GOVERNMENT	18.09%
TAS	Male	GOVERNMENT	18.06%
NT	Male	CATHOLIC	9.89%

Source: ABS Longitudinal Census Database 2011-2016-2021

The enormous variation in the proportion of students attaining Bachelor or Higher degrees (from 68.11% to 9.89% calls into question the effectiveness of the multiple millions of dollars spent by federal and state governments in achieving equitable outcomes.

The data in this report shows correlations between university completions and the state of residence of students in 2011, their sex, and the sector of school they attended for secondary schooling. Possible causes for the variance could include the influence of parental educational attainment, school cultures, class sizes, skill levels together with the extent of professional development of teaching staff and access to teaching materials and study aids (e.g. laptop computers).

It is not possible to determine the causes of these correlations from the current study. However, the current study provides a very useful baseline for assessing the current performance of schools acting as pathways to higher education.

Can males catch up?

Research from the United States suggests that girls are outperforming boys from primary school through to university, and recent studies also show the gender gap is now starting even earlier during kindergarten years.⁴

“Jayanti Owens, who studies inequality in schools at the Yale School of Management has found that boys behaviour at ages 4 and 5 predicted the amount of schooling they finished by their mid-20s”

In Australia the disparity in educational attainment rates has been increasing over the past 30 years.

Drawing on data held in Confidentialised Unit Record Files (CURFS) held by the Australian Bureau of Statistics for the Censuses from 1986 through to 2021 it was possible to identify the proportion of males and females aged 25-34 years who had attained a Bachelor or Higher degree in each Census year.

Table 4: Percent of 25-34 year old males and females in Australia with Bachelor or Higher Degree								
	1986	1991	1996	2001	2006	2011	2016	2021
Male	11%	12%	15%	17%	22%	26%	30%	33%
Female	8%	11%	17%	23%	30%	34%	41%	46%
Variance (females)	-3%	-1%	+2%	+6%	+8%	+8%	+11%	+13%

Source: ABS Confidentialised Unit Record Files for the Australian Census 1986-2021

Given the enormous variability in the effectiveness of secondary schools acting as pathways to higher education it raises the question of how effective initiatives announced as part of the University Accord might be.

The Federal Government is committing an additional \$2.5 billion from 2024-25 to 2034-35 to support participation in tertiary education from prospective students in under-represented backgrounds.

To what extent are these initiatives likely to open the door to prospective students from disadvantaged, low socio-economic status, given that primary and secondary schooling appear to be the formative years in establishing engagement with post compulsory education.

Second, how likely are they to substantially increase the proportion of working age people having a tertiary qualification, given that as of 2021 the rate of attainment of Bachelor or Higher degrees by males (at 33%) was 13% less than the rate achieved by females (46%).

Is the approach to curriculum, engagement with education and funding of schools appropriate?

While the Grant Commission has focused on equality of inputs for allocation of GST revenue to the states for funding infrastructure for government run schools, they do not consider equality of outputs. In addition to the Grant Commission funding there have been attempts to allocate other Federal funds to schools across all sectors (Government, Catholic and other Independent) on a needs basis.

The School Resource Standard (SRS) attempts to estimate the level of public funding needed to equitably fund all schools based on the students' educational needs and the capacity of the school to raise resources.

The SRS base amount is calculated by multiplying the number of students enrolled at the school for the year by the SRS funding amount for the school for the year. For most non-government schools, the SRS base amount is reduced by the school's Capacity to Contribute (CTC).

In 2025, the estimated SRS funding amounts are \$13,977 for primary students and \$17,565 for secondary students. These amounts were established in 2018 by analysing funding levels in schools which had at least 80 per cent of students achieving above the national minimum standard in NAPLAN for reading and numeracy for 3 years in a row. The SRS funding amounts are indexed each year by the SRS indexation factor to keep up with costs.

The Commonwealth will provide an estimated \$22.1 billion in base funding for schools in 2025.⁵

The different levels of post-school educational attainment by students from different states, sex and education sectors suggest that the current approaches are not working effectively in terms of achieving equity of engagement in overall levels of educational attainment.

The recent University Accord considers the challenges of attracting regional and lower socio-economic status students and has recommendations to reduce barriers to accessing higher education.

Given the enormous sums of money being allocated to education, and the goal of 80% of working age people having post-secondary qualifications by 2050, there is a need for a substantial reset of strategy for attainment of both university and other post school qualifications.

From the current study we now have more clarity on the current outcome performance associated with secondary schools across Australia as far as university qualifications are concerned.

Any hypotheses on how to achieve equitable outcomes need first to build insight into why current outcomes are so varied.

Notes

¹ Research Paper 6 GST Distribution and State Investment Needs Commonwealth Grants Commission 2023

² Australian Universities Accord Final Report <https://www.education.gov.au/australian-universities-accord/resources/final-report>

³ ABS Confidentialised Unit Record Files Australian Censuses of Population and Housing, 1986, 1991, 1996, 2001, 2006, 2011, 2016, 2021

⁴ Why Boys are Behind in School from the Start Claire Cain Miller, New York Times, May 31, 2025

⁵ <https://www.education.gov.au/recurrent-funding-schools/schooling-resource-standard#:~:text=The%20SRS%20base%20amount%20is,funding%20for%20schools%20in%202025.>