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Educational inequality in Australia

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This chapter explores different forms of educational inequality, how Australia compares to other countries and policy options for reducing inequality.
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educational marketisation, school stratification and segregation, and school funding. She has expertise about schooling in OECD countries, especially North America and Europe, and cross-national comparative research. She aims to conduct research that can be used to guide public policy efforts to improve educational equity, efficiency and quality.

Introduction

Education is an essential component of any nation's economic, political, cultural and social development. It is the main vehicle for social mobility for individuals. It develops skills, attitudes and attributes that are essential for creating active, engaged and productive citizens. It is the key to promoting a tolerant, cohesive, prosperous and innovative society.

Education is positively related to many benefits. For example, it is related to superior health and wellbeing, civic outcomes, happiness and self-efficacy.¹ Individuals with higher levels of education tend to be more tolerant of people who are different from themselves, have higher levels of political and civic engagement, earn more money, have better health and wellbeing and live longer. These benefits are passed to the next generation, with parental education positively linked to children's health outcomes, for example. Conversely, low levels of education are related to many negative outcomes. In Australia, low educational outcomes are related to diminished health,² unemployment,³ low wages,⁴ social exclusion,⁵ crime and incarceration⁶ and teenaged pregnancy.⁷

Education helps people to become happier, healthier, and wealthier, which translates to large social and fiscal benefits for communities and the larger society.⁸ Higher wages and lower unemployment means a larger tax base, less crime and less public money to be spent on healthcare, social welfare and prisons. It can lead to more economic development, innovation, creativity and social cohesion. It minimises the negative drains on the public purse and leverages positive outcomes.

What is educational inequality?

Schooling is a complex social institution that comprises many dimensions, all of which can influence children and young people's personal and academic development. Due to its complexity, it is handy to conceptualise educational equity (and inequalities) as comprising multiple dimensions. One way to do this is to break down educational equity into opportunities, experiences, and outcomes.

Opportunities

Educational opportunities comprise inputs and resources, structures and access. They include, for example, qualified and experienced teachers, particular forms of curriculum, facilities and resources.

Experiences

Educational experiences are the processes and interactions that occur in schools, such as classroom disciplinary climate, student-teacher relations, teacher expectations, pedagogical practices, and relations with peers.

Outcomes

Educational outcomes are the values, skills, qualifications, attributes and characteristics that schooling develops in young people. They include secondary school completion qualifications, tertiary participation and completion, scores on standardised tests and evaluations, and grades from school-based assessments. Educational outcomes also include cognitive skills such as writing, analysis, critical and creative thinking, and soft skills related to interpersonal communication, emotional and social intelligence, teamwork and intercultural understanding, among others. Finally, educational outcomes include disciplinary knowledge, literacy and numeracy skills, and cultural knowledge. Literacy and numeracy skills are measured by the National Assessment Program – Literacy and Numeracy (NAPLAN), which is administered to all students in Years 3, 5, 7 and 9. Australia also participates in the Programme for International Student Assessment (PISA), which is administered by the Organization for Economic Cooperation and Development (OECD) to a nationally representative sample of 15-year-olds in member countries every three years.

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Implications of different forms of inequality

Educational outcomes, like any human behaviour or trait, are not equally distributed among individuals. This is normal and natural and not a cause for concern. Some students will be better at math, for example, than their peers, while others

will be better at sports or art or English. These individual differences become inequalities, however, when they are associated with group characteristics, such as gender, ethnicity, first language, social class or geographic location. Group differences are a cause for concern because they suggest that social forces and structures are hindering the development of individuals.⁹

Equity of educational opportunities and experiences are important for two reasons. First, educational opportunities and experiences directly impact on education outcomes. If particular groups of students have inequitable access to qualified and experienced teachers, for example, it is likely that they will have lower educational outcomes than their more educationally privileged peers.¹⁰ At the same time, all students should have equal access to quality learning environments, regardless of whether they impact on their educational outcomes or not. All students, regardless of where they live or go to school, have a right to enjoy supportive relationships with their teachers, or to have a safe and orderly classroom. Thus, ensuring equity of educational opportunities and experiences is important for ensuring equity of educational outcomes, as well as a matter of equity in its own right.

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Most people would agree that the ability to develop to one’s potential should not be shaped by parental income, place of residence, or school attended. At the bare minimum, all students should receive equal opportunities and experiences. To reduce inequalities of education outcomes, socially disadvantaged students may need additional educational opportunities (for example resources and supports) than their more advantaged peers. The problem, however, is that socially advantaged students in Australia often receive *more* educational advantages than their peers.

Educational inequality in Australia

There are three equity groups in Australia. These are the groups of students that consistently experience lower educational opportunities, experiences and outcomes. They are students from lower socioeconomic status backgrounds, Indigenous students, and students who reside in rural/remote areas.¹¹ These groups often overlap, resulting in compounded educational disadvantage. Thus, the students who experience the highest levels of educational inequality in Australia are low-income Indigenous students who reside in rural/remote communities.¹²

Stark inequalities have been documented for a range of outcomes, such as NAPLAN and PISA, secondary school completion (Year 12), and university participation. A snapshot of educational inequalities is provided below.

NAPLAN

Inequalities in literacy and numeracy outcomes as measured by NAPLAN have been documented. For students in Year 7, Lamb et al¹³ found the following inequalities in the proportion of students that achieved the international benchmark on NAPLAN:

- 62 per cent of Indigenous students did not meet the international benchmark, compared to 27 per cent of non-Indigenous students.
- 50 per cent of students whose parents did not complete Year 12 (a proxy for socioeconomic status) did not meet the international benchmark, compared to 13 per cent of students whose parents have completed Year 12.

For students in Year 5 and Year 9, Cobbold¹⁴ found large inequalities on NAPLAN between the children of parents with high and low levels of education. The achievement gaps between Year 5 students from high and low educated parents was the equivalent of more than 2.5 years of learning in reading and approximately two years in writing and numeracy; in Year 9, the gaps were approximately four years in reading and numeracy and 4.5 years in writing.

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PISA

Inequalities on NAPLAN are mirrored in PISA. Stable inequalities have been documented in all rounds of PISA and in all three subject domains (reading, mathematical, and scientific literacies). Data from the last round of PISA has uncovered the following inequalities:¹⁵

- Students that attend schools in provincial and remote communities (representing approximately 25 per cent of students in the PISA sample) have substantially lower scores than their metropolitan peers. This equates to one year and 1.5 years of schooling for provincial and remote students respectively in all three domains.
- Indigenous students have substantially lower scores than their non-Indigenous peers, equating to 2.5 years of schooling for scientific literacy, and 2.3 years of schooling for reading literacy and mathematical literacy. Only 25 per cent of Indigenous students reached the National Proficient Standard in mathematical literacy compared to 57 per cent of non-Indigenous students. Similar proportions were found for reading and scientific literacy, with 32 per cent of Indigenous students reaching the National Proficient Standard compared to 62 per cent of non-Indigenous students.
- Reflecting the compounding of multiple disadvantage, the largest inequalities are found between students from the highest and lowest socioeconomic quartiles. Across all three subject domains, students from the highest SES quartile substantially outperform students from the lowest SES quartile. The equity gap represents almost three years of schooling for all subject domains.

Educational attainment

Inequalities in academic achievement are mirrored in inequalities of educational attainment. For example, the proportion of students that complete secondary school vary substantially:

- 72 per cent of metro, 65 per cent of regional and 36 per cent of remote students complete secondary school in Australia.¹⁶
- The secondary school completion gap between Indigenous and non-Indigenous students is more than 40 per cent.¹⁷
- The gap between students from the highest and lowest socioeconomic backgrounds is 28 per cent. Overall, 40 per cent of young people from the lowest socioeconomic backgrounds do not complete Year 12.¹⁸

University participation and completion

Inequalities of university participation and completion also exist:

- 66 per cent of students from the highest socioeconomic backgrounds (top quintile) enter university, compared to 25 per cent of students from the lowest socioeconomic quintile.¹⁹
- Australians who reside in large cities are twice as likely to have a university degree than their counterparts in rural communities.²⁰

Inequalities of educational opportunities and experiences

Inequalities of outcomes are related to inequalities of educational opportunities and experiences. These include, for example, inequalities in access to experienced teachers, school resources, academic curricula in upper secondary school and classroom disciplinary climate.

Data from PISA has shown that schools in rural communities face greater challenges than their metropolitan counterparts. One of their largest challenges is recruiting and retaining teachers. School principals report that teaching shortages hinder student learning, with 83 per cent of principals in small rural communities reporting that a lack of mathematics teachers hinders instruction to some extent or a lot, compared to only 17 per cent of principals in communities close to the centre of a very large city.²¹

Of all OECD countries, Australia has one of the largest gaps in the shortage of teachers between urban and rural schools.²² Inequalities of instructional materials have also been documented, with 50 per cent of principals in small rural communities and 40 per cent of principals in small country towns reporting that a shortage of instructional materials hinders instruction in their school to some extent, compared to eight per cent of principals in schools located in inner suburbs of capital cities.²³ On the other hand, students in rural and metropolitan schools report similar levels of support from their teachers,²⁴ which is a reassuring finding.

Data from PISA has also uncovered between-school inequalities of educational opportunities and experiences between schools with different socioeconomic compositions. Australia has the largest gap in the shortage of teachers between disadvantaged and advantaged schools among all OECD countries.²⁵ Disadvantaged schools in Australia also have far fewer educational materials (books, facilities, laboratories) than high SES schools.²⁶ This gap is the third largest in the OECD, with only Chile and Turkey showing larger inequalities between schools. Large inequalities in students' educational experiences have also been found between advantaged and disadvantaged schools, particularly in regards to classroom disciplinary climate, teachers' use of stimulating instructional strategies, and supportive relationships with teachers.²⁷

Finally, between-school inequalities in access to academic curricula in senior secondary school (Year 11 and 12) exist in Australia. Access to a wide range of academic curriculum offerings in upper secondary school is substantially greater in higher SES school contexts than in disadvantaged schools.²⁸ Even some core academic subjects, such as literature and advanced mathematics, are not offered in all high schools. They found that nine per cent of low SES schools offer English literature, physics, chemistry and advanced mathematics, compared to 100 per cent of high SES schools.²⁹ Between-school curricular inequalities exist between rural and metropolitan schools as well. Rural schools, on average, offer half as many academic subjects as do larger secondary schools in metropolitan areas.³⁰ Access to STEM subjects, especially advanced mathematics, is especially inequitable. In Victoria, for example, only 30 per cent of rural public schools and 65 per cent of metropolitan public schools offer advanced mathematics.³¹

Curricular inequalities are problematic for multiple reasons. First, they present substantial barriers for students who are unable to reside in an affluent community or pay fees to attend a non-government school, contradicting Australia's social commitment to provide a "fair go". Second, these barriers reduce the country's ability to increase secondary students' participation in science, technology, engineering and mathematics, a key policy objective of the Australian Government's innovation agenda.³² Third, curricular inequalities exacerbate the social segregation of schools, which leads to further educational inequalities. This is because middle-class/professional families often choose a secondary school based in part on the school's offerings. Well-off rural families, for example, often send their children to board at private schools in capital cities, in part because of limited curricular offerings in the local school.³³ This drift can reduce the local school's ability to offer a solid range of academic curricular offerings, and thus the vicious cycle of school residualisation and educational disadvantage continues.

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How to reduce educational inequalities?

Inequalities of educational outcomes are the result of home/community factors and school factors. Home factors play the largest role, but school factors are also important. Social disadvantage at home reduces parent and care-givers' capacity to support children's school learning.³⁴ School factors play a larger role as youths progress through the education system. By Year 3 in primary school, the relationship between school disadvantage and academic outcomes is just as strong or even stronger than family disadvantage in predicting literacy scores.³⁵ These findings show that schools can ameliorate educational inequalities that are the result of social disadvantage.

Because educational inequalities are partly the result of social disadvantage, one way to reduce inequalities of outcomes is to reduce poverty.³⁶ This is a long-term solution that takes much time, effort, and political will. It is an effective investment, however, because it disrupts the vicious cycle of social disadvantage and educational disadvantage.

In the short term, schools and education authorities can implement strategies that have been shown to improve the educational outcomes of disadvantaged students and schools. This approach is essential, but it rarely leads to large and sustained improvements.³⁷

The most effective approach for reducing inequalities of educational outcomes is to reduce social segregation between schools.³⁸ Segregated schooling, which occurs when socially advantaged students are segregated into some schools and socially disadvantaged students are segregated into other schools, is neither efficient nor effective. It is associated with lower outcomes for students in the disadvantaged schools, and at the same time, is not associated with higher outcomes for students in advantaged schools. Evidence for this claim can

be seen by comparing PISA scores for Canada and Australia.³⁹ Canada has one of the least segregated schooling systems in the OECD, and Australia has one of the highest. Advantaged students have the same performance on PISA in the two countries, but low SES students perform substantially better in Canada than in Australia.

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Conclusion

While schooling in Australia is generally considered high-quality, educational disadvantage and inequality are a cause for concern. Inequalities of educational outcomes in Australia are of a similar magnitude to those of the US, and are greater than in the UK or Canada.⁴⁰ This is a striking finding, and one that is perhaps surprising given our national identity as an egalitarian society that gives everyone a fair go.

The costs of educational underachievement and disengagement are large, for individuals but also for the larger society. According to the⁴¹ OECD 17 per cent of Australian young people leave secondary school without achieving basic educational skill levels. The OECD report estimates the total economic benefit out to 2095 of ensuring that there is universal enrolment in secondary school and all students achieve basic skills by 2030. It finds that the economic benefit for Australia is equivalent to 130 per cent of the nation's current gross domestic product in 2015 terms. Put another way, GDP would be 11 per cent higher in 2095 than if the education system did not achieve these outcomes. They conclude that eliminating school underperformance would reap enough fiscal benefits to pay for the country's entire school system.

Similarly, Lamb and Huo⁴² modelled the fiscal and social costs to Australian society of early school leaving and lifetime disengagement. Their results are staggering, with an estimated lifetime fiscal cost of \$12.6 billion and social cost of \$23.2 billion (at the 2014 net present value) for early school leaving. As many early school leavers do not find stable employment later in life, they also estimated the costs to society of lifetime disengagement. These costs are even higher: \$18.8 billion in lifetime fiscal costs and \$50.5 billion in social costs.

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Investing in high achievement and productive school experiences for all students not only reduces costs but also increases opportunities for national development. At the end of WWII, Korea had an agrarian economy with low levels of literacy. The nation invested heavily in schooling, which in turn facilitated the development of industry and manufacturing. South Korea now has some of the highest educational outcomes in the world,⁴³ as well the world's most innovative economy.⁴⁴

Investing in strong educational opportunities and outcomes for all students, not just a segment, is especially important for small countries. For large countries like Germany or the US the economic costs of having inequitable education systems can be more readily off-set. Their large populations, dynamic economies, advanced industrial and technological prowess, and sophisticated research and development infrastructure ensure that they have enough human capital to be

economically competitive. Small countries, however, do not have the luxury of maintaining inequitable schooling. If they want to be internationally competitive, as well as prosperous and harmonious, they need to develop as fully as possible the talents of all their young people, not just a few.

Clearly there is a public policy imperative to reduce educational inequalities in Australia. Reducing educational inequalities will lead to increased educational effectiveness and efficiency.⁴⁵ Solutions are not easy, but they are not impossible, as the experiences of other countries show. The first step is for policy makers to commit to achieving educational equity, putting it at the forefront of any policy discussion or objective.

“Clearly there is a public policy imperative to reduce educational inequalities in Australia. Reducing educational inequalities will lead to increased educational effectiveness and efficiency.”

Two steps are necessary to reduce educational inequality. The first is to provide extra support to low performing, socially disadvantaged students and schools. However, improving teaching and learning in socially disadvantaged schools is difficult, expensive and hard to sustain. For this reason, it is also important to reduce the number of socially disadvantaged schools, which means reducing social segregation between schools. School segregation is problematic because it is related to educational inequalities between schools. These inequalities then lead to further segregation, creating a vicious cycle of stunted learning and wasted opportunity. Put another way, educational inequalities between schools are both a cause and a consequence of school social segregation.

School funding is an important lever for reducing educational inequality. Needs-based school funding is crucial for addressing the additional challenges that socially disadvantaged students and schools face. However, needs-based funding is not sufficient. Even more importantly, school funding formulas can be designed to reduce, not increase, qualitative differences between schools in terms of their resources and facilities. This in turn will reduce school social segregation. Finland, which outperforms Australia on PISA, reduced school stratification and segregation more than 40 years ago by reforming its school funding mechanisms. Other high performing countries such as New Zealand, Canada, the UK and Ireland have also reformed their school funding mechanisms to reduce educational inequalities while also promoting diversity of educational offerings. These experiences can provide insights about ways to promote educational choice and diversity while also improving educational equity and effectiveness.

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