



*everyone's family*

# **The Australia We Want Education Forum**

## **Background Paper**

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## WHY EDUCATION MATTERS

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### This paper

This paper has been prepared as background reading for the *Australia We Want Educational Forum*, to be held in Melbourne on August 2, 2017. It aims to provide a brief **overview** of:

- Why education matters
- How Australia is performing educationally
- Key research on what influences and helps improve educational outcomes.

It draws on a number of references which for ease of reading are included at the end of the paper<sup>1</sup>.

### Why does education matter for individuals and nations?

Education is a key **predictor** of a person's engagement in lifelong work and study. Higher levels of education are associated with higher paying jobs, better general health, lower reliance on welfare and less likelihood of engaging in crime, as highlighted by the statistics below.

- **Highest education and employment:** In 2016, 67% of Australians with Year 12 as their highest education were employed, compared with 44% for those with Year 11 or below, and 80% for those with a Bachelor degree or above.
- **Welfare support:** Australians aged 15-64 years without any qualifications, are almost twice as likely to live in families dependent on government income support, compared to those with a qualification.
- **Prisoners:** In 2015, 16% of Australian prisoners had completed Year 12 or equivalent compared to 63% of the total adult population.

National **economic growth** and **social development** are closely related to the skills of a country's population. Higher levels of education are associated with:

- Greater economic productivity
- Increased workforce participation
- Higher tax payments
- The population's reduced reliance on government health, welfare and social support programs
- Greater social cohesion, civic engagement and interest in social issues.

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<sup>1</sup> Further details on the sources of all information in this paper can be provided on request.

## AUSTRALIA'S EDUCATIONAL PERFORMANCE

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### How is Australia performing educationally?

National data from four key milestones – when children start school, Year 7 NAPLAN, Year 12 or equivalent completion and full engagement in education, training or work at age 24 – shows a **consistent pattern**.

At each milestone, six in ten young Australians are succeeding but a significant proportion – **four in ten** – is not. One in 10 young Australians are missing **all** four key milestones. For those missing any milestone, some make up ground and move back on track. Others succeeding at some points, fall behind at other milestones. Importantly, more students fall behind than catch up as they progress through education.

Success at each stage **varies** by Indigenous status, socioeconomic background, region, gender and language background of young Australians, as shown by the statistics below.

- 56.8% of **Indigenous** children are school ready, compared with 79.1% of non-Indigenous children.
- 60.6% of young people from the lowest **socioeconomic** backgrounds complete Year 12 or equivalent<sup>2</sup> by age 19, compared to 89.1% of those from the highest socioeconomic backgrounds.
- Close to 80% of young people living in **major cities** complete Year 12 or equivalent by age 19, compared to 56.4% in remote areas.
- 58.9% of young people from the lowest **socioeconomic** backgrounds are fully engaged in work, education or training at age 24, compared to 83.1% of those from the highest.
- Even when **capabilities are similar** in Year 3, by Year 9 students from disadvantaged backgrounds are between 12 and 21 months **behind** students from more advantaged backgrounds.

### How is Australia performing from an international perspective?

At age 15, Australian students achieve a significantly **higher average** score on science, reading and mathematical literacies, than the OECD average. However, Australian students' performance in each of these literacies has **significantly declined** in recent years.

International tests show that Australian students from the highest socioeconomic quartile are, on average, **three years of schooling ahead** of students from the lowest socioeconomic quartile, on all three literacies.

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<sup>2</sup> Certificate III or above

## YEAR 12 AND KEY INFLUENCES OF DEVELOPMENT

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### Why is Year 12 completion important?

Completion of a Year 12 qualification provides an indication of whether young people have developed the knowledge and skills for **further study** or participation in the **workforce**. It is estimated that of young Australians aged 19 in 2014, approximately 38,000, or **one in eight** of that age group, will not complete Year 12 or equivalent over their lifetime.

Year 12 attainment is largely **locked in by age 25** – if a person hasn't achieved it by then, they are unlikely to ever do so. This suggests there is a “window of opportunity” for supporting young people to complete Year 12.

The **costs** to individuals and Australia, of young people not completing Year 12, are very high. It is conservatively estimated that the average lifetime costs<sup>3</sup> for each student who does not complete Year 12 or equivalent, compared to a student who does, is almost **\$950,800**.

It is estimated that a **25% reduction** in the numbers of young people not completing Year 12 would result in savings of around **\$9 billion** per cohort<sup>4</sup>.

### What does research tell us about the key influences of young people's development?

A range of factors influence the development of children and young people:

- **Personal characteristics** - such as, attitudes towards learning, their perception of their ability, social skills, intelligence.
- **Family** – such as parent's engagement in their child's learning and the resources and networks the family can access.
- **Peers** – their attitudes to education, their aspirations and risk-taking behaviour.
- **Institutions** – that children and young people attend and engage with, such as early learning and care settings, school, health and community services.
- The **community** in which they live – the social and economic resources available there, the presence of role models and the level of community cohesion and safety.

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<sup>3</sup> This includes for example, lost tax payments, lost earnings, costs of welfare support and health programs and to the criminal justice system.

<sup>4</sup> Each group of young people aged 19 years.

## IMPROVING EDUCATIONAL OUTCOMES

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These factors help **shape** young people's **likely trajectory** or pathway through life. However, these pathways are **not pre-determined** or immutable. Challenges in one area, for example at school, can be offset by additional support in another, for example the family, and vice versa. A young person's trajectory can be positively influenced, by providing the support that is needed at the time it is required – ie the '**right support at the right time**'.

### What do we know are some of the broad principles of what works to improve educational outcomes?

The work of Nobel Economist Professor James Heckman has identified two key principles for positively influencing the outcomes of **disadvantaged** children and young people:

- Intervene **early**  
AND
- Provide **balanced long-term support** over a young person's life.

The **early years** of life play a key role in laying the **foundations** for children's future learning and lifetime outcomes. Effective learning involves ideas and concepts that build on each other. If children don't acquire crucial skills, knowledge and positive attitudes to learning early on, it can become increasingly difficult for them to learn as they get older.

However, for disadvantaged children, supporting them in the early years is **not sufficient** to ensure strong educational and life outcomes. Professor Heckman argues that efforts aimed at improving the outcomes of disadvantaged young people are most **cost effective** when they involve **balanced long-term support** across the first two decades of a young person's life as shown in Table 1.

Table 1 outlines the impact on disadvantaged children of **four different investment** approaches. The four approaches involve: no intervention; intervention only in early childhood; intervention only in adolescence; and balanced intervention across the full life cycle of a child.

## IN-SCHOOL AND BEYOND SCHOOL

**Table 1: Impact of different investment strategies on disadvantaged children and young people’s educational and life outcomes**

	<b>High School Graduation Rates %</b>	<b>University enrolment %</b>	<b>Use of welfare %</b>	<b>Criminal convictions %</b>
<b>No intervention</b>	41	4	18	23
<b>Early childhood intervention only</b>	66	13	9	17
<b>Adolescent intervention only</b>	64	12	10	18
<b>Balanced intervention across full life cycle of a child</b>	<b>91</b>	<b>38</b>	<b>3</b>	<b>11</b>

Table 1 clearly shows that providing disadvantaged children with **balanced support** across their lives results in the **best outcomes**. It also indicates that positive outcomes **are** possible for disadvantaged children.

Key to this approach is that support is **targeted** – it invests in children and young people who, without support, are likely to have poor educational and wellbeing outcomes. Targeting contributes to the **cost-effectiveness** of the approach.

### **What in-school and beyond school factors influence educational achievement?**

As well as the broad principles outlined by Professor Heckman, research points to a range of **in-school** and **beyond school** factors which influence educational achievement.

There are a number of in-school factors which impact, with the most important being the **quality of teaching** that students experience. The work of Professor John Hattie highlights that teachers account for about **30%** of the variance in student achievement.

**Schools** and **principals** account for a further **five to ten** percent of the variance. Schools for example, can develop and sustain a **culture** where academic success is **expected of all** students, including those from disadvantaged backgrounds. The **environment** of a school is also important for educational success. Students tend to do well academically when they feel **socially connected** and at ease at school.

## INDIVIDUAL FACTORS

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However, it is not only in-school factors which influence student achievement. **Beyond-school** factors account for about **60%** of the variance in student achievement. **Students** themselves account for about **50%**, the **home** an additional five to ten percent and **peers** a further five to ten percent.

### What individual factors influence educational outcomes?

There are a range of individual factors, outside of innate ability, that influence young people's learning outcomes. These include early achievement, attitudes to learning, levels of school attendance and the extent to which students move schools.

**Early achievement** is an important predictor of later educational success. Early low achievers tend to fall further behind over time, while initial high performers continue to excel.

There are also a range of **non-cognitive** skills such as students' motivation, perseverance, beliefs about their academic abilities and their attitudes and behaviours regarding learning, that influence the educational outcomes they achieve. These skills **predict later-life** outcomes, with the same or greater strength, as measures of cognitive skills.

Cognitive and non-cognitive skills can be **shaped** and enhanced over a person's life, with particular skills more **malleable** at particular life-stages. Non-cognitive skills, for example, are more able to be influenced in adolescence, than are cognitive skills. Children can be **supported to develop** a number of the attitudes and behaviours that positively influence educational outcomes, for example having a growth mindset<sup>5</sup>, setting learning goals and monitoring progress, and persevering when difficulties are encountered.

There is a strong relationship between **school attendance** and academic achievement, particularly for students from disadvantaged backgrounds. Academic achievement **declines** as school absence rates increase and the **impact** of absences **accumulates** over time. **Attendance gaps** between children from low and high socioeconomic backgrounds are obvious from the **first year of school** and the **gap widens** as young people progress through school.

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<sup>5</sup> The understanding that abilities and intelligence can be developed.

## HOME ENVIRONMENT

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**Student mobility**<sup>6</sup> can also impact student outcomes, and has a particularly negative impact on students from disadvantaged backgrounds. Students with **higher levels** of mobility achieve **lower NAPLAN** results and are more likely to **leave school** before completing Year 12.

### How does a child's home environment influence their learning?

Research over the past forty years highlights the critical role of **parental engagement** in their children's learning. This is **particularly true** for children and young people from **disadvantaged** backgrounds.

Parental engagement in children's learning is a **bigger predictor** of how children do in school than a family's **socioeconomic** background. Students with engaged parents, no matter what their income or background, are more likely to do well at school, graduate from school and go on to higher education.

The **aspects** of parental engagement that **matter most** include:

- Parents' **aspirations** and **expectations** – these have consistently been identified as the strongest and most influential aspect of parent engagement.
- **Parent-child reading**, particularly in the early years and primary school.
- Parents' **conversations** with their children, which can have a strong influence on children's cognitive skills, the value they place on learning and their enjoyment of it.
- Creating a **stimulating home learning environment**, which includes having books and other learning resources in the home, visiting libraries and museums, fostering learning around children's interests and participating in community events.
- Positive and **trusting parent-teacher relationships** and opportunities for regular communication.

Parental engagement contributes to a range of short and long-term **outcomes** for children. It primarily influences children's **orientation to learning**, including their motivation, engagement, confidence and beliefs about learning.

While research in this area is long-standing, it has only more recently become an area of policy focus.

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<sup>6</sup> That is, moving schools

## COLLABORATION, DATA, EVIDENCE

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### Collaborative efforts, data and evidence

Given the size of Australia's educational challenge and the complex range of individual, family, school and community factors that influence educational outcomes, there is an increasing realisation of the need for **shared responsibility** and **cross-sectoral** and **cross-institutional** efforts to address educational disadvantage.

There is also recognition from researchers such as Professor Heckman that we need to “**resist** the temptation to look for **one silver bullet** investment or program”.

The recently released Productivity Commission report on the *National Education Evidence Base* noted that **monitoring** outcomes and performance benchmarking are **insufficient alone** to achieve gains in education outcomes.

The Commission noted the **largest gaps** relate to **evidence**, namely:

- The **evaluation** of policies, programs and evaluation practices in Australian schools and early childhood education and care services, to identify **what works** best, for **whom** and in **what circumstances** and
- Building an understanding of how to **turn best practice** into **common practice** on the ground.

## REFERENCES

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Bentley T & Cazaly (2015) *The shared work of learning: Lifting educational achievement through collaboration*, Mitchell Institute for Health and Education Policy and the Centre for Strategic Education, Melbourne.

Bronfenbrenner U (1994) Ecological models of human development, *International Encyclopaedia of Education Vol 3, 2<sup>nd</sup> Ed*, 1643-1647, Elsevier Sciences, Oxford.

Centre for Education Statistics and Evaluation (2015) *Mobility of students in NSW government schools*. Report prepared by Lu L & Richard K, Department of Education, Sydney.

Cunha F & Heckman J (2007) 'The technology of skill formation', *American Economic Review, American Economic Association*, Vol 97, No. 2, pp. 1428 – 46.

Dweck C (2015) "Carol Dweck revisits the 'growth mindset'", *Education Week, Vol 35, No 5*.

Fox S & Olsen A (2014) *Defining parental engagement*, ACT Department of Education and Training, Canberra.

Goss P, Sonnemann J, Chisholm C & Nelson L, (2016) *Widening gaps: what NAPLAN tells us about student progress*, Grattan Institute.

Gutman L & Schoon I (2013) *The impact of non-cognitive skills on outcomes for young people: Literature review*, Education Endowment Foundation, London.

Hancock K J, Shepherd C C J, Lawrence D & Zubrick S R (2013) *Student attendance and educational outcomes: every day counts*, Report for the Department of Education, Employment and Workplace Relations, Canberra.

Hattie J (2009) *Visible Learning: A synthesis of over 800 meta-analyses relating to achievement*, Routledge.

Hattie J (2003) 'Teachers make a difference: What is the research evidence?' Paper presented at the *Australian Council for Educational Research Annual Conference on Building Teacher Quality*, Melbourne.

Heckman J (2007) 'The economics, technology and neuroscience of human capability formation', *PNAS, Vol 104, No. 33*, pp. 13,250 - 13, 255.

Lamb S & Huo S (2017), *Counting the costs of lost opportunity in Australian Education*, Mitchell Institute Report No. 02/2017.

Lamb S, Jackson J, Walstab A & Huo S (2015) *Educational opportunity in Australia 2015: Who succeeds and who misses out*, Centre for International Research on Education Systems, Victoria University for the Mitchell Institute.

Organisation for Economic Cooperation and Development (OECD) (2016) *Low performing students: Why they fall behind and how to help them succeed*, PISA OECD Publishing.

OECD (2014) 'Fostering and measuring skills: Improving cognitive and non-cognitive skills to promote lifetime success', *OECD Education Working Papers*, No 110, OECD Publishing.

Productivity Commission (2016) *National Education Evidence Base*, Report no. 80, Canberra.

Thomson S, De Bortoli L & Underwood C (2017) *PISA 2015: Reporting Australia's results*, Australian Council for Educational Research.