

The difference early learning makes for children: The evidence

Children who do not attend preschool are 50% more likely to start school with a developmental vulnerability ...

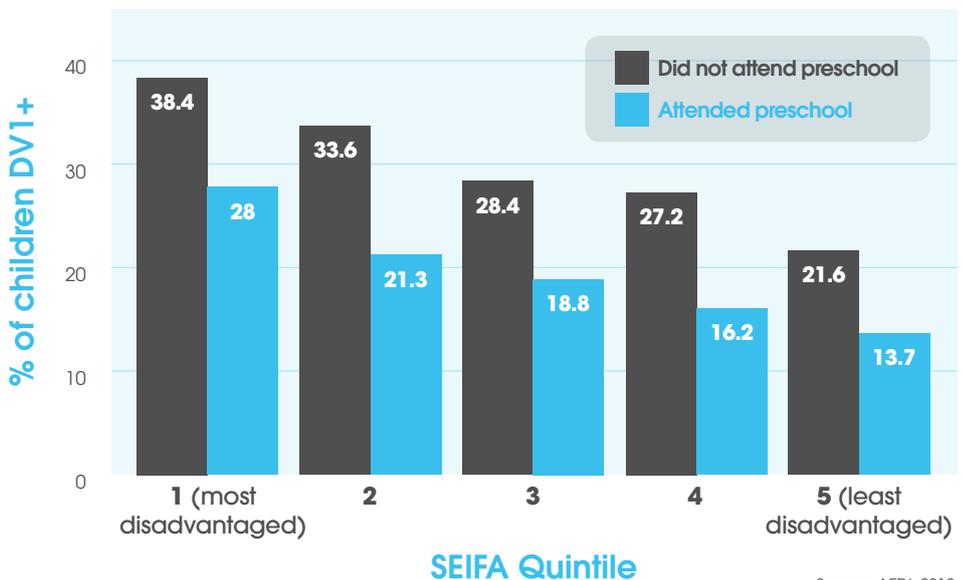
The Australian Educational Development Index (AEDI) assessed all children in Year 1 against seven child development domains. It found children who did not attend preschool were 50% more likely to be developmentally vulnerable than children who did.

Children from the poorest 20% of households are twice as likely to be developmentally vulnerable than those from the richest 20%.¹

Children who were developmentally vulnerable in Year 1 are three times more likely than other children to perform poorly in reading and numeracy NAPLAN tests in Year 3, Year 5 and even Year 7.²

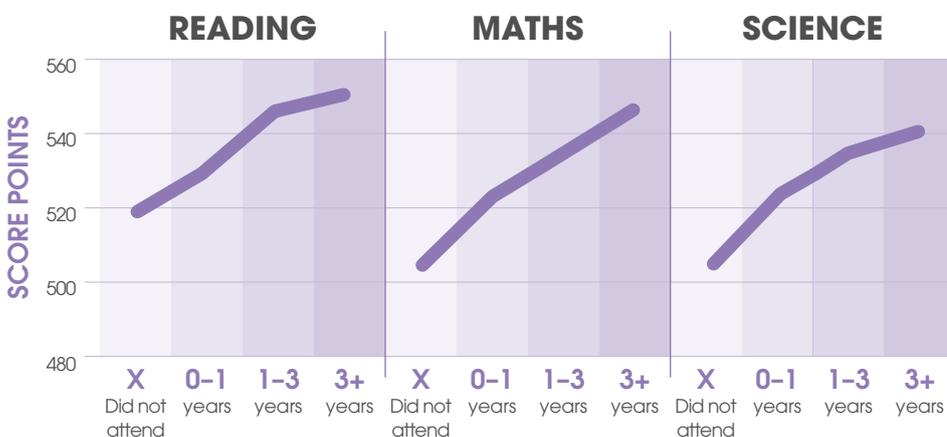
Children from low income families are twice as likely as children from high income families NOT to attend preschool and early learning. 57 per cent of children from non-working families do not attend preschool, compared to just 11 per cent from families where both parents work, contributing to intergenerational poverty and unemployment.³

Impact of preschool participation on levels of developmental vulnerability, 2012



Source: AEDI, 2012.

Number of years of attendance in pre-primary education and average achievement levels in international testing, Year 4 students in Australia, 2011



Source: COAG Reform Council, Education in Australia 2012

Children who attend three years or more of early learning perform much better on Year 4 literacy and numeracy tests

In 2011, over 40 developed countries participated in international tests in literacy (PIRLS) and numeracy and science (TIMSS) for Grade 4 children. Children who had three or more years of early learning scored on average 30–40 points higher in the tests than children who had no early learning, and around 20 points higher than those who attended only one year of early learning.⁴

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Children taught by a preschool teacher with a Diploma or Degree qualification score 20–30 points higher on Year 3 NAPLAN tests

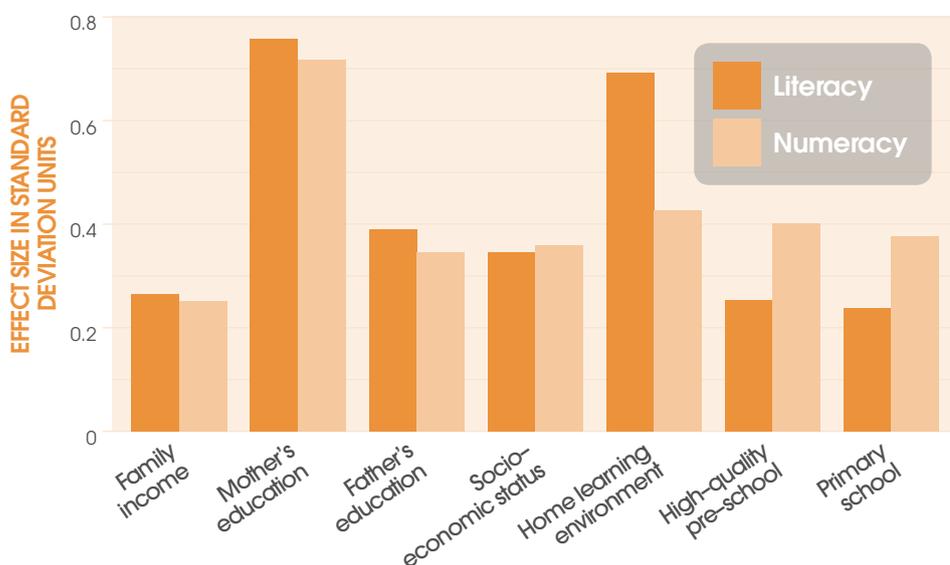
A study of almost 2000 Australian children found that attending preschool had a positive impact on a child's later Year 3 NAPLAN score, as did the qualification level of their preschool teacher.⁵

Year 3 NAPLAN Score by Pre-school Teacher Qualification (Means)

	No preschool	Certificate-qualified teacher	Diploma-qualified teacher	Degree-qualified teacher (ECT)
Numeracy	396	410	429	422
Reading	398	402	436	429
Writing	408	416	431	431

Source: Warren D & Haisken-DeNew, 2013.

EPPE Effects on Age 11 literacy and numeracy



Source: Sylva, et al, 2010.

The benefits of quality early learning are still evident at ages 11 and 16...

A 15-year study of 3,000 English school children found that access to quality preschool had a strong effect on later literacy and numeracy understanding. The effect of 18 months of preschool was stronger on literacy and numeracy at age 11 than all six years of primary school, and still evident even at age 16. The home learning environment and the mother's education were the most important factors. The influence of pre-school quality and effectiveness persist and is especially important for boys and disadvantaged children.⁶

16 year olds who had attended more than two years of quality preschool (compared to none) scored on average 51 points higher on their final GCSE exams, which is the difference between getting 8 B grades versus 8 C grades.⁷

... and on age 15 PISA literacy and numeracy test scores

The impact of early learning is still evident for 15 year olds in test scores in the Programme for International Student Assessment (PISA), with students who attended pre-primary school for more than one year scoring 53 points higher in mathematics—the equivalent of more than one year of schooling—than students who had

not attended pre-primary education. The four best-performing countries in the 2012 PISA tests (Korea, Japan, Switzerland, and The Netherlands) averaged 87% participation in more than one year of pre-primary education.

Australia averaged 51.7% participation and came 24 of 29 countries. The report concluded: "Earlier entry into pre-primary school prepares students better for entry into—and success in—formal schooling".⁸

1. 2012 AEDI, Goldfeld, S., O'Connor, E., O'Connor, M., Sayers, M., Kvalsvig, A., & Brinkman, S. (submitted) "The Role of Early Childhood Education and Care in Promoting Children's Healthy Development: Evidence from an Australian Population Cohort".
 2. Brinkman S, Gregory T, Harris J, Hart B, Blackmore S, Janus M 2013 "Associations between the Early Development Instrument at Age 5, and Reading and Numeracy Skills at Aged 8, 10 and 12: a Prospective Linked Data Study" Child Indicators Research 6:695-708
 3. ABS 4402.0—Childhood Education and Care, Australia, June 2014

4. COAG Reform Council "Education in Australia 2012: Five Years of Progress" 2013, citing results from the PIRLS 2011 International Results in Reading *(Mullis I, Martin M, Foy P and Drucker K eds.) and TIMSS 2011 International Results in Mathematics (Mullis I, Martin M, Foy P and Arora A), Boston College 2012 <http://timssandpirs.bc.edu/>
 5. Warren D & Haisken-DeNew 2013 "Early Bird Catches the Worm: The Causal Impact of Pre-school Participation and Teacher Qualifications on Year 3 National NAPLAN Cognitive Tests" Melbourne Institute Working Paper No 34/13, Oct 2013.

6. Sylva K, Melhuish E, Sammons Pm Siraj-Blatchford, Taggart B "Early Childhood Matters: Evidence for the Effective Pre-school and Primary Education project" Routledge London 2010; www.ioe.ac.uk/projects/epepe
 7. <https://www.gov.uk/government/news/children-who-have-early-education-get-higher-gcse>
 8. OECD 2013 "PISA 2012 Results in Focus" p. 12 <http://www.oecd.org/pisa/keyfindings/pisa-2012-results-overview.pdf>