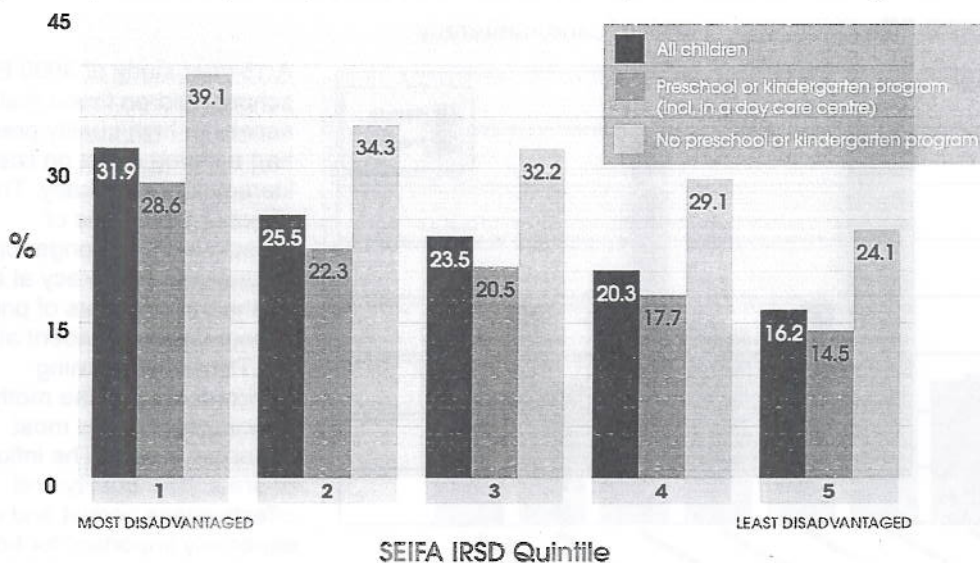


## The difference early learning makes: the evidence

Children who attend preschool are a third less likely to start school developmentally vulnerability....

The Australian Educational Development Index (AEDI) assesses all children in Year 1 for developmental vulnerability against seven child development domains. It found children who attended preschool were a third less likely to be developmentally vulnerable than children who did not. Children from the poorest 20% of households are twice as likely to be developmentally vulnerable than those from richest 20%.<sup>(1)</sup> But, if intervention were targeted at children only in the bottom two quintiles, then over half of developmentally vulnerable children would miss out. 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.<sup>(2)</sup>

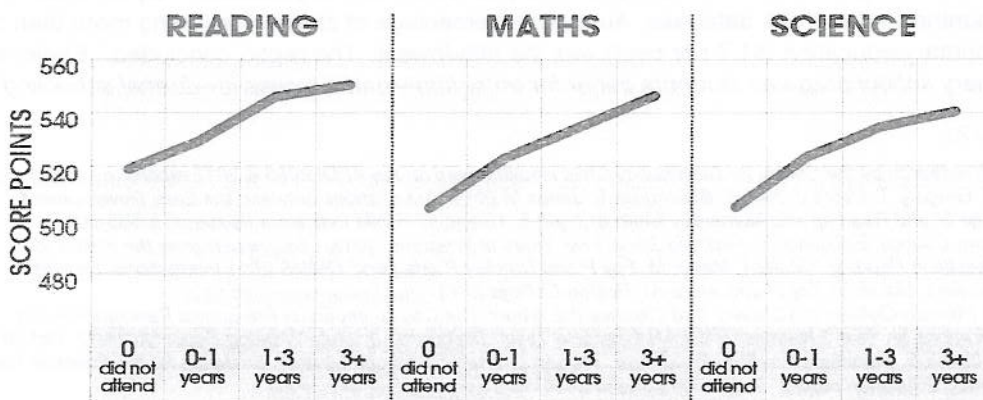
Impact of preschool participation on levels of developmental vulnerability: AEDI 2009



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 score 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 preschool.<sup>(3)</sup>

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



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

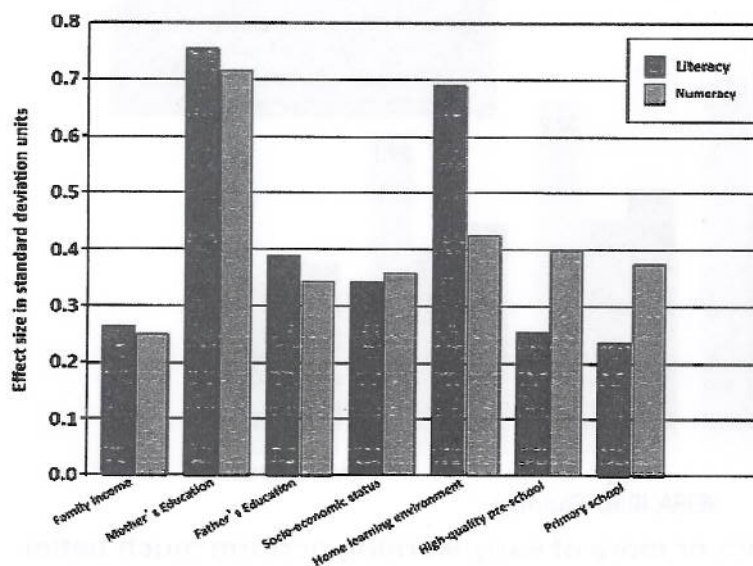
A study of almost 2000 Australian children found attending preschool had a positive impact on their later Year 3 NAPLAN test scores, as did the the qualification level of their preschool teacher. Children with a degree or dipoloma qualified preschool teacher scored 20-30 points higher (4):

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

The benefits of quality early learning is still evident at ages 11 and 14....

EPPE Effects on Age 11 literacy and numeracy



A 15 year study of 3000 English school children found that access to high quality preschool had a strong effect on later literacy and numeracy. 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 at age 14. 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.(5)

....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 OECD 's Programme for International Student Assessment (PISA) results, 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 per cent participation in more than one year of pre-primary education. By contrast, of the 29 OECD countries in the PISA database, Australia's percentage of children reporting more than one year of pre-primary education (51.7 per cent) was the fifth-lowest. The report concluded: "Earlier entry into pre-primary school prepares students better for entry into—and success in—formal schooling".(6)

**References:**

(1) Unpublished research by the Centre for Community Child Health based on the AEDI 2009 & 2012 reports [www.aedi.org.au](http://www.aedi.org.au)  
 (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" *Child Indicators Research* 6:695-708  
 (3) 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 (Mullin I, Martin M, Foy P and Arora A), Boston College 2012 <http://timssandpirls.bc.edu/>  
 (4) 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.  
 (5) 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/eppe](http://www.ioe.ac.uk/projects/eppe)  
 (6) OECD 2013 "PISA 2012 Results in Focus" p. 12 <http://www.oecd.org/pisa/keyfindings/pisa-2012-results-overview.pdf>