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Australia's Education System

Good, but must
do better



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What's holding us back?

A look at Australia's Education System

To date there has not been a cohesive, end-to-end review of the Australian Education System, from Early Childhood Education and Care through to Higher Education and training.

Looking through the lenses of quality, access and funding, this paper highlights some of the inconsistencies and inequalities in the Australian Education System. It calls for a White Paper to review the whole Education System in Australia and make recommendations for ensuring it is a more accessible, consistent and high performing system.

The benefits of a strong education system are clearly evident in developed economies. Education drives growth, productivity, global competitive advantage and contributes to a good society. High levels of education also have a direct impact on individuals' success in life, health, wellbeing and social mobility.

While many aspects of the Australian Education System are strong, some measures do not consistently indicate optimum performance. The performance of the system should be measured by the educational attainment of the students within it, not the performance of the system itself.

Australia's Education System fails to operate as a cohesive whole; it relies on dual funding from Commonwealth and State Governments and is affected by multiple layers of influence, from Commonwealth policy through to Council and Board level governance. The varying nature of these influences affects the sustainability and success of reforms.





We cannot buy performance

While Australian spending on school education is comparable with other developed countries, spending increases in recent decades have not led to improved overall student performance.



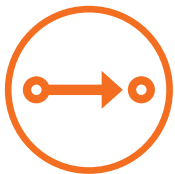
We need to invest early

Organisation for Economic Co-operation and Development (OECD) Research¹ in 2012 found that 15 year old students who had attended early childhood education (ECE) tend to perform better on the Programme for International Student Assessment (PISA) than those who did not, even after accounting for their socio-economic backgrounds. Improving access, without giving due attention to the *quality* of early childhood education and care (ECEC) services, is not sufficient to secure good individual and social outcomes.



Focus on quality

It was recently reported that more than half the Year 12 students offered places in teaching degrees in 2014 had university entrance scores below the average of 70, with one in eight scoring 50 or less².



Closing the gap

More than in most other english speaking countries, the performance of Australian students is strongly tied to their socio-economic status³. Australia's lowest performing students are not meeting minimum standards of achievement. Our most disadvantaged group, Aboriginal students, are more than two years behind their peers in maths, science and reading⁴.



Educational reform

Educational reform over the past 20 years can be seen as fragmented and to some extent politically driven. Reform continues to be undertaken on a siloed basis. Each of the areas across the education spectrum namely, ECEC, Schools, Vocational Education and Training (VET) and Higher Education make little or no reference to each other, and are not linked to form an integrated continuum of reforms. Reviews and reforms have tended to focus on only one part of the sector (eg National Quality Framework for Early Childhood Education and Care 2012, Introduction of Australian Curriculum 2010 in schools, Kemp Norton review of Higher Education Demand Driven Funding, 2013).

¹ Report on Early Childhood Education and Care OECD 2013

² The Australian, May 2014

³⁻⁴ OECD Education at a Glance 2012: OECD Indicators 2012

Introduction

Aim of this document

This document aims to frame key issues, questions and trends in the Australian Education System (the System) for key stakeholders including, but not limited to, State and Commonwealth Governments, teachers, students, parents and employers. It focuses on fragmentation and inequality in the system and the resulting missed opportunity to improve economic productivity and social mobility.

While many aspects of the System are strong, some measures do not consistently indicate optimum performance. The performance of the System should be measured by the educational attainment of the students within it, and not by the performance of the System itself.

The System fails to operate as a cohesive whole; it relies on dual funding from Commonwealth and State Governments and is affected by multiple layers of influence, from Commonwealth policy through to Council and Board level governance. The varying nature of these influences can greatly influence the effectiveness and sustainability of successful reform.

Educational reform in Australia continues to be pursued on a siloed basis. Each of the areas within the wider System, namely Early Childhood Education and Care (ECEC), Schools, Vocational Education and Training (VET) and Universities make little or no reference to each other and are not linked to form an integrated continuum of reforms (eg National Quality Framework for Early Childhood Education and Care 2012, Introduction of Australian Curriculum 2010 in schools, Kemp Norton review of Higher Education Demand Driven Funding, 2013).

To date, there has not been a cohesive, end-to-end review of the Australian Education System, from ECEC through to Higher Education. There have been a number of comprehensive reviews of sections of the System – eg Review of Funding for Schooling 2011, however, many of these reviews have failed to result in significant action, change or renewal.

Looking through the lenses of quality, access and funding, this paper highlights some of the inconsistencies and inequalities in the System. It calls for a White Paper to comprehensively review the System and make recommendations for ensuring it is more accessible, consistent, and high performing.

Need for a comprehensive Government white paper on the end-to-end education system.

N.B. For the purpose of this document, the System refers to the educational institutions and regulatory bodies that cover ECEC, Schools, Higher Education and Vocational Education and Training, (VET). 'Teacher' refers to teachers in early childhood through to lifelong learning. 'Student' refers to any child or adult who is in attendance at an Educational Institution.



The institution we call education

The term education has many meanings and is formed by the norms prevailing at a given time and in a given place. For administrative reasons, the Education System is often described in terms of the institutions or organisations which provide education. Australia's formal Education System has traditionally included schools, VET and universities.

Like many OECD countries, Australia's ECEC services have increased in response to growing demand for better learning outcomes, as well as rising female labour force participation. Some schools that were previously P-12 are now including options for children aged 0-5 years. As a great influencer in future performance, ECEC should be included in any education conversation.

In addition, students are no longer confined by sectoral boundaries to predictable or structured pathways⁵. The boundaries are becoming blurred. University graduates undertake TAFE study following, or in parallel, with their studies. Schools allow Year 11-12 students to undertake VET programs in their regular Year 12 timetable, including part-time traineeships. Credit transfers between schools, TAFE and universities provide multiple pathways for young and lifelong learners.

Formal education is becoming less institutionalised; learners have become more demanding and are increasingly on the move, looking for flexible ways to learn. Many educational institutions are working hard to become more flexible and responsive.

The increased need for fluidity between the sectors highlights the need for a National plan that focuses on the end to end needs and support of learners.

All students in all schools are entitled to an excellent education, allowing each student to reach his or her full potential, so that he or she can succeed and contribute fully to the community, now and in the future.

Holding us back from what?

The benefits of a strong education system are clearly evident in developed countries. Education drives growth, productivity, global competitive advantage and contributes to a good society. High levels of education also have a direct impact on individuals' success in life, health, wellbeing and social mobility.

A 2010 OECD⁶ study found that, by improving educational performance to the standard set by Finland, Australia could boost its GDP by 200 per cent over a 90 year period. Other research suggests that increasing international test scores lifts GDP growth, with conservative estimates indicating that increasing scores by one standard deviation would lift GDP growth by 1 per cent⁷.

An increase in teacher effectiveness of 10 per cent would lift Australia's education system into the highest performing group of countries in the world. In the longer-term, this would improve the productivity of Australian workers, and would increase long-run economic growth by \$90 billion by 2050⁸ making Australians 12 per cent richer by the turn of the century.

High levels of education have a direct impact on an individuals' success in life. More education leads to approximately 10 per cent additional income per annum for each extra year of education⁹. Improved skill levels are associated with enhanced life chances, which are in turn passed on to the next generation.

The 2013 OECD Survey of Adult Skills (PIAAC)¹⁰ found that proficiency in literacy, numeracy and problem solving in technology rich environments is positively and independently associated with the probability of participating in the labour market and being employed, and with higher wages. People also have less chance of being unemployed than individuals with lower levels of proficiency.

The level of education attainment also has a direct impact on an individual's health. Adults who score lower proficiency in literacy are more likely than those with high proficiency to report poor health¹¹.

Education is seen as a foundation of a good society. There is sound evidence that education creates positive physical and mental health, increases social cohesion¹², reduces crime and lowers welfare needs¹³ – strengthening civil society and saving society and government resources, which can be directed elsewhere. The PIAAC Survey found there is a link between higher literacy and social outcomes, such as trust in others, participation in volunteer and associative activities, belief that an individual can have an impact on political process and better health.

The benefits from optimising the System support our call for a White Paper to canvass a comprehensive, end to review of the Australian Education System.

More education leads to approximately 10 per cent additional income per annum for each extra year of education.

Australia could boost its GDP by 200% over a 90 year period.



6 The High Cost of Low Educational Performance – The Long-Run Economic Impact of Improving Pisa Outcomes, OECD 2010

7-8 Jensen, B., 2010, Investing in Our Teachers, Investing in Our Economy, Grattan Institute, Melbourne

9 Hanushek, E. and Wößmann, L., 2007, The Role of Education Quality in Economic Growth, Working Paper 4122, World Bank

10-11 The 2013 OECD Survey of Adult Skills (PIAAC), OECD 2013

12 Education at a Glance 2010: OECD Indicators, OECD, Paris

13 Wolfe, B. and Haveman, R., 2002, "Social and nonmarket benefits from education in an advanced economy", in Kodrzycki, Y. (Ed.), Education in the 21st Century: Meeting the Challenges of a Changing World, Federal Reserve Bank of Boston, Boston

What's holding us back?

Not making the grade

The latest international snapshot from the Organisation for Economic Cooperation and Development (OECD, 2012) highlighted a decline in some areas of achievement in Australian schooling. In addition, the global ranking of Australian universities has not improved, with only seven of our universities now in the top 200 globally¹⁴.

At the other end of the education journey, according to the report on government services in 2014, in four of the seven states and territories, 50 per cent of Early Childhood centres assessed did not meet the educational program and practice standard according to the newly implemented National Qualities Framework for Early Childhood Education and Care¹⁵.

Much is said about declining performance of the System, but it is important to make note of what is being measured and whether it is effective and valid in guiding educational reform and policy. In the three examples above, the first measures the literacy and numeracy of 15 year olds against global benchmarks, the second ranks university research capability, and the final measure rates adherence to a framework.

More rigour and accuracy in terms of customised and appropriate measurement tools is needed if we are to effectively measure and address the performance of the System.

What is more telling is the system's failure to close the gap in equality; between high and low performing students, socio economic groups and metro and regional students. Although more than adequate funding has been available, education reforms over the past 20 years in Australia have been ineffective and Australia continues to face the challenges of increasing inequities.

The 2012 PISA results indicated that Australia has a significant gap between its highest and lowest performing students. More than in most other English speaking countries, the performance of Australian students is strongly tied to their socio-economic status¹⁶. Countries with higher performing systems have closed this gap significantly over recent years. Australia has also failed to close the gap in other areas – the previous PISA test in 2009 showed a five-point gap between boys and girls in maths, whereas the latest results show the gap had widened to 12 points¹⁷.

Catholic school students recorded the largest fall in scores, compared with their peers in government and independent schools, falling more than three times as much in reading, and dropping 13 points in maths (compared with 10 points in government schools and seven points in independent schools)¹⁸.

Although more funding has been available, education reforms over the past 20 years in Australia have not closed the gap.

Australia continues to face a challenge to reduce inequities between students from different socio-economic and ethnic backgrounds, by tackling system-level policies which hinder equity in education.

Australia's lowest performing students are not meeting minimum standards of achievement.

¹⁴ Times, Top 100 Universities 2013

¹⁵ Report on Government Services 2014 – volume chapter3, Early Childhood Education and Care

¹⁶⁻¹⁸ OECD Education at a Glance 2012: OECD Indicators 2012

Can we buy performance?

While Australian spending on school education is comparable with other developed countries, spending increases in the last decade have not improved student learning¹⁹. Australia spends slightly less per primary school student than the OECD average, but more than the OECD average on pre-primary and secondary school students²⁰. Various policies have contributed to

the level of expenditure. However, they have not resulted in overall improvements in student performance. And generally speaking, there are diminishing returns from higher levels of funding, as shown in Figure 1 below, with other countries achieving comparable levels of education outcomes but for significantly lower cost.

Public funding of education



Education expenditure increased from \$40.8bn in 2002-2003 to \$75.9bn in 2011-2012, a CAGR of 7%.



Expenditure on preschool education has grown the most, with 162% growth over the time period to \$6.2bn in 2012, however it was from a relatively small base of \$1.6bn in 2002-2003.



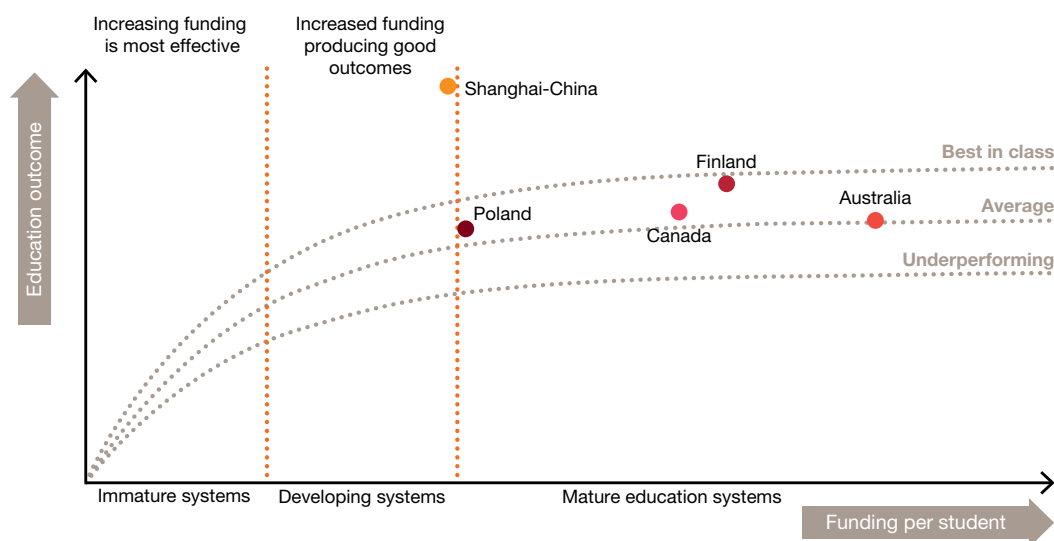
Tertiary education funding has grown 82% over the nine year period, reaching \$27.4bn in 2011-12.



Investment in primary and secondary grew 72%, reaching \$38.7bn.

Source: Australian Bureau of statistics: 5518.0.55.001 – Government Finance Statistics, Education, Australia, 2011-12

Figure 1: Educational Outcome/Performance in Maths vs Funding



Source: Adapted from 2012 OECD Snapshot.

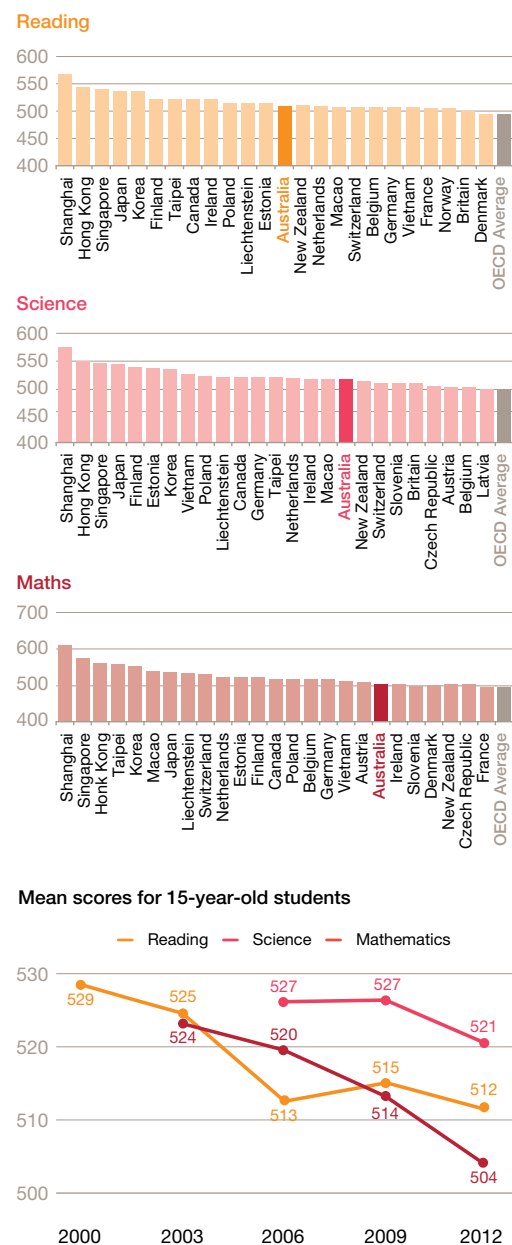
Diminishing returns on educational investment in Australia.

19 Ben Jensen. Investing in Our Teachers, Investing in our Economy Ref, Grattan Institute 2010

20 OECD Education at a Glance 2012: OECD Indicators 2012

In 2012, Australia was one of 13 countries to have recorded a significant fall in student performance in maths since 2003, while nine countries recorded a significant improvement, with Asian jurisdictions now dominating the ranks of high-scoring students.

Figure 2: Falling down the rankings



Source: The Australian, 13 December 2013. Billions fail to stop slide in world student rankings.

While Australia's results in reading and science remained relatively stable, maths scores recorded a big fall, and Australia has slipped outside the top 10 nations in all three subjects for the first time since the tests started in 2000.

Australia's falling performance has occurred despite a strong focus on education and billions of dollars invested in schools to address the needs of disadvantaged students and improve the quality of teaching, most recently as a result of the 2011 Gonski Review for Funding Schooling. However, it is important to note that, although the review was the most comprehensive review of schooling to be conducted in Australia, many of the recommendations have not been acted upon and those that have, have been curtailed.

Although the additional Commonwealth funding is welcomed by school communities, it is the States that are responsible for running public schools, and for the accountability, regulatory and registration frameworks for all school types. In 2012, States and Territories provided almost 70 per cent of all government funding for schools, of which 90 per cent²¹ was directed to public schools.

While endorsed by the 2012 OECD report, "the allocation of resources across schools is associated with equity in education opportunities"²² the approach of the Gonski review has been branded ineffective in improving performance by some, whereas essential to producing long term change by others.

School funding in Australia is unnecessarily complex, making it at times less than optimally effective and equitable. The sector contains multiple systems – public and private, state and commonwealth, religious and secular – and reform has occurred in each school type, generally without regard for the others. The number of policies and the complexity of funding models involved limits accountability and contributes to growing resource and performance gaps, with disadvantaged students suffering most.

21 Australian Bureau of statistics: 5518.0.55.001 – Government Finance Statistics, Education, Australia, 2011-12

22 OECD Education at a Glance 2012: OECD Indicators 2012

In 2012, 29 per cent of government post-secondary education funding was allocated to VET and 71 per cent to Higher Education²³, whereas there was 1.5 million government funded VET students (this excludes all private and overseas provider students) and only 1.2 million students in the public higher education system (and an additional 85,985 in the private system). The difference reflects the higher cost of course provision and research focus of universities.

VET in itself is an example of a sub-optimal funding model. VET has five potential funding sources, depending on the learning institution and the government assistance provided by the state/territory. Sources include:

- Student payments
- State based training authorities (including indirect government funds)
- Direct State/Territory funding
- Direct Commonwealth Government Grants
- Industry/Australian apprentices (including indirect government funds).

The funding received varies greatly between states and between institutions, affecting the cost, quality and length of a training course. A course costing a student \$10,000 in Victoria may cost \$5,000 in South Australia and may even be free in NSW, for example. This greatly affects access to VET, in particular for those re-training later in their careers.

Funding alone will not improve the quality of education in Australia. Structured, long term, strategic reform, that outlives political terms, is also required, across the System as a whole.

A VET course costing a student \$10,000 in Victoria may cost a student \$5,000 in South Australia and may be free in NSW.



Approaches to reform

While many nations express a commitment to improved education, the aspect of quality of educational outcomes can slip down the policy agenda and the funding constraints of education tend to take priority. Because the benefits of educational investments are only experienced in the future, it is also possible to underestimate the value and the importance of improvements for short, medium and long term benefits.

Problems being faced by the Education sector occur with short term elected governments at both State and Commonwealth level, where quick wins for votes can be gained at the expense of long term strategies which may lead to lasting change and renewal.

Making significant systematic changes in schools and educational institutions is a difficult task, and the results in terms of student achievement are often relatively modest. At the same time, the results from countries achieving high and equitable learning outcomes in PISA – like Finland, Canada, Japan and Korea – or from those that have seen rapid improvements in the quality of schooling (like Poland) underline that doing better is possible, and it doesn't have to cost more.



Case studies in reform

The case studies below provide four examples of systemic change in schooling to improve student outcomes as measured by PISA.



Hong Kong – Exam centric

One approach, typified by Asian countries such as Hong Kong and Korea (2nd and 5th in the 2012 PISA reading rankings, respectively²⁴), places emphasis on a national exam-centric curriculum, individual learning rather than group learning and discussion, and student diligence including long hours of study with significant time spent studying at home or with tutors. This approach is enabled by a parenting style that supports long hours of study, and by the competitiveness of entry into higher education and the labour market²⁵. National examinations determine which secondary schools and universities students can attend.



Finland – Equity of access

Finland reformed its education system with the aim of providing equity of access and outcomes to all. School education in Finland is characterised by classroom discussion and group learning, and locally-tailored curricula and pedagogies. There are no national examinations; rather, teachers are trusted to implement assessments as they see fit. This system is enabled by a rigorous and competitive teacher entry and training program whereby all teachers must have a Masters degree and many applicants are not accepted into the degree program²⁶. Finland's reforms over the past 10 years, have also made TVET (Technical, Vocational Education and Training) very popular and has contributed to the lowering of youth unemployment.



Poland – Structural change

Poland moved from an eight year primary school and three to five year secondary school, depending if general studies were chosen (four years) or vocational stream was chosen (three years for basic, five years advanced). Students have to choose at the end of primary school which stream they would pursue around the age of 14. The reform changed the system to a six year primary school, followed by secondary school of three years, after which students chose between two streams of upper high school which lasts either three or four years, effectively delaying decision making by one year. Poland has been able to improve student outcomes, with very little funding. Poland ranked in the Top 10 for maths in 2012 PISA results²⁷.



Australia – Needs-based funding

The most recent reform – needs-based funding – followed the Gonski review of schools funding in 2011. The plan, announced in September 2012, sought to place Australian students amongst the top five highest performing nations through a combination of additional, targeted funding using a model, new initiatives in teacher training and accountability, personalised student learning plans, greater school autonomy, and a raft of other Commonwealth initiatives. The emphasis of this reform was primarily on funding, and there has been much debate. The short term outcomes in struggling schools has been positive, however these may be short lived, with a loss of funding beyond 2016.

24, 26-27 OECD Education at a Glance 2012: OECD Indicators 2012

25 McClatchey, C. (2013). What is the key to a successful education system? Available at: <http://www.bbc.co.uk/news/uk-21354932>. Accessed 19 July 2013.

From these four examples we can see that there are two distinct differences between the reform in Australia and of those in other countries:

1. Australia has focussed on increasing funding as an enabler to improve performance, where the other countries have focussed on improving quality of teaching and learning to boost performance.
2. Although a national initiative, unlike the international examples Australia has an extra layer of complexity being dual funding; the Commonwealth has limited control other than providing funding, while the states are responsible for running public schools, and for the accountability, regulatory and registration frameworks for all schools.

Smarter Schools National Partnerships address some of the cross jurisdiction issues affecting Australian schools. At a cost of over

\$2.5 billion²⁸ schools are participating in partnership initiatives for low socio-economic status school communities, literacy and numeracy and teacher quality. However, not all students have the opportunity to benefit from these initiatives. For example, only 400 schools participate in the Literacy and Numeracy Partnership²⁹. The high performing countries of Korea and Finland have common themes, including high respect for teachers, the profession of teaching and a strong national focus on education as the vehicle for social mobility. There is a strong cohesion between government and the education sector, and educational policy is able to be sustained well beyond the life of a political party.

Key factors influencing educational outcomes at the national level appear to be the quality of teaching, resulting from teaching being considered an attractive profession, and public attitudes towards education, resulting in student effort and diligence.

Significant change in national attitude to education is required.

Everyone has the right to education.

UN Declaration of Human Rights

Access to education

More than most other English speaking countries, the performance of Australian students is strongly tied to their socio-economic status³⁰. The 2012 OECD snapshot³¹ shows Australia's most disadvantaged group, Aboriginal students, is more than two years behind their peers in maths, science and reading.

Education policy for improving access to education exists in four key areas – for students with disabilities, indigenous students, regional and remote students and low socio-economic students. These policies refer to areas or access points (eg university entry) and are rarely integrated across the end-to-end System.

With increased importance placed on educational credentials for career choices, parents who can afford it are increasingly enrolling children in non-government schools. Enrolment in non-government schools represents segmentation of primary, and especially secondary, education by economic status.

The movement away from government schools in the most disadvantaged communities has left government schools catering for the bulk of low socio economic, indigenous, non-English speaking family, and students with disability or learning difficulties. The disadvantaged students in these areas are the most in need of effective, high quality teachers, but the least likely to get them, because of where they live. This trend was further exacerbated by the development of selective government schools. As desirable as these selective schools are, they have only compounded the concentration of poorly performing students in non-selective government schools.

The quality of a student's education should not be limited by where the student lives, the income of his or her family, the school he or she attends, or his or her personal circumstances.

Australian Education Bill 2012

28-29 smarterschools.gov.au

30-31 OECD Education at a Glance 2012: OECD Indicators 2012

Generally speaking, students who attend non-government schools demonstrate higher performance, are more likely to attend university and are more likely to have a high paying, successful career. Although more than 60 per cent of year 12 students attend government schools, the 2013 On Track survey³³ in Victoria found that a greater proportion of private school students (54 per cent) enrol at university compared to government school students (36 per cent).

The Federal Budget recently detailed a plan to deregulate university fees, and adjust interest rates on HECS debts to align with the cost of government borrowing. This could further affect the access of students from lower-socio economic backgrounds, regional and rural areas. However, research from the UK suggests that higher fees do not act as a deterrent and that the number of students from these groups is growing. In 2012 UK student entry and application rates fell, but just one year later they were bouncing back, with 2014 figures reaching record heights³⁴.

Educational participation and attainment is influenced by the socio-economic status of both parents and the school attended. As a measurement of socio-economic status, there is a strong relationship between parental occupation and educational attainment. As shown in Table 1 children of managers and professionals are significantly more likely to complete a bachelor degree or higher³⁵.

Negative social bias has often discouraged young people in both developing and developed countries from enrolling in vocational programmes. In Australia, young people and their parents often see vocational training as a second choice education option. The low status of VET is also linked to quality concerns regarding low academic performance, poor quality provision and blocked future pathways.

One of the identified reasons for high youth unemployment across the globe is the mismatch between supply and demand for skills. Vocational education tends to result in faster transition into the workplace, and countries that have it at the core of curriculum have been successful in maintaining low youth unemployment rates, for example – Germany, Switzerland and Austria. This is also seen in Finland, where reforms over the past ten years have made TVET (Technical, Vocational Education and Training) very popular and have contributed to the lowering of youth unemployment. TVET has become more competitive than university, and the standards continue to increase.

Table 1: Level of highest education enrolment or attainment for 20 – 24 year olds, by parent's occupation

Highest qualification or enrolment of children (20-24)	Manager and professionals	Technicians and trade workers	Community, clerical & sales workers	Machinery operators, drivers & labourers
Bachelor degree or above	49%	23%	28%	15%
Certificate III – Advanced diploma	31%	42%	33%	31%
Year 12	12%	16%	18%	29%
Below Year 12	7%	19%	21%	27%

Note: Where parents had different occupations, the occupation requiring the highest skill level was used.
Source: Based on ABS (2011 b)

33 On Track Survey, Victoria 2013

34 Guardian UK, Higher fees don't mean fewer working class students – look at the UK for proof, Daniel Carr, 27/05/2014

35 Mapping Australian Higher Education, A. Norton 2012, Grattan Institute



Focus on quality

In order to improve performance, quality needs to be reviewed across the System. The Media routinely cover debates on school curriculum, teaching methods and teaching training, however such attention is rarely directed at higher education, where funding and fees are the main focus of debate. Even more rarely is the quality of teaching in VET covered.

A review of quality across the System would produce effective recommendations to guide long lasting policy and improvement in performance. Previous reviews in sector areas have produced multiple recommendations but brought about little action or change. Improved efforts would need to implement lasting change and renewal.

The recent implementation of the National Quality Standards Framework, in ECEC, and the implementation of the Australian Quality Framework in universities aim to address quality in teaching and learning. However, there is not one overarching framework that covers all areas of the System from early childhood through schools, to VET and higher education.

Although student satisfaction with teaching in universities has been improving, engagement between academics and students remains below levels achieved in other countries³⁶ and, as a result, Australian students may be learning less. Research funding does not follow student numbers, so universities cannot sustain a workforce employed both to teach and research. The consequence is a large workforce of casual or temporary teaching-only academics³⁷. Students may sometimes get the worst of both worlds: academics skilled in neither teaching nor research³⁸.

In 2012, the Commonwealth Government lifted previously imposed limits on domestic bachelor-degree student numbers at public universities. Kemp/Norton's review in 2013 found that public universities have responded well to changes under the demand driven system and improved access for all students. It found the new system has allowed universities to be more responsive to student needs, driven innovation and lifted quality.

However, these gains may be to the detriment of other areas of the System. In 2014 more than half the Year 12 students offered places in teaching degrees had university entrance scores below the average of 70, with one in eight scoring 50 or less³⁹. A report by the federal Education Department shows education faculties have the highest proportion of students with a low Australian Tertiary Admission Rank (ATAR), with almost 55 per cent scoring 70 or lower, compared with about 31 per cent nationally. About 12 per cent had an ATAR of 50 or less compared with 7 per cent in 2013 and 6.5 per cent in 2012⁴⁰. The drop in ATAR score reflects the introduction of a demand driven funding system in 2012 for undergraduates.

Improving teacher effectiveness would have a greater impact on economic growth than any other reform before Australian governments. An increase in teacher effectiveness of 10 per cent would lift Australia's school system into the highest performing group of countries in the world⁴¹.

Improving teacher effectiveness would have a greater impact on economic growth than any other reform before Australian governments.

Year 12 students offered places in teaching degrees in 2014 had university entrance scores below the average of 70, with one in eight scoring 50 or less.

An increase in teacher effectiveness of 10% would lift Australia's education systems into the highest performing group of countries in the world.

36-38 Mapping Australian Higher Education, A. Norton 2012, Grattan Institute

39-40 The Australian, May 2014. N.B. It has been estimated that 40 per cent of students entering teacher education do so from an ATAR score, and therefore the comments only related to approximately 40 per cent of students studying teaching.

41 Investing in Our Teachers, Investing in our Economy, Ben Jensen, Grattan Institute 2010

Invest early

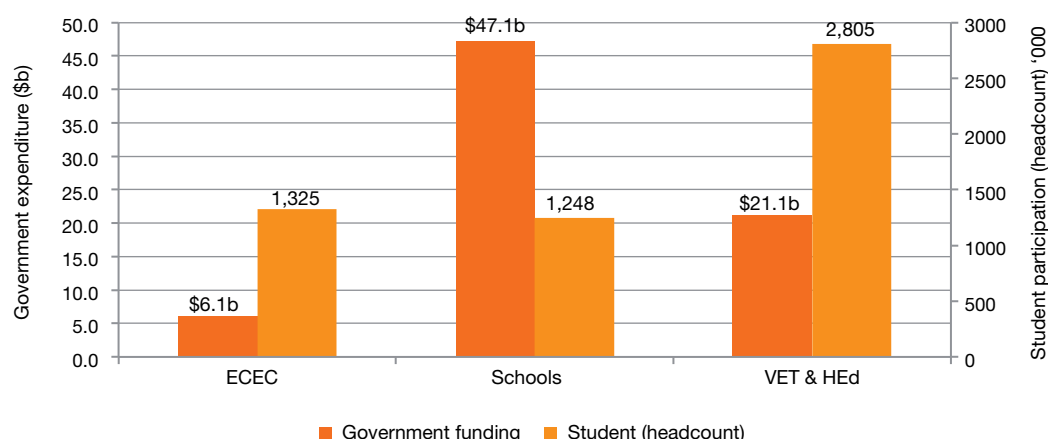
The earlier we invest in a child's education the greater the long term benefit will be. OECD Research in 2012 found that 15 year old students who attended early childhood education tend to perform better on PISA than those who did not, even after accounting for their socio-economic backgrounds. It also found that improving access without giving due attention to the quality of early childhood education is not sufficient to secure good individual and social outcomes.

ECEC availability in Australia has increased in response to growing demand for better learning outcomes, as well as rising female labour force participation, however the number of ECEC teachers has not increased over the same period.

This rapid and wide spread growth has not been matched by the level of government funding available for ECEC. As a great influencer of future performance, ECEC should be included in any education conversation.

15 year old students who attended early childhood education (ECE) tend to perform better on PISA than those who did not, even after accounting for their socio-economic backgrounds.

Figure 3: Government funding and student involvement in the Australian Education System by sector (2011-2012)



Note: Direct spend per student should not be inferred from the data above as student participation is based on headcount. Students in schools will be almost wholly full time, however children in ECEC and students of VET & HEd are not necessarily full time

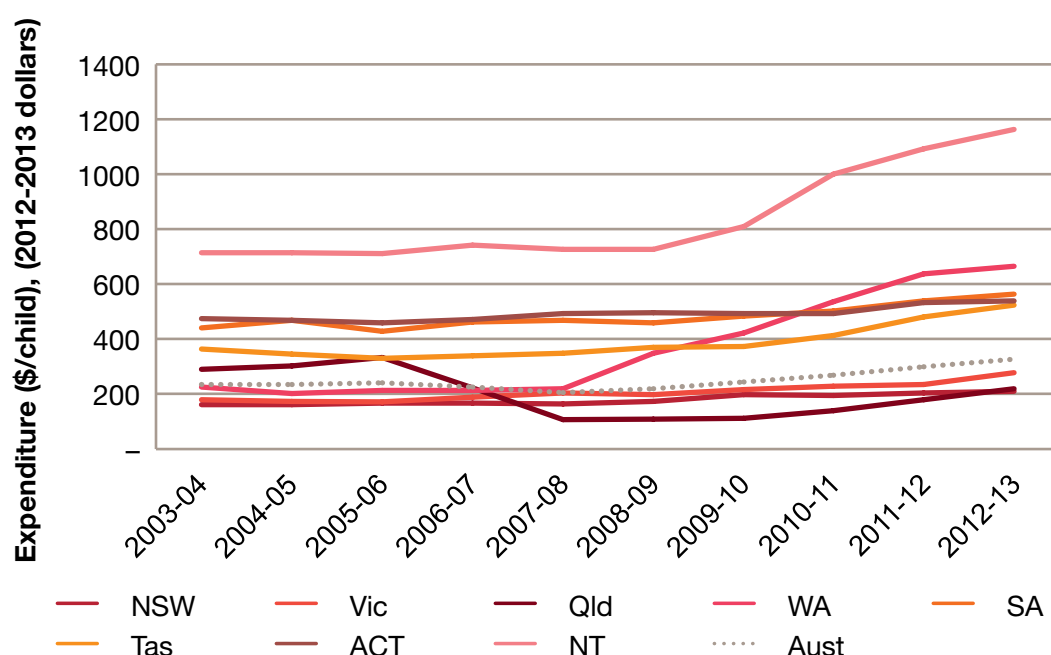
One of the challenges of improving standards across ECEC in Australia is the large number of providers. In addition to this, the providers vary by state and also vary between childcare and preschool. In 2013, 96 per cent of the pre-schools in South Australia were government managed⁴². In contrast only 10 per cent are government managed in NSW where 81 per cent are community managed⁴³.

The large number of providers leads to funding inequality in ECEC, where there is up to 70 per cent variation in funding per child across the states and territories by the Commonwealth. A large percentage of the \$6.1 billion is allocated to Western Australia, South Australia, Tasmania and the territories.

In NSW, Victoria and Queensland the majority of providers are community managed, whereas in the other states and territories they are government managed and therefore more highly funded. This potentially means that a child in one state may receive a very different start to their educational experience to a child in another state, due to differences in funding, management and possibly the quality of the service being provided.

Newly introduced, the National Quality Standards Framework in ECEC is taking steps to improve the quality of education received at the earliest and most important stage of a student's journey.

Figure 4: Total State and Territory Government real recurrent expenditure on early childhood education and care per child in the community aged 0–12 years (\$/child) (2012-13 dollars)



Source: Report on Government services – Chapter 3 Early childhood education and care – Chapter 3 Attachment tables – Table 3A.51

N.B. The drop in Queensland funding between 2006-2007 and 2007-2008 is a result of preschool stopping in the state and prep starting (prep is not included in the figures)



Conclusion

Funding alone will not improve the quality of education in Australia. Review and long lasting reform is also required, not only in schooling but across the System as a whole.

The key output of a successful education system is successful learners, confident individuals and active and informed citizens. The qualities we expect of an educated person include rationality, critical reflection, breadth of intellectual interest, commitment to truth, and independent thinking. These qualities are brought about by providing a high quality, well supported, accessible system that provides opportunities for all.

There are significant challenges in improving access, quality and equity of funding in education. A significant assisting factor would be to enhance national attitudes towards education – from a mandatory step, to an opportunity to realise individual potential and fortune, which can lead to national prosperity.

Improving Australia's Education System requires national, long-term transformation efforts. This would include reforms to improve quality, access, and adequate and appropriate funding, through a national approach to education that includes but is not restricted to:

- setting a national strategic policy agenda and regulatory framework through an end to end review of the education in Australia
- reforming teacher pay, conditions and performance
- reforming tertiary entrance requirements and qualifications for teachers, childcare workers and lecturers
- setting an appropriate measurement of system, staff and student performance.

A starting place for long-term transformation would be an end-to- end review of the Education System in Australia through a Government White Paper.

A successful education system creates successful learners and active, informed citizens.

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