



# New approaches to persistent problems

## Background paper

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Mailie Ross

Mitchell Institute for Health and Education Policy

300 Queen Street, Melbourne, Victoria

t. +61 3 9919 1820

e. [info@mitchellinstitute.org.au](mailto:info@mitchellinstitute.org.au)

w. [mitchellinstitute.org.au](http://mitchellinstitute.org.au)

## Purpose

In November 2013, the Mitchell Institute hosted a policy forum titled *New approaches to persistent problems* attended by approximately 100 of Australia's leading education, government and policy leaders, researchers, and practitioners. The discussion was chaired by Mark Burford, Executive Director of the Mitchell Institute and led by an expert panel comprising Kathryn Greiner, John Hattie, Lisa O'Brien and Yong Zhao.

This background paper was provided to panel members and forum participants as pre-reading. The highlights and outcomes of the forum are outlined in the Mitchell Institute forum report No. 1/2014, *New approaches to persistent problems in education*, April 2014.

## Summary

- Despite decades of reform programs and increasing investment in schools, we are not seeing progress in student learning outcomes
- A significant gap remains between low and high socioeconomic status (SES) students
- A large proportion of young people are at risk of not achieving good education outcomes, with serious social, health and economic consequences
- Despite likely strong returns on investment, we are still investing relatively little in the early years
- It is not clear that the reforms associated with school funding will deliver improved outcomes; however, school funding has created an opportunity to recalibrate the school reform agenda

## 1.2 There has been substantial national school reform recently, building on decades of reform at the state and territory level

**The wide-ranging federal reform agenda established by the Council of Australian Governments (COAG) in 2008 is associated with new federal-state/territory financial arrangements**

- The Intergovernmental Agreement on Federal Financial Relations (IGAFFR) formalised a new approach to federal financial relations that aimed to increase state and territories' flexibility in delivering services, and improve accountability and reporting
- The COAG Reform Council was established to strengthen performance and accountability
- Themes of reform were focussed on economic and social participation, health, and indigenous disadvantage
- The reform agenda was to be implemented through national agreements (such as the National Education Agreement and National Indigenous Reform Agreement) and national partnerships<sup>12</sup>
- The reforms built on those that had been implemented in previous decades under Liberal and Labour Governments

**The current goals for education listed in the Melbourne Declaration set the agenda for education reform in 2008**

- At the end of 2008, the Ministerial Council on Education, Employment, Training and Youth Affairs (MCEETYA) set goals for Australian education for the next 10 years:<sup>13</sup>
  - Goal 1: Australian schooling promotes equity and excellence
  - Goal 2: All young Australians become:
    - successful learners
    - confident and creative individuals
    - active and informed citizens
- This remains the only national documentation that sets out education goals
- The 2012 National Education Agreement reinforced these goals with targets for school completion and achievement in literacy and numeracy<sup>14</sup>

**The development of the Australian Curriculum has reinforced the Melbourne Declaration goals**

- The general capabilities included in the Australian Curriculum are explicitly designed to support Goal 2 of the Melbourne Declaration<sup>15</sup>
- These capabilities are:
  - Literacy
  - Numeracy
  - Information and communication technology (ICT) capability
  - Critical and creative thinking
  - Personal and social capability
  - Ethical understanding
  - Intercultural understanding

**A proliferation of National Partnerships was established to drive reform**

- These are outlined in Appendix 1

### Decreases in class sizes may account for about a quarter of the increase in recurrent expenditure

- In the decade since 2003, student : teacher ratios in government schools have dropped from 15.0 to 13.9<sup>17</sup>
- Assuming teachers account for 70% of recurrent costs, this accounts for an approximate 0.3% p.a. increase, which is one quarter of the overall increase
- Student : teacher ratios are a proxy for class sizes, although they can also indicate changes in other school-level staffing arrangements

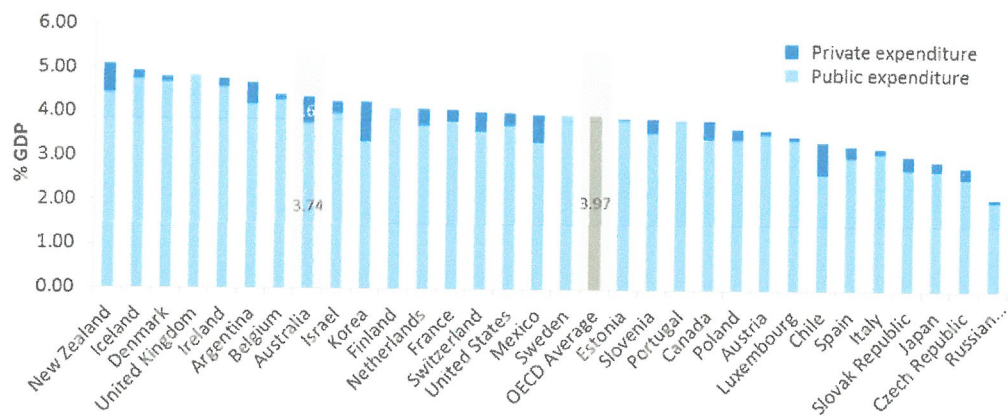
### Teacher pay may account for over one third of the increase in recurrent expenditure, but has still not kept pace with other professional pay

- Between 2000 and 2010, teacher pay increased by 0.7% p.a. in real terms<sup>18</sup>
- This accounts for about a 0.5% p.a. increase in recurrent costs, or 32% of the overall increase
- Professional pay (as defined by the Australian Bureau of Statistics) increased by 1.1% p.a. over the same period, perhaps attracting people with high academic aptitude *away* from teaching. This may have contributed to reducing teacher quality<sup>19</sup>

### Australia spends more than the international average on school education

- This is illustrated in Figure 2

Figure 2. Organisation for Economic Co-operation and Development(OECD) countries' expenditure on primary, secondary and post-secondary non-tertiary education as a percentage of GDP (2010)<sup>20</sup>

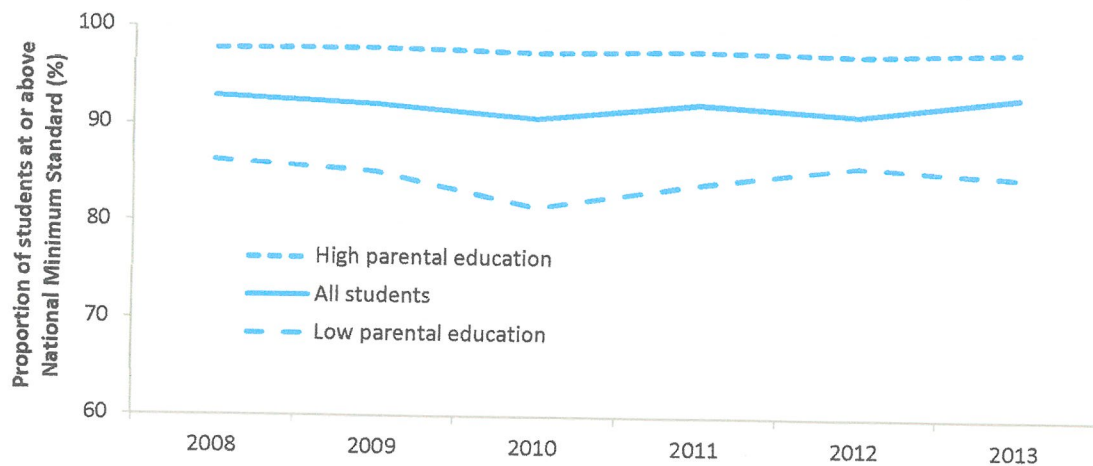


## 2.2 There has been some success, but student achievement overall has not improved

### Australia achieves high results by international standards, but there are signs we are falling behind

- Australia performs significantly higher than the OECD average in reading, maths and science in PISA tests
- However, more countries are now outperforming us than when we first undertook PISA tests<sup>8</sup>
- Australia's performance in reading and maths has declined since 2000, and our science performance has shown no change.<sup>21</sup> Figure 3 shows reading results for that period

Figure 4. Proportion of year 9s at or above National Minimum Standard in NAPLAN reading<sup>22</sup>



### 2.3 The current system for measuring outcomes is narrow, which is problematic for interpretations of progress

#### There are outcomes that we do not measure

- Outcomes against the stated Melbourne Declaration goals across improving equity, developing confident and creative individuals, and developing active and informed citizens have not been measured
- There is no nationally consistent way to track students through the school system and to identify when they drop out (some jurisdictions, such as Victoria, are able to do this, but not all)
- There are no systematic longitudinal measures of student success beyond school

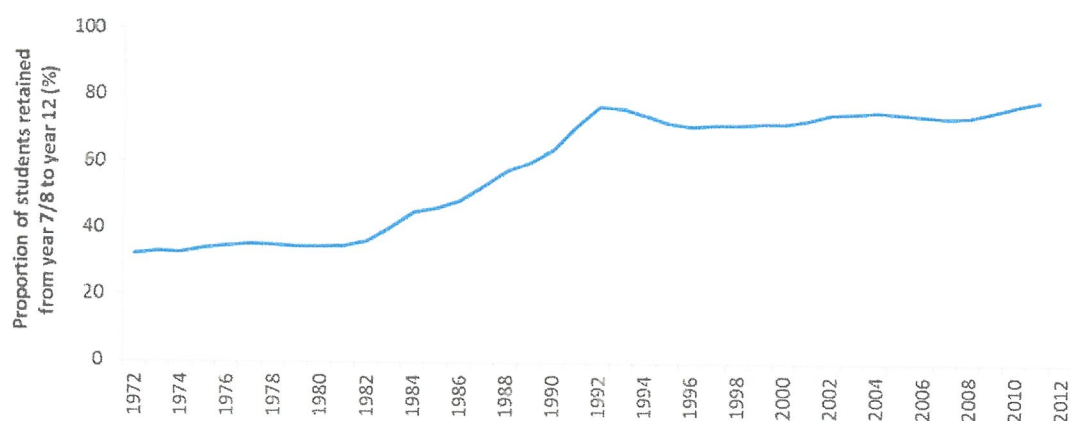
#### Where outcomes are measured, reporting can be problematic

- Comparison of NAPLAN, which is Australian, with the Progress in International Reading Literacy Study (PIRLS), which is international, indicates that NAPLAN performance benchmarks are set very low against the standards compared to international assessment. Figure 5 illustrates this point
- NAPLAN results are frequently used to discuss absolute level of achievement, when results can also be used to identify *improvement* in achievement. When this is done the picture of performance changes. For example, the states and territories that perform worst when absolute level of achievement is considered alone (NT, Qld and WA), have in fact shown the biggest improvements in achievement.<sup>23</sup>



- Increases in retention through the 1980s saw more than twice as many students finishing school than had previously, significantly changing the mix of students in school and increasing the challenge of engaging students
- However, despite having a more diverse cohort, Australia still has relatively narrow certification pathways for students finishing school, largely focused on Australian Tertiary Admission Ranks (ATARs). This may affect retention to year 12
- The distorting effect of ATARs may be decreasing, as the proportion of tertiary entries via ATAR has significantly dropped over time<sup>25</sup>

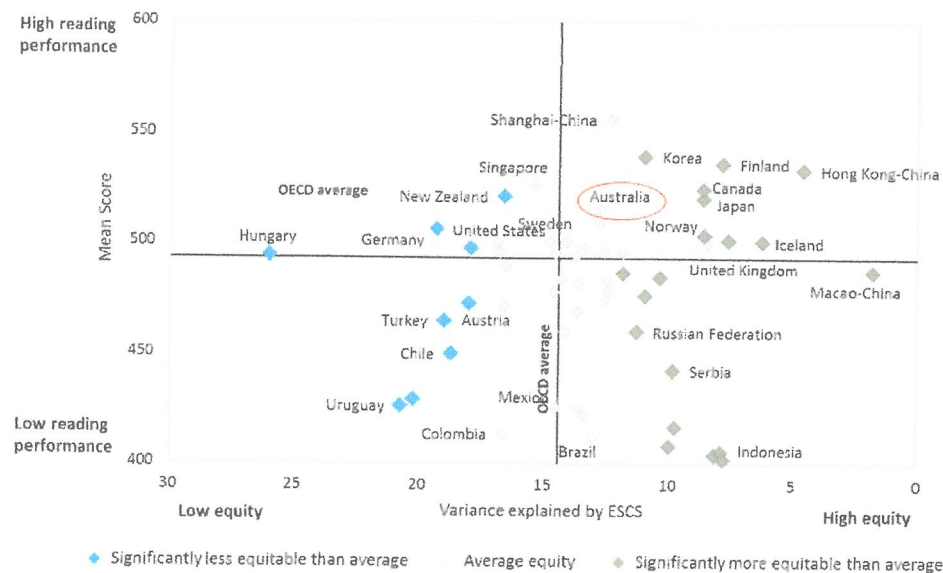
Figure 6. Proportion of students retained from year 7/8 to year 12<sup>17,29</sup>



#### High levels of absence in high school

- Data from WA show reasonably high attendance in primary school, dropping substantially when students enter high school (year 8 in WA) and continuing to drop through later years<sup>30</sup>
- According to the Telethon Institute, which assembled the data, the WA figures are representative of the other states and territories
- Attendance correlates with achievement at school as measured by NAPLAN
- Attendance is much lower for subgroups (defined by NAPLAN) including low SES, Aboriginal and Torres Strait Islanders, students with high mobility (frequent school changes), remote students, and those with low parental education and occupation

Figure 8. OECD reading performance compared to equity, 2009<sup>37</sup>



### Socioeconomic status can explain much of the variation between schools and school sectors

- Individual SES and the SES of a student cohort influence achievement
- Analysis by the National Institute of Labour Studies shows that when those two factors are taken into account, average differences between the government, Catholic and independent sectors disappear. Schools from the three sectors have the same distribution of “value added” for reading, science and mathematics after controlling for school resources and SES<sup>8</sup>
- The Australian Council for Educational Research’s analysis of the latest PISA results reinforces this. When student-level and school-level socioeconomic background are taken into account, there is no difference in mathematics performance between government, Catholic and independent schools<sup>21</sup>

## 2.6 The concentration of low SES in some schools is increasing, which makes it harder to achieve good outcomes in those schools

### There is an ongoing movement of students from government to non-government schools

- This shift has been occurring since the mid-1970s<sup>38</sup>
- Increasingly, high SES parents are choosing to enrol their students in independent schools, out of Catholic and government schools<sup>38</sup>
- “Average” SES students are increasingly enrolling in Catholic schools<sup>38</sup>
- There is a reduction in enrolments of high and average SES students in government schools<sup>38</sup>
- There is substantial disagreement about how to address this movement and about the degree of difficulty created by having high concentrations of low SES in particular schools

### A high proportion of students with additional needs are in government schools

- Schools that serve poor families are predominantly government schools, whether regional or metropolitan<sup>39</sup>
- 80% of students with disabilities are educated in government schools<sup>40</sup>

## 3. Early childhood development

### Summary

- Early childhood development cannot be ignored in schooling and education reform
- There has been substantial reform in early childhood education and care
- Early childhood education has a significant impact on outcomes at school
- The return on investment in early childhood education is high
- Expenditure in early childhood education has increased significantly but is low by international standards
- More children are attending early childhood settings, both childcare and preschool
- Increased investment is starting to show results, but a significant gap remains for disadvantaged children

### 3.1 There has been substantial reform in early childhood education and care

#### A national quality agenda for early childhood education and care has been developed

- In July 2009, COAG agreed to a National Early Childhood Development Strategy, called Investing in the Early Years,<sup>42</sup> providing a national focus for ensuring all children have access to a quality early childhood education
- Governments established National Partnership Agreements on early childhood education and on Indigenous early childhood development, as well as a National Quality Framework for Early Childhood Education and Care
- Under the National Partnership Agreement on Early Childhood Education, in 2008 the Commonwealth Government committed \$970 million to states and territories over five years<sup>43</sup>

### 3.2 Early Childhood Education has a significant impact on outcomes at school

#### Development opportunities prior to school can improve performance at school

- Developmental concerns evident at school entry tend to continue and be exacerbated over the primary school years, particularly for low SES children<sup>44</sup>
- Even three years after the preschooling has taken place, NAPLAN scores of year 3 children are significantly higher than for those who had not attended preschool
- Attendance at preschool with qualified early childhood educators has a significant positive impact on year 3 NAPLAN Reading and Numeracy results equivalent to half a year of schooling<sup>45</sup>

#### The quality of early childhood education provision is important

- Children whose preschool teacher had a diploma or degree in early childhood education or childcare gained the most from attending preschool – the level and specialisation of preschool teacher qualifications are important<sup>45</sup>

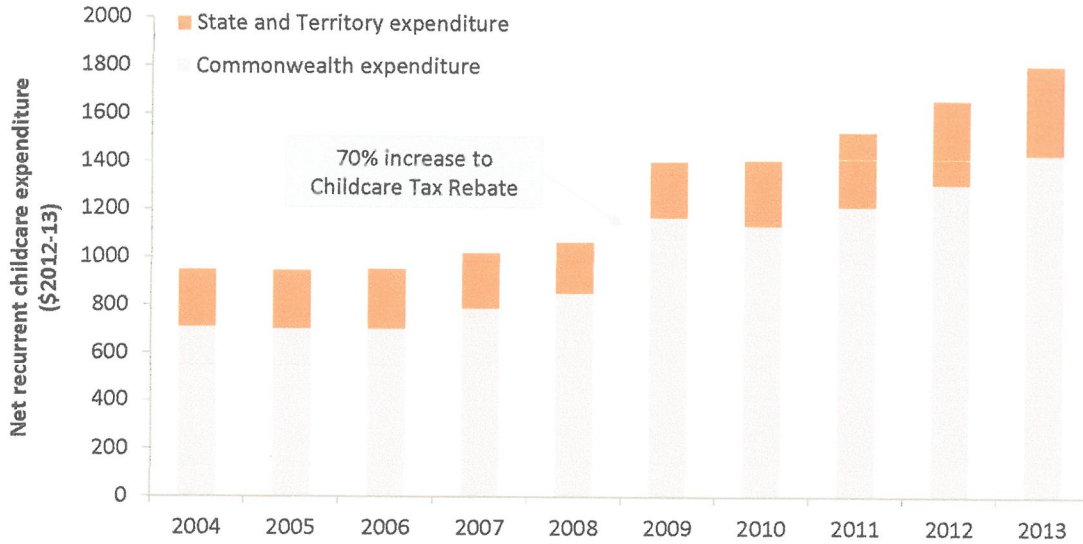


### 3.4 Expenditure in early childhood has increased significantly but is low by international standards

#### Government expenditure in early childhood has increased significantly in recent years

- This is illustrated in Figure 11

Figure 11. Childcare expenditure per child aged 0-12 in the resident population<sup>16</sup>



#### Government spending in early childhood education still lags behind other OECD countries

- Our expenditure on early childhood education is well below the OECD average, as shown in Figure 12
- This does not include expenditure on childcare
- Early childhood education at age 3 is the norm in many Western European countries<sup>20</sup>

Figure 12. Expenditure on early childhood educational institutions as a percentage of GDP (2010)<sup>20</sup>

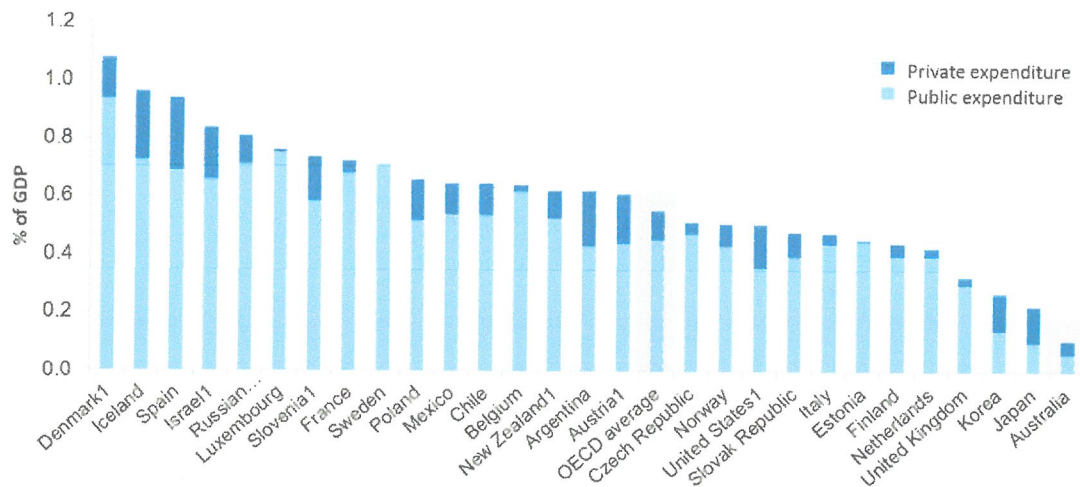
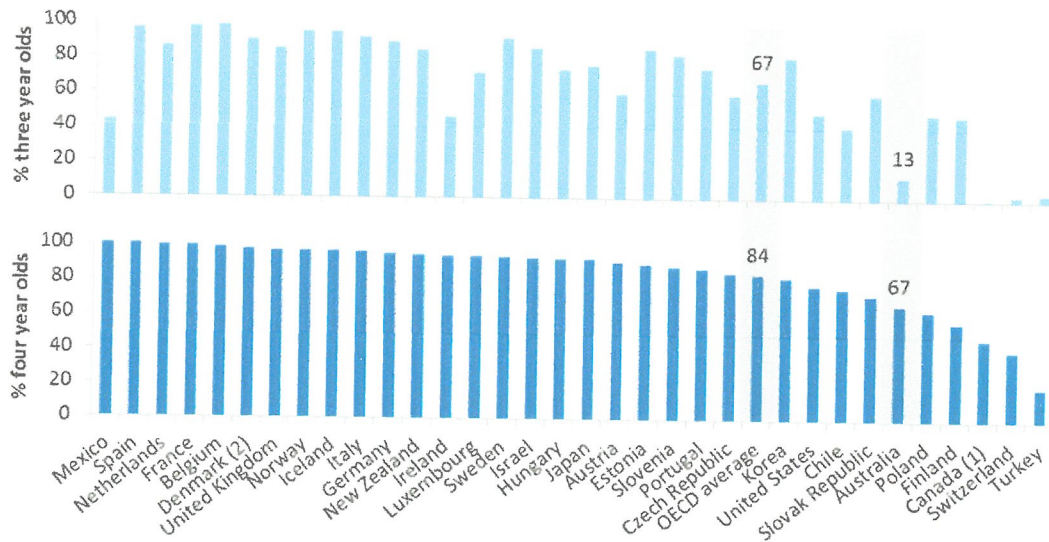


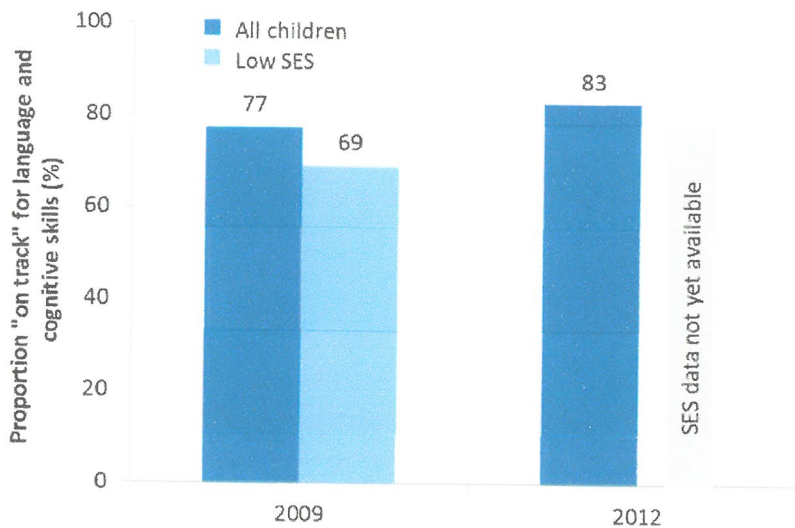
Figure 14. Enrolment rates of three and four year olds in early childhood or primary education (2011)<sup>20</sup>



### 3.6 Increased investment is starting to show results, but a significant gap remains for disadvantaged children

The Australian Early Development Index (AEDI) shows a significant increase in the number of children who were developmentally “on track” for school between 2009 and 2012. This is illustrated in Figure 15.

Figure 15. Proportion of children who were “on track” for language and cognitive skills based on AEDI<sup>48,49</sup>



## 4. Funding reform

### Summary

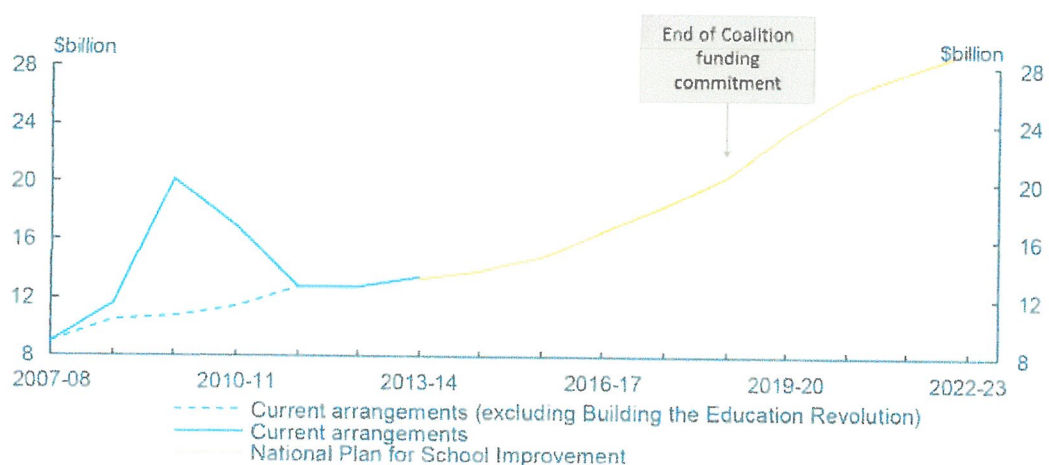
- School funding reforms have created a new funding model with loadings for disadvantage, but the measures are problematic
- The *Australian Education Act 2013* outlines a reform agenda to complement the new funding regime

### 4.1 School funding reforms have created a new funding model with loadings for disadvantage, but the measures are problematic

Allocation of funding is defined under the *Australian Education Act 2013*<sup>52</sup>

- School funding is based on recommendations from the Review of Funding for Schooling (known as the Gonski Report)<sup>53</sup> and the subsequent National Plan for School Improvement (NPSI)<sup>54</sup>
- Recommendations in the Review of Funding for Schooling aimed to help create “a schooling system that is among the best in the world for its quality and equity, and [which prioritises] support for its lowest performing students”<sup>53</sup>
- The plan is to achieve this through a changed funding formula based on a set “student resource standard” (SRS), with loadings for low SES, disability, Aboriginal and Torres Strait Islanders, low English proficiency, school size and location
- Government schools will have their SRS fully funded. Non-government schools will be funded based on “capacity to contribute”. Between 10% and 80% of SRS will be funded by the school, depending on its SES score
- The Coalition has committed to four years of funding, although the proposed changes will be implemented over six years. The biggest increase in funding will occur after the fourth year. This is illustrated in Figure 16
- At this stage, the details of how funding reforms will proceed are unclear

Figure 16. National Plan for School Improvement (“Gonski Plan”) funding in 2013-14 budget<sup>54</sup>



## Appendix 1: National Partnerships in Education since 2008

**National Partnerships based around facilitation and reward payments for states and territories in specific areas:**<sup>58,59</sup>

- Building the Education Revolution (\$16.2b over 3 years from 2009/10, primarily for economic stimulus)
- Digital Education Revolution (\$2.3b over 6 years)
- Smarter Schools National Partnerships:<sup>60</sup>
  - Low Socio-Economic Status School Communities (\$1.5b over 7 years)
  - Literacy and Numeracy (\$540m over 4 years)
  - Improving Teacher Quality (\$550m over 5 years)
- Trade Training Centres in Schools (\$2.5b over 10 years)
- Youth Attainment and Transitions (\$706m over 5 years)
- Other National Partnerships in Early Childhood Development<sup>58</sup>



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