

Education Research Brief

The Case for Gonski Plus Funding Loadings for Low SES Students

Trevor Cobbold

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Key Points

1. The large inequalities in educational outcomes in Australia are the biggest weakness in national education. The Gonski funding model represents a watershed change in school funding in Australia as it is the most serious attempt to tackle this problem in the last 40 years. The central debate now around the Gonski model concerns the levels of funding required to make a real difference for various categories of disadvantaged students. Determining the funding loadings for low SES students is the first step to creating an effective, evidence-based Gonski Plus funding model.
2. The evidence from many research studies shows that the current Federal Government funding loadings for students in the lowest SES quartile are far too low to ensure that these students meet expected minimum national standards of education. Research studies suggest a loading of at least 1.0, some suggest loadings as high as 1.5 to 1.7.
3. The current maximum loading of 0.5 is only half that suggested by research studies. It only applies to schools with over 75 per cent of students from the lowest SES quartile. As such, it applies to only three per cent of all low SES students in Australia. Students in schools with very high proportions of low SES students get even smaller loadings.
4. The current low SES loadings should be replaced by a Gonski Plus funding loading. In the first instance, the loading should be set at 1.0 for all low SES students. Higher loadings should be set for schools with high proportions of low SES students.
5. The revised loadings should be seen as a first stage in a longer term strategy to achieve the social equity goal of ensuring that students in different social groups achieve similar education outcomes. The loadings to achieve this goal will need to be substantially higher again.
6. Improving the results of students in the second lowest SES quartile to match those of higher SES students should be part of the long-term strategy to achieve social equity in education outcomes. More information is needed to determine whether the current loadings for this group are sufficient to support an adequate education for under-performing students.

Introduction

The Gonski funding model represents a watershed change in school funding in Australia. It is the most serious attempt to deal with the major inequalities in educational outcomes in Australia in the last 40 years. It provides the framework for a new national school funding system to reduce inequity in education outcomes. The Gonski report stated that: “Achieving greater equity in Australia’s schooling system is central to the panel’s remit...” [Review of School Funding 2011: 105].

To this end, the report proposed a Schools Resource Standard comprised of a basic per student amount for primary and secondary school students and funding loadings for various student-based and school-based sources of disadvantage, including for low SES students. The funding loadings recognise that student success at school is strongly affected by student background factors such as parent education, occupation and income, Indigenous and ethnic background, English proficiency, and location. The loadings provide additional funding for various categories of disadvantaged students. For example, a loading of 1.0 for a given type of disadvantage indicates that it costs 100 per cent more to bring a student up to a given performance standard than the cost for a student who is not disadvantaged.

A set of funding loadings were adopted by the previous Labor Government and implemented under the *Australian Education Act 2013*. The low SES loadings provide additional resources to support schools to address the educational needs of students from low SES families and improve educational outcomes for these students. These loadings are now under review by the Federal Government.

Current Low SES funding loadings

The low SES loadings apply to students in the lowest two SES quartiles. The loadings for students in the lowest SES quartile are on a sliding scale ranging from 15 per cent (or 0.15) for the first student in the lowest SES quartile (\$1,391 per primary student and \$1,829 per secondary student in 2014) to 50 per cent (or 0.50) for each student in schools with more than 75 per cent of students in the lowest quartile (\$4,635 per primary student and \$6,096 per secondary student).

For students in the second lowest SES quartile, the loadings range from 7.5 per cent (\$695 per primary student and \$914 per secondary student) to 37.5 per cent for schools with over 75 per cent of students from this quartile (\$3,477 per primary student and \$4,572 per secondary student).

These loadings differ from those recommended by the Gonski review. The Gonski report only recommended extra funding for every student in the lowest SES quartile while the funding plan adopted by the Federal Government provides additional funding available for every student in the bottom 50 per cent. However, the report recognised that there are also many under-achieving students in the second lowest SES quarter. It said that one way to address this may be to have a separate, but lower, loading for these students as well as those in the lowest quartile. It suggested that further work be undertaken on the extent and on what basis a low SES loading should be provided to the two lowest SES quarters.

The loadings for students in the lowest SES quartile are slightly more generous than those proposed by the Gonski report. The Gonski report proposed loadings ranging from 10 per cent of the resource standard for each low SES student in schools with under 10 per cent of

students in the lowest SES quarter to 50 per cent for each low SES student in schools with more than 75 per cent of students in the lowest SES quarter.

Research studies indicate that the loadings are far too small

The funding loadings are significantly below that suggested by international research studies on the funding requirements for low SES students. Overseas research studies show that the additional expenditure required for low income students to achieve adequate standards of education is double or more the cost of educating a non-poor student. This implies loadings of 1.0 or more.

The main methods used in studies to estimate the additional cost of educating students from disadvantaged backgrounds are education cost function (or econometric) studies and professional judgement panel studies.¹ There are methodological issues associated with each method with each having its advantages and disadvantages [see Duncombe & Lukemeyer 2002, Duncombe et.al. 2004, Baker 2006, Imazeki 2006, Taylor et.al. 2005, Baker et.al. 2008, Jimenez-Castellanos & Topper 2012]. Cost function analysis is the only methodology that explicitly quantifies the relationship between outcomes and costs for school districts and, generally, is the preferred method.

Given the econometric advances of the last decade, the cost function approach is the most likely to give accurate estimates of the within-state variation in the spending needed to attain the state's chosen standard, if the data are available and of a high quality. [Downes 2004: 32; see also Duncombe & Yinger 2011].

A number of education cost studies show that the additional expenditure required for low SES students to achieve at a given education standard is double or more the cost of educating an average student to the standard, that is, the loadings for low SES students are generally estimated at about 1.0 or above.

One of the earliest studies to estimate loadings (weights) for low income students from education cost functions found a weight of 1.59 for the Wisconsin public school system [Reschovsky & Imazeki 1998]. A weight of 1.59 indicates that to achieve any given level of educational outcome costs just over two and a half times as much money as required to educate a regular student. A similar study of New York State estimated the required poverty rates at between 0.95 and 1.34, based on eligibility for free school lunches as the measure of poverty, and between 0.95 and 1.1 based on the US Census definition of poverty [Duncombe 2002].

Another study estimated loadings ranging from 0.65 in low poverty rural districts in Kansas to 1.15 in high poverty urban districts [Duncombe & Yinger 2005a]. A similar cost study suggested weights of 1.2 in high poverty large school districts in Kansas City, Kansas [Baker 2005].

A path-breaking cost study estimated loadings for students in poverty to achieve a given pass rate on elementary and secondary mathematics and reading tests in New York State ranging from 1.1 to 2.15 [Duncombe & Yinger 2005b].² The weights using the Census definition of

¹ Other methods such as models of successful schools have been used to estimate the costs of providing an adequate education, but few of these provide estimates of the additional costs associated with getting disadvantaged students to a given level of education.

² This study is the standard reference in the literature and is used as the basis for many other studies analysing the relative costs of serving children with varied needs and research estimating funding gaps.

poverty range from 1.22 to 1.67 while those based on eligibility for free lunches range from 1.1 to 2.15.

Another study of the impact of funding arrangements under the No Child Left Behind Act in Kansas and Missouri estimated poverty weights of 0.55 and 0.65 respectively, with higher weights in the central cities [Duncombe et.al. 2008]. A study prepared for the St. Louis Board of Education estimated a state wide poverty weight for Missouri of 0.56 and 1.22 for St. Louis [Duncombe 2007]. The poverty pupil weight is significantly higher in St. Louis compared to the average district because of the high concentration of low-income African American students in the district.

In contrast to these studies, two studies have estimated significantly lower poverty weights for Texas and California of 0.5 and 0.3 respectively, although it was suggested that the California estimates are likely to be under-estimated [Imazeki 2006]. A recent study estimated poverty weights for California at 0.56 [Duncombe & Yinger 2011].

An overview of cost studies suggests poverty weights of between 1.0 and 1.5 for US states with large urban areas, such as New York, Texas and Wisconsin, and loadings between 0.6 and 1.0 for rural states [Duncombe & Yinger 2008]. A review of eight non-academic unpublished cost function studies prepared for state education authorities found that the estimated poverty weights ranged from 0.40 to 1.68, with the majority between 0.6 and 1.5 [Baker et.al. 2008]. Differences in the estimated weights appear to be a function of differences in the regional distributions of families in poverty, different measures of poverty and different education standards expected for students.

The loadings produced from professional judgement studies are generally lower than those obtained from cost studies and range from about 0.6 to 1.0 [Baker et.al. 2008, Downes & Steifal 2008]. However, professional judgement panel studies are criticised for under-estimating the cost of educating children living in poverty to a given education standard and there is a general preference for relying on cost function studies.

The above estimated weights also do not take account of differences in the concentration of low SES students between schools. The loadings are based only on the needs of individual students and ignore the effects of concentrations of high need students. As one leading education expert has stated:

The addition of needs-based weights helps, but does not fully eliminate, the inequity associated with concentrations of needy students. [Ladd 2008]

Many research studies show that the high concentration of low SES students is a factor in student performance. A student attending a school where the average SES of the student body is low is likely to have lower outcomes than a student from a similar background attending a school where the average SES of the student body is high [Alegre & Ferrer 2010, Borman & Dowling 2010, Dronkers & Levels 2007, Oh 2007, Rangvid 2007, Rumberger & Palady 2005, 2006]. There is a compounding effect for students from low SES and minority families in that they tend to be disadvantaged because of their circumstances at home, but when they are also segregated into low SES and/or predominantly minority schools their school outcomes are likely to be even worse [Willms 2006, 2010].

There is strong evidence of such effects in Australian schools [McConney & Perry 2010; Perry & McConney 2010a; Perry & McConney 2010b]. The 2009 PISA results indicate that

the school compositional effect is much greater than the individual family effect [Thomson et.al. 2010]. Analysis presented in the Gonski report shows a strong association between concentration of low SES students in schools and lower student and school performance [Review of Funding for Schooling 2011: 124-125, 259].

This research suggests that additional supplementary funding is required for schools which have a high proportion of students from low SES backgrounds, as recognised by the Gonski report. Differential funding loadings should therefore be applied according to the proportion of a school's enrolments in the lowest SES quartile.

However, there is little research evidence to guide what these loadings should be. As one prominent researcher on student funding loadings has noted, there is relative consensus amongst research studies on at least a range for the magnitude of appropriate weights, but the research is less clear whether and how these costs change as the concentration of disadvantaged students increases [Imazeki 2013].

The strong conclusion that can be drawn from the available research is that the low SES funding loadings proposed by both the Gonski report and as applied in the new Federal funding plan are far too small to achieve the goal that all low SES students achieve an adequate education. A rough consensus from the studies is that a loading of at least 1.0 is appropriate for low SES students with even larger loadings for schools that have high concentrations of these students.

By comparison, the maximum funding loading for low SES students under the current Federal arrangements is 0.5 and it applies only to schools that have over 75 per cent of their enrolments from the lowest SES quartile. Low SES secondary school students in these most highly disadvantaged schools will only receive an extra \$6,096 compared to \$12,193 if the loading was set at 1.0.

Schools with significant, but lower, enrolments of low SES students receive even less. Low SES secondary students in schools with 50 per cent of students in the lowest SES quartile will receive a loading of about 0.38, or \$4,633 per student. Secondary schools with 30 per cent of students from the lowest SES quartile would get a loading of about 0.3, or \$3,658 per low SES student.

The maximum loading of 0.5 applies only to a tiny proportion of low SES students. According to the My School website only 289 schools (248 government, 18 Catholic and 23 Independent) would have qualified for this loading in 2013. The total enrolment in these schools was 33,572, of which about 27,000 were in the lowest SES quartile. In 2013, there were approximately 844,000 students in the lowest SES quartile. Therefore, only about three per cent would qualify for the maximum low SES loading, a loading which is only half that suggested should apply to all low SES students by research studies.

All this suggests very strongly that the lowest SES quartile students are significantly under-funded to achieve the goal of an adequate minimum standard of education expected for all students. The research evidence suggests that the funding loadings for these students should be lifted to 1.0, with additional loadings for schools with high concentrations of low SES students. However, further research is needed to more precisely determine the appropriate loadings in the latter case.

It should be noted that the weights (loadings) estimated by research studies are designed to achieve a ‘weak’ equity objective of a given pass rate or standard which could be considered as a benchmark for an adequate education. Loadings designed to achieve an adequate education for all students, irrespective of background, will leave substantial inequality in outcomes between students from different social groups. For example, high SES students will still achieve much higher average test scores than low SES students, although the gap should be much reduced.

Higher loadings are needed to achieve the Gonski social equity goal

While the Gonski report said that all students should be expected to achieve a minimum level of education, it also set a stronger equity objective than that considered by the above research studies. It adopted a social equity objective that education outcomes achieved by students from different social groups should be similar. This objective was expressed in its definition of equity in schooling:

The panel has defined equity in schooling as ensuring that differences in educational outcomes are not the result of differences in wealth, income, power or possessions. Equity in this sense does not mean that all students are the same or will achieve the same outcomes...

Central to the panel’s definition of equity is the belief that the underlying talents and abilities of students that enable them to succeed in schooling are not distributed differently among children from different socioeconomic status, ethnic or language backgrounds, or according to where they live or go to school. [p. 105]

This social equity objective was a key part of the Gonski review’s concept of equity in education as was later explained by one of its panel members:

...the range of achievement, and the mean achievement, of sub-groups of students within the total student cohort should become similar, over time – whether the subgroup be recent arrivals for whom English is not a first language; or children in small and remote central schools; or Aboriginal children; or children of single parents living on benefits; or Moslem children; or children with hearing impairments; or children attending Faith Lutheran School Tanunda, or Melbourne Girls Grammar School, or Dimboola High School, or Marist College Ashgrove, or Newington College, or Moree Christian School, or Cabramatta High School.

...That is what we mean when we say that differences in educational outcomes should not be the result of differences in wealth, income, power or possessions. That is what we mean by talking about a fair go for all young Australians. [Boston 2012a, see also Boston 2012b]

The loadings to achieve such a ‘strong’ equity objective would have to be much higher than those necessary to achieve a minimum, or adequate, level of education for all students. This implies loadings that are very much higher than apply under the present arrangements. Therefore, implementing loadings for all low SES students of around 1.0 should be seen as a first stage towards achieving full social equity in education.

Funding for the second lowest SES quartile

The federal funding model introduced by the Labor Government broadened the scope of the low SES loadings by applying them to the two lowest SES quartiles. A sliding scale of loadings also applies for students in the second lowest SES quartile as well as those in the lowest quartile. Thus, some form of loading applies to the bottom 50 per cent of students classified by SES.

The case for funding loadings for the second SES quartile is that a significant group of these students achieve much lower outcomes than students with higher SES backgrounds. The 2012 PISA results show that while 33 per cent of 15 year-old students in the lowest SES quartile were below the mathematics proficiency standard (Level 2), 22 per cent of students

in the second lowest SES quartile were also below the standard [Thomson et.al. 2013: 39]. The achievement gap between students in the second lowest SES quartile and the highest quartile was 58 points which is equivalent to about one and half years of learning. Fifteen per cent of students in the second lowest quartile were below the benchmarks in reading and science compared to 23 per cent of students in the lowest quartile and the achievement gaps were 57 and 56 points respectively.

Thus, there is a good case to provide additional funding for students in the second lowest quartile as well. Improving the results of these students to match those of higher SES students should be part of the long-term strategy to achieve social equity in education outcomes.

The smallest loading for the second lowest SES group is set at half that of the lowest quartile while the maximum loading is set at 75 per cent of that for the lowest group. It is not clear how these loadings for the second lowest SES quartile were determined.

There appears to be little research to guide the appropriate loadings for the second lowest SES quartile. However, some guide may be provided from a comparison of the average results of the two groups.

The average reading, mathematics and science results from the PISA tests for the lowest quartile are about 40 points below the average for all students, which is equivalent to about one year of learning. The average results for the second lowest quartile are only about ten points below the overall averages. This may indicate that while a significant proportion of students in the second lowest quartile are below the international proficiency standards, they are mostly clustered just below the standards.

If this is true, the current loadings for the group may be sufficient for them to achieve an adequate standard. Clearly more information is needed about the distribution of the results of the second lowest SES quartile to make a definite judgement about the size of the loadings for this group of students compared to those required for students in the lowest SES quartile.

Conclusion

The claims by the Federal Minister for Education that there is no equity problem in Australia and that money doesn't make a difference to student outcomes are demonstrably false. The central issue now around the Gonski model concerns the levels of funding required to make a real difference for various categories of disadvantaged students. Determining the funding loading for low SES students is the first step to creating an effective, evidence-based Gonski Plus funding model.

The evidence from research studies shows that the current funding loadings for students in the lowest SES quartile are far too low to ensure that these students meet expected minimum national standards of education. The maximum loading of 0.5 is only half that suggested by research studies and it applies to only three per cent of all low SES students in Australia. Students in schools with very high proportions of low SES students, for example, 50 to 75 per cent, get even smaller loadings.

The current loadings are too low to meet the goal that all low SES students achieve an adequate education. They should be replaced by a Gonski Plus funding loading. In the first instance, the loading should be set at 1.0 for students in the lowest SES quartile. The loadings

should also be higher for schools with high proportions of low SES students, but further research is needed to determine the loadings that should apply.

These revised loadings should be seen as a first stage in a longer term strategy to achieve the strong Gonski goal of social equity in education outcomes. The loadings to achieve this goal will need to be substantially higher again.

There is also a good case to provide additional funding for students in the second lowest quartile as well. Improving the results of these students to match those of higher SES students should be part of the long-term strategy to achieve social equity in education outcomes. However, more information is needed about the distribution of the results of the second lowest SES quartile to make a definite judgement about the size of the loadings for this group of students compared to those required for students in the lowest SES quartile.

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