FRASER MUSTARD CENTRE

A collaboration between

Government of South Australia
Department for Education and Child Development

TELETHON KIDS INSTITUTE
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Dear Commissioners

We were pleased to read the Productivity Commission's draft report which incorporates many of the proposals put forward in the Fraser Mustard Centre's first submission.

We offer the following advice on three of the issues discussed in the draft report.

1. Surveys and samples versus censuses

Surveys and samples could be used instead of censuses

It is not always necessary to have data on the full population to create robust and informative evidence. Surveys and testing programs administered to samples of students can significantly increase the breadth of information collected and provide for the quality of analysis and evidence required, at lower cost than censuses.

(National Education Evidence Base – Draft report. Page 11)

The Commission has noted the overall burden of data collection and the distribution of these costs across the education system. We would encourage education systems to invest in the collection of data in a deliberate way, balancing the potential value of the information gained against the costs. We suggest that the report focus on the need to make decisions using this investment approach, which in some cases may support the use of sample-based surveys and in other cases would support the collection of data as a census. For many areas of responsibility of the education system, there is significant heterogeneity between students and between education sites. This makes whole-of-population data necessary for planning purposes and invaluable for evaluating programs and spending. For example, the introduction of the Australian Early Development Census for all children every three years has allowed jurisdictional differences in child development to be compared after adjusting for a full range of socioeconomic and demographic factors[1] and has permitted detailed monitoring of progress for subgroups of children (by Indigenous status, remoteness and socioeconomic position) and for specific communities.[2]

In our experience, the collection of data on a whole-of-population scale is a more efficient use of resources (reducing the cost per assessment or measure completed). For example, the Department for Education and Child Development has implemented a measure of middle years students' wellbeing for all students in specific schools and regions since 2012. This collection is centrally coordinated to minimise the amount of

[1] Brinkman et al., 2012, Jurisdictional, socioeconomic and gender inequalities in child health and development: analysis of a national census of 5-year-olds in Australia. BMJ Open. https://espace.cdu.edu.au/eserv/cdu:38380/Silburn_38380.pdf .

[2] See Attachment 1.

work required on the part of schools to administer the survey. In 2015, the cost per student participating was $2.50. In addition to the greater efficiencies of collection, collecting data for all students has enabled the use of data in ways which would not be possible using a sampling methodology, including:

- data for schools to be provided with sufficient resolution to enable detailed planning and understanding of local issues
- comparative data for schools and other administrative units to be provided in multiple layers of disaggregation
- the results for very small subpopulations to be described (e.g., students under the care of the State's child protection agency)
- the data to be used to evaluate programs or school-based programs or to examine later outcomes for groups of students according to their wellbeing profile.

The technology to collect information is rapidly improving and increasingly affordable, particularly for collections which are not being run as high-stakes testing. This makes whole-of-population data capture more feasible and opens up the potential to minimise respondent burden by undertaking multiple measures at once and providing specific question sets to particular target groups.

2. Lever off existing infrastructure

DRAFT RECOMMENDATION 7.2

The Australian, state and territory governments should pursue a national policy effort to develop a high-quality and relevant Australian evidence base about what works best to improve school and early childhood education outcomes. In particular, five activities need to be supported:

• development of research priorities

• commissioning of high-quality education research

• adoption of rigorous research quality control processes

• dissemination of high-quality evidence

• development of researcher capacity

DRAFT RECOMMENDATION 8.1

The Australian, state and territory governments should task the COAG Education Council to provide explicit policy direction through a new Education Agreement, which would build on prior agreements and define the:

• objectives

• nature of the research to be undertaken in the bottom-up evaluation of what works

• evidentiary standards or frameworks to be applied, including assessment of cost effectiveness

• requirement for translation of evidence into guidelines accessible by schools, early childhood education and care services and teachers.

They should also request the Education Council to:

• assign an institution to be responsible and accountable for implementation of the functions set out above and in Draft Recommendation 7.2

• specify the assigned institution's governance arrangements, functions and operations

– including a responsibility for promoting a culture of using the evidence base by policy makers and educators

(National Education Evidence Base – Draft report. Pages 27 and 28)

Our submission referred to the National Health and Medical Research Council as an example of the type of research funding institution required for the education sector. There already multiple standalone education bodies funded by governments and it is unlikely that there would interest in investing in another separate entity. The organisations already established (e.g., ESA, AITSL, ACECQA) are likely to play a role in seeking research funds or informing the selection of research priorities, which would detract from the independence required of an organisation distributing funding.

Due to the considerable time and expense required to establish an institution such as the NHMRC (e.g., legislative mandate, financial systems, governance processes and setting criteria for standards of evidence), we propose that there would be significant advantages to housing the 'operational arms' of new education research funding within the existing structures of the NHMRC. The responsibility for setting research priorities would be vested with the Education Council, who could seek advice from industry experts in forming these priorities. This would reduce duplication and leverage the existing administrative processes in the health sector whilst ensuring that the distribution of funding was recognised as transparent, contestable and based on the expected public benefits of research.

3. Evidence about the impact of teaching practices

The Commission's draft report notes the significant potential for value-added measures of education outcomes to separate the impact of schools from the impact of factors beyond the school gate. We support the greater use of value-added performance measures. Such methods, in principle, could also be extended to estimating the impact of specific teachers matched to students and thereby used to test specific claims about what constitutes teacher quality.

However, from our preliminary work, there are limitations in focussing on school-level and teacher-level effects. The total variance accounted for by factors at the school and teacher level is consistently shown to be smaller than factors associated with students themselves. Analysis of our student data demonstrates that between 3% and 10 of variance in NAPLAN results can be attributed to differences between schools.[3] Similar results are found in Australia and internationally.

Perhaps due to the limited variance attributable to schools, there are significant risks to using value-added statistical models to draw conclusions about the performance of teachers and schools.[4] After adjusting for student mix and then identifying those schools which have performed "better than expected", there is seldom clear evidence as to what strategies used by those schools led to those differences[5] – average and low performing schools typically report using the same basic approaches. Furthermore, the available evidence suggests that general attitudes and approaches recognised as signs of 'teacher quality' are not readily amenable to change and could be described as traits rather than skills.[6]

There has been significant investment in teaching quality and improvement over a number of years. It is clear, however, that there has been no commensurate gain in student outcomes as a result of this investment. It seems unlikely that implementation failure underlies the lack of impact given that the same policy has been pursued by multiple education systems in Australia and internationally. It is more likely that most of the gains from investing in general "teacher quality" have already been realised and pursuing this further will not result in further gains.[7]

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[3] Billington, 2015. Using NAPLAN and administrative data to asses determinants of a student's academic growth.

[4] For example, see American Educational Research Association, 2015, AERA statement on the use of value-added models (VAM) for the evaluation of educators and educator preparation programs. Educational Researcher, Volume 44, pp. 448 – 452.

[5] For example, see Centre for Education Statistics and Evaluation, 2015, High value-added schools: Key drivers of school improvement. https://www.cese.nsw.gov.au/images/stories/PDF/HighValueAddReport_Oct2015.pdf

[6] Research undertaken as part of the Teaching for Effective Learning program in South Australia.

[7] Although we note that in an international context the skills and qualifications of the teaching workforce remains a current issue for many education systems. See, for example, "Dissident teachers in Mexico strike over education overhaul", Wall Street Journal, 1 June 2015.

This body of evidence suggests the need to obtain more precise data on what specific teaching practices and educational tasks are used in classrooms, use this data to identify those that are more effective and then design and evaluate mechanisms to have these practices taken up at scale.

A balance between a focus on teacher pedagogy and specific means of building the skills and capabilities of students is needed. Despite a commitment to build noncognitive skills and general capabilities being agreed by schools systems in 2008, the research is bereft of options to measure these systematically among students.

We thank the Productivity Commission for taking these comments into account as it prepares its final report. We would be happy to discuss any of these matters further.

Yours sincerely

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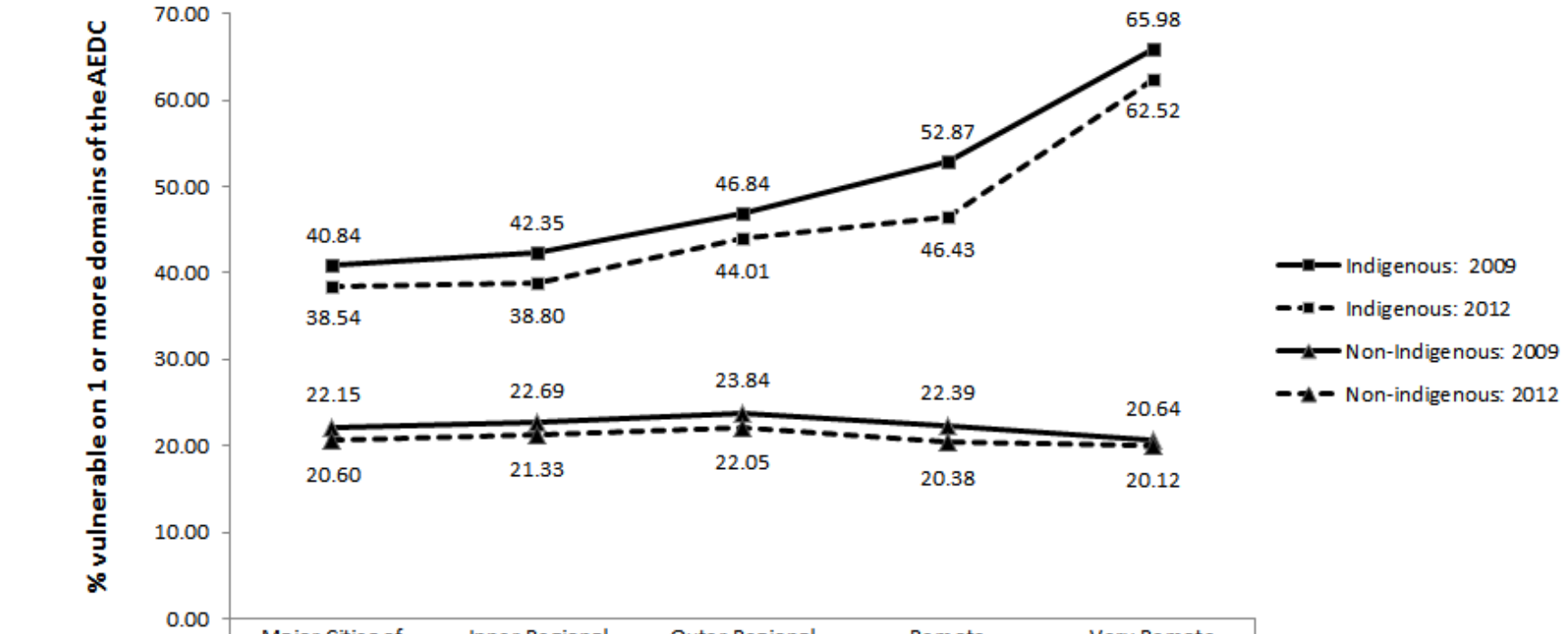
Attachment 1

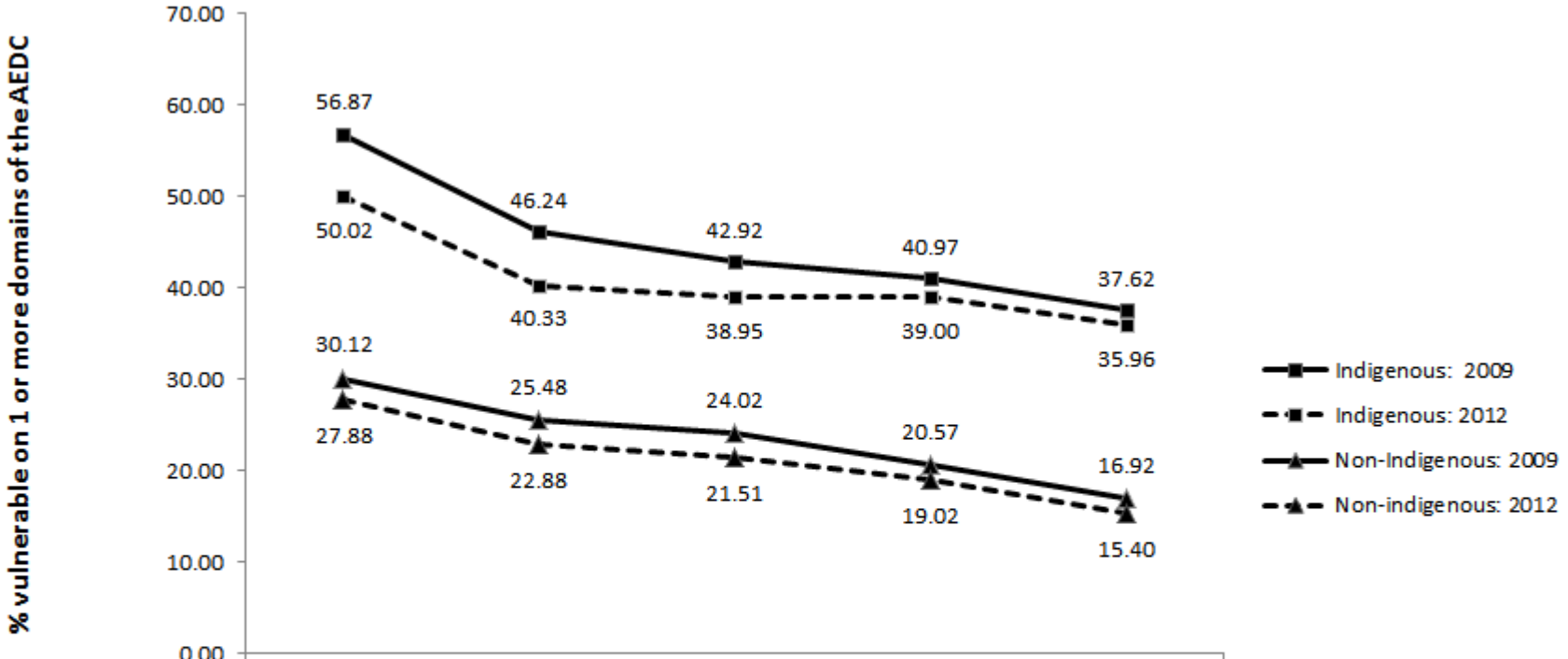
Examples of the use of Australian Early Development Census data

Child development by Indigenous status and remoteness, 2009 versus 2012



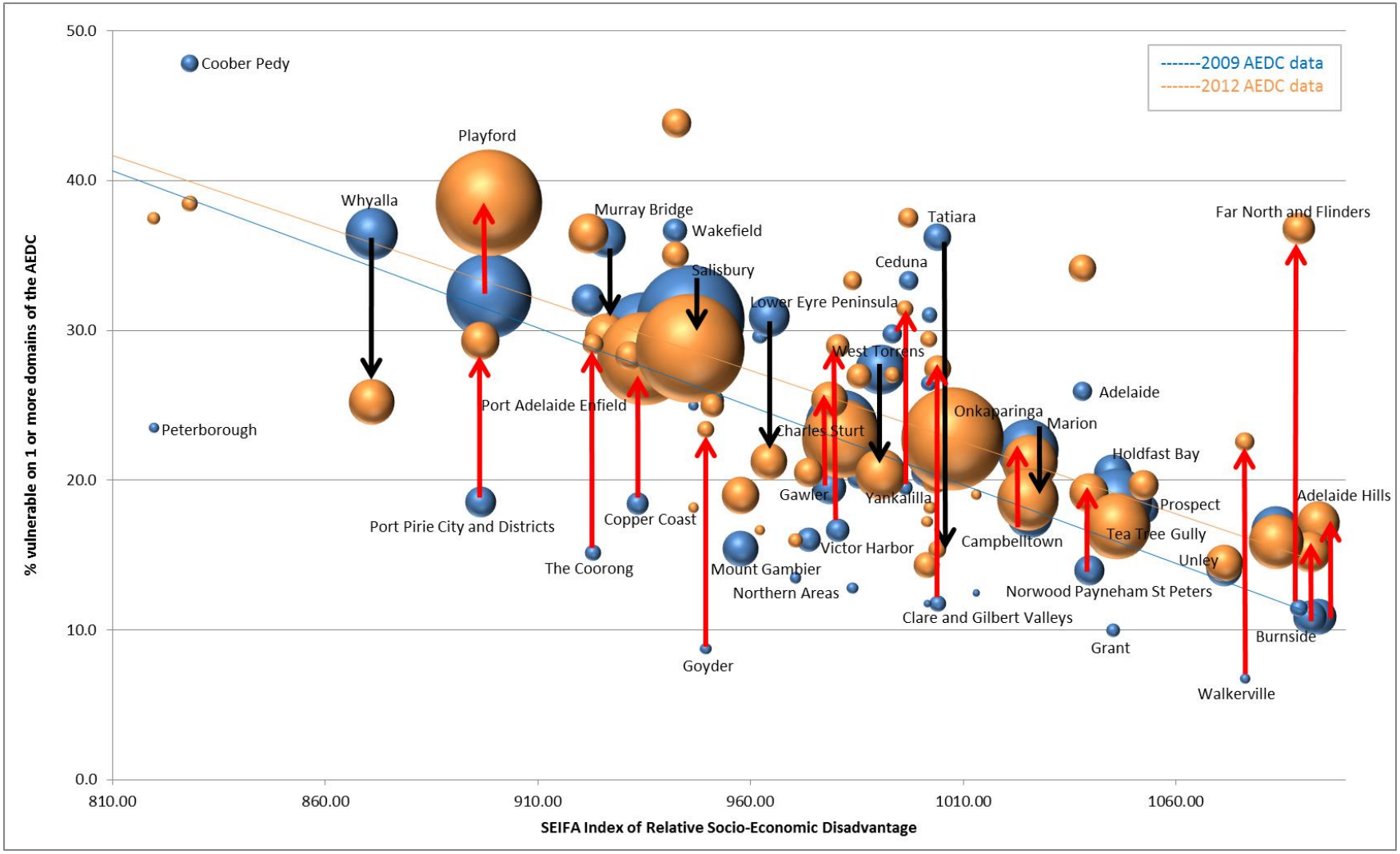
	Major Cities of Australia	Inner Regional Australia	Outer Regional Australia	Remote Australia	Very Remote Australia
Indigenous: 2009	1,353	1,088	1,193	589	1,086
Indigenous: 2012	1,805	1,287	1,463	513	989
Non-Indigenous: 2009	35,183	10,991	5,280	1,003	263
Non-indigenous: 2012	37,785	10,106	5,016	678	237

Child development by Indigenous status and quintile of community disadvantage, 2009 versus 2012



	Most disadvantaged	2	3	4	Most advantaged
Indigenous: 2009	1,899	1,124	1,468	622	158
Indigenous: 2012	2,525	1,610	1,050	684	187
Non-Indigenous: 2009	7,195	7,743	16,704	12,580	8,498
Non-indigenous: 2012	10,407	11,727	12,044	11,508	8,187

Child development for South Australian communities, 2009 versus 2012



Black arrows show significant drop in vulnerability between 2009 and 2012
Red arrows show significant increase in vulnerability between 2009 and 2012