Submission

Senate Inquiry into the administration and reporting of NAPLAN testing

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Department of Education
Strategic Policy and Performance

Tasmania
Explore the possibilities

Background

This submission has been prepared on behalf of the Department of Education by the Strategic Policy and Performance Unit. This Unit within the Department is responsible for leading the state's contribution to, and implementation of, national education policy and strategy from the early years to Year 10, and ensures alignment with state policy and strategy.

Strategic Policy and Performance Unit develops and implements data and information systems about school, student and state performance that supports school leaders and helps to improve overall education performance. The unit is also responsible for overseeing the development of, and support for, the implementation of accountability frameworks and supports sustained improvement of education and child care services.

This submission provides comment against each of the terms of reference of the Senate inquiry.

(a) the conflicting claims made by the Government, educational experts and peak bodies in relation to the publication of the National Assessment Program – Literacy and Numeracy (NAPLAN) testing

Although the National Assessment Program has been in place for a number of years, the National Assessment Program – Literacy and Numeracy (NAPLAN) began in 2008. NAPLAN testing has provided, for the first time, a comprehensive suite of data whereby all jurisdictions can reliably assess the performance of its students in aspects of literacy and numeracy against other jurisdictions as well as against national performance. These tests allow jurisdictions to track improvement over time and to identify strengths and areas for improvement.

All jurisdictions use the NAPLAN data for system level reporting, for school accountability and for strategic planning. This data has enabled jurisdictions to target their support in resourcing schools and students with the greatest need.

Schools have typically used the data to identify strengths in their teaching programs, to identify gaps in the curriculum and to align resources strategically to address areas of need.

Teachers are using the data to identify strengths, areas for future focus and as a check against their delivery of curriculum content.

Moreover, the real power of the data derived from NAPLAN testing is through jurisdictional analysis whereby schools, and individual teachers, have access to a thorough diagnostic analysis of the performance of each student on each test, provided on a question by question basis. This provides teachers with an invaluable tool when designing learning experiences for students, at the whole class, group and individual level. This information enables the teacher to intervene and support the child.

Teachers possess the professional knowledge that enables them to interpret this information. This knowledge includes knowing about the student, the curriculum, the test situation and most importantly, knowing how to use the information to plan future learning. It also provides them with information to share with individual parents and carers.

The public reporting of NAPLAN results, as part of a larger suite of information about schools has been supported in Tasmania through the annual snapshot of our public system with the release of Tasmania's Education Performance Report and School Improvement Reports on all government schools. Tasmanian government schools have been used to public reporting of their data.

The Department of Education continues to support public reporting of NAPLAN results in so far as they are used for the purpose of reporting a school's improvement over time. The use by third parties of NAPLAN results to create simplistic league tables often maligns the excellent work of schools in enriching the lives of their students and working towards improved outcomes, and raises the stakes of the tests from their original purpose to one of "high stakes".

The conflicting claims made by the various bodies in relation to the publication of the NAPLAN data occur, in a large part, because we live in a data-rich world where people have been led to believe that data are information. Data are turned into information by those who bring their professional understanding to interpret it.

The value to parents of publicly reporting school NAPLAN results is often stated in terms of providing them with choice about the school their child attends rather than using the data to inform improved outcomes. This is a very misleading argument for the following reasons:

- It implies that schools are entirely responsible for a student's results, without taking into account the personal, political and social context in which they operate.
- Most parents do not have choice. In many parts of Australia there is no other school and in other areas many parents do not have the resources to move their child to another school.
- Where there is choice, parents choose schools for a variety of reasons, not only test results. They choose because of the needs of their children, the school culture, the social or extra-curricular programs the school has, because their child has friends who attend that school, because it is close to where they live or work or merely because they went there themselves.
- If the argument is accepted that parents will choose schools based on the public reporting of NAPLAN results, the parents who take this option could be changing schools each year as results change due to the different cohorts being tested.

This issue, as well as the issue of freedom of information for "parental choice" or for "raising standards", is further explored by Harvey Goldstein and Kate Myers (1996).

Briefly, Goldstein and Myers contend that the abuse of information such as school test results is very real because the ability of the data *"to reflect objective reality may be extremely limited and its publication may therefore cause incorrect inferences about institutions to be drawn".*

They maintain that the argument of freedom of information should not hold in cases where it can be seriously misleading. They also recommend essential principles for publication based on *"the avoidance of unwarranted harm"*. These are expanded upon in (b) below.

These principles are addressed to varying degrees in the MySchool website however, they are not addressed in simplistic tables produced by the media for the purposes of "ranking" when the philosophical basis for ranking is neither explored nor educationally convincing. This style of public ranking producing 'winners' and 'losers', has been misleading and has the potential to lead to unscrupulous behaviour, thereby diluting the integrity and value of NAPLAN as a powerful diagnostic tool for schools, teachers, students and parents.

(b) the implementation of possible safeguards and protocols around the public presentation of the testing and reporting data

In introducing safeguards and protocols around the public presentation of testing and reporting data, the following principles are put forward by Goldstein and Myers (1996).

The principle of contextualisation

Indicators should provide information which allows for fair comparisons. Indicators strongly affected by extrinsic factors should not be used unless adjustments have been made: for example, school rankings based solely on 'raw' examination and test score results should not be published. All adjustments/contextualisations should be carefully described and prominently displayed.

Publishing NAPLAN data as part of a suite of data through the MySchool website attempts to allow for fair comparison through using the ICSEA index as a measure of socio-economic status, therefore allowing comparisons with similar schools. It is understood that the ICSEA index will be revised in the future to become a student level index which is strongly supported. Currently the ICSEA index measure assumes that 'like people' live near 'like people'. While this may be the case in the suburbs of our major cities, where income and affordability are the primary drivers, this is not the case in rural and remote Australia. The perceived weakness of the current ICSEA measure is that it is more an index of community socio-economic status, than an accurate measure of the socio-economic status of the students who attend a particular school. This has implications for rural schools where it is believed that wealthy parents send their children to private schools, particularly in the secondary years.

In its research paper (March 2000), *The Measurement of Socioeconomic Status for the reporting of Nationally Comparable Outcomes of Schooling*, the ACER reported:

1. Individual-level rather than area-based measures of socioeconomic position are preferred for the monitoring of the relationship between socioeconomic status and educational outcomes. Our Department argues that area-based measures are not appropriate because:

- the use of an area-based measure to estimate an individual's socioeconomic position is subject to considerable misclassification error, especially in regional and rural areas
- they are not cost effective

- they are most often not up-to-date
- the inaccuracies associated with area-based measures will undermine conclusions about between-system and over-time differences in the importance of socioeconomic position on educational outcomes
- for the analysis and reporting of student outcomes, area-based measures cannot be used to categorise (individual) socioeconomically disadvantaged students
- it is not feasible to use area-based measures of socioeconomic position to 'control' for differences between Indigenous and non-Indigenous students, between students from different immigrant groups, and between urban and other students.

2. For monitoring purposes, socioeconomic position is best measured by data on parental occupation and education. We conclude that such data are most suitable for measures of socioeconomic position because:

- they have been commonly used in research on socioeconomic position and educational outcomes so have intellectual credibility
- data on parental occupation and education are also collected by some overseas education authorities
- they cover the two most important aspects of a student's socioeconomic background in regard to educational outcomes: their parent's occupational status (or social class) and their parents' education
- they are stable over-time so that any over-time changes in the relation between socioeconomic position and educational outcomes cannot be attributed to methodological differences.

It is for the above reasons that MCEECDYA (formerly MCEETYA) recommended schools collect parental education/occupation data upon enrolment. Many jurisdictions have high completion rates for this information which is already used by them in their own analyses of NAPLAN data.

It is noted that ACARA proposes to improve the accuracy of ICSEA by using student level data and other enhancements. These enhancements are supported.

The principle of uncertainty presentation

All indicators to be accompanied by prominent estimates of statistical uncertainty. These should reflect sampling variability, choice of measurements, models, etc.

Schools, or teachers within those schools, should not be judged by a single 'cohort' of students, but rather on their improvement over time. The public reporting of a school's test results for a single year ignores the fact that only a small proportion of the school's students were tested. The results of a school will change from year to year because of different cohorts. For example, a primary school catering for students in Kindergarten, Prep, Year 1 through to Year 6 with an average class size of 25 will have only 25% of its students tested in one year. It is potentially misleading to report the results of these students as being representative of all the students in the school. Improvement over time will encompass more students and give a more reliable picture of student performance.

Statistically, a school's score on NAPLAN tests is an *estimate* of the score. This "estimate" is affected by sample size. Accordingly, for true representation of NAPLAN testing data, confidence intervals (at the 95% level) should be included in any reporting. This is consistent with reporting of international tests such as PISA (OECD sample testing of 15 year olds scientific, reading and mathematical literacy skills). The presentation of the confidence intervals should be as prominent as the values themselves.

In 2010 for the first time, the same cohort has sat two NAPLAN tests (i.e, 2008 Year 3 to 2010 Year 5 and so on). This comparative information will be valuable to schools, parents and students and will add the richness of data currently available.

MySchool uses the mean score as a measure to report a school's performance against the Australian mean and the mean of "similar schools". The use of the mean as the school's average score is problematic for schools with small cohorts of students. For such schools, the use of the median as a measure of the average is recommended as its calculation is not affected by just one or two students performing either extremely well or extremely poorly. Over time the median will tend to be a more stable measure for schools with small student populations.

The principle of multiple indicators

Where possible, and where relevant, multiple indicators should be presented rather than a single or summary one. This is intended to avoid over-concentration on one aspect of performance.

MySchool addresses this by the inclusion of the school means and reporting the percentages in each band for NAPLAN testing as well as including school demographic data. The proposals put forward by ACARA for enhancing the MySchool website by publishing the following multiple indicators are supported:

- school financial data
- senior secondary information
- satisfaction with schooling
- student population indicators
- growth data
- teaching staff expertise
- information about student absences, withdrawals and exemptions from NAPLAN testing.

The principle of institutional rights

Any indicated institution shall have the right to question the accuracy of information about it. Compilers of indicators shall be obliged to make available data in a format which allows this, subject to confidentiality constraints.

MySchool makes its calculations available to jurisdictions for validation and opportunity for schools to question the data. Timeframes allowed for this need to be sufficient for meaningful interrogation. It is also proposed to provide a facility for schools to provide commentary on their NAPLAN results, which would be welcome.

Agency responsibilities for public education

Agencies responsible for providing public performance indicators shall assume a responsibility for disseminating material about the underlying procedures used for compilation.

Technical information should be made accessible, for example about sampling or statistical analysis. There is also a responsibility for secondary providers, such as the press and television, to inform the public of the strengths and limitations of the indicators.

When an official body publishes data, it lends credence to it. It is therefore important that every attempt is made to present it accurately, especially making sure that those who publish it also publish information about its uses and limitations and present it fairly.

In addressing this principle it is noted that Ministers have endorsed ACARA's proposal of requiring users to agree to terms and conditions of the use of the MySchool data as well as investigating ways of preventing automatic scraping of data from the website.

(c) the impact of the NAPLAN assessment and reporting regime on:

(i) the educational experience and outcomes for Australian students

NAPLAN testing has provided, a set of data whereby jurisdictions can begin to assess the performance of their students in aspects of literacy and numeracy against other jurisdictions as well as against national performance. It allows them to track improvement over time and to identify strengths and areas for improvement.

(ii) the scope, innovation and quality of teaching practice

Teachers use the information from NAPLAN testing to identify strengths as well as a check against their delivery of curriculum content. Through jurisdictional analysis, individual teachers have access to a thorough diagnostic analysis of the performance of each student on each test, provided on a question by question basis. This provides them with an invaluable tool when designing learning experiences for their students, at the whole class, group and individual level.

(iii) the quality and value of information about student progress provided to parents and principals

Schools typically use the data to identify strengths in their teaching programs, to identify gaps in the curriculum and to align resources to address need. Parents receive a student report which allows them to compare their child's results with the average score for Australia, how their child performs in comparison with the middle 60% of scores and a description of what their child can typically do. From 2010 it will also enable parents to see growth from tests done two years previously.

(iv) the quality and value of information about individual schools to parents, principals and the general community

This information is highly valued. Jurisdictions use the data for system level reporting, for school accountability and for strategic planning. Some jurisdictions use the data from NAPLAN for public reporting

as one of many of measures in reporting to the public. The following link gives an example of Tasmania's School Improvement Reports: http://schoolimprovement.education.tas.gov.au/2009/

(d) international approaches to the publication of comparative reporting of the results, i.e. 'league tables'

Parties who refer to international experiences relating to the publication of comparative reporting often refer to those of England and the USA where league tables were constructed from student results on standardised tests and exams conducted at the end of their schooling years. These have been used as evidence that the publication of school data has been responsible for school closures.

Those who present this argument neglect to consider that it was not the publication of the data per se that was responsible for school closures, but the policy decisions to withdraw resources from those schools which were deemed to be performing poorly.

The Australian system, however is vastly different for a range of reasons, primarily because school improvement is the focus, with the data being used to support improvement, identify need and ensure that resources are directed accordingly.

(e) other related matters.

Exempting students from testing

Each jurisdiction has a policy governing the circumstances under which students can be exempt from testing. Although they are similar for most states and territories, the application varies. For example, in some states/territories exemptions are granted centrally, based on a central disability database, whereas in others, students are exempt at the discretion of the principal. The creation of a common and enforceable national exemption policy would mitigate against suggestions that schools ask students not to sit a test because of their ability or parents possibly being pressured to keep students at home.

High stakes testing

NAPLAN tests are created by educators, testing experts and the best available educational psychometricians. They undergo extensive trialling and refinement before being provided to schools. Their intention is to enable the provision of good quality educational feedback to schools, teachers and parents. Any attempt to use the results of NAPLAN testing for comparing schools, teachers and systems is an attempt to use the tests for purposes other than for which they were created, and instantly raises their stakes with potentially some of the following undesirable consequences:

- the creation of an environment where charges of unscrupulous behaviour exist
- the implementation of high levels of security, with added cost and test impost on test administration
- teacher organisations seeking to undermine the tests
- NAPLAN tests being treated with suspicion

- teachers not engaging with the tests, providing disadvantage to students and therefore ignoring the valuable information they can provide
- an undue focus of attention on some aspects of schooling at the expense of other outcomes that are equally important
- creating unnecessary stress for families and students.

1 References

Goldstein, H and Myers, K (1996) *Freedom of information: towards a code of ethics for performance indicators.*

http://www.cmm.bristol.ac.uk/team/HG_Personal/Full%20Publications%20%20download/1996/code-of-ethics-for-performance-indicators.pdf

ACER (2000) *The Measurement of Socioeconomic Status for the reporting of Nationally Comparable Outcomes of Schooling.*