

23 June 2010

The Committee Secretary
Senate Education, Employment and Workplace Relations Committee
PO Box 6100
Parliament House
Canberra ACT 2600

Dear Committee Secretary

RE: Inquiry into the Administration and Reporting of NAPLAN Testing

I am pleased to submit the following response on behalf of the Australian Council for Educational Research (ACER).

The submission is in two parts. The first part relates to the National Assessment Program – Literacy and Numeracy (NAPLAN) testing program itself. The second part relates to the reporting of NAPLAN results on the MySchool website.

Thank you for the opportunity to make this submission.

Sincerely

Professor Geoff N Masters
CHIEF EXECUTIVE OFFICER

Australian Council for Educational Research

Submission to the *Inquiry into the Administration and Reporting of NAPLAN Testing*
June 2010

NAPLAN Testing

The introduction of the NAPLAN tests in 2008 followed considerable work over a number of years to explore the feasibility of replacing the various State and Territory literacy and numeracy testing programs with a single, national assessment that would provide consistent processes and comparable results across the nation. The NAPLAN program provides valuable information about the literacy and numeracy levels of all Australian Year 3, 5, 7 and 9 students, including information that can be used to:

- identify individuals who are not meeting minimum literacy and/or numeracy expectations for their Year level;
- identify, at a school level, areas of the curriculum in need of further teaching and emphasis;
- monitor the performances and progress of social inclusion priority groups (eg, Indigenous students);
- set targets for improvement at school, regional, state or national levels; and
- monitor changes in literacy and numeracy standards over time.

Many countries lack the capacity that NAPLAN now provides to identify areas of specific educational need, to track the progress of particular groups within the student population and to evaluate the impact and effectiveness of national and system-wide literacy and numeracy programs and initiatives.

Educational research studies have underscored the fundamental importance of literacy and numeracy, not only to educational success, but also to successful transitions into employment and adult life. Levels of literacy are correlated with a wide range of outcomes, including lifetime earnings, employment prospects, levels of health and involvement in crime. At the present time, an unacceptably high percentage of Australian 15-year-olds are achieving only minimal levels of reading and mathematical literacy and are judged by the OECD to be at risk of not having the skills required for life and work beyond school. This is particularly true of students living in remote regions of Australia and for Indigenous students. NAPLAN provides a systematic basis for identifying individual students who are not meeting national minimum standards at various points in their schooling. NAPLAN also is playing an important role in focusing the efforts of the education community on ensuring that all young Australians meet at least minimally acceptable standards in these crucial areas of the school curriculum.

Other valuable features of the NAPLAN tests result from the particular statistical methods used to analyse students' test performances. These methods allow NAPLAN results to be compared directly from one year to the next (eg, 2011 to 2012), enabling

trends in literacy and numeracy levels to be monitored over time. NAPLAN also allows growth across the Years of school to be measured, raising the possibility of comparing average growth (eg, between Year 3 and Year 5) across systems, sectors and schools and over time.

The NAPLAN tests were introduced to provide a new level of diagnostic information, not only for teachers and schools, but also for education systems and governments. At the school level, the tests can be used to identify areas of relative strength and weakness and to assist in planning teaching interventions and special support. A number of Australian states provide software to support schools to explore and make best use of the diagnostic information available through NAPLAN. At a national and education system level, NAPLAN provides diagnostic information to inform educational policies and planning.

It is ACER's belief that NAPLAN testing is now playing an important role in efforts to ensure that all Australian students master essential literacy and numeracy skills. NAPLAN tests are based on international best practice in educational measurement and are providing quality information for educational decision making of a kind that is unavailable in many other countries.

Challenges

The NAPLAN tests are evolving. For example, future modifications are anticipated to align the tests with the new national curriculum. There also will be opportunities to make future changes to the NAPLAN tests and to the ways in which NAPLAN results are analysed and reported to enhance their usefulness. Future opportunities and challenges include:

- *improving the precision with which all students' literacy and numeracy levels are measured.* At the present time, NAPLAN tests are tagged to Year levels (3, 5, 7, 9) and all students in the same Year level are administered the same test. The consequence is that some students are taking tests that are too difficult or too easy for them. The literacy and numeracy levels of these students could be measured with greater precision (confidence) if they were administered a test better matched to their current levels of literacy and numeracy development. ACER understands that this possibility is under consideration by the Australian Curriculum, Assessment and Reporting Authority (ACARA). From an educational measurement point of view, it would be possible to develop a larger number of tests spanning a broader range of ability levels – and possibly not tagged to particular Year levels – and still to generate the range of reports currently provided. The advantage would be that many students' literacy and numeracy levels would be more precisely measured. This would be a particular advantage in constructing and reporting growth measures.
- *developing measures of growth.* To date, it has been possible to report NAPLAN results only as point-in-time ('status') measures. Because Year 5, 7 and 9 students in

2010 were assessed in Years 3, 5 and 7 respectively in 2008, it is now possible for the first time to provide measures of how much students improved over this two-year period (ie, measures of 'growth'). This introduces the possibility of reporting (eg, on MySchool) not only mean NAPLAN scores, but also average measures of growth for individual schools, education systems and nationally. Again, ACER understands that this possibility is under active consideration by ACARA.

- *acknowledging limits to confidence.* In common with all educational assessments, NAPLAN scores provide estimates of students' achievement levels and so are accompanied by a level of uncertainty. Consumers of test results generally are unfamiliar with this feature of test scores and are used to seeing them reported without an accompanying estimate of measurement error (eg, 67 rather than 67±4). In general, uncertainty is greater for individual student measures than for group means, and greater for measures of growth than for measures of status. There is an ongoing challenge to raise awareness of, and to better communicate, the inevitable uncertainty surrounding individual NAPLAN scores, mean NAPLAN scores and measures of NAPLAN growth.
- *improving diagnostic feedback.* Although NAPLAN is not a 'diagnostic' test in the traditional sense, NAPLAN tests are capable of identifying specific areas of literacy and numeracy in which individuals – and particularly groups – perform unusually well or unusually poorly. It may be possible in the future to increase the diagnostic power of NAPLAN for teachers, for example through linked online assessments that 'drill down' to explore individuals' skills and understandings in more depth.
- *minimising inappropriate coaching for NAPLAN.* Given the fundamental importance of literacy and numeracy to the broader school curriculum and to work and life beyond school, and given the proportions of students who are failing to meet national minimum standards in these essential skills, it may be desirable for some schools to spend more time ensuring that all students master these basics. In some instances it may be appropriate that literacy and numeracy are given priority (at least for a period) over other areas of the curriculum. There may also be value in giving students test-taking practice to minimise anxiety by ensuring familiarity with test-taking processes. However, there clearly are limits to how much time and attention should be given to literacy and numeracy teaching and learning and to test preparation activities in schools. These limits are matters of professional judgement and, in our view, the vast majority of teachers and principals are very capable of making these judgements. Nevertheless, it may be necessary to monitor how schools are responding to NAPLAN and to provide advice and guidelines on appropriate forms of test preparation.
- *addressing generalised opposition to tests.* A final challenge will be to ensure that the benefits of the diagnostic information becoming available through NAPLAN – for parents, teachers, schools and educational policy making – are broadly understood and appreciated. Opponents of standardised testing often point to experiences overseas without acknowledging the very different testing programs and educational circumstances that operate in other countries. For example, they point to Finland without acknowledging the very different features of the Finnish

education system, including the fact that Finnish teachers are significantly more highly qualified than Australian teachers and Finnish schools are much more alike in composition and outcomes than Australian schools; or to England without acknowledging the much more comprehensive testing programs that have operated in that country or the very different uses to which English test results have been put.

NAPLAN tests and the ways in which results are analysed and reported are the subject of ongoing improvements. Future developments will almost certainly enhance the value of this testing program. However, it is important that steps are taken to minimise misuse and to protect and promote the diagnostic benefits and potential of NAPLAN.

MYSCHOOL

The MySchool website was launched earlier this year and has the potential to become a valuable single source of comparable, public information about every Australian school. The website was established on an impressively short timeline and is best viewed as the first version of this site. The amount and quality of information available about schools on the site will no doubt be refined and further developed into the future.

One way in which MySchool will be developed and improved is through the broadening of the information provided about each school. We understand that MCEECDYA at its last meeting decided on a range of additional information to be provided on MySchool from 2011, including information about school resources. The provision of a range of additional information is consistent with the advice given by ACER to the Australian Ministers of Education prior to the establishment of the site.ⁱ

A feature of the website in its first year of operation is the considerable prominence given to measures of student performance – in particular, NAPLAN data. Given that the primary purpose of MySchool is to provide public information about schools and their performances, future developments of the site could consider including other kinds of evidence about the performances of schools. Most education systems now undertake reviews of school performance. These reviews focus on what schools are doing to improve outcomes for students. For example, during the 2010 school year, Education Queensland is undertaking a teaching and learning ‘audit’ of every government school in Queensland. Each school will be visited by one of a number of auditors (experienced school principals) who will evaluate eight different aspects of the school’s teaching and learning policies and practices. At least some schools are already choosing to report the outcomes of this audit on their school websites. In future it may be possible to include nationally consistent school review/audit outcomes as part of the publicly available information about individual schools.

By providing evidence of this kind alongside data on student outcomes, it may be possible to provide a more comprehensive and accurate picture of a school’s

‘performance’. School review/audit processes are revealing that some schools’ excellent practices are not yet being reflected in their student performance data. There are various possible explanations for this observation, including the high proportions of students with special needs and the high rates of student mobility in some schools. The addition of other, more direct, evidence about a school’s ‘performance’ to complement student achievement data may provide a more accurate picture of how a school is performing and reduce the current reliance on student data as the sole indicator of school performance.

As already noted, the current MySchool website relies heavily on NAPLAN as its source of data on student performance. This is understandable given that NAPLAN provides the best nationally comparable student data currently available. However, this heavy reliance on NAPLAN is privileging a limited – albeit essential – part of the school curriculum (literacy and numeracy) and the NAPLAN data are point-in-time measures of student achievement. The emphasis on NAPLAN is giving rise to concerns that schools may overemphasise literacy and numeracy in their teaching and that the original, diagnostic purposes of NAPLAN may be undermined through its use as an indicator of school performance. Part of the response to this concern may be to add, over time, other measures of student performance alongside NAPLAN measures. We understand that consideration is being given to reporting Year 12 results in more nationally comparable ways on MySchool. In future, other measures of student learning and performance could be added to reduce the current emphasis given to literacy and numeracy.

At the present time, MySchool evaluates school performances using school means. Again, we see this as a starting point in the development of MySchool. There are other ways of evaluating a school’s performance: for example, in terms of the amount of progress that students make between Year 3 and Year 5 or between Year 7 and Year 9. Measures of growth provide a better basis for evaluating a school’s performance than school means which can reflect influences over which schools have little or no control. While school means are currently privileged on the MySchool website, this need not be the case in future when measures of growth also can be reported. Eventually, NAPLAN results for a school could be reported in a variety of different ways (eg, change in the percentage of students failing to meet the national minimum standard; change in the percentage of very high performing students).

Finally, the current MySchool website privileges one way of comparing schools over other possible methods. At present, the main comparisons (facilitated by red and green coding) are with schools with ‘statistically similar’ student intakes. We believe that this general approach is superior to approaches used in some other countries. For example, school comparisons in England are based on ‘contextualised value added’ (cva) measures which are constructed by first predicting how students in a school will perform from their backgrounds and then calculating the difference between the predicted and actual performances of students in each school. This method has the apparent advantage of providing a single number for each school enabling it to be compared with every other school in the country. These cva measures are residuals that

are assumed to reflect the contribution of the school, but in fact also reflect any other influences not taken into account in making the 'prediction'. They also have the disadvantage of obscuring students' actual levels of performance: students in a school can be judged to be performing as well as expected even when their absolute achievement levels are unacceptably low. MySchool does not attempt to construct measures of *school* performance, but instead reports measures of *student* performance. Rather than attempting to compare every school in the country with every other school, it encourages comparisons only across schools with similar student intakes. Concerns that Australia is adopting English school league tables usually fail to acknowledge this fundamental difference.

While ACER is supportive of this general approach, we believe that improvements are needed to the basis for defining schools with statistically similar student intakes. ACER has been invited by ACARA to provide input into the consideration of ways to make these ongoing improvements.

We also believe that other ways of comparing student results across schools could be developed and provided on MySchool. This would take the focus off the current basis for comparison (ICSEA measures). We also see value in allowing users to choose the kinds of comparisons they wish to make. For example, each school's results could be presented without comparison, accompanied by a menu of possible comparisons:

Compare students' performances in this school with the performances of all students in:

- ☐ *Australia*
- ☐ *the same State/Territory*
- ☐ *the same sector (eg, all Catholic schools in Australia)*
- ☐ *the same education system (if relevant)*
- ☐ *schools with similar student intakes*
- ☐ *etc.*

We also believe that, for public reporting purposes, these kinds of comparisons might be better presented graphically than numerically.

The MySchool website is at a very early stage in its development. At this early stage, the website provides a relatively narrow range of information about schools, with a focus on student performance measures, NAPLAN, school means, and comparisons across schools with similar student intakes. Many of the current concerns about MySchool are likely to be addressed by broadening the range of information provided and increasing levels of user choice.

ⁱ Masters *et al* (2008). Reporting and Comparing School Performances
http://www.curriculum.edu.au/verve/_resources/ACER_Report_on_Reporting_and_comparing_school_performances.pdf