

## **SOME REFLECTIONS ON NAPLAN AND THE *MySchool* WEBSITE**

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NAPLAN results and the *MySchool* website have been the focus of media attention during the early part of 2010. While much of this attention has been constructive, some has been positively harmful for students, schools and education in general. This paper attempts to provide a systematic and coherent base to the discussion about the merits and possible uses of these two “innovations”, from my perspective as Director of Studies at Radford College.

### **NAPLAN:**

At Radford, we believe that NAPLAN provides good information about an individual’s and a school’s performance, with the proviso that NAPLAN scores come from one test, done on one day. The data cannot possibly provide a complete picture of a student, nor of a school. But when the data is viewed through the lens of the rest of the information that is known about a student, it can provide useful feedback to target weaknesses in a student’s knowledge or skills. The data can also target problems with the skills and knowledge development in a whole school program.

Parents and external onlookers do not have access to the whole of this lens. They only have access to the individual data about their child, and about the average data for the whole school and the system. Hence these users cannot get quite the same value from the data. However, in consultation with their school, parents can have input into the programs run for their child to gain the best outcomes. Good schools have always done this. That, is they have used external testing data and listened to parental concerns.

It must never be forgotten, as with any data, that there are some problems with the data generated by NAPLAN. For example, I believe there is a gender bias in NAPLAN data. The spread of marks would indicate that the four literacy tests favour girls, and the single numeracy test favours boys (although less strongly). This is not the same as saying that girls are better at writing and boys are better at maths. The test design appears to bring out these stereotypical results.

There is evidence that this gender bias is not just my imagining. Schools do get the data broken down by gender. Radford girls do better on the literacy tests and our boys on the numeracy test, in ways that are not reflected in all of our own testing. Furthermore, anecdotally, the writing task was one that would never appeal to many Year 9 boys. Students were asked to make up a narrative about “a box”. Not much more detail than this was provided. They had 50 minutes to write. Many Year 9 boys were just not interested in spending 50 minutes writing a narrative about “a box”. Interestingly, it was exactly the same task given to Years 3, 5, 7 and 9. Apparently the test designers felt that the Year 3 writing task was suitable for both genders at Year 9, and that it would produce valid results at an individual level.

The gender bias can also be seen in the *MySchool* data, for example as reported in the Sydney Morning Herald for NSW schools (Sydney Morning Herald, 29 January 2010, p1). The top 6 schools on each subtest were listed. On most Year 7 and 9 literacy tests, there were four selective girls' schools and only one selective boys' school. On each numeracy test these numbers were at least more even. It would be easy for the Australian Curriculum, Assessment and Reporting Authority (ACARA) to follow up on this discrepancy and commission changes to the test structures to solve any biases found. I hope this is happening, but if it is, it has not been widely reported. Until any gender bias is eliminated, comparisons between boys' schools, girls' schools and coeducational schools, based on NAPLAN data, are fraught with problems.

The bias of markers is also a significant problem with NAPLAN results. I think the test results should be transparent...but NAPLAN results are only transparent if transparency means giving the parents a "rocket-graph" that shows where on an arbitrary scale their child fits. The bigger question of how the marks were obtained in the first place is not at all transparent. The marking scheme is, in fact, mired in values that are not made clear to anyone. To illustrate my concerns I can provide two examples.

When Radford received its 2009 results, two Year 9 students, who received "A" English grades at school, did very poorly in the writing task. Both were in the tiny fraction of students nationwide who were declared "below benchmark". I was concerned about both students, so asked to see a copy of the scripts so we could help the students improve for future tests. I congratulate the authorities, as the response was swift. One student who was below benchmark (Band 5) was re-marked to now be on Band 8. No explanation, no chance to see the script, just a new score. The student was happy, but I was bewildered.

For the second student who was also deemed below benchmark, I received a note saying that the chief examiner thought the script "... verged on disturbing as classified by our rules regarding disturbing scripts." According to the marking scheme I found on the NAPLAN website, there was no such designation. I once more queried the reasoning and asked for the script. Again, to congratulate the "system", the script was quickly sent. I had it marked by several English teachers using the NAPLAN marking scheme. I have discussed it at length with the student and the student's parents. It was not a perfect essay. It could possibly be seen as racist, and it had a poor ending. It was, however, a written response done in 50 minutes by a Year 9 student. It was a powerfully written piece. With only a little bit of reworking, it could have been improved to become a very strong anti-racist story (the student has subsequently told me the intent was not to write anything that could be construed as racist). Most of the story was well written. It had a wonderful opening sentence, great characterisation, good spelling, clear paragraphs and a twist in the plot that kept you wanting to read on. It was not below benchmark on any objective criteria. The markers just did not like it. Again, I was bewildered. But bewilderment turns to concern when the wider community uses NAPLAN data for reasons other than addressing an individual's weaknesses.

I queried two pieces and have two serious misgivings about the way they were marked. How many other pieces of writing would be moved up or down if they were marked by different people on different days? How transparent is the data that is provided to schools and parents? What validity can be attributed to any individual test mark?

A very significant flow-on from community focus on NAPLAN data is the effect the changing use of NAPLAN data will have on the validity and usefulness of the test. At Radford, we have always taken the view that “the best way to improve literacy and numeracy skills is to teach well.” In other words, good teaching is paramount, with NAPLAN providing one input into how we can determine what good teaching is needed. We value NAPLAN for this purpose.

If, in future, the emphasis shifts so that good NAPLAN results are paramount, then the basic educational premise changes to “the best way to show we are good at literacy and numeracy is to ensure we do well on NAPLAN tests”. The first premise produces education that lifts literacy and numeracy, and this is then verifiable through test results. The second premise only produces improved NAPLAN results. They are not the same thing.

As evidence of the changing emphasis, you only need to log onto Google and ask to see NAPLAN resources. Hundreds of sites and groups are now in the business of preparing students and teachers for NAPLAN. Reading the Google results, you could end up thinking that doing well on NAPLAN and providing a good education are the same thing.

Personally, I hope that Radford continues to refuse to “teach to the test”. Then we will continue to be able to use the NAPLAN data to highlight student needs. This may mean other schools appear to catch up to our presently very high scores, but it will not mean our students have fallen.

### **The MySchool Website**

At Radford College we have been happy to look for constructive uses of the data provided on the *MySchool* website. The appetite of parents for data has been obvious, and we would welcome any accountability that could possibly arise as a consequence of the information being in the public arena. However, the *MySchool* website has also created a lot of controversy. Most of the controversy can be traced to the stated aims of the Government and the Australian Curriculum, Assessment and Reporting Authority (ACARA). For example, in the ACARA brochure, *Assessment and Reporting: Improving student performance*, the following statement appears:

*This will assist parents, schools, governments and the wider community to better understand the performance of students in schools.*

*To support greater transparency and guide decision making, all governments have agreed to national reporting on all schools...*

Many politicians have also made statements with respect to the value of the *MySchool* website for government decision making.

The second of these claims is disingenuous.. Governments (both Federal and State/Territory) have had this information in far greater detail than is published on *MySchool* for many years. (e.g. the information on school performance, how schools compare, how students have improved and how boys and girls perform has been provided to schools for a number of years.) They could have always used the data to highlight schools that are in need of assistance, (and in fact in some cases have already done so). *MySchool* was not needed to allow this to happen.

The first aim, of transparent communication, also needs to be questioned. The *MySchool* website contains a lot of numbers. It is in fact a daunting amount of data. You really need to focus to extract data. You need a lot of mathematical skill to interpret the data meaningfully. Therefore most users read, and many totally rely on, second hand “expert” interpretations, usually from the media. These can contain some good analysis – but they also contain some damaging fallacies.

For example, Jack Waterford (*Who’s who in whose league table*, The Canberra Times, Forum, 30 January 2010, p8) wrote a detailed piece about the uses and advantages of the *MySchool* data. However, within this lengthy and generally well argued piece, he made the following claim:

*Thus when one is looking at, say, the scores achieved by Canberra Grammar, one can ask and answer questions of how it compares with schools that are broadly similar – in income and backgrounds of parents, in resources and so on. (The answer is Grammar is good – about as good as Scots (Sydney) and St Kevin’s (Melbourne), better than Wesley (Melbourne) and Radford (Canberra)...*

I assume Waterford used the data that was published that day in the Canberra Times, but I cannot reach this conclusion regarding Radford and Canberra Grammar, no matter how I slice the data. Using the data quoted in the Canberra Times, and looking at data from Years 3, 5, 7 and 9, Radford comes out on top in approximately 14 of the 20 possible sub tests or comparisons. However, Waterford’s incorrect statement is “in the media”, and will be quoted for years to come. Neither school, nor any students, have benefitted from the inaccurate comparison.

The main use being touted for the *MySchool* website is that it allows parents to make informed decisions. What a parent can actually determine is in fact much less than they often interpret. In fact, because it is only school averages that are quoted on *MySchool*, all you can determine from the data relates to averages. So, if a parent is absolutely certain that their child will be the average student in whichever school they go to, independent of intelligence, work ethic, fees, religion, social standing, uniforms, teaching standards, resources, “fit”,

motivation or a multitude of other educational and non-educational factors then the website can tell the parent which school they should have sent their child to - last year. The *MySchool* site does not tell any parent how their child will go this year. Knowing the averages obtained by a whole suite of schools tells a parent nothing about how their child will go if they went to one of these schools. For example, a weak child may blossom with a specific teacher in an otherwise poorly performing school (the child may not have even met the teacher yet). The strongest child at the best school may suffer depression that they may not have experienced if they went to a local school with different children. That is the education dilemma. We are dealing with kids, not averages.

There are also a number of biases and assumptions that are inherent in the data, but these do not seem to have been considered in the media. The first of these is that there seems to be an unwritten acceptance that because you can now compare your school with other “similar” schools, based on an index of community social and educational advantage (ICSEA), that these schools are in other respects similar, and that this means that all other comparisons are valid.

If you look a little deeper, these comparisons may not be valid. The basis of similarity is a complex mathematical equation (that can be found in the resources available from the *MySchool* site.) The equation reads:

$$\begin{aligned} \text{INDEX} = & 2.125 + \text{INC\_LOW\_Px}1.849 + \text{INC\_HIGH\_Px}1.053 + \\ & \text{CERT\_Px}5.501 + \text{DIP\_Px}1.430 + \\ & \text{NOQUAL\_Px}5.806 + \text{NOSCHOOL\_Px}6.50 + \text{NOY12\_Px}2.934 + \\ & \text{UNEMP\_Px}0.0 + \text{OCC1\_Px}2.933 + \\ & \text{OCC4\_Px}0.844 + \text{OCC5\_Px}0.946 + \text{INDIG\_Px}4.367 + \\ & \text{ONEPAR\_Px}5.364 + \text{NONET\_Px}0.965 \end{aligned}$$

and, after INDEX is re-scaled to a mean of 1000 and a standard deviation of 100:

$$\begin{aligned} \text{ICSEA} = & 3.970 + \text{INDEXx}0.021 + \text{INDEX}^2\text{x}2.331\text{e-}005 + \\ & \text{INDEX}^3\text{x-}6.501\text{e-}009 + \text{ARIAx}0.020 + \text{pINDIGx}0.023 \end{aligned}$$

*Technical Paper – Index of Community Socio-Educational Advantage (ICSEA),*  
available online at [www.acara.edu.au](http://www.acara.edu.au)

The meaning of each variable can be found in the technical paper. The equations are used to determine school “similarity”. I will not argue about whether the equations are mathematically sound. I accept they have been tested rigorously. They may be useful for high order statistical comparisons. But the equations rely on a large number of indices built up from data contained in the census collection areas of the home addresses for parents of students at a school. One problem with doing this, that I have already raised, is that none of the variables used in these formulae relates to student gender, although this appears to have an effect on school averages. Other factors that could have a significant effect on NAPLAN scores include the level of school resources, staff to student ratios, staff experience and whether the students were academically selected to attend the school. These variables are also not included. Does this mean you can look at schools with similar ICSEA scores and then compare their average NAPLAN

scores and gain information that will tell you that a specific child will do better in one school than another? The ICSEA index needs a lot of development before it will allow genuine comparisons between “like” schools.

Another source of misinterpretation of the data from the *MySchool* website is caused by school size. In the ACT, a number of the top performing schools were also extremely small schools. In the cases that I know about, these schools cater very well for some very bright students who do not fit comfortably into more mainstream schooling. The *MySchool* data shows that these bright students did well. The schools should be congratulated on their outcomes. However, it does not mean a different child would necessarily suit these schools.

I present one final example of the misuse of the *MySchool* data. On 8 February, the Sydney Morning Herald published a story about a boy who was attending Normanhurst Boys High School, an academically selective Government school in Sydney (Patty, 8 February, p1). The boy had used the *MySchool* data to convince his father he should stay at Normanhurst, and not go to “an expensive independent school”. The Sydney Morning Herald lauded the example as a fantastic use of the data. But what does the data really show. It showed that an academically selective school had a higher average than a non-academically selective school. This result should be obvious even before the introduction of the *MySchool* website. The average results do not show how an individual student will grow or develop in either school. There could be many reasons a family could decide to send a child to either school. Comparison of NAPLAN averages should not be one of them.

This debate has a long way to go. I believe that schools should make use of all available educational data, and this data should be used wisely. At Radford, we use the NAPLAN data as one part of our picture of a child. I am still hoping to be able to use the *MySchool* website in the future to determine ways to improve teaching or learning, but I am not able to do so yet.

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- [www.myschool.edu.au](http://www.myschool.edu.au) (website for *MySchool* data)