Making local meaning from national assessment data: NAPNuLit

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Abstract

The first part of this paper provides a background to the research, starting in 2000 with the DEST funding for what has become known as the Data Club for the Western Australian Department of Education and Training through to the current activity funded by the Western Australian Catholic Education Office and the Association for Independent Schools of WA. Each project's brief, design and the scales used are outlined. The second part of this paper demonstrates the representations of NAPLAN data used in 2008 and also the ways in which the 2001–2007 WALNA data were displayed. Finally, this paper deals with uses made by classroom teachers, curriculum leaders, school principals, and education systems for both accountability and school improvement. It concludes by raising some questions about applications of these kinds of analyses for collaborative reporting on national partnerships.

Introduction

As early as 1999, it was clear that schools in Western Australia, at least government schools, were not the slightest bit interested in national assessment data. At that time, Bill Louden and I had begun what became known as the Data Club. Bill had negotiated with the Department of Education, Training and Youth Affairs (DETYA) and the WA Department of Education to fund a project titled: 'Developing schools' capacity to make performance judgements'. Located at Edith Cowan University in Western Australia, this collaboration was set up as a pilot project which aimed to:

- advise on 'value added' and 'like school performance' measures suitable for schools,

- develop data displays and self-evaluation strategies,

- test the effectiveness of these strategies with school communities,

- trial these strategies with individual schools to build their capacity to interpret and use benchmark performance data, and,

- report on best practice in the use of benchmarking data in school self-assessment.

If this sounds ambitious, there is more! The project was based on the assumption that schools would use the 1998 and 1999 benchmark data to make a series of performance judgements: between 1998 and 1999 cohorts within the school; between the 1998 and 1999 cohorts; between school cohorts and all students; and between schools. It was assumed that by 2000 each school would be in a position to demonstrate growth in student performance between Year 3 and Year 5, and compare this growth with the growth of student performance in other schools, and throughout the state. Furthermore, the initial project promised to not only work with schools but also to meet with schools, school staffs and school communities to explain the analyses. We undertook to improve the skills of school leaders, teachers and communities to interpret benchmark data. We have come a long way since 1999 and we have learnt a great deal. We might even have learnt some lessons that are applicable to the expectations of gain, improvement and growth in student performance under the current National Partnership funding arrangements.

We invited each school to share its 1998 and 1999 benchmark data with us, and to send two school leaders to participate in a half-day workshop, on the understanding that a sample of about 20 schools would respond. We would select for our trial those Districts with the largest representation of schools. In the event, 200 schools

responded, including two Districts with 100 per cent response rates. Having decided to expand the trial to take all applicants we then started to collect their data. 'What data?' was the most common response. Although the data had been sent to each school in hard copy, few schools could locate theirs but happily paid for reprints. Our first lesson was that the data had little meaning and even less value to those 200 schools keen to join our pilot. The second lesson for us was that the data quality was uneven. It was clear that schools had not taken the tests seriously – large gaps in cohorts; patches of extremely low scores suggesting students were poorly supervised during the tests or given too little time to complete many items; and some sets of outrageously high scores suggesting rather too much teacher 'support' during the tests. However, the third lesson is one that I continue to learn now, a decade later – the variable capacity of school personnel to engage with the data in a thoughtful way.

From 2000 to 2003, the Data Club was funded by DETYA/DEST and the WA Department of Education and run from Edith Cowan University by Louden and Wildy, with technical support from Jessica Elderfield. Over these three years, the number of schools registered grew to 510, representing over 80 per cent of schools with primary-aged students in the government sector. The materials, initially paper-based, became disk-based, and later web-based. Each year, workshops were run in Perth and across the regional centres, as well as via satellite broadcasts and interactive video conferences. The workshops were conducted by Louden and Wildy, and held in March, April and May. A key design element was that schools only received their analysed Western Australian Literacy and Numeracy Assessment (WALNA) data when they participated in the workshops. Confidentiality was another key

element: schools voluntarily joined the Data Club and submitted their data for inclusion in the analyses. Schools were coded and no materials carried identifying names.

In November 2001 an evaluation of the impact of the Data Club was conducted by Jane Figgis and Anne Butorac of AAAJ Consulting Group. Using telephone interviews with principals from a random sample of 30 of the participating schools, Figgis and Butorac examined why principals signed up for the Data Club; the use to which the WALNA data was put; the professional development provided by the Data Club and related issues such as confidence in the assessment regime. Amongst the findings of this evaluation were these points: principals joined because they wanted to compare their school with like schools, and to track their students over time; they wanted to make use of the WALNA data but did not know what the data meant; and the workshops gave them time to devote to reflecting on the data. Many principals spoke of how data were used and the collaborative processes they were developing in schools to share their understandings. Others spoke of looking at the data 'squarely in the eye' and accepting that there was something relevant to them and their school. Figgis and Butorac reported on the participants' appreciation of the workshops as professional development, concluding that: 'There was not a single principal who felt that he or she did not learn what was intended for them to learn. The outcome was that they wanted more – more for themselves and for their teachers.' The reviewers ended their report with: 'The Data Club has begun very well, but its role has only just begun. Schools recognise that there will be much more for them to learn about using the data over the next few years. And they will want reliable help from independent experts. The

Data Club has provided those services to everyone's satisfaction – indeed, it seems to have exceeded expectations.' I have quoted heavily from this report because of its bearing on what was to follow.

At the end of 2002, I was appointed to the staff of Murdoch University's School of Education. More importantly, the WA Department of Education resolved that henceforth the Data Club would operate from within its ranks. One last round of analysis was carried out by the original team. The following year, in 2003, the Department's internal team developed some disks and offered them to all schools without the requirement of attending workshops which were run by District office personnel. In the first year of using this system (2004), it was reported that even greater numbers of principals participated in workshops than previously. I believe that, since that time, Data Club analyses have been carried out by DET staff and disks distributed without workshops, and this has been supplemented with a First Cut analysis focused on the achievement of targets.

Although my involvement with the government sector ended by mid-2003, I then started a new venture with the Catholic Education Office of Western Australia (CEOWA) at the invitation of Gerry O'Keefe. With the guidance of Professor David Andrich, I assembled the NuLit team comprising Dr Barry Sheridan, programmer, and Dr Annette Mercer, project manager and data analyst, which has continued to the present. For each of the five years, 2004–2008, NuLitData has run from Murdoch University for the CEOWA. For the four years, 2005–2008, we have run a parallel project for the Association of Independent Schools of WA (AISWA). NuLitData CEOWA involved all 159 schools in that sector and NuLitData AISWA involved nearly all 158 schools. The NuLitData model was similar to the Data Club although

the programming was vastly more sophisticated than that used in the Data Club. Throughout this period, Monitoring Standards in Education at Year 9 (MSE9) assessment data were added to the Years 3, 5, and 7 WALNA data so secondary school principals and curriculum leaders joined the workshops. (Until recently, Year 7 was the final year of primary schooling in WA.) Linking Year 7 students' data with their later performance as Year 9 students was challenging, both because we could not access data across sectors and also because of the difficulty of creating a 'virtual' Year 7 for each secondary school from the numerous (as many as 43) feeder schools. Workshops were conducted by Wildy and Mercer, during February, March and April each year.

By 2009, I had moved to The University of Western Australia (UWA) and all materials for this year's distributions were to be re-badged and the operation relocated. However, more than that was to change. For the first time, we were to deal with NAPLAN data and we wondered whether to attempt to continue to present the longitudinal 2001–2007 WALNA and MSE data. In the event, we decided that we would do both. We set up new displays for the 2008 NAPLAN data in a program we called NAPNuLit, building on the concept of bands and incorporating subgroup data (Indigenous, LBOTE, Sex) as we had for all the NuLit displays. However, we introduced new box-plot displays to make use of the percentile data available nationally. In deciding that 2008 data would be the beginning of the new disks, we realised, in collaboration with our CEOWA and AISWA partners, that one year's data did not make much of a story, even though the new concepts were to be used. So we continued the NuLit analyses, and added 2008 NAPLAN Reading and Numeracy data adjusted

back to link with the WALMSE scale we used for the WALNA and MSE data. Now usingdata from 2001 to 2008, we displayed on a single graph the means from eight years of Reading, and then of Numeracy for Years 3, 5, 7 and 9. For the first time each school could examine its long-term performance throughout the school for a given test. This most powerful overview of school performance allowed principals and other leaders to interrogate the performance of year groups over time – noticing the extent of their natural fluctuations, looking for signs of upward movement, and all the while questioning the impact of interventions and the effects of organisational and cultural changes.

Throughout the five years of working with the CEOWA, we designed workshops linking NuLitData and NAPNuLitData with school improvement processes. For the first couple of years, the focus was entirely on understanding the data displays. Each year, participants examined their school's data in terms of overall means compared with the state and with like schools, then shapes of distributions through box and whisker plots – from subgroups to individuals, then to individual student change over time, and then to value added measures. Participants learnt how to interpret standardised residuals plotted around a mean of zero with expected performances lying between +1 and -1. They noticed that, over the eight-year period, most of them performed as expected and that wild deviation was usually accounted for by very small numbers or early aberrant data. They understood that, while the school as a whole might be ticking along nicely, they could identify the impact of interventions on subgroups (for example, low performing students) and also on individuals. Participants also learned how to construct conversations they could pursue back at school with

groups of teachers to explore and extend others' interpretation of the data. More recently, all these learnings were linked specifically to school goals and strategies. Now the challenge is to develop the skills to marshall sets of data to back up arguments and to write coherently for different audiences. These were our goals in our 2009 workshops with CEOWA and AISWA schools.

Conclusion

In conclusion, I refer back to the words of Figgis and Butorac in their 2001 report on the impact of the Data Club and apply these to our subsequent work with the national assessment data. I believe that this 'has begun very well, but its role has only just begun. Schools recognise that there will be much more for them to learn about using the data over the next few years.' It is a decade since we started this work and our efforts have been focused on school leaders. We have not even begun to work with teachers or school communities. That, I believe, is now in the hands of the school leaders.