The importance of mathematics or its alter ego ‘numeracy’ has been cemented in the public’s mind with the instigation of national, high-stakes testing in Australia. As part of the discourse around these tests, it is possible to see how a process of social valorisation operates. Using press releases, online news articles and online public comments, we show how politicians, parents, teachers and the general public discuss ideas around disadvantage in relationship to national testing of numeracy. Deficit language in these discussions identifies some children as being less likely to gain value from mathematics instruction. On the other hand, there is also a perception that poor results for individual schools contribute to their students being seen by the wider community as disadvantaged.

NATIONAL TESTING, MATHEMATICS AND DISADVANTAGE

In a broader research program, in which we investigated the public discourse around the National Assessment Program – Literacy and Numeracy (NAPLAN), the theme of disadvantage occurred frequently. In this paper, we show how Australians’ conceptions of disadvantage were complex and sometimes contradictory.

For some time, mathematics has been considered a gate keeping subject in relation to people’s opportunities to take up further study and work opportunities (Davis, 1996; Quintos & Civil, 2008). In Australia, national testing has solidified this role for numeracy with literacy the only other subjects being tested and therefore considered valuable in judging the ability of a school to deliver education to students (Donnelly, 2009). The following statement comes from the NAPLAN website and describes the background of the tests.

The content of each test is informed by the National Statements of Learning in English and Mathematics which underpin state and territory learning frameworks. Test questions cover aspects of literacy (Reading, Writing, Spelling, Grammar and Punctuation) and numeracy. Questions are either multiple-choice or require a short written response (Australian Curriculum, Assessment and Reporting Authority [ACARA], 2010b).

The tests determine whether Australian students reached minimal standards at Years 3, 5, 7 and 9 (ACARA, 2010a). Four months after the children sit the tests, parents and caregivers are sent a report on how their child did against the standards and in relationship to other children. In early 2010, the Federal Labor Government opened a website, called My School, which compared different schools’ results on the NAPLAN tests, thus very quickly making them high stakes (Lingard, 2010).

The reasons for requiring students to complete these tests are similar to those in other English-speaking countries and are linked to ‘raising standards’, particularly for
students from disadvantaged backgrounds (Donnelly, 2009). As Lingard (2010) stated this reasoning “has become a globalized educational policy discourse” (p. 131). However, researchers, such as Hursh (2008), have linked this discourse of raising standards for students under-achieving at school to neoliberal beliefs about the need to hold schools accountable and privatisate them, along with other institutions. The results of tests allow individuals to make choices so they can maximise the benefit of schooling in an education market. Thus, a discourse of accountability of teachers, schools and education systems runs in tandem with one about raising standard for at risk students (Lingard, 2010). As suggested by Gutiérrez and Dixon-Román little has been done to reconcile the two discourses:

[A]lthough many use “the achievement gap" as an important call for school accountability around needed resources and additional support for marginalized students, (e.g., Education Trust, 2005), such discourse has done little more than replace "the culture of poverty" in the latest of deficit frameworks. That is, while equity issues are becoming more mainstream in the mathematics education community, theoretical framings continue to reflect equality rather than justice, static identities of teachers and students rather than multiple, fluid, or contradictory ones (Gutiérrez, 2007; 2002; Martin, 2009) and schooling rather than education (in press).

The consequence of these types of discourses saturating educational debates is that the discursive field pervading mathematics teaching and learning becomes highly charged. Inherently, a discursive field attributes value to some phenomena whilst depriving others of value or visibility. The result is that the discursive field facilitates some ways of talking and hinders others. Summarising their findings from several studies, Abreu and Cline (2005) described this process as social valorisation:

We have evidence from previous studies that the social valorisation of practices is a key element in a person’s representation of these practices. Studies with Brazilian schoolchildren (Abreu, 1995) and with British schoolchildren (Abreu & Cline, 1998) showed that they had developed an understanding of how specific forms of mathematical knowledge were socially marked and that this enabled them to construct categories, to compare them and to relate these to given social identities (Abreu & Cline, 2003). (p. 699).

As gravitational and magnetic fields define directions in the physical world, a discursive field assigns what is ‘up’ and ‘down’, ‘south’ and ‘north’, ‘along’ and ‘against’ thus constituting what could be termed a force field of social valorisation. The force field affects the saying, doings and relatings (Kemmis & Grootenboer, 2008) of students, teachers and the general public. It shapes backgrounds and foregrounds of students and their dispositions to engage in learning mathematics (Alrø, Skovsmose, & Valero, 2009; Skovsmose, 2005). The force field of this discursive world is inescapable to its ‘inhabitants’ in the same sense that we cannot escape the gravitational field. It does not mean that people cannot talk or think in ways not aligned with the valorisations of the discursive field; rather, it is more appropriate to consider them as always being affected by it. Therefore, the discursive
field, in which ‘raising standards for those at risk’ and ‘accountability’ are included, pervades public discussions about NAPLAN and My School. Whilst participants are constrained by this force field, they simultaneously also contribute to its perpetuation by their acceptance that children can be judged as potential workers and contributors to society as a result of their mathematical achievement.

In this paper, we explore how ‘disadvantaged’ is used within public discourse and how it is compared and contrasted with discourses around accountability. The use of ‘disadvantaged’, with its meaning of something or someone being less privileged, presents an opportunity to examine how status is added to certain types of mathematical achievement. Being disadvantaged or attending a disadvantaged school impacts on the social identity of students, their teachers and their parents. Measuring and broadcasting the mathematical achievement of students at schools provides a focus for discussion in which ideas around being disadvantaged are raised. Through an examination of data from publicly available news items about NAPLAN and My School, we show there are differences in how being disadvantaged is conceived. In some situations, it appears that children as a consequence of their backgrounds are considered disadvantaged. At other times, it is the process of valorisation through the labelling of some schools as failures which results in their students being considered disadvantaged.

**METHODOLOGY**

The data set consisted of five interview transcripts and four media releases from the Department of Education, Employment and Workplace Relations (DEEWR), and 19 online news articles, five of which included public comments. This data set captures what the Minister for Education at the time, Julia Gillard, stated on these matters. It also shows how this information was received by journalists, academics, the teacher union and the principal association as well as by those people in the general public who felt inclined to join the discussions when opportunity was provided. Wherever possible we have taken news articles from national sources such as the Australian Broadcasting Corporation (ABC), the online journal Inside Story or the newspaper The Australian. However, at times articles from the Brisbane-based The Courier Mail and the Adelaide-based The Advertiser were used because they included online comments from the public. There was over 230 pages worth of data.

The data were collected between September 2008 and March 2010. Although the first NAPLAN tests were conducted in May 2008, we chose to start from September 2008, which was when parents were about to receive information about their children’s achievements in the tests for the first time. Our cut-off date in March 2010 captured most of the discussion around the release of the school results for NAPLAN on the My School website, but before the discussion focussed too narrowly on the 2010 NAPLAN tests. Although not the entire public discourse from this period, the choice of material has sufficient breadth to reflect the variety of views of people engaging in these discussions.
Initially, both authors and a research assistant went through the data with an open mind to what was in the data, developing classifications and categories, and finally identifying eight themes. In this paper, we report on the theme concerned with disadvantage. To this end, the data were re-examined for discussion dealing with or referring to disadvantage. We choose to focus on this theme because of the complexity of the ideas about disadvantage. They showed how people were aware of the operation of the process of social valorisation and as a consequence often tried to divert responsibility from themselves for disadvantaging others in the system. At times, the government’s system of high stakes testing was blamed for contributing to the disadvantaging process.

As all documentation was publicly available, the names used by contributors, including those used to comment on online news articles, are provided in the quotes below. We have also left all spelling and grammar as they were in the contributions.

**WHO IS DISADVANTAGED AND IN WHAT WAYS?**

In the data set, being disadvantaged was presented in several ways. At times the term ‘disadvantage’ was used. At other times, it was implied by suggesting that some children or schools were less privileged by having less opportunity for learning or fewer life chances. For example, some children because of their backgrounds were expected to do poorly in the NAPLAN tests. As a result, they or the schools that they attended were likely to be described as disadvantaged. As well, some children were positioned in the discourse as disadvantaging other students’ learning because of their disruptive behaviour. Finally, being disadvantaged was discussed in relationship to how the results of the tests resulted in certain schools being labelled as failures with children who attended these schools simultaneously gaining the same label.

The Minister of Education consistently identified students who were most likely to do poorly on the NAPLAN tests as those who came from disadvantaged backgrounds. Their enrolment at a school contributed to the school being known as disadvantaged. These students included Indigenous students, students with disabilities and students from poorer households.

Julia Gillard: The National Assessment Program will help us identify schools that aren’t reaching the kind of standards that we want kids to get to. And there are other things that can tell us about disadvantage in schools—number of Indigenous children enrolled, for example; number of children with disabilities (DEEWR 10/9/08).

Julia Gillard: But it remains of great concern that the data shows that Indigenous student achievement is significantly lower than non-Indigenous students in all areas tested and all jurisdictions (DEEWR 19/12/08).

Julia Gillard: It's about lifting standards for every child in every school and making a huge difference for those kids most at risk of being left behind, who are our kids from our poorer households in this country (DEEWR 10/11/09).
It seemed that Julia Gillard saw the two discourses of ‘raising standards’ and ‘accountability’ as being complementary. For her, ‘raising standards’ presupposed identification of schools with sub-standard results, in order to hold them accountable for those results, but also initially to enable money to be provided so they could improve those results. However, in presenting a case that NAPLAN would support all children gaining appropriate outcomes in literacy and numeracy, the Minister contributed to a deficit discourse around some groups of students being disadvantaged.

There were few comments by the general public in the data set, which identified specific groups or schools as disadvantaged. One of these is the following comment on the ABC website to a story on teachers voting to boycott the NAPLAN tests.

Joker: And what do you purpose teachers do in indigenous communities in which you are lucky if the kids show up to school for 2 days a week???

Stop thinking about your own immediate area and start thinking about the whole of Australia.

I don't agree with this site [My School] at all. It gives an inaccurate reflection. How can you possibly compare the education standards of a remote community to say a private school in inner Melbourne where each student has a laptop and a remote community is lucky to have a reliable computer?????? (Rodgers 28/1/10)

In this comment, the disadvantages faced by Indigenous students were not discussed. Rather, the writer seemed to suggest that it was the schools in Indigenous communities, which were disadvantaged in the My School rankings, because irregularly-attending students were unlikely to perform well. At the same time, there was an awareness of how My School contributed to value being awarded to some schools which may already have been privileged. The responsibility for this disadvantaging of the school seemed to be shared between the children and the system which made such rankings.

Similarly, teachers and their spouses were much more likely to see disadvantaged students as those who were disrupted by their badly behaving peers. The parents of misbehaving children were often positioned as being responsible for the poor behaviour and thus for other students becoming disadvantaged.

Johnny Unimpressed of Adelaide: My wife gets constant abuse from parents for handing out detentions to kids who misbehave, abuse, distract and bully other students, or they simply write notes to the school making up stories about why their precious angel can't do the detention (Kenny 11/11/09).

Skip of Brissy: Parents need to be more accountable and make their little darlings work. I came from a tough up bringing and the wrong side of the rails. My parents valued education and I have done reasonably well. Comparing schools makes no sense when it is the same trashy kids at each. My wife is a
teacher, you won't turn Chaff into Bread, no hope. If parents had to do more, then educational standards would improve overnight. The fault may well be two-way, but with out proper and useful parental support then I am afraid we will continue to dumb down (Kenny 11/11/09).

For some time, it has been known that teachers commonly blamed factors within the child or the family if the child failed to learn at school (Hempenstall, 2009) and the comments by teachers in the public discussions were often of this ilk.

Parents also felt that some students were disadvantaged at school. However, they were most likely to mention children who had disabilities or who were gifted and talented. They felt that these children were disadvantaged because their legitimate needs were not met within the schooling system. Although there was some teacher blame in these comments, parents were more likely to blame the system because of under-resourcing. As described by (Gutiérrez & Dixon-Román, in press), these types of comments are connected to an accountability discourse around making schools or education system provide for marginalised students.

Bullfrog: Whilst there are some sociological advantages in classes of mixed ability, unless the resourcing model is vastly changed, the current set up disadvantages non-normal learning kids, both the less capable, and more capable (Woodley 17/11/09).

Bernard Wood of Modbury: Many kids I've met with ASD [autism spectrum disorders] don't meet the requirement for a special class but they can not handle mainstream and unfortunately mainstream teachers are not experts in teaching these children and they get suspended [temporarily barred from school] etc. therefore the kids suffer (Kenny 11/11/09).

Adelaide: The Victorian Affiliated Network of Gifted Support Groups estimates that 75 per cent of gifted students are underachievers and as many as 40 per cent leave school before the end of year 12. Dr McGuigan reported research showing that some 15 per cent of children of high intellectual potential drop out of school before completing year 12 (Kenny 11/11/09).

If NAPLAN or My School were mentioned in parents’ comments about their disadvantaged children, then it was generally to dismiss them. Some commentators clearly connected the government’s discourse to one about accountability and thus unlikely to contribute to a more just society. In the few comments of this kind, the two kinds of discourse tended to be juxtaposed as contrasting, rather than as complementary as had been the case with Julia Gillard’s comments.

Sjames: Another example of a government harassing poorly funded and undersupported schools, teachers, children and their communities. The Labour Govt has inherited its 'wisdoms' from the hyper-rationalism of the Liberals - it's all about accounting (Woodley, 17/11/2009)
However, NAPLAN and My School could not be ignored, even if the information that they provided was not seen as valuable. Perceptions of the school as being disadvantaged were considered to have a long-term impact on children’s life chances because the publication of NAPLAN results on the My School website contributed to children becoming disadvantaged as a result of attending particular schools.

Dan: I have pretty much no choice where my kids go to school given the zoning rules, so to me all this does is perpetuate and exacerbate the discrimination my very young children are already subject to. That is, because of where they live, they have to go to a fairly low performing school. Because of that, they will be considered to be low performing students whether or not they are. Because of that they may have more difficulty finding a job and because of that, they may not be able to afford to live in a wealthier suburb and send their kids to a private school either.....and so on (Woodley 17/11/09).

Matt: And what does the parents 'higher' education have to do with children learning to count and read. Whilst there may be statistical relationships there. Simply learning the times tables and reading are something that needs to be put into perspective. What you are saying is that children from lower socio economic backgrounds are almost destined to be failed by the education system. Instead of bleating about the additional information needed in these reports to make you feel comfortable, how about offering constructive view on how we fix the system so those children are not failed by the education system (Rodgers 19/1/10).

It would seem that not everyone accepted the complementary story that the politicians tried to tell about how increasing accountability would support the aims of social justice, through ‘raising standards’. Instead the two discourses were seen as being in conflict with each other with contributors calling for a resolution of the differences. Parents’ knowledge of their children’s situation influenced their understanding of how NAPLAN affected children being or becoming disadvantaged, especially when they felt that the schooling system was not supporting their children. They drew on this understanding when they evaluated the stories told by Julia Gillard and other politicians.

CONCLUSION

The concept of disadvantage and how children became disadvantaged was a much more complicated issue in the mind of the general public than it seemed to be in the mind of the Minister. Although she did not generally label groups of students as being disadvantaged, by linking them to disadvantaged schools, she suggested that they were disadvantaged by association. Teachers, or their spouses, were more likely to consider parents to be the cause of disadvantage. By not teaching their children appropriate behaviours, these parents were directly responsible for other children becoming disadvantaged because they were unable to take up learning opportunities.
This could be rectified by parents taking more responsibility for bringing up their children. On the other hand, parents saw schools and the education system as being responsible for the disadvantages that their children suffered in schools. This was either because the schools were unable to provide adequate support for their learning and so their children’s life chances were restricted or because the publication of NAPLAN results resulted in the labelling of a whole cohort of students as being poor achievers whether this was the reality or not. Discourses around ‘raising standards’ and ‘accountability’ brought out many different conceptions of who was disadvantaged and in what ways. This was seen as impacting on the lives of those who were considered as disadvantaged and those who worked with them.

Children’s possibilities for their future lives can be severely limited by the wider public’s acceptance that a school’s NAPLAN results indicate the worth of its students as potential workers and citizens. In the same way, teachers’ professional careers are discussed and dissected within the public discourse making them more or less likely to teach in particular ways, depending upon how much their social identities are marked by this discourse. The discursive field adds value to some phenomena whilst making other phenomena invisible. In discussions about NAPLAN and My School, mathematical achievement in the tests added value to children, their schools and by implication their teachers. At the same time, ability to work as part of a team which may also be considered to be a worthy attribute for good workers and citizens is not seen as valuable in these discussions. A discussion around raising standards in relation to team work is hard to imagine in this discourse.

Mathematical achievement and how it is measured is not a neutral activity. It is part of, contributes to, reinforces and is thinkable within the force field of social valorisation. The way that mathematics achievement is valorised provides an indication of what is ‘up’ and what is ‘down’. Having good NAPLAN results was connected to having opportunities for a good future life. However, the linking of some students to disadvantaged schools who had poor NAPLAN results was likely to affect how teachers, students and their parents viewed the teaching and learning of mathematics. If NAPLAN is considered to be the determiner of improved life chances then, the type of mathematics assessed in these tests will be the kind valued by teachers, children and their parents in schools which are most likely to achieve poorly on these tests. They will be fobbed off with this ‘education’ whilst other schools with ‘good’ NAPLAN results have more opportunities to widen their focus and so provide a richer mathematics education for their students.

On the other hand, our examination of the public discourse around NAPLAN and My School suggests that within the cacophony of discussion around these ideas, there were dissenting voices. Some contributors saw as contestable the suggestion that the two discourses around ‘raising standards’ and ‘accountability’ were complementary. Their comments showed an awareness of how the process of social valorisation contributed to some children being labelled as failures. The determination of what is ‘up’ and what is ‘down’ were not fixed for these people. They were affected by the
discourses, but were not determined by them. For the parents whose children’s social identities were likely to be marked because of the publication of NAPLAN results on the My School website, the process of social valorisation became obvious. Often references to being disadvantaged were located within discussions about who was responsible. Although this often referred to children, their families and their teachers, it also enabled an identification of government ministers and their policies as those who were enforcing this social valorisation of a particularly limited kind of mathematical knowledge. Thus, while the discursive field can be considered to be providing an indication of what is ‘up’ and what is ‘down’, at the same time people’s awareness of it enables dissent and an unpacking of how it developed. This can open up possibilities for changes.

ACKNOWLEDGEMENT

We wish to thank Lisa Pearson who was our very tolerant research assistant for this project.

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