



**The “Big Test”:  
One School Community’s Responses to the *Year 5  
Aspects of Numeracy Test***

**Research Project Report**

**December 2005**

***Compiled by Fiona Walls, School of Education,  
James Cook University***

## **Acknowledgments**

This research came into being through the collaborative efforts of the Ashton School Principal and Deputy Principal, the Year 5 teachers at the school, fifteen of the Year 5 children, and seven of their parents. To protect the privacy of those who took part, the names of the school and all research participants have been changed in the report.

The research participants have expressed the hope that their shared experiences might provide others with important insights into the “grass roots” effects of significant education policy such as the Aspects of Literacy and Numeracy assessment program, and that policy makers will take the findings of this research into account when planning for future directions in assessment. They hope that this small project will provide a springboard for wider research into the social impacts of education assessment policy.

All participants including the children appreciated becoming part of the research process and being given the opportunity to express their thoughts and feelings about the Test. As Ana, one Year 5 child said in her final conversation, “I’d like to say thank you for being so interested in this work. I feel special, because I get interviewed.”

It has been a privilege and an inspiration to have acted in a facilitating role in bringing together this school community’s account of their involvement in the Aspects of Numeracy Test process.

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## ***Executive Summary***

This project was based on a *critical collaboration* model of research in which researcher and participants shaped the research together. The project aimed to give voice to participants in the Year 5 Aspects of Numeracy Test in Queensland. The participants welcomed the opportunity to provide what they perceived to be much-needed community feedback about the Test to those responsible for curriculum design, implementation and assessment in Queensland.

The study focused on one school community. Year 5 children from the school, their teachers, school managers, and parents talked about their experiences and views of the 2005 Aspects of Numeracy Test procedures including Test preparation, Test administration, and receiving and interpreting Test results. Their collective perspectives create a picture of how one school community responded to this standardised statewide mathematics assessment event.

The Principal and Deputy Principal, five Year 5 teachers, fifteen Year 5 students and seven parents of Year 5 students elected to take part. The research process was guided by the participants who chose to share their views and experiences with the researcher individually, within informal group conversations, or in writing.

## ***Findings***

Statements were collated by participant type and grouped according to emergent themes. It was found that the children for the most part accepted the Test as an inevitable, necessary and significant part of their schooling and believed the results to be a better indicator of their mathematical abilities than assessment feedback from their teachers. While acknowledging that the Test indicated something about the children's mathematical skills, teachers and school managers were more circumspect about the Test results, questioning their validity and reliability. Some parents viewed the Test results as a more reliable indicator of their child's mathematical abilities than school-based assessment, while others saw the Test as part of an ongoing assessment process of which school-based assessment formed the major part.

Although participants' responses were varied and at times divergent or conflicting, four major participant issues came to light from their accounts:

- ***adverse effects on student and family wellbeing***  
Participants' reports revealed a significant proportion of children experienced mild to severe stress and some suffered severe feelings of disappointment, loss of confidence and decline in mathematical self-belief as a result of the Test process; participants also reported extra pressure on families created by the Test, including managing children's stress and sibling disparities.

- ***adverse impacts of the Test on the school and teachers***  
School managers and teachers reported that the test created a great deal of extra work for what they viewed as little gain, that they felt pressured by the Test because of the ways in which the results could be interpreted.
- ***limitations of information gained from the Test***  
Participants all reported that they found the multiple-choice test results yielded little specific or useful information in the absence of the children's completed Test papers or the original Test questions. Discrepancies between children's school and Test results were particularly difficult to explain for all groups of participants. Given the perceived importance and significance of the Test results, this lack of information caused considerable frustration and consternation, particularly for parents and children.
- ***adverse effects of the Test on delivery of Year 5 mathematics programs***  
Teachers and school managers reported that the Test had a significant effect on the content and pedagogy of Year 5 mathematics programs, and that the schools' focus on interdisciplinary learning and the development of the attributes of lifelong learners was both undermined and compromised by the Test.

Participants suggested a range of possible changes to the Test design, administration and reporting procedures to better manage these issues. These included: modifying the multiple-choice format to allow for children to demonstrate their mathematical working, thinking, and reasoning; reporting results alongside children's responses to the questions; granting greater choice to schools and children about Test participation; rescheduling the Test to lessen the impact on classroom programs and maximise the usefulness of the results, and reporting the results to children and parents in a non-comparative format.

### ***Implications of the research***

The research findings demonstrate that the Test creates significant difficulties for participants, and that these need to be addressed. Participants' responses point to an overall desire for a greater sense of choice and ownership in the Test design and administration process, and better communication about the significance and implications of the Test procedure and results, firstly between Education Queensland, the Queensland Studies Authority, and schools, and secondly between school management, teachers, children, and families.

Further community level research of this nature needs to be undertaken to explore the social impacts of standardised testing across a range of school types and from a range of geographical regions.

## **Introduction**

Standardised testing for literacy and numeracy skills of primary school students has become a widely-implemented method of assessment in Australian states and territories. School administrators, teachers, children, and parents involved in the testing process at a school community level lack the opportunity to talk about the test from a participant's point of view, either to share experiences within their school communities, or to provide "grass roots" feedback to state and federal government authorities who are responsible for the design and implementation of such tests.

This report presents the findings of a community-based research project that set out to provide a multi-voiced account of one school community's response to participation in the 2005 Year 5 Aspects of Numeracy Test. With assistance from a researcher from the School of Education at James Cook University (Dr Fiona Walls), school administrators, teachers of Year 5 children, Year 5 children, and parents of Year 5 children talked about their experiences and views of the test.

## **Background**

The Year 5 Aspects of Numeracy Test is part of The Queensland Studies Authority's Years 3, 5 and 7 Literacy and Numeracy testing program.

The stated overall purposes of this program are:

- to *account* for student learning in aspects of literacy and numeracy in Standard Australian English
- to contribute to the *improvement* of student learning in aspects of literacy and numeracy.

The specific purposes of the Years 3, 5 and 7 tests are:

- to collect data from the population of Years 3, 5 and 7 students for reporting to parents/carers and schools for systematic reporting
- to accommodate the assessment of students against national benchmark standards.<sup>1</sup>

Separate tests for aspects of numeracy and literacy are developed each year by Queensland Studies Authority's testing officers and reviewed by a panel of literacy and numeracy experts. The tests are designed specifically for Queensland students and based on the Queensland curriculum.

Specific dates are allocated each year for Aspects of Literacy and Numeracy testing. The 2005 Aspects of Numeracy Test took place on 23 August. All Years

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<sup>1</sup> The State of Queensland QSA (2005). 2005 Queensland Years 3, 5 and 7 Tests in Aspect of Literacy and Numeracy: 2005 Test Preparation Handbook. Brisbane: The State of Queensland (Queensland Studies Authority).

3, 5 and 7 children in Queensland are required to take part, although exemptions may be granted in special cases. Schools are supplied with test materials including test preparation booklets to be used by teachers in the weeks leading up to the Test, and instructions for Test administration.

The Year 5 Aspects of Numeracy Test is administered within classrooms in the manner of an examination, with furniture rearranged to keep children as far apart as possible during the Test. Following a prescribed script and adhering to strict time allocations, teachers guide the children through the Test. The Test takes about two hours to complete, including two short breaks.

In 2005, the Year 5 Aspects of Numeracy Test used the same format as tests of previous years. These tests are of the “pencil-and-paper” type, comprising around 40 discrete questions most of which require children to select from a choice of computer-readable answers. To answer many of the questions, the children must use information such as tables, graphs, or pictures of shapes, presented in the form of a supplementary “magazine”. Some questions require the use of additional materials such as calculators supplied by the children, or in the case of the 2005 Year 5 Aspects of Numeracy Test, special equipment consisting of a transparent 10 X 10 centimetre grid and a small cardboard angular device for testing for 90° angles.

The Test does not require children to justify their answers. It does not gather any evidence of children’s reasoning or their understanding of either the questions themselves, or the mathematical ideas involved in the questions. The Test method assumes that correct answers match “correct” thinking, which in turn indicates sound mathematical understanding. Although the method has been investigated by a number of mathematics education researchers<sup>2</sup> who claim a question/answer/understanding mismatch rate of as high as 30% and argue that the test is therefore unacceptably unreliable, this method of assessment continues to be used by Education Queensland as the primary source of statewide data about children’s achievement in primary mathematics.

### **“Community Responses to the Year 5 Aspects of Numeracy Test”: Research Method**

The method used in this project was based on the *critical collaboration* model proposed by Atweh, 2004<sup>3</sup> and the *critical analytic* approach described by

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<sup>2</sup> E.g. Ellerton, N. & Clements, K. (1997). Pencil-and-paper tests under the microscope. In A. Begg (Ed.) *People in mathematics education, Proceedings of the 20<sup>th</sup> Annual Conference Mathematics Education Research Group of Australasia. Rotorua, New Zealand: MERGA (155-162)*

<sup>3</sup> Atweh, B. (2004). Towards a model of social justice in mathematics education and its application to critique of international collaborations. In I. Putt, R. Faragher & M. McLean (Eds.) *Mathematics Education for the Third Millennium: Towards 2010. Proceedings of the 29th Annual Conference of Mathematics Education Research Group of Australasia. Townsville: June, 2004.*

Freebody, 2003<sup>4</sup> whose key concepts are the provision of multiple ‘voices’, the location of the research process within authentic accounts, and an emphasis on the *process* of research activity as much as the *outcomes*. Accordingly, participants were involved in decision-making throughout the research process including collection, analysis, and presentation of the research data. Data analysis was not only about looking for possible common threads in participant narratives, but also diversity, difference, and complexity.

The importance of building strong educational partnerships between families, schools and communities is thought to be associated with children’s success at school, including achievement in numeracy (Goos & Lowrie, 2005)<sup>5</sup>. Accordingly, this project aimed to explore the experiences and views of key members of this vital partnership.

Children’s right to participation in all matters affecting their lives (Taylor, 2000)<sup>6</sup> is becoming increasingly acknowledged through Australia’s Commissions for Children and Young People. This research project invited and enabled children as key participants in school assessment strategies, to share their views and experiences of the Aspects of Numeracy Test. Their reflections are significant.

In August 2005, teachers, children and parents of Ashton School an urban state primary school in North Queensland were invited to take part in a research project that would gather together their experiences of the 2005 Year 5 Aspects of Numeracy Test. Information sheets describing the research purpose and providing a broad outline of a possible research process were discussed with prospective participants. Three of the school managers (Principal and Deputy Principals), five Year 5 teachers, seven parents of Year 5 children, and fourteen Year 5 students consented to become involved in the project. Throughout the research process, participants contributed to the design of the research and assisted in further recruitment of participants. There were 5 key stages in the research process:

**1. Orientation:** In order to provide the researcher with an initial understanding of the Test content and procedure, several of the teachers and school managers described the Test from their past experiences. One of the Year 5 teachers (Lee) consented to the researcher’s observation of the administration of the Test in her classroom. This took place on 23 August 2005, the day designated by the Queensland Studies Authority for all Year 3, 5 and 7 children in Queensland to do the numeracy section of the Test.

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<sup>4</sup> Freebody, P. (2003). *Qualitative research in education: Interaction and practice*. London: Sage.

<sup>5</sup> Goos, M. & Lowrie, T. (2005) A framework for examining numeracy education partnerships between families, schools and communities. In M. Goos, C. Kanes & R. Brown (Eds) *Proceedings of the 4<sup>th</sup> International Mathematics Education and Society*. Centre for Learning and Research: Griffith University.

<sup>6</sup> Taylor, A. (2000). *The UN Convention on the Rights of the Child: Giving children a voice*. In A. Lewis, & G. Lindsay (Eds), *Researching children’s perspectives*. London: Open University Press.

**2. Post-Test conversations:** After the Test had been completed, the researcher recorded conversations of teachers, children and parents as they spoke of their experiences of the test, their perceptions of its purpose and value, and their ideas for improving the Test. In accordance with participants' preferences, these conversations took place either in small groups or one-to-one with the researcher. Several participants asked to talk by phone or to record their thoughts in writing.

**3. Transcript review:** Where possible, the conversations were recorded with a digital voice recorder, transcribed by the researcher, and transcriptions returned to the participants for correction or further comment. This process was important because it allowed participants to review what had been said, and to withdraw, change, or add to their comments in light of their reflection on the conversations.

**4. Post-results conversations:** When the school had received the results of the Test and these had been sent them home to parents, further meetings were arranged to record participants' responses to the results of the Test. Three of the final conversations involved both parent and child reflecting together on the Test results. These conversations were again recorded and transcribed by the researcher.

**5. Report review:** In accordance with participants' wishes, a preliminary report of the research and its findings was drafted for participants by the researcher and distributed to parents, teachers and school managers for discussion and further comment. After participants' feedback had been gathered, the report was completed and copies sent to participants. A child-friendly version of the report was provided for all the children who took part.

### ***Findings: What the participants said***

#### ***1. Children's conversations***

Several days after the children had taken part in the Test, they were invited to talk about their experiences through informal conversation with the researcher. There were no prepared questions, but the researcher used prompts where necessary to assist the children in continuing their conversations, to explain their responses more fully, or to guide the process to ensure that each child received a fair hearing within the group.

Statements from the children's conversations were grouped according to strong emergent themes and compelling testimonies (see below). The researcher found that the children's talk revolved largely around how they had prepared for, and coped with the Test; they recalled their emotions before, during and after the Test, their strategic approaches in undergoing the Test, and their personal judgments about the degree of difficulty of the Test. Their emotional responses to the Test were closely linked to perceptions of ease or difficulty of the questions and confidence in their mathematical capabilities.

The theme that emerged most strongly overall was the children's focus on their performance: whether they had got the answers right, anticipation of the results, and conjecture about consequences of the results. They also talked about what they thought was the purpose of the Test, whether they considered it to be a valid or beneficial method of gathering information about their mathematical skills and understandings, and possible improvements to the Test.

The children overwhelmingly expressed their acceptance of the Test not only as an inevitable and necessary part of their education, but also as the most critical and accurate gauge of their mathematical capabilities as Year 5 students.

### ***Children's preparations for the Test***

The children described how they had practiced for the Test in class:

- We did some practice but Mr T. [teacher] didn't know what was in it so we did a little bit of practice in maths and spelling and everything so we did the [multiple choice] bubbles. (Perry)

They talked about their discussions with parents and classmates before the Test:

- My mum and dad said, "Just do your best as you can and then you'll be able to work it out, and remember things you had in the past." (Eddie)
- [My family said] "Do your best. Work hard." (Bart)
- I heard lots of people talking about the test saying, "Yeah, I'm going to get everything right," but I think they're going over the top in confidence. (Perry)

### ***Children's experiences of doing the Test***

Some children described the process of sitting the Test:

- We couldn't sit near to each other; we couldn't open our desks, or get out of our chairs, or anything. (Ana)
- At the start, like right at the beginning I was, like, struggling, but then I had a break and had some water and then I could do it better. (Ari)
- It said on the maths test where you just had to look at the answers and I'd say, "It must be that one." (Kim)
- Well it was pretty good except it was easy a bit, and when the bits that were hard like the shapes and that, like Tony (another child in the conversation group) said, sometimes it was annoying, but at the end when I finished it felt good that I'd finished it all. (Kim)

They recalled questions from the Test:

- I remember the question about sports 'cause I love sports. Where there was two teams. And a blue team beat the white team and you had to guess the scores. 27 to 14 and you had to guess how many points they won by and it was tries for 4 points and goals were 2 points and field goals were 1 point. (Perry)
- And when we were allowed to use the calculator I'm pretty sure I got that one right. (Eddie)

- How many corners and sides does this weird shape have? It's like a *panenogon* or something like that. (Kim)

They talked about what they did when they were confronted with difficult questions:

- I got stuck with some things...where it said the teacher was allowed to explain it for you, I asked her to explain and then I got the hang of it...
- I just tried it until I got through. (Britta)
- I sometimes had some hard things, really hard, and I'm going, "Oh no, what do I do?" I eventually gave it a guess. Yeah, hopefully I'll get it right. (Zarn)
- Every now and again in the test there's a question where you have to read it over again. (Ana)
- (When explaining working out the mental computation questions) We were allowed to move our fingers around and tap them around... like, say I had 20 and I would keep one hand down (puts two fingers on the table) and 30 I'd get three...it's hard, but. (Ari)
- My teacher says, "If you're stuck with a question go back to it at the end. If you still have time."...I found a hard question and I went back to it at the end, at the STOP signal. (Perry)

Time was mentioned as a significant factor for some children:

- And the time, once I ran out of time with doing it and then I panicked... (Ana)
- I thought I might not have enough time to finish the questions. (Britta)

Two children reported physical problems affecting Test performance:

- My mum and dad said, "Just do your best and keep having little breaks like for water," 'cause I was feeling sick then, and I had to have some breaks sometimes 'cause I was having my tonsils...(Eddie)
- And the hard thing for me, I had a thing on my finger because I snapped my tendon so I couldn't write properly, but I did pretty good. (Kim)

### ***Children's thoughts about the degree of difficulty of the Test***

- It was pretty easy. (Bart)
- I thought it was a bit easy. (Chloe)
- It was hard sometimes, but some of the questions were easy. (Ella)
- Sometimes it was hard and sometimes easy...none of them felt like Grade 7 questions. (Britta)
- I felt sort of annoyed and bored sometimes. 'Cause I already knew the stuff, and sometimes when I didn't know it, it frustrates me. (Tony)
- Reading it was hard...There were some questions I didn't understand (Ari)
- It was a bit frustrating when you got to the bits with the measurement and stuff. (Kim)
- Halfway through the maths test it started getting hard, but at the start it was easy...The calculator was the best bit because you could multiply and

subtract and all that and you could get the answers correct...It (mental computation) was very tough. (Ari)

- A couple of the calculator questions, they were hard 'cause I'm not used to using a calculator. (Perry)
- Yes, like the shapes, there were these shapes, like there was a shape we never even learnt, we never even heard of it. And we didn't know what it was. So we had to sort of like guess what we think it would be. And it was really hard. (Kim)

### ***Children's judgments about, and explanations for, their performance***

- I flew through it even though I was nervous about it... I realised I was going great, or I think I was...I think I'll go pretty well. (Zarn)
- Pretty good. (Bart)
- I thought that I'd do very well. And I might make a couple of mistakes but I'd do very well. (Perry)
- I usually finished, and I didn't know if my answers were right or wrong, but I didn't know if they *were* right or wrong, I just thought they might be. I just checked. (Britta)
- (Explaining her confidence) Normally I had five minutes left when it was time to go on to the next part. (Diane)
- I think I got most of the answers wrong...because most of them, like, I didn't understand. (Ella)
- I have trouble with my maths because I'm not all that good with the multiplication but I'm good with all the others. (Ari)
- Multiplication's a big worry for me. (Eddie)

### ***Children's' emotional responses to the Test***

The children talked about their feelings before, during and after the test:

- I didn't mind the test. I just did it... It didn't really affect me. (Ana)
- That was a fun test. I loved it...(Perry)
- Good...I finished it early... Excited...'cause I like my maths. (Bart)
- I felt really nervous like I wasn't going to do well. (Chloe)
- I had butterflies... I didn't even want to do the test. My brother didn't have to do it. Why did I? ...I was like, "Oh my God, please be good, please be easy." (Chris)
- It was like on the first day when we did the test, in the morning I had butterflies, which is probably normal for me. And when we like sat down and started the test I was fine really.... (Adele)
- When I didn't finish I thought, "Ooh, oh no, I didn't finish!" ...When it was finished I felt a little sad – because I got used to doing it even though I was nervous about it. (Britta)
- I felt very, very nervous, like, too much nervous. (Ella)
- I felt, at the start I felt nervous and like thinking about if I would be able to get the test easy, yeah, and once I started doing the test I felt real nervous and then once we had our break I thought I got all the answers right and I started to feel real good. And then after the break I was real happy and

started doing it, and then there was one question that busted me and I started to feel nervous again. (Ari)

- I felt like weird inside, 'cause I thought it would be really hard and I had a funny feeling in my tummy. (Kim)
- I felt good that it was over. (Eddie)
- (Contemplating the possibility of having the test every year) ...if we had it every year it would be a bit scary because it's the big test each year, and every second year it's not as scary. (Adele)

### ***Children's perceptions of the purpose, importance and value of the Test***

- The test is important. [If you missed the test] people wouldn't be able to find out how they went...yeah, so the teachers know how much they know, what to do in case they need to be kept down or need to do more maths. (Zarn)
- I think to see what level we're at, you know. (Ana)
- So we can improve. (Ella)
- So they'll (teachers) give us more things to do and see if we can do it. (Diane)
- My mum said, "Don't worry 'cause it's not going to affect your life... (Dad said) "You probably won't get kept down." (Tony)
- It actually does affect your life, because if you don't go really good, it affects your career. (Chris)
- It affects your education. (Ari)
- Some people won't get jobs they want because they won't know as much. (Perry)
- We're pretty lucky because in high school with your tests, you've got to be, like, pretty good with it, like in high school it's like what you do then is like what you can do in the future. Primary school, it's like a little learning thing for high school. (Kim)
- It helped me learn...You know how there's timetables (a question in the test) and stuff, it was good and it helped me learn by that. (Eddie)
- If I passed the test I'd think I was way better in my work, like my pluses and take aways. So I reckon it helped me a lot. (Ari)
- It helped me with my maths. A bit. A bit more...There were some questions I didn't understand. (Bart)

### ***Children's anticipation of the Test results and their implications***

- I can't wait until November which is when we get the test back. (Zarn)
- When I'm going to open my results, I'm going to open them really slowly (mimes tearing open the envelope very cautiously) and I'm going to see what I got. It's going to be exciting. (Kim)
- I'm a bit nervous because I'm not sure whether I'm going to get them all right. I don't know...I just feel nervous. (Britta)
- I don't want to get my results. I was frustrated... My mum and dad says that if I don't get over 10 or 11, I have to do Year 5 again. (Chris)

- I'm feeling a bit excited. Because they said I'd probably do well. (Chloe)
- Quite nervous about it. Seeing which questions I got wrong. (Ella)
- I'm not going to be upset about my marks, because it's just a test. (Ana)
- If you get all the test wrong or you don't do a test, then you won't learn for next year. It's like a cycle...And if you didn't get a good result out of it, that means that we didn't learn much in Grade 5 so we should stay back if we didn't get a good enough result. (Kim)
- All I'm worried about is getting some money taken off me or something if I get a bad mark...I get stuff taken off me or lose money or get grounded... [Other kids] just say, "If I get a bad mark I'll have to go to my room for a couple of minutes." And I'm thinking, "Hey, it's not fair." ...If I've got a really good mark [friends] sometimes call me Nerd. (Perry)
- I was sad that I wouldn't do really well. (Sally)

### ***Children's responses to the Test results***

The children talked about what they thought of their test results:

- On this I reckon I did OK...I did pretty good. (Tony)
- I don't know...I can't remember. (Diane)
- I think I got a really good one. (Ella)
- Well I think I did pretty good... I saw that and I thought, "Wow!" (Adele)
- Good...happy...Every year I've done better. I did the best this year. (Chris)
- Good. (Ari)
- OK. I've got two low and, well, that's in the middle, and I don't know about that one (pointing to 'overall' category). (Ana)
- It was pretty good...Mum said it was really, really good. (Eddie)
- I didn't want Simon (younger brother) to look at mine because I didn't want him to see that he was better than me. (Sally)

They explained how they had interpreted the Test result sheet:

- (Pointing to each of his dots in turn) Well that's like, "*all right*", and that's, "*good*," and that's "*all right*," that's my guess... 'cause at my old school I didn't get this, I'm used to getting numbers, marks... (Ari)
- I got over the...(points to the line indicating state average). (Bart)
- I got all mine in the higher place...they're like the highest grade. (Tony)
- It just means what rating you got. And that's like the middle line (pointing). And, um, I don't know what that darker square is, I think it's like, not low, but in the "before low" [group]...I don't really know what "Space" means (Kim)
- Those two (indicates dots) are the higher ones – number, and measurement and data. (Ella)
- I'm off the graph (Adele)
- I just went like that (shows how he opened the result sheet and had a quick look) and saw it then just closed it, 'cause I thought they (results) were bad. I saw all the circles and I never read the legend... There's the black circles...here's the legend. (Chris)

- Because it had the dots on there. Mine were in the middle. It told me that I did pretty good, and that I had a lot of confidence (Eddie)

Some children talked about what they had expected in terms of their results:

- Worse than that. (Bart)
- I thought I would have done better... From when I did the Test, I thought it would be like... 'cause from what I did it was pretty easy and I knew all the maths I had to do. (Kim)
- I did a lot better than I thought I would. (Adele)
- Something a little bit lower. (Chris)
- Around the same. (Ari)
- I wasn't quite sure. I didn't want to think about how I would do, I was just concentrating on the process of getting it done... I guess it's better than what I thought I would do. (Ana)

Children's feelings about their results:

- Pretty happy. (Bart)
- Pretty happy, 'cause I tried real hard. (Ana)
- Well I'm very pleased about how well I did. I never knew I'd get a good mark....last year's mark was good and this one's better so it's excellent. (Perry)
- A bit happy and sad... I was happy with the measurement and data, but I wanted to be a bit higher. (Britta)
- Bad...pretty sad. (Kim)
- I didn't want Simon (younger brother) to look at mine because I didn't want him to see that he was better than me. (Sally)  
And what did Simon say to you afterwards when you were crying? He came up and gave you a big cuddle and told you it was OK didn't he? (Ursula – Sally's mother)  
He made me cry more. (Sally)
- It went quick. 'Cause I forgot about it and then the teacher said, "Oh you're getting your test results," to everyone and I'm like, "Oh!" I didn't want to be... I didn't want to get all worried about it and then if I got a bad mark I'd be even more angry so... I was excited. And when I got to one (result) I could see, I was excited too. (Ana)

Childrens' explanations for their "good" performance on the Test:

- 'Cause, um, I normally do sums and that all the time. (Tony)
- 'Cause I had a good go, and every question I just had a go. And I didn't stop until you had to move on. (Chris)
- Just doing the test and trying my hardest. (Ari)
- Because I was so excited to do the test and so I thought, "If I do well," and I thought about my Mum and Dad and my family, what would they say and everything, if I got a good mark.(Perry)

Researcher: So that made you put more effort in?

(It made me) Confident. (Perry)

Childrens' explanations for their "poor" performance on the Test:

- I don't like maths , it's not fun, but I do my best...sometimes it's confusing... in my maths, I thought maybe, if I done it again, I'd probably could have done it better than I did, could have answered the questions. (Britta)
- I don't know... the only thing was I had a sore finger but that didn't really matter. I don't know... it shouldn't have made a difference. (Kim)
- Yeah, I've never been good at maths. (Sally)

Children's awareness of others' Test performances:

- I don't think Martin's maths (result) is going to be very high. He's not good at maths. I'm good at maths. (Bart)
- She (twin sister) got higher than me. My brother got high in everything... He can pick it up straight away and for me and Ingrid we have to keep on working for it...(Sally)
- ...my friends said they're (results) good. 'Cause I got higher (points to right of Queensland average line for literacy). (Ana)
- We could have been playing games instead of looking at that stuff (Test results), and if I checked it out I would look like a nerd...Well, my friend, he had a look at it and he didn't think he got that much of a good mark, so he wasn't too happy with his marks.(Perry)  
But he didn't tell you anything? (Researcher)  
Nuh. (Perry)  
So you reckon you might have done better than him? (Researcher)  
Yep. (Perry)  
You did have a friend over today who goes to a local catholic school who said that he did the same sort of test and that he got results that were all up quite high, so he obviously did OK, but that's the first out of anyone that Perry knows that's talked about it, when I've been around, anyway. (Theresa, Perry's mother)

Children's reports of parents' responses:

- "You're doing good at your tests." (Diane)
- "You better try harder." (Kim)
- I think they felt very happy. Extremely happy. (Perry)

Children's thoughts about what the test "told" them:

- Probably have to practise more and, um, get like more work done and stuff. (Kim)
- You can know what areas you need to work on...I think I need to work more on my numeracy. (Britta)
- I think it tells me where I'm at, and what I can do, and what I'm having to do. (Ana)

- I reckon it would be a good thing, (getting his test paper back) see what I mucked up on then I could work on it...it just tells me what mark I got...I need to work on my two digit times. (Perry)
- Researcher: (To Sally, who was unhappy with her results compared with her sister and brother) So does it make you think that you're not very good at maths, then?  
Yeah, I've never been good at maths. (Sally)

Children's thoughts about what they value about the Test in light of their results:

- Because I want to see what I'm good and not good at. (Britta)
- It helped my maths. (Bart)
- It's all right... (Explaining why he thought the Test was worth sitting) So I could learn stuff and see how I went. (Kim)
- ...if you didn't get a Big Test, the teachers wouldn't be sure what to teach, and all the different children, because they're all at different levels, they would be, some of them would be having a lot of trouble and they might um, have like, I don't know what's the word to use, but when they're older it might, um like, be something bad because they didn't learn something and they might need to know it really...if they're having trouble, some kids have trouble. (Ana)

### ***Children's thoughts about the Test design, and/or suggested modifications to the Test***

Some of the children were happy with the Test as it was:

- It was pretty good once you'd answered the questions. (Diane)
- I reckon the way they did it, the whole test was good...whoever made it was good at doing it because it was a really fun test and some bits were hard. (Kim)
- Yeah, me too, I reckon it was good, eh? And some bits were really challenging. (Ari)
- (When the researcher asked "Which is a better way of assessment – of finding out what you know - the test like this or what the teachers get you to do, do you think?") The test.... Because then the teachers get to know more of what we can and can't do. (Several speaking at once)
- It's pretty good, like when you got started, you got used to it and you felt comfortable. (Adele)
- I like the way they reported my results. (Perry)

Some thought it should be modified:

- With me, I recommend some pages should be a little more easier - a lot less reading. (Ari)
- I'd put more sports questions in there, and more questions that are divided bys and yeah more multiplication, 'cause there's a lot of take away in there, and plus, and I'm getting a bit bored with that...I was expecting a lot more multiplication and division – there wasn't that many of them. (Perry)

- I reckon it would be it would be good if they gave us a good amount of time. (Eddie)
- The only thing that was bad was the teacher she was not allowed to read out the numbers, so if we missed something, like we didn't understand the numbers, we didn't know what to do. (Britta)
- I reckon we should have more drawing. (Tony)
- Some things, like, we didn't...I couldn't understand really 'cause we hadn't done much of it, maybe if, like, in the class we did an equal amount of everything. And maybe we'd know more of everything. (Adele)

Some children commented on the administration and timing of the Test:

- I reckon we should have had a rest after the tests. We only had a little rest, that's all. (Diane)
- I reckon the test was pretty good, but they should have [a] longer time, like say children who are away, they should have more times that the children can do it other than just Thursday and Friday. Children missing it never make it up...I think we should have it in the middle of the year, not later but earlier, 'cause of then you've already had half a year and another half to come. And the results earlier so you're not sitting around nerve-racking wondering what you got... I reckon they should have a test every year...the children can get used to doing tests and they won't be so nervous, then they'd get used to doing exams and assignments ...they have exams in the upper levels. (Zarn)
- I wouldn't do it (if she had the choice not to) (Sally)

### ***Summary of children's conversations***

Almost every child expressed a view of the Test as an inevitable, useful and necessary part of schooling, and regarded the results as a reliable indicator of their mathematical skills, as these statements illustrate: "To see what level we're at"; "The Test is important, in case [children] need to be kept down or need to do more maths" and, "It's a little learning thing for high school."

Individuals responded in unique ways to the Test. Most experienced performance-related anxiety expressed in such statements as, "I'm a bit nervous because I'm not sure whether I'm going to get them all right." For some, this anxiety was severe. A number of children also reported lack of confidence with maths. Several children reported feelings of excitement and satisfaction with the Test with such statements as, "I'm very pleased about how well I did," and were often the ones who reported feeling confident about their mathematical capabilities. One child reported strong feelings about not wanting to sit the Test.

The children made considered suggestions about how the Test might be improved for them, including timing issues, question content, question type, test structure, and reporting of results. Statements such as, "I reckon it would be good if they gave us a good amount of time," and, "I reckon we should have more drawing," exemplify their thoughtful views about the Test.

## **2. School Managers' Conversations**

The school's Principal and Deputy Principals were keen to talk about the Test from the point of view of administrators whose concerns were the effective day-to-day running of the school, the establishment of high educational standards, and maintenance of positive school-community relationships. They talked individually with the researcher. Their conversations revealed that although they accepted the Test as "here to stay" they had serious misgivings about the Test, including its educational value, and its impacts on teachers, children and families.

### ***School managers' experiences of preparations for the Test***

- ...what happens is boxes of things arrive in the school and Carmel the other deputy she'll sort them out but in terms of the process of what to do with them and there's quite a bit of work just involved in making sure each class gets the right number of tests and that sort of thing so there's also the whole security of the Test because we have to sign off and say that they'd been kept secure before the test so that's a big deal. (Deputy Principal)
- The teachers are really desperate to find out any little tidbit of information that they can about the Test so we have all these subtle and not so subtle requests for information about what's going on and I don't know whether they're true but there's a lot of urban myths about other schools and what they do and, "I know people who've seen the test already and they know what the spelling words are and I know what the maths things are," so we hear stories like that back here and it comes then with either the spoken or unspoken question, "So will you be telling us some of those little secrets?" so that sort of makes a fair bit of tension around the place. (Deputy Principal)
- The other thing that we do is try and encourage teachers to be ready so we'll have reminders you know right from the beginning of the year as soon the dates of the test are known we say to the teachers "Now don't forget these are the dates that the test will be on, don't plan any other serious work around that time because you know that you'll want to be skilling kids up for sitting by themselves working independently and under test conditions. There's no camps that can go on around that time, and most teachers set about 3 or 4 weeks beforehand for test preparation where they just do that regular you know, it's either skill and drill stuff for the actual content or practising taking tests where we say to the kids, "Now this is what it's going to be like...no talking now..." so that can be quite a big deal and if then you've got other work that you haven't finished in your class then you know that you've got all that test preparation that you'd like to do so that creates another tension. (Deputy Principal)

### ***School managers' views of the impact of the Test results on the school and school administrators***

- So from an administrator's point of view, I suppose the biggest issue for me is the level of credence that is being put on these results externally, in

- terms of accountability, and the public awareness of them and that's going to get more and more obviously, unless we've got to put them all on the front page (of the newspaper) and we've got to advertise them and obviously there's going to be money attached to them, and it seems that if you do well in literacy and numeracy, well you get rewarded. (Principal)
- When we first opened our results they were pretty horrible but we worked long and hard to try and ... I mean, we've put in support and it's not just support for these, it's support in general, but I mean we do pay a lot of money and have a lot of teacher aide time to support those programs. (Principal)
  - We get our results back, the school gets a report – we get an overall summary report and then the kids get their individual reports and we get the class reports and we ask the teachers to go through the class reports and we look for patterns and stuff like that. (Principal)
  - What we have to do with the overall results is we have to publish them. So we have to publish them in the school community, we have to publish them now on our website, and when we go to our once a year meetings with the district directors, basically we, it's the district stuff and how we're going as a district, you know because that's part of their accountability as well, so it's looking at district trends and while all of our schools are put up there and if you want to read how your school went compared to my school you can, that information doesn't leave the room anyway, it's just confidential information for us as a group of principals, and we can do some data analysis, and based on our results we get some money. (Principal)
  - ...then there's other data that we're expected to report on that we have to go to a website called Corporate Data Warehouse which is external to education Queensland and we have to do some searches and download particular records now that's a really difficult process and Carmel (Deputy Principal) does most of that, I've had a go at it bit it's too complicated for me. So [the Principal] doesn't do that, she says, "Carmel please download this data," and she tries to download it... they're improving the searches that you do, and they're getting more sophisticated and probably getting more adept at being responsive to what EQ want from its data but it's still pretty hard slog.... because the data is linked to support funding so what they do is they say, "This amount of your children didn't reach the benchmark so therefore you will receive this amount of funding," but they've stopped identifying the particular kids who are supposed to get the funding so basically now they say, "Well you know where the kids are," and we do, we've already identified them long before the test comes along, however, now they've made another layer of complication because the funding's meant to come to the school but we can use it just to beef up our recovery program but there's federal government money now that's associated with reading and it's called a voucher system and parents can apply for a voucher for \$700 for external tutorial assistance for their kids for reading but we don't know which kids it's for because they're not

marking those kids, they're not clearly marking them – they used to have an asterisk beside their name but now but now it comes out without the asterisk so all the time that we have to spend going through trying to work out who's nominated for particular types of funding it's extraordinary and in terms of our own reporting, we can do all sorts of statistical analysis but it's not easy to do because of the way the reports come. I'd like to know for example how many kids have performed at the higher levels so the report comes out and it'll have a shaded area and it varies and it's in this shaded area this is the amount of kids from your school that performed in the range of the middle 50% - sometimes it's 60, sometimes is 50, then they'll have 15 at the bottom and 15 at the top or whatever they decided to put in and we're required to report but I like to report, well just interpret for a start, and that's hard too. (Deputy Principal)

- ...you see all the impacts of that in terms of students and you know you don't have a lot of faith in the results being reliable or useful to the students so unfortunately we tend to treat those tests and the results with a fair bit of contempt and it probably has got the capacity to damage relationships within the school community...(Deputy Principal)

### ***School managers' views of the impacts of the Test on parents***

- ...we've had situations where a child hasn't performed well on a test, and then months later when the report comes to the school and then goes home which is the second last week of term 4, the parent receives the report home, is concerned about particular aspects of the report and wants to talk about the performance on this test, we often have to say, "Look, don't worry about it, it was one or two days in the year, look at the report card which is a much more comprehensive collection of data gathered over a long period of time and more accurate in terms of what we have seen of the child and the child's performance," however, the parent then is faced with looking at this very official document that's come from the government, and sees that perhaps the child hasn't met the benchmark or is falling below other children in the state, that's pretty frightening, so when they have a genuine concern about that and we say to them, "Look don't worry about it, trust us, trust our nice little school report card," it sets up a bit of an oppositional relationship there that they have to choose between trusting something official or trusting us and that is fraught with difficulty. (Deputy Principal)
- ..the other thing is, we can't give specific feedback about the test unless the teacher photocopies the test and has that as a ready reference, they don't really know where specifically the child did well on the test, so when the parent rings and says why didn't my child do well on the test, or you want you to tell them where they did do well in a particular area, it doesn't really have the reference point. (Deputy Principal)
- when there's sort of extrapolations made from 2 or 3 questions so parents are panicking because their child's fallen down in this particular area, when they got 2 or 3 questions wrong, you know, so it's not really a big

deal in the big scheme of things, and the other thing that happens on the test is because they put questions from higher levels on the test like they'll put Year 7 questions on the Year 5 paper as a sort of equating measure to see how that question was for kids of different ages and there will be questions where they haven't done the work to be able to answer that question successfully and if the kids get that question wrong, it's not a big deal, they're meant to get it wrong. Yeah, so I have concern that potential conflict between what we're telling the parents about the child and what the test results are telling them can cause some problems with relationships with the school and the level of trust they have about the teachers and what they've done and because of the time the reports come it's too late to do anything to repair that relationship so the teachers say on the report card and they've been saying all year, "Yes, your child's doing fine and the Test results come back and it's different and basically there's a week of school left you know, it's all over, so it's really not a lot you can do about it at that point. (Deputy Principal)

- I'm concerned that the standardised testing is the only way that the value of the school's performance is tested in Australia, you report upwards and outwards to your school community how well you're doing and these are the results that count and the only results that count so you could be doing fantastic work and getting great outcomes in other areas but if the results on these particular measures aren't up to scratch in comparison to your like schools...you lose Brownie points with the community and potentially with the people in your own organisation and by the very nature of looking at the norm-referenced system, someone's got to be in the bottom 15%. And we're pretty fortunate in this school in terms of our parents and the and the numeracy practices at home in our families, we have a very literate and numerate community. (Deputy Principal)

### ***School managers' views of the Test as a form of assessment***

- ...obviously basic literacy and basic numeracy are important but ...there's the skills and the processes that are not being looked at all... we're not getting a full raft of what a child can do through these tests, and that's what worries me. (Principal)
- ...the nature of the test is such that it's quite foreign to the way we normally test in schools, so it's a completely different context, I mean kids may do as part of a suite of things, they may do some multiple choice, but quite often what this test is testing is the kids' comprehension rather than their mathematical knowledge and understanding. (Principal)
- We keep saying to parents, "Look this is part of a suite of information we get about kids," but because it is a piece of paper and it says, "Well on this continua, your child is there," you know it's a bit like, "Well, that's the class and that line is the class and my child's sitting there," the class being every Year 5 child in Australia or whatever, and that's 2 days out of 12 months too, so there are all these issues, and they're not going to go away, and the national testing's not going to go away, so I say to people in

- this school, “Well we’ve got to do it so let’s make the most of it, make the kids as comfortable as possible, and give them some practice in terms of multiple choice questions and give them problem solving around those sorts of questions and that’s all we can do.” There’s not much else we can do. (Principal)
- ...the other problem that I see is the reporting is mainly norm-referenced so it’s about how did your kids go in comparison to other kids in the state, not how did your kids go in comparison to a benchmark, and that doesn’t seem to me to be focusing on standards. I think we have to get a lot more explicit about what the benchmark is, and what that standard means and then saying, “Well how many of our kids didn’t achieve that standard and how many did, and of the ones who didn’t, what’s going on there. Were they just below, or were they markedly below?” And so that needs a lot of ways to describe the children’s performance, you need a lot of indicators for that. It’s not just about 3 questions, you know...and so that’s what I’d like to see in terms of moving forward, yeah, use a better understanding of what the child actually needs...(Deputy Principal)
  - ...it’s disheartening that we know other (assessment) systems that are more appropriate, are more accurate, that value teacher judgment and that actually give the child a chance to actually be involved in demonstrating and having another go at demonstrating at a higher level, that that can’t be taken up at this point because of money. Standardised testing in the form of multi-choice tests that we mark by computer are comparatively cheap and unfortunately that’s the way that we seem to be going and more of the same in different year levels so that’s disheartening to me. (Deputy Principal)

### ***School managers’ views of impacts of the Test on children***

- ...kids in the lower school having to sit for 40 minutes, from what we know about research, you just don’t do it, I mean research tells us that kids can concentrate for a minute for every year for their age so teachers of 8 year-olds are constantly changing their activities every 10 minutes and then they’ve got this test situation so I don’t know whether you noticed when you were in there, but you know, the stress levels of kids start to go up and they’re exhibited by the fidgeting and the wanting to go to the toilet I mean, “I must go to the toilet,” all those sorts of things that are clear indicators of stress. (Principal)
- We had an incident this year where a child was away sick with chicken pox and the mother was ringing and saying, “I’ll bring the child in for the test,” you know, bring him off your sick bed, so teachers and kids and parents take it very seriously. (Deputy Principal)
- You know what I see happening is the data’s not meant to help the students, it’s not about them getting feedback on their work, it’s not really about teachers getting feedback about how they’re performing, it’s about schools, and getting data about trends to improve performance and it’s about systems so it’s very political really and so at the coal face when

you've got these little Year 3s doing this test and getting anxious about it, or we had one Year 5 and he was away in Year 3 when they did test and he was very anxious because he'd never done one of these before and the others had done it and going through the whole trauma and then knowing yourself it's not actually about helping your child, it's a game, they have to play this game, they have to jump through the hoop, but it's not really going to benefit them; it's a hard thing to justify as an educator. When it creates so much angst and so much work for so many people. So, I think we need to be honest about what the purpose of the test is, what the audience for the results are, and the audience is not really the parents, it's not the students, it's hardly for teachers.... It's for administrators and the school. (Deputy Principal)

### ***School managers' views of the impacts of the Test on teachers***

- We have done some interesting things in the past about analysing test results at the school level where we've asked teachers to look at results and look for trends in terms of overall results...as administrators you see this data as potentially worthwhile for teachers to make some connections between the pedagogy and the outcomes, however it's not really that simple and the realisation of that worth of the data, because of the whole extraordinary sort of emotional thing that goes on with teachers looking at data and I don't know if it's peculiar to primary teachers or whether secondaries are better at this because they've got more regular discussions about outcomes and that moderation process, but we find that our teachers are very anxious about discussing their results and having anyone else look at their results. (Deputy Principal)
- ...we ask the teachers to go through the class reports and we look for patterns and stuff like that, you know, just in terms of, "Well yes it seems that across the Year 5s there's an issue with whatever," and then we have to say, "Well are we sure about that in terms of what we're doing with kids and, or it might be, "Gee a teacher's done really well in this. What's that teacher doing that might be really different from what the rest of us are doing?" so we use the results in that way just in terms of learning and teaching, and how we can make it better. (Principal)
- We find that our teachers are very anxious about discussing their results and having anyone else look at their results...we gave out data to class teachers where they could identify their class but they couldn't identify other classes you know, so there'd be 5 or 6 classes in the year level and you could see the name of your class's results but you couldn't see name of anyone else's class, but you can still see the actual data but they couldn't handle that, they were traumatized by it and we had a lot of negative feedback, "Please don't ever make us do that again," and it just didn't seem to matter what we tried to do with it, even we looked at it all blind and we said these are the results for the year 5s and the year 3s and the year 7s, they still took it personally that other teachers in the school would be saying, "Oh, those Year 7 teachers they didn't do well on the

test,” even though we say, “Look it’s not about how you do as a teacher just in that Year level, it’s about a combination of all the years of schooling as well,” though really I think they worry that if their kids did poorly on the test it’s all their fault and they should be ashamed of that. They’re not really good at taking credit for when their kids did well, so we really stopped doing that because firstly I don’t know whether the data is actually valid enough, reliable enough, for us to be hanging too much importance from it, and also as administrators we don’t really, perhaps we don’t have the statistical knowledge about what to do with the data, I mean, we’re learning about it. (Deputy Principal)

- It’s no good being negative about these things...you’ve got to do it. You know, we’re not going to get away from it. It’s going to get worse (standardised assessment) so, you know I mean, the people in this school, while they’re not happy with it they say, “OK, that’s what we’ve got to do,”...and we do. (Principal)

### ***School managers’ views of the Test results in 2005***

They talked about the results in general:

- ...we’ve had reasonable results but we certainly do have kids who aren’t reaching the benchmark and who aren’t reaching the state average...(Deputy Principal)
- (Commenting that the school had maintained their results compared with the previous year) Yes, yes. It’s always about the same. (Principal)
- We’ve had a general look at the results at the school but as an admin team we haven’t sat down and done some deep analysis. It appears that we’ve stuck to our normal pattern of results, we’ve had reasonable results in Year 3, year 5 a dip and year 7 starting to come out of that dip...it seems to be a pattern that’s repeated across the state and I think that’s part of the reason that the middle phase of learning has become a really significant item on EQ’s agenda. It’s because that dip sort of is worrying and I’ve read about it in other research and it’s called “The fourth grade slump.” (Deputy Principal)

They talked of processes in “reading” the data:

- ...it does take some time to get your head around the results, what they actually mean. Lee (Year 5 teacher) was in here this morning and had her first look at the results and she said to me after about fifteen minutes, “I’ve just realised I’ve been looking at the results the wrong way; where there’s a dot that doesn’t mean they got it wrong, that means they got it right,” so it’s a lot of headwork trying to find out what the actual numbers mean. (Deputy Principal)
- We seem to have changes every year, so just when you think you understand how to read them, something changes. (Deputy Principal)
- When we handed out the pieces of paper to the teachers with their class data on them the year level cohort data, I spoke to the teachers, some of the teachers the next day and I said, “So what did you think of the

results?” and they said, “Can you tell me how to read these pieces of paper?” And I thought about it and, “Oh that’s right, see this little number down the side in this little column here, that’s actually what you’ve got to look at first.” And that was the state mean and the school mean. So it’s a whole literacy in itself for a teacher to be able to read the information. And so because it changes every year, it’s a complicated process. (Deputy Principal)

- ...when you start to analyse the data on a bigger scale you can get different reports from the Corporate Data Warehouse, but it takes a fair bit of expertise as well...it’s probably a higher level of understanding of what you’re looking for that’s required to make the most of the data opportunities that are there...we’re really skimming the surface of what we could do with that data...given that we don’t necessarily know whether...how much faith to have in the data, it’s a lot of extra work to do for not necessarily important information. So we actually spend a fair bit of time collecting our own data at the school and I think that might actually be a better use of our time. To spend more time in teachers’ classrooms looking at their practice, looking at the student outcomes regularly and trying to dig more deeply into that and I think that would probably take us further into reforms in pedagogy and curriculum and assessment than what this data gives us at the moment. (Deputy Principal)

They described teachers’ responses to the results:

- It’s been interesting watching the teachers and, um, and their responses to it...Some teachers couldn’t care less about them and, “Ah, whatever,” and some teachers are quite anxious about it. They really want to examine their results to see whether they’ve failed. (Deputy Principal)
- I haven’t heard any teachers talking about that (large discrepancies as found in literacy results) in numeracy though, probably because it’s more straightforward on the marking. At least when I hear that, I’m pleased that the teachers are trying to make sense of, “What is the criteria here?” and, “What are the standards and benchmarks?” It’s not all bad, there are some good educational discussions around what’s happening. (Deputy Principal)
- There were some teachers who were concerned about some gaps that they saw between what they thought the kids would achieve and what they actually did. There were some teachers who were pleased about how their kids had done, surprised, but we really haven’t had any big whole group discussions about the Test, so we’ve just had individual teachers going on their own. (Deputy Principal)
- ...the Learning Support Teacher said straight away to me, “That’s it. We are not having a textbook for numeracy any more because look at this.” And I agree, I don’t think we should have a text book and we’ve tried to have this debate with teachers, but she said, “Look, in the results it’s clear that across the school since we’ve implemented the use of this text book our results in numeracy have gone down,” and so I started that

- conversation with a couple of teachers but it's a bad time of the year to have that conversation. But they are not seeing that this is valid and reliable data, to make that decision on, which I can understand however, there's got to be some explanation for why we're having that downward trend and it's coincidental or not that it's associated with the introduction of maths texts across the school.
- We also had one teacher who in the report card comments made a reference to the Year 7 test on every child's report saying, "So-and-so has done well in the numeracy and this is reflected on the Year 7 Test," or, "So-and-so has done well in class but unfortunately this wasn't reflected on the test." I think it sounds a little bit like, "Don't believe the Year 7 Test because I've seen them do it in class," and that's probably OK to say that but I'd rather that was said to the parent's face rather than have it on the report card which is a lasting document. I just don't think it gives the impression of a professional on-the-ball school. I'm not quite sure about it; it's the first time I've seen that. I was surprised by it. I guess though it does say something about that teacher's understanding that the parents will take the test seriously. (Deputy Principal)
  - I've tried to suggest to some of the teachers that using the maths textbook actually changed their pedagogy but it was late in the year, bad time..., that's a debate we have to have in a fairly serious way I think...I don't think that teachers are really seeing what is happening to their pedagogy because they have this (children's recording) book , they're seeing the workbook as a convenient way to have things set out for the kids and the teachers don't have to put it all up on the board. And they don't have to draw the 2-D shapes and it saves a lot of time. However, I can see that it's taken away a lot of the oral maths opportunities, it's taken away the use of a lot of concrete materials because they've got these lovely coloured pictures there and that may be appropriate for some things but I still don't see that they're using as much concrete materials as they used to...the teachers might disagree with me on that but I think I would rather use data from their own class work to initiate those discussions than use the standardised test information. Which they probably don't have an attachment to because they don't believe in it, so I think that's probably where we'll have to do some more work in the future. (Deputy Principal)

They talked of parents' responses to the results:

- We've had some parents call and say, "When are the tests results going to be coming home?" so some parents have been waiting for it. (Deputy Principal)
- ...in past years we've had the week, basically after the test goes home we have probably half a dozen parents from a thousand kids come and say, "I'm not happy with my child's test results. Can I talk to someone about what I see as a discrepancy here, or what I see as an area for concern?" You know, "The teacher tells me it's OK but look at this result here." So yeah, I'm expecting there will be some....I say to teachers after we

administer the test and after we've looked at the results, if there are some performances from students that you know that don't match their regular performance please tell the parents straight away, give them a call and say, "I've had a look at their test and they didn't actually go as well as I expected them to, so when the test results come you might be disappointed when you see what other work they're been able to do during the year." So maybe when we get better at doing that job we'll have fewer concerned parents. (Deputy Principal)

- I have two messages from parents who want to talk to me about the results. (Deputy Principal)

They offered explanations for the results:

- Basically from what I saw and the feedback that I'm getting, is similar to what I'm talking about basically...in many, many, many cases there's a high level of correlation, but there are discrepancies. We had for example one child who is an exceptionally good writer who came out sort of in the high middle...I saw her work and it was the stuff that brought tears to your eyes. But because she manipulated the genre, she certainly didn't get what we would expect. So there's those sorts of discrepancies you're always going to see. Some kids where we know they can do better but because of the test situation, because of the pressure they put on themselves, they didn't do as well as they could. Some kids because they have to concentrate for a period of time instead of quick succession, they probably haven't done as well, but that's the test situation. (Principal)
- ...there's got to be some explanation for why we're having that downward trend (in Year 5) and it's coincidental or not that it's associated with the introduction of maths texts across the school. I've tried to suggest to some teachers that using the maths textbook actually changed their pedagogy but it was late in the afternoon, late in the year, bad time...yeah, that's a debate we have to have in a fairly serious way I think. (Deputy Principal)

They described the kinds of action that might be taken on the basis of the results:

- ...the other thing is working with those children who are identified. Teachers, when they have their data given to them, will be able to see really clearly which of them (children) didn't meet the benchmark. That's a job we have to make sure is done properly for next year. That that information is passed on to the next year's teachers so that the (support) programs can continue. (Deputy Principal)
- ...we have previously rolled up a lot of our literacy and numeracy and indigenous support funding to provide fairly comprehensive support programs, so our support program won't be as comprehensive next year because some of that other money isn't there in the quantity that we've had it in the past so we might have to be quite creative about how we put support programs together for next year and I guess that's the reality for lots of schools and that's not about the standardised testing but it will have an impact I think in what we can do with the money that actually comes

from the support for the kids who actually don't reach the literacy and numeracy benchmarks because that money will basically have to stand on its own now rather than be gathered up with all the other bits and pieces. (Deputy Principal)

- The thing about the standardised test is it can be used I guess to get parents to take their home support seriously because if you've got the child's test report that says, "No, not quite up with the state average," and then you ask a parent to help support the classroom program by doing this and this at home, they're more likely to do it I guess if they understand that their child isn't quite where we want them to be at this point so that can be a tool I guess we can use to our advantage. It's just a shame that it's at this time of the year. They'll go away on holidays and they'll have a new teacher next year who won't necessarily have that information at their fingertips comprehensively, straight away. (Deputy Principal)
- ... plenty more work to do in analysing the data and probably planning more strategies to address the issues that will come out of it but I'm thinking that they won't be big issues...until we get into the deeper layers of analysis which won't happen until next year. (Deputy Principal)

### ***School managers' suggestions for improvements to the Test***

- Even if the teachers were able to read the questions to the kids it would make a difference because then you'll know that you're testing their mathematical ability or their mathematical understanding rather than, "Did I read the question properly?"...a lot of the questions are phrased, they're phrased in tricky ways anyway, I mean passive voice for example, passive voice is not something that kids are familiar with at this age, you know passive voice is not something we use a lot in society now...language is a worry to me in terms of the way they're phrasing the questions. (Principal)
- You know if we can get a better assessment instrument that can be used in a ... you could get better descriptors of the standards and then we had a quicker turnaround of feedback to students and to teachers that would improve it. (Deputy Principal)
- ...if we had some better ways to interpret the data because certain technology exists to do whatever we want with data but because of the scale of the data collection it's thousands and thousands of students...it's just a big deal with this enormous amount of data. I think schools need to be able to get access to different ways of interrogating that data for their own purposes. But no, I certainly don't have all the answers about how to improve it but I do have a general commitment to using genuine authentic assessment tools and increasing accountability but I don't see that what we've got at the moment actually does that. (Deputy Principal)

### ***Summary of school managers' conversations***

The school managers were concerned about many aspects of the test, ranging from its educational value as an assessment tool, to its impacts on students, teachers, families, and the running of the school itself. They saw the test as

potentially damaging to school/community relationships since it could undermine parents' faith in the teachers' expertise in assessing children's "true" abilities. Although they would rather the school were able to develop its own robust and externally moderated assessment methods, they viewed the Test as something to be put up with and dealt with as positively as possible, summarised in the Deputy Principal's statements, "If we had some better ways to interpret the data," and, "if we can get a better assessment instrument... you could get better descriptors of the standards and then [if] we had a quicker turnaround of feedback to students and to teachers that would improve it."

### **3. Teachers' Conversations**

Initial conversations with the teachers took place in two group sessions. After the Test results had been sent home to families, the researcher gathered responses from individual teachers. Teachers were primarily concerned with the welfare of their students, the educational value of the Test, and the impacts of the Test on their mathematics teaching and learning programs.

#### ***Teachers' experiences of preparing for and administering the Test***

Some teachers talked about the issue of composite classes that become split for test preparation and administration:

- Logistically, I mean a lot of schools have composite classes which makes it difficult to administer a test like this. (Allie)
- The other option was that I split the [Year] 4s up and I could have administered it that way...but then it wastes their learning time. (Kate)
- But the whole thing is that you don't know how your kids are going because you had to split your children up, you don't know how they coped with it...How do they feel that you're not there to say, "Keep going, good on you," you know, that bit of support. It can mean a lot to some kids. (Allie)
- I know last year when I wasn't there for my Year 3 Test, how horrendous it was for those little people...I had kids in tears, you know, because I wasn't there, that different environment and things like that. (Lee)
- You also have the issue...I don't know about anyone else's class, but I found since the end of the Test my class has switched off. They've just kind of gone "OK that's over with..." you know... (Dan)
- (Agreeing with Dan) "That was the Big One". (Allie)
- Mine didn't make such a big thing of it. (Kate)

They talked of the impact the test had on their long-term planning for mathematics in Year 5:

- We talk about pressure on the kids but also on the teachers as well, because if we don't, you know... we've got to prepare for this because you're not giving the kids the opportunity that they, you know, to show their best and that sort of stuff...to me it rearranges my teaching format...I used to do chunks of things, so you know in the fourth term might have been the measurement or it might have been heavy in that, and therefore

- you've changed your whole way of teaching because you've got to do bits of everything to ensure that they get a range of choice. (Col)
- I agree that in a way this term has been totally modified because you've been trying to teach the kids the things that they need to know for the test that's in August... It has really altered, you know, almost like a whole term of nothingness...You're disadvantaging them by not doing it. (Allie)
  - You've just got to make sure that you've covered everything, so the kids aren't surprised...I think this year was the first year I went through it and I went, "Yep, OK we've done all of this and they should be OK with it," you know, and that's a first. But it is, it's a stress to make sure that you've covered everything, and you've covered it well enough...You see I get that from pretty much day one - we did quite a bit of comprehension stuff and within the comprehension we did multiple choice and so we spoke a lot about breaking it down. Now you see you've got to do, like, specific test teaching, you know, and I actually think it's a waste of time. But it's a foreign thing to them, and you have to do it...the numeracy stuff I probably started about halfway through Term 2. And, yeah, we'd do like one a week, so...talking about having a good go if you're not sure, at least getting within the area, so, and we did a lot of practice, especially the numeracy one, I found a really good book and it had quite a bit of multiplication, colouring in bubbles, and I felt that it really helped them in terms of that stuff. (Dan)
  - We've got our (Rich) Tasks that we do and it's (the Test) fair smack in the middle of your working time and it's like, for me this term has been really higgledy-piggledy because we've started something and then we've stopped and concentrated on the test for a little while and now we're trying to pick up what we did and it's really spoilt the whole atmosphere around the Task too, and, not like you spend every minute of the day concentrating on the Test, but there are things that you have to do...I find actually the whole multiple choice thing I've got to practice with them because they don't know quite know how to approach it, and it's not something we use. (Lee)
  - they're talking about doing these type of tests every year and I think that's a really, really bad thing because that's a going to put stress on kids every year and suppose there's always the problem of you know, do you teach to the Test? If you're doing it every year, I think that's a bit of a worry, because you do to a point have to teach to the Test, just to get them used to the, I suppose, the process of doing one, and if you have to do that year after year, I think that takes out too much I suppose hands-on teaching time, where they just I suppose have fun with the process of whatever they're doing rather than, "Oh there's something looming over our heads that we have to do." (Dan)

They talked about what happens when the results arrive:

- When the results of the Test come out at the end of the year, these kids go, "I can't even remember that test." So we'll go through that with them

- and say, "This isn't meant to be a torture test, but just to say 'How did you go? What things now?'" . You need some sort of follow-up in class. (Dan)
- Yeah, because they'll never get these (test booklets) back. (Lee)
  - Yeah, they keep saying to me, "But why can't we see how we did? We should be able to see." Because of course we always show them (results of school-based assessments)... they're almost kept up to date with how they're going, so that's really hard for them to grasp the idea that they're never going to actually see their test paper and go, "Oh, I got that one wrong, I know why I got that one wrong." (Allie)

### ***Teachers' observations of children's experiences of sitting the Test***

- My children told me it was easy. (Kate)
- I know which kids in my class are not going to do well... but I also know from that day (test day) which kids are not going to do well because you can just see. The way they were acting and how they were behaving after the test you could just see they weren't in the frame of mind to go in and do it and after looking quickly through how they answered it you can tell they've just gone through and gone, "I couldn't be bothered." And they've just answered it like that...Yeah I actually had, um, I don't know, this is just my own opinion but I think I had one girl in my class this year whose mother's and father's very school focused and she's great but she's actually started getting sick and suffering a lot of migraines and I think that was a bit of pressure. I actually had it sorted out before the Test, and from what I can see she did pretty well but I think a bit of it was stress. So I do think it happens... You've got to learn a new way of behaving. Kids do. You know it's the, "I'm by myself," you know, "I'm not allowed to talk," 'cause you know especially at this school we do a lot of group type stuff, and the Year 5s in particular are very chatty. I don't know about your class, but mine is, and so it's a new way of behaving and just sitting there for so long ...(Dan)
- But even the difference you know, the fact that they can't ask for help, because in a classroom situation you know, you can guide them, even in a test situation you tend to guide them, you know, whereas this is just so (different)...(Lee)
- Giving them cues, like, "Think about when we did this," and making them click onto an experience they've had, well you can't do any of that. It's standardised. And that, you know some teachers might do more of that than others, so I guess that's the nature of standardising. (Allie)
- Oh, some. You find some are very focused on it and so they talk and you know, "Oh, I'm really nervous," you know just about how nervous they are and what they have to worry about and whether they were happy with it and, "What did you...?" you know, "What was your answer for this?" and, "How did you do this one, how did you do that?" and that was actually, I thought was really good because I could see their thought process which is probably more valuable than their actual answer, because I can see, "Oh you got it that way," and they actually pick up their own shortcomings I

suppose, you know, they go, “I’m not very good in this area,” and what they did and that type of stuff, which is interesting to hear. And then other kids will just go, “No, I don’t want to talk about it.” ... (Dan)

- I’ve only had experiences where, I mean, I had one that I asked for special consideration for, who just entirely freaked out and would not leave, and I explained to his parents that he would not get special consideration if he stayed in the classroom but he could not bring himself to go to another place to sit the Test – he wanted to be in his room at his desk with me, and I wonder how it impacts on kids like your kids, Kate, who, you know, are displaced, and the kids who are Learning Support, who need us, being displaced with a teacher they don’t really know, to do these things, it seems to be extremely hard... (Allie)
- There’s an awful lot of sick kids at that time of year...and you look at them (sitting the test) and their eyes are all droopy and you think, “Oh, you poor little thing.” (Lee)
- And it’s such a long time for them to sit there suffering. (Kate)

### ***Teachers’ views of and beliefs about the value of the Test***

Teachers’ views about the mathematical content of the Test:

- When you look at it, it’s not all thorough anyway, to me. (Col)
- This year in particular I didn’t like the numeracy part. I didn’t think it was well-balanced. It didn’t cover as many aspects as it could have...very little number stuff. (Dan)
- Yeah there wasn’t much number...mostly measurement. (Kate)
- Heavily based in calculation. (Allie)
- It was worded really strangely this year I felt, and the kids got really confused with how it was worded... they had to do the “insides” (angles). (Dan)
- Some of it was ambiguous. (Kate)
- Even in the angles [one] as adults we all had huge discussions about that didn’t we?...You know the one with the angles. (Allie)
- We think, “Well if we teachers don’t know, how are the children expected to know?”

Teachers’ views about the validity of the Test:

- There’s those kids that don’t pick up things until July, you know, the first six months of the Year Level it’s like, “slog, slog, slog, slog,” then that last six months they start...the light comes on, you know. (Lee)
- In the real world, how often do we...? If we can’t do something we discuss it with others, so what are we really testing? Like, really if you all said you sat and discussed it, if I can’t find something I ask my colleagues or I search for it somewhere, I don’t sit down in an isolated room. I find it very frustrating that we test them that way when it’s not what we teach. That’s my input...So that’s not how we teach, we teach them to talk and discuss, that’s how they work now....we teach them to find information now. There’s no way you can have it all in your head.... (Yolanda)

- We give them strategies to deal with things they don't know. (Allie)
- Yeah, I think most of it's irrelevant.... when would ever they use a square piece of paper to measure angles, you know, it's got the 90 degree thing on there, but when...? It was foreign to them. (Dan)
- The thing is with multi-choice, I mean even the kids that really don't have an understanding have a one in four chance of getting it right. Purely because they've circled or coloured the correct [answer bubble] ... (Yolanda)
- Without the children showing their working out they really have no justification for why they've circled [a particular answer]. (Lee)

Teachers' beliefs about who gained from the Test:

- And again with the parents, it doesn't tell them what sort of question they've got wrong. And as you've said, there's no data gathering for us. It's an exercise for the government to gather data. (Allie)
- It would be really, really handy if it worked its way down. If the government got a bit out of it and the kids got a bit out of it and the parents got a bit out of it. It's lots of hard work. (Lee)
- For no return... They say that there are percentages of these tests where some of it is baseline and then it gradually gets harder to let those children who are very bright, shine. I just find that very frustrating for the children who aren't the shiners. (Allie)

### ***Teachers' interpretations of the Test results***

Teachers talked about how the children had performed:

- They came out pretty much exactly the same as their record cards... It's nice when that happens. It doesn't always happen. I've had a couple of parents say, "Oh it was nice to see that they (school results and Test results) were saying the same thing." It doesn't normally happen that way. Normally they look much worse (on the Test). I haven't spoken to anyone else (other teachers) so I'm interested to find out whether they think the same thing. (Allie)
- Interesting in a couple of places. One child, that's very, probably my best student, like if we had awards for excellence or that sort of thing I would have given him top student and he bummed... didn't do so well. And I've had that before. We had one child who really shows us nothing, and was marked really highly and we're going, "Hell!" so it's a bit of a contradiction there... there's one other child he's doing home schooling and he's supposed to be very good, and didn't show much. (Col)
- I was a bit surprised there were no, I suppose questions where everyone really, really struggled with, like generally where a lot of people got it wrong, the high kids. Some of my high kids got it right where you would expect [that] would happen. With numeracy stuff it was fairly OK, there were no big question marks or parts I was surprised at and generally as a group they did OK so... They did very well in the space (strand), I don't know why, actually number's probably the area they went down a little bit.

Nothing major, and that can be easily fixed by doing a lot more oral, that's how it was presented in the Test you know, orally rather than written version type thing...Everything else I was fairly happy and OK with. (Dan)

- A lot of them did very well, as I expected. And a lot came out lower, as I expected too. And a lot of them came out above the national benchmark, which is something different, I don't think it was on last year's (results), on the previous one...the dotted line, they came out like, a lot of them between the national and the Queensland one, so, that's pleasing. (Kate)

They talked about parents' responses:

- Some of them (parents) look at it and say, "Gee what's this dot?" and it's hard sometimes to follow as well, because you don't read it probably, so some of them come and say, "What's this here?" and you've got to try and tell them. It's a bit easier for us too when we see the actual summary of the stats, you can tell them in a bit more detail. (Col)
- They (Test results) only went out two days ago and I haven't had anyone (parents) say anything yet, but I was expecting one or two of the ones that I thought would do well, to come and have a chat with me but they haven't yet but I did try to explain to them that it was only a point in time type of test but I actually expect them to and I'll be a bit surprised if they don't come and talk to me because it would be good to chat to them about it and probably try to explain a few things I suppose. (Dan)

They talked about children's responses:

- (In reflecting on whether the children had talked about the results of the Test) No...you see I've had year 7s (previously) so they normally do. They'll get amongst themselves and look, they're a bit more conscious of it, but these (Year 5) kids don't really, there's other things going on at the moment. Christmas is coming. (Col)
- ...with my class this year I didn't hear much of it at all (children's talk about Test results)...mind you when I did hand them out it was pretty close to home time and so they wouldn't have had much chance and they didn't talk about it the next day...they actually spoke more about the sheets, the work and tests that we did in class and when I gave them back they went through, and their report card, so they did talk about that...(Dan)

They talked of the information they had gained from the test results:

- We've only had them (Test results) for about, probably 2 weeks and we just haven't had the opportunity to [look back at the Test questions]. It would be very beneficial to like go through, just have a couple of hours to go through it as a group and just say, "Well we need to work on this and this."...we're planning for next year, I mean I know that would fit into planning for next year but writing reports and computers...the network went down the server died...(Kate)
- I haven't had a lot of time to think about it, (Test results) you're at the end of the year...it's kind of good that you don't get time to dwell on it and

really, really think about it. I don't particularly like it. I just think it puts a lot of unnecessary stress on the kids...I have a much better idea myself, of what I see every day ...it's not a true reflection [of children's abilities], I think, generally, and I've seen perfect examples. I don't really see the purpose in it apart from, I suppose it's a good way...the next reporting system to go back to parents to show where their kids are up to...as I said, I don't think it's totally accurate so is that a good thing? (Dan)

### ***Teachers' suggestions for modifications to the Test***

- I don't understand why it's not at the end of the year. Does it really matter that the kids don't get the results until the following year? And then it would have been a much more comprehensive learning experience for them, because, as you (Col) said, you would chunk the learning so they're getting more meaning out of it. (Lee)
- When it comes down to the parents, they look at [the results] and they think that that is their child on a hundred percent scale, so they're looking at them [dots] and saying, "Oh they're down near the 10," and that's not what it means at all, but it's trying to explain that to a parent, it's really difficult. And then on such a large scale they don't know what it means, which as far as I'm concerned makes it something that's not useful for them at all. (Allie)

### ***Summary of teachers' conversations***

The teacher's conversations were focused on the impacts of the test on classroom life, and on individual children. They questioned the value of the Test both in terms of how it complemented or interrupted their teaching programs and the quality of information gained from Test results. They talked of the issues of managing the Test process including ensuring that the children were well-prepared, interacting with parents to clarify results, and helping parents to understand the results graphs and explaining discrepancies between school-based assessment and Test results. Their frustrations are captured in statements such as, "I don't think it's totally accurate so is that a good thing?" and "It would be really, really handy if it worked its way down. If the government got a bit out of it and the kids got a bit out of it and the parents got a bit out of it. It's lots of hard work," "...for no return."

## ***4. Parents' Conversations***

Conversations with parents took place shortly after the Test had been administered. Several of the parents spoke together in a group, while others talked individually with the researcher, or submitted written responses. After the children's Test results had been sent home, the researcher spoke with parents individually. Three of these conversations also involved the child (Theresa and Perry; Carol and Adele; Ursula and Sally). These child/parent conversations were particularly significant, since they offered opportunities for children and parents to reflect on the Test together and to gain understandings of one another's perspectives.

### ***Parents' interactions with their children in preparation for the Test***

- She (Sally) says, "Mum I'm having trouble with divide by. With division." And you know I sat down every night with her and we did lots of sums. (Ursula, Sally's mother)
- Coming up to it (the Test) I was...we were practising a bit more...but of course having no idea what's in the Test you're limited to what you can do. But Perry didn't come across as being too worried. I was the one that was worried. (Theresa, Perry's mother))  
(To his mother)That I'd get a bad mark? (Perry)  
(To Perry) I was worried...not that you wouldn't do well but maybe you'd find it difficult or something.... I suppose it's in the sense that everything's so competitive and the pressure is there to compete but not so much from the school itself [but] in a macro sense in society and everything out there... I mean the schools, they don't tend to, you know there's not too much emphasis I don't think on the competitiveness...they're pretty good with their information. But Perry likes to compete, he's great at sport and anything that he sees as a competition is a good thing ... so I could see him having fun in doing a test. (Theresa)
- Like at school she seems to be tense and nervous and quite quiet...At homes she's' like, "I can't do it, I just can't do it!" and you try to sit down and explain to her, "Britta look it's just a school thing, just pretend that it's just your normal school day," but I mean I know that every child is going to be different but that's just the way that it affects her. She seems to get very angry and uptight and that builds up into anger with her... She knows that she knows it but she knows that given a time limit, that's going to make her nervous and she may not get it all done because she's going to be slower.... Well at home, we just...she would bring home her maths book every couple of days because she had work to do in it and we'd just sit down with her and if she was ... as I said building up over the 2 weeks beforehand, she was getting quite angry and I'd sit down and you could tell she knew how to do the sum or you could read it and know that she could do it, but she would just sit there and just go, "I can't do it!" and just that's it, "Can't do it!" and you'd say, "Britta, sit down and read it. This is what it says. Do you understand what that means?" and, "No! I don't know what that word means," so you'd get the dictionary out. "That word means this, Britta. Now do you know what that question means?" "Oh, well that means I just go blah-blah-blah," and I think it's just the whole concept [that] it's timed, and it's a test and it's important and we do all this...I think her concept is that because we do all this preparation beforehand, that it must be really, really big. And because they build them up you know, "You're only going to have this long."(Marlene, Britta's mother)

### ***Parents' observations of their children's responses to the Test***

- My two were quite different in their emotions towards the Test. Andrew who is in Year 5 was not too worried. He experienced a little nerves but

otherwise was OK. Charlie who is in Year 3 worried very much about the outcome. He was very stressed about sitting the Test and doing well at the same time. Charlie told his teacher and myself that he was worried about sitting the test. This concerns me a great deal. (Ann-Marie)

- He (Perry) actually said this morning that the Year 5 Test was easier than the Year 3 Test, 'cause he'd learnt more, so that was interesting...Perry likes to finish first. It's a bit of speed thing in everything he does... (To Perry) Don't you? You like to finish quickly... I'm always emphasizing if you've got time to go back over your work, and you did, so that's good. That's great. (Theresa)
- Zarn was actually quite excited because she's a bit of an academic and she was quite excited about doing the test. (Tina, Zarn's mother)
- No he wasn't worried about it at all. He was quite happy, he was like, "We've got a test today Mum." On the numeracy one he tried to tell me that he was sick. And I said, "Well, you've got a test today. If you're that sick the school will ring me." But he was fine. (Olivia, Chris's mother)
- Kids do get really stressed. Extremely stressed. I know mine does. And if they don't do well at the Test, they think they're not up with everybody else. I'm quite concerned about her (Sally). She just doesn't get it...really, really behind...When she does these tests, wow, she just gets really stressed, really, *really* stressed and I know when I get her results they won't be very favourable. She just gets that uptight about it and ends up in tears, and it's just not worth it, because it highlights her ability, her weakness, which is maths. (Ursula)
- ...it's quite sad from the child's point of view, isn't it...she's (Sally) getting herself that stressed...I don't know. What do you do? (Carol)
- Well, we find that Britta (daughter) has trouble with maths at the best of times, not so much trouble but she can have something explained to her fully and then not grasp it but when she finally does it's like, "Oh now I can do it" but when she's put in that kind of situation where there's, when she knows there's a big test coming up she gets herself...she doesn't get nervous, she gets angry at herself because she knows that she knows how to do it but she's having trouble, I think, she's knows she can do it but she knows it's going to take her a bit of time and she gets concerned about the time limits on it like, they'd say, "You've got so many minutes to do Part A," and she gets all tense and worked up and at home that comes out as anger. (Marlene)
- I think she'd like to think that she could just do it in her own time. And not have to worry. I think that if she just got given that piece of paper, and said do it and didn't even know it was a test or anything, she'd be fine. But it's the whole 2 weeks' preparation beforehand and then you've got 5 minutes and you know it's important and you know you're going to be assessed on it, and it's going to be right throughout Queensland and she's saying, "Mum, it's all of Queensland"...I mean she loves coming to school, and it's only when she knows she's got a test, and it's not just that test, it's every term, but that test in particular I think because she knows

- that it's Queensland wide. And that there are time limits. And she is going to be assessed. And, like I said, that preparation time, for a couple of weeks before, she says, "More tests today Mum." (Marlene)
- I think they started talking about it in Term 2 that they were going to be doing it, and she started building up from there, it was like "It's that big one again, Mum. Remember when I did it last time?" and that's when we started pulling out the report then, "But you did fine," you know. She got as they say "caught in the net" (Year 2 Diagnostic Net) and that's when we gave her the tutoring but then, you know, after that she seemed to build up her confidence a lot, but I think just the whole idea that it's a test . ...I mean Britta could probably be one in a million, I don't know, but she really does get herself worked up about it. (Marlene)

### ***Parents' interpretations of the test results***

Parents described their children's results:

- We're very proud of Adele's results. She's got a high level for everything, right through the whole thing....yeah, so we're obviously very proud...and throughout the year, so she's on track I think... (Carol)
- She (Zarn) did really, really well on her results... this is probably surprising (points to lower number result) and that she'd be off the graph of what they'd expect (points to measurement and data strand) 'cause I would have just thought you know when you look at their maths work you think, "Oh generally they're probably all the same," (in all strands) but it does give you a breakdown and you realize that they can have a different understanding (in different strands). (Tina)
- He (Andrew) thought he did better in numeracy than literacy, he said he thought the numeracy was easy, but it was the other way around. So I wonder, are these results really Andrew, or was it just him panicking on the day? (Ann-Marie)
- We were actually quite shocked as to how far down the scale she (Britta) was. (Marlene) So I think in a way it's good but I just don't think the kids need to be compared that way. Like every child's different and every child needs to learn in their own way and at their own pace and I think for children to be shown that this is where the Queensland average is but you're just below that or you're above that, I don't totally agree that that's a good thing. (Marlene)
- Chris supposedly loves English and loves maths... His maths, oh, numeracy result's just above the middle line, so he's actually in the higher side of the average in numeracy and the lower side of the average in English so I don't know...He was very surprised by even his report card because his report card says that he's achieving at a higher level in parts of the numeracy as well. But he thinks he's no good at maths. His dad said, "Mate, you can't tell me you're no good at maths."..."You might not be much good at remembering your times tables," we said, "but when pen comes to paper, you know what you're doing." (Olivia, Chris's mother)

Parents talked about their children's responses to the results:

- He just went, "These are the results for my testing Mum," and I was, "OK, how'd you go?" "I did better in maths than I thought." But yeah apart from that he goes, "Oh the rest of it's just normal." He's still a bit shocked I think. (about how well he did for numeracy). He got what he was expecting in spelling, he's way above the state average. And I expected that anyway... his numeracy was about the same, I think it's just laziness (that he doesn't do better). (Olivia)
- We got her results back yesterday. Sally was pretty upset with the results. Crying. But I tried to explain to her that it didn't mean as much as what her general report card meant because the teacher knows what she's been doing throughout the year. But when she saw that her dots were all below in everything, she was very upset about it... What did you say to me yesterday? "I'm so glad in Year 6 we don't have to sit it next year," didn't you? (Ursula)
- ...you know we talked about it last night and she was really excited you know seeing how well she did. So for her, you know it was just like, um she'd been looking forward to getting the results. She is a bit of an academic, I think she...it comes from her sisters who are academic so she just tries to achieve at their level. (Tina)
- Before he looked at the results he was worried that he hadn't done very well. (Ann-Marie)
- ...she was a bit upset as well because obviously she'd looked at it at school and seen other kids and they'd seen hers and when we went through it with her she said, "Oh Mum, mine was lower than my friends and that was really bad," and I said, "No, that's OK, as long as you tried your best." I don't think she was quite expecting it to be where she was, and I think that was quite a shock for her and for her to open it in front of other kids, who've then gone, "Oh look where your dot is!" you know...it was a bit of a shock I think...I think for her it was a bit disappointing 'cause she felt that after the Test she came home so confident and so you know, "I've done so well," and then to see those dots and to see that she hadn't done so well and trying to explain to her that it's all over Queensland. "It isn't just your class or your school. It's all over Queensland," doesn't make a difference to her. Like she just sees it as, "I'm not even in the middle." (Marlene)

Parents talked of the impacts of the Test results on the family:

- I was impressed. It makes a lot of difference with Chris's Test results to my oldest son, 'cause he was well below the state average in everything. (Olivia)
- But Leo, he's Grade 3, and he sat the Year 3 Test this year obviously, and we're very disappointed with his results. He's been doing really, really well (in class). (Carol, Adele's mother)  
Maybe it was because it was like a test, that he got a bit nervous. (Adele)

I don't know, I'm going to see his teacher about it this afternoon because his writing, see how they've got that here (benchmark) he's back here. From his report card, from his teacher he's at the top of the class and he doesn't have a problem. And if that's the benchmark, that they should be here at least, and he's back here, to me he's behind the eight ball. So we were very disappointed in his results for that actual test. That's why I say if there's a big difference between their class work and that test, to me, that test tells me the story that what's happening class is not actually happening. You know what I mean, what I thought was happening, is not actually happening otherwise he would have got better results. (Carol)

- ...in the family environment it does damage, like she (Sally) said, her brother's in Grade 3 and he was like off the scale and he was, um, off here like where they put the big arrow, which then makes them feel inferior to their younger brother...They've got to try really hard...it causes friction between the siblings, and embarrassment, like yesterday I was doing Ingrid's, I look at their reports individually, I don't do it together, and Ingrid was sitting there and telling Sally to go away [saying] "I don't want you to look at mine." (Ursula)
- I think that's something that if she sees it (her younger brother's excellent Year 3 Test results) then we'll have to deal with, but she knows that everything comes easy for him and she knows that that's just the way it is for her and him, and she doesn't try, she doesn't tend to compare herself to him, because she knows that she struggles and he doesn't. And I think we're really lucky with Larry as well being the kind of child that he is he doesn't rub it in to her, like he doesn't say, "Oh, look where I am, Britta," or anything like that. He doesn't say anything about it. If she brings it up he says, "Oh well," you know, and I think we're very lucky in that aspect to have him that way. (Marlene)
- But he's (Andrew) a little sad that (Charlie – younger brother) may be a lot quicker than him at maths. Charlie did really well (on the Year 3 Test). I haven't shown him Charlie's results. I don't want them to compare, but it's how to talk to him about it...I suppose it's a matter of sitting down and trying to explain where it's a bit low and you wonder why. (Ann-Marie)

Parents talked about the accessibility and value of the Test information:

- I think it's easy to read, I mean, I think it's a good feedback and the child can read it too. I think it's easier for a child to understand. The way it's been outlined, and for parents, you haven't got to go into a whole lot of reading, it's there, it's visual, it's straight in front of your eyes. Yeah, no explanations about it, a little bit of information but I went straight to here (results graph) and I'm sure a child does too, and most parents would, that's all they want to know, they're not interested in the rest of it by this stage. (Tina)
- I mean if you read through everything and look at it I guess it's not so hard to read, but I don't really want to know where my child is as a dot in Queensland. Do you know what I mean? My child's not a dot. The

comparison to me I don't think is fair. I just don't think it's something that the kids need to go through at that stage in their life... You don't actually get Test results, you just get a dot on a scale. You don't get to see where she's gone wrong or what part... you know it says, "Measurement and data," but... do you know what I mean?... it's just a broad scale. It's so long ago they did the test. They don't get it back to see where they've been marked, and they don't even get told who marks them, do you know what I mean? Yeah, it's sort of a big secret as to even where they go to be marked or... like the teachers just say, "Oh no, they're not marked here. They're all sent away." (Marlene)

- There's not enough detail in the results... I would like to know a lot more... If I could sight his test paper to see where he had problems.... where he went wrong on questions. I can't pinpoint what went wrong so I can't help him. Is it because of the teachers' inconsistent monitoring of him? I'm not sure whether I should be concerned... You feel like you haven't been able to help. (Ann-Marie)

### ***Parents' views of and beliefs about the value of the Test***

- About all the revision they do beforehand, I think that's really important. They need to have a standard that they can reach and so for the kids in that class that need to be brought up, they need extra time... I think that's what is important about the numeracy testing is they actually find out where they're sitting with the state and that's what they want to know... they want to make sure the school is delivering in the area of the school, so that your child ... the school next door is up to scratch. I think if they don't do something like they're doing, children will... a whole grade of children could slip through the cracks, and get to grade eight and not doing well. (Tina)
- You don't get any result of the school. Like some schools, they might be traveling the children at a far better rate than another school. And then you could think well, "Is the school having a problem, or have they just got a batch of children who are medium?" And that would give you an idea too I think on the overall school (results)... I'd be interested in knowing that because then you could see then well maybe there's a lot of children struggling in certain areas at the school and maybe there's a breakdown and you could pinpoint the breakdown and that kind of thing. (Carol)
- I wonder if these tests are worth the stress they put on the teachers and students. In Years 3, 5, and 7 the children also have rich tasks which takes up a tremendous amount of time as well as their daily school work. I think the Year 5 Test puts the teachers and students under a lot of extra pressure. (Ann-Marie)
- I think after seeing her results now she's sort of even like now, just the normal test is going to be daunting to her, simply because she's not where she thought she was and even if she thinks she's got the answer right she's going to second guess everything she does. And that's not a bad thing, to revisit recheck her work and stuff like that, it's not always a bad

thing, but if she's got it right, she'll, you know, if she's checking it, I know myself if you keep checking the same thing over and over, in the end even if it's right you usually tend to change it. (Marlene)

***Parents' concerns about, and/or suggestions for modifications to the Test process***

- A lot of work goes into preparing the students for the Test. I think the revision work is very important but I do think the students at the top of the class academically should be given extension work while they are doing revision. (Ann-Marie)
- I found a big problem when I was helping in the classroom...you could get some really bright kids in maths, you give them a piece of paper and say, "You've got to read the question and now answer it," because they couldn't read very well, they would fail their maths and I think that is so sad. I struck a heap of boys in A's class and then again Grade 7, and they're bright, eh? They're right on the mark, but if I can say to them, you know whatever it is, and they can just, "Vroom!" in their head, or you know if you give them those little wooden blocks and stuff, they get the answer, but if you give them a piece of paper with it written on and then say, "Well, what's that word?"... (Carol)
- I wonder how much preparation goes in because I don't know if it's a concerning thing or not but how much time must they spend on preparing for every exam when their normal schoolwork is pushed aside for that? (Carol)
- I think that that's what bothers her is the preparation beforehand, maybe if that could be just even a few days rather than a couple of weeks, I don't know if that would help or not but I just find for Britta the whole building up period really gets her worked up. (Marlene)
- I think it is a really stressful time for them and I think maybe if they could, you know, somehow eliminate the time limits would make it better for the kids, well ones like Britta anyway...(Marlene)
- You shouldn't have to go out of your way to get your child to do testing so you know what's going on. The teachers should be doing that anyway. And informing you. That's what they're here for. They should be informing you and saying, "We've done a little test on little Sammy and he's lacking in this area and that area or whatever." They should be doing that, we shouldn't really have to ...I know we've got to support it and help it along but we can't do everything – teachers should be doing that too. They should be bearing responsibility ... they should know. They should be doing the tests themselves. Then they could ring and say Sammy sat this test today and he's not doing so well in the punctuation area or his spelling's excellent or whatever. They should be doing that. (Ursula)
- Should they have it every year? I mean they only do it Grade 3,5 7 and it's from Grade 3 to 5, there's a big gap there, you wouldn't want to miss. (Carol)

- I don't agree with comparing children. And I think that that's what this is doing, it's comparing children against each other, and you know, I know some children's ability levels aren't as good as others, but I just don't think that the children need to know who's better than who, because they get their report cards and, "Where did you get on this?" and I just think that's wrong....I mean if they need to compare with the other kids that's fine, but maybe, I don't think the parents even need to know where your child sits as a dot in Queensland if you understand. Like I think that the parent interview gives you enough insight into where your child's going and where they're at, for the parent I think that's enough information rather than to know where they are in Queensland on an average, like, I just don't think that it's something that really parents need to know. Maybe schools need to know it, so that they can adjust classes and you know, spread the children out over their ability levels, but I don't think parents need to know. I don't think the children need to know at all. But report cards go to the children to be brought home to the parents so if you're sending it to the parent through the child, of course they're going to look at it. I mean if they want to tell the parents send it via mail or something so the children can't get it. Even as a ...post it on a website with a password or something like that, that you can access your child's information if you wish to. (Marlene)
- Maybe do it (the Test) as an ability group, I mean split the classrooms up and the high achievers here, middle, lower, and give them different time limits according to their ability. I don't know. I don't know whether that would work, but it would have to be worth a try....Yeah, I mean someone who's at the upper end is going to take a lot less time than someone who's at the lower end and they've all got the same amount of time to do it in, and surely they could work out if they get 15 minutes and they get 30, and they get them all done in their 15 and they get them all done in their 30, then surely they could still work out where they sit as an average. I don't know. (Marlene)
- ...my biggest worry was the fact that they can compare them like I don't think kids of that age need that and then as they get higher like even Year 7 they do it, they do the same Test so they're going to be comparing it as well and that's going to be worse for them I think. So yeah I think my biggest concern is the fact that the kids get handed these tests to sit there and compare with their friends. And that worries Britta as well and she stresses about the test to begin with...and then for her to be able to compare it with other kids and to see she's not doing so well is really upsetting to her, and yes, that's a bit of a worry for me so I think if there's another way that they can hand those results out, even in a sealed envelope or some, you know, would be better than just handing the kids their tests to say, "Here you go, here's where you sit." So that the parents get the chance to have a look at it and then go through it with the children before the kids get it at school and open it up and go, "Oh!", you know, I just don't think that's such a great idea, really. (Marlene)

- But what happens with these tests? When they see a student's test like this? Where they've got an overall rating that's below the benchmark? What does the government then do about these?...Because I mean there's got to be a purpose to this testing...I mean to put kids through the stress and then just leave them there and think, "Oh well," if they're under the benchmark, "Oh well," that's the end of it. There's got to be a reason for doing it. There should be extra tutoring or something to the select group of children that are basically below the benchmark, and they should be trying to get them up there....It's basically all about what she (Sally) feels about it. It's not what I feel. (Ursula)

### ***Summary of parents' conversations***

The parents' accounts told of some children who coped easily with the Test and others who didn't. Parents spoke of the ways in which they had encouraged their children to face the Test with confidence, supporting children who were disappointed with their results, and dealing with the pressures created within families where some siblings outperformed others. While some parents were happy with the Test results and felt the Test information was valuable, others were disturbed by the outcome and struggled in their own ways to make sense of what the Test results were telling them asking such questions as, "But what happens with these tests?" and saying, "I would like to know a lot more... If I could sight his test paper to see where he had problems..." Some parents saw the Test as a useful assessment tool that pinpointed their children's strengths and weaknesses - "that Test tells me the story that what's happening class is not actually happening," and believed it should be retained or even extended. Others believed that the Test created excessive stress for their children, that it had detrimental effects on their children's self-esteem and confidence, and that it did not lead to improved outcomes in their children's learning of mathematics: "I don't agree with comparing children... I don't really want to know where my child is as a dot in Queensland. Do you know what I mean? My child's not a dot."

## ***5. Summary of findings and Discussion***

In this study, participants' testimonies highlight successes and demonstrate how the Test can provide participants with a sense of confidence and satisfaction. But they also reveal debilitating anxiety, disappointment and loss of confidence for a significant proportion of children. The "failures" in the Test process are faced not only with the stigma of "lower" achievement, but also with the challenge of trying to understand the "failure", and finding effective strategies to improve their results.

This schools' account strongly suggests that the design, administration and reporting of the Aspects of Numeracy Test must take account of the complex of social as well as educational concerns in standardised testing. Recent research shows that lack of achievement in primary mathematics is an ongoing issue in

many countries including Australia,<sup>7</sup> and is closely linked to lack of confidence and waning interest in the subject. If, as this study suggests, The Year 5 Aspects of Numeracy standardised test contributes to a significant proportion of children's loss of belief in their capabilities and a growing aversion to, or fear of mathematics, then its potential to contribute positively to children's achievement in the subject will be substantially undermined.

The study highlights a need for further research that will:

- (a) enable school communities, particularly children, to voice their experiences, opinions and concerns about The Aspects of Numeracy Test and other statewide education policies that affect their lives, and
- (b) provide educational policy-makers with information to improve assessment design and implementation, and in turn, enhance educational outcomes for all children.

### ***Participants' views of the value of the test value of the Test***

Varying views were expressed about the value of the Test. School managers, teachers, and some parents strongly questioned the merits of the Test on the grounds of its disproportionate disturbance of the everyday running of the school, its unreasonable potential to shape community views about the school's academic quality, its failure to yield educationally useful information about children's "real" mathematical skills and understandings, its negative impacts on children's wellbeing both in terms of its creation of stress before and during the test, and its impact on children's self-esteem and mathematical self-efficacy beliefs.

Some parents appreciated the ways in which the Test enabled them to understand more about their child's achievements in comparison with those of other children in the state. They felt the information was useful. All of them were concerned about the impacts of the test on those children who lacked confidence and became very distressed. There was also concern about the effects of test preparation on regular learning routines. A number were opposed to aspects of the testing process and called for change.

Most of the children accepted the Test as an inevitable part of schooling. Some found it exciting because it gave them an opportunity to demonstrate their skills, or to confirm their mathematical capabilities. Others found the experience worrying, or even deeply distressing because they feared that they would not be able to answer the questions or that the test would either reveal or reinforce their lack of ability in mathematics.

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<sup>7</sup> Thompson, S. & Fleming, N. (2004). *Summing it up: Mathematics achievement in Australian schools in TIMSS 2002*. Camberwell, Victoria: Australian Council for Educational Research.

### ***The impact of the Test on participants***

It is clear from participants' statements that the Test impacts significantly, albeit in varying ways and to varying degrees, on the lives of all participants. These impacts include the school managers' efforts to balance community perceptions of the importance of the Test, its effects on the school image, and realistic perspectives on the educational value of the Test, teachers' efforts to ensure children have a fair go at the test in spite of its disruptions to their teaching programs and their own concerns about its validity as a method of assessment, parents' efforts to encourage, reassure, and support their children through the entire Test process, and children's feelings of anticipation, excitement, "butterflies" or "nervous, too much nervous", in undertaking the Test, and in receiving and interpreting the results.

### ***Participants' recommendations for changing the Test***

Participants made a number of suggestions for modifications to the Test based on their concerns about its limited capacity to provide useful information, its negative impacts on children's wellbeing, and its disruption of the implementation of a coherent Year 5 mathematics program: School managers' suggestions included the view that the Test should be less concerned with producing statistics for statewide comparisons, and more focused on helping schools identify and cater for students' real learning needs in mathematics. Teachers believed that the Test should be more closely aligned with the current curriculum framework emphases on working cooperatively, and developing research and problem solving skills within meaningful mathematical contexts. Children offered a range of ideas such as Test questions that involved less reading, more questions involving drawing, less time pressure, a wider window of opportunity to sit the Test, more questions on topics to which they could relate, the option of sitting the Test or not, and results delivered more rapidly and meaningfully.

## ***6. Implications of the research***

The reflections of the four participant groups – school managers, teachers, children, and parents combine to create a rich picture of how the Aspects of Numeracy Test is experienced within a school community. Experiences were sometimes contrasting, concerns conflicting, and suggestions for change divergent. As one parent noted, "You're seeing scenarios of so many different people...like every child adapts in a different way, and I mean it would be hard for us to come to a level playing field to suit everybody." (Carol)

Across the unique accounts, four distinct themes emerged from the participants' testimonies. These warrant further investigation and indicate areas where many participants believed change was needed. They were: adverse effects of the Test on student and family wellbeing; negative impacts of the Test on the school and teachers; the limited quality of information gained from the Test, and the effects of the Test on delivery of Year 5 mathematics programs. These are outlined below, with participants' suggestions for improvements.

## 1. Adverse effects of the Test on student and family wellbeing

### ▪ Issues

- the teachers', parents', and students' accounts provide compelling evidence of moderate to severe emotional effects of the Test on a significant proportion of the children
- several parents reported the difficulties created by sibling comparisons within families because of the Test
- while most children reported at least some degree of nervousness, there were reports from teachers and parents of debilitating effects on the mental health of some children
- participants reported children's loss of confidence and diminished mathematical self-efficacy beliefs following the Test results
- in light of Australian Federal and State governments' commitments to child wellbeing through the United Nation's Convention on the Rights of the Child<sup>8</sup> and the Queensland Commission for Children and Young People and Child Guardian's policy on Safe Environments for Young People<sup>9</sup>, the levels of stress produced by the Test can be seen as failing to uphold children's right to physically, psychologically and emotionally safe learning environments.

### ▪ Suggestions for change

- making the Test voluntary rather than compulsory
- allowing children to elect whether they sit the test under "exam" conditions or without a time limit
- redesigning the pencil-paper multi-choice format of the test to allow for children to show their mathematical understandings in a variety of ways
- presenting the results to children in a non-comparative way, if at all
- making return of results optional for parents, and possibly emailed, or accessible from a website with a password for those who wish to see them

## 2. Negative impacts of the Test on the school and teaching programs

### ▪ Issues

- school managers were concerned about the ways in which the Test results contributed inappropriately to the school's academic reputation
- school managers were concerned about funding issues related to the school's overall performance in the Test
- while teachers did not regard the Test as an effective method of assessment, they worried about the implications of the Test results

<sup>8</sup> United Nations, (1989). *The United Nations Convention on the Rights of the Child* [Online] Available at <http://www.unhcr.ch/html/menu3/b/k2crc.htm>

<sup>9</sup> Commission for Children and Young People and Child Guardian. *Safe environments for young people* [Online] Available at [www.ccyipc.qld.gov.au/pdf/risk/workbook/workshop\\_brochure.pdf](http://www.ccyipc.qld.gov.au/pdf/risk/workbook/workshop_brochure.pdf)

and adopted strategies to promote in-school assessment as providing more valuable information about children's achievement in mathematics than information from the Test

- school managers and teachers noted issues with timing of the Test

- **Suggestions for change**

- uncoupling Test results from school funding
- making the Test voluntary
- EQ and QSA providing support for teachers to interpret the Test data in order to inform, rather than rank, their teaching
- rescheduling the Test to lessen the impact on classroom programs and maximise the usefulness of the results

### **3. The limited quality of information gained from the Test**

- **Issues**

- children and parents experienced difficulty in understanding what the Test results really "told" them
- there was no direct information about children's mathematical processing (thinking reasoning and working mathematically)<sup>10</sup> provided through the Test, in spite of claims to the contrary<sup>11</sup>
- the Test did not assess the mathematical skills emphasized in the syllabus and by the school
- excessive stress produced by high stakes assessment methods such as the Aspects of Numeracy Test is regarded by educationalists as sufficient reason to question the validity of the results<sup>12</sup>.
- students and parents were unable to connect the results with the Test questions

- **Suggestions for change**

- returning Test papers so that children and parents can make greater sense of the results
- redesigning the Test to include opportunities for children to demonstrate their mathematical processes including, "identifying and posing problems, selecting and applying appropriate strategies to find solutions, conjecturing and justifying, applying and verifying,

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<sup>10</sup> The State of Queensland Studies Authority (QSA), (2005). *About thinking, reasoning and working mathematically*, states that, "Thinking, reasoning and working mathematically is an essential element of learning for, learning about, and learning through mathematics." U131.

<sup>11</sup> The State of Queensland (Queensland Studies Authority), (2005). *Queensland Years 3,5,and 7 Literacy and Numeracy Tests Reporting Handbook*. Brisbane: Queensland Studies Authority.

<sup>12</sup> Wiliam, D., Bartholomew, H., & Reay, D., (2004). *Assessment, Learning and Identity*. In P. Valero & R. Zevenbergen (Eds.), *Researching the socio-political dimensions of mathematics education: Issues of power in theory and methodology*. Dordrecht: Kluwer Academic Publishers.

generalizing, using mathematical models, communicating ideas and solutions and reflecting on learning.”<sup>13</sup>

- reducing the excessive stress factor by allowing schools, teachers, and children to select assessment tasks appropriate to teaching and learning approaches implemented at the school. from a bank of standardized assessment items, with annotated exemplars of typical student responses

#### 4. Adverse effects of the Test on Year 5 mathematics programs

##### ▪ Issues

- because the Tests are regarded by many as an important, valid and reliable measure of a child’s performance, school-based assessment in mathematics is not taken as seriously by some participants, particularly children
- the test interferes with effective long-term planning in mathematics and fragments curriculum delivery as teachers try to “cover” the strands of the syllabus in a shorter time and in less depth than they normally would
- the test does not support the school’s focus on New Basics and enactment of Rich Tasks
- potential learning time is lost through teachers’ need to coach the children in test technique that is only uses at Test time

##### ▪ Suggestions for change

- remove the “grading” element from test results to reduce it’s potentially inappropriate use as a gauge of children’s overall mathematical skills, understandings and knowledge
- encourage teachers to use other nationally recognised methods of assessment in mathematics and educate parents about the need for effective assessment in mathematics to take many forms and to be gathered over time<sup>14</sup>

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<sup>13</sup> The State of Queensland Studies Authority (QSA), (2005). *About thinking, reasoning and working mathematically*, states that, “Thinking, reasoning and working mathematically is an essential element of learning for, learning about, and learning through mathematics.” U131.

<sup>14</sup> The State of Queensland Studies Authority (QSA), (2005). *Mathematics: Assessing and reporting: Assessing learning*. A3