

Assessing and Reporting against National Standards in Literacy and Numeracy: Towards an Educationally Sound Approach

The New Zealand Assessment Academy

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Introduction

The Education (National Standards) Amendment Act 2008 set in place the the New Zealand's new government's ten-step Crusade for Literacy and Numeracy (Hon. John Key, 13 October, 2008). As part of that Crusade: (i) national standards will be set in literacy and numeracy; (ii) every primary and intermediate student will be assessed regularly against the national standards; and (iii) every primary and intermediate school will report to parents in plain English about how their child is doing compared to national standards and compared to other children their age. Where it is indicated, targeted funding will be provided to enable schools to give assistance to the students who do not meet national standards.

The crusade is the government's response to "one in five students leav[ing] school without gaining the basic skills they need to succeed in education, work, and their daily lives". (Ministry of Education, (2009, p.1) Hence, national standards aim "to improve student achievement in literacy and numeracy by being clear about what students should achieve and by when" (Ministry of Education, 2009a). Each standard states the expected level of achievement of each child compared with others at that age and level across New Zealand. Appendix 1 contains examples of draft year one national standard¹ in reading, writing and mathematics. "Assessment information will show how teachers need to support students so they can move further toward the standard if they are not yet meeting it, and how teachers can challenge and extend children who are achieving the standard." (Ministry of Education, 2009, p.1)

During 2009 there has been intensive and widespread discussion and debate and Ministry-led public consultation. The New Zealand Assessment Academy (NZAA) has contributed to the discussion in order to inform the development and implementation of the standards and the accompanying assessment and reporting systems. This paper discusses key principles that the NZAA considers should underlie the design of an

¹ The standards are currently under review on the basis of feedback from consultation and will be published in October 2009.

assessment and reporting system based on national standards, identifies three key issues that have potential to threaten an educationally sound approach to assessing and reporting against the national standards, and presents suggestions that have potential for enabling an educationally sound approach rather than educationally compromised one.

The introduction of national standards in education, and the assessment and reporting of student and school-level data to parents and the Ministry of Education, constitutes a major break from current practice in New Zealand (Gilmore, Crooks, Darr, Hattie, Smith & Smith, 2009). In and of themselves, the national standards are 'neutral', and it is the "quality of the standards and the use to which they are put that makes them a positive or negative force for education" (Timperley, 2009). There is plentiful evidence from England and the USA that such a system of assessment and reporting can have serious negative impacts on schooling and school children. The rhetoric of the government's intention to improve the educational provision and outcomes for students through national standards needs to be matched by assessment and reporting approaches that support this intention in reality. As has been the case in England and the USA, the introduction of national standards has had serious negative consequences when they have been 'captured' by an accountability agenda. Indeed, much of the public debate about and resistance to implementing national standards in New Zealand has centred on the very threats that have emerged overseas: the use of a national testing strategy, the construction of league tables of school performance and quality, and the school planning and reporting systems which promote accountability rather than improvement.

In its earlier paper (Gilmore et al., 2009, p. 136), the New Zealand Assessment Academy (NZAA) identify eight key principles that should underlie the design and implementation of national standards, and of the assessing and reporting of students' achievements in relation to them.

1. *Promote the educational progress of all students...* The focus of educational policy and practice relating to national standards should be on maximising benefit and minimising harm for students.
2. *Optimise the positive impacts of the strategy on students' learning and educational experiences ...* We need to promote a positive and professional approach to teaching and learning, one with both rigour and flexibility.
3. *Minimise negative impacts of the strategy on students' learning and educational experiences ...* national standards should complement, rather than compete with existing initiatives that have been shown to improve students' learning.
4. *Make the standards evidence-based and achievable.* The national standards should take careful account of current levels of achievement, and promote goals that are challenging but achievable (and therefore motivating) across the wide range of students...
5. *Ensure that teachers' professional expertise is utilised and enhanced.* National standards need to be stated in a way that they do not become prescriptive of teachers' work on schools, but supportive of it. ...

6. *Acknowledge that parents have a right to be well informed.* Parents should receive trustworthy and meaningful information about their children's achievement and progress so that, together with the teacher and child, they can identify aspects to celebrate and aspects needing attention...
7. *Adopt a solution that particularly suits New Zealand.* There should be sufficient flexibility and choice to fit with New Zealand's model of self-governing schools and the corresponding flexibility built into the New Zealand Curriculum...
8. *Value multiple sources of evidence...* in order to compile as comprehensive a picture as possible of the areas of progress, areas requiring attention, and what the particular progress looks like.

The overarching aim of implementing national standards, then, should be to improve teaching and learning and raise student achievement through a focus on literacy and numeracy which are foundation skills required to access the curriculum throughout schooling. Consequently, the intention of assessment and reporting against standards should be firstly, to support teachers as professionals and schools as the major agencies of reporting, to develop and use assessment practices that enhance teaching, learning, assessment and reporting; and secondly, to ensure parents receive meaningful information about their child's learning so that they are better able to support and contribute to that learning.

Improved teaching and learning is more likely to occur if the design and implementation of the national standards build professional expertise and confidence so that students, teachers and schools are able and motivated to access, interpret and use information from quality assessments in ways that affirm and further learning ("assessment capability" (Absolum, Flockton, Hattie, Hipkins, & Reid, 2009)); does not overemphasise standardisation by limiting assessment to a single 'national' test, rather than allowing for choice, flexibility and innovation in order to provide a rich and defensible picture about performance; and is manageable, does not impose undue burden on the work of teachers and schools, and is aligned with other initiatives such as the implementation of The New Zealand Curriculum.

Hence, any model needs to build on:

- The current NZ curriculum including the learning progressions and mathematics framework, and other supporting resources;
- Schools continuing to operate as self-governing. That is, the school has primary responsibility for itself and therefore needs to be the 'evaluation unit of analysis'. The system should promote diversity while at the same time maximizing and sharing excellence;
- Students and teachers enhancing their schools; and
- Accountability actions and consequences that enhance teaching quality and public acceptance of quality of schools and schooling in New Zealand.

The model of standards relates to:

- Clearly described national standards, which include multiple examples of student work to elaborate expected student performance and reflect quite diverse patterns of strengths and weaknesses.
- Teachers' overall judgments of a student's performance based on evidence from a range of sources. It is the judgments *not* the assessment data that is stored and used for student- and school-level reporting.
- Performance being measured against descriptive benchmarks that 'best fit' or 'best describe' a student's performance against the standards at a particular point in time.
- Assessing and reporting both level *and* rate of student achievement, with greater focus and importance given to the latter. Measures of progress sets fair challenges for all students and schools, whatever their circumstances or decile levels.
- Standards that are have been validated by evidence and experts using standard setting procedures.
- The Education Review Office (ERO) reviewing, within a school, the *quality* of these judgments, the sources of evidence used and the moderation processes used, and these processes and debates being very transparent to all.
- Quality assurance and moderation procedures that will be most effective in promoting school improvement and raising student achievement if they promote the development, and use of, teachers' professional judgment and decision-making and encourage the use of effective assessment practice and effective self moderation.

The model for reporting relates to:

- Communicating in plain language to students and parents, a student's level of performance, their progress; an explanation of particular strengths and weaknesses, and suggestions for the next learning steps.
- School-level reporting focusing on the aggregation of individual student progress; an analysis of the average and variation in individual student progress, and description of relevant contextual details about the school and its population for interpreting the aggregated data.
- National-level reporting that describes students' performance against the national standards nationally. This is best achieved through careful random sampling procedures, rather than through centrally collected student-level data supplied by schools.

The NZAA (Gilmore et al., 2009, p. 140) argue that a useful student-level, school-level or system level report needs to be:

1. *Trustworthy*... This means that the information has multiple sources of evidence (e.g., nationally validated assessments geared to the NZ curriculum, student work samples showing growth and level of performance), has good validity, is reliable, and is a fair account of students' level and rate of progress whether for an individual, class/school, or year level.
2. *Comprehensible*. The audience of the report card needs to be able to readily understand the information that is being communicated to it...

3. *Relevant*. The audience of the report needs to be able to receive information that is useful and meets its needs...
4. *Evidence-based*, that is, reports assessment information and gives examples of typical achievement/progress.
5. *Uses a weight of evidence*... When multiple sources of evidence are assembled, evaluated, weighed up against each other, it is possible to provide a more balanced and well-rounded indication of student achievement/growth.

Avoiding league tables

Most league tables provide misleading information to parents, and distort the discussion away from what really matters in the teaching and learning of students. Unlike Australia, the New Zealand government will not legislate against the media creating league tables. It is not certain that legislation would indeed be a successful deterrent.

The approach taken to national standards needs to *minimize* the effects of league tables. Two elements to achieving this is:

- To ensure that the school review is not merely the aggregation of the information from students. Thus, schools should provide an overall teacher judgment about *all* learning areas (based on evidence) as schools are required to undertake more than reading, writing and mathematics. The quality of evidence for reading, writing, and mathematics will need to meet a higher standard of accuracy.
- ForERO to evaluate the quality of the evidence and processes used in a school that leads to these overall teacher judgments as one of the key indicators of the quality of the school along with ERO evaluations of other information such as ... the quality of the teacher overall judgments about other learning areas, the school environment (class/school climate), the school leadership and vision, the school planning and reporting, such as with the New York City School report model (NYC Department of Education, accessed 2009).
- Adopt a school planning and reporting mechanism that focuses on school improvement, rather than compliance and accountability.

In New Zealand, 'planning and reporting' legislation requires schools to individually identify achievement targets for their school (because they know their students well) and to provide evidence to their Boards of Trustees and the Ministry of Education of how these targets have been achieved. It will be important that external reporting does not jeopardise the internal targets set by schools. The problem with this reporting mechanism is that it is essentially a paper transaction between each school and the Ministry without the added insight that ERO can gain through its visit to the school and the enquiries that it can make while there. In addition, it is very unclear that the Ministry has the staff to make something useful from their end of the process.

The current planning and reporting mechanism has a focus on identifying targets/goals for the coming year and strategies to reach them (planning); and then an account of the variances (reporting). The use of ‘targets’ and ‘variances’ clearly indicate the need for goals which are quantifiable and can be demonstrated numerically. It would be possible for Boards of Trustees to meet their requirements to plan and report to the ministry and report to their community, by issuing a more textual account in relation to:

- The goals set and achievement against those goals;
- Areas of success and concern;
- Actions taken/to be taken;
- Resources required to enable this.

NZAA suggests that the planning and reporting mechanism should have the following elements:

1. *Each school sets their own goals* and reports on their success with those. The Ministry must not be able to demand reporting on particular goals, as this makes planning and reporting vulnerable to league tables.
2. *Allow flexible-reporting formats* best suited to schools’ needs, again to avoid the possibility of readily-made comparisons of schools based simply on student achievement data.
3. *Be subject to review by the ERO, rather than be submitted to the Ministry.*
Because the evidence schools give to ERO is not discoverable through the Official Information Act (only their final report), there is not a problem in schools showing ERO their statistics on the standards (both current levels and annual gains). It is ERO rather than the regional Ministry offices that have the expertise for making evaluative judgments about necessary support.
4. *The ERO report contains an account of its judgments in text* about the level of confidence in the implementation of the standards by the school, identify concerns with the processes and judgments applied by school personnel, and give summary statements about the perceived performance of the school in relation to the standards. The key for protecting against league tables will be that in its reports ERO gives *judgments in text* rather than reproducing the original data.
5. *The ERO report provides the trigger* for additional PD support and resourcing.

The advantages of such an approach are that:

1. It supports school-level self review and improvement
2. It is consistent with schools being self-governing
3. Student data on achievement and progress remains within the school (and is not accessible under the Official Information Act)
4. Is subject to regular review by ERO
5. ERO reports provide the most appropriate contextual account of school performance broadly defined

6. Makes the planning and reporting mechanism more strongly related to school improvement and separates it from compliance and accountability.
7. Provides a mechanism for initiating interventions, PD support or additional resourcing.
8. The ERO report provides sufficient detail about school performance (without original school achievement data) for accountability purposes.
9. More appropriately locates the national standards as resources to support the implementation of the New Zealand Curriculum. Hence, the standards have a central role in improving teaching and learning (and, therefore, improving student outcomes) rather than as a metric for accountability.

Guidance for schools on how to judge, document and report progress will need to be carefully developed. This will need more time. If standards spaced one year apart are to be promulgated and exemplified, as the current drafts suggest, then we need to think about whether gains of less than a full standard might be reported. The risk with this is that it will be very tempting for teachers and schools to use this option to suggest at least some progress for almost all students. On the other hand, if gains are based on the one year intervals, some students will be reported as making a year gain when they have moved from just below a standard or just above the standard (a gain of perhaps one third of a year), while others who have just met a standard the previous year and are now part way towards the next one will be shown as making no gain. That is probably not a problem for aggregated reporting on cohorts, but it is not so nice for progress reporting to parents. Perhaps the solution is to apply the year interval approach for cohort reporting and for quantitative reporting to parents, but allow in the parent reports the addition of qualitative comments that indicate clear progress but not sufficient progress to justify a full one-year step.

Given that the government plans to implement national standards in 2010, it is essential that they are introduced in a planful and manageable manner that respects the professional work and expertise of teachers, and acknowledges the rights for schools to be self-governing; they are well resourced to enable schools to address the reading, writing and mathematic needs identified; and they are informed and monitored by a programme of rigorous research and inquiry. Perhaps, most importantly, given the unfortunate experiences of overseas, we are alert to any evidence that threatens an educationally sound approach.

Absolum, M., Flockton, L., Hattie, J., Hipkins, R., & Reid, I. (2009). Directions for assessment in New Zealand. <http://www.tki.org.nz/r/assessment/research/mainpage/directions/>, Paper prepared to provide advice to the Ministry of Education., March 16.

Gilmore, A., Crooks, T., Darr, C., Hattie, J., Smith, J., & Smith, L. (2009) Towards Defining, Assessing and Reporting Against National Standards for Literacy and Numeracy in New Zealand, *Assessment Matters*, 1, pp. 135-145.

Ministry of Education (2009) *National Standards and Reporting to Parents*, Item Number 33431 Kit Number 33429, Wellington, NZ.

Ministry of Education (2009a) <http://literacyonline.tki.org.nz/Literacy-Online/National-Standards>, accessed 31.08.09.

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<http://schools.nyc.gov/Accountability/SchoolReports/ProgressReports/default.htm>), accessed 31.08.09.

Timperley, H. (2009) Neutral Standards, *Education Review*, August 28, p.7.

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WRITING STANDARD: After one year at school



After one year at school, students will draw on the knowledge, skills, and attitudes described in the progressions to think about, record, and communicate experiences, ideas, and information in contexts from across the curriculum at level 1.

The texts that they write, for a variety of purposes and audiences, will usually include:

- more than one sentence
- a simple idea, response, opinion, or question
- some key personal vocabulary and high-frequency words
- sentences with capital letters and full stops used correctly

Students will write most letters and numerals legibly.

Examples of texts that students will write largely by themselves

I ^{always} shut ^{when} I'm ⁱⁿ ^{my} ^{door} ^{keep} ^{cep} ^{my} ^{dot} ^{my} ^{bed} ^{room} ^{it} ^{is} ^{all} ^{privit} ^{with} ^{my} ^{brother} ^{not} ^{being} ^{abl} ^{to} ^{get} ⁱⁿ ^{He} ^{is} ^{an} ^{annoying} ^{brother}.

www.tki.org.nz/r/assessment/exemplars/eng/personal/wpp_1b_e.php

I wonder why we have night and day?

Day and nit are for the Eof and the sun. And the Eof ods are the 2an. the Eof are ard. When we far the 2an it is day and when we far the moon it is nit.

www.tki.org.nz/r/assessment/exemplars/eng/explanation/wpp_1r_e.php

READING STANDARD: After one year at school


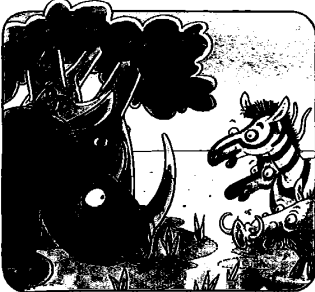


After one year at school, students will draw on the knowledge, skills, and attitudes described in the progressions to read, respond to, and think critically about texts at Green level (Ready to Read). They will answer questions about facts, using information that is explicit in the text, and make simple inferences when reading stories and information texts.



Texts at this level include:

- illustrations that extend the meaning but may not exactly match the words
- frequent use of dialogue
- some variety in sentence types
- some irregular verb forms
- a range of punctuation features
- some variety in text types, text forms, and text layouts
- simple storylines and mostly familiar contexts.

Examples of texts that students will read largely by themselves

<p>"Well ..." said Rhinoceros. "There is enough sweet grass for all of us. There is lots of water in the bubbly spring. There is plenty of mud. And, if you do what I say, there will be shade for everyone, too."</p> 	 <p>Rhinoceros made them all get up. Then he lay down under the shady tree. "Now you've taken all the shade!" cried the other animals.</p>
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A Good Idea by Bill Nagelkerke (Ready to Read series, Green)

<p>My great-grandma rode a horse. She rode it to school. It was a very long way.</p> 	 <p>I ride a horse sometimes but not to school. Mum takes me in the car.</p>
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The Way It Was by Dot Meharry (Ready to Read series, Green)



After one year at school, students will be achieving at early level 1 of The New Zealand Curriculum. In contexts that require them to solve problems or model situations, they will be able to:

apply "counting all" strategies

use reflection and translation symmetry and equal sharing to partition shapes and sets and continue sequential patterns

compare the measurement attributes of objects directly and indirectly

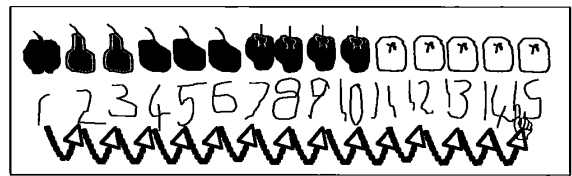
classify shapes and data into categories

visualise and represent number patterns, own location and direction, and category data.

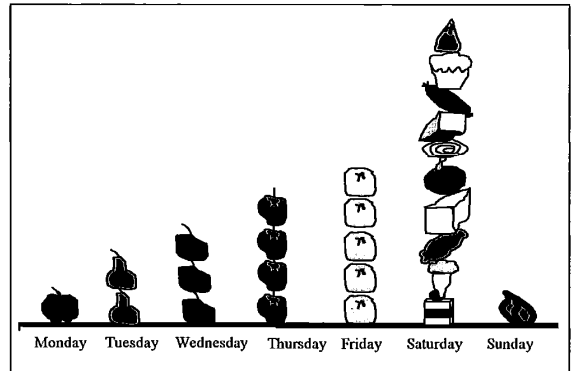
The following rich mathematical task and descriptions of student thinking exemplify what is required to meet this standard.

Parts of this task are based on the book *The Very Hungry Caterpillar* by Eric Carle, Puffin Books (1969).

From Monday to Friday, how many pieces of fruit did the caterpillar eat altogether?



What day did the caterpillar get a stomach ache? Why?



What will the other half of the butterfly look like?

