Things that matter most should never be at the mercy of things that matter least.

Tena koutou, tena koutou, tena koutou katoa. Greetings from New Zealand.

Thank you for the invitation to come and share some of our thinking about assessment tools for teachers, and for the opportunity to listen, discuss, question and learn. I’d like to share some thoughts about some of the issues that the New Zealand Ministry of Education have grappled with as we have developed new assessment tools over the last few years.

One of the aims of the New Zealand assessment strategy is to develop school-based assessment tools that:

• help teachers and students see more clearly what quality looks like;
• identify bases for students to build on and areas in which to grow; and
• in Royce Sadler’s (1989, p. 121) words, enable teachers and students to ‘use information on the gap to change the gap’.

I want to spend some time considering these things and the teaching practices and professional learning opportunities necessary to support the use of assessment tools to raise student achievement. I plan to do this with reference to two school-based assessment tools that the Ministry of Education has recently developed: Assessment Tools for Teaching and Learning (asTTle) and Curriculum Exemplars.

But first a look at the whole learning environment and all of the people who need assessment information in order to support student learning. In order to build a learning environment broader than just the classroom the Ministry considered:

• who needed assessment information;
• what they needed it for; and
• how assessment tools might be used to promote a two-way flow of information that supports learning rather than takes energy away from it.

Traditionally, educational stakeholders such as parents, other teachers, school managers and governors have wanted (and sometimes received) information about student learning but have not been able to use this information in ways that are experienced back in the classroom as supportive of learning. In other words, information going out from the learner was more often focussed on the reporting and accountability functions of assessment with little explicit flow-back to the learner.

The Ministry strategy is clearly focussed on using assessment to improve teaching and learning at all levels of the system. This is not incompatible with the
reporting and accountability purposes for assessment. If teachers are teaching and students are learning then there will be evidence that can be used to improve teaching practices, and provide feedback for learning, and this evidence should also be able to be used for reporting and accountability purposes. The participatory processes we used to develop the tools and the professional development programmes we fund to support their use to improve learning are as important as the quality of the tools themselves. They have enabled teachers to engage in conversations and develop shared agreement about things that matter, to look for indicators of quality in examples of their students’ work, and to reflect on their teaching practice. These participatory processes have been followed up with professional learning programmes that help teachers to use assessment tools to:

- set clear and challenging goals with students;
- provide learning oriented feedback;
- adjust their teaching and develop learning environments that are more relevant and motivating for their students; and
- develop better learning focussed partnerships with parents and community.

Shared ideas about what matters and what quality looks like are critical because what teachers believe (about their students, about what’s to be learnt and about how it should be taught) matters. It guides what they notice, what they recognise, and how they respond to students. When the decision is made to value something by developing tools to look more closely at it, to assess it – what people see changes. Interactions change, teaching changes, and learning changes.

As Thoreau (1858) says, "All this you will see and much more if you are prepared to look for it … things are concealed from our view because there is no intention of the minds eye towards them. We do not realise how far and widely or how near and narrowly we are able to look. There is just as much visible to us as we are prepared to appreciate. Not a grain more."

What matters changes over time and this influences both pedagogy and assessment. When I was at primary school my teachers cared about order, discipline, tables, spelling, and me knowing the correct answers to their questions. Teaching was designed to help me rote learn and store information in my head in case I needed it in the future. I sat tests so that my teachers could find out how much I had stored in my head at any given time. The results didn’t seem to influence what I was taught next, or the way I was taught it. My teachers believed that oral fluency was important in the teaching of reading. This meant that reading was taught by having us read aloud around a circle. Unknown words were supplied by the teacher or another student and we were assessed with a mark out of 10 or a stamp on the hand. At the end of the year we were awarded a place in class and a common practice during the year was ‘taking places’ where we all stood in a line and those who spelt words or answered questions correctly moved up the line, like a table tennis ladder, while others moved down.

A few decades later we have a fundamentally different conception about how students best learn to read. This influences how they are taught to read and how reading is assessed. We now believe that teaching students from early on how to make meaning from the text is more important than oral fluency. Teachers use texts that support this. Texts that are rich in meaning engage students’ interests and draw on their cultural and
social identities. Teachers look closely at each student’s actual reading behaviour and use a range of approaches including guided, shared and independent reading. They teach students specific strategies to help them decode unknown words and make sense of texts. They use assessment tools that help them see these things more clearly, and clarify students’ possible next steps with them.

Good assessment is more than assessing important content outcomes – we have always had reading comprehension tests. It is also about assessing in ways that are compatible with what we believe is important about the learning process.

I want to spend some time thinking about asTTle and Curriculum Exemplars in the context of what we consider important today. Key features of these tools are that they:

- provide clear, valid, reliable and accessible information for students, teachers, parents and Boards about things that matter;
- provide deliberate links to curriculum, pedagogy, and possible what-next pathways; and
- are accompanied by professional learning for teachers.

Both tools have been developed in English and in Maori through separate but parallel processes.

**asTTle**

*Assessment Tools for Teaching and Learning* (asTTle) is an interactive CD ROM-based tool that provides assessments, in both English and Maori, for students in Years 4 to 12, in Reading, Writing and Mathematics. Its main purpose is to provide analysed assessment information that can be used to improve teaching and learning. The tool generates interactive graphic reports that allow teachers (and students) to analyse student achievement data to share with anyone who has a need for that information, usually students and parents. Along with other assessment tools, asTTle provides externally referenced assessment information that assists teachers to make valid and reliable judgments about the progress of their students.

At classroom level, asTTle enables teachers and students to:

- diagnose student performance;
- give and receive focused feedback;
- set learning goals;
- develop and modify classroom programmes; and
- engage in learning oriented discourse with parents using reliable information.

At school level, information may be aggregated and used to evaluate teaching programmes and inform strategic planning. Users can:

- create tests to specified difficulty levels and content;
- manage student and test information; and
- create in-depth reports on student and class achievement.

All test items link to the New Zealand Curriculum. Test items are also linked to a common scale using student trials, moderation, educators’ reviews and item response theory. This ensures that all items are marked to scale and the response to different items and groups of items can be compared. The program generates a range of reports showing curriculum levels, individual learning pathways, group learning pathways, comparisons with national data and what-next profiles.

asTTle individual learning pathways reports identify areas of strength to build on as well as areas of need for individual students. Possible next steps in learning are also shown, enabling teachers and
students to develop learning intentions together.

Patterns of achievement and learning needs are also identified for whole classes.
Specific comparisons can be made on a student’s year of study, gender, ethnicity, language spoken, location, and to ‘schools like mine’.

asTTle also includes a hyper link to a resource bank which contains suggestions and resources to help teachers plan the next steps for their students.

A challenge when using tools like asTTle is to ensure that the information from the tool is not too deeply coded to lead to appropriate action (Sadler, 1989), or that numbers or signifiers don’t become more impressive, more real, more memorable than what they signify (Linn, 2000). In other words it is important that aggregated data is not too hard for teachers to disaggregate and use to improve their teaching. This can happen when numbers or summary comments become disconnected from the event or task. The further those interpreting the numbers are from the event, the more difficult it is to regain a rich picture of what happened.

Just last week a friend of mine told me her son Sam’s teacher had called her to a meeting to tell her Sam was in a special reading group. The teacher said the reason Sam was receiving special help was that he had sat a reading test and on a scale of one to 12, (12 being the best), and he had scored one. My friend said that seemed strange because Sam had always seemed fine at reading to her, but maybe now he was at secondary school there were things he didn’t know that he should know. She went home and asked Sam about the test. Sam said, ‘Oh that test – it was really boring and silly so I only answered the first three questions. I didn’t know it was important!’

Sam’s mother arranged for him to re-sit the test and he scored 10.

Contrast this with classrooms where teachers involved in Assess To Learn (aToL) professional development programmes are working with facilitators to develop ways to give ownership of tests to students. In these schools, teachers tell students why they are doing a test
and the reason they are being asked to do it. Students are clear that the purpose of the test is to help them work out what they know, and what they need to learn next. Students mark tests together and take turns at entering each others results into the computer. They are very focussed on ensuring their peers enter their results accurately, so accuracy is not an issue.

Some teachers hand out test papers, group students and ask them to identify where the questions started to get hard. Students then look at what kind of questions the hard ones were and anything in common about them. They label what the groups of questions are about and use this discussion as starting point for setting their next learning goals with the teacher.

In one cluster of schools the aToL facilitator asked teachers to look at students individual asTTle pathways reports. They were asked, ‘Do these paint pictures of the students you know? Do the results capture what you know to be true about each student’s understandings in reading?’

They agreed they did. Then they were asked, ‘What might happen if you shared these reports with the students?’

The teachers decided to give the results to the students to talk about. In each class, teachers showed the group learning pathway to the whole class. The students were helped to understand the labels used for the reading functions, such as ‘inference’ or ‘finding information’, to further develop their language of learning. They were also helped to see how they could relate the reading functions analysis back to the actual test items. The teachers then asked the students to group and discuss what they thought the results meant about their current patterns of reading knowledge and what they thought they needed to learn next. The teachers were delighted with what happened. The students came up with a detailed analysis of the reports and came back highly motivated about what they wanted to learn next and how they wanted to learn it.

The teachers built on this base by conferring with each student about their own individual report and supporting each student to focus the group goals down to their own individual learning needs. This further increased motivation, especially when some of the students spontaneously took the individual reports home to discuss their learning with their parents (Absolum 2004).

These are examples of pedagogical approaches to using assessment tools that intensify peer support and create environments where ‘getting it wrong’ is simply useful. These approaches provide an opportunity for higher mental processes to form through scaffolding of students developing understanding through social interactions with skilled partners (Smith 1999). They are examples of students contributing to their own assessments, and learning more effectively – examples of interactions that help teachers to learn about their students working theories about learning, knowledge that helps them to teach more effectively (Dweck 1999; Black & Wiliam 1998; Bishop et al 2001).

Just presenting practitioners with valid and reliable assessment results doesn’t change practice. Completing asTTle assessments and putting the results on a PowerPoint presentation at a staff meeting won’t on its own change teacher practice. Practice changes as practitioners alter their relationship with those around them. Change in practice depends on teachers being ready, willing and able to develop new ways of understanding the purpose of teaching, themselves, their students and their subject matter. This
kind of professional development is challenging and demanding in time and personal commitment to implement change in ideas and approaches. A major source of support is teachers' awareness that they are not alone. Team or whole-school approaches that support teachers to look at data together across the school or department and consider what it is telling them help teachers to focus on the issue and motivate them to consider new approaches.

Three Northland schools were concerned that students were under-achieving in Reading so they gathered school-wide asTTle data across Years 4 to 8. The results showed that few students were meeting or exceeding expected levels of achievement. Staff from the three schools worked together with an external facilitator to develop a plan of action. This plan included analysing each students results in order to identify current strengths and set ‘next-step’ teaching and learning goals; and each teacher committing to involvement in an in-depth professional development programme involving close in-class examination of their pedagogy, an opportunity to compare their pedagogy with research on ‘best practice’ and then on-going support through facilitator and peer coaching, modelling, feedback and mentoring opportunities to narrow the gap between what is and what ought to be.

Eight months later, the schools administered another asTTle reading test. The results indicated that there had been a significant improvement in reading achievement with an effect size of 0.56 (Absolum 2004).

This example is supported by Black & Wiliam’s (1998) research. Drawing on more than 250 studies from around the world the authors found that in order to improve learning students need:

- effective feedback;
- to be actively involved in their own learning and assessment;
- teachers who adjust their teaching to take account of results; and
- teachers who ensure assessment practices impact positively on motivation.

Their study concludes that a focus on the above aspects of formative assessment results in achievement gains for all students and higher gains for underachievers.

**Curriculum Exemplars**

The other assessment tool I’d like to mention is Curriculum Exemplars. These are examples of student work in all curriculum areas (in English and in Maori). They are annotated to illustrate learning, achievement, and quality in relation to Levels 1 to 5 in the National Curriculum Statements. These levels roughly equate to ages 5 to 14. The Ministry developed Curriculum Exemplars to help answer the question, ‘What is quality work?’, and to highlight features that teachers need to watch for, collect information about and act on, to promote learning. All exemplars follow the same general format and include indicators about what the work shows, curriculum links, the learning context (what the teacher did to get students to produce this work), a learning conversation between teachers and students or students and their peers, and ideas about where to next.
While teachers’ judgments about progress and achievement are guided by their understanding of the long-term educational outcomes signalled in achievement objectives in New Zealand’s official curriculum, we found that achievement objectives alone were insufficient to provide the clarity of focus needed to signal learning progressions that assist teachers to provide focused formative feedback to students. They were also insufficient to help teachers make consistent and comparable judgments about students’ quality of performance for reporting purposes.

As Sadler (1987) points out, it is difficult to express progress and quality in words alone. Words are needed to describe criteria and examples are needed to demonstrate quality.

In A Journey in Ladakh, Andrew Harvey puts it another way: All words fall short of the shining of things, things exist that are unnameable, we need to be able to see through the word to the thing.

Look at these Visual Arts curriculum achievement objectives. Imagine the kind of work students might be producing and what progress and quality might look like.
<table>
<thead>
<tr>
<th>Level 1</th>
<th>Level 2</th>
<th>Level 3</th>
<th>Level 4</th>
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</thead>
<tbody>
<tr>
<td>Students will express visual ideas in response to a variety of motivations, using imagination, observation, and invention with materials.</td>
<td>Students will develop visual ideas in response to a variety of motivations, using imagination, observation, and invention with materials.</td>
<td>Students will generate and develop visual ideas in response to a variety of motivations, using imagination, observation, and invention with materials.</td>
<td>Students will generate and develop visual ideas in response to a variety of motivations, using imagination, observation, and a study of artists' works.</td>
</tr>
</tbody>
</table>

Now have a look at these portraits.

Think about what teachers, parents and students need in order to be clear about what matters, what counts as quality, what should be achieved? Shared agreement and understanding between teachers, students and parents about what is to be learnt and why is critical because often under-achievers don’t know what they’re supposed to be focusing on. This can mean they expend effort on the wrong things, get disheartened because their efforts don’t lead to success and ‘retire hurt’, attributing their successes to luck and their failures to lack of ability (Dweck 1999; Freebody et al 1996). Conversely, helping students attribute their successes and failures to effort and strategy rather than luck or ability is one of the most important things teacher can do for their students because it impacts on their achievement and the way they approach their ongoing learning. Shared agreement and understanding between teachers and students about what is to be learnt and why is also critical because often, its not that students can’t learn, it’s that they don’t want to, or can’t see the point. The problem is motivational rather than cognitive (Csikszentmihalyi 1990). Helping students see why something is important is more likely to trigger their personal desire to learn and this desire is an incredibly powerful force that can carry learners through repeated disappointments and difficulties (Crooks 2002). Learning golf, for example, takes two to four years for most people. Why do people persist?

Students' individual learning journeys may be smooth or involve stops, starts, sudden leaps, and wrong turnings - a bit like snakes and ladders. To support students' learning and help them to make their next move, teachers need to make strategic, on-the-spot interventions. The teacher-student conversations in the exemplars suggest how to provide effective feedback that scaffolds learning, and these have been accompanied by professional development focussed on learning conversations and feedback that improves learning.
Here’s an example of a conversation between a teacher and a 5 year old boy during a first draft of a story about his grand father:

Teacher: Can you read your story to me?
TJ: My grandad is bald.
Teacher: Is he really? No hair at all?
TJ: Well, he’s got a few bits of hair.
Teacher: Just a few bits.
TJ: And they’re all spikey. Sticking up.
Teacher: Are you going to write about the spikey bits?
TJ: Yes.
Teacher: Is there anything else you want to say about your grandad?
TJ: Don’t know.
Teacher: What's he like? What sort of things does he like to do?
TJ: He likes fishing.
Teacher: Maybe you could write about that too!

TJ’s finished story read, ‘My granddad is bald with little spikey bits. He likes fishing.’

Specific, constructive feedback about learning as it is occurring is one of the most powerful influences on student achievement (Hattie 1999). Positive feedback that celebrates their successes can help to keep students motivated and increase their confidence. Constructive feedback can highlight the things that are important to focus on and provide scaffolding towards the next learning steps.

Dylan Wiliam (2003) says you know feedback is good when it makes you think. That’s helpful, but I think good feedback does more than just make you think. It helps students see things in a new way, like the paradox of a good poem, where the reader instantly recognises something as true but sees it in a new light. Good feedback inspires the student to do something, or try something differently. It also leads to increased task engagement and increased agency. Good feedback is tailored to both the nature of the assessment task and the learner’s response to the task, and leads to progressive appreciation by the learner of what constitutes quality work and the strategies needed to attain high standards (Sadler 1998).

Teachers’ understanding of the qualities of effective feedback is critical. This understanding was lacking in Emma Smith’s and Stephen Gorard’s recent study of a school adopting comment-only marking. The treatment (comment) group made less progress than their peers (who received traditional marks) and left pupils gagging for their marks with the telling comment, ‘We really need our marks to know how we’re doing because the comments don’t tell us much.’ (Smith & Gorard 2005, p. 33).

Curriculum Exemplars are being used in number of ways. A common practice to help teachers develop shared understanding of progress and quality is for staff to plan a school- or department-wide unit or assessment task for their students. Each teacher brings to a staff meeting six samples (at low, mid, and high range) of their students’ work on the unit or task. In turn, each teacher lays their samples out across the staffroom floor to show a continuum or progression from the lowest to highest curriculum levels. The teachers then group the samples of work. They annotate these grouped samples and record features of the work that they think are important. The teachers then compare their school samples and annotations to the relevant national exemplars and indicators.

Activities such as these are helping teachers make more consistent judgements that are likely over time to
decrease discrepancies between different teachers' judgements; inconsistencies in a teacher's judgment over time; a teacher's personal view of the student; the carry-over of positive or negative judgments from one assessment to the next; a teacher's general tendency towards leniency or severity; and teachers being influenced by extraneous factors in the student's work, for example neat or untidy handwriting.

Teachers have also been using exemplars with their students to help them better understand and judge the quality of their work. They have found that asking students to think about and reflect on their own and others' work prompts thinking by students, such as: ‘How did they do that?’, ‘What would I have to know in order to do that?’, ‘That gives me an idea’, ‘So that's what good work looks like’, ‘I want to do that too’, ‘How can I learn that skill?’ and ‘Who could I ask to help me do that?’

These approaches allow students to see and discuss desirable qualities in real examples of work and enable them to realise that there are many ways to achieve their goals.

Some schools are also using exemplars with parents. In Dunedin, a school grouped national writing exemplars, by level, around the walls of the school hall and invited parents to a supper meeting. Following a short talk about what the school believed was important in student writing parents were given three or four anonymous student samples and asked to work in pairs to place them on the walls beside the national exemplars. The following evening parents had the opportunity to meet with teachers to discuss their own child’s writing. Not surprisingly this resulted in conversations that were much more learning focussed.

Exemplars and asTTle are assessment tools that signal important things for teachers to notice, recognise and respond to in their teaching practice. They are supported by aToL professional learning opportunities for teachers so that they can use them to make a difference to student learning. Investment in assessment tools will not on its own make any difference to student outcomes. The difference happens when motivated and skilled teachers use the tools to change what students become.

There was a child went forth every day
And the first object he looked upon, that object he became
And that object became part of him for the day,
Or a certain part of the day
Or for many years, or for stretching cycles of years.
The early lilacs became part of this child
And grass
And white and red morning glories
And clover and the song of the phoebe bird...

Walt Whitman

References

Bishop, Russell & Glynn, Ted (2000), Kaupapa Maori messages for the mainstream, Set Research Information for Teachers, no. 1, pp. 4-7.
Freebody, P., Ludwig, C., & Gunn, S. (1996), Everyday literacy practices in and out of school in
low socioeconomic urban communities, Griffith University, Brisbane.
Hattie, J. (1999), *Influences on Student Learning*, Inaugural Professorial Address, University of Auckland.