



The asTTle story →

asTTle





Q1

Describe the purpose, scope and nature of the project, programme, system, or policy initiative, including the specific problem it addresses.



Well developed literacy and numeracy skills are vital foundation competencies that enable people to contribute effectively to the communities in which they live and work. They lay the foundations that enable individuals to contribute positively in the workplace and for New Zealand to thrive in a global economy. There is increasing recognition internationally of the need for teachers to have quality assessment tools in order to develop and deliver effective teaching programmes that raise student achievement in literacy and numeracy.

asTTle is a leading edge CD-Rom tool that enables teachers to create and analyse tests in literacy and numeracy. It uses technology to provide teachers with unprecedented access to rich information about their student's performance. asTTle enables teachers to monitor student progress, to compare results with similar schools or nationwide data, and to access relevant resources for the next stages of learning.


asTTle



Q2

What makes it innovative?

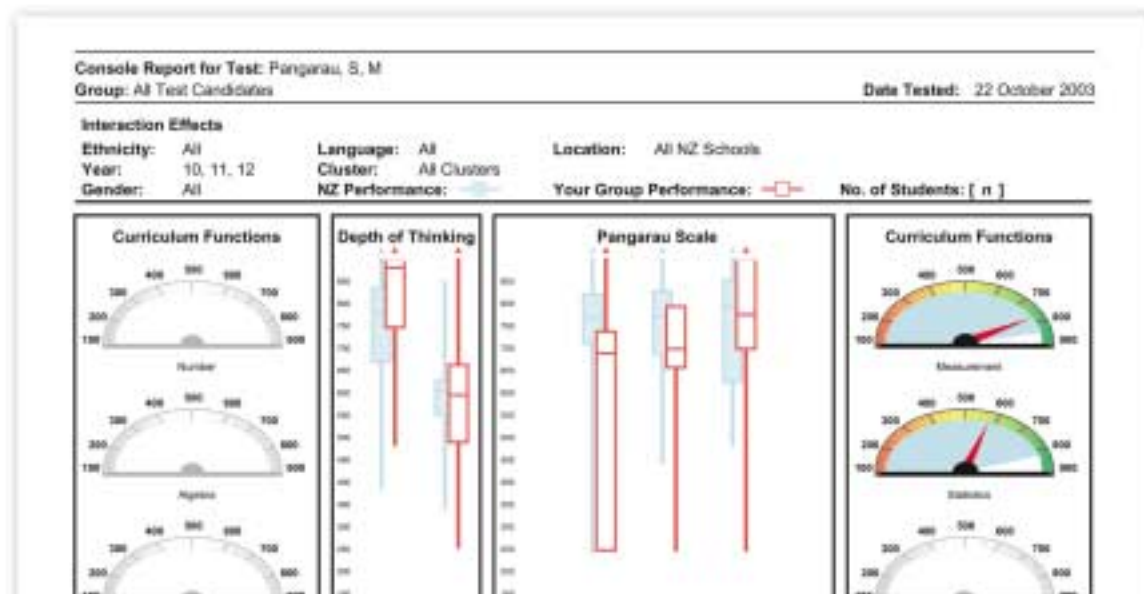


asTTle is innovative

1. asTTle allows teachers to set tests that are aligned to the curriculum when they want and at the level they want; and to measure progress over time.
2. asTTle uses a programming method (linear programming heuristics) to create the 'best possible' test while also meeting the requirements specified by the teacher.
3. asTTle has developed a new approach to writing and classifying test items so that every test is tailored to the specific needs of the classroom.
4. asTTle has made advances in standard-setting methodologies, giving teachers a realistic picture of how well each student, class or school is doing compared to the national average and the requirements of the curriculum. It allows comparisons to other groups such as gender, ethnicity or school types.
5. asTTle is leading edge internationally because of the rich interpretations and specific feedback that it provides in relation to student performance (rather than simply providing a score). It identifies areas of student weakness and strength that may otherwise go unnoticed.
6. asTTle presents the results in visual ways making it easier for teachers to discuss performance and the steps they're taking with students, parents, and Boards of Trustees.
7. asTTle supports teachers by giving them direction and access to extensive and relevant Internet resources (What Next on the Te Kete Ipurangi website) for raising student achievement more efficiently.
8. asTTle is the first bilingual (English and Te Reo) assessment tool to be developed in New Zealand.

"It was so good at saying where the children were and where to go to next – and that was what I was missing. You never knew where to go for the next thing. asTTle has that wonderful website What Next and it tells you what these children need next: here are the journals that focus on that for that level, here's an English online resource, and samples you can use with the kids. The biggest thing is it tells you where to go."

**Susan Johnson, Year 6 teacher,
Woodstock Primary School**



asTTle





Q3

Describe the target population served or targeted by your initiative.



The target population includes:

- teachers and students in Years 5 to 10 (nine to 15-year olds)
- school administrators and Boards of Trustees
- parents and caregivers.



Group Learning Pathways Report for Test: Pangarau, S, M
Group: All Test Candidates
Group Size: 18
Date Tested: 22 October 2003



asTTle





Q4

When and how was it conceived? What steps were required to implement it?
How has it evolved and how do you expect it to evolve?



In 2000 the Ministry launched the National Assessment Strategy, a \$28.4m funding package to develop assessment initiatives, one of which was asTTle.

Development of asTTle began that year in partnership with the University of Auckland, chosen because of its strength in assessment and Māori education research. Since then, the university's asTTle team has worked closely with the Ministry to ensure asTTle is aligned with the New Zealand curriculum, appropriate for teachers and successful as a bilingual tool. The team developed the working specifications, with assistance from software engineering company SolNet and IT firm Atlantech.

Consultation with teachers and other stakeholders (such as colleges of education and the primary teachers' union NZEI) occurred throughout asTTle's development, ensuring its relevance and gaining buy-in. Over 40 workshops involving 600 teachers were held throughout New Zealand, leading to the development and refinement of over 4000 test items. These items were tested with close to 100,000 students – providing asTTle with nationally representative data as well as student feedback about the tests. The volume of data and research leading to each test item enables asTTle to provide a precise analysis of student performance that is unprecedented.

A comprehensive professional development programme trains teachers in using asTTle, and helpdesk support is available. asTTle is provided to schools free of charge, and can be ordered through Learning Media or by attending an asTTle workshop.

In 2002 professional development providers tested Version 1 with 110 schools throughout New Zealand. Since then two more versions have been developed, each extending the scope of asTTle. Version 3 included assessment for mathematics up to Year 10 and curriculum level 6.

Version 4, due out in early 2005, will make asTTle even more powerful. It will:

- also include assessment for reading and writing for secondary schools
- be a multi-user version, enabling schools to use asTTle on their network
- be able to be integrated with existing school systems that manage student data.

These developments will further reduce teacher workload: teachers and principals will be able to share test information more readily making it easier for schools to use asTTle for planning; and standard information will only have to be entered once.

Given asTTle's success, the Ministry is now looking at its potential to become a web-based tool.

Key points

- *Developed in partnership with the University of Auckland.*
- *Involved over 600 teachers and 100,000 students throughout New Zealand.*
- *Features over 4000 test items.*
- *Accompanied with comprehensive professional development.*



asTTle





Q5

What has changed in your organisation as a result of the innovation?



The Ministry of Education

The information gathered from the 100,000 students during asTTle's development has provided the Ministry with an extraordinary quantity of data about student performance that is influencing decision-making and other projects.

The data has revealed that investments in particular strategies such as the Numeracy Strategy are paying dividends. Student performance in numeracy is generally higher than in other mathematical areas. In addition, it identified areas of the curriculum that need further development to raise achievement. For example, the results revealed gaps in the curriculum relating to certain aspects of geometry, and these are being addressed.

Schools

Schools familiar with asTTle are enthusiastic about how it's helping teachers to focus their teaching, and engage parents and other stakeholders in discussions about student achievement. It's also becoming recognised as a powerful tool to use in strategic planning.

West Eyreton Primary School, Rangiora

Principal Jillian Gallagher says asTTle's precision in identifying areas of weakness or strength is impressive. "We found that while our boys in Years 5 to 8 were high achievers there were a number of them who had poor attitudes to reading. So we've set about taking steps to improve their attitude to reading and to measure that change.

"In addition, the Board of Trustees was absolutely fascinated with the information we'd found about these boys' achievement and that meant that they were asking some really incisive questions. The charts and tables it produces give them the type of picture they need to understand the decisions we make about teaching and learning.

"asTTle has given us tremendous support and confidence in our teaching and our class programmes as it guides our decisions. It's been very satisfying knowing that our teaching is focused exactly on the students' learning needs and what they need to do next."

Campbells Bay School, Auckland

Teachers at Campbells Bay School used the reports generated by asTTle at recent parent-teacher interviews. Deputy principal Lara Sydall says the reports helped focus discussion around children's areas of strength, areas that need work and next steps. "There was a lot of positive feedback from parents. They said it was great to have a tool that could actually identify what their children know, but more importantly what they needed to know... the fact that it is directly linked in with the New Zealand curriculum makes it very easy for the teachers talk to."

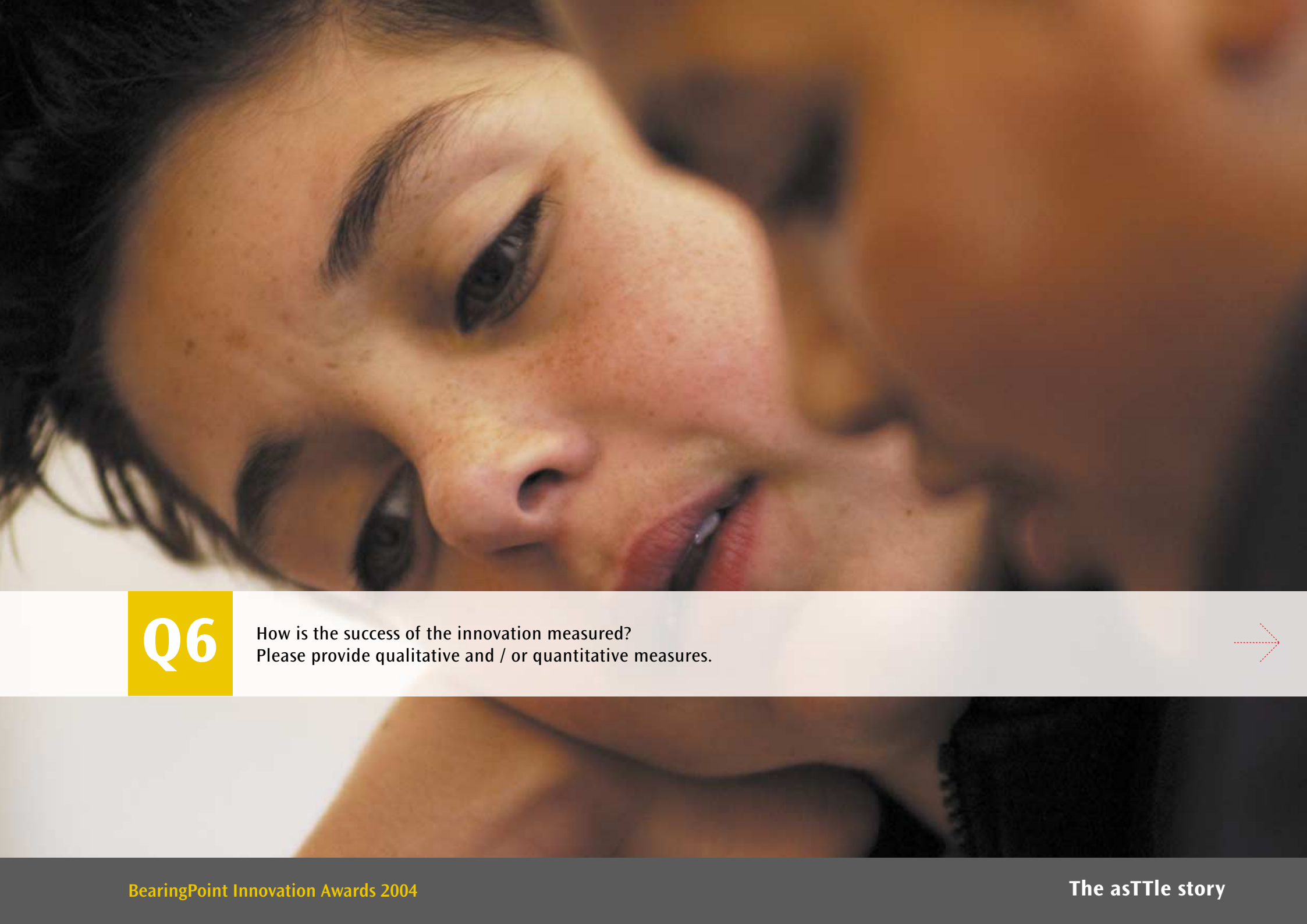
"You can use the resources that get them [the students] ahead and they take ownership too. It helped me to be more specific about what I was doing, and it [the teaching] was more interesting as well."

**Susan Johnson, Year 6 teacher,
Woodstock Primary School**



asTTle





Q6

How is the success of the innovation measured?
Please provide qualitative and / or quantitative measures.



The New Zealand Council of Education Research will measure asTTle as part of research they are undertaking about assessment tools and their impact on teaching and learning.

National Assess to Learn facilitators deliver the training, which accompanies asTTle, to teachers. They provide quarterly reports to the Ministry and these are used to monitor the uptake of asTTle, its effectiveness, and areas for future development.

While it's too early to measure the improvement in literacy and numeracy skills across the system, extensive feedback shows teachers and schools are finding asTTle useful in many different ways.

asTTle is helping to achieve a significant increase in student achievement

James Cook High School, Manurewa

The school has been using asTTle to measure the progress of Year 9 students in maths. Students were assessed and placed in three bands of performance. Two goals were set and teaching programmes developed to achieve those results. A follow-up test showed a significant increase in student achievement across the whole year, with the results tending towards the New Zealand average for that age group.

Assess to Learn facilitator Sue Leslie says the biggest gains were made by Pasifika students, followed by Maori. She says the main reasons for success stem from teachers and students getting high quality information from asTTle, and students being clearly informed about the goals they were expected to achieve.

asTTle is helping teachers to quickly access the right resources

Campbells Bay School, Auckland

Deputy principal Lara Sydal: "We are targeting students' learning more precisely to the child's individual needs. One of our goals is to differentiate the curriculum but when you have 32 students to

one teacher that can be quite a challenge. asTTle has meant teachers spend less time trying to find appropriate resources for the specific needs of individuals. In addition, we can be more confident that the resources we use will be the right ones."

asTTle is helping to measure student progress

Tokomairiro High School, Milton

The school is using asTTle for all Year 7 students whose reading is under their chronological age. The goal is to increase their reading age by a factor of two. The teachers are using asTTle and working with literacy researchers to target the learning activities to the needs of different groups of students.

Teacher Karen Vollweiler says asTTle has been useful in setting tests of equal difficulty but with entirely new content, enabling them to measure student progress.

asTTle is versatile

West Eyreton Primary School, Rangiora

Principal Jillian Gallagher: "At West Eyreton we like asTTle and think it is a useful teaching tool because it supports teaching and learning in the following ways:

1. Learning criteria can be identified then shared – with pupils and parents.
2. It gives feedback through a range of useful information that is visual and clear.
3. It shows teachers, parents and pupils the next steps for learning.
4. It supports teachers and gives them direction/resourcing for the next steps for learning.

"We envisage that an assessment tool that achieves these things is going to make a difference to children's learning because it gives teachers good direction about what to teach...asTTle is an extremely versatile tool – it has a huge range of applications whether for students, teachers, parents or the Board of Trustees. We believe the work involved in keying in the data is well worth the initial effort because the information for our teaching and learning is hugely supportive."

95% of primary schools and 115 secondary schools throughout New Zealand have requested access to asTTle.

asTTle won the ComputerWorld Excellence Award for IT in Education in 2003.



asTTle



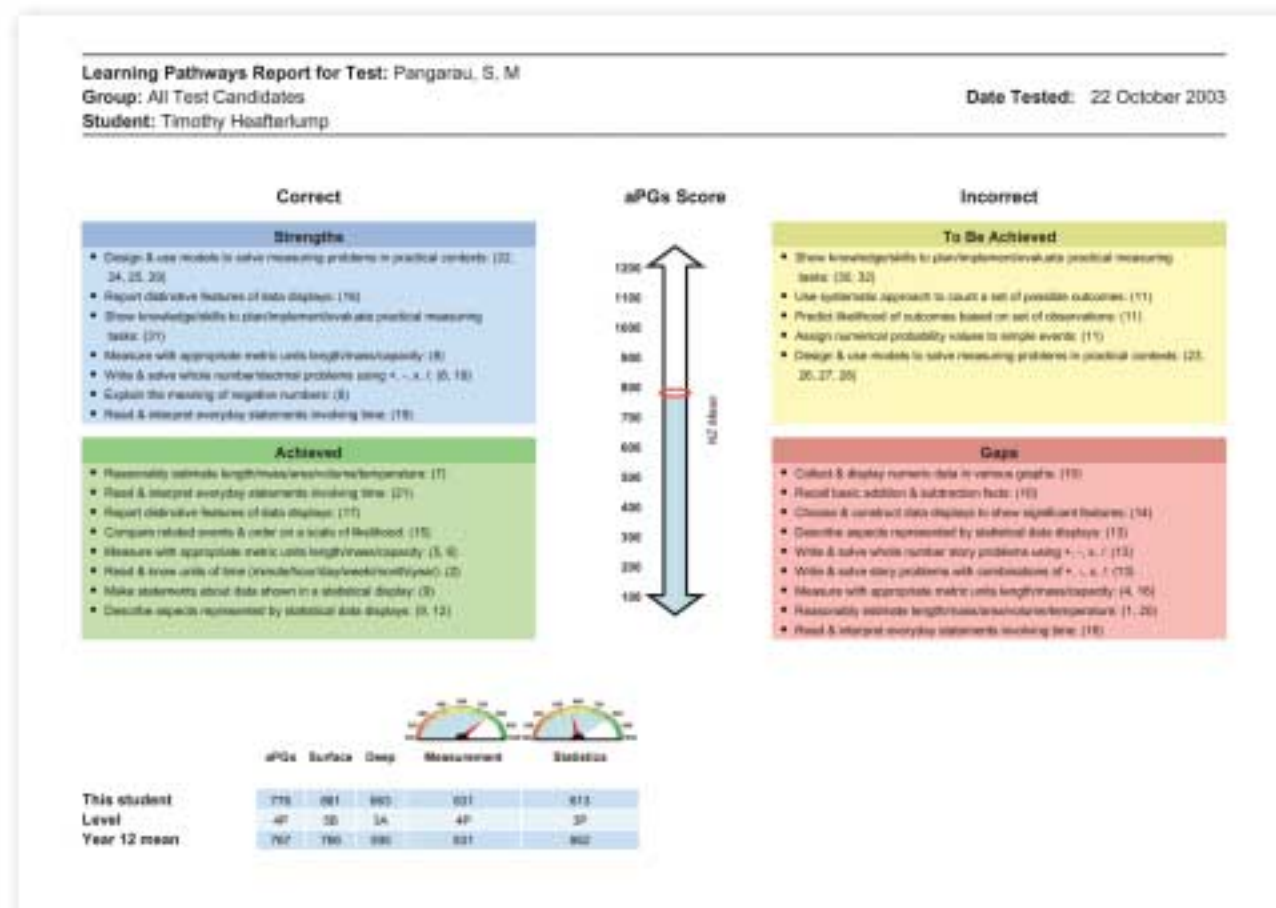


Q7

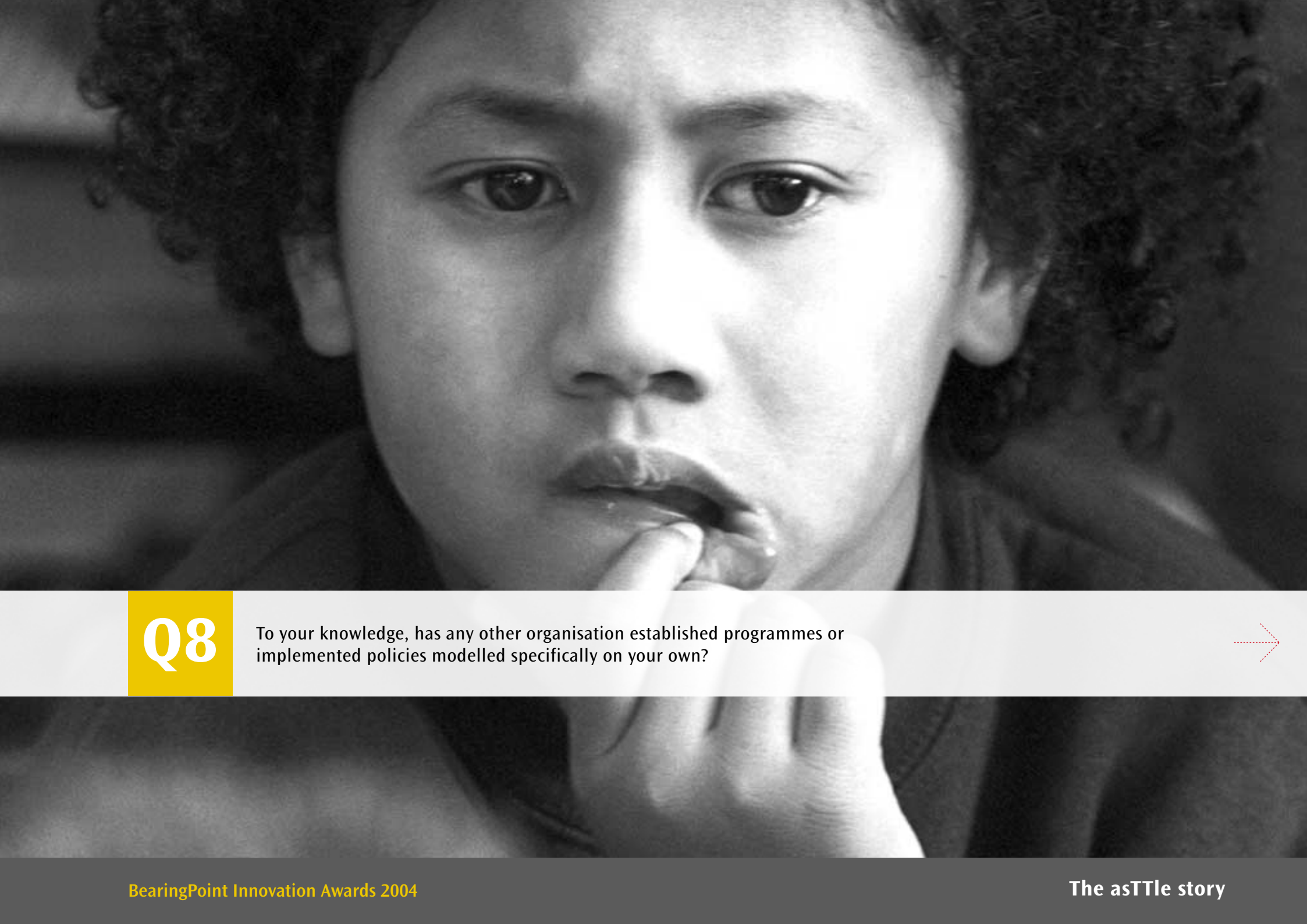
To what extent do you believe your initiative is replicable and why?



asTTle has the potential to be used in other areas such as science and adult literacy, and in the international market. It would require some adaptation such as introducing new content and data but the analysis processes, 'look and feel', and basic structure would remain the same.



asTTle

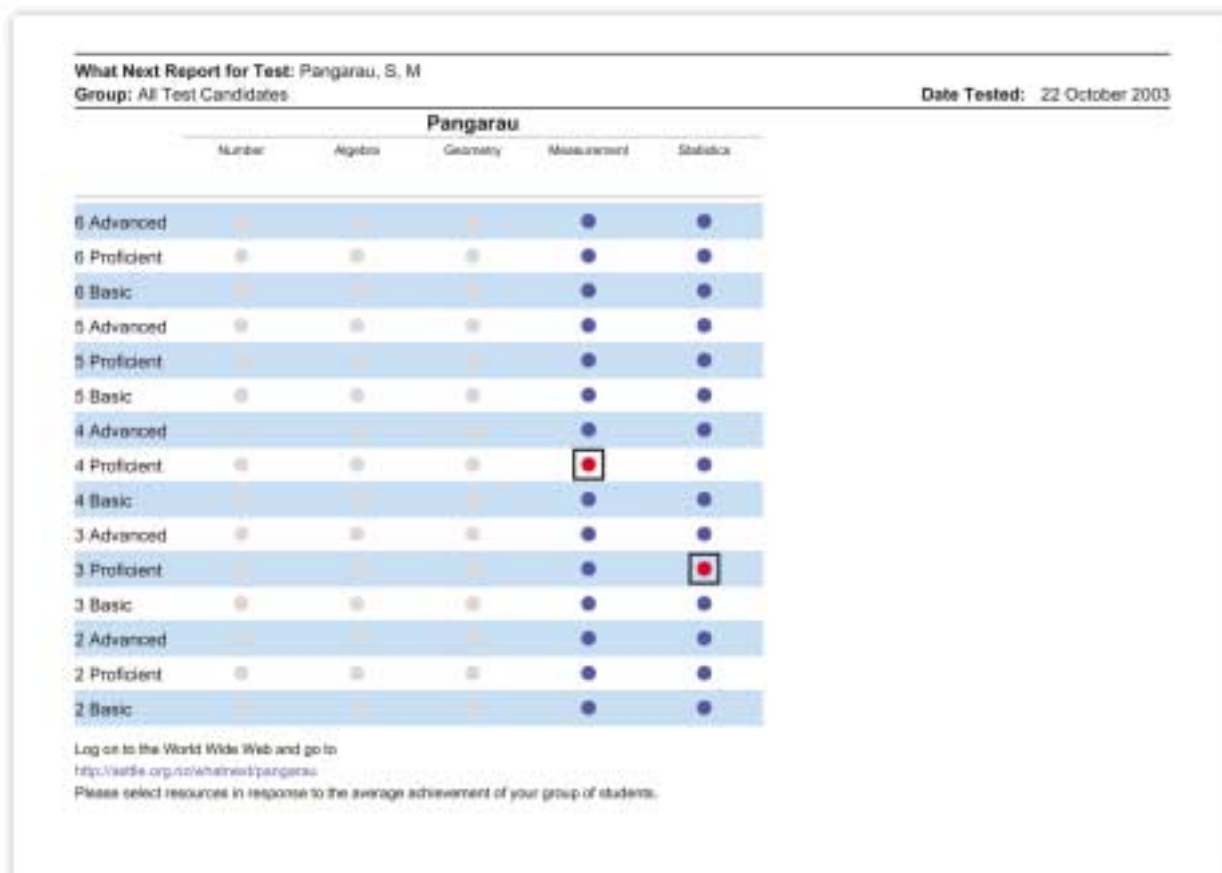


Q8

To your knowledge, has any other organisation established programmes or implemented policies modelled specifically on your own?



No, but there has been overwhelming international interest including enquiries from the Director-General of Education in Canada, the Malaysian Examination Syndicate (Ministry of Education), and the Human Sciences Research Council of the Republic of South Africa.



asTtle





Q9

What makes your initiative particularly relevant to the Innovation in Technology category?



asTTle uses technology to:

- create item banks
- select items for tests
- score test results
- analyse results.

While these are all recent technologies in educational assessment, asTTle is unique because it integrates these procedures into a complete package – delivering a system that enables teachers to identify teaching and learning priorities and resources. Teachers can be confident that the latest psychometric methods are used without having to know the mathematical details.

Furthermore, asTTle:

- can be used in the same way on Macintosh and PCs
- enables data to be assembled and assessed at no cost to schools
- generates tests in a PDF format
- generates interactive reports, graphs and charts to show the results.



asTTle

