EDUCATION REVIEW OFFICE
TE TARI AROTAKE MATAURANGA

Directions for Learning: *The New Zealand Curriculum* Principles, and Teaching as Inquiry

May 2011

Teaching as Inquiry

Teaching Inquiry

Teaching

Learning

Focusing Inquiry

Learning Inquiry

Is there something I need to change?
What are the next steps for learning?

Ko te Tamaiti te Pūtake o te Kaupapa

The Child – the Heart of the Matter

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We welcome your comments and suggestions on the issues raised in these reports.

Foreword

The whakataukī of the Education Review Office (ERO) demonstrates the importance we place on the educational achievement of our children and young people:

Ko te Tamaiti te Pūtake o te Kaupapa
The Child – the Heart of the Matter

In our daily work we have the privilege of going into early childhood services and schools, giving us a current picture of what is happening throughout the country. We collate and analyse this information so that it can be used to benefit the education sector and, therefore, the children in our education system. ERO's reports contribute sound information for work undertaken to support the Government's policies.

The New Zealand Curriculum allows schools the flexibility to design their learning programmes based on what their own students need. ERO's interest is in the extent to which schools look closely at the impact of their teaching, and are able to make well-informed decisions to change and improve their school's curriculum and programmes.

Successful delivery in education relies on many people and organisations across the community working together for the benefit of children and young people. We trust the information in ERO's evaluations will help them in their task.

Graham Stoop
Chief Review Officer

May 2011

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OVERVIEW

Overview

In November 2007, a revised curriculum was launched for use in New Zealand schools. *The New Zealand Curriculum* is a statement of official policy related to teaching and learning in English-medium schools in New Zealand.[1] The requirement for schools to implement *The New Zealand Curriculum* came into effect on 1 February 2010. In early 2010, the Ministry of Education asked the Education Review Office (ERO) to conduct an initial evaluation, and a follow up evaluation one year later, to investigate how schools were using the eight principles and the teaching as inquiry process as outlined in *The New Zealand Curriculum*.

The principles of *The New Zealand Curriculum*

The eight principles represent what is important and desirable in a school curriculum. These principles are: high expectations, Treaty of Waitangi, cultural diversity, inclusion, learning to learn, community engagement, coherence and future focus. The principles are positioned in *The New Zealand Curriculum* as the founding framework that guides curriculum decision-making. They are also a potential touchstone by which schools can review their curriculum plans, priorities and outcomes.

ERO found that there were two key aspects to schools' initial work in understanding the principles. Firstly, in the process of familiarising themselves with *The New Zealand Curriculum,* teachers learned about the principles along with the vision, values and key competencies. Conceptual links were made between each of these elements and the school's existing curriculum framework and content. Guided by school leaders, some schools took the opportunity to explore what the principles might look like when they were applied in classroom programmes.

Schools gradually reviewed and adjusted their existing curriculum framework in light of what they had learned. They generally assimilated *The New Zealand Curriculum* with what they, and their school communities, valued and thought was important. Leaders, some of whom had taken advantage of externally delivered professional development about *The New Zealand Curriculum*, had a head start on staff in terms of understanding the revised curriculum. By the time teachers were ready to engage in curriculum review and development, these leaders were well placed to drive the processes described above.

In 82 percent of schools evaluated by ERO, the principles were evident in the school's curriculum. Some schools had consulted communities in the process of reviewing and developing their revised curriculum. This consultation focused on developing the vision and values that sat at the core of the local school curriculum.

1 Ministry of Education, (2007). *The New Zealand Curriculum for English-medium teaching and learning in years 1–13.* Wellington: Learning Media Limited.

In the few schools that were somewhat more advanced in terms of their curriculum development process, school leaders had begun to think about how they would review their newly-developed curriculum by looking at how they were using the principles.

In 18 percent of schools, there was minimal or no evidence that the principles were part of the process of reviewing and developing their curriculum. In these schools, leadership influence was less apparent and systems supporting effective implementation of *The New Zealand Curriculum* were less well developed.

The three principles most in evidence were high expectations, community engagement and inclusion. Teachers indicated that they expected all students to “succeed and to behave well” in order for teaching and learning to happen. High expectations for learning underpinned the approach teachers took when they encouraged students to set and review goals. Inclusive practice focused on implementing a range of programmes for students with specific learning needs, and encouraging students’ participation in a range of academic, sporting and cultural activities. Parent engagement included helping with school events, participating in reporting processes and providing input into the direction of the locally-developed school curriculum.

The least evident principles were Treaty of Waitangi, cultural diversity, coherence and future focus. Teachers took a range of actions to encourage bicultural understanding, but schools still need to strategically address, through the curriculum, the Treaty of Waitangi principle. Schools’ practice in addressing cultural diversity could also be improved, particularly with respect to making provision for students to express their cultural perspectives and views. There is still a need for some schools to achieve a seamless, progressive and coherent curriculum for students and to develop a more comprehensive understanding of the intent and nature of the future focus principle.

Teaching as inquiry

Teaching as inquiry is a process that involves educators investigating the impact of their decisions and practice on students. In *The New Zealand Curriculum,* this course of action is described as a cyclical process in which questions are posed, evidence is gathered and decisions are made.

In 72 percent of the schools in ERO’s evaluation, processes had been put in place by school leaders that were either highly, or somewhat informative and supportive in promoting teaching as inquiry. Leaders had created routines and protocols that facilitated discussion about student achievement and teaching practice. Systems were developed by them so that inquiry also became part of teachers’ classroom practice. In schools where

teaching as inquiry was well supported, a culture was created that was characterised by shared aspirations to improve learning and teaching, and a desire to work as a team. Useful next steps for teachers include improving teachers' evaluation practice and making use of relevant research in developing plans for students' learning.

Teachers used reflective journals and end-of-term evaluations to inquire into the impact of their class programmes on students' learning. These inquiry activities tended to be part of the school's performance management system and were therefore promoted and monitored by school leaders. There were indications that some teachers had adopted an inquiry disposition – they habitually viewed teaching and learning through an inquiry lens.

Teachers understand the value of gathering evidence about their own capability through the performance management system. Peer observations and feedback processes supported teachers to build more effective teaching practice. ERO's findings suggest that evaluation practice could be improved by better use of evidence about the impact of teaching practice on outcomes for students. Where this process was robust, the cycle of inquiry was completed by leaders talking with teachers about the link between teaching observations and outcomes for students. As a result of these discussions, new teaching goals were established.

Twenty four percent of schools had minimal processes in place, and in four percent of schools the positive practices described above were not in evidence. None of the important leadership functions noted in the more successful schools was happening, and as a result teachers did not have a clear understanding of teaching as inquiry, or how it could be applied in their classrooms.

There were clear links between school level support systems and classroom practice in terms of teaching as inquiry and the curriculum principles. Where school level curriculum development and review processes were well developed and teaching as inquiry was happening well, leaders were correspondingly active in promoting understanding about *The New Zealand Curriculum* and teachers' professional learning. This included creating the processes and culture in which learning and effective teaching practice could happen.

NEXT STEPS

ERO has recommendations for school leaders, teachers and the Ministry of Education to make the principles of *The New Zealand Curriculum* and teaching as inquiry a useful and integral part of everyday teaching practice in New Zealand classrooms.

ERO recommends that school leaders and teachers:

- review the extent to which each principle of *The New Zealand Curriculum*, and the elements inherent in them, are represented in their policies and plans and in the curriculum that is enacted in classrooms
- read and discuss *Ka Hikitia: Managing for Success Māori Education Strategy*[2] as a first step in developing knowledge about the Treaty of Waitangi curriculum principle
- build deeper understanding of the process of inquiry, and the contexts in which teaching as inquiry can be used to improve learning and teaching
- create opportunities for sustainable professional learning about effective teaching
- practice through incorporating teaching as inquiry into their performance management system.

ERO recommends that the Ministry of Education supports school leaders and teachers to:

- understand the nature and complexity of the eight principles
- develop deeper understanding of the principles identified in this report as being least evident and least enacted – Treaty of Waitangi, cultural diversity, coherence and future focus
- carry out robust and effective teaching as inquiry practice.

ERO also recommends that the Ministry of Education:

- explores ways to make more accessible, through Ministry of Education websites, research material that will support teachers and school leaders to extend their understanding about pedagogical practice, including engaging in teaching as inquiry.

2 Ministry of Education (2009) *Ka Hikitia: Managing for Success Māori Education Strategy 2008–2012.* Wellington: Ministry of Education.

INTRODUCTION

Introduction

In November 2007, a revised New Zealand curriculum was launched for use in schools. The requirement for schools to implement this curriculum came into effect from 1 February, 2010. *The New Zealand Curriculum* is a statement of official policy related to teaching and learning in English-medium schools.[3] It includes: vision, principles, values, key competencies, and expectations for eight learning areas.[4] *The New Zealand Curriculum* also describes effective teaching actions that promote student learning. Teaching as inquiry is one of these.

In 2010, the Ministry of Education asked ERO to conduct an evaluation of curriculum development in schools with a particular focus on:

- investigating the extent to which the principles of *The New Zealand Curriculum* are evident in schools' curriculum
- how the principles are enacted in the classroom
- the extent to which school systems and self-review processes guide, inform and support 'teaching as inquiry'
- the extent to which teachers inquire into the impact of their teaching on student learning.

The evaluation occurred alongside the scheduled education reviews of schools throughout New Zealand.[5] A second evaluation is to be conducted in 2011 in which ERO will report on progress made.

Principles in *The New Zealand Curriculum*

The New Zealand Curriculum enables all schools to design their own learning programmes based on what they consider to be appropriate to meet the needs of their communities and students. Every school's curriculum, therefore, should be a unique and responsive blueprint of what they and their communities consider is important, and desirable for students to learn.

The eight principles of *The New Zealand Curriculum* are the foundations and touchstones of curriculum review, design and practice in schools.[6] The principles apply equally to all schools and to every aspect of the curriculum. The eight principles are as follows:

High expectations: The curriculum supports and empowers all students to learn and achieve personal excellence, regardless of their circumstances.

Treaty of Waitangi: The curriculum acknowledges the principles of the Treaty of Waitangi and the bicultural foundations of Aotearoa New Zealand. All students have the opportunity to acquire knowledge of te reo me ōna tikanga.

Cultural Diversity: The curriculum reflects New Zealand's cultural diversity and values the histories and traditions of all its people.

3 Ministry of Education, 2007 *The New Zealand Curriculum for English-medium teaching and learning in years 1–13.* Learning Media Ltd Page 6

4 The eight learning areas are: English, the arts, health and physical education, learning languages, mathematics and statistics, science, social sciences and technology.

5 This includes Full primary schools (Years 1-8), Contributing schools (Years 1–6), Intermediate schools (Years 7-8), Special schools (Year 1-15), Secondary schools (Year 7-15), Composite schools (Years 1-15) and Secondary school (Year 9-15).

6 Ministry of Education, (2007). *The New Zealand Curriculum for English-medium teaching and learning in years 1–13.* Learning Media Limited. Wellington. (Page 9).

Inclusion: The curriculum is non-sexist, non-racist, and non-discriminatory; it ensures that students' identities, languages, abilities, and talents are recognised and affirmed and that their learning needs are addressed.

Learning to learn: The curriculum encourages all students to reflect on their own learning processes and to learn how to learn.

Community engagement: The curriculum has meaning for students, connects with their wider lives, and engages the support of their families, whānau and communities.

Coherence: The curriculum offers all students a broad education that makes links within and across learning areas, provides for coherent transitions, and opens up pathways to future learning.

Future focus: The curriculum encourages students to look to the future by exploring such significant future-focused issues as sustainability, citizenship, enterprise and globalisation.

Teaching as Inquiry

Teaching as inquiry is a process through which educators investigate the impact of their decisions and practice on students. In *The New Zealand Curriculum*, this course of action is described as a cyclical process in which questions are posed, evidence is gathered, and decisions are made. Three key questions guide this process:

1. What is important (and therefore worth spending time on), given where my students are? This *focusing inquiry* establishes a baseline and direction. The teacher uses all available information to determine what their students have already learned and what they need to learn next.
2. What evidence-based strategies are most likely to help my students learn this? In this *teaching inquiry*, the teacher uses evidence from research and from their own past practice and that of colleagues to plan teaching and learning opportunities aimed at achieving the outcomes prioritised in the focusing inquiry.
3. What happened as a result of the teaching, and what are the implications for future teaching? In this *learning inquiry*, the teacher investigates the success of the teaching in terms of the prioritised outcomes, using a range of assessment approaches. They do this both while learning activities are in progress and also as longer-term sequences or units of work come to an end. They then analyse and interpret the information to consider what they should do next.[7]

Teaching as inquiry has also been positioned as a professional learning approach[8] that can be applied to build teachers' knowledge of teaching processes that have a positive impact on outcomes for students. Through an iterative cyclical process that aligns closely with that described in *The New Zealand Curriculum*, teachers "collectively and individually identify important issues, become the drivers for acquiring the knowledge they need to solve them, monitor the impact of their actions, and adjust their practice accordingly".[9]

7 Ministry of Education, (2007). *The New Zealand Curriculum for English-medium teaching and learning in years 1–13.* Learning Media Limited. Wellington. (Page 35)

8 Timperley, Wilson, Barrar & Fung (2007). *Teacher Professional Learning and Development: Best Evidence Synthesis Iteration [BES].* Wellington: Ministry of Education.

9 Timperley et al, (2007) p. xiii

EVALUATION FRAMEWORK

This evaluation sought to answer four evaluation questions:

1. To what extent are the principles of *The New Zealand Curriculum* evident in the interpretation and implementation of schools' curricula?
2. To what extent are the principles of *The New Zealand Curriculum* enacted in classroom curricula?
3. To what extent do schools' systems and self-review processes guide, inform and support teachers to inquire into their practice?
4. To what extent do teachers inquire into the impact of their teaching on students?

Judgements were made using a four point scale. Further details about the evaluation framework are provided in Appendix 1.

METHODOLOGY

Sixty seven primary schools and 42 secondary schools were selected for this evaluation from the schedule of schools due for an ERO education review in Terms 3 and 4, 2010. In total, data were gathered from 106 primary and 94 secondary classrooms. In sampling, consideration was given to achieving proportional numbers across Year levels and, in secondary schools, to covering a wide range of school subjects. For further information about the demographics of the sample, refer to Appendix 2.

ERO used a team of reviewers with particular curriculum expertise for this evaluation. Reviewers collected information in ways that were appropriate to the context of the school. These included document analysis, observations of lessons, observations of and participation in teacher meetings, and interviews with teachers and leaders.

In reporting the findings ERO refers to the broad categories of secondary schools and primary schools. The following school types are included in each category.

Table 1: School level categories

Secondary schools	Years 7-15 Secondary schools Years 1-15 Composite schools Years 9-15 Secondary schools Years 1-15 Special schools
Primary schools	Years 1-8 Full primary schools Years 1-6 Contributing schools Years 7-8 Intermediate schools

Findings

THE PRINCIPLES EVIDENT IN THE INTERPRETATION AND IMPLEMENTATION OF SCHOOLS' CURRICULUM

The New Zealand Curriculum requires schools and their communities to use the principles as a guide for shaping a curriculum that:

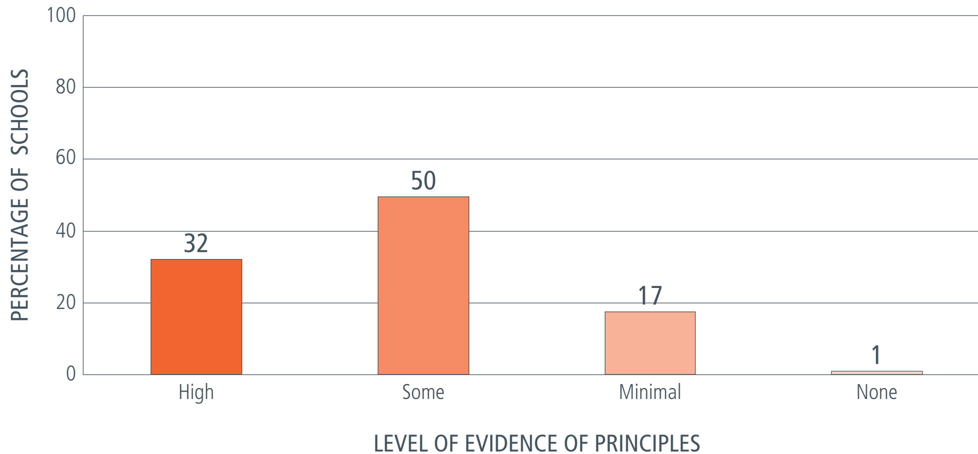
- embodies beliefs about the nature of the educational experience and the entitlement of students
- puts students at the centre of teaching and learning, engages and challenges them, is forward-looking and inclusive, and affirms New Zealand's unique identity.

The New Zealand Curriculum gives schools the autonomy to develop a curriculum that suits the locally identified needs of students and communities and makes use of the resources that are available in those communities. Responsibility for deciding on the curriculum should be shared between teachers, trustees, parents, students and the community. The vision, values, principles and key competencies of *The New Zealand Curriculum* provide a framework for parties to engage in discussion about what kind of people they want students to be, and the best means to support students to develop their potential.

Evidence of all eight curriculum principles in the school curriculum

In 70 percent of schools, all eight curriculum principles were evident in some form in their curriculum review and development practices and policies. Most schools (82 percent) had either high or some evidence of practice that involved interpreting and implementing the principles of *The New Zealand Curriculum*. Seventeen percent of schools had minimal evidence of the principles, and one percent of schools could show no evidence of curriculum principles. These findings indicate that, in the three years since *The New Zealand Curriculum* was introduced, good progress has been made in understanding the curriculum principles and building them into school level curriculum review and development processes and practices.

Figure 1: Curriculum principles – level of evidence in schools



Typically, where the principles were highly evident:

- teachers had high expectations for individual students regardless of their ethnicity, social background or ability
- assessment for learning practices, such as students reflecting on learning and setting goals, were embedded in teacher practice
- leaders and teachers promoted a culture of respect, caring, support and safety including providing a range of programmes to cater for students with diverse learning strengths and needs
- parents and whānau were encouraged to contribute their perspectives about the future direction of the school.

Where the principles were minimally evident:

- expectations for students were less specific and therefore less able to be planned for and monitored
- parents and whānau were involved in school events, but were not necessarily consulted about the broad direction of the school and its curriculum
- the curriculum was less coherent or aligned across subject areas
- students had limited self-responsibility, choice and ownership of their learning.

Developing understanding of *The New Zealand Curriculum* and reviewing the curriculum

The following descriptions of curriculum review and development are largely drawn from the schools where the curriculum principles were highly evident in their planning documentation.

The New Zealand Curriculum was explored through school-wide and/or cluster-wide curriculum development managed by school leaders. In some schools, curriculum development began with school leaders constructing their own knowledge of *The New Zealand Curriculum* before they worked with the whole staff on curriculum review and development. Leaders attended meetings facilitated by the Ministry of Education, accessed support from other external providers or worked with other leader colleagues. In terms of ongoing support, the *New Zealand Curriculum Online* and *Te Kete Ipurangi* were deemed to be useful websites for materials and examples of the principles in action.

When teachers began to engage with *The New Zealand Curriculum*, they started by exploring the vision, values, principles and key competencies at the front of the document. Investigation of the eight learning areas usually followed on from this. As the example below shows, there was a desire to treat the vision, principles, values, and key competencies as an integrated 'package' that created a coherent approach to curriculum development.

> *Eighteen months ago senior leaders and staff discussed curriculum principles alongside vision, values, principles and key competencies. They decided that curriculum development was to be meaningful for students and teachers. They wanted to consider all the front part of The New Zealand Curriculum together in a holistic way. They did not want the vision, values, principles, and Key Competencies to be seen in isolation as these together need to underpin the school's curriculum, pedagogy and relationships.* (Contributing school, Years 1–6)

In the past, schools had sought the views of their communities in developing their school charters. In the course of reviewing and developing their revised curricula, schools consulted them again, this time with a focus on the vision, values and principles that were important to them. School leaders noted that the curriculum principles linked well to school values and/or the culture of the school and could therefore be incorporated relatively easily into the schools' curriculum framework.

> *The principles were considered as part of the designing process of The New Zealand Curriculum. They were linked to what we considered important from our original school values.* (Full primary, Years 1–8)

> *…maintained were the values, already agreed and still seen as appropriate by the community, alongside The New Zealand Curriculum principles.* (Contributing school, Years 1–6)
>
> *... enactment of the principles was not experienced as a big step or a major shift in the school's approach to reviewing the curriculum.* (Secondary school, Years 7–15)

Teachers' knowledge about the principles was built over time and strengthened as they revisited them in the course of reviewing elements of the school-wide curriculum. In schools where this process was going well, the principles appeared in school documentation, filtered into classroom planning and were made known to students.

By contrast, in schools with less effective curriculum development processes, teachers were in the very early stages of looking at the vision, values, and key competencies; exploration and understanding of the curriculum principles was minimal; and school documentation did not mention the principles. There was much greater likelihood that the key competencies, or the vision and values were given greater priority than the curriculum principles.

> *When the New Zealand Curriculum professional development and implementation phase began in school in 2008, the principal spent part of the teacher-only day discussing the curriculum principles with the staff … Greater emphasis was placed on the vision and values, and what these implied in the revision of the school's vision and values. Since 2008, curriculum principles have not been prioritised, whereas key competencies have.* (Composite School, Years 1–15)

The relatively lesser focus on principles in curriculum development processes related to schools' perceptions that:

- their existing values served as a useful proxy for the principles and therefore no further work was required to develop the principles separately
- the principles were taken for granted in the curriculum and required little further exploration or unpacking.

In addition to working towards achieving alignment between the school vision, values, curriculum principles and key competencies statements, schools also sought to understand the distinctive features of each curriculum principle and any links between them. Schools perceived that there were links between pairs of principles, such as between inclusion and cultural diversity, high expectations and learning to learn and, to a lesser extent, between community engagement and Treaty of Waitangi. In some cases, schools also confused the curriculum principles. For example, there was some confusion between cultural diversity and Treaty of Waitangi.

Where there was strong evidence of curriculum development in schools, the process of gaining clarity about *The New Zealand Curriculum* was invariably collaborative. Sometimes this understanding deepened through whole staff discussion. At other times it happened in syndicates or in specially-appointed curriculum teams.

Leaders supported implementation by initiating discussions with teachers about what vision, values, principles and key competencies might look like in practice in the classroom. Indicators were sometimes developed for each curriculum principle. As the following comments from schools illustrate, the indicators were designed to guide teachers' work.

> *We defined what the principles would look like and sound like at our school. It was clearly expected that these principles would frame the curriculum and be woven into everything we did. Definitions for each principle included an overarching aspirational belief or objective which was supported by indicators for key aspects of school operation or expectations relevant to the principle.* (Contributing school, Years 1–6)

> *Each faculty considered each principle and unpacked them in discussion with staff using indicators of what might be seen in the classroom and how they may link to effective pedagogy, values and key competencies.* (Secondary school, Year 9–15)

> *In cross-curricular learning groups, staff brainstormed how each of the principles would influence teaching and learning in the school in the future ... They gave evidence of each principle and suggested ways in which the whole school community could become more aware of their importance. The groups suggested how each of the eight principles could make a difference for students who were currently not achieving to their full potential in the school.* (Secondary school, Year 9–15)

A second area in which leaders made a contribution was through establishing school systems that promoted the consistent and/or sustainable implementation of *The New Zealand Curriculum*. They did this through developing department schemes, planning documents, school handbooks and prospectus. As this comment illustrates, leaders recognised that producing this required resourcing.

> *The principal and Senior Leadership Team have supported the heads of department to drive the implementation of The New Zealand Curriculum. Heads of department have developed an implementation plan that includes late-start Tuesdays where they have worked in teams to plan for documentation initially. Documentation seems to be focused on key competencies, values, learning areas and pedagogical dimensions.* (Secondary school, Year 9–15)

The difference between schools that had high evidence of the principles in their curriculum, and those with lesser evidence, is that the former more actively supported this consistent and sustainable implementation through developing systems to support teachers.

These findings resonate with a previous ERO report, *Readiness to Implement The New Zealand Curriculum* (August 2009). This report noted that where schools were well positioned to implement *The New Zealand Curriculum*, the following features were present:

- teachers and school leaders understood that curriculum design was cyclical and that there would be multiple future opportunities to trial formats and systems for planning, delivering and assessing their curriculum
- teachers were well supported by leaders who played a critical role in maintaining the impetus on change, especially in the area of leading the learning on which curriculum development was founded
- school leaders spent time gathering perspectives about the content of a local curriculum and explored the values and vision that were important to their communities.

Evidence of individual principles in the school curriculum

The curriculum principles were evident to some extent in all schools (see Table 2). ERO investigated which were most evident, least evident and not evident in the school curriculum. Usually one or more principle was identified under each category.

Table 2: Evidence of each principle in the curriculum of 109 schools

Ranking	Principles identified as most evident in the school curriculum	No. of Schools
1	High expectations	76
2	Community engagement	56
3	Inclusion	53
4	Learning to learn	50
5=	Treaty of Waitangi	43
5=	Coherence	43
6	Cultural diversity	37
7	Future focus	36
Ranking	**Principles identified as least evident in the school curriculum**	**No. of Schools**
1	Treaty of Waitangi	43
2=	Coherence	31
2=	Cultural diversity	31
3=	Learning to learn	29
3=	Future focus	29
4	Inclusion	17
5	Community engagement	13
6	High expectations	11
Ranking	**Principles identified as not evident in the school curriculum**	**No. of Schools**
1	Future focus	8
2=	Cultural diversity	7
2=	Treaty of Waitangi	7
3	Coherence	6
4=	High expectations	2
4=	Community engagement	2
5=	Inclusion	1
5=	Learning to learn	1

High expectations was an important principle for many schools. ERO found that teachers made clear links between the curriculum principles of high expectations, learning to learn and inclusion. They thought that all students should:

- participate in learning
- have access to appropriate support for their special learning needs
- take responsibility for aspects of their learning (including setting and reviewing personal achievement goals).

ERO noted that teachers' focus was most often on how to meet the learning needs of students at risk rather than on extending more able students. Interestingly, schools also interpreted high expectations in terms of student behaviour. Specifically, they thought that students should behave appropriately and demonstrate effective self-management skills at school.

Typically, teachers, leaders and trustees perceived that promoting the notion of high expectations began with their own actions.

> *The school had a long-standing commitment to maintaining high expectations. This was evident in teachers' interactions with students and the quality of the teaching practices used in the school. Longstanding and experienced staff supported and promoted a commitment to excellence in the school, including implementing goal-setting with students and sharing assessment data with them.* (Full primary school, Years 1–8)

> *A key focus for the school's PLD leaders (that includes the principal and teachers who were using high quality teaching practices) was to promote high expectations for teachers as practitioners. This was seen as the mechanism to foster success for all students. It included looking at diverse factors that impacted on achievement, such as attendance, teaching practices, collecting evidence through multiple voices and using data to co-construct strategies for improving results.* (Secondary school, Years 9–15)

> *The board of trustees had identified a range of priorities to meet its strategic vision. These included: raising student achievement and promoting personal best across sporting, academic and cultural pursuits.* (Secondary school, Years 9–15)

When schools focused on the principle of *inclusion*, they emphasise the notion of students' involvement in the curriculum, specifically that classroom teachers made students of all ethnicities and abilities feel welcome, and encouraged their participation in the programme.

> *The teacher organised her programme to ensure that students were fully able to access appropriate learning activities by establishing many ability groups in mathematics and reading. There was support available from the principal and a part-time teacher for students with specific learning needs. Gifted and talented students were identified and the teacher sought opportunities to extend these students particularly through information and communications technologies (ICT) tasks.* (Full primary school, Years 1–8)
>
> *Thoughtful consideration was given to including students with high needs such as buddying them with other students or adapting the programme so they experienced success. A big deal was made when they moved levels with the emphasis being on improvement and progress rather than on attainment of a particular level.* (Full primary school, Years 1–8)

ERO found evidence that teachers deliberately responded to students' learning needs through the curriculum. Class descriptions were frequently cited as the initial process to identify which children required additional support. This was then followed up through teachers' planning, the implementation of differentiated programmes, and giving additional support to students with learning needs.

Another of the principles, *community engagement*, happened in three ways. Schools consulted their communities about the charter and the revised curriculum. They also gave parents assessment information about their children and involved them in school programmes or events such as parent-helping or sports coaching. In all but a few cases there was little evidence that community expertise was being used to support students' learning. Community engagement processes tended to happen at a school level rather than in classroom programmes.

Learning to learn was the fourth most evident principle. This suggests that while teachers had high expectations for students' learning, their programmes did not necessarily teach students ways to be self-managing learners. Given the high priority that thinking and managing self have in the key competencies of *The New Zealand Curriculum*, it is a concern that this principle is not more apparent in the curriculum. ERO noted the following practices in schools applying this principle well. Students:

- developed, with their teachers, learning intentions and success criteria for lessons/units of work
- generated foci/questions that set the direction for learning
- learned about the process for inquiring into topics of interest
- reflected on their own performance, achievement or progress
- set appropriate learning goals or next learning steps.

Coherence is one of three curriculum principles that was least evident in schools. This principle includes the notions of a broad education, links within and across learning areas, and transitions and pathways to future learning. Not all of these aspects were addressed by schools in their curriculum review or planning. Challenges to achieving coherence related to aligning the curriculum between departments in secondary schools or between classes in primary schools. Schools seldom mentioned transitions and pathways to future learning as a factor in their planning of the curriculum, although secondary schools were more likely to do this than primary schools.

The notion of integrated learning appears to be the aspect most understood and taken up by teachers and school leaders when reviewing and planning their curriculum. They did this through:

- developing planning that linked several learning areas
- planning for and/or making explicit to students, the links between new learning and previous topics or understandings.

In a few cases, schools made links between the principles and professional development they were engaged in, as shown in the following example:

> *Whole-school, externally-facilitated PLD initiatives supported the school in implementing and embedding curriculum improvement. As well as the Secondary Literacy Programme and the Secondary Numeracy Programme, the school was involved in Te Kotahitanga to improve teaching practice and student engagement. Te Kotahitanga embraced many of The New Zealand Curriculum principles and is therefore linked to teachers' practices.* (Secondary school, Years 9-15)

Treaty of Waitangi and cultural diversity were the other two least evident principles. Where the *Treaty of Waitangi* principle was least evident, Te Ao Māori (a Māori perspective or world view) was not visible in the school's curriculum. There were minimal opportunities for students to learn te reo me ōna tikanga Māori, and the environment did not adequately celebrate aspects of Māori culture. Ways schools could improve their practice included:

- understanding the Treaty of Waitangi and its implications for school policy, organisation and planning
- consulting the Māori community/communities about the direction of the school and their aspirations for Māori students.

Where the Treaty of Waitangi principle was evident in the curriculum, the following features were noted in school programmes:

- te reo me ōna tikanga Māori was valued and promoted at many levels of the school (trustees, teachers, students) through pōwhiri, karakia and kapa haka
- students had opportunities to visit local marae
- relationships were established with local iwi that supported students' learning.

In a few schools, a Resource Teacher Māori (RTM) and/or Kaiawhina was available. These people provided specialist support to build teachers' knowledge of te reo Māori, kapa haka and Māori protocols.

Some schools had done particularly well in increasing teachers' capacity to understand a Māori perspective and thereby meet students' needs as shown in the following example:

> *The school had a very capable board, three of whom were Māori. Senior managers and trustees have enrolled in a New Zealand Qualifications Authority paper to increase their awareness of Te Ao Māori and tikanga. They identified a group of Māori students who needed to develop a stronger sense of themselves as Māori. A schoolwide programme was in place.* (Full primary school, Years 1–8)

Others had sought to work closely with Māori communities to support students' academic development. As this example indicates, the impact was beneficial:

> *Many strategies were in place for supporting Māori students in their enjoyment of school and learning. These were coordinated by a large team of school and community personnel, brought together through a memorandum of understanding with [named trust]. Students had access to a variety of resources, role models, mentors and support systems. Expectations, aspirations and retention rates for Māori were lifting. Students experienced successes in academic achievement, sports, music, and performance and were moving on to higher learning.* (Secondary school, Years 7–15)

Where there was evidence that schools were thinking about and incorporating the principle of *cultural diversity* into their curriculum, students had opportunities to celebrate some of their cultural practices and to share knowledge of these with other students. By contrast, where this principle was not highly evident, there was little acknowledgement of students' cultural heritage in school programmes and in the physical environment. A more inclusive approach to curriculum management would make learning more relevant for students from diverse cultural backgrounds.

As a next step in developing deeper understanding of this principle, schools should provide professional development opportunities for staff that should focus on surfacing teacher's own culturally-based beliefs and practices, and how these play out implicitly and explicitly in school and classroom systems and programmes. They should also make provision for students to express their diverse cultural perspectives and views.

ERO's evaluation findings suggest that schools need to gain a more comprehensive understanding of the intent and nature of the principle of *future focus*. Four dimensions are incorporated in this principle – sustainability, citizenship, enterprise, and globalisation. Schools tended to focus their curriculum planning and programmes on one aspect – sustainability. They were involved in environmental projects, such as recycling, conservation and beautification programmes. Missing from most schools' curricula was a planned and enacted approach to the aspects of citizenship, enterprise and globalisation. Absent was the crucial focus on supporting students to imagine a positive future through practising decision-making, learning about their rights and responsibilities in the classroom and the community, and discussing and acting on social justice issues.

Further, some schools interpreted this principle very narrowly as "preparing students to be 21st Century learners." The scope of this principle was then limited to learning about how to use information and communications technology. Schools need to explore this principle in greater detail, so that its full intent and scope can be expressed in each school's curriculum.

Treaty of Waitangi and cultural diversity are among the least evident principles in schools' curricula. It would be useful for schools to gain a more comprehensive view of the implications of the Treaty of Waitangi for school policy and practice. It would also be useful for schools to develop their understanding about the nature of the Treaty of Waitangi and cultural diversity principles, including the distinction between the two principles. Examples of how each of the principles can be aligned with curriculum planning and incorporated into it, would also be beneficial to school leaders and teachers.

THE PRINCIPLES OF *THE NEW ZEALAND CURRICULUM* ENACTED IN CLASSROOM CURRICULUM

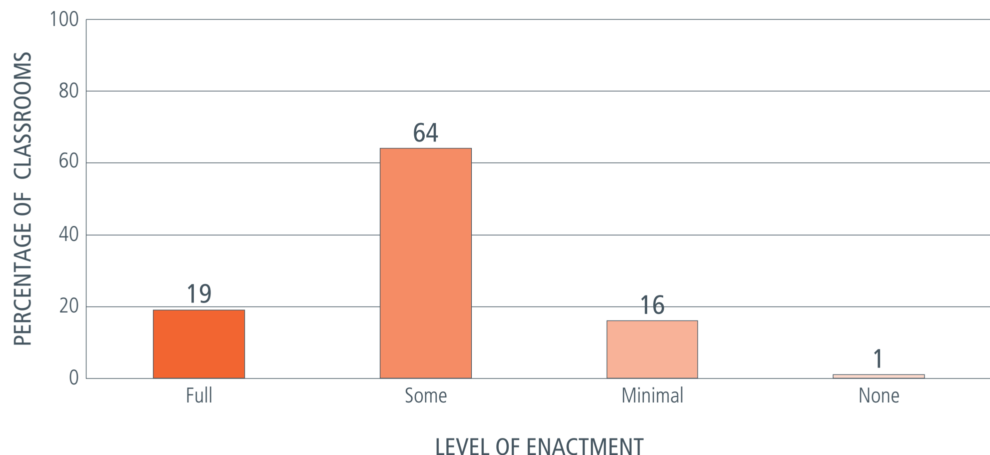
Just as schools must be receptive to their communities and students in designing their revised curricula, classroom teachers, through classroom programmes, should respond to the emerging needs, interest and strengths of students. The eight principles, as well as the vision, values, and key competencies in *The New Zealand Curriculum* are a touchstone by which teachers can plan and review their programmes.

To enact the principles, teachers need to have a good knowledge of all eight principles and how each of them can be promoted through the classroom programme. When the principles are being enacted appropriately, they will be evident in teachers' planning *and* in their programmes in action. The planned activities will take account of students' learning needs, strengths and interests, as well as priorities that arise from consultation with the school's community. For instance, the Treaty of Waitangi principle will be evident in regular planned opportunities for students to learn te reo Māori as well as through other formal and informal opportunities students have to understand and celebrate the place of Māori in Aotearoa New Zealand. The aspirations and views of students, their parents and communities will be apparent in school and classroom planning.

The extent of enactment in the classroom

ERO looked at the extent to which the principles were enacted in classrooms. Findings indicated that of the 200 classrooms, 83 percent showed high or some enactment of the principles in their curricula. In 17 percent of classrooms there was minimal or no enactment of the curriculum principles.

Figure 2: Curriculum principles – classroom enactment



There were differences between the ways the principles were used at school and classroom levels. At school level leaders developed curriculum frameworks and systems for teachers to enact the curriculum. In the classroom, the principles were evident in teachers' actions and student learning.

Patterns in teachers' practices were noted by ERO where the curriculum principles were fully and minimally enacted. Teachers integrated the principles into their long-term unit plans, and into their teaching actions. Typically, where the principles were fully enacted, teachers:

- sought to know students well (for example through the analysis and interpretation of assessment information) so that they could tailor the teaching programme to suit them
- aligned planning to assessment information
- focused on lifting students' achievement and accelerating their progress
- sought to eliminate any barriers to the successful involvement of students in programmes
- gave students information about their achievement and progress
- encouraged students to set high personal and academic goals
- gave students exemplars and rubrics to guide their future learning and self assessment
- thought about ways to engage students in their learning
- valued, promoted and celebrated the cultural heritage, strengths and abilities of students.

School leaders were more likely to be teaching in classes where the curriculum principles were fully enacted than in classes where there was some, minimal or no enactment. Given that in many schools, PLD for understanding the principles began with leaders, and had been sustained by them through school-based systems; this is not unexpected.

In classrooms where the principles were minimally enacted, some teachers had participated in professional learning activities to understand *The New Zealand Curriculum*. They generally understood the role the principles could potentially play in the process of curriculum review and development. Enactment in these classrooms, however, lacked the purposeful application noted in classrooms where enactment was high. In classrooms where enactment was minimal:

- teachers did not have a clear understanding of the principles
- the principles were not included in planning
- there was a lack of focus on fostering students' self-responsibility for learning.

EVIDENCE OF INDIVIDUAL PRINCIPLES IN THE CLASSROOM CURRICULUM

ERO investigated which principles were most evident, least evident and not evident in the classroom curriculum. Usually one or more principle was identified under each category. In 41 percent of classrooms, all eight curriculum principles were evident in some form. The extent to which each principle was evident in the curricula of the classrooms is represented in Table 3.

Table 3: Evidence of each principle in the curriculum of the 200 classrooms

Ranking	Principles most evident in classroom curriculum	No. of Classrooms
1	High expectations	147
2	Inclusion	115
3	Learning to learn	107
4	Coherence	75
5	Cultural diversity	65
6=	Community Engagement	55
6=	Future focus	55
7	Treaty of Waitangi	48
Ranking	**Principles least evident in classroom curriculum**	**No. of Classrooms**
1	Treaty of Waitangi	80
2	Future focus	58
3	Community engagement	53
4	Coherence	50
5	Learning to learn	47
6	Cultural diversity	44
7	Inclusion	24
8	High expectations	21
Ranking	**Principles not evident in classroom curriculum**	**No. of Classrooms**
1	Treaty of Waitangi	40
2	Future focus	33
3	Cultural diversity	30
4	Community engagement	29
5	Coherence	21
6	Inclusion	10
7	Learning to learn	7
8	High expectations	6

The three principles most evident in the classroom curriculum were *high expectations, inclusion* and *learning to learn*. These principles were demonstrated in classrooms through opportunities for students to:

- reflect on their work and decide on their next learning steps or goals
- make choices about topics to study, or pose questions for investigation
- work with their teachers to develop success criteria for learning tasks or units of work
- discuss their progress and achievement with teachers and their parents.

Students in these classrooms were viewed as competent and capable learners whose contribution to the programme was valued and encouraged.

> *The teacher operated from a facilitative approach. She continually searched for opportunities to challenge students' thinking, for them to generate their own questions and find their own answers. She valued students as capable learners.* (Contributing school, Years 1–6)

> *The teacher knew his students well, and developed their confidence through discussion, affirmation and collaborative peer activities. Students were involved in co-constructing success criteria and regularly discussed with the teacher their progress and next steps for learning.* (Secondary school, Years 9–15)

Some teachers took this practice further by consulting students about the aspects of teaching that were most beneficial to their learning. They then adapted their programmes or teaching approaches, as shown in the following example:

> *The teacher had conferences with students about their next learning steps, was open and inclusive and highly reflective in her approach. For example, she conducted end-of-year surveys and had lots of one-on-one conversations with students about how they were finding the work. Many units of work had self evaluations which students filled out, and these were filed in the student portfolios. The teacher had made comments on these, showing an awareness of how students experienced the teaching.* (Composite school Years 1–15)

The *inclusion* principle was promoted through caring and supportive classroom cultures where teachers showed respect for students' ideas, planned carefully so that learning was relevant, and used targeted resources and programmes for students with identified specific learning needs. High expectations and inclusion were also most evident in the school curriculum suggesting that understanding of these principles was strong.

Treaty of Waitangi, future focus and *community engagement* were the three principles most often not evident in the classroom curriculum. At the school level, Treaty of Waitangi was also the least evidence, along with future focus, which was also near the bottom of the school list. These findings indicate a relationship between school-wide systems and processes, and enactment in the classroom. The implications are that school leaders need to help teachers develop a more comprehensive understanding of Treaty of Waitangi, future focus and community engagement, in order to promote these principles more effectively in the classroom.

THE LINKS BETWEEN SCHOOL EVIDENCE AND CLASSROOM ENACTMENT

The most evident school principles were also the principles most enacted in the classroom. The principles least evident in school curricula were also those least enacted at classroom level. Well-developed school systems corresponded with better understanding of the principles by teachers and more comprehensive enactment of them in the classroom.

While several principles were promoted well at a school level, and were being enacted at a classroom level, others were not given adequate priority at either of these levels. As part of curriculum review, it would be useful for school leaders to ascertain the extent to which all eight principles are understood and are evident in school policies and classroom practice and then address any gaps.

SCHOOL SYSTEMS TO GUIDE, INFORM AND SUPPORT TEACHING AS INQUIRY

School systems to guide, inform and support teaching as inquiry

The primary purpose of teaching as inquiry is to bring about improved outcomes for students through purposeful evaluation, planned action, strategic teaching, and focused review.[10] Reid[11] emphasises the deliberate and strategic nature of teaching as inquiry:

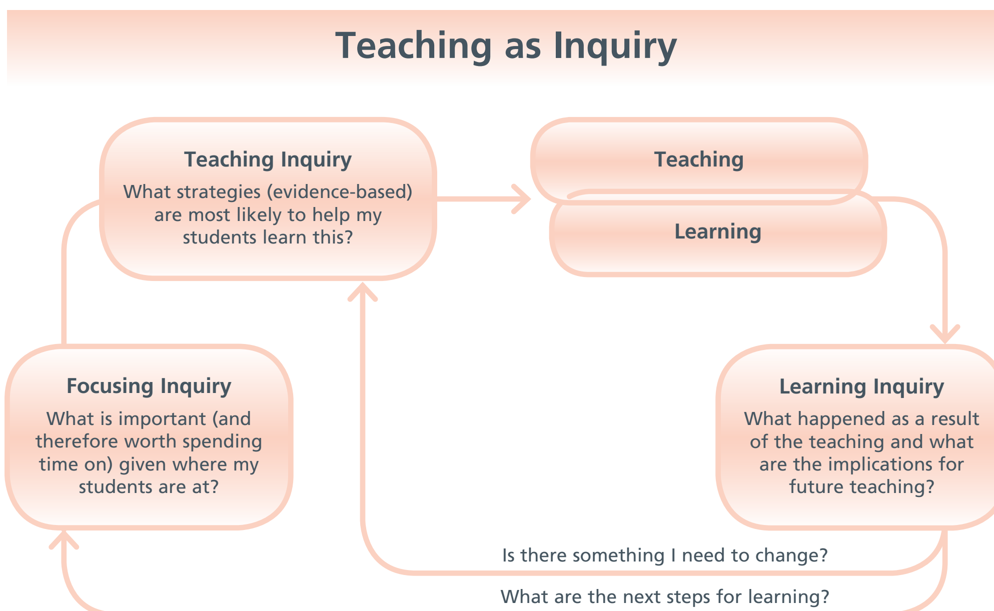
> *I understand inquiry to be a process of systematic, rigorous and critical reflection about professional practice, and the contexts in which it occurs, in ways that question taken-for granted assumptions. Its purpose is to inform decision-making for action.* (Reid, 2004: p.4)

Teaching as inquiry, represented in *The New Zealand Curriculum*, is a four phase cyclical process. These questions guide teachers in their inquiry process:

1. What should students achieve, where are our students in relation to these goals and priorities, and what do students need to learn next (focusing inquiry)?
2. Which strategies will support students to achieve these outcomes (teaching inquiry)?
3. What learning happened for students and what will teachers do next to ensure that students continue to improve (learning inquiry)?

As Figure 3 shows, the process of inquiry should be dynamic and responsive to information gathered about students. In the pursuit of appropriate strategies for helping students, the inquiry process can skip some phases and revisit others several times.

Figure 3: The teaching as inquiry cycle



10 The Teaching as Inquiry cycle was developed by Aitken and Sinemma (2008) and presented in *Effective Pedagogy in Social Sciences/ Tikanga ā Iwi* best evidence synthesis iterations.

11 Reid, A. (2004). Towards a Culture of Inquiry in DECS. *Occasional Paper Series.* Department of Education and Children's Services. South Australia.

Teaching as inquiry is founded on the notion that problems of practice and/or issues related to students' learning are bound by context and therefore require locally-developed teaching responses. These should draw on the successful experience of teachers as well as on respected sources of research that extend teachers' thinking. Whatever teachers choose to do with respect to their teaching, their decisions should be based on a thorough and candid examination of their practice. They should also assess what additional or alternative practices or approaches could be used to improve outcomes for students.

As Reid (2004) pointed out, inquiry is about challenging teachers' thinking in ways that promotes their own learning as well as that of their students. For this to happen, teachers need to examine their taken-for-granted practices critically in the light of evidence about students' learning (Timperley, Wilson, Barrar and Fung, 2007). They should also explore relevant research literature that can challenge their thinking and offer new teaching possibilities.

The considerable role school leaders play in supporting teaching as inquiry is documented in literature.[12] Amongst groups of teachers, leaders promoted a culture of trust, open-mindedness, responsibility, wholeheartedness (Reid, 2004); and fallibility[13] and persistence (Aitken & Sinemma, 2008). School leaders also develop systems to help teachers engage in inquiry. They arrange for teachers to meet in groups, investigate data related to specific aspects or issues, reflect on why problems or difficulties might be occurring, and consider approaches or strategies that will promote better outcomes for students.

In 2010, ERO investigated what school leaders did to establish and maintain systems in schools that built teachers' understanding of teaching as inquiry as a process, and how they helped teachers to use it. The findings are reported below.

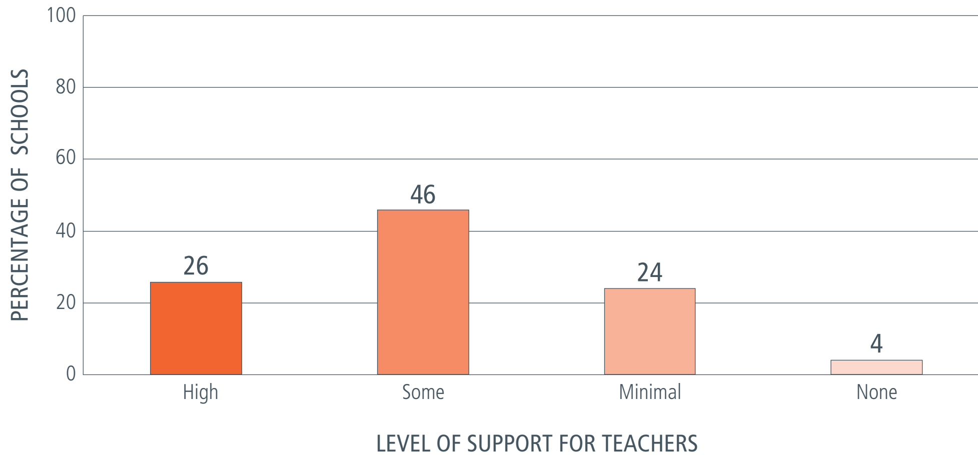
The extent schools used inquiry to inform and support decision

Many schools (72 percent) had processes in place that were either highly, or somewhat informative and supportive in promoting teaching as inquiry. In 28 percent of schools, there were no processes or processes were minimal.

12 Timperley, H., Wilson, A., Barrar, H., and Fung, I. (2007). *Teacher Professional Learning and Development: Best Evidence Synthesis Iteration [BES]*. Wellington: Ministry of Education.

13 Fallibility is referred to by Aitken and Sinnema (2008, p.53) as "accepting the possibility that what was, or what has been, successful with one group of learners may not be successful for another and that, for this reason, well designed intentions might fail to generate the desired response".

Figure 4: Teaching as Inquiry – level of school support for teachers



The concept and practice of inquiry preceded the release of *The New Zealand Curriculum*. For example, the use of evidence-based evaluation and inquiry was the underpinning theory for schooling improvement models.[14] This meant that some schools had experience of thinking about and applying an inquiry model to their school processes before *The New Zealand Curriculum* was introduced.

SCHOOLS WHERE TEACHING AS INQUIRY WAS HIGHLY INFORMATIVE AND SUPPORTIVE

Where schools used inquiry well to inform and support their practices, ERO noted:

- they used external expertise to build teacher understanding about teaching as inquiry
- they included teaching as inquiry in the process of exploring *The New Zealand Curriculum*
- they integrated and promoted teaching as inquiry through school systems that applied at classroom and school level
- they drew links between professional development programmes they were involved in, and the processes of teaching as inquiry.

Inquiry was generally an expected and monitored component of school practice. It happened in multiple and concurrent ways and typically included discussion in groups of teachers or among school leaders. The focus of the discussion was on combinations of the following:

- sharing a problem of practice (such as students whose progress was not at the expected level)
- critical data analysis
- appropriate teaching strategies and approaches.

14 As early as 2004, the Analysis and Use of Student Achievement Data (AUSAD) initiative set about improving the capacity of leaders in Mangere and Otara schools to analyse data and share findings to support students' learning.

Individually teachers engaged in inquiry when they:

- recorded in journals information about students' learning, and ideas about actions teachers would take to improve learning
- wrote end-of-term classroom or syndicate programme evaluations
- observed each other's practice, giving each other feedback and following up with discussions or planning.

Teachers were not the only ones who used an inquiry approach. Occasionally, inquiry was applied to the self-review process carried out by leaders. For example, leaders made decisions about future PLD opportunities on the basis of information collected through the performance management system (PMS). Such practices indicated the strength and coherence of inquiry in these schools.

In schools where teaching as inquiry was highly informative and supportive, a culture was created and characterised by a shared aspiration to improve learning and teaching, and a desire to work as a team. Teachers met regularly to engage in joint activity that had learning and teaching foci. By being part of the group, teachers developed a shared commitment to decisions made, and to implementing practices consistently.

Leaders were instrumental in initiating activities and processes that supported teachers' work. Their work in this area included:

- establishing inquiry routines (such as regular meetings and ongoing classroom evaluation practice)
- developing guidelines, expectations and protocols about how groups of teachers should engage in inquiry
- making information available in forms that teachers could use as part of their inquiry activity
- conveying the importance of, and modelling, reflective practice
- creating opportunities, through school systems such as target setting and performance management, for teachers to build their capacities as high quality teachers.

An inquiry approach was most often applied when teachers and leaders reviewed student's progress and achievement information. They explored analysed data and then made decisions about groups of students who were not meeting achievement expectations. Decisions for these students were about: planning school initiatives; selecting appropriate learning programmes; discussing strategies individual classroom teachers would use, and setting targets for students who were at risk of educational failure. As this example shows, these students were a shared priority:

> *Teachers discussed in depth syndicate-wide assessment data. From these discussions they identified students (individuals and groups) at risk, areas of concern and strategies to address these. From these discussions each syndicate also identified syndicate goals for the term.* (Contributing school, Years 1–6)

Few schools used research findings as the basis of their decision-making about provision for students. Teachers typically selected future teaching strategies from an existing repertoire of their own and colleagues' practice. While there are merits to choosing known approaches, the risks are that these do not necessarily align well with the currently identified issues. Thinking about the possibilities that could lead to better outcomes for students should include looking at what other teachers and researchers have found to be effective.

A further application of inquiry was through the Performance Management System (PMS). The PMS in some schools operated like an inquiry cycle. Information about students' learning was used to set goals for teachers' practice, evidence about students and teachers' progress was collected and reviewed, and further goals were set. The objective of implementing the PMS in this way was to build teachers' capacity to think about their own practice and its possible impact on students' learning. In some schools where processes were highly informative and supportive, teachers:

- set teaching goals based on student achievement information
- sought peer feedback about their teaching practices
- used peer mentoring, coaching, and observations
- met periodically, with school leaders, to review progress towards meeting teaching goals and school targets.

As this example shows, school leaders played a significant role in supporting this process. There was also a clear link to school-wide targets.

> *Each teacher set a development goal that came from school targets about increasing student engagement. Teachers set their goals using data gathered from class observations, videoing and self assessment. Information from these goals fed into an overall review of the school target. Twice a year teachers had meetings with the principal where they discussed individual student achievement and progress against set targets. From these discussions teaching approaches were considered.* (Contributing school, Years 1–6)

Teaching as inquiry is about sustainable learning. Timperley et al (2007) note that sustainable teacher learning and improvement is contingent on:

1. A strong theoretical understanding about the foundation for changes to practice
2. Teachers equipped with the skills to inquire into the impact of their teaching on student learning
3. Leadership that provides the conditions for collective, evidence informed inquiry, and for improved pedagogical content and assessment knowledge
4. Participating teachers and their leaders taking responsibility for, and believing they have the capacity to address identified problems with student outcomes
5. Solutions that are located within the educational opportunities of the school
6. A focus on minimising competing initiatives and policy directions.

In schools where teaching as inquiry was highly informing and supported self review and decision-making, sustainable learning processes, as described by Timperley et al above, were beginning to happen. A small number of schools were well on the way. Notably, in these schools, teachers had been equipped with the skills to use inquiry. Skilled leaders supported, modelled and expected inquiry to happen, and teachers were committed to making a difference for their students. The development point in terms of sustainable practice was for leaders to encourage teachers to explore relevant research literature that could challenge their thinking and assumptions about student learning.

SCHOOLS THAT WERE SOMEWHAT INFORMATIVE AND SUPPORTIVE OF TEACHING AS INQUIRY

In the 46 percent of schools where ERO found processes to be somewhat informative and supportive of teaching as inquiry, the features of sustainability described in the previous section were much less evident. Compared to schools using high levels of inquiry, leaders' influence was less apparent. Nonetheless, their contribution was important. In some cases they worked with teachers, and/or sought support from external facilitators to build understanding of the "front end" of *The New Zealand Curriculum*,[15] including the notion of teaching as inquiry. They made achievement information about students available to groups of teachers. They encouraged discussions in groups that focused on how to address the specific learning needs of students.

Overall, in these schools there was a need for teachers to gain further clarity about the nature and process of teaching as inquiry and its implications for practice. None of the activities described in the four phases of the inquiry cycle as described in *The New Zealand Curriculum*, were seen often. The deliberate and rigorous inquiry process

15 The front end of the curriculum includes the vision, values, key competencies, principles and learning areas.

described by Reid (2004), were not seen. Missing were the structures that supported robust inquiry in the schools with good inquiry: clear guidelines about how inquiry should happen, monitoring of inquiry activity, and promotion of the inquiry processes by school leaders.

There was a particular gap in the learning inquiry phase of the teaching as inquiry cycle.[16] As this example shows, evaluation lacked a necessary focus on whether or not there had been improved outcomes for students:

> *Teachers are expected to evaluate completed units of work, but there is variability in terms of the quality of these and the frequency in which they are done. The best practice happened where teachers' evaluations included reflective and informed comments about what went well, what had not, and why, and what the teacher would do differently. Some teachers, however, simply made descriptive comments about what students had done rather than being evaluative about the impact on students' learning.* (Contributing school, Years 1–6)

SCHOOLS THAT GAINED LITTLE INFORMATION FROM TEACHING AS INQUIRY, OR USED THE PROCESS MINIMALLY

In schools where inquiry processes were either minimally informative (24 percent) or not used to support decision-making (4 percent), teachers were in the early stages of understanding what inquiry was about. Some teachers had confused it with a learning approach used by students called 'inquiry learning'. Teachers had few opportunities to work together using an inquiry approach. The capacity and sustainability features that ERO found in schools that had highly informative and supportive inquiry systems and cultures were not evident in these schools.

There were gaps in practice at every phase of the teaching as inquiry cycle.[17] Leaders did not promote the use of student achievement information as the basis for making decisions about teaching and learning. Focused discussion on strategies for addressing students' needs was absent. Evaluation practice was not carried out well or did not happen at all. Compared to schools where teaching as inquiry was well embedded, teachers were less inclined to be reflective about their practice. Leadership, through the PLD programmes (including the PMS), did not support teachers' development effectively.

16 See Figure 3.

17 See Figure 3.

Teachers' inquiry into the impact of their teaching on students

The four phases of the teaching as inquiry cycle,[18] and the three sets of related questions,[19] also apply to inquiry that happens in classrooms. While classroom inquiry tends to be more individualised and contained, there are opportunities for teachers to talk with others about their inquiry processes and findings. Reflective journals, end of term/end of unit evaluation processes, action research projects, portfolios, and participating in the PMS, are common forms of classroom inquiry.[20] Each can be used in different ways and some can be combined to provide rich information and accounts of learning and teaching.

Where teachers have the skills and disposition, teaching as inquiry also happens moment-by-moment as teachers reflect on what learning is happening and how they will respond to the emerging needs and strengths of students. Regardless of when and how it happens, teaching as inquiry is purposefully oriented to knowing about the impact of teaching on students, and then to responding to this information in ways that will promote students' learning. Effective leaders play an important role in establishing and promoting inquiry approaches and in emphasising the deliberate nature of teaching as inquiry.

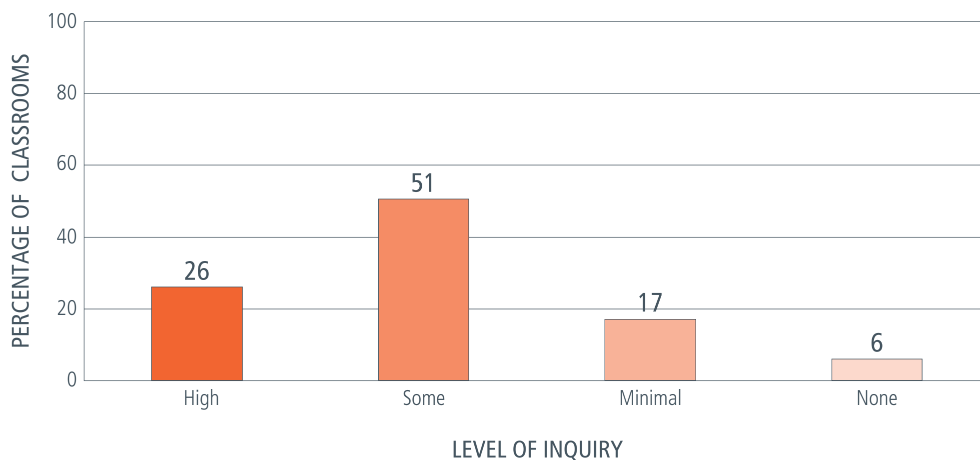
Teaching as inquiry is essentially a teacher activity,[21] however because students are the beneficiaries of teachers' inquiry, it makes sense that they participate in the process at certain points. For instance, students can take responsibility for working towards achieving learning goals or priorities that have been identified by teachers through inquiry. To do this effectively, teachers must make it explicit to students what these goals are, and the processes by which students can achieve and review them as part of the classroom programme. Students can also give teachers useful information about the impact of teaching practices on their learning and engagement.

THE EXTENT OF TEACHERS' INQUIRY IN THE CLASSROOM

ERO found that many teachers used teaching as inquiry in their classrooms.

In 77 percent of classrooms, teachers were either using a high level or some inquiry. In 23 percent of classrooms there was minimal or no evidence of teaching as inquiry. Figure 5 illustrates the level of inquiry found in classrooms in this evaluation.

Figure 5: Teaching as inquiry – level of inquiry in the classrooms



High levels of inquiry

Findings indicate that in classrooms with high levels of inquiry, teachers focused on knowing about students' achievement. Student assessment data were gathered over time, using many tools and processes. They collected and inquired into both formal and informal assessment data. Teachers gathered information informally, and in an ongoing manner, to find out more about a particular student's progress on a 'need-to-know' basis. Typically there was also a schedule developed by school leaders that teachers followed when gathering formal assessment data. School leaders analysed data and information that was then passed on to groups of teachers in a form that could be used by them. Teachers discussed the findings and shared approaches that could be used with students to raise achievement.

ERO found that teachers were well supported by leaders and their colleagues in improving their teaching and their understanding of inquiry as a process for changing practice. As this example shows, there were opportunities to learn from peers, guided by systems established by leaders:

> *The teacher was involved in a critical inquiry cycle process with another colleague in the department. Key questions informed this process. All teachers had regular times for their meetings with colleagues and for planning.* (Secondary school, Years 9–15)

Individual classroom teachers also used their own analysed data to cater for individuals and groups of students. They typically used it to identify gaps in students' learning, monitor their progress, and develop or adjust long and short-term planning for them. A common use for assessment data was to group and regroup students in reading and mathematics.

18 These phases are: focusing inquiry, teaching inquiry, teaching and learning, and learning inquiry.

19

1. What should students achieve, where are our students in relation to these goals and priorities, and what do students need to learn next (focusing inquiry)
2. Which strategies will support students to achieve these outcomes (teaching inquiry)
3. What learning happened for students and what teachers will do next to ensure that students continue to improve (learning inquiry)?

20 Reid (2004) refers to a range of inquiry approaches that are part of teachers' "inquiry toolbox". Some of these relate to collaborative inquiry and others to individual inquiry.

21 This process should not be confused with inquiry-based learning which involves students investigating self-generated questions and issues.

> *The teacher evaluates lessons by writing in a scrap-book and reflecting on these evaluations. She uses success criteria to see how students have done and which areas of learning need revisiting. Exemplars are used to assess individual student progress and to re-teach and re-group where necessary.* (Contributing school, Years 1–6)

The culture in classrooms where inquiry was high was one of both informal and formal monitoring, reflection on and responsiveness to students learning needs and interests. For instance, teachers made moment-by-moment decisions on how to respond to emerging issues for learners on the basis of their observation of what students were doing as shown in the following example:

> *The teacher was a close observer of students' learning in progress. She constantly modified her approach as she assessed students' understanding and application.* (Contributing school, Years 1–6)

> *The teacher listens to students' responses to gauge their understanding and makes notes that contribute to her planning and teaching for the next day.* (Full primary school, Years 1–8)

Sometimes teachers used more formal processes for recording information about students. These included class descriptions, reflective journals, weekly evaluations, or analysed student surveys. These were used to improve aspects of the programme and the learning environment, such as adapting the level of challenge in units of work.

> *The teacher did frequent evaluations with students. Comments students made changed aspects of the English department scheme, influenced the way this teacher taught, and contributed to decisions about topics and resources. The programme was now more student centred.* (Composite school, Years 1–15)

Whereas some teachers felt confident about changing aspects of the curriculum in response to information about students learning, others were less inclined to do so.

> *The teacher was aware of teaching as inquiry as a concept from whole staff and faculty PLD. She was developing a sense of how to use inquiry to improve teaching and learning. Inquiry was not a strong process in what to teach [the content of learning] as the course was set down in the scheme and the teacher thought she should follow it.* (Secondary school, Years 9–15)

It is important that teachers have the flexibility and are encouraged to make adaptations to the programme when they have the evidence to indicate that to do so would benefit students' learning. School leaders have an important role in conveying the value of balancing the documented school curriculum and prescribed timeframes with the emerging needs, interests and strengths of the students in their classes. Where teachers receive a clear message from school leaders that it is not only permissible but also desirable to do this, teachers will be more inclined to inquire into their practices and make necessary adjustments to their teaching.

Critically inquiring discussion among teachers should be probing and challenging. Teachers need to be open to learning and trying new ways of teaching that might be beneficial to their students. It is not clear that these types of probing inquiry conversations occurred in schools. What is clear is that only a few teachers made use of research in considering alternative teaching approaches in their programmes. Problems of practice, including what to do for students who were not progressing at the expected rate, were mostly addressed by drawing on current teaching repertoire. It would be beneficial if leaders and teachers located relevant research that would challenge thinking about current practices.

Leaders supported good practice in inquiry by providing frameworks for teachers to follow. For example teachers had a set of questions that guided their inquiry at both a school and classroom level. Leaders also produced planning and assessment systems, and school expectations that supported consistent and coordinated teaching practice across classrooms and made it easier for teachers to engage in inquiry. Formal frameworks that encouraged observation and critical reflection, as part of the PMS, also created a useful context for teachers to use an inquiry approach.

This example illustrates leaders' influential effect on how teachers taught.

> *Teachers were well supported by clearly documented guidelines for planning, teaching and assessment. They benefited from targeted and well-planned professional development. Teaching as inquiry was well supported by the self-review system developed by senior managers. Self review was focused on raising students' achievement by improving practice. Professional development and the performance management system were closely aligned to supporting teachers in improving their practice.* (Full primary school, Years 1–8)

Underpinning teachers' work was a set of attitudes that defined the teaching and learning culture in the classroom. Where there was strong inquiry, teachers showed a desire to make a difference for students, a disposition to include students in the processes of learning, a curiosity about what would make students' learning better, and a willingness to improve teaching practice.

Students' were involved in making decisions about their own learning. They were encouraged to set goals on the basis of the information teachers had gathered about them, and to reflect on the progress they had made towards meeting these. In some instances students were also involved collaboratively in negotiating criteria used in assessing their work.

> *Students were fully aware of their progress and grades. They have copies of the indicators used by teachers to make judgments about the quality of their work. Students do self-assessment activities and meet with teachers to discuss their progress and next steps. There was a clear emphasis on individual progress and a personal approach to achievement.* (Secondary school, Years 9-15)

Knowing about their own progress and achievement and the means by which they could improve, were considered useful steps in fostering students' sense of ownership for learning.

Some level of inquiry

Where there was some level of teacher inquiry, more work was required at a schoolwide level to develop teachers' understanding and application of teaching as inquiry. ERO identified gaps in teachers' practice in all four phases of the teaching as inquiry cycle. Typically, data gathering was less comprehensive than in classrooms with high levels of inquiry. For instance, data on students' ethnicity were not collated or reflected on critically. There was variable practice in relation to using assessment information as the basis of classroom programmes. Some teachers used data well (including information from self review or evaluation); whereas others had yet to routinely link assessment data to planning. As this example shows, the practice of using data to guide practice was somewhat tentative:

> *Teachers throughout the school were beginning to get to grips with using student achievement data for informing the classroom programme. They were beginning to group students and teach them according to their needs identified from student achievement data.* (Secondary school, Years 9-15)

Where analysed information was used well to focus learning, it was used to identify gaps in students' learning, for grouping or regrouping students (especially in mathematics and literacy), and to develop long and short term plans for students. Some of this planning was not closely aligned to the data gathered.

The influence of leadership practice on teachers was apparent, especially in the support teachers received for carrying out review. Leaders set stimulus questions to structure review, developed templates for recording review processes and outcomes, and established evaluation schedules and guidelines. They were pivotal in making sure teachers had opportunities to meet and reflect on learning and teaching. Teaching as inquiry underpinned the appraisal process, specifically through peer coaching, reflective conversations, feedback and setting goals.

Students had some involvement in learning processes, through goal-setting and opportunities to reflect on personal performance. This involvement was noticeably less than in classes with highly developed inquiry.

Minimal and no levels of inquiry

In 17 percent of classrooms, teachers had minimal understanding of teaching as inquiry, or were confusing it with the process of inquiry-based learning. Some leaders encouraged teachers to meet, to discuss students' learning, and share planning. However, these activities were not regular, and ongoing inquiry was therefore not established. Decisions made were not sufficiently anchored in evidence about student achievement to make these sessions useful.

In the few classrooms (6 percent) where there was no inquiry teachers had not met to talk about students or engaged in organised or coordinated professional learning using an inquiry framework. The same confusion about inquiry noted above was also evident in these classrooms. There were few examples of teachers evaluating the outcomes of their teaching and modifying their programmes or timetables to give priority to where their students needed to focus most. Without this supportive environment, teachers were not in a good position to apply teaching as inquiry in their classrooms.

Conclusion

In schools where curriculum principles were most evident and teaching as inquiry was well supported at the school level, leaders played an active role in supporting teachers' work in the classroom. Where leaders were effective they brought clarity to teachers' thinking and practice. Specifically, they initiated discussion about aspects of *The New Zealand Curriculum*, and the part that the principles played in a revised school curriculum. They also developed systems that promoted coherence and uniformity, such as planning formats and guidelines for undertaking inquiry. Above all, leaders promoted a culture characterised by high expectations for student achievement, shared aspirations to improve teaching, and a desire to work collaboratively.

Leaders in all schools need to help teachers improve their knowledge of the processes involved in all four phases of the teaching as inquiry cycle. A key focus should be on developing understanding of the learning inquiry phase. Leaders have a particularly important role in challenging teachers to think beyond the routine use of known teaching strategies and practice as solutions to all the learning and teaching issues they identify. Leaders should also convey to teachers the benefits to students from adapting the planned school curriculum in response to information about students' learning.

Where curriculum principles were less evident, or not evident, and teaching as inquiry was not well supported at a school level, these leadership influences were absent. Curriculum development was much less robust and coherent and teaching as inquiry was poorly understood. The critically inquiring culture fostered in the higher functioning schools was not apparent in these schools.

In classrooms where the curriculum principles were fully enacted and levels of inquiry were high, teachers created opportunities for students to develop self responsibility. Students reflected on their learning and decided on appropriate next steps or goals. Underpinning this were the high expectations teachers had of students as capable and competent learners. In some classrooms, teachers made use of student feedback, along with other relevant data, to adjust the programme for students.

Teachers had acquired a good foundation on which to base their practice. They knew about the components of the curriculum and were able to carry out teaching as inquiry in their classrooms. They had been well supported by leaders in doing these things. Some work is still needed before most teachers develop robust evaluation practice as described in the learning inquiry phase of the teaching as inquiry cycle. They would also benefit from further exploration of the curriculum principles, particularly community engagement, Treaty of Waitangi, and future focus, so these principles are able to be enacted in the class curriculum.

NEXT STEPS

ERO has recommendations for school leaders, teachers and the Ministry of Education to make the principles of *The New Zealand Curriculum* and teaching as inquiry a useful and integral part of everyday teaching practice in New Zealand classrooms.

ERO recommends that school leaders and teachers:

- review the extent to which each principle of *The New Zealand Curriculum*, and the elements inherent in them, are represented in their policies and plans and in the curriculum that is enacted in classrooms
- read and discuss *Ka Hikitia: Managing for Success Māori Education Strategy*[22] as a first step in developing knowledge about the Treaty of Waitangi curriculum principle
- build deeper understanding of the process of inquiry, and the contexts in which teaching as inquiry can be used to improve learning and teaching
- create opportunities for sustainable professional learning about effective teaching practice through incorporating teaching as inquiry into their performance management system.

ERO recommends that the Ministry of Education supports school leaders and teachers to:

- understand the nature and complexity of the eight principles
- develop deeper understanding of the principles identified in this report as being least evident and least enacted – Treaty of Waitangi, cultural diversity, coherence and future focus
- carry out robust and effective teaching as inquiry practice.

ERO also recommends that the Ministry of Education:

- explores ways to make more accessible, through Ministry of Education websites, research material that will support teachers and school leaders to extend their understanding about pedagogical practice, including engaging in teaching as inquiry.

22 Ministry of Education (2009) *Ka Hikitia: Managing for Success Māori Education Strategy 2008–2012.* Wellington: Ministry of Education.

APPENDIX 1

Appendix 1: The evaluation framework

Table 8: Evaluation framework

Evaluation Focus	Level of the school	Evaluation Question	Categories use to describe practice
Curriculum Principles	School	1. To what extent are the principles of *The New Zealand Curriculum* evident in the interpretation and implementation of this school's curriculum?	Highly evident Some evidence Minimal evidence Not evident
Curriculum Principles	Classroom	2. To what extent are the principles of *The New Zealand Curriculum* enacted in classroom curriculum?	Fully enacted Some enactment Minimal enactment No enactment
Teaching as Inquiry	School	3. To what extent do this school's systems and self-review processes guide, inform and support teachers to inquire into their practice?	Highly informative and supportive Somewhat informative and supportive Minimally informative and supportive Not informative and supportive
Teaching as Inquiry	Classroom	4. To what extent do teachers inquire into the impact of their teaching on students?	High levels of inquiry Some levels of inquiry Minimal levels of inquiry No evidence of inquiry

APPENDIX 2

Appendix 2: Sample of schools

Sampling

ERO investigated curriculum principles and teaching as inquiry in 109 schools (67 primary and 42 secondary) reviewed in Term 2 and 3, 2010. The number of classrooms evaluated in each school was dependent on the school size as shown below.

Table 9: Classrooms by school roll

Roll number	Number of classes
<300	one
300 – 700	two
700 – 1500	three
1500+	four

Tables below show the demographics of the sample. The sample has been compared to the national percentage[23] and comments made, where relevant, about any statistical differences between the observed (sample percentage) and expected (national percentage) values. The differences between observed and expected values were tested using a Chi square test. The level of statistical significance for all statistical tests in this report was $p<0.05$.

Table 10: Schools by decile

School decile group	Number of schools	Percentage of sample	National percentage
Low decile schools (deciles 1–3)	24	20	32
Medium decile schools (deciles 4–7)	53	50	39
High decile schools (deciles 8–10)	32	30	29
Total	109	100	100

Table 10 shows that the sample was not representative of national figures in terms of decile. Compared to the national sample, the sample for this evaluation was over represented by medium decile schools and under represented by low decile schools. These differences were statistically significant.

23 The national percentages of schools decile, size, locality and type are based on the total population of schools in each category as at February, 2011.

Table 11: Schools by size

School size	Number of schools	Percentage of sample	National percentage
Very small	4	4	11
Small	19	17	26
Medium	35	32	36
Large	37	34	19
Very large	14	13	8
Total	109	100	100

Table 11 shows that the sample was not representative of national figures in terms of school size. Compared to the national sample, the sample was over represented by large and very large schools, and under represented by very small, small and medium schools.

Table 12: Schools by locality

School locality	Number of schools	Percentage of sample	National percentage
Main urban	75	69	53
Secondary urban	7	6	6
Minor urban	9	8	12
Rural	18	17	29
Total	109	100	100

Table 12 shows that the sample was not representative of national figures in terms of school locality. Compared to the national sample, the sample was over represented by main urban schools and under represented by minor urban and rural schools.

Table 13: Number of schools sampled by school type

School type	Number of schools	Percentage of sample	National percentage
Full primary (Years 1–8)	26	24	44
Contributing primary (Years 1–6)	35	32	32
Intermediate (Years 7 & 8)	5	5	5
Special school (Years 1–15)	1	1	2
Secondary (Years 7–15)	10	9	4
Composite (Years 1–15)	7	6	4
Secondary (Years 9–15)	25	23	9
Total	109	100	100

Table 13 shows that the sample was not representative of national figures in terms of school type. Compared to the national sample, the sample was over represented by composite, secondary (Years 7–15 and Years 9–15) schools, and under represented by full primary and special schools.

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