

# Curriculum Stocktake Report to Minister of Education, September 2002

## EXECUTIVE SUMMARY

### Introduction

Following a major public consultation on the curriculum in the mid-1980s, the Department of Education began work on an overall framework for a revised school curriculum. With the publication of The New Zealand Curriculum Framework and Te Anga Marautanga o Aotearoa in 1993, curriculum policy shifted from a focus on content to a policy based on outcomes. Since that time, curriculum statements and ngā tauākī maratanga mö te motu have progressively replaced syllabi.

The curriculum stocktake report analyses the recent New Zealand curriculum reform experience in terms of:

- the appropriateness of the New Zealand curriculum and te marautanga o Aotearoa in the current educational, social and economic climate;
- the purposes of these curricula; and
- the quality of these curricula in contributing to improved student outcomes<sup>1</sup>, meeting the expectations of a range of stakeholders and against comparable international curricula.

Since implementation of the current curricula began, the following changes have occurred:

- wider consultation with Māori on their aspirations of education;
- research now links certain pedagogy to improved student outcomes;
- New Zealand society has continued to diversify;
- the Internet is increasingly available, resulting in international recognition of the importance of digital literacy and the value of aligning curriculum goals, ICT usage and teaching;
- increasing globalisation has resulted in greater recognition of social connectedness and the need to acknowledge the uniqueness of indigenous culture, language and traditions; and
- recognition of the importance of balancing the social outcomes of education with a focus on academic achievement, triggering an international resurgence in citizenship and values education.

### Major Findings

International assessment data indicates that by the end of the period of the compulsory curriculum, the performance of a large group of New Zealand students is world-class. However, wide disparities of outcomes for groups of students persist. In particular, Māori students achieve at a significantly lower level than non-Māori, and Pasifika<sup>2</sup> students achieve at a significantly lower level than non-Pasifika students do. However, the range of achievement within any group is wider than the range of achievement between any two groups.

It would appear that, for the group of students who succeed, New Zealand's national curriculum is, for the most part, effective.

- *The New Zealand Curriculum Framework* and *Te Anga Marautanga o Aotearoa* are coherent, sound statements, which teachers perceive as useful for providing an overarching policy framework and providing a direction for preparing students to live and work in the 21<sup>st</sup> century.
- The curriculum statements reflect similar cognitive expectations to international curricula.
- The structure of the curriculum statements is useful for planning programmes, gaining an overview of the progression of key ideas and achieving consistent understanding of the levels within schools.
- The curriculum statements and *ngā tauākī marautanga mö te motu* are flexible enough so that teachers can meet the needs of their students, and they reflect pedagogies which research has linked with increased student achievement.

Although the information from the curriculum stocktake is mostly positive about the effectiveness of the New Zealand curriculum and *te marautanga o Aotearoa*, wide disparities in outcomes and increasing experience in the use of the statements indicate that some modifications are needed.

### Recommendations

*The New Zealand Curriculum Framework* and *Te Anga Marautanga o Aotearoa* should be modified using a process of consultation and trialling.

Cross-disciplinary teams should be involved in the revision of *The New Zealand Curriculum Framework* and *Te Anga Marautanga o Aotearoa*. These teams should include those with expertise in the essential learning areas, essential skills, attitudes and values and assessment, as well as those with expertise in *ngā wāhanga ako*, *ngā tino pūkenga*, *ngā waiaro me ngā uara* and *te aro matawai*. Consultation with representative groups from different sectors of New Zealand society, including parents/*whānau*, members of Māori and Pasifika communities and business should occur.

These two frameworks should be mandated as overarching foundation policies. The part of the Education Act that allows for the gazetting of such statements was added to the Education Act in 1998, and carried through in the most recent amendment in 2001.

Kura Māori and schools should be authorised to use either policy or a combination of both.

As most Māori students are in schools that use *The New Zealand Curriculum Framework* and curriculum statements (in English), the underlying philosophy of both frameworks should reflect their status as *tangata whenua* and expectations of 'best outcomes' for all students. The frameworks should be similar in structure and coherent with each other, but not just translations. Considerations should be given to whether a bilingual version of *Te Anga Marautanga o Aotearoa* should be developed for kura, schools and teachers.

The modified versions of the frameworks should be similar in structure to the existing frameworks. The following sections should be retained (with modification to content to reflect Māori social and academic aspirations):

- principles/*ngā mātāpono*;
- essential skills/*ngā tino pūkenga*;
- attitudes and values/*ngā waiaro me ngā uara*;
- essential learning areas/*ngā tino wāhanga ako*;
- assessment/*te aro matawai*; and
- context/*te horopaki*.

In addition, the following should be added:

- a clear statement of the purposes of curriculum/marautanga as being to clarify expectations for all New Zealand students and to develop the human capability necessary for a prosperous and inclusive New Zealand society;
- a section on effective pedagogy;
- a section on the relationship between the New Zealand curriculum/te marautanga o Aotearoa and *Te Whāriki*; and
- a section on the relationship between the New Zealand curriculum and te marautanga o Aotearoa and qualifications and work.

The principles/ngā mātāpono should be revised so that there is coherence between the purposes of the national curricula/te marautanga o te motu.

The essential skills/ngā tino pūkenga should be modified from the current organisation of fifty-seven essential skills/ngā tino pūkenga in eight groupings to five essential skills and attitudes (motivation and discernment to use these skills):

- creative and innovative thinking;
- participation and contribution in communities;
- relating to others;
- reflecting on learning;
- developing self-knowledge; and
- making meaning from information.

The values outlined in *The New Zealand Curriculum Framework* and *Te Anga Marautanga o Aotearoa* should be modified and have a more explicit role in frameworks and support materials. The values of the frameworks should not be presented as an exclusive list.

The essential learning areas/ngā wāhanga ako sections of the framework documents should be modified to include the expected outcomes (aims and achievement objectives) from the curriculum statements/ ngā tauākī marautanga o Aotearoa. The broad and flexible nature of the achievement objectives should be maintained, but they should be revised to ensure that they:

- reflect the purposes of the curricula/ngā marautanga;
- are critical for all students; and
- better reflect the future-focused curriculum themes of social cohesion, citizenship, education for a sustainable future, bicultural and multicultural awareness, enterprise and innovation and critical literacy.

This recommendation aims to address some of the concerns about the curriculum manageability, crowdedness, and a need to prioritise learning in the national curricula/ngā marautanga o te motu.

The essential learning area Language and Languages/Te Kōrero me ngā Reo should be two separate learning areas - English/Te Reo Māori and Languages. This separate area would include heritage, community and foreign languages and the learning of English and te reo Māori as second languages. Schools should be required to provide instruction in an additional language for students in years 7 to 10 (except for Māori immersion settings), but it should not be mandatory for all year 7-10 students to learn another language. Generic outcomes for Languages should be developed and included in the revised New Zealand Curriculum Framework and *Te Anga Marautanga o Aotearoa*.

The section on ngā tino wāhanga ako should ensure that language and layout is consistent between statements.

Information about 'good practice' from the National Assessment strategy will need to be incorporated into the reviewed frameworks replacing much of the current text on Assessment. This section will explain the nature of effective assessment practice rather than providing specific guidance on how teachers must assess student learning.

Once *The New Zealand Curriculum Framework* and *Te Anga Marautanga O Aotearoa* are gazetted, the legal status of the current curriculum statements and ngā tauākī marautanga o Aotearoa should change to that of support materials. Once modification of *The New Zealand Curriculum Framework* and *Te Anga Marautanga o Aotearoa* has been completed, the curriculum statements and ngā tauākī marautanga o Aotearoa should be modified to include the new outcomes. Each modified statement should include more specific information on effective pedagogy and assessment strategies for increasing achievement and social outcomes, and reducing disparity.

Support materials and professional development should be provided that focus on developing teachers' understanding of the content knowledge that underpins each of the curriculum statements and ngā tauākī marautanga mö te motu.

In addition, professional development and materials should be developed for teachers on:

- the most effective strategies for integrating and linking curricula/ngā marautanga; and
- how teachers can better recognise and cater for diversity in all of the essential learning areas and ngā tino wāhanga ako.

Professional development and materials for kura Māori should reflect Māori aspirations for education and be cognisant of the difficulties of working in Māori medium education. More resources for children and teachers should continue to be developed. Considerations should be given to whether bilingual versions of guidance materials should be developed for kura Māori.

Publications explaining *The New Zealand Curriculum Framework* and *Te Anga Marautanga o Aotearoa* should be developed for parents/whānau, community organisations and the business sector.

<sup>1</sup> It is important to note that, while student outcomes are used as a proxy for curriculum quality in this report, many factors influence outcomes. National curriculum policy, therefore, can only promote or inhibit achievement, rather than directly influence it.

<sup>2</sup> Pasifika peoples is the term used by the Ministry of Education to describe people living in New Zealand who have migrated from the Pacific Islands or who identify with the Pacific Islands because of ancestry or heritage, vary considerably (eg Pacific Island, Pacific Nations person, Polynesian, Pacific Islander, etc). "Pasifika peoples" is used to differentiate with other people who view themselves as being Pacific based on New Zealand being a country in the Pacific region. "Pasifika peoples" does not refer to a single ethnicity, nationality, gender or culture. The term is one of convenience used to encompass a diverse range of peoples from the South Pacific region or people within this country who have strong family and cultural connections to Pacific Island countries. Hence, the use of "peoples" rather than "people." Pasifika peoples are not homogenous and include those who have been born in New Zealand or overseas. It is a collective term used to refer to men, women and children of Samoan, Cook Islands, Tongan, Niuean, Tokelauan, Fijian and other Pasifika or mixed heritages. It includes a variety of combinations of ethnicities, recent migrants or 3rd, 4th or 5th generation New Zealand-born.

## SECTION ONE: BACKGROUND

### *Introduction*

The curriculum encompasses all learning, both formal and informal, occurring in educational settings, including social values, attitudes and norms of behaviour as well as a body of knowledge. In practice, however, curriculum is commonly misconstrued as a plan for teaching, in which knowledge and procedures are isolated from the socio-cultural context of the school and classroom (Cornbleth, 1990).

Curriculum development is a dynamic and iterative process. Carr, McGee, Jones, McKinley, Bell, Barr, and Simpson (2000) refer to a 'cascade' of interpreted curricula from the official curricula down to the students' interpretation of the curriculum as a consequence of teaching and learning activities. National curricula are developed as 'intended' curricula, changed through regulation to 'planned' curricula, become 'taught' as they are interpreted, reformulated and internalised by teachers. Finally, curricula are 'experienced', 'learned', and 'internalised' by students (Harland, 1988). Curriculum reform involves reflection and change at all the different levels of curriculum, 'intended', 'planned', 'taught', 'learnt' and 'internalised'.

While 'taught' curricula define specific intentions for a specified group of students, 'intended' curricula define the expected outcomes for the entire student population (McGee, 1997). In this context, the government is responsible for specifying the 'intended' or 'planned' curriculum. A national approach facilitates consistency of opportunity of outcome and ensures that although New Zealand's population is highly mobile, New Zealand students will be exposed to consistent expectations of what they should learn.

Curriculum reform by the government includes 'an analysis of what a nation wanted its citizens to gain from school and the nature, characteristics and needs of society' (McGee, 1997, p. 42), formulation and reformulation of the aims, goals, objectives, content, 'pointers about contemporary knowledge about how people learn and how this can influence curriculum decisions' and broad assessment policies of the curriculum (McGee, 1997, p. 43). Evaluation of the New Zealand curriculum and te marautanga o Aotearoa also needs to be in terms of the stated outcome of the curriculum/te marautanga o te motu to raise the achievement of all students.

## Historical Context

From 1961 to 1986, the New Zealand curriculum was specified, in English, through more than a dozen syllabi and guidelines<sup>3</sup>. Following a major public consultation on the curriculum in the mid-1980s, the Department of Education began work on an overall framework for a revised school curriculum. The 'Report of the Curriculum Review' (1987) proposed eight 'curriculum aspects'<sup>4</sup>: culture and heritage; language; creative and aesthetic development; Mathematics; practical abilities; living in society; Science, Technology and the environment; and health and well-being. Key ideas were represented as strands and developed as achievement objectives at five levels. The achievement objectives in many of the statements were not expressed as outcomes, but in terms of typical learning experiences, activities, and content to be covered. The intention was that schools would develop programmes to suit their students as long as their programmes covered all of the aspects.

The reform of the administration of education in 1989 and a change of Government in 1990 meant the work did not proceed beyond a draft document. Curriculum development resumed in 1991, under an 'Achievement Initiative' policy, and from 1993 under the umbrella of *The New Zealand Curriculum Framework*<sup>5</sup> and *Te Anga Marautanga o Aotearoa*<sup>6</sup>.

With the publication of *The New Zealand Curriculum Framework* and *Te Anga Marautanga o Aotearoa*, curriculum policy shifted from a focus on content, experiences and activities to curriculum policy based on outcomes. This was, in part, due to pressure on government to account for investment in education by demonstrating what students achieved during schooling<sup>7</sup>.

Since 1993, curriculum statements and ngā tauākī marautanga mö te motu<sup>8</sup> have progressively replaced syllabi. They have been published initially in draft form for consultation and trialling, published in final form. The curriculum statements have been gazetted for mandatory implementation in years 1-10.

## Table 1: Timeline for the Publication and Gazetting of the Curriculum Statements and Ngā tauākī Marautanga mö te Motu<sup>9</sup>

	Draft(s)	Final	Implementation
Mathematics	1992	1992	1994
Science	1992	1993	1995
English	1993	1994	1996
Technology	1993	1995	1999
Social Studies	1995/96	1997	2000
Health & Physical Education	1998	1999	2001
The Arts	1999	2000	2003
Pāngarau (Mathematics)	1994	1996	1997
Pūtaiao (Science)	1994	1996	1997
Te Reo Māori (Māori language)	1994	1996	1997
Hangarau (Technology)	1998	1999	2001
Tikanga ā Iwi (Social Studies)	1997	2000	2002
Ngā Toi (The Arts)	1999	2000	2003
Hauora (Health & PE)	2000	2001	2004

In 1994-1995, the Ministry of Education published curriculum statements for optional programmes in the senior Sciences and languages, and started a contestable second language funding pool for programmes for students from year 7 onwards. The funding for this pool has increased over time.

**Table 2: Publication of Curriculum Statements for Languages other than English or Te Reo Māori**

Language and Languages learning area	
Chinese	1995
Spanish	1995
Samoan	1996
Japanese	1998
Korean (draft)	1999
French (draft)	2001
German (draft)	2001

In 1996, the development and implementation of new curriculum statements and ngā tauākī marautanga mö te motu was paused by the then Minister of Education in response to widespread concern across the school sector about the pace and scale of change. New timelines for the New Zealand curriculum and te marautanga o Aotearoa were announced in July 1997, introducing a transition period of at least two years between the publication of a final statement and its mandatory implementation.

Alongside the introduction of new curriculum timelines came an undertaking that, following the publication of the full set of curriculum statements and ngā tauākī marautanga mö te motu, a time of consolidation and reflection would occur. That point was reached with the publication of *Hauora i roto i Te Marautanga o Aotearoa* in 2002.

This report takes stock of the last decade's curriculum developments and their implications for teaching and learning, and considers the implications for future curriculum policy development. It does not, however, undertake a review of the curriculum from first principles.

### *Sources of Information*

The Ministry of Education collated data on student outcomes over the period of curriculum/te marautanga implementation from international studies and from National Education Monitoring Project reports. This information was analysed to determine the contribution of the curriculum/te marautanga in improving student outcomes.

Data on teacher perceptions of curriculum implementation was collected through the establishment of the National School Sampling Study. This project involved focus group interviews and a quantitative questionnaire with teachers in 10% of schools and kura Māori (about 4000 teachers in total) about their experiences using *The New Zealand Curriculum Framework, Te Anga Marautanga o Aotearoa*, the curriculum statements and ngā tauākī marautanga mö te motu. Analysis of the research findings of 2002 is cited as McGee, Jones, Bishop, Cowie, Hill, Harlow, Oliver, Tiakiwai, and Mackenzie (2002) and McGee et al. (2002) in this report. In 2002-2003, this study will provide further analysis of material from quantitative questionnaires and case studies to inform the work of the Ministry of Education.

The Ministry sought critical comment on *The New Zealand Curriculum Framework* and the curriculum statements from two organisations recognised as having international curriculum expertise, the National Foundation for Educational Research (NFER) UK and the Australian Council for Educational Research (ACER). The NFER commentary is cited as Le Métails (2002) and the ACER commentary as Ferguson (2002) in the body of this report.

A representative group of major stakeholders in education met with the Ministry of Education in November 2000, March, June and October 2001, March and May 2002 (The Curriculum Stocktake Reference Group). The group acted as a sounding board and gave critical comment and advice on policy directions. The meetings have provided opportunities for the interests of those with key roles in curriculum implementation to be heard.

Essential learning area meetings to discuss Mathematics/Pāngarau, Science/Pūtaiāo, English/Te Reo Māori occurred in 2001. The meetings brought together representatives from the teaching profession, teacher education, tertiary education, and employers related to the area of learning. Meetings are to be held for the other essential learning areas.

The Ministry consulted with regional and national principals' meetings, the Education Review Office, and the business sector.

Although no formal call for public submissions was made, the Ministry of Education received a number of communications and submissions from individuals and other organisations. A discussion group was also established on the Te Kete Ipurangi Curriculum Stocktake community web page. However, use of this forum for discussion has been limited.

3 These were provided for subjects and, in some cases, aspects of subjects, such as handwriting. The documents were of different vintages spanning from 1961 to 1986, covered different year levels, and were written in different forms.

4 New syllabi for these aspects would have replaced more than 20 old ones, but the draft document was not developed into a final version and the accompanying aspect documents were not developed. All this was overtaken by events: Tomorrow's Schools, the transformation of Department into Ministry and the change of Government in 1990.

5 *The New Zealand Curriculum Framework (NZCF)* was published in 1993 setting out the overall policy direction for curriculum and assessment but has not been gazetted.

6 Te Anga Marautanga o Aotearoa is a translation of The New Zealand Curriculum Framework.

7 Other governments at this time also changed to a focus on outcomes (Killen, 2001; Manno, 1994; O'Neill, 1994)

8 There are National Curriculum Statements for each essential learning area described in the NZCF published in English and in te reo Māori. The statements have a common format of 'Strands' containing eight progressive levels of 'Achievement Objectives' which specify expected learning outcomes.

9 Dates shown in italics are expected dates for publication and for full implementation.

## SECTION TWO: THE QUALITY OF THE NEW ZEALAND CURRICULUM AND TE MARAUTANGA O AOTEAROA

### *Introduction*

Assessing the quality of education policy is problematic because of the subjective nature of what constitutes quality; any definition of quality is related to the specific goals of a group. Additionally, tight specification of what constitutes quality can jeopardise the dynamic processes that achieving quality requires (Vedder, 1992). The information collected on the quality of the curriculum is of an eclectic nature and reflects the different perspectives of stakeholders.

The New Zealand Curriculum Framework (p.3) states that:

*The New Zealand Curriculum seeks to raise the achievement levels of all students and to ensure that the quality of teaching and learning in New Zealand schools is of the highest international standard.*

*E whai ana te Marautanga o Aotearoa kia piki nga taumata ako katoa onga ākonga, kia ōrite hoki nga mahi ako i roto i nga kura ki nga taumata tino tiketike o te ao whānui.*

The quality of the curriculum/te marautanga is measured by its contribution to this goal.

Monitoring student outcomes allows the government to determine whether the education system is supporting the achievement of groups of students. In relation to Māori students, the focus of the national curriculum/te marautanga o te motu on outcomes allows the curriculum to be evaluated in terms of whether it is helping to meet Māori aspirations of education.

In recognition of the status of te reo Māori as the indigenous language of New Zealand, students are entitled to have te reo Māori as their language of instruction<sup>10</sup>. The number of students in Māori immersion is currently low, but the number of Māori students in the education system is predicted to increase dramatically over the next 20 years. The quality of curriculum/te marautanga in te reo Māori and English in terms of meeting the needs of Māori students, therefore, needs to be established.

The quality of the curriculum/te marauatanga in regards to meeting the needs of Pasifika students also needs to be determined<sup>11</sup>. In the next 20 years, the number of Pasifika students is predicted to increase significantly, predominantly in Auckland. This group of students is currently achieving at a significantly lower level relative to other groups in New Zealand. Monitoring outcomes allows the Ministry of Education to determine how changes in the education system are impacting on the achievement of Pasifika students.

The information on the quality of the national curricula/te marauatanga has been divided into two parts. Part one considers the quality of the implemented curricula as measured by student outcomes. It incorporates comments from international critiques that relate to the potential of the curriculum to improve student outcomes and considers the place of pedagogy in the implemented curriculum. Part two evaluates the quality of the design and implementation of the curriculum on criteria other than student outcomes.

## *Part 1: Improving Student Outcomes*

### **Information about Student Outcomes from Student Assessment Data**

#### Background

Classroom environments are dynamic social systems, where the actions of both students and teachers evolve according to how they view the myriad of interactions taking place (Moos, 1979). Therefore, factors operating in a classroom do not cause changes to student attitudes and achievement, but influence them.

The classroom curriculum is one of nine identified factors that influence learning (Walberg, 1991). These nine factors can be represented in three groupings, student aptitude, instruction and the environment. Student outcomes are dependent on complex interactions between these factors (Walberg, 1991).

***Table 3: Factors influencing learning (adapted from Walberg, 1991)***

Student aptitude factors	Instructional factors	Environmental factors
Motivation or self concept	Quality of the instruction (curriculum and pedagogies)	Curriculum of the home
		Morale of the classroom social group
Development	Amount of time which students engage in learning	Peer group outside school
Ability as measured as prior achievement		Minimum leisure-time television viewing

The links between curricula and student outcomes are indirect. The national curriculum/te marauatanga can, therefore, only significantly influence the quality of instruction when it is reflected strongly in the classroom curriculum. The classroom curriculum influences student motivation and classroom morale. Student motivation and classroom morale influence student learning.

If the national curriculum strengthens links between home and school and provides greater access to curriculum knowledge, there can be an influence on 'the curriculum of the home'.

#### Sources of student achievement data

Information about student achievement has been analysed from national and international sources.

Student responses to tasks from the University of Otago National Education Monitoring Project (NEMP), the International Association for the Evaluation of Educational Achievement (IEA), and the Organisation for Economic Co-operation and Development (OECD) were used to quantify educational gains. The achievement of the students in the NEMP, IEA and OECD tests was seen as representative of the New Zealand student population. Over-sampling was used so that generalisations could be made for minority groups of students that are over-represented in underachievement data.

The National Education Monitoring Project (NEMP) has been conducting annual assessments of children's achievement, values and attitudes at year 4 and 8 since 1995. NEMP data is based on the results from 3,000 randomly selected students in 260 randomly selected schools on a variety of tasks that measure the knowledge, skills, motivation and attitudes that relate to the essential learning areas. NEMP data is available for English, Mathematics, Science, Technology and Social Studies. NEMP (2000) data is available for Māori immersion students in year 8 in the areas of Technology and reading and speaking. This information describes the achievement of 104 Māori immersion students on the NEMP tasks and compares their achievement with the 16 to 20 percent of Māori students who were in the main sample in 2000. Reports on the Arts, and Health and Physical Education did not reflect the essential learning areas as these statements were not mandated at the time of the studies.

- New Zealand has participated in three IEA studies, an assessment of reading literacy, the Third International Mathematics and Science Study (TIMSS), and its repeat (TIMSS-R). The assessment of reading literacy measured the ability of students in their last year of schooling and occurred in 1990-1991. TIMSS was conducted in 1994-95 and involved students at years 5, 9 and 13. TIMSS-R was conducted in 1998-99 at year 9 only and provided trend data on Mathematics and Science achievement for New Zealand students compared to students in other countries from 1994 to 1999. The Ministry of Education employed a national repeat with year 5 students in 1998-99, although no international comparisons can be made with this data.
- The Organisation for Economic Co-operation and Development (OECD) Programme for International Student Assessment (PISA) - This programme assessed 15 year old New Zealand students in 2000. It measured reading, mathematical and scientific literacy and focused on 'the capacity to use their knowledge and skills in order to meet real-life challenges, rather than merely looking at how well they had mastered a specific school curriculum' (Ministry of Education, 2000).

### Results of assessments - Student achievement in years 11-13

The Organisation for Economic Co-operation and Development (OECD) programme (PISA, 2000), and the International Association for Evaluation of Educational Achievement assessment for reading literacy (IEA, 1991) and Third International Mathematics and Science Study (TIMSS, 1995) assessed school leavers. These studies found some New Zealand students compare very highly against international standards at the senior secondary level.

Reading literacy<sup>12</sup>: mean 3<sup>rd</sup> out of 32 countries and highest proportion of students at the top level of proficiency at age 15 (PISA, 2000). 4<sup>th</sup> out of 32 countries at the end of schooling (IEA, 1991).

Mathematical literacy<sup>13</sup>: significantly above international mean at the end of schooling (TIMSS, 1995) and mean 3<sup>rd</sup> out of 32 at age 15 (PISA, 2000).

Scientific literacy<sup>14</sup>: significantly above international mean at the end of schooling (TIMSS, 1995) and mean 6<sup>th</sup> out of 32 at age 15 (PISA, 2000).

These results indicate that in independent studies, New Zealand secondary students consistently score relatively highly in tests for different forms of literacy compared with their

international counterparts. These achievements are significant because information from these assessments implies that this cohort of students will be highly literate adults.

Students participating in PISA (2000) would have been in year 5 at the start of the implementation of the new curriculum and have experienced the implementation of most of the curriculum statements. Students participating in TIMSS (1995) would have been in year 11 or 12, so would not have experienced the implemented curriculum.

Although PISA (2000) is not based on specific school curricula, the notable achievement of New Zealand secondary students in this assessment can be reasonably interpreted as indicating that, for many students, the curriculum promotes rather than inhibits learning.

It is difficult to determine whether achievement has increased, however, for senior secondary students over the period of curriculum implementation. There is no trend data available to compare with either TIMSS - school leavers (1995) or PISA (2000).

#### Results of assessments - Student achievement in years 4-9

While New Zealand students achieve, on average, relatively highly on international measures in Mathematics and Science towards the end of schooling, they have not done so at years 5 or 9 (TIMSS 1995; 1999). For example, in 1999, the mean of year 5 New Zealand students on Science tasks was 16<sup>th</sup> out of 26 countries, and 21<sup>st</sup> out of 41 at year 9. In the same year, the mean of year 9 New Zealand students on Mathematics tasks was 21<sup>st</sup> out of 38 countries. Disparity in outcome for groups of students is expanded in paragraph 67.

Trend data from NEMP indicates that achievement in most of the essential learning areas has not improved over the period of implementation, particularly for Māori and Pasifika students.

Although there are differences on some tasks in the achievement of Māori immersion students and Māori students in the mainstream NEMP sample, some of the differences favour students in Māori immersion, and others Māori students in the mainstream. The pattern of difference varies from subject to subject, and is not consistent, which suggests that the differences are likely to reflect different pedagogical emphases between these two settings, rather than differences in quality of provision.

**Table 4: Changes to overall achievement in NEMP trend tasks over period of implementation for Science, Technology, Social Studies and Mathematics**

Essential Learning Area	Years of tests	Strand	Year 4 - % difference in achievement	Year 8 - % difference in achievement
Science	1995 - 1999	Living World	1%> (not significant)	1%> (not significant)
		Physical World	1%> (not significant)	1%> (not significant)
		Material World	2%> (not significant)	1%> (not significant)
		Planet Earth & Beyond	No trends summarised	No trends summarised
Aspects of Technology	1996-2000	Technological knowledge & understanding	12%_	No change
		Technological capability	2%> (not significant)	1%> (not significant)
		Technology & society	No trend items	No trend items

#### Results of assessments - Disparities of outcome

There are wide variations in achievement within New Zealand schools and between groups of students in all national and international studies.

- Māori and Pasifika students, on average, achieve significantly lower scores than non-Māori and non-Pasifika students.
- Students in high decile schools achieve significantly higher scores than those in low decile schools.
- Students for whom English is a second language achieve lower scores than first language speakers.

In addition, the disparity between the performance of students in low decile schools and high decile schools generally increases as schooling progresses. That is, the relative competence of students in low decile schools is weaker at school-leaving than at entry.

Comparative data available over the period of curriculum implementation (between years 4 & 8 (NEMP), and 5 & 9 (TIMSS)) indicates that there have been the following changes in outcomes:

- an increase in disparity for students from lower decile schools in years 4 and 8 compared to those in higher decile schools (NEMP); and
- inconclusive changes for students in years 5, 9 and 11 for whom English is a Second Language (TIMSS, PISA)<sup>15</sup>.

**Table 5: Changes in performance of subgroups on NEMP tasks over the period of curriculum implementation<sup>16</sup>**

Essential Learning Area	Years of tests	Disparity at year 4 for Māori/non Māori (difference in disparity where analysed)	Disparity at year 8 for Māori/non Māori (difference in disparity where analysed)	Disparity at year 4 for decile rating of school (difference in disparity where analysed)	Disparity at year 8 for decile rating of school (difference in disparity where analysed)
Science	1995 - 1999	61% · 12% (49%)	58% · 44% (14%)	54%	63%
Aspects of Technology	1996-2000	53%	65%	86%	48%

#### Information about social outcomes

Information about the social outcomes of schooling is mixed.

PISA (2000) indicates that many New Zealand 15-year-olds score highly on competitive and co-operative learning indices. Both of these strategies are linked by research to better outcomes. New Zealand students were placed:

- 4<sup>th</sup> in the co-operative learning index, which is related to whether students like working with others, like helping others and perform best when working with others; and
- 2<sup>nd</sup> in the competitive learning index, which is related to whether students like trying to do better than others, like being the best at something, work well when trying to be better than others and learn faster when trying to be better than others.

NEMP (2000) data indicates that Māori medium pedagogical contexts engage Māori students in a way that fosters more positive attitudes, a greater willingness to be involved in learning and a more positive perception of their abilities than mainstream pedagogical contexts for Māori students.

Trend data indicates that over the period of curriculum implementation:

- there has been some improvement in how students at years 4/5 and 8/9 feel about Science and the way that students see themselves as scientists; and
- students feel more positively about Technology at year 8 and about themselves as technologists, but less positively at year 4.

**Table 6: Trend Results for Year 4, 5, 8 and 9 Student Attitude Changes and Student Self-concepts in Science and Technology**

	Science		Technology	
Year 4/5	Positive attitude change from 1995 - 1999 (NEMP)  No significant change (TIMSS)	Improved view of self as 'good scientist' from 1995-1999	Decline in attitudes from 1996-2000 (NEMP)	Wider spread of self-concept in Technology from 1996-2000 (NEMP)
Year 8/9	Positive increase in attitudes from 1995-1999 (NEMP) Very slight positive increase 94/98 (TIMSS)	Positive increase in 'good at Science' self-concept from 1995-1999  (NEMP)	Positive increase in attitudes from 1996-2000  (NEMP)	Positive increase in self-concept (7%) from 1996-2000  (NEMP)

Significantly high levels of absenteeism, verbal intimidation, physical violence and suicide are reported by New Zealand students by international comparison (TIMSS; PISA, 2000).

There are significant disparities in social outcomes for Māori students, Pasifika students and boys when compared to non-Māori, non-Pasifika and girls (respectively), as measured by suspension rates, truancy rates, and the numbers leaving school without going on to further training.

Social outcomes have indirect links to the national curriculum. They may, however, be influenced by classroom climate and student motivation. These factors may in turn be influenced by the classroom curriculum, which is likely to be based on the New Zealand curriculum.

#### **Information about Student Outcomes from Teachers**

Data on teachers' perceptions as to whether teaching from English medium curriculum has improved achievement for all students is inconclusive (McGee et al., 2002). It indicates, however, that most teachers believe that teaching from the curriculum statements has resulted in significant achievement gains for Māori students in Māori immersion settings, few achievement gains for Māori students in other settings, and few achievement gains for Pasifika students (McGee et al., 2002).

**Table 7: Teachers' Responses about whether Teaching from the Curriculum has Resulted in Improved Achievement (McGee, et al., 2002)**

Number of teachers who stated that achievement has improved	A lot or some	Marginally or not noticeably
For all students	59.9%	40.1%
For Māori students (in mainstream) <sup>17</sup>	33.4%	50.6%
For Pasifika students <sup>18</sup>	20.3%	38.3%

## Possible Ways to Improve Student Outcomes

Quality teaching makes more difference to student outcomes than any other factor. The effect of quality teaching on social outcomes, such as attitudes to learning, classroom morale and motivation is highly relevant given New Zealand's high rates of truancy and suspension.

### Quality Teaching

It is difficult to consider the implementation of curriculum in isolation from teaching. Technocratic concepts of curriculum as a product isolated from the socio-cultural contexts of the classroom and school are limited (Cornbleth, 1990) as they ignore the potential of teaching to improve or inhibit achievement and social outcomes for students.

Research indicates that quality teaching influences student outcomes by 40 to 55%<sup>19</sup> (Ministry of Education, 2002c).

Quality teaching, however, is complex and involves dynamic relationships between curriculum, pedagogy and assessment. All of these components are integrated as teachers respond to the individual learning needs of students. The design of curriculum, no matter how well crafted, cannot, on its own, guarantee that effective teaching or assessment practice takes place.

While it is difficult to evaluate linkages between the curriculum, support materials and professional development programmes in relation to effective teaching practice, international research suggests a relationship exists (Le Métails, 2002).

The curriculum statements/ngā marautanga o Aotearoa reflect teaching strategies that are likely to increase student achievement (Ferguson, 2002; Le Métails, 2002). New Zealand teachers use some of the strategies outlined in the curriculum statements/ngā marautanga o Aotearoa and believe that use of these practices are effective (McGee et al., 2002).

Some of these strategies are similar to those identified in on-going Ministry of Education analysis to determine the nature of quality teaching. This analysis involves the meta-analyses used by Brophy (1999), Hattie (1999), Walberg & Paik (2000), and those underpinning the Queensland curriculum reform movement, 'New Basics' (State of Queensland Department of Education, 2001).

While some effective teaching strategies are incorporated into the curriculum/te marautanga, there is insufficient guidance for teachers on how to cater for the needs of a diverse student population<sup>20</sup> (Ferguson, 2002; Le Métails, 2002). Disseminating information on ways of meeting the needs of New Zealand's diverse student population may decrease disparities in the achievement of some New Zealand students.

At this stage, the Ministry does not have sufficient evidence to predict the extent of the use, or distribution, of effective teaching strategies in New Zealand classrooms. Connecting curriculum review and implementation with ongoing Ministry of Education analysis has the potential to align approaches by providers of Ministry of Education professional development, writers of Ministry materials, advisors in School Support Services, the Education Review Office, Māori educators, teachers, schools, resources and parents/whānau to support quality

teaching and improve student outcomes. Research indicates that this type of alignment is linked to significant increases in student achievement.

#### Other school factors

Other school factors may influence student outcomes by 6 to 19 percent (Ministry of Education, 2002c), including resources and professional leadership.

- Literature shows some links between capital investment and students' outcomes, particularly at the beginning of primary and beginning of secondary schooling, but there are greater improvements in student outcomes when resources are aligned with curriculum goals, tasks and assessment. This alignment is critical for ICT resources.
- Principals/tumuaki and school leaders/whānau can improve student outcomes by focussing on improving classroom teaching by developing the school/kura as a professional and collaborative learning community.

## *Part 2: Information about the Design and Implementation of the New Zealand Curriculum and Te Marautanga o Aotearoa*

### **Summary of key findings on the National Curricula**

Information on the quality of *Te Anga Marautanga o Aotearoa* and *ngā tauākī marautanga mō te motu* has come from Māori immersion teacher responses in the National School Sampling Study, individual submissions and comments from the essential learning area meetings. Analysis of this data indicates that *Ngā Marautanga* are flexible enough so teachers can meet the needs of their students, but the design across the statements is less coherent and more complex than the curriculum statements and use of language is inconsistent and difficult. (McGee et al., 2002).

The National Council for Educational Research (UK) and the Australian Council for Educational Research were asked to provide critique on *The New Zealand Curriculum Framework* and the English medium curriculum statements with regard to:

- the standing of the New Zealand curriculum in relation to international views of effective curriculum;
- their educational integrity; and
- their potential for supporting effective educational practice.

The focus of the two reports was on the curriculum as specified (the intended and regulated curriculum) rather than the curriculum as implemented.

The National Foundation for Educational Research report suggests that the New Zealand curriculum is theoretically similar to other curricula (Le Métails, 2002).

*The New Zealand Curriculum (as described in the eight documents) seeks to meet the, sometimes conflicting, expectations of a wide range of stakeholders and provide a balance between the interest of individual students and the requirements of society and economy. In common with many other curricula, it is increasingly subject to pressures to demonstrate its effectiveness in terms of student learning outcomes (Le Métails, 2002, p. 70).*

Both reports found a high degree of coherence between the *New Zealand Curriculum Framework* and the curriculum statements with two exceptions: the low priority given to learning languages, and the failure to follow through on the commitment to meet the needs of students of different social and religious backgrounds.

Both reports found that the curriculum is sound in terms of its educational integrity and its potential for supporting effective educational practice.

- *The New Zealand Curriculum Framework* and curriculum statements are coherent and comprehensive with the achievement objectives indicating progression of learning (Ferguson, 2002).
- The curriculum statements are inclusive in terms of having non-biased achievement objectives, but most do not use cultural contexts in the learning and assessment examples or provide guidance for how teachers can meet the needs of a diverse student population (Ferguson, 2002; Le Métails, 2002).
- The curriculum statements are flexible enough so teachers can meet the needs of their students (Ferguson, 2002; Le Métails, 2002).

## *The Quality of The New Zealand Curriculum Framework and Te Anga Marautanga o Aotearoa*

The Australian Council for Educational Research report notes that *The New Zealand Curriculum Framework* is useful and suggests that it should be mandated.

*The New Zealand Curriculum Framework provides a 'coherent framework for learning and assessment in New Zealand schools' (page 1, Framework) and is a short, coherent document that on first impression provides those involved in school education with a clear and concise outline of the philosophy and nature of New Zealand curriculum. It is accessible and easy to read with very little use of educational jargon, making it suitable for use with non-professional members of the education community ... The principals consulted in the process of writing this report were unanimous in their belief that the mandating of this document, or a similar statement updated for the Twenty-first century, would be of great assistance in formulating the general direction of education in their schools (Ferguson, 2002).*

Most teachers in the National School Sampling Study find *The New Zealand Curriculum Framework* very important or important for planning - 87.6%; providing an overarching view of the curriculum - 86.7%; and providing a direction for preparing students to live and work in the 21<sup>st</sup> Century - 70.5%<sup>21</sup>(McGee et al., 2002).

Although all of the leaders of kura Māori interviewed in the National School Sampling Study used *Te Anga Marautanga o Aotearoa* for planning, only half indicated they thought the framework is important. (A significant number did not respond to the question on the importance of this framework<sup>22</sup>).

Most of the feedback about *The New Zealand Curriculum Framework* focussed on the principles, essential skills and attitudes and values. This suggests that these sections are used more than the sections on the essential learning areas, the curriculum statements, assessment or the context for the New Zealand curriculum. The National School Sampling Study indicates that teachers use the curriculum statements and ngā tauākī marautanga mō te motu, rather than the essential learning areas/ngā tino wāhanga ako sections of *The New Zealand Curriculum Framework* and *Te Anga Marautanga o Aotearoa* (McGee et al.)

Submissions to the stocktake have highlighted a lack of knowledge in the general community about the scope and expectations of the New Zealand curriculum and te marautanga o Aotearoa, and the need for better communication about its purposes.

The curriculum and te marautanga should encourage involvement of stakeholder groups, including parents/whānau, iwi Māori, members of the community and business with schooling, so that students experience learning that is relevant to the real world. In addition, there is evidence that parental involvement is linked to improved student outcomes, including social outcomes<sup>23</sup> (Lumsden, & Hertling, 2002).

Providing better links between schools/kura and members of the community and business is likely to improve the effectiveness of schooling through active citizen participation and more connected community (Lumsden, & Hertling, 2002).

The revised frameworks, therefore, have a role in developing links between schools and these stakeholders.

### **The principles/ngä mätäpono of The New Zealand Curriculum Framework/Te Anga Marautanga o Aotearoa**

The existing principles/ngä mätäpono of *The New Zealand Curriculum Framework/Te Anga Marautanga o Aotearoa* define and describe the New Zealand curriculum/te marautanga o Aotearoa as it is reflected in the curriculum statements/ngä ngä tauäki marautanga mö te Motu. Additional principles have been recommended to the stocktake in meetings and submissions. These principles come predominately from Durie (2001), *Te Whāriki* and *Te Aho Matua*.

In order to better focus on student outcomes, the existing principles need to be modified. There is an inconsistency in the principle, 'at each level, it clearly defines the achievement objectives against which students' progress can be measured,' as this statement describes a function of the achievement objectives rather than a principle. It is also erroneous, in that the achievement objectives describe the broad expectations for learning, but are generally not specific enough to measure progress of individual student learning.

### **Table 8: Summary Sentences in the Existing Principles of The New Zealand Curriculum Framework**

1. The New Zealand Curriculum establishes direction for learning and assessment in New Zealand schools.
2. The New Zealand Curriculum fosters achievement and success for all students. At each level, it clearly defines the achievement objectives against which students' progress can be measured.
3. The New Zealand Curriculum provides for flexibility, enabling schools and teachers to design programmes which are appropriate to the learning needs of their students.
4. The New Zealand Curriculum ensures that learning progresses coherently throughout schooling.
5. The New Zealand Curriculum encourages students to become independent and life-long learners.
6. The New Zealand Curriculum provides all students with equal educational opportunities.
7. The New Zealand Curriculum recognises the significance of the Treaty of Waitangi.
8. The New Zealand Curriculum reflects the multicultural nature of New Zealand society.
9. The New Zealand Curriculum relates learning to the wider world.

The NFER report found that these principles are reflected throughout the curriculum statements (Le Métails, 2002).

The purposes of curricula are not explicitly addressed in *The New Zealand Curriculum Framework/Te Anga Marautanga o Aotearoa*. The purposes of the curriculum, however, may

be seen as reflected in the National Education Goals and the principles of *The New Zealand Curriculum Framework* and *Te Anga Marautanga o Aotearoa*. The curriculum stocktake has confirmed the theoretical and practical importance of the section on principles, and the need to delineate the purposes of New Zealand's national curricula. The purposes that have been identified in the stocktake are discussed in section 3 of the report.

There is a strong relationship between these new purposes, modified principles/ngā mātāpono of *The New Zealand Curriculum Framework/Te Anga Marautanga o Aotearoa* and the principles suggested in meetings and submissions.

***Recommendation: That the principles/ngā mātāpono of the New Zealand Curriculum Framework and Te Anga marautanga o Aotearoa are revised***

The principles and ngā mātāpono should be modified, so that both focus on student outcomes and relate to the purposes of the national curricula defined in the stocktake. Suggested changes are listed in section four of this report.

Review groups should use the principles suggested in meetings and submissions to develop rationale and guidance statements to support the suggested principles.

**The essential skills/ngā tino pūkenga of The New Zealand Curriculum Framework and Te Anga Marautanga o Aotearoa**

There are fifty-seven existing essential skills/ngā tino pūkenga in *The New Zealand Curriculum Framework* and *Te Anga Marautanga o Aotearoa* in eight groupings.

The international commentaries remark that:

- the groupings of skills are similar to, but more detailed than those in some Australian curricula (Ferguson, p. 10, 2002); and
- 'whilst Statements refer to the general contribution of the learning area to the development of the essential skills, suggestions for transfer of learning are inconsistent' (Le Métais, p.18, 2002).

Feedback to the stocktake has demonstrated that some teachers and members of the general community lack knowledge about:

- how the essential skills/ngā tino pūkenga should be incorporated within the essential learning areas;
- connections between the essential skills/ngā tino pūkenga ;
- connections between the essential skills/ngā tino pūkenga and the attitudes and values/ngā waiaro me ngā uara;
- which of the essential skills/ngā tino pūkenga should be priorities when developing school curricula;
- the role of the essential skills/ngā tino pūkenga in knowledge transfer and developing life long learning.

Reducing of the number of essential skills/ngā tino pūkenga ako may give a clearer sense of priorities.

Common arguments in literature on curriculum suggests that:

- curriculum should encourage teachers to embed skills in domain specific knowledge and not encourage them to be taught in isolation; and
- curriculum should encourage teachers to consider the use of skills alongside the attitudes of motivation (inclination) and discernment (intention).

Combining skills and attitudes can be achieved by listing the attributes or dispositions the curriculum aims to develop in students by the end of schooling, rather than skills or attitudes. This shifts the focus from essential skills as an end in themselves to facilitating outcomes that promote life long learning.

For example, the Queensland curriculum describes the attributes of a life long learner as:

- a knowledgeable person with deep understanding;
- a complex thinker;
- a creative person;
- an active investigator;
- an effective communicator;
- a participant in an independent world; and
- a reflective and self-directed learner.

This approach is significantly different from the current New Zealand curriculum and te maruatanga o Aotearoa, and may not provide sufficient guidance for teachers. The attributes described in the Queensland curriculum are, however, similar to the skills and attitudes described in literature as needed for participation in a knowledge society. These skills and attitudes are:

- critical thinking<sup>24</sup> and creative thinking<sup>25</sup> ;
- local and global citizenship;
- interpersonal development;
- intrapersonal development; and
- literacy.

Critical thinking skills is part of a broad concept of literacy skills and attitudes, which combine information processing, motivation and discernment. Broad concepts of literacy skills and attitudes are fundamental to learning in the essential learning areas<sup>26</sup>.

The curriculum also has a place in promoting the use and development of ICT to develop digital literacy<sup>27</sup> (Organisation for Economic Co-operation and Development, 2001).

- ICT increases the breadth and richness of learning, and the development of higher-order thinking skills (pedagogical rationale).
- Competence in ICT is becoming a pre-requisite for participation in society and in the workplace (social rationale).
- It is perceived that the economy, both in the present and the future, will require personnel with increasing levels of ICT skills (economic rationale).

'Literacy', 'interpersonal' and 'intrapersonal' skills can be interpreted in a range of ways. It is, therefore, important that the meanings of these terms are clearly defined, as uncertainty can hinder teachers' changing their practice.

The skills and attitudes described in the literature can be phrased more simply as the skills and attitudes needed for:

- creative and innovative thinking;
- participation and contribution in communities;
- relating to others;
- reflecting on learning, and developing self-knowledge ; and
- making meaning from information<sup>28</sup>.

***Table 9: Definitions of proposed essential skills and attitudes associated with each skill***

Definition of the essential skill	Definition of attitudes associated with each skill
<p>The skills needed for creative and innovative thinking involve:</p> <ul style="list-style-type: none"> <li>• recognising alternative perceptions, unusual connections, others' points of view; and</li> <li>• responsible risk taking, ingenuity and enterprise; generation of fluent, flexible, elaborate and original ideas in a range of societal contexts.</li> </ul>	<p>The attitudes needed for creative and innovative thinking involve:</p> <ul style="list-style-type: none"> <li>• being willing and motivated to engage in creative and innovative thinking; and</li> <li>• being discerning about when and where risks should be taken, thinking about the consequences of being enterprising and considering which ideas are ethically appropriate for different situations.</li> </ul>
<p>The skills needed for participation and contribution in communities involve developing:</p> <ul style="list-style-type: none"> <li>• a sense of place, belonging and mana whenua;</li> <li>• local, national and global human responsibility and a sense of citizenship; and</li> <li>• bicultural and multicultural awareness.</li> </ul>	<p>The attitudes needed for participation and contribution in communities involve:</p> <ul style="list-style-type: none"> <li>• being willing and motivated to participate and contribute in a range of communities; and</li> <li>• being discerning about the nature of this participation and contribution, and thinking about the consequences of any actions.</li> </ul>
<p>The skills needed for relating to other people involve:</p> <ul style="list-style-type: none"> <li>• written, verbal, and non-verbal<sup>29</sup> communication skills; and</li> <li>• social and co-operative skills.</li> </ul>	<p>The attitudes needed for relating to other people involve:</p> <ul style="list-style-type: none"> <li>• being willing and motivated to communicate and use social and co-operative skills;</li> <li>• being discerning about the appropriateness of how, what, where and when to communicate.</li> </ul>
<p>The skills needed for reflecting on learning and developing self-knowledge involve:</p> <ul style="list-style-type: none"> <li>• setting goals, self-monitoring and self-evaluation;</li> <li>• developing responsibility for learning, self-expression, self-respect and acceptance, and reflecting on learning, values and beliefs; and</li> <li>• developing a sense of well-being (physical, emotional, social and spiritual), and a view of the self as a competent, confident and resilient learner.</li> </ul>	<p>The attitudes needed for reflecting on learning and developing self-knowledge involve:</p> <ul style="list-style-type: none"> <li>• being willing and motivated to reflect on learning and to develop self-knowledge; and</li> <li>• being discerning about the appropriateness of any actions taken in response to self-knowledge, such as sharing self-knowledge with others.</li> </ul>
<p>The skills needed for making meaning from information involves:</p> <ul style="list-style-type: none"> <li>• processing text and visual, quantitative, spatial, health, emotional,</li> </ul>	<p>The attitudes needed for making meaning from information involves:</p> <ul style="list-style-type: none"> <li>• the willingness to use senses, responses, signs, symbols and tools</li> </ul>

<p>physical, mana aotūroa, cultural, artistic, digital, scientific, social scientific and technological information.</p> <p>This information comes from:</p> <ul style="list-style-type: none"> <li>• all of the senses;</li> <li>• physical and emotional responses<sup>30</sup>; and</li> <li>• signs, symbols and tools<sup>31</sup>.</li> </ul>	<p>to create knowledge, apply this knowledge in a variety of societal contexts (school, local, national and global communities); and</p> <ul style="list-style-type: none"> <li>• being discerning about information from senses, responses, signs, symbols and tools.</li> </ul>
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Many of the existing essential skills/ngā tino pūkenga ako can be incorporated within these groupings. While other skills can be incorporated into school curricula, these main groupings highlight the priorities for all New Zealand students.

There are similarities between these skills and the strands of *Te Whāriki* - mana atua/wellbeing, mana whenua/belonging, mana tangata/contribution, mana reo/communication and mana aotūroa/exploration.

### **The attitudes and values/ngā waiaro me ngā uara of The New Zealand Curriculum Framework and Te Anga Marautanga o Aotearoa**

Research indicates that the social climate of schools and classrooms may influence student outcomes. The school climate is underpinned by the attitudes and values demonstrated by the staff and students. As curricula are underpinned by values, it is possible for curriculum policy to promote positive attitudes and values within schools.

Analysis of information in the stocktake has not provided an assurance that:

- the values expressed in *The New Zealand Curriculum Framework* and in the *Te Anga Marautanga o Aotearoa* are the most appropriate in the current social, economic and educational climate;
- the current attitudes and values/ngā waiaro me ngā uara are taught or reinforced in schools/kura or reflected in policies;

students are demonstrating the attitudes and values/ngā waiaro me ngā uara. International and national assessment data suggests that there is a high prevalence of absenteeism, verbal intimidation, physical violence, and suicide among New Zealand students by international comparison<sup>32</sup>;

the statements on page 21<sup>33</sup> of *The New Zealand Curriculum Framework* and in *Te Anga Marautanga o Aotearoa* provide sufficient guidance for schools or clear expectations of what schools should do to promote and support community values.

Sector feedback indicates that this section of *The New Zealand Curriculum Framework* and *Te Anga Marautanga o Aotearoa* is critical to education in New Zealand, as attitudes and values/ngā waiaro me ngā uara:

- have the potential to aid the effectiveness of the curriculum in fulfilling its purposes;
- have an important role in helping students to understand philosophical questions about their world and their participation in it;
- can improve the climate and morale of classroom environments (Walberg, 1991); and

are an essential component of differentiated curricula<sup>34</sup> for gifted and talented students. These students often operate at a higher level of moral reasoning than their chronological peers, reaching the highest level of Kohlberg's framework (stages 5 & 6) in their teenage years. In comparison, only 10-15% of all adults ever reach this stage (Brunt, 1996).

Other countries are also reviewing the role of values in their curriculum. Inclusion of cultural values, moral values and individual rights in curriculum is one of the main areas of international curriculum reform (Hughes and Skilbeck in OECD, 1994).

The different values of groups in New Zealand suggests the national curricula need to be flexible enough to allow schools/kura to reflect the values of their local communities. Webster (2001) found that Pasifika peoples value global human responsibility, closeness to the South Pacific, and family values more than the general population, and that Māori express a stronger sense of nationalism, community participation, participatory democracy and commitment to the environment than the general population of New Zealand.

While it is important that community values are reflected in programmes, schools and students may also need to question whether these values foster personal, national and global wellbeing.

There are, however, certain values the curriculum needs to promote. These values are those that link to:

- the purposes of the New Zealand curriculum and te marautanga o Aotearoa, such as equity, respect for diversity, democracy, excellence, global human responsibility, active community participation and contribution, citizenship;
- the revised essential skills/ngā tino pūkenga ako, such as truth/logic, self-respect/acceptance, honesty, responsibility, justice, fairness, co-operation, tolerance, concern for others, aroha, whānaungatanga, open-mindedness, ingenuity; and
- higher level thinking in the essential learning areas/ngā wāhanga ako, such as aesthetics, beauty, mauri, whakapapa, kaitiakitanga, environmental guardianship, whenua, rahui, truth and logic.

Current international thinking favours an eclectic approach to values education. In the USA, former proponents of values clarification now tend to support a combination of moral guidance and values clarification. In the UK, modelling and imitation, training and habituation, and enquiry and clarification are the three main processes of values education.

***Recommendation: That the essential skills/ngā tino pūkenga and attitudes and values/ngā waiaro me ngā uara in the New Zealand Curriculum Framework and Te Anga marautanga o Aotearoa are revised.***

The essential skills/ngā tino pūkenga should be modified from the current organisation of fifty-seven essential skills/ngā tino pūkenga in eight groupings to five groups of essential skills and attitudes to be consistent with *Te Whāriki*.

Incorporation of values should be more explicit in the frameworks and support materials, but values should not be presented as an exclusive list.

It should be obligatory that the essential skills, attitudes and values of *The New Zealand Curriculum Framework* and *Te Anga Marautanga o Aotearoa* are reflected in programmes of learning in all New Zealand schools.

Teams of cross-disciplinary specialists and different members of the community should work together to determine the nature of the values in the revised frameworks. The revised values should link to the purposes, essential skills and attitudes and higher order thinking in the essential learning areas of the New Zealand curriculum and te marautanga o Aotearoa.

There needs to be further consultation within the Ministry on the titles of five groupings of skills, but:

- the essential skills need to include attitudes;
- there should be three dimensions of these skills and attitudes - the capability to use skills, discernment in use, and willingness to use skills; and
- the groups should relate to creative and innovative thinking, participation and contribution in communities, relating to others, reflecting on learning, and developing self-knowledge, and making meaning from information.

#### Rationale

Reducing of the number of essential skills/ngā tino pūkenga ako may give a clearer sense of priorities.

The skills stated as needed for participation in a knowledge society, life long learning and by employers fall into the following categories: critical thinking<sup>35</sup> and creative thinking skills<sup>36</sup>;

local and global citizenship skills; interpersonal skills and intrapersonal skills; and literacy.

A common argument in current literature is that skills should be embedded in domain specific knowledge and not taught in isolation.

Literature also suggests that skills require: students to use a skill; be discerning about how and when to use a skill; and be willing to use the skill and apply a skill in a variety of contexts.

Many of the existing essential skills/ngā tino pūkenga ako could be incorporated within these groupings. While other skills can be incorporated into school curricula, these skills and attitudes could be the priorities for all New Zealand students.

There are similarities between these skills and the strands of *Te Whāriki* -mana atua/wellbeing, mana whenua/belonging, mana tangata/contribution, mana reo/communication and mana aotūroa/exploration.

Attitudes and values/ngā waiaro me ngā uara have the potential to aid the effectiveness of the curriculum by strengthening social cohesion, developing a stronger sense of civics, citizenship and more enterprising attitudes, and fostering a culture of innovation, respect for others and critical thinking.

Sector feedback has criticised the curriculum statements (except for *Health and Physical Education*) for giving insufficient attention to values and not providing clear expectations of what schools should do to promote and support community values.

Literature on the education of gifted and talented students highlights the importance of values and affective components in differentiated curricula for these students.

Current international thinking favours an eclectic approach to values education.

Webster (2001) found differences in the values between different ethnic groups in New Zealand.

## The essential learning areas/ngā tino wāhanga ako of The New Zealand Curriculum Framework and Te Anga Marautanga o Aotearoa

The essential learning area/ngā tino wāhanga ako sections of *The New Zealand Curriculum Framework* and *Te Anga Marautanga o Aotearoa* are inconsistent with the published national curriculum statements for each area. This is a consequence of *The New Zealand Curriculum Framework* and *Te Anga Marautanga o Aotearoa* and the curriculum statements and ngā tauākī marautanga mö te Motu being published in advance of the development of most of the statements

Confusion between the descriptors of the essential learning areas/ngā tino wāhanga ako and the curriculum statements/ngā ngā tauākī marautanga mö te Motu could be minimised by including the achievement objectives in *The New Zealand Curriculum Framework* and *Te Anga Marautanga o Aotearoa*. Further information about each of the essential learning areas (e.g. guidance on effective pedagogy) could then be provided as support materials.

There have been requests for further essential learning areas. An analysis of these requests against government priorities and the needs of current and future society indicates that within the curriculum, the following future focussed themes need to be more explicit:

- social cohesion (including developing resilience and a sense of social connectedness);
- citizenship (local, national, and global);
- education for a sustainable future (including sustainable development and environmental sustainability);
- bicultural and multicultural awareness;
- enterprise and innovation; and
- critical literacy (including digital literacy).

Most of these future-focused curriculum themes can be emphasised in curricula without becoming extra essential learning areas. These themes can also be reflected in the purpose of the national curriculum.

There have also been requests for the essential learning area *Language and Languages* to be separated into two essential learning areas: English or Te Reo Māori and Languages. This separation will also apply to *Te Kōrero me Ngā Reo*. At present, only the curriculum statement *English in the New Zealand Curriculum* has been gazetted.

These requests are supported by evidence that New Zealand has very low levels of students learning additional languages relative to other countries<sup>37</sup>. Rationale for developing a Languages learning area are that language education:

- fosters multicultural awareness<sup>38</sup>;
- supports literacy in English; and
- fosters inclusive school environments for students from New Zealand's increasingly diverse communities.

There is general agreement amongst the New Zealand languages community that years 7-10 are the most appropriate years for any significant investment in languages teaching<sup>39</sup>.

Requiring all students to study eight essential learning areas would result in perceptions of further curriculum crowding, and there are issues of teacher supply. Compulsion to *provide* languages from primary school onwards<sup>40</sup> and compulsion to *provide* languages from year 7 onward are being considered at this stage.

Submissions also indicate that the essential learning areas/ ngā tino wāhanga ako of *The New Zealand Curriculum Framework/Te Anga Marautanga o Aotearoa* and their

transformation into curriculum statements/ ngā tauākī marautanga mö te Motu fosters artificial compartmentalisation of knowledge.

*Recent curriculum developments in the 1990s have witnessed a strengthening of the separate-subjects model in The New Zealand Curriculum Framework (1993) so that separate subjects have been reaffirmed as a way of designing curriculum (McGee, 1997, p.96).*

Arbitrary compartmentalisation of knowledge may prevent students from transferring knowledge.

*We know that knowing, teaching, and learning are communal acts. We also have several generations of solid research on the fact that pedagogies and curricula of connectedness help people get smarter faster about complex fields of information (Palmer, 1999).*

While some level of integration of curricula may help develop connectedness and transfer of knowledge, there are substantial educational risks to students with this option when there is focus on activities rather than concepts, processes and functions of essential learning areas, or where the curriculum uses themes that may not interest students. In addition, the time needed for planning, timetabling and teacher release and the knowledge required of teachers in a range of subjects and resource requirements may be underestimated (University of South Florida, Learning Community faculty; 20001-2002).

Some forms of curriculum integration, however, can lead to positive student and teacher outcomes (Joyce and Taylor, 2000). An approach that integrates the curriculum into issues that have personal and social significance to students, promotes critical inquiry, social action and collaborative teacher-student curriculum planning<sup>41</sup>, and may increase students':

- understanding of general concepts and comprehension of global interdependencies;
- ability to identify, assess and transfer the significant information needed for solving novel problems;
- co-operative learning skills;
- attitude towards learning and being a meaningful member of the community; and
- motivation.

***Recommendation: That the essential learning areas/ngā wāhanga ako in the New Zealand Curriculum Framework and Te Anga marautanga o Aotearoa be revised***

This recommendation aims to address some of the concerns about the curriculum manageability, crowdedness, and a need to prioritise learning in the national curricula.

The essential learning areas/ngā wāhanga ako of the frameworks should include the outcomes (aims and achievement objectives) from the curriculum statements/ngā tauākī marautanga mö te motu. Specialist cross-disciplinary teams should audit the outcomes against the purposes of the curricula and against the future-focused curriculum themes of:

- social cohesion (including developing resilience and a sense of social connectedness);
- citizenship (local, national, and global);
- education for a sustainable future (including sustainable development and environmental sustainability);
- bicultural and multicultural awareness;
- enterprise and innovation; and
- critical literacy (including digital literacy).

The outcomes of the revised frameworks should contain the knowledge and skills that are critical for all students in New Zealand. The broad and flexible nature of the achievement objectives should be maintained.

Level one and two outcomes should emphasise foundation learning for each of the learning areas, particularly the development of literacy and numeracy skills. To ensure a focus on foundation learning and indicate priorities, there should be fewer strands and achievement objectives at levels one and two.

In the sections of the Frameworks on the essential learning areas and ngā tino wāhanga ako there should be guidance statements that explain that the essential learning areas do not have to be taught as distinct subjects. This section should make explicit:

- that the outcomes of each essential learning areas inter-relate;
- that learning should be holistic; and
- the value of developing connections between the outcomes within and across essential learning areas/ngā tino wāhanga ako.

The eight level and strand structures are useful for organising and clarifying expectations of learning. They are not intended to specify a one-size fits all learning progression. Although the rationale for and the number of levels has been questioned there are significant risks associated with changing the number of levels. This structure should be maintained, but the number of strands and objectives specified at each level should be reviewed.

New outcomes should only be developed where it is deemed necessary to make the curricula more efficient at fulfilling their purposes and to strengthen the emphasis on the future-focused curriculum themes. Overlap between the essential learning areas/ngā wāhanga ako should be identified to avoid unnecessary duplication. Where overlap is necessary for transfer of knowledge, links should be made explicit.

#### Rationale

The essential learning areas/ngā tino wāhanga ako of the frameworks and their transformation into curriculum statements/ngā tauākī marautanga mö te motu fosters a 'subject silo' approach which artificially compartmentalises and limits transference of knowledge.

The large number of achievement objectives has increased teacher workload and reduced opportunities for creativity.

The broad and flexible nature of the achievement objectives do not currently help teachers to set priorities or determine the key messages of the statements.

The outcomes of national curriculum need to recognise that students develop at different rates and that student's learning may be asynchronous.

A significant number of the achievement objectives need to be rewritten, as they do not always represent progression of concepts, processes and functions.

The outcomes of national curricula need to recognise the diverse nature of New Zealand students.

The outcomes need to be flexible enough so that schools can use them to develop their own curricula.

A focus on critical foundation learning at earlier levels is helpful for students with special education needs. Students for whom English is a Second Language also need a sound base of literacy on which to apply their prior knowledge in their first language.

The essential learning area Language and Languages/Te Kōrero me ngā Reo should be two separate learning areas - English/Te Reo Māori and Languages. Languages should include

foreign, community and heritage languages and additional language learning in English for students in kura kaupapa and additional language learning in te reo Māori.

Schools should be required to provide instruction in another language for students in years 7 to 10 (except for Māori immersion settings), but it should not be mandatory for all year 7-10 students to learn another language.

Generic outcomes for Languages should be developed and included in the revised New Zealand Curriculum Framework and Te Anga Marautanga o Aotearoa.

#### Rationale

Learning languages is key to students developing greater understanding of the cultures of others.

Relative to other countries, New Zealand has very low levels of language learning.

Language education helps to foster bicultural and multicultural awareness.

The teaching of languages supports literacy in English and forms part of a broad general education for all students.

There is general agreement amongst the New Zealand languages community that years 7-10 are the most appropriate years for any significant investment in languages teaching.

The section on ngā tino wāhanga ako should ensure that language and layout is consistent between statements.

#### Rationale

While the concept of te marautanga o Aotearoa is philosophically sound, teachers find ngā tauākī marautanga mö te motu difficult to use.

Teachers state that they feel that the objectives are too broad to be easily understood, and that they use difficult and inconsistent vocabulary. Teachers also note inconsistencies between the layout and terminology of the statements.

#### ***Recommendation: That The New Zealand Curriculum Framework and Te Anga Marautanga o Aotearoa are redeveloped and gazetted as foundation policies***

*The New Zealand Curriculum Framework and Te Anga Marautanga o Aotearoa* should be modified, and mandated as overarching foundation policies, as provided for by the Education Act. Kura Māori and schools should be authorised to use either policy or a combination of both. A process of consultation and trialling should be undertaken.

As most Māori students are in schools that use *The New Zealand Curriculum Framework* and curriculum statements (in English), the underlying philosophy of both the Māori medium and English medium curricula should reflect the status of Māori as tangata whenua and expectations of 'best outcomes' for all students. The frameworks should be similar in structure and coherent with each other, but not necessarily translations. Considerations should be given to whether a bilingual version of *Te Anga Marautanga o Aotearoa* should be developed for kura Māori and Māori immersion teachers.

The modified versions of the frameworks should be similar in structure to the existing frameworks. They should include sections on the principles/ngā mātāpono, essential

skills/ngā tino pūkenga, attitudes and values/ngā waiaro me ngā uara, essential learning areas/ngā tino wāhanga ako, assessment/te aro matawai and context/te horopaki.

In addition, there should be a clear statement of the purposes of the New Zealand curriculum and te marautanga o Aotearoa. These purposes are to clarify expectations for all New Zealand students and to contribute to developing the human capability necessary for a prosperous and inclusive New Zealand society.

A section on effective pedagogy should also be included. This section should explain the nature of the pedagogies that have been linked by research to increased achievement and social outcomes and to reduction in disparities.

Furthermore, there should be a section on the relationship of the New Zealand curriculum and te marautanga o Aotearoa with *Te Whāriki*, so that primary schools can ensure a smooth transition for new entrants from early childhood education.

There should be subsequent policy work to develop the content of a section on the relationship of the New Zealand curriculum and te marautanga o Aotearoa and qualifications, work should be developed for inclusion in subsequent revisions of the frameworks after the full implementation of NCEA.

Cross-disciplinary teams should be involved in the revision of *The New Zealand Curriculum Framework* and *Te Anga Marautanga o Aotearoa*. These teams should include those with expertise in the essential learning areas, essential skills, attitudes and values and assessment, as well as those with expertise in ngā wāhanga ako, ngā tino pūkenga, ngā waiaro me ngā uara and te aro matawai. Consultation with representative groups from different sectors of New Zealand society, including parents/whānau, members of Māori and Pasifika communities and business should occur.

### *The Quality of the Design of the Curriculum Statements and Ngā tauākī Marautanga*

The curriculum statements and ngā tauākī marautanga mö te Motu differ in size, level of information and style. This reflects the different approaches of the individual curriculum writing groups and the experience accumulate over the ten year period of progressive development and implementation of the curriculum statements. Although the international commentaries state the curriculum statements are reasonably consistent and coherent, local feedback suggests that the achievement objectives are too numerous, and that they sometimes conflict or overlap. The structure of the eight levels is useful for planning.

#### **User-friendliness of the curriculum statements and ngā tauākī marautanga**

Teachers in the National School Sampling Study indicated that some curriculum statements are more difficult to teach from than others (McGee et al., 2002). Some of these responses can be explained. For example, *Mathematics in the New Zealand Curriculum* is reported as easiest to use. This statement has been mandated longest, and has the most specific achievement objectives, hence requires less interpretation from teachers than the other curriculum statements. *Technology in the New Zealand Curriculum* is reported as hardest to use. This statement represents a new curriculum area and therefore requires more interpretation by teachers.

**Table 10: Teacher Perceptions of the Ease of Use of the Curriculum Statements (McGee et al., 2002)**

Curriculum Statement	% teachers finding it easy/very easy to teach from	% teachers finding it difficult/very difficult to teach from the
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	the curriculum statement	curriculum statement
Mathematics	62.1	7.6
Science	57.3	5.9
Social Studies	53.9	8.9
Health and PE	47.7	9.9
English	47.1	14.2
The Arts	40.8	12.1
Technology	34.4	19.2

It is more difficult to evaluate the user-friendliness and flexibility of *ngā tauākī marautanga mō te Motu* as few teachers use them.

In Māori immersion settings, over half of teachers use either the curriculum statements in English, or a combination of curriculum statements and *ngā tauākī marautanga*.

Most teachers find *ngā tauākī marautanga mō te motu* useful, but not user-friendly, because they feel that the statements:

- are based on the New Zealand Curriculum Framework rather than Māori philosophies of education;
- have broad objectives and inconsistent layout and terminology;
- have difficult and inconsistent vocabulary; and
- access to support materials is limited (McGee et al., 2002).

Some teachers in English medium schools use the *ngā tauākī marautanga*. The National School Sampling Study found that 8.1% of teachers who use English as the main language of instruction, use *ngā tauākī marautanga* (McGee et al., 2002).

### **Usefulness for setting goals for learning**

Some theoretical problems with the organisation of the curriculum statements and *ngā tauākī marautanga mō te motu* have been posited:

- some achievement objectives are not outcome statements but behavioural objectives;
- the structure of the achievement objectives into eight levels is artificial and does not match the realities of learning and teaching;
- the large number of achievement objectives increases teacher workload and reduces opportunities for creativity; and
- programmes are driven by (the need to cover off all) achievement objectives, rather than student need<sup>42</sup>.

From a practical perspective, teachers find the levels of the curriculum statements and *ngā tauākī marautanga mō te motu* useful for multi-level teaching and planning to meet the needs of individual students (McGee et al., 2002).

Teachers in the National School Sampling Study indicate that the achievement objectives are *useful* for:

- gaining an overview the progression of key ideas - 69.1% of schools, 75% of kura Māori/units;
- planning their classroom programme - 61.8% of schools, 75% of kura Māori/units; and
- achieving consistent understanding of the levels within their school - 57.5% of schools, 62.5% of kura Māori/units (McGee et al., 2002).

## Usefulness in providing expectations for achievement

The outcomes-focus of the national curriculum has strengthened the quality of assessment, and offered direction for reporting what students can do (McGee et al., 2002). Other strengths of the New Zealand curriculum and te marautanga o Aotearoa reported by teachers include that:

- curriculum policy is linked to assessment policy;
- assessment focuses on learning goals; and
- the curriculum emphasises the needs of learners who are having difficulty (McGee et al, 2002).

Most teachers find the curriculum statements useful for developing specific learning outcomes based on the achievement objectives - 66%; and achieving consistent understanding of the levels within their school - 57.4% (McGee et al., 2002).

A significant number of teachers find the curriculum statements and ngā tauākī marautanga mō te motu useful for:

- assessing student achievement and progress - 47.2% of schools, 58.3% of kura Māori/units;
- communicating student achievement within the school - 41% of schools, 45.8% of kura Māori/units; and
- reporting student achievement to parents/whānau and caregivers - 38% of schools, 66.7% of kura Māori/units<sup>43</sup> (McGee et al., 2002).

The international commentaries and sector representatives raised concerns that the assessment information provided in the curriculum statements and ngā tauākī marautanga mō te motu is not sufficiently clear. Both international commentaries, noted that the achievement objectives are not expressed in terms of *measurable* outcomes (Ferguson, 2002; Le Métails, 2002).

Specific assessment guidance in for each curriculum statement and ngā tauākī marautanga mō te motu is being developed through the National Assessment Strategy. The National Assessment Strategy exemplars will help teachers clarify the learning needs of individual students, while also providing information on the teacher-student interactions, which are necessary for students to achieve gains in learning.

### **Recommendation: That the section on assessment in The New Zealand Curriculum Framework and Te Anga Marautanga o Aotearoa is revised**

The New Zealand curriculum and te marautanga o Aotearoa, alone, do not provide enough guidance on assessment. The commencement of the National Assessment Strategy since the publication of *The New Zealand Curriculum Framework and Te Anga Marautanga o Aotearoa* is addressing the lack of material about effective assessment practice.

Information about 'good practice' from this strategy will need to be incorporated into the reviewed frameworks.

#### Rationale

Effective teaching practice is complex and involves dynamic relationships between curriculum, pedagogy and assessment. All of these components are integrated as teachers respond to the individual learning needs of students.

The outcomes-focus of the national curriculum has strengthened the quality of assessment,

and offered direction for reporting what students can do.

Teachers reported the following as strengths: curriculum policy is linked to assessment policy; assessment focuses on learning goals; and the curriculum emphasises the needs of learners who are having difficulty.

There is concern that about the clarity of assessment information provided by the curriculum and ngā tauākī marautanga mö te motu. The international commentaries state that the achievement objectives are not expressed in terms of measurable outcomes.

In countries which have adopted prescribed and mandatory performance indicators or benchmarks in their national curriculum, the 'taught' curriculum has been narrowed and teachers have tended to adopt standardised programmes, rather than using contexts for learning which reflect students' needs and interests.

### **Usefulness in meeting the needs of Māori students and Pasifika students**

The National Schools Sampling Study shows that most teachers in kura/immersion units find ngā tauākī marautanga mö te motu useful for meeting the needs of Māori students, but few teachers in schools, 24.7%, find the curriculum statements useful for meeting the needs of this group of students (McGee et al., 2002).

In contrast, about a third, 33.8%, of teachers in schools said the curriculum statements were either 'not at all useful' for meeting the needs of Māori students or did not know if the curriculum statements were useful (McGee et al., 2002). Even fewer, 17.9%, believe that the curriculum statements improve learning outcomes for Pasifika students. 48.7% of teachers said the statements were either 'not at all useful' for meeting the needs of Pasifika students or did not know (McGee et al., 2002).

Few of the curriculum statements include learning or assessment examples that use cultural contexts and there is lack of advice about how to develop differentiated school curricula (Ferguson, 2002; Le Métais, 2002).

### **Usefulness in providing flexibility for planning programmes**

The New Zealand curriculum and te marautanga o Aotearoa are sufficiently flexible for teachers to plan programmes to meet the needs of individual students.

- the ACER report indicates that all of the curriculum statements are flexible (Ferguson, 2002).
- the Education Review Office (2001a) finds that the curriculum is sufficiently flexible to accommodate local contexts and priorities, but cautions that it is dependent on teachers planning well and having sufficient subject area knowledge to 'weave legislative requirements and local objectives together'; and
- 82.7% of teachers in the National School Sampling Study feel that the curriculum statements are flexible enough to plan programmes to meet individual students' needs and interests (McGee et al., 2002).

### **Links between early childhood education and school**

A smooth transition between early childhood and school is important to minimise the barriers to learning faced by young children. Research indicates that disjunction in approaches to teaching and learning by the early childhood education and school sectors can hinder a child's ongoing development and reduce gains made in early childhood education. If children's early primary school experiences interface appropriately with their early childhood experiences, they are likely to be confident that they can participate fully and successfully in all learning opportunities.

An understanding of how the early childhood education and schools sectors relate to each other is important to ensure development and learning in the early years are maintained and built upon. This is particularly important in New Zealand as almost all four year olds, and 92% of three year olds attend some form of early childhood education from early childhood provider. Participation rates are considerably lower, however, for Māori and Pasifika children.

*Te Whāriki* and the school curriculum both recognise that children learn and develop at different rates, that children of the same age will be at different levels of learning and development, and that a child may be further along the continuum of learning and development in one area than another.

The five themes which make up the strands of *Te Whāriki* - mana atua/wellbeing, mana whenua/belonging, mana tangata/contribution, mana reo/communication and mana aotūroa/exploration are developed in many of the achievement objectives of the national curriculum statements. Ideally, all achievement objectives can build on a child's sense of mana atua/wellbeing by nurturing their emotional wellbeing and keeping them safe. Likewise, schools can be places where children have a sense of mana whenua/belonging - where they know they have a place, feel comfortable with routines, customs and regular events, and know the limits and boundaries of acceptable behaviour. All teaching and learning situations can be environments where children feel they can mana tangata/contribute - where they experience environments that affirm each child as an individual provide equitable opportunities for learning, irrespective of gender, ability, age, ethnicity, or background. Equally, the essential learning areas, essential skills and attitudes of the school curriculum can continue to build on mana reo/communication and mana aotūroa/exploration skills and attitudes developed by the strands of *Te Whāriki*. The National Education Guidelines also reaffirm the values of *Te Whāriki* within schools.

***Recommendation: That a section on the relationship between the New Zealand curriculum/te marautanga o Aotearoa and Te Whāriki is developed***

*The New Zealand Curriculum Framework* and *Te Anga Marautanga o Aotearoa* should include a section for primary schools on how to ensure a smooth transition between early childhood education for new entrants. This section should:

- outline the similarities and differences between the school curriculum frameworks and the early childhood curriculum;
- explain features of effective early childhood learning environments and ways that reception classroom learning environments can also reflect these features; and
- explain how schools and kura Māori can develop closer relationships with parents/whānau, whānau and the community in the first two years of students' education.

Rationale

Smooth transitions between early childhood and school minimise the barriers to learning faced by young children.

Disjunction in approaches to teaching and learning hinder a child's ongoing development and reduce gains made in early childhood education.

If children's early primary school experiences interface appropriately with their early childhood experiences, they are likely to be confident that can participate fully and successfully in all learning opportunities.

**Links between school, tertiary education and work**

The curriculum statements provide guidance to level 8, which corresponds to the highest level of achievement expected of senior secondary school students. At the end of the compulsory curriculum (year 10), most students, however, are still under the school leaving age of 16 and continue into the senior secondary school. At present, there are no curriculum regulations for years 11- 13, except for National Certificate of Educational Achievement (NCEA) literacy requirements at level 1.

At years 9 and 10, the downward pressure of the qualifications system is greater than the upward pressure of the compulsory curriculum. Students face a tension between needing more choice at years 9 and 10, and not having the experience of all essential learning areas at a high enough level to be able to make choices regarding future careers. Secondary teachers tend to regard years 9 & 10 as the start of preparation for qualifications rather than the completion of a broad, general education. This is one reason the curriculum design set out in the New Zealand Curriculum Framework has not been fully accepted or put into practice in many secondary schools. more work is needed on the implications of altering the regulations for year 9 and 10.

Provision of an education in each of the seven essential learning areas in years 9 and 10 is seen to be in conflict with the traditional secondary core and options system. The essential learning areas are also causing timetabling challenges for some secondary schools.

Once students turn 16, they are eligible to leave school. They either continue in the senior secondary school or pursue tertiary education, employment or unemployment. There is evidence that students need to be assisted to make smooth transitions from the end of schooling, yet the present curriculum frameworks do not provide guidance on how the curriculum relates to post secondary pathways.

The introduction of NCEA in 2002 has widened the options available to senior secondary students. It has also improved the continuity between year 1-10 courses and those in years 11-13 at least in the subjects which have curriculum statements.

NCEA is being phased in at 3 levels.

- level one (for students predominately in year 11) in 2002;
- level two (for students predominately in year 12) in 2003; and
- level three (for students predominately in year 13) in 2004.

Where curriculum statements were available, achievement standards were based on achievement objectives. Where statements were not available, standards were based in part on examination prescriptions.

NCEA also allows students to be assessed on unit standards developed in conjunction with industry training providers. The breadth of options available for schools to offer senior secondary students makes regulating the senior secondary school (where attendance is non-compulsory) problematic and a complete departure from current policy seems unwise at this time. The current policy approach recognises that senior secondary students need to access an increasing range of learning opportunities as they search for a possible career path. .

The National Certificate of Educational Achievement (NCEA) is a major initiative and policy on senior secondary school curricula is currently focussed on its implementation. Policy is also currently being developed on transitions from school to work for students aged 16-19.

***Recommendation: That further policy on the secondary school curriculum is undertaken***

Further work on the challenges that the curriculum poses for secondary schools needs to be undertaken. Work on the and the links between the curriculum and foundation and generic skills of the tertiary sector has been started by the Ministry of Education.

The present curriculum frameworks do not provide sufficient guidance on how the curriculum relates to post secondary pathways, and these need to be investigated.

Further work on the links between the senior secondary school and work and tertiary study need to be undertaken once the NCEA has been fully implemented.

A section on the transition to the senior school, qualifications and work should be included in subsequent revisions of *The New Zealand Curriculum Framework* and *Te Anga Marautanga o Aotearoa* after the full implementation of NCEA.

### **Information for parents/whānau, members of the community and business**

Submissions to the stocktake have highlighted a lack of knowledge in the general community of the scope and expectations of the New Zealand curriculum and te marautanga o Aotearoa. Parents/whānau, members of the community and business are all key stakeholders of the education system. If students are to transfer their learning to the real world, parents/whānau and members of the community have a fundamental role in assisting this transfer. The more parents/whānau and community members know about the curriculum, the more effective they will perform this role. Developing publications about the curriculum frameworks may provide better curriculum information to stakeholders. This will help facilitate a sense of connectedness and may develop wider understanding about the curriculum in particular and the purposes of education in general.

Providing better information to parents/whānau about the curriculum has the potential to increase the expectations parents/whānau have for their children in terms of educationally significant learning. It may also change the expectations that parents/whānau have of schools and aid parents/whānau in better supporting their children to achieve positive educational outcomes.

### ***Recommendation: That curriculum guidance materials for parents/whānau and members of the community and business is developed***

Publications explaining *The New Zealand Curriculum Framework* and *Te Anga Marautanga o Aotearoa* should be developed for parents/whānau, community organisations and business.

The parent publications should explain:

- the reasons for, and purposes of, national curricula;
- the obligations of schools in regard to curricula;
- the different elements of learning expressed in the curriculum - essential skills/ngā tino pūkenga, attitudes and values/ngā waiaro me ngā uara, essential learning areas/ngā tino wāhanga ako;
- the continuum of learning from years 1 to 10 through illustrations of student work exemplifying what they can expect their children to achieve at different levels of the curriculum;
- how parents/whānau can effectively participate in their child's learning;
- how parents/whānau can assist their children to transfer their knowledge from school to the world outside of the classroom; and
- what is currently known about learning, for example, the importance of literacy, numeracy and early childhood oral language development.

The content of the community and business publications should resemble the parent/whānau publications, in that they also explain:

- the reasons for, and purposes of national curricula;

- the different elements of learning expressed in the curriculum - essential skills/ngā tino pūkenga, attitudes and values/ngā waiaro me ngā uara, essential learning areas/ngā tino wāhanga ako;
- reasonable expectations of what students should know and be able to do towards the end of schooling;
- information on the National Certificate of Educational Achievement; and
- information on how school-business partnerships can be developed through mentoring, field trips and guest speakers.

#### Rationale

Parents/whānau, members of the community and business are all key stakeholders of the education system.

Parent/whānau involvement is linked to improved student outcomes.

There is a lack of knowledge in the general community of the scope and expectations of the New Zealand curriculum and te marautanga o Aotearoa. Providing better access of knowledge about the curriculum for key stakeholders could develop this sense of connectedness.

Providing better access to curriculum knowledge for members of the community and business may improve the effectiveness of schooling through active citizen participation and a more connected community.

Providing better access to curriculum knowledge for parents/whānau has the potential to increase the expectations parents/whānau have for their children and to focus these expectations on educationally significant learning.

If students are to transfer their learning to the real world, parents/whānau and members of the community have a fundamental role in assisting this transfer.

### *The Quality of the Implemented Curriculum and Ngā Tauākī Marautanga mö te Motu in Schools and Kura*

#### **Manageability**

For the most part, schools feel they have effectively implemented the curriculum. Overall, however, the implemented curriculum has not improved outcomes for Māori or Pasifika students. Introduction of the curriculum is perceived as having increased teacher workload. In the National School Sampling Study, over half of the teachers in Māori immersion indicated that the requirements of ngā tauākī marautanga mö te motu increased administration and written planning (McGee et al., 2002).

*Variations within and between curriculum documents, and the scale and spread of curriculum change may have resulted in pressures on teachers... There will always be workload issues associated with delivering the curriculum and it is part of teachers' professional role to manage the various demands on their time ... Nevertheless, review officers reported that the workload associated with planning learning programmes, combined with that required to develop meaningful assessment activities, is unnecessarily onerous for some teachers. The curriculum statements do not provide sufficient detail to assist with either of these tasks. Workload can be made more manageable if planning is done collaboratively and is shared. This is easier in large schools than in small schools (Education Review Office, 2001a).*

Informal feedback to the Ministry of Education Literacy and Numeracy strategy suggests that where the effects of change can be seen in practice and improved student outcomes, workload is less of an issue for teachers.

### Implementation of programmes that meet the needs of Māori students

On 1 July, 2000, National Administration Guideline (NAG) 1(v) relating to policies, plans and targets for improving the achievement of Māori students came into effect. By June 2001 most schools had made progress implementing this NAG, however considerable improvement is still required (Education Review Office, 2001b).

- There is a lack of objective information in many schools about the relative educational achievements of Māori and Pākehā students, due, in part to a lack of effective assessment practices. Only 28 % of schools surveyed provided the Education Review Office with separate information on the achievement of Māori students in any of the essential learning areas.
- Only 20% of schools demonstrated specific programmes or initiatives in place aimed at identifying and overcoming barriers to learning for Māori students. Seven percent of schools used the participation of whānau to improve the learning environment and reflect high expectations for Māori students. Only 1% of schools were specifically singled out for providing excellent whānau support. ERO had particular concerns about the level of support for Māori students in 4% of the schools, because of issues such as high truancy rates or a lack of engagement among Māori students.
- The report found that most schools (59%) have started to identify Māori communities and consult with them on their aspirations for Māori students. Policies and relationships were well-developed in 43% of these schools. Seventeen percent of these schools had inadequate policy frameworks relating to the Treaty of Waitangi, 14 % had no relationship or a negative one with their Māori communities, and 31% had poor policies.
- Forty nine percent of schools provided te reo Māori and Māori perspectives through all of the essential learning areas in their school curriculum. ERO found, however, that many teachers demonstrated low levels of confidence and expertise in tikanga Māori.

### Teacher knowledge

A significant number of teachers believe that they need more content knowledge to teach from the *ngā tauākī marautanga mö te motu*, and *The Arts in the New Zealand Curriculum and Technology in the New Zealand Curriculum* (McGee et al., 2002). Greater content knowledge may improve the quality of teaching and therefore improve outcomes for students.

With the exception of technology, the longer the curriculum statements have been mandated, the more teachers feel their knowledge of the curriculum area is good or satisfactory. This indicates that perceived comfort with a curriculum statement increases with time.

**Table 11: Teacher Perceptions of the Level of their Own Content Knowledge of the Curriculum Statements and Ngā tauākī Marautanga mö te Motu (McGee et al., 2002)**

	Teachers rating their knowledge in a curriculum area as <i>good</i> or <i>satisfactory</i>	Teachers indicating that they <i>need more content knowledge</i>	Māori immersion teachers rating their knowledge as <i>very adequate</i> or <i>adequate</i> (out of 24 teachers for each question)
The Arts	60.5%	35.8%	12
Ngā Toi	-	-	1

Technology	65.9%	29.9%	12
Hangarau	-	-	1
Health and Physical Education	79.3%	18.5%	14
Hauora	-	-	4
Social Studies	85.2%	12.6%	19
Tikanga-ä-iwi	-	-	4
Science	86.1%	11.6%	16
Pūtaiao	-	-	1
English	89.0%	9.3%	14
Te Reo Māori	62.5%	35.0%	4
Mathematics	90.1%	7.9%	16
Pāngarau	-	-	4

### Quality and availability of professional development

Most teachers in the National Schools Sampling Study indicate that the advisory support and professional development supporting curriculum implementation is effective. However, most teachers in the study still feel they need more professional development for all of the curriculum statements:

- 90.5% for the Arts;
- 82.1% for Technology;
- 78% for Health and Physical Education;
- 74.2% for English;
- 72.7% for Social Studies;
- 72.4% for Science; and
- 69.4% for Mathematics (McGee et al., 2002).

The amount of professional development perceived as required broadly correlates with the time since the mandating of each curriculum statement. That is, fewer teachers feel they need professional development for the curriculum statements that were implemented earliest. Again, technology is the exception. This may be because at the time of implementation, technology represented a new curriculum area.

Two-thirds (130) of the total number of responses from teachers in Māori immersion also indicated that they need more professional development. Most teachers stated that they need a lot more professional development in all of ngā tauākī marautanga mö te motu.

There are significant challenges with professional development to support the implementation of ngā tauākī marautanga mö te motu (McGee et al., 2002).

- There is the perception that there are many small, unlinked initiatives. Professional development and resource development initiatives need to be better aligned in Kura Māori.
- Teachers' experience of professional development in te reo, and in using the ngā tauākī marautanga mö te motu indicates that facilitator reo is sometimes limited, and that in some cases, the professional development is insufficiently targeted for Kura Māori.
- Teachers in Māori immersion generally felt that effective professional development for teachers in kura kaupapa Maori reflects Māori aspirations, is run for Māori, by people who speak te reo Māori, and reflects Māori philosophies and customs.
- Teachers indicated that professional development was often too short and use of their own personal time for professional development added stress to teachers with already high workloads.

- High teacher turnover and a small pool of relief teachers aggravate problems with professional development for Māori immersion teachers.

## Resourcing

Technology facilities have a major influence on the effectiveness of the implementation of the Technology curriculum (McGee et al., 2002).

A lack of resources to support *Technology in the New Zealand Curriculum* and all of ngā tauākī marautanga mö te motu has also impeded implementation (McGee et al., 2002).

A lack of resources for ngā tauākī marautanga mö te motu has placed pressure on experienced and fluent teachers of te reo, as well as new teachers with limited language capability. This indicates that more resources for children (particularly non-fiction resources), and for teachers need to be developed<sup>44</sup> in order to support student achievement. Available Māori medium resources are also not effectively utilised.

There are particular curriculum issues for bilingual units and for students moving between Māori medium and English medium instruction. There is a case for having bilingual versions of ngā tauākī marautanga mö te motu for schools who do not have the benefit of a staff member fluent in the specialised language of all of ngā tauākī marautanga mö te motu. These schools need to be able to access the curriculum statements easily to ensure that ngā tauākī marautanga mö te motu are implemented and delivered as intended. Developing teachers' competence in te reo Māori is also needed<sup>45</sup>.

Recommendation: That further curriculum guidance materials and professional development programmes are provided for teachers

Support materials and professional development that develops teachers' understanding of the content knowledge underpinning each of the curriculum statements and ngā tauākī marautanga mö te motu should be provided.

In addition, high quality professional development and materials should be developed for teachers which:

- updates teachers' knowledge of content in all of the essential learning areas and ngā tino wāhanga ako; and
- provides information on effective pedagogies, such as the most effective strategies for integrating curricula, and how teachers can better recognise and cater for diversity in all of the essential learning areas and ngā tino wāhanga ako.

Professional development and materials for kura Māori should reflect Māori aspirations for education and be cognisant of the difficulties of working in Māori medium education.

Resources for students and teachers in Māori immersion settings should continue to be developed.

Considerations should be given to whether bilingual versions of guidance materials should be developed for kura Māori and Māori immersion teachers.

### Rationale

A significant number of teachers believe that they need more content knowledge to teach from the curriculum statements and ngā tauākī marautanga mö te motu.

Most teachers still feel that they need more professional development about all of the

curriculum statements and ngā tauākī marautanga mö te motu.

There are significant problems with materials and professional development to support the implementation of ngā tauākī marautanga mö te motu.

There are too many small, unlinked initiatives, and professional development and resource development initiatives in Kura Māori need to be aligned.

A lack of resources for ngā tauākī marautanga mö te motu has placed pressure on experienced and fluent teachers of te reo, as well as new teachers with limited language capability.

Available Māori medium resources are also not effectively utilised. There are also particular curriculum issues for bilingual units and for students shifting between Māori medium and English medium instruction.

10 Ngā Haeata Mātauranga (2002) describes the Ministry of Education priorities for Māori education.

11 The Pacific Education Overview states that: *As the majority of the Pasifika population currently resides in Auckland it is in Auckland that the largest impact will be felt. Between 1996 and 2016 it is expected that the total Pasifika population will increase by about 60% or 83,000 people. Presently one in ten children is a Pasifika child, by 2051 it is predicted that this will rise to one in five. In the school sector, 7% of students identify as Pasifika students, predicted to rise to 11% within thirty years. Some schools now have significant numbers of Pasifika students, sometimes up to 90% of a school's roll.*

12 Defined as understanding, using, and reflecting on written texts, to achieve one's goals, to develop one's knowledge and potential, and to participate in society.

13 Defined as identifying, understanding, and engaging in mathematics to make well-founded judgements about the role that mathematics plays in their current and future life as constructive, concerned, and reflective citizens.

14 Defined as using scientific knowledge to identify questions and to draw evidence-based conclusions to understand and help make decisions about the natural world and the changes made to it through human activity. Note: The results of the International Adult Literacy Survey, however, indicate that, while a proportion of New Zealand's adult population is highly literate, a significant proportion of our population as measured by these assessment tasks, is not.

15 TIMSS indicates that disparity in achievement has reduced at year 5 for students who reported that English was spoken rarely at home. PISA indicates significant disparities are still present for non-native students (1st generation).

16 Trend data on achievement for students in Māori immersion is not included due to problems with translation of the 1999 NEMP tasks.

17 Note: 16.3% of teachers state that they do not teach Māori students.

18 Note: 41.8% of teachers state that they do not teach *Pasifika* students.

19 This figure includes the effects of quality teaching on student motivation and classroom morale.

20 These groups include Māori students; *Pasifika* students; students with special education needs; gifted and talented students; and gender issues.

21 This question asked teachers about the framework documents. There may have still been confusion about *The New Zealand Curriculum Framework* and *Te Anga Marautanga o Aotearoa* publications and the overall policy of the frameworks (which include the curriculum statements and ngā tauākī marautanga mö te motu).

22 Some teachers in Māori medium immersion settings are reluctant to use *Te Marautanga o Aotearoa* as it is based on *The New Zealand Curriculum Framework* rather than *Te Aho Matua* (McGee et al., 2002).

23 England has developed materials for parents which enable them to support the curriculum work of schools (The Learning Journey books and website, free Parent and School magazines).

24 Critical thinking is 'skilful and responsible thinking in which you study the problem from all angles, and then exercise your best judgement to draw conclusions' (Sies, 1999).

25 Creative thinking is 'a new way of looking at something, a transformation, a relationship that was not there before, where one perceives new idea combinations, new meanings or new applications' (Davis, 1983).

26 For example information literacy, scientific literacy, technological literacy, arts multiliteracies, health/emotional/physical literacies.

27 [Digital literacy] implies a sophisticated set of competencies pervading workplace, community and social life, including information-handling skills, and the capacity to make judgements about relevance and reliability when searching on the Internet (Organisation for Economic Co-operation and Development, 2001b, p.15).

Digital literacy refers to the assortment of cognitive-thinking strategies that consumers of digital information utilize... It includes the ability to "read" instructions from graphic interfaces ('photo-visual literacy'), to use the computer's digital reproduction capability ('copy & paste') in order to form genuine-creative products ('reproduction literacy'), the flexibility of thinking that enables learners to construct knowledge from hypertextual, non-linear navigation through knowledge domains ('lateral literacy'), and the ability to critically evaluate and assess the quality of digital information ('information literacy'). These literacies determine, to a great extent, the quality of learners' work in digital environments (Eschet, 2002).

28 This could also be expressed as building knowledge from information. In Singapore, this was expressed as building data into information, information into knowledge and knowledge into wisdom.

29 This includes the physical skills needed for non-verbal communication.

30 Different literacies use different combinations of visual, auditory kinaesthetic and tactile senses. It is important that students recognise a variety of physical and emotional responses for health, emotional and physical literacy.

31 Different literacies involve different tool use.

32 Further information is available in a separate scoping paper.

33 This page is entitled "Attitudes and Values/Nga Waiaro me nga Uara."

34 This literature recommends differentiating the curriculum to include the exploration and clarification of value-laden issues, rather than inculcation of values.

35 Critical thinking is 'skilful and responsible thinking in which you study the problem from all angles, and then exercise your best judgement to draw conclusions' (Sies, 1999).

36 Creative thinking is 'a new way of looking at something, a transformation, a relationship that was not there before, where one perceives new idea combinations, new meanings or new applications' (Davis, 1983).

37 In England, international languages are compulsory at secondary school (Key Stages 3 and 4), and language learning (at primary and secondary school) has been compulsory in Australia for the past ten years. It has recently been suggested in Australia that study of languages should not be compulsory. This appears to be motivated by difficulty finding suitably qualified teachers, crowding of the curriculum and difficulty deciding on which language to teach.

38 Learning another language 'enriches them [students] intellectually, socially, and culturally, offers an understanding of the ways in which other people think and behave, and furthers international relations and trade (Ministry of Education, New Zealand Curriculum Framework, 1993)'

Note: There is no curriculum statement for te reo Māori as a language additional to the language of instruction.

39 Introductory programmes could be provided at years 7 and 8, but more substantial and continuous programmes could be provided at secondary level, to recognise the higher levels of teacher expertise in languages in secondary schools. All programmes could be based on the curriculum statements, where there are statements for that language.

40 Within this option, New Zealand would initially suffer from a shortage of qualified language teachers, especially in primary schools. This would necessitate a lead-in period of approximately five years before schools would be able to comply with any compulsory language requirements.

41 Fraser, D. (2000) Curriculum Integration: Powerful ways to motivate and enhance the learning of all students. University of Waikato workshop, 24 May, 2000.

42 In the first few years of implementation, teachers thought they were obliged (under the 1993 version of NAG1) to provide evidence to ERO of teaching and assessing each and every objective. This was one reason that NAG 1 was reworded in 1999.

43 These figures are higher than the number of teachers who found the curriculum statements sometimes useful, sometimes not or not useful.

44 These could be similar to Planning and Assessing in English.

45 Expanding the Whakapiki Reo professional development programme may achieve this goal.

## SECTION THREE: THE NATURE OF THE NEW ZEALAND CURRICULUM AND TE MARAUTANGA O AOTEAROA AS POLICY

This section considers the nature of the New Zealand curriculum and ngā marautanga o Aotearoa as policy, including:

- the purposes of national curricula that the New Zealand curriculum and ngā marautanga o Aotearoa should reflect; and
- the current legal status of the New Zealand curriculum and ngā marautanga o Aotearoa, and possible options for change.

### *Part 1: The Purposes of the New Zealand Curriculum and Te Ngā marautanga o Aotearoa*

The official purposes of the current New Zealand curriculum and ngā marautanga o Aotearoa are not explicit in current curriculum policy. It can be argued that the purposes of the curriculum are reflected in the National Education Goals and the principles of *The New Zealand Curriculum Framework* and *Te Anga Marautanga o Aotearoa*.

In order to best support positive student outcomes, the purposes of the New Zealand curriculum and ngā marautanga o Aotearoa, defined in the stocktake, should be to:

- clarify expectations for all New Zealand students; and
- develop the human capability necessary for a prosperous and inclusive New Zealand society.

#### **Purpose 1: To Clarify Expectations for all New Zealand Students**

The outcomes of national curricula need to reflect higher level thinking and be goals for learning, rather than benchmarks or minimum standards. It is important that these outcomes are expectations that most students can achieve with purposeful teaching, that teachers develop specific differentiated tasks that are targeted to their learning needs of their students and that teachers have high expectations of all students.

*There is consistent evidence that clear expectations that focus on educationally significant learning and high but attainable standards raise achievement. Clear expectations that discourage deficit explanations of student performance based on cultural and social class stereotypes support teachers in focusing on the next learning steps for each pupil regardless of their background, and lead to more equitable learning outcomes for students (Chamberlain, p.20, 2000).*

The mandatory achievement objectives of the New Zealand curriculum are broad goals for learning. The curricula provide the broad expectations and help schools to set goals for specific groups of students. With the help of more specific advice from the National School Assessment Strategy, schools/kura are able to gather achievement data and measure the progress of these groups of students. While the performance indicators and guidance on student-teacher interactions provided by the National Assessment Strategy are not

mandatory, the measurement of progress allows schools to identify specific learning needs of groups to plan strategies to meet these needs.

Other countries use prescribed, mandatory performance indicators or benchmarks against which to evaluate student achievement at the school level (Ferguson, 2002; Le Métais, 2002). This approach narrows the 'taught' curriculum in schools to the 'assessed' curriculum and teachers tend to adopt standardised programmes, which prepare students for assessments, rather than using contexts for learning which reflect students' needs and interests (Le Métais, 2002).

## **Purpose 2: To Develop the Human Capability Necessary for a Prosperous and Inclusive New Zealand Society**

The adults of tomorrow are likely to work in more open, competitive, flexible labour markets with increased migration flows, rapid growth in human capability and more open and competitive international education and research markets. Continuous technological, social and economic change will mean continuous change in the level and types of capability needed, the range of opportunities and career pathways available, and the relative wages offered for different sets of skills and capabilities. In the face of this change, the national curriculum has a role in safeguarding and promoting social cohesion<sup>46</sup>. New Zealand is not as explicit as other countries in the role education plays in developing national identity through *'teaching about different cultures, using a range of cultural contexts in teaching, promoting positive attitudes towards diversity, and making differentiated provision for different cultural/ethnic groups'* (Le Métais, 2002).

Curricula have a role in contributing to the well-being of New Zealand society through:

- building social capital;
- using diversity as a strength; and
- developing an innovative, knowledgeable and capable workforce (including unpaid employment).

In particular, Māori students have specific rights and responsibilities as the indigenous people of New Zealand. In order for Māori *'to live as Māori, to participate as citizens of the world, and to enjoy good health and a high standard of living'*, education [and therefore the curriculum] must be guided by the principle of *'indigeneity'* and *'best outcomes'* for all students (Durie, 2001, p.5.). New Zealand's national curricula, therefore, must take account of the Treaty of Waitangi and recognise Māori as tangata whenua.

In order for diversity to be used as strength, the outcomes of national curricula need to be expressed so that they recognise difference. The outcomes of national curriculum need to recognise that students develop at different rates, and that student's learning may be asynchronous. Curricula also need to be inclusive and reflect how student learning progresses in the socio-ecological context of the classroom environment (rather than as a lock-step process). Curricula also need to be viewed alongside support materials, which may help teachers meet the needs of the diverse student population.

### ***Recommendation: That a section on the purposes of the New Zealand curriculum and ngā marautanga o Aotearoa is developed***

*The New Zealand Curriculum Framework and Te Anga Marautanga o Aotearoa should include clear statements about the purposes of the New Zealand curriculum and ngā marautanga o Aotearoa. These purposes are to clarify expectations for all New Zealand students and contribute to developing the human capability necessary for a prosperous and inclusive New Zealand society.*

## Rationale

Curricula help schools/kura to address issues of cultural relevance, indigeneity and to address disparity, such as that due to social class.

Curricula help develop a creative and innovative citizenry, developing life-long learners and safeguarding and promoting social cohesion.

Curricula that reflect current learning theory are flexible, inclusive and recognise that student learning progresses in the socio-ecological context of the classroom environment.

The outcomes of the curriculum can be expressed as both aspirations that reflect higher level thinking, and expectations of what students should learn at different levels.

## *Part 2: The Legal Status of the New Zealand Curriculum*

Currently, the national curriculum is regulated under the Education Act 1989 through the National Education Guidelines<sup>47</sup> which have four components:

- National Education Goals;
- Foundation Curriculum Policy Statements<sup>48</sup>;
- National Curriculum Statements; and
- National Administration Guidelines<sup>49</sup>.

In common with a number of other education systems (Australian states, Canadian provinces and South Africa), the legislation pertaining to the New Zealand curriculum specifies expected or desirable learning outcomes for students, rather than content. These curricula outline progress in achievement levels, rather than year/class levels. This policy recognises that children learn and develop at different rates, that children of the same age will be at different levels of development and that a child may be further along the continuum of development in one area than another.

In New Zealand, the regulation of seven essential learning areas for years 1-10 is designed to protect students' entitlement of opportunity to achieve and to provide a broad, balanced, general education rather than a vocationally or academically narrowed/specialised one.

Until December 1998, the junior secondary curriculum was regulated through the Secondary Instruction Regulations (1975) which outlined minimum time allocations for 'core' subjects in years 9-11. Although these regulations were revoked in 1998, they continue to impact on secondary school practice<sup>50</sup> by determining a perceived hierarchy of subjects.

In response to workload and administration concerns, the National Administration Guidelines were amended in 1999, with effect from 1 July 2000. The changes sought to:

- improve schools' responsiveness to Maori students and improve the achievement of Maori students;
- ensure that schools give priority to achievement in literacy and numeracy, especially in the early primary years;
- ensure that schools identify and respond appropriately to students with special needs;
- clarify requirements for schools to assess and report on student progress in relation to the national curriculum statements; and
- link schools' analysis and use of assessment information with strategic planning, self-review, and teacher professional development.

The changes have gone some way to prioritising what schools are required to do and to correct the misconception that the Education Review Office expects schools to show evidence of teaching and assessing every achievement objective.

To give effect to changes introduced by the Education Standards Act 2001, particularly in respect to requirements related to planning and reporting, further amendments to the National Administration Guidelines will need to be considered.

There is widespread sector concern that the curriculum is overcrowded and needs to be reduced. Others, however, wish to increase the size of the regulated curriculum by developing and gazetting further essential learning areas.

Options for changing the current regulatory framework were considered in terms of the purposes of the curriculum and the quality of the curriculum. Completely deregulating the curriculum places the provision of opportunity of achievement at risk. At the other extreme, international experience indicates that highly regulated curricula with mandatory outcomes, benchmarks of achievement and content deprofessionalise and demotivate teachers, reducing achievement to minimum standards for all and removing any flexibility for teachers to meet the needs of their students (Le Métais, 2002).

### **Options for altering the regulation of the national curricula**

#### Gazetting The New Zealand Curriculum Framework

Sector feedback<sup>51</sup> and the international commentaries give support for *The New Zealand Curriculum Framework* to have the status of a foundation curriculum policy statement (Ferguson, 2002; Le Métais, 2002). However, feedback on the quality and purpose of the New Zealand curriculum suggests that the framework would need to be revised before it was mandated.

#### Gazetting Te Marautanga o Aotearoa

Ngā marautanga o Aotearoa have not been gazetted and this has caused a legal inconsistency, where kura Māori should, in theory, be using the New Zealand curriculum. In Māori immersion settings, over half of teachers use either the curriculum statements in English, or a combination of curriculum statements and ngā tauākī marautanga mö te motu. Both the English and Māori medium curricula could be gazetted, with Kura Māori/immersion units being able to use either or parts of both curricula.

#### Using the essential skills/ngā tino pūkenga as the structure of the regulated curriculum<sup>52</sup>

A focus on essential skills/ngā tino pūkenga instead of essential learning areas/ ngā tino wāhanga ako reflects OECD research which indicates employers are more interested in employee skills and dispositions rather than domain specific knowledge. A focus on skill development can promote metacognition and the use of authentic, interdisciplinary contexts, both of which are necessary in a knowledge society. However, progression in skill development is difficult to define and teachers may teach the essential skills in isolation from conceptual knowledge. Teachers are also more likely to stay within their knowledge and experience thus narrowing the curriculum.

#### Decreasing the number of essential learning areas/ngā tino wāhanga ako

This option may allay teacher concerns about workload associated with the current curriculum. However decreasing the number of essential learning areas may not decrease workload, as curriculum content may remain the same, with one essential learning area being integrated into another. Many New Zealand schools already integrate the essential learning areas<sup>53</sup>. Integrating curricula, however, poses both advantages and risks. Less sophisticated

approaches to integration pose greater risks to learning; more sophisticated options require greater teacher capability and possibly increase workload.

#### Increasing the number of levels in the curriculum statements/ngā tauākī marautanga mö te motu

There has been some discussion in the Exemplar project that students progression is more clearly represented in some essential learning areas by more levels than those in the current curricula. Increasing the number of levels, however, would increase workload and manageability for teachers. This option may also change the specificity of the achievement objectives from 'broad expectations of learning' to 'specific performance indicators'. The adoption of specific mandatory performance indicators has educational risks that are outlined in the section two of this report.

#### Decreasing the number of levels in the curriculum statements/ngā tauākī marautanga mö te motu

Some teachers assume that most students in a classroom are working at the same level and plan programmes accordingly. The intention of the current New Zealand curriculum and ngā marautanga o Aotearoa is that teachers should plan programmes for students at their actual and different levels. Multilevel teaching is one way teachers can cater for gifted and talented students and students with special needs.

If the number of levels were decreased, most students in a classroom would be defined as working at the same level. It is likely, therefore, that fewer teachers would adopt multilevel teaching strategies. Decreasing the number of levels, therefore, presents risks that the needs of gifted and talented students, and students with special needs students will not be met in more New Zealand classrooms.

#### Decreasing the number of achievement objectives in the curriculum statements

This option offers possibilities for reducing the complexity and increasing the clarity of the curriculum statements and addresses workload concerns. A significant number of the achievement objectives may need to be rewritten, as they do not always represent progression of concepts, processes and functions.

The outcomes could be targeted to the different learning needs of students at different levels.

- The first two levels could reflect only the outcomes critical for foundation learning.
- Level three and four outcomes could reflect those outcomes that are critical for the embedding foundation learning into a wide variety of contexts that are relevant to the learner and essential for future learning.
- From level five onward outcomes could reflect what is critical for future learning, whether this is life long learning or learning for qualifications.

Other options for reducing the number of achievement objectives include:

- reviewing whether each of strands of the essential learning areas need to operate at each level;
- reviewing whether other mandatory requirements in the curriculum statements, such as the number of technological areas can be removed.

#### Development of a core content

Within this option, the curriculum statements remain much as they are, but a required content core is identified that must be taught during certain periods of schooling. This would reduce the number of achievement objectives and help teachers to establish teaching priorities.

#### a. Mandating only the English and Mathematics curriculum statements in years 1 and 2<sup>54</sup>

This could be seen as being consistent with the literacy and numeracy strategy and reflects the focus of the NAGs on literacy and numeracy. However, literacy and numeracy skills can be developed through a variety of learning experiences, not just in English and Mathematics. Analysis of Level 1 achievement objectives across the essential learning areas shows they are heavily focused on students developing language skills within the context of the learning area. Another approach might be to ensure that the outcomes of the first two levels are critical for foundation learning.

#### b. Reducing the regulations in years 9 and 10

Most of the sector feedback on the 'crowded' curriculum has come from secondary schools, who find that implementing the Health and Physical Education, Technology and the Arts curriculum statements is causing significant timetabling difficulties. There is also evidence that some secondary schools are not implementing these curricula because of timetabling and workload problems and because of the desire of some subject teachers to maintain their subjects, eg, Home Economics.. De-regulating some of the essential learning areas would give secondary schools more flexibility to meet the needs of their students.

However, it can be argued that junior secondary students are the group that has the highest needs for a balanced and broad curriculum, as students are making decisions about senior subjects which in turn affect their career choices. Much of the knowledge and skills required for participation in a knowledge society is reflected more strongly in the Social Studies, Health and Physical Education, Technology and the Arts curricula than in English, Mathematics and Science. While some may dispute that these essential learning areas do not meet the needs of individual students, they are essential for meeting the needs of society. Deregulating these curricula in years 9 and 10 may, therefore, create a knowledge-gap in the New Zealand population.

#### c. Minimal Core

English, Maths and Science, or literacy and numeracy, could be mandated for all year levels, so that schools/kura focus on doing these things well. Adopting a minimal core, however, is teacher rather than student focused.

*In some countries, the development of 'teacher proof' schemes, intended to improve basic skills has had a positive result, but these may encourage the pursuit of short-term outcomes rather than long-term learning ... a high degree of documentary prescription demotivates and deprofessionalises teachers and prevents the organic development of the curriculum in response to changes (Le Métais, 2002).*

#### d. Redefined core built around 'new literacies', such as innovation, creativity, problem solving, ICT and teamwork

Queensland's New Basics project<sup>55</sup> is an example of a redefined core. Reasons for adopting an approach similar to New Basics include the movement from the industrial age to the knowledge age, where the old order is no longer regarded as sufficient or appropriate. Reasons against adopting an approach similar to New Basics include that the approach may be too far out of step, or ahead of, schools, parents/whānau and society. Adopting an approach similar to New Basics would represent a radical departure from New Zealand's current curriculum, and as the New Basics programme has not yet been evaluated, it poses considerable risks.

<sup>46</sup> 'Individualisation, globalisation and the development of sub-cultures mean that current morality has become fragmented. The acceptance of a common set of values, to underpin the laws and way of life in any given country, can therefore no longer be assumed, and it is increasingly necessary to negotiate values, and to develop active tolerance for, and manage the potential conflict arising from, diversity (National Foundation for Educational Research , 2002)'

Note: In comparison with many other countries, the relationship between the New Zealand Government's social and economic goals and the curriculum is not clear (Education Review Office, 2001)

47 Each school charter is deemed to contain the aim of achieving, meeting, and following (as the case may be) the national education guidelines

48 NB: to date, no foundation policy statement has been gazetted. The status of the NZ Curriculum Framework is that of a statement of policy direction only

49 The National Education Guidelines were first published in 1990, significantly revised in 1993, and amended in 1996 and 1999 and are under consideration again as a consequence of changes contained in the Education Standards Bill.

50 For example, there is a perceived subject hierarchy, with English, Maths and Science at the top, followed by Physical Education and Social Studies.

Note: Specific reference to curriculum requirements is contained in National Administration Guidelines 1 and 2 and NCEA Level 1 (year 11) contains literacy and numeracy requirements.

51 Data from the National School Sampling Study suggest that although the framework is not been gazetted, the majority of schools use it.

52 The nature of essential skills and possible alternatives are discussed in paragraphs xxx of this report.

53 Indicated by the National School Sampling Study.

54 This is supported by Education Review Office (2001), which suggests that 'not all seven essential learning areas necessarily need to start at Level 1. Primary school programmes should certainly include aspects of Science, social studies and technology, not only because these subjects are important in their own right but also because they can assist with literacy learning through enabling students to use language in a wider variety of contexts. However, the curriculum statements do not need to be mandatory at all levels to achieve this purpose'.

55 The State of Queensland Department of Education (2001) New Basics Project. Information available on-line at <http://education.qld.gov.au/corporate/newbasics/#>

## SECTION FOUR: RECOMMENDATIONS

### **Recommendation 1: That The New Zealand Curriculum Framework and Te Anga Marautanga o Aotearoa are Redeveloped and gazetted as foundation policy statements**

*The New Zealand Curriculum Framework and Te Anga Marautanga o Aotearoa* should be modified, and mandated as overarching foundation policies, as provided for by the Education Act. Kura Māori and schools should be authorised to use either policy or a combination of both. A process of consultation and trialing should be undertaken.

As most Māori students are in schools that use *The New Zealand Curriculum Framework* and curriculum statements (in English), the underlying philosophy of both frameworks should reflect their status as tangata whenua and expectations of 'best outcomes' for all students. The frameworks should be similar in structure and coherent with each other, but not necessarily translations. Considerations should be given to whether a bilingual version of *Te Anga Marautanga o Aotearoa* should be developed for kura Māori.

The modified versions of the frameworks should be similar in structure to the existing frameworks. They should include sections on the principles/ngā mātāpono, essential skills/ngā tino pūkenga, attitudes and values/ngā waiaro me ngā uara, essential learning areas/ngā tino wāhanga ako, assessment/te aro matawai and context/te horopaki.

In addition, there should be a clear statement of the purposes of the New Zealand curriculum and ngā marautanga o Aotearoa. These purposes are to clarify expectations for all New Zealand students and to develop the human capability necessary for a prosperous and inclusive New Zealand society.

A section on effective pedagogy should also be included. This section should explain the nature of the pedagogies that have been linked by research to increased achievement and social outcomes and to reduction in disparities.

Furthermore, there should be a section on the relationship between the New Zealand curriculum/ngā marautanga o Aotearoa and *Te Whāriki*.

There should be subsequent policy work to develop a section on the relationship between the New Zealand curriculum and ngā marautanga o Aotearoa and qualifications and work should be developed for inclusion in subsequent revisions of the frameworks after the full implementation of NCEA.

Cross-disciplinary teams should be involved in the revision of *The New Zealand Curriculum Framework* and *Te Anga Marautanga o Aotearoa*. These teams should include those with expertise in the essential learning areas, essential skills, attitudes and values and assessment, as well as those with expertise in ngā wāhanga ako, ngā tino pūkenga, ngā waiaro me ngā uara and te aro matawai. Consultation with representative groups from different sectors of New Zealand society, including parents/whānau, members of Māori and Pasifika communities and business should occur.

**Recommendation 2: That a section on the purposes of the New Zealand curriculum and te marautanga o Aotearoa is Developed**

*The New Zealand Curriculum Framework* and *Te Anga Marautanga o Aotearoa* should include clear statements about the purposes of the New Zealand curriculum and ngā marautanga o Aotearoa. These purposes are to clarify expectations for all New Zealand students and contribute to developing the human capability necessary for a prosperous and inclusive New Zealand society.

Rationale
Curricula help schools/kura to address issues of cultural relevance, indigeneity and to address disparity, such as that due to social class.
Curricula help develop a creative and innovative citizenry, developing life-long learners and safeguarding and promoting social cohesion.
Curricula that reflect current learning theory are flexible, inclusive and recognise that student learning progresses in the socio-ecological context of the classroom environment.
The outcomes of the curriculum can be expressed as both aspirations that reflect higher level thinking, and expectations of what students should learn at different levels.

**Recommendation 3: That the principles/ngā mātāpono in the New Zealand Curriculum Framework and Te Anga marautanga o Aotearoa are Revised**

The principles and ngā mātāpono should be modified, so that both focus on student outcomes and relate to the purposes of the national curricula defined in the stocktake.

Suggested changes to principles/ngā mātāpono of the national curricula so that they relate to the purposes are listed in the table below.

Revised Purpose	Revised principles	Related principles from meetings and submissions:
1. The New Zealand	1. Schools and kura Māori should use the national curricula to	Durie (2001) - Focus on best outcomes for all students.

<p>curriculum and ngā marautanga o Aotearoa are to clarify expectations for all New Zealand students.</p>	<p>establish coherent directions for learning and assessment as students progress through their schooling and provide a basis for further learning.</p>	<p>Te Whāriki - Empower the child to learn and grow.</p>
	<p>2. Schools and kura Māori should have high expectations of all learners and use the national curricula to develop programmes that foster higher level thinking.</p>	<p>Te Aho Matua - Children who graduate from [schooling] should be fully functioning people whose personal attributes are recognised, nurtured and brought to fruition.</p>
		<p>Chamberlain (p.20, 2000) - There is consistent evidence that clear expectations that focus on educationally significant learning and high but attainable standards raise achievement. Clear expectations that discourage deficit explanations of student performance based on cultural and social class stereotypes support teachers in focusing on the next learning steps for each pupil regardless of their background, and lead to more equitable learning outcomes for students.</p>
<p>2. The New Zealand curriculum and ngā marautanga o Aotearoa, are to develop the human capability necessary for a prosperous and inclusive New Zealand society</p>	<p>3. Schools and kura Māori should use the national curricula and school/home/community/business partnerships to help students to become active and innovative participants of the world and their local community, and life long learners with positive attitudes towards diversity.</p>	<p>Le Métails (2002) - Protect and transmit culture, so that learners can develop a sense of self from learning about shared history and values.</p>
		<p>Te Whāriki- The languages and symbols of their own and other cultures are promoted and protected.</p>
		<p>Te Aho Matua - Develop bilingual competence</p>
	<p>4. Schools and kura Māori also should use the national curricula to develop school programmes that honour the Treaty of Waitangi and recognise and value the unique position of Māori in New Zealand society.</p>	<p>Durie (2001) - To actively participate as citizens of the world; establish good relationships between home and school; recognise all participants in education and the importance of home/community/school partnerships as vital for increasing achievement and reducing disparity.</p>
		<p>Te Aho Matua - Nurture physical and spiritual endowment of learners.</p>
	<p>5. Schools and kura Māori should use the national curricula to develop inclusive, supportive learning environments and inclusive, differentiated programmes that recognise and cater for diversity, special education needs, giftedness and talent.</p>	<p>Other submissions - Equip learners for the rigours and complexities of an uncertain world; develop a sense of belonging to Aotearoa / New Zealand; develop understanding of the role of the business and enterprise in the economy.</p>
		<p>Te Whāriki - Opportunities for learning are equitable, and each child's contribution is valued.</p>

Review groups should use the principles/ngā mātāpono suggested in meetings and submissions to develop rationale and guidance statements to support the suggested principles.

**Recommendation 4: Revision of the essential skills/ngā tino pūkenga and attitudes and values/ngā waiaro me ngā uara in the New Zealand Curriculum Framework and Te Anga marautanga o Aotearoa**

The essential skills/ngā tino pūkenga should be modified from the current organisation of fifty-seven essential skills/ngā tino pūkenga in eight groupings to five groups of essential skills and attitudes to be consistent with *Te Whāriki*.

Incorporation of values should be more explicit in the frameworks and support materials, but values should not be presented as an exclusive list.

It should be obligatory that the essential skills, attitudes and values of *The New Zealand Curriculum Framework* and *Te Anga Marautanga o Aotearoa* are reflected in programmes of learning in all New Zealand schools.

Teams of cross-disciplinary specialists and different members of the community should determine the nature of the values in the revised frameworks. The revised values should link to the purposes, essential skills and attitudes and higher order thinking in the essential learning areas of the New Zealand curriculum and ngā marautanga o Aotearoa.

There needs to be further consultation within the Ministry on the titles of five groupings of skills, but:

- the essential skills/ngā tino pūkenga need to include attitudes;
- there should be three dimensions of these skills and attitudes - the capability to use skills, discernment in use, and willingness to use skills; and
- the groups should relate to creative and innovative thinking, participation and contribution in communities, relating to others, reflecting on learning, and developing self-knowledge, and making meaning from information.

Rationale

Reducing of the number of essential skills/ngā tino pūkenga ako may give a clearer sense of priorities.

The skills stated as needed for participation in a knowledge society, life long learning and by employers fall into the following categories: critical thinking<sup>56</sup> and creative thinking skills<sup>57</sup> ;

local and global citizenship skills; interpersonal skills and intrapersonal skills; and

literacy.

A common argument in current literature is that skills should be embedded in domain specific knowledge and not taught in isolation.

Literature also suggests that skills require: students to use a skill; be discerning about how and when to use a skill; and willing to use the skill and apply a skill in a variety of contexts.

Many of the existing essential skills/ngā tino pūkenga ako could be incorporated within these groupings. While other skills can be incorporated into school curricula, these skills and attitudes could be the priorities for all New Zealand students.

There are similarities between these skills and the strands of *Te Whāriki* -mana atua/wellbeing, mana whenua/belonging, mana tangata/contribution, mana reo/communication and mana aotūroa/exploration.

Attitudes and values/ngā waiaro me ngā uara have the potential to aid the effectiveness of the curriculum by strengthening social cohesion, developing a stronger sense of civics, citizenship and more enterprising attitudes, and fostering a culture of innovation, respect for others and critical thinking.

Sector feedback has criticised the curriculum statements (except for Health and Physical Education) for giving insufficient attention to values and not providing clear expectations of what schools should do to promote and support community values.

PISA (2000) data indicates that changes to the psychosocial environment of classrooms are likely to affect student achievement in New Zealand.

Literature on the education of gifted and talented students highlights the importance of values and affective components in differentiated curricula for these students.

Current international thinking favours an eclectic approach to values education.

Webster (2001) found differences in the values between different ethnic groups in New Zealand.

### **Recommendation 5: That the essential learning areas/ngā wāhanga ako in the New Zealand Curriculum Framework and Te Anga Marautanga o Aotearoa are Revised**

This recommendation aims to address some of the concerns about the curriculum/marautanga manageability, crowdedness, and a need to prioritise learning in the national curricula.

The essential learning areas/ngā wāhanga ako of the frameworks should include the outcomes (aims and achievement objectives) from the curriculum statements/ngā tauākī marautanga. Specialist cross-disciplinary teams should audit the outcomes against the purposes of the curricula and against the future-focused curriculum themes of:

- social cohesion (including developing resilience and a sense of social connectedness);
- citizenship (local, national, and global);
- education for a sustainable future (including sustainable development and environmental sustainability);
- bicultural and multicultural awareness;
- enterprise and innovation; and
- critical literacy (including digital literacy).

The outcomes of the revised frameworks should contain the knowledge and skills that are critical for all students in New Zealand. The broad and flexible nature of the achievement objectives should be maintained.

Level one and two outcomes should emphasise foundation learning for each of the learning areas, particularly the development of literacy and numeracy skills. To ensure a focus on foundation learning and indicate priorities, there should be fewer strands and achievement objectives at levels one and two.

In the sections of the Frameworks on the essential learning areas and ngā tino wāhanga ako there should be guidance statements that explain that the essential learning areas do not have to be taught as distinct subjects. This section should make explicit:

- that the outcomes of each essential learning areas inter-relate;
- that learning should be holistic; and
- the value of developing connections between the outcomes within and across essential learning areas/ngā tino wāhanga ako.

The eight level and strand structures are useful for organising and clarifying expectations of learning. They are not intended to specify a one-size fits all learning progression. Although the rationale for and the number of levels has been questioned there are significant risks associated with changing the number of levels. This structure should be maintained, but the number of strands and objectives specified at each level should be reviewed.

New outcomes should only be developed where it is deemed necessary to make the curricula more efficient at fulfilling their purposes and to strengthen the emphasis on the future-focused curriculum themes. Overlap between the essential learning areas/ngā wāhanga ako should be identified to avoid unnecessary duplication. Where overlap is necessary for transfer of knowledge, the links should be made explicit.

#### Rationale

The essential learning areas/ngā tino wāhanga ako of the frameworks and their transformation into curriculum statements/ngā tauākī marautanga mō te motu fosters a 'subject silo' approach which artificially compartmentalises and limits transference of knowledge.

The large number of achievement objectives has increased teacher workload and reduced opportunities for creativity.

The broad and flexible nature of the achievement objectives do not currently help teachers to set priorities or determine the key messages of the statements.

The outcomes of national curriculum need to recognise that students develop at different rates and that student's learning may be asynchronous.

A significant number of the achievement objectives need to be rewritten, as they do not always represent progression of concepts, processes and functions.

The outcomes of national curricula need to recognise the diverse nature of New Zealand students.

The outcomes need to be flexible enough so that schools can use them to develop their own curricula.

A focus on critical foundation learning at earlier levels is helpful for students with special education needs. Students for whom English is a Second Language also need a sound base of literacy on which to apply their prior knowledge in their first language.

The essential learning area Language and Languages/Te Kōrero me ngā Reo should be two separate learning areas - English/Te Reo Māori and Languages. Additional Languages include foreign, community and heritage languages and second language learning in English and in te reo Māori.

Schools should be required to provide instruction in another language for students in years 7 to 10 (except for Māori immersion settings), but it should not be mandatory for all year 7-10 students to learn another language.

Generic outcomes for Languages should be developed and included in the revised New Zealand Curriculum Framework and Te Anga Marautanga o Aotearoa.

#### Rationale

Learning languages is key to students developing greater understanding of the cultures of others.

Relative to other countries, New Zealand has very low levels of language learning.

Language education helps to foster bicultural and multicultural awareness.

The teaching of languages supports literacy in English and forms part of a broad general education for all students.

There is general agreement amongst the New Zealand languages community that years 7-10 are the most appropriate years for any significant investment in languages teaching.

The section on *ngā tino wāhanga ako* should ensure that language and layout is consistent between statements.

#### Rationale

While the concept of *ngā marautanga o Aotearoa* is philosophically sound, teachers find *ngā tauākī marautanga o Aotearoa* difficult to use.

The objectives are too broad to be easily understood, they use difficult and inconsistent vocabulary, and there are inconsistencies between the layout and terminology of the statements.

#### **Recommendation 6: That the section on assessment in New Zealand Curriculum Framework and Te Anga Marautanga o Aotearoa is Revised**

The New Zealand curriculum and *ngā marautanga o Aotearoa* do not provide enough guidance on assessment. The commencement of the National Assessment Strategy since the publication of *The New Zealand Curriculum Framework* and *Te Anga Marautanga o Aotearoa* is addressing the lack of material about effective assessment practice. Information about 'good practice' from this strategy will need to be incorporated into the reviewed frameworks.

#### Rationale

Effective teaching practice is complex and involves dynamic relationships between curriculum, pedagogy and assessment. All of these components are integrated as teachers respond to the individual learning needs of students.

Teachers reported the following as strengths: curriculum policy is linked to assessment policy; assessment focuses on learning goals; and the curriculum emphasises the needs of learners who are having difficulty.

There is concern that about the clarity of assessment information provided by the curriculum and *ngā tauākī marautanga mö te motu*. The international commentaries state that the achievement objectives are not expressed in terms of measurable outcomes.

#### **Recommendation 7: That a section on the relationship Between the New Zealand curriculum/te marautanga o Aotearoa and Te Whāriki is Developed**

*The New Zealand Curriculum Framework* and *Te Anga Marautanga o Aotearoa* should include a section for primary schools on how to ensure a smooth transition between early childhood education for new entrants. This section should:

- outline the similarities and differences between the school curriculum frameworks and the early childhood curriculum;
- explain features of effective early childhood learning environments and ways that reception classroom learning environments can also reflect these features; and
- explain how schools and kura Māori can develop closer relationships with parents/whānau, whānau and the community in the first two years of students' education.

#### Rationale

Smooth transitions between early childhood and school minimise the barriers to learning faced by young children.

Disjunction in approaches to teaching and learning hinder a child's ongoing development and reduce gains made in early childhood education.

If children's early primary school experiences interface appropriately with their early childhood experiences, they are likely to be confident that can participate fully and successfully in all learning opportunities.

#### **Recommendation 8: That further policy on the senior secondary school curriculum is Undertaken**

Further work on the issues that the curriculum poses for secondary schools needs to be undertaken.

The present curriculum frameworks do not provide sufficient guidance on how the curriculum relates to post secondary pathways, and these need to be investigated.

Further work on the links between the senior secondary school and work and tertiary study need to be undertaken once the NCEA has been fully implemented.

A section on the transition to the senior school, qualifications and work should be included in subsequent revisions of *The New Zealand Curriculum Framework* and *Te Anga Marautanga o Aotearoa* after the full implementation of NCEA.

#### **Recommendation 9: That Curriculum guidance materials for parents/whānau and members of the community and business are Developed**

Publications explaining *The New Zealand Curriculum Framework* and *Te Anga Marautanga o Aotearoa* should be developed for parents/whānau, community organisations and business.

The parent publications should explain:

- the reasons for, and purposes of, national curricula;
- the obligations of schools in regard to curricula;
- the different elements of learning expressed in the curriculum - essential skills/ngā tino pūkenga, attitudes and values/ngā waiaro me ngā uara, essential learning areas/ngā tino wāhanga ako;
- the continuum of learning from years 1 to 10 through illustrations of student work exemplifying what they can expect their children to achieve at different levels of the curriculum;

- how parents/whānau can effectively participate in their child's learning;
- how parents/whānau can assist their children to transfer their knowledge from school to the world outside of the classroom; and
- what is currently known about learning, for example, the importance of literacy, numeracy and early childhood oral language development.

The content of the community and business publications should resemble the parent publications, in that they also explain:

- the reasons for, and purposes of national curricula;
- the different elements of learning expressed in the curriculum - essential skills/ngā tino pūkenga, attitudes and values/ngā waiaro me ngā uara, essential learning areas/ngā tino wāhanga ako;
- reasonable expectations of what students should know and be able to do towards the end of schooling;
- information on the National Certificate of Educational Achievement; and
- information on how school-business partnerships can be developed through mentoring, field trips and guest speakers.

#### Rationale

Parents/whānau, members of the community and business are all key stakeholders of the education system.

Parent involvement is linked to improved student outcomes.

There is a lack of knowledge in the general community of the scope and expectations of the New Zealand curriculum and ngā marautanga o Aotearoa. Providing better access of knowledge about the curriculum for key stakeholders could develop this sense of connectedness.

Providing better access to curriculum knowledge for members of the community and business may improve the effectiveness of schooling through active citizen participation and a more connected community.

Providing better access to curriculum knowledge for parents/whānau has the potential to increase the expectations parents/whānau have for their children and to focus these expectations on educationally significant learning.

If students are to transfer their learning to the real world, parents/whānau and members of the community have a fundamental role in assisting this transfer.

#### **Recommendation 10: That the curriculum statements and ngā tauākī marautanga mö te mötu are Revised**

If *The New Zealand Curriculum Framework* and *Te Anga Marautanga O Aotearoa* are gazetted, the legal status of the current curriculum statements and ngā tauākī marautanga mö te mötu should change to that of support materials.

Once modification of *The New Zealand Curriculum Framework* and *Te Anga Marautanga O Aotearoa* has been completed, the curriculum statements and ngā tauākī marautanga mö te mötu should be modified to include the new outcomes.

Each modified statements should include more specific information on effective pedagogy and assessment strategies for increasing achievement and social outcomes, and reducing disparity.

### Rationale

The essential learning areas/ngā tino wāhanga ako of the frameworks and their transformation into curriculum statements/ngā tauākī marautanga mö te motu fosters a 'subject silo' approach which artificially compartmentalises and limits transference of knowledge.

Replacing the curriculum statements and ngā tauākī marautanga mö te motu with foundation policies could increase the emphasis of the curriculum on the connectedness of learning, and encourage schools to develop as holistic, connected learning communities.

The large number of achievement objectives increase teacher workload and reduce opportunities for creativity.

The broad and flexible nature of the achievement objectives do not currently help teachers to set priorities or determine the key messages of the statements.

A significant number of the achievement objectives do not represent progression of concepts, processes and functions.

### **Recommendation 11: That further guidance materials and professional development for teachers is provided**

Support materials and professional development that develops teachers' understanding of the content knowledge underpinning each of the curriculum statements and ngā tauākī marautanga mö te motu should be provided.

In addition, high quality professional development and materials should be developed for teachers which:

- updates teachers' knowledge of content in all of the essential learning areas and ngā tino wāhanga ako; and
- provides information on effective pedagogies, such as the most effective strategies for integrating curricula, and how teachers can better recognise and cater for diversity in all of the essential learning areas and ngā tino wāhanga ako.

There is a case for having bilingual versions of ngā tauākī marautanga mö te motu for schools who do not have the benefit of a staff member fluent in the specialised language of all of ngā tauākī marautanga mö te motu.

Professional development and materials for kura Māori should reflect Māori aspirations for education and be cognisant of the difficulties of working in Māori medium education. More resources for children and teachers should continue to be developed. Consideration should be given to whether bilingual versions of guidance materials should be developed for kura Māori and Māori immersion teachers.

### Rationale

A significant number of teachers believe that they need more content knowledge to teach from the curriculum statements and ngā tauākī marautanga mö te motu.

Most teachers still feel that they need more professional development about all of the curriculum statements and ngā tauākī marautanga mö te motu.

There are significant problems with materials and professional development to support the

implementation of ngā tauākī marautanga mö te motu.

There are too many small, unlinked initiatives, and professional development and resource development initiatives in kura Māori need to be aligned.

A lack of resources for ngā tauākī marautanga mö te motu has placed pressure on experienced and fluent teachers of te reo, as well as new teachers with limited language capability.

Available Māori medium resources are also not effectively utilised. There are also particular curriculum issues for bilingual units and for students shifting between Māori medium and English medium instruction.

56 Critical thinking is 'skilful and responsible thinking in which you study the problem from all angles, and then exercise your best judgement to draw conclusions' (Sies, 1999).

57 Creative thinking is 'a new way of looking at something, a transformation, a relationship that was not there before, where one perceives new idea combinations, new meanings or new applications' (Davis, 1983).

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