

*Policy Directions for*

# School Qualifications

A Report on the  
National Certificate of Educational Achievement

EDUCATION FORUM  
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Professor Alan Smithers BSc, MSc, MEd, PhD (Plant Physiology), PhD (Education), CPsychol FSRHE, is the Sydney Jones Professor of Education and Director of the Centre for Education and Employment Research (CEER) at the University of Liverpool, United Kingdom. He has previously been Professor of Education at the University of Manchester (1977–96) and Professor of Policy Research at Brunel University, London (1996–98).

The Centre for Educational and Employment Research undertakes research for industry, government departments and other bodies, and receives grants from research councils and charitable organisations. It specialises in providing accessible numerical accounts of education, particularly in relation to employment. Recent projects have included national assessment policies, qualifications structures, teacher supply, education for 16- to 19-year-olds, vocational education, graduate employment, flows into science and engineering, technology in schools, single-sex education, further education, trends in higher education, and industry and education links.

In 1986 Professor Smithers was elected as one of the first three Fellows of the Society for Research into Higher Education. He has been a member of the National Curriculum Council and the Beaumont Committee on Vocational Qualifications. He has served on committees of The Royal Society, the Engineering Council and the Business and Technology Education Council. He is a Special Adviser to the House of Commons Education and Employment Committee.

Professor Smithers has published a number of influential books and reports, and over a hundred papers in biology, psychology and education. His research often leads him to be asked to comment on the educational issues of the day.

Chapter 3 on the international perspective draws extensively from a separate report, also published by the Education Forum, by Dr Kevin Donnelly of Education Strategies, a Melbourne-based consultancy group. The report is listed in the References.

This report has benefited from comments on the National Certificate of Educational Achievement provided by Professor Sam Ball. Professor Ball is a Professorial Fellow in the Department of Mathematics and Statistics at the University of Melbourne. He was formerly Chief Executive Officer of the Victorian Board of Studies (1993–1999) in charge of curriculum and assessment in primary and secondary education in Victoria.

From 1978 to 1993 he was Professor of Education and Head of the Department of Educational Psychology and Measurement at the University of Sydney where he was also appointed Chair of the Academic Board (1987–1990) and Pro Vice-Chancellor (1990–1993). From 1968–1978 Professor Ball was Senior Research Psychologist at the Educational Testing Service in Princeton, New Jersey and Adjunct Professor of Psychology and Education at Columbia University.

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## EXECUTIVE SUMMARY

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- The Achievement 2001 initiative, announced in late 1998, proposed a four-level National Certificate of Educational Achievement (NCEA) (one level at each of Years 11, 12 and 13 plus a scholarship level) as the main school qualification. Assessment would be against new graded Achievement Standards – between five and eight for each conventional school subject. Credits towards the NCEA from Achievement Standards would result from a mix of internal and external assessment. School Certificate and Bursary would remain as the externally assessed examination components at Years 11 and 13, but marks would not be scaled. The Sixth Form Certificate and the Higher School Certificate were to be abolished. Some Unit Standards would also generate credits towards the NCEA. The new system was to provide a clear assessment of students' achievement across a whole range of subjects and skills and dispense with the 'confusing' dual system of assessment for Unit Standards and exams.
- The NCEA as developed is more of a rerun of Unit Standards. The Achievement Standards, into which subjects would be broken up, are to be assessed separately either internally *or* externally with neither cross-moderation nor aggregation. Percentiles may be reported for externally assessed Achievement Standards. Thus there will be no overall, rounded assessment of students' performances in each subject. School Certificate and Bursary are not to be retained in any recognisable form. The scholarship level is now uncertain. NCEA transcripts will be highly detailed. (Chapter 1)
- A quantitative analysis shows:
  - nearly all Year 11 students take some School Certificate subjects, with 10 subjects accounting for nearly 90 percent of entries;
  - some four-fifths of students stay to Year 12;
  - about half of all students stay to Year 13;
  - education in the final three years is predominantly subject-based with most students taking maths, English and science; and
  - Unit Standards make only a small contribution to school education relative to learning through subjects. (Chapter 2)
- A review of the NCEA from an international perspective indicates that countries performing well in international surveys tend to adopt very different approaches. They usually have well-defined curricular pathways based on syllabuses rather than the 'cafeteria' approach of Achievement and Unit Standards. They tend to

use externally set and marked examinations rather than internal assessment. Where assessment set directly against standards is used it is restricted to the compulsory years. A qualification with several characteristics similar to those of the NCEA, the Victorian Certificate of Education, met with considerable difficulties and required extensive changes. (Chapter 3)

- The NCEA reflects the ideological thinking of the National Qualifications Framework and the new curriculum framework in that it seeks a tidy solution and a common currency to specify what students 'should know and be able to do' – called variously 'elements', 'standards' and 'outcomes'. The NCEA is not a qualification so much as a framework into which the qualifications – mainly Achievement Standards – are to fit. The main problems are:
  - a similar structure is to be used for all senior school learning irrespective of the nature of what is to be learnt;
  - there are often considerable difficulties in specifying the 'standards' to be attained and the differences in the grades sufficiently precisely to allow consistent assessment;
  - subjects are to be broken up into mini-subjects which are not always coherent components. Their content will often have to be inferred from a few exemplars;
  - without cross-moderation and overall subject scores, the assessment of the individual Achievement Standards will be unreliable;
  - there will be information overload but without the overall subject scores that many users of qualifications seek. The Achievement Standards lump too many different performance levels into one of three grades (credit, merit, excellence) with the inevitability of egregious errors at the margins between grades;
  - the limited number of grades and the probable loss of Level 4 (scholarship) will result in failure to differentiate between really high achievers;
  - there will be undesirable pedagogical consequences and loss of subject integrity with teaching and learning geared to individual Achievement Standards and exemplars not whole subjects; and
  - there will be workload consequences of students working to individual Achievement Standards at different levels in the same class, the increase in internal assessment, moderation requirements and record keeping. (Chapter 4)

- The NCEA as presently designed is not the solution to problems with school qualifications. The government should go back to the drawing board, but if this not acceptable then it is recommended that it should:
  - recognise that the NCEA is an overarching framework and not a qualification;
  - not impose a common currency on qualifications within the NCEA framework;
  - concentrate on developing high quality qualifications allowing their own individual identities and purposes;
  - retain School Certificate and Bursary – they have recognised standing. They could be improved – for example the subject coverage for the School Certificate could be reduced to reflect the high proportion of students progressing to Year 12 and to lower the overall assessment burden;
  - introduce an examination at Year 12 (perhaps called the Advanced School Certificate) along Bursary lines;
  - redesign Achievement Standards to avoid the disastrous consequences of fragmenting subjects. Retain overall subject scores, with marks or a broader range of grades, and turn Achievement Standards into statements of content and level descriptors. Ensure external examination is used where possible and cross-moderate between internally and externally assessed components;
  - retain Unit Standards but some or most could be phased out if Achievement Standards are redesigned as recommended; and
  - give special attention to Year 12 as a major exit point for some students and as a 'half-way house' for those staying on for Year 13. A 'framework' approach to a Year 12 certificate could be particularly suitable. (Chapter 5)



# INTRODUCTION

### 1.1 The Achievement 2001 initiative

In May 1996, the then minister of education, Wyatt Creech, put on hold the implementation of the widely criticised National Qualifications Framework. A Green Paper, *A Future Qualifications Policy for New Zealand*, on which submissions were invited, was issued in June 1997. A revised structure for senior secondary school qualifications, labelled Achievement 2001, was then developed by the Ministry of Education and the New Zealand Qualifications Authority (NZQA) and announced in November 1998 (Ministry of Education, 1998b).

The key features of the new school qualifications system were:

- the National Certificate of Educational Achievement (NCEA) to become the main qualification in the senior secondary school;
- the NCEA to have four levels ranging from Level 1 for most Year 11 students to Level 3 for most Year 13 students, plus a Level 4 as 'scholarships' assessment for the highest achieving students;
- achievement at each level to be assessed by a mix of external and internal assessment;
- School Certificate and Bursary examinations to be retained, though marks would not be scaled,<sup>1</sup> earning recognition respectively at Levels 1 and 3 of the NCEA, but the Sixth Form Certificate and the Higher School Certificate to be abolished;
- new Achievement Standards will measure achievement in internal assessment for each curriculum subject, with achievement graded to recognise excellence;
- Unit Standards to remain for non-conventional subjects (for example, tourism, forestry, recreation), earning recognition at Levels 1, 2 or 3;
- schools to be able to offer courses that package any combination of Achievement Standards and Unit Standards;

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<sup>1</sup> Scaling is said to have been abolished for the School Certificate. However, it is understood that a similar distribution of marks is maintained from year to year by adjusting marking schedules after sampling student papers. This seems eminently sensible if inter-year comparisons of School Certificate results are to remain possible. Yet it is contrary to official announcements and public perceptions.

- a student's annual results to show credits gained from Achievement Standards and Unit Standards, grades for Achievement Standards, exam marks for external assessments and any other national certificates; and
- the new system to be phased in over three years, starting with Year 11 students in the year 2001.

It was further announced that the development of the NCEA was to be through a new Qualifications Development Group that would oversee the work of expert panels to determine the Achievement Standards and the proportions of internal and external assessment for each subject.

This approach was endorsed by the new government with the exception that in March 2000 a one-year delay was announced by the minister of education, Trevor Mallard, to allow more time for implementation.

## **1.2 The National Certificate of Educational Achievement that emerged**

At first sight, the proposals announced in 1998 look to be a reasonable compromise between the main purposes of qualifications for school leavers: recording achievement and differentiation. The NCEA appears to have been envisaged as an overarching framework embracing both established examinations and new Achievement Standards. As such, it seemed to hold the promise of settling "nearly twenty years unresolved debates about senior secondary qualifications in New Zealand" (Fancy, 2000).

However, in the implementation the "compromise"<sup>2</sup> has emerged more as a rerun of the National Qualifications Framework, with consequences for the organisation of subjects, the nature of assessment and the reporting of results that were not apparent in the initial announcement.

### **1.2.1 The organisation of subjects**

The main impact of the development work for the NCEA has been on the organisation of subjects. According to the drafts currently out for consultation and available at the time of writing, subjects are no longer to be considered as a whole but as a collection of sub-subjects called Achievement Standards. Thus English is no longer to be simply 'English', but, at Level 1, "produce creative writing", "produce formal writing", "read

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<sup>2</sup> A report to the minister of education dated 17 July, 2000 signed by the chief executives of the Ministry of Education and the NZQA refers to the NCEA as "a compromise" between qualifications based solely on external assessment and qualifications based solely on internal assessment. The chief executive of the ministry has advised that "the development of the NCEA was driven by a political desire to find a quality middle ground ... " (Fancy, 2000). It is not clear how the ministry and the NZQA can claim that the NCEA is a compromise *and* that it follows 'best practice'.

and understand written texts", "understand oral or visual texts", "read and understand unfamiliar texts", "give a talk in a formal situation", "produce a media or dramatic presentation" and "process and present information for research purposes".

Mathematics is no longer to be just 'mathematics', but to consist of eight Achievement Standards at Level 1, eight at Level 2, six at Level 3 Calculus and seven at Level 3 Statistics. Geography is no longer to be just 'geography', but "making connections; place, processes and perspectives", "applying geographic skills and methodology", "contemporary issues" and "global studies". These Achievement Standards make some reference to the components of the National Curriculum for Year 11, but are not always coterminous with them.

Each of the Achievement Standards is to be separately assessed and will carry a credit value (usually three or four but ranging from two upwards). Since the aim is to accumulate enough credits, in fact 80, to be awarded the NCEA at the appropriate level, this will in theory be possible by taking and passing Achievement Standards derived from a mosaic of subject fragments.

### ***1.2.2 The nature of assessment***

The dissolution of subjects, which are the main ways of making sense of the world (Smithers, 1997, p 39), is underlined by the proposed methods of assessment. Although at the launch of the NCEA it was claimed that there would be a mix of internal and external assessment, in fact, each Achievement Standard will be assessed *either* internally *or* externally, usually by one activity. Where there are examinations it is envisaged that, at Levels 1 and 2, the papers would consist of individual questions, or sets of questions, to assess performance in relation to individual Achievement Standards (McMahon, 2000). The School Certificate and Bursary examinations are not to be retained.

Thus, far from there being a rounded assessment of a student's performance in a subject, each of the new bits will be exclusively assessed in one way or the other. There will be no simple aggregate mark per subject, nor any moderation from one form of assessment to the other.

### ***1.2.3 Reporting of results***

The epistemological reordering will be carried further in the reporting of results. This will be by Achievement Standard. For each Achievement Standard it is intended to present the NCEA credit carried, whether the assessment is internal or external, the grade obtained in terms of credit, merit or excellence, and the marks or percentile rankings for external assessment. Thus a student's performance in Level 1 English, where eight Achievement Standards are proposed, will be conveyed as 44 items of

information (eight standards, eight levels, eight numbers of credits awarded, eight internal/ external assessments, eight grades, and four marks or percentile rankings).<sup>3</sup>

It is considered that this highly detailed record of learning "will provide much better information to help guide students into the best learning pathways" (Fancy, 2000). It is also believed that it is in line with what employers and parents want (McMahon, 2000).

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<sup>3</sup> The original announcement said examination marks would be recorded. Later percentages and then percentiles were proposed. At the time of writing it was understood that the reporting of percentiles is being reconsidered and may not proceed.

## A QUANTITATIVE PICTURE

Any attempt at qualifications reform in the upper secondary school must be considered in relation to the numerical picture – how many young people are participating and what they are studying.

### 2.1 Participation rates

Since the raising of the school-leaving age to 16 in 1993, Form 6 has become a major exit point. Figure 2.1 shows that in 1997 nearly all of the Year 9 students had been retained to Year 11, 80 percent had been retained to Year 12, and 56 percent to Year 13 (Ministry of Education, 1998a).

**Figure 2.1: Participation in Upper Secondary Schooling (1997)**

### 2.2 Qualifications

#### 2.2.1 *School Certificate*

Nearly all the Year 11 pupils take some subjects in the School Certificate examinations, the traditional school-leaving qualification. In 1999, 44,718 (89.4 percent of the age group in Year 11) became candidates – sitting 204,570 papers between them (Ministry of Education, 2000a). Although the School Certificate was on offer in 32 subject areas, three subjects, English, maths and the sciences, contributed 55.3 percent of the entries. The top 10 subjects – the core three plus geography, design technology, art, economics, accounting, history and graphics – accounted for 87 percent.

#### 2.2.2 *University Bursary/Entrance Scholarship*

For the Bursary/Entrance Scholarship examinations 30 subjects were on offer in 1999 with the top 10 accounting for over three-quarters of the entries (75.6 percent). Those top 10 subjects included maths (now divided into two subjects), the three separate sciences, English (14,549), mathematics with statistics (11,969), mathematics with calculus (8,394), biology (8,201), geography (7,511), physics (6,281), chemistry (6,042), economics (5,476), history (5,195) and classical studies (4,749).

#### 2.2.3 *Sixth Form Certificate*

The Sixth Form Certificate has a bolt-on feel to it. Not only is it entirely internally set and marked (though the results are moderated by the previous year's School Certificate results), but there is a diverse array of courses. In 1999 the top 10 subjects

(interestingly, the same as for the Bursary/Scholarship, except for there being only one maths option, and with physical education, computer studies and accounting instead of history, classical studies and the other maths option) contributed only 66.3 percent of the entries. Locally developed subjects, the principal of which were religious studies, life skills, physical education/health/recreation and study skills, accounted for 16 percent. Only about three-quarters of the sixth form students (73.1 percent) entered for the Sixth Form Certificate.

### **2.3 Unit Standards**

Under the plans for the National Qualifications Framework introduced in 1991, a common currency, the Unit Standard, was to be adopted for both school studies and learning undertaken elsewhere, including the workplace. By May 1997, 9,161 Unit Standards had been recognised. Some school subjects had been reframed in these terms and Industry Training Organisations (ITOs) were reorganising occupational training on this basis (Smithers, 1997).

By May 1997, 164,796 people had been registered on the database established by the New Zealand Qualifications Authority. Of these, 29.4 percent were of school age and 26.2 percent were studying in schools, suggesting that they were mainly taking school subjects.

Of the over one million credits awarded by May 1997, 92.7 percent were at Levels 1 to 3, indicating that many people were working later in life toward awards that were deemed to be equivalent to those in the upper secondary school. Units were to be accumulated depending on the level towards a range of qualifications including a national certificate (units mainly at Levels 1–4), a national diploma (units mainly at Levels 5–7) and degrees (which were also to be recast as Unit Standards at Level 7). Although, in theory, units did not have to be completed within a set time, notionally one credit was taken to be the equivalent of 10 hours work. Large numbers had therefore to be accumulated for a student to obtain the awards. By May 1997, relatively few national certificates had been awarded and mostly in only a handful of areas, the top four being computing (1,230 awards), motor industry (1,134 awards), food handling (603 awards) and business administration (533 awards).

### **2.4 Flows through education and training**

The bringing together of these various statistics suggests that the backbone of the final year of compulsory schooling (Year 11) is English, maths and science broadened by choice concentrated mainly in just a few other subjects. Four-fifths of the students stay on to Year 12 and over half to Year 13. Their education is predominantly subject-based with, again, English, maths and science to the fore.

In Year 12 the Sixth Form Certificate has created the opportunity for a more applied form of education (currently called non-conventional subjects) and some of those young people not continuing at school beyond Year 11 will have engaged in occupational learning in the workplace. Both applied and occupational learning will have been more amenable to the introduction of Unit Standards but, as Austin (2000) notes, "they have not gained the universal approval of schools, employers or parents". Compared with learning through subjects, Unit Standards quantitatively have made a relatively small contribution to the education and training of 15- to 18-year-olds.



## **AN INTERNATIONAL PERSPECTIVE<sup>4</sup>**

### **3.1 Introduction**

The NCEA represents a dramatic change to the current post-compulsory qualifications system in New Zealand. The most obvious aspects of this change are the adoption of an 'outcomes' approach in the senior schools (hitherto only used in Unit Standards), increased internal assessment,<sup>5</sup> abolishing all statistical scaling and increasing the reliance on school-based moderation, blurring the distinction between academic and vocational studies, and the departure from the traditional role of end-of-school qualifications in seeking to provide clear, simple and differentiating information to the users of qualifications. However, the most significant, indeed revolutionary, aspect of the changes are the effects on subjects through the assessment and qualifications structures.

A question that arises is whether New Zealand is following well-established and successful overseas precedents in senior school certification or embarking, as in the case of the National Qualifications Framework and the New Zealand Curriculum Framework, on yet another system-wide experiment in the intimately related areas of curriculum, assessment and qualifications that is based on little research and is unguided by relevant overseas experience. It is, in fact, unclear from the reports to ministers what the NCEA owes to international empirical or theoretical research. Perhaps little regard was paid to such research because the designers of the new system consider the NCEA to be only an evolutionary step from current arrangements (Ministry of Education and NZQA, 2000; Fancy, 2000).

Yet the designers claim that "the NCEA combines the best assessment practices, here and overseas, of the last 20 years" (Ministry and NZQA 2000, p 7). It is not apparent how such a claim could be made in the absence of any documented identification of what comprises best practice and discussion about whether and how it might best be incorporated into the NCEA. The construction of any major new national system

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<sup>4</sup> This chapter draws extensively from a report by Kevin Donnelly being published separately by the Education Forum (Donnelly, 2000).

<sup>5</sup> Internal assessment is used in some School Certificate and Bursary subjects, and the Sixth Form Certificate is wholly internally assessed though 'moderated' against the previous year's School Certificate results. So the NCEA does not represent a shift from a wholly externally assessed system, and the net increase in internal assessment is as yet difficult to judge. However the Ministry has advised the minister of education in a report dated 17 February, 2000 that the NCEA will involve "The introduction of a significantly greater level of high-stakes internal assessment [which] has implications too, for the NZQA's moderation systems".

should be assisted by the best expertise available, both local and overseas, and the proposals developed on the basis of extensive peer review.

### 3.2 International interest in educational standards

However, the Ministry's concern to follow 'best practice' is to be applauded, although the lack of any documentation of its investigations and of any evidence of the contribution by internationally recognised experts is extremely worrying. Certainly much current interest among educational jurisdictions is based on the premises that education systems need to measure local initiatives against international 'best practice' and that the standards to be adopted need to reflect various levels of knowledge and skills comparable to what students in high-achieving countries, as identified in international surveys, are expected to master (American Federation of Teachers (AFT), 1993).

#### 3.2.1 *The Third International Mathematics and Science Study 1995 (TIMSS)*

The TIMSS tests involved testing mathematics and science education at the middle primary, lower secondary and the final year of secondary schooling. At the first two levels, students in Singapore, Korea, Japan, the Netherlands and the Czech Republic performed consistently at the top of the table. New Zealand students were in the middle range. Results for the last year of secondary school in science and mathematics literacy (which excluded Asian nations) placed New Zealand students specialising in maths third in a list of 14 countries, and for science literacy New Zealand students came fifth equal in a list of 21 countries.<sup>6</sup> In both tests, New Zealand satisfied both sample and participation rate requirements while several other countries did not. Thus for the final year of schooling, New Zealand students appear to have performed comparatively much better than for earlier years, though the absence of the Asian nations makes any judgment somewhat problematical.

#### 3.2.2 *The Asian Education Research Project*

The Asian Education Research Project (Donnelly, 1997) sought to identify the reasons why several Asian education systems rank consistently at the top of international tests such as TIMSS. The report highlighted:

- The competitive, examination-based nature of the assessment systems.  
  
The majority of the Asian nations surveyed have a strong regime of public examinations that combines both incentives for working hard and consequences for failure.
- The nature of classroom teaching and learning.

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<sup>6</sup> See <http://nces.ed.gov/timss/> for an outline of TIMSS.

Compared with teachers in schools in Australia, New Zealand, the United States and England, teachers in Asian countries generally rely more on examinations and tests, rote learning, and teacher-directed lessons.

Asian countries tend to have content-based curricula with set textbooks. As a result there is less need for teachers to develop their own curricula and they can focus more on improving the quality of teaching and learning in the classroom. Asian teachers, compared with Australian, have a higher expectation of what their students can achieve.

- The influence of the Confucian tradition, parents and the home background.

Asian parents tend to have a high respect for learning and a very strong commitment to their children's education as shown by the amount of time and money they give to their children's education and by their support for what happens in the classroom.

Other research (Reynolds, 1996; Stevenson and Stigler, 1992; Stigler, 1999) confirms Asian education systems have a strong syllabus-approach to curriculum development involving regular 'high-risk' testing. Classroom pedagogy, in comparison with classrooms in America, Australia, England and New Zealand, is more teacher-directed with a greater emphasis on whole class work and memorisation, especially during the early years.

Cochrane,<sup>7</sup> on the basis of recent observation, has noted that Asian teachers are themselves well-educated and that they deliver well-organised and paced lessons and fully inform their students about what they are expected to learn. He notes that, in Korea, lessons involve a variety of activities and always have a conclusion. Nonetheless, Asian educators tend to be very critical of their own education delivery. Korean authorities are concerned about excessive stress on rote learning and memorisation in preparation for university entrance and are seeking to develop more flexible approaches. Korea and Singapore are aiming to give greater emphasis to skills such as logical reasoning and creative and critical thinking.

### **3.3 The National Certificate of Educational Achievement from an international perspective**

A comparison between New Zealand practices and proposals in the intimately related areas of pedagogy, curriculum, assessment and certification with those employed in the more successful overseas countries reveals some surprising contrasts, especially given the claim that the NCEA incorporates best overseas, as well as local, practice. It

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<sup>7</sup> Personal communication dated 14 July, 2000. See also Education Review Office (ERO), 2000.

should be emphasised that the main source of identification of high-performing countries is the International Association for the Evaluation of Educational Achievement (IEA) comparative studies that cover a limited, though very important, curricular range. Moreover, the most relevant studies for present purposes, those at the school leaving age, did not include the Asian nations which did particularly well at earlier stages of schooling.

### 3.3.1 *A 'cafeteria' versus a 'pathways' approach*

In order to build up credits towards their NCEAs, students will, subject presumably to practical constraints, be able to pick and choose from a vast number of subject fragments (ie Achievement Standards) as well as a relatively smaller number of Unit Standards and other qualifications. The potential number of different combinations that might yield the necessary number of credits for the award of an NCEA is, in theory, enormous. However, in New Zealand there is only one curriculum for each subject, so that a student wanting to study maths with the expectation of becoming a tradesperson follows the same curriculum as the student intending to study maths at university. All students are forced to follow the same curricular path, although to different end points, as if it provided a balanced maths education for all types of students.<sup>8</sup> This approach assumes that capable students think in exactly the same way as less capable students but do so more quickly, which is not necessarily true. It also assumes that the interest of all students in a particular subject can be maintained to the same degree and with the same curriculum delivered in the same way, which seems most implausible.

In contrast to New Zealand's proposed 'cafeteria' approach based on different combinations selected from a very large range of Achievement Standards linked to one set of curricula, those countries that performed best in the three sets of TIMSS results, generally speaking, differentiate clearly between academic and vocational streams. Such systems provide distinct pathways with separate courses and certificates for students with different abilities and interests. 'High-stakes' examinations are often used to decide which pathways students should take. The success of such systems appears to reside in clear academic, applied and occupational pathways, often taught in different kinds of secondary schools, clear curricula backed up by particular textbooks, explicit assessment methods that command confidence, and informative qualifications recognised by users. The NCEA does not establish clear vocational and academic tracks but rather homogenises them, so students will be unclear as to their purpose and can spread out in all directions without necessarily building a platform for anything.

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<sup>8</sup> For an excellent discussion of curricular as well as other types of differentiation see Howson (1994) listed in Appendix C.

One benefit of the pathway approach is that courses can be designed so that they are most likely to meet the specific needs and post-school destinations of students. While there are obvious and significant risks in early curricular and institutional differentiation,<sup>9</sup> it also appears that the retention rates for post-compulsory students for those countries, and the numbers of students involved in vocational education and training, are relatively quite high.<sup>10</sup>

The difficulties arising from having only one certificate for all students are highlighted by the fate of the Victorian Certificate of Education (VCE) when it was first designed and implemented. The VCE was introduced in 1990–91 as a common senior school certificate that subsumed several existing courses. All students had to complete the same general certificate and, as a result, academically minded students, as well as those interested in vocational education and training, suffered. A review report (Department of Education, Employment and Training (DEET), Victoria, 2000) commented that the system lacked flexibility and that "The VCE cannot be expected to do everything". Notwithstanding the 'cafeteria' approach to the selection of courses, the NCEA will likewise force all component qualifications into the same mould and into one certificate and will incur the same procrustean-bed limitations.

### 3.3.2 *The question of assessment*

Most education systems across the Organisation for Economic Co-operation and Development (OECD) and Asia-Pacific Economic Cooperation (APEC) countries, especially those with clearly identified academic streams leading to tertiary studies, rely on system-wide, externally set and marked examinations. Where externally set and norm-referenced examinations are absent (eg Korea, Japan and Sweden), tertiary institutions usually rely either on some kind of system-wide aptitude test or set their own examinations to select students.

Those systems that have reduced the emphasis on external norm-referenced examinations, such as the majority of Australian states, ensure both the credibility and reliability of the internal marks by moderating them in various ways against the results of external examinations. Some systems employ forms of scaling to arrive at an aggregate used to decide tertiary selection.

Victoria also provides an example of a system that has experimented with replacing norm-referenced system-wide examinations with school-based assessment of student performance plus moderation. In its original design, the VCE incorporated several of

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<sup>9</sup> For a discussion see Irwin, 1994, Chapter 5.

<sup>10</sup> It should not be inferred that placing students into different qualifications streams is necessary for high overall retention rates. Such streaming does not generally take place in Canada and the United States where retention rates are high.

the characteristics now proposed for the NCEA. Both certificates seek or, in the case of the original VCE, sought to:

- reduce the emphasis on external, end-of-year examinations;
- blur the distinction between academic and other studies;
- lessen the impact of competition and academic excellence by reducing the assessment scale – from a 100 points to a five points scale under the VCE, and from 100 points to three<sup>11</sup> for the NCEA (credit, merit and excellence); and
- introduce a system of school-based moderation<sup>12</sup> without statistical scaling.

The VCE very quickly encountered problems, and such was the public uncertainty and disquiet that an inquiry was commissioned. Its report concluded, *inter alia*, that the gradings lacked reliability, there was evidence of bias in the award of grades and of unfair practices by many students and a minority of teachers, grade criteria were unclear, the costs to schools, students and the administering body were high, and there was unevenness in the distribution of marks between the various assessment tasks (Brown and Ball, 1992).

The inquiry led to changes in the VCE including completing more assessment tasks under examination conditions and moderating school-based assessment of Common Assessment Tasks (CATs) against an externally set and marked General Achievement Test (GAT). A further review recommended greater use of external, system-wide examinations and the inclusion of statistical moderation. It also recommended that, to reduce cheating and the burden of assessment and moderation, assessment tasks undertaken outside the classroom over an extended period of time be replaced by formal tests supervised by teachers in the classroom.

The question that arises is why the New Zealand authorities are introducing a certificate that incorporates several features that led to so many difficulties for the Victorian VCE. This is all the more puzzling because a New Zealand initiative, the English Study Design (ESD) senior school English course developed at Waikato University, used the original VCE as a starting point but included several modifications to combat some of the problems seen in it. These included an external examination for moderation purposes and to address problems of authenticity in the writing portfolio while protecting the sound pedagogical practice of having students process writing in a normal, 'real world', time-frame (see also 5.5.1).

It is to be noted that the NCEA incorporates a feature not included in the VCE – the proposed dissolution of subjects into between five and eight sub-subjects to be assessed

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<sup>11</sup> If 'no credit' is reported this will become a fourth 'grade'.

<sup>12</sup> Details of the moderation scheme for the NCEA were not available at the time of writing.

and reported separately – which is likely to exacerbate for the NCEA several of the areas of difficulty encountered by the original VCE. This dissolution of subjects will lead not only to specific reliability concerns (see Hall, 2000), but also to reporting problems.

In one sense the vast array of possible combinations of qualifications contributing to the NCEA allows enormous scope for differentiating between students. But in practice this is far more likely to confuse users of qualifications. Some ideological block seems to prevent New Zealand's educational bureaucracy from accepting what successful countries have presumably concluded – that at some point, certainly by entry to the senior school, students' differences in terms of ability, attainment and aspirations need to be recognised by different curricular tracks leading to different qualifications.

### 3.3.3 *Syllabuses, outcomes or standards?*

Traditionally, the school curriculum has been based on a 'syllabus' approach to teaching and learning with subject syllabuses providing a clear and succinct understanding of what is to be taught and learnt. While this is still the case in countries like Singapore, Japan and, to a lesser degree, England, a number of other education systems have adopted a different approach involving 'frameworks', 'outcomes' or 'standards'.

Those countries that perform consistently well in international tests such as the TIMSS, including Singapore, Korea and Japan, adopt a 'syllabus', or content-based, approach to curriculum development and assessment. However, New Zealand has very deliberately shifted from a content-based curriculum to an outcomes-based curriculum (Wyatt Creech and Brian Donnelly, 1998, p 7).

Although consistent with its shift in curriculum specification, New Zealand's new school qualification, the NCEA, represents a dramatic change in the qualifications area from a 'syllabus' or 'prescription' approach to one represented by outcomes in the form of 'Achievement Standards' that are defined as statements about what students "need to know and do to be credited with meeting the standard" (Ministry of Education and NZQA, 2000). Most of the new curricular outcomes and the Achievement Standards are, in fact, very vague and imprecise and, as such, appear to equate with 'outcomes' in US parlance. Outcomes-based education (OBE) has fallen into disrepute in the United States because the outcomes were too often found to be "nebulous, hard to measure and focus(ing) on affective matters ... values, beliefs, and emotions rather than academic achievement" (Manno, 1994). Precisely the same criticisms have been made of the outcomes in New Zealand's new curricula (Irwin 1999a; see also Appendix C for reviews of individual curricula).

The recent literature search undertaken by Kevin Donnelly (Donnelly, 2000) failed to identify any other educational system that has implemented a system-wide approach to senior school certification based on what is termed "Achievement Standards" in New Zealand. It should also be noted that even in those countries where the 'standards' movement is in the ascendancy, 'standards' have only been implemented at the level of the compulsory years of schooling.

Finally, while it is true that some systems, such as Scotland and England, have introduced a 'standards' type approach in the vocational education and training area (eg National Vocational Qualifications, or NVQs, and General National Vocational Qualifications, or GNVQs) these countries maintain an academic, examination-based system (eg A Levels) associated with the mainstream, post-compulsory system.

### 3.3.4 *Defining and specifying the 'standards'*

The history of the 'standards movement' in the United States demonstrates that the process of establishing 'standards', or what students need to know and do, is far from easy. The United Kingdom's qualifications based on the notion that competency standards can be described unambiguously have also run into considerable difficulties (Wolf, 1995). In the United States the best 'standards' are now often considered to be those based on a more traditional, discipline-based approach to teaching and learning (AFT, 1999).

The problems associated with setting standards can readily be seen by examining the draft NCEA Achievement Standards in English. At Level 2 students are expected to:

Write in a range of genres	2.1 Produce developed creative writing 2.2 Produce developed formal writing
Explore the language of and think critically about a variety of oral, written and visual texts	2.3 Read and analyse written texts 2.4 Analyse oral or visual texts 2.5 Read and analyse unfamiliar texts
Speak with confidence Media or drama production	2.6 Deliver an oral or visual presentation
Conduct research	2.7 Investigate a language or text-based topic

Such Achievement Standards beg vital questions: in the above case "what kind of written texts?" and "at what level of textual difficulty?". These Level 2 students' standards could just as easily be standards for 11-year-olds, which is ludicrous. Exactly the same problems were encountered with Unit Standards (Irwin *et al*, 1995). The proposed standards are more like the type of learning outcomes associated with the

now discredited OBE movement in the United States. By comparison, some of the more recent US 'standards' are detailed, explicit and academically more rigorous.<sup>13</sup>

A second problem, discussed further in Chapter 4, is the enormous difficulty in trying to specify what constitutes credit, merit and excellence. Underlying the problem is the decision to avoid direct comparisons of students' performance and instead to do so indirectly against written statements. This problem is exacerbated by the lack of clear statements about content.

### 3.4 Conclusion

While the official view is that the NCEA is based on local and overseas 'best assessment practices', it would appear that the NCEA in fact varies very considerably from 'best practice' in several high-performing countries. It cannot, of course, be assumed that what is 'best practice' in one system is necessarily optimal for another, and it must be remembered that qualifications cannot capture everything that school education seeks to deliver. But the differences are striking between New Zealand's approach to curriculum and assessment and the practice of a number of countries that do well in international surveys:

- New Zealand has a common curriculum and comprehensive schooling and rejects curricular and institutional differentiation at the school level;
- New Zealand employs often vague outcome statements in curricular and assessment specification instead of syllabuses specifying succinctly what is to be taught and learnt;
- New Zealand's school education is more child-centred than teacher directed;<sup>14</sup>
- New Zealand proposes one certificate for all students rather than a range of certificates each with their own identity and purpose;
- New Zealand proposes that students should be able to build up their NCEAs from credits mainly awarded from any combination of subject fragments rather than being required to follow one of several distinct and structured pathways;
- New Zealand has rejected system-wide competitive examinations with marks in favour of greater internal assessment and a very narrow range of differentiation in student achievement; and

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<sup>13</sup> Donnelly, 2000, provides an example.

<sup>14</sup> See Education Forum (1998), especially Chapter 6, for a discussion of the official approach to pedagogy.

- New Zealand employs the outcomes (or 'standards') approach to curriculum and assessment throughout the senior school rather than just during the compulsory years.

The NCEA represents an experimental form of senior school certification that appears to have little, if any, currency among education systems doing well in international surveys. It should be noted particularly that when Victoria introduced a post-compulsory certification system similar in several material respects to the NCEA, major flaws, both in design and practice, were revealed leading to major disruption and disquiet and extensive restructuring. It remains unclear how it can be claimed that the NCEA incorporates 'best practice' in assessment.

## **EVALUATION**

### **4.1 Introduction**

Given the numerical picture presented in Chapter 2, if one were starting with a blank sheet of paper the obvious problem to be addressed would be how to revise upper secondary school qualifications to take account of the raising of the school leaving age and the increased participation to Year 12. One would be looking to adapt the subject-based School Certificate and the Bursary/Scholarship examinations that have served New Zealand well to provide a coherent set of curricular pathways with a recognised exit point at Year 12. One might also be looking for ways in which achievement in Year 12 could be used to make up ground lost in Year 11 through some combination rules. There would also be a case for devising some means by which learning in the workplace and elsewhere could be taken into account. But the emphasis would be on getting the qualifications in English, maths and science and the other subjects right. Given the intimate relationship between curriculum, assessment and qualifications, it would be necessary to revisit the curriculum for the senior years.

It would also be very important to look seriously at the international evidence for guidance about 'best practice' in assessment issues. While slavish imitation must be avoided, good reason would need to be advanced for moving decisively in a very different direction from that indicated by the more successful countries as identified in international surveys. As seen from Chapter 3, this would involve giving serious consideration to a 'syllabus' or prescription approach to the specification of what is to be taught and assessed, curricular (and maybe also institutional) differentiation in the form of well-designed curricular pathways for the senior school reflecting the wide spread of ability, attainment and post-school aspiration to be now found in it, and significant reliance on externally set and marked examinations.

Unfortunately the current New Zealand government inherited the ideological baggage of the 1991 National Qualifications Framework. This held out the promise that if all school subjects, degrees and vocational qualifications were disaggregated into units, with the addition of some new ones, they could be used to tailor-make qualifications for all people and all purposes. It was a late example of the educational thinking that supposed the accumulation of large numbers of credits was a sensible means of obtaining a higher qualification. The hope was that through a system of levels and credits a seamless qualifications structure could be created. It proved to be an overly ambitious and seriously misguided attempt to integrate disparate educational elements and processes: one cannot make things that are dissimilar the same just by giving them the same name – in this case Unit Standards. But a legacy has been left of the view that

everything can be specified in levels and credits and assessed on the basis of standards that the government has sought to accommodate in its proposals for the NCEA.

The government also inherited a new curriculum framework published in 1993 that is only now in the final stages of implementation. This extensive curricular initiative also reflected the confident expectation that all school-based education could be specified in terms of 'outcomes' which are sufficiently clear that student achievement could be assessed against them. This initiative also has not worked out that way, and it is likely that it will come to share the same fate as the now widely discredited 'outcomes' approach to schooling in the United States, because, in particular, of the vacuity of most 'outcomes'.<sup>15</sup> The New Zealand curriculum is still being implemented in spite of criticism (Irwin, 1994; 1999a; reports in Appendix C) and the moves away from this approach in the United Kingdom and the United States. As seen in Chapter 3 of this report, this approach to curriculum specification contrasts strongly with the 'syllabus', or content, approach of top-performing systems in IEA surveys.

Both the curricular and qualifications initiatives were driven by a desire to specify outcomes without realising that much school-based education cannot be expressed in this way without serious distortion. The desire for a common currency to link all curricula and qualifications (outcomes, objectives, Unit Standards and now Achievement Standards) remains strong. The initiatives also seem to have been motivated by egalitarian concerns, for example that differences in assessment methodology should not confer status distinctions between the 'academic' and the 'vocational'.<sup>16</sup> The latter concern is seriously misguided in that the 'status' of a qualification depends on what one can do with it and not on the method of assessment.

The NCEA can be criticised on a number of grounds (Austin, 2000; Hall, 2000; Irwin, 1999b; Locke, 1999), among them: confusion between qualification and framework; the attempted use of Achievement Standards as a common currency; the impact on subjects; the unreliability of assessment; the informational overload in the reporting of results; the pedagogical consequences of the structure proposed; and the massive workload entailed. The risks of failure are significantly increased by the lack of

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<sup>15</sup> The degree of specification varies. For example, the curriculum statement for 'science' is much more vague than the separate science curriculum statements for Forms 6 and 7. The standards approach can work well for training where the outcomes tend to be clearer but is less suitable for assessment of abstract thinking.

<sup>16</sup> An internal Ministry of Education memorandum addressed to the Secretary for Education (undated but probably mid-1999) and entitled "The National Certificate of Educational Achievement – Paper 1" states that the Achievement 2001 initiative was to develop a "unified" qualification, that, *inter alia*, "unifies and removes the status distinction between the standards-based and traditional examination approaches to qualifications assessment". An NZQA paper dated 5 December, 1997 entitled "The Future Shape of Secondary Education Qualifications in New Zealand" states that a new qualifications system for senior school students should allow "learners a choice of assessment pathways and learning outcomes that have equal credibility".

research, trialling, and international precedent and the abolition of existing arrangements that have worked well, though certainly capable of improvement.

#### **4.2 Qualification or framework?**

The NCEA is presented as a qualification, but in reality it is a framework. It is the components that are the qualifications and the certificate is a means of bringing them together. The components may consist of Achievement Standards as well as curriculum-related and ITO-developed Unit Standards and other exams or qualifications (Ministry of Education and NZQA, 2000). Of itself, the proposed NCEA is at too high a level of generality to be useful to the universities and employers in the decisions they have to take. They will be looking to the subjects studied and courses followed, and how well the applicant has done in them. Universities are likely to set prerequisites for entry or to adopt some scaling device to ensure that inappropriate Achievement or Unit Standards are not unfairly recognised for entry. Students will be pursuing different combinations of courses and programmes according to their abilities, interests and aspirations, and these need to be denoted in some way.

England has similarly faced the dilemma of where to put the emphasis in end-of-school awards – separate qualifications or an overarching certificate – and has plumped for the former (Dearing, 1996; Department for Education and Employment (DfEE), 1997 and 1999). In its recent reform of qualifications for 16- to 19-year-olds, A Levels have been retained in modified form, the qualifications for applied learning, GNVQs, have been changed to bring them into line with A Levels, and occupational learning is to continue to be accredited through NVQs. There was consultation on an overarching certificate, but in the light of the responses it has been held in abeyance for the time being. If A Levels, GNVQs and NVQs do grow closer together some combination rules between the qualifications may be worked out leading eventually to the award of an overarching certificate. This would be additional to, and not instead of, the separate qualifications.

#### **4.3 Achievement Standards**

Having decided to place the emphasis on the framework, the New Zealand government has looked for some common currency to give it coherence. This did not have to be Achievement Standards. Different subjects and courses could have been given some numerical rating and these could have been summed up, or another combination of rules worked out. If some sub-division of subjects was thought to be necessary, modules could have been created on the basis of content and expected performance.

But somewhat surprisingly in view of the numerous criticisms of Unit Standards, the Ministry has settled on Achievement Standards as the building blocks of the new framework. Achievement Standards seem to differ from Unit Standards in only three

ways – there are fewer, they are stated somewhat differently and an attempt is made to define three levels of performance – credit, merit and excellence.<sup>17</sup>

For the subject history, for example, there were 13 Unit Standards (NZQA, 1996a) at Level 1, and six Achievement Standards are now proposed. Five of the Unit Standards, however, are in essence the same, one has been dropped, and the other seven have been conflated into one, 'describe the identity of people(s) in New Zealand historical settings'. In physics (NZQA, 1996b), there were 12 Unit Standards and six Achievement Standards are proposed. One of the Unit Standards has been retained but the others (which seemed almost designed to break up old notions of physics) have been redrawn to restore some of the normally accepted areas – mechanics, light and waves, electricity and magnetism, and heat transfer and nuclear physics.

The long lists of Unit Standards were generated in the spirit of encouraging the widest possible choice, whereas the Achievement Standards seem more an attempt to sub-categorise subjects. In history, all the Level 1 Unit Standards were, and Achievement Standards are, rated at four credits. In the case of the National Qualifications Framework, the total value of the Level 1 history units, 52, was more than the notional minimum number needed to obtain a national certificate at this level (which was 40). In physics, the 12 Unit Standards added up to a credit value of 32 which in the transformation to Achievement Standards has been pruned to the new accepted total of 24.

Whereas an attempt was made to spell out Unit Standards as lists of performance criteria, Achievement Standards are stated as general criteria for identifying credit, merit and excellence.

Achievement Standards nevertheless retain all the problems of Unit Standards discussed in Smithers (1997). Chief among these, in the present context, is that standards are not a good vehicle for conveying what a qualification or part-qualification is about. They can be a useful way of stating expected levels of performance (though even here level descriptors are better), but it is also necessary to specify content. In addition to the inherent weaknesses of Unit Standards, Achievement Standards are further flawed in seeking to compare the performance of different candidates not directly, but indirectly through comparison with written statements of what constitutes credit, merit and excellence.

However inviting this indirect approach may sound in theory, in practice it is very difficult to achieve. Consider the verbal contortions that have to go into stating the

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<sup>17</sup> In reporting, the NCEA will use a four point scale with failure, or 'no credit', as one of the points (letter from Ministry of Education to Michael Irwin dated 20 June, 2000). However it is understood that there is pressure in the schools sector to abandon the reporting of 'no credit'.

grades for the first Achievement Standard in English – "produce developed creative writing". At Level 2, the four criteria for merit differ from the four criteria for credit only in the addition of the six words in italics: "develop idea(s) *convincingly* with detail, *showing mature thought*, in a piece of creative writing"; "use a *controlled* writing style to create effects appropriate to audience, purpose and text type"; and "structure material *clearly* in a way that is appropriate to audience, purpose and text type". The fourth criterion is the same: "*use writing conventions accurately*". The four criteria for excellence rely on the addition of six further words: "*and which commands attention*" is added to the second criterion and "*and effectively*" is added after "clearly" in the third. A similar exercise is gone through for each Achievement Standard at each level with excellence, merit and credit being distinguished usually by the addition of just a few words.

The enormous effort that must have gone into trying to find the words to express the gradations of performance would have been much better spent on trying to agree on the essentials of what constitutes English at this level. It is very doubtful whether markers will be able to work back from those words to confidently grade pieces of work. This will almost inevitably depend on comparisons with what the other students have done and subjectively held notions of credit, merit and excellence. Although it is well known that grading depends on direct comparisons, some ideological hang-up seems to hold back the Ministry and NZQA from accepting this, and hence the enormous and unnecessary effort to which the expert panels are being put.

#### 4.4 Subjects

The adoption of Achievement Standards will have a major impact on subjects. Effectively, they are being reconstituted as six or so smaller subjects. In the redefinition the Achievement Standards are expected to stand alone for assessment and reporting purposes. They do not, however, represent coherent components of a subject, but cut across each other like slices through an orange from different directions. Adopting a common approach to all subjects has led to some quite artificial distinctions between sub-subjects.

"Process and present information for research purposes" is no more a basic unit of English than "carry out an historical investigation" is of history or "carry out directed geographical research" is of geography. In part, this failure to specify the components of the curriculum stems from the attempted separation in the New Zealand Curriculum Framework (Ministry of Education, 1993) between essential learning areas and essential skills. Curiously the Level 1 Achievement Standards do not follow the curriculum for Year 11, but put another gloss on it.

It would be perfectly possible to state the requirements for, say, English at Years 11, 12 and 13 in terms of the ground to be covered and expected levels of performance. The

subjects could be stated as modules to dovetail at one level and build upon each other from one level to the next. To some extent, this is achieved in the standards for mathematics but only by extending the notion of Achievement Standard to include content. Explanatory notes are added to the assessment criteria so that the first Achievement Standard at Level 2, "manipulate algebraic expressions and solve equations", becomes "assessment of manipulation will be based on a selection from – expanding brackets, factorising expressions including quadratics, using fractional and negative indices, changing the subject of the formula, using elementary properties of logarithms, simplifying rational expressions".

Other subjects rely mainly on exemplar assessment activities with possibly only one exemplar given for each Achievement Standard. This leaves much of the content to be inferred. While, however, the Achievement Standards may have meaning for people like those on the expert panels working from the subject content, it is almost impossible to work back from the statements of the standards to recover the content. This puts a lot of weight on the isolated exemplars.

#### 4.5 Assessment

The use of single assessment tasks to test performance against individual Achievement Standards also makes for unreliable assessment. Judging human performance is difficult. It is not like measuring time or temperature. It usually depends on taking a number of samples of what a person can do, sometimes using different methods, and combining the results to come to an overall judgment. The technicalities are such that the more samples you have the more reliable the information. This is admirably discussed in relation to the NCEA in a recent paper by Hall (2000). Although the importance of reliability tends to be downplayed in relation to validity, it must be remembered that if a measure is inconsistent it cannot measure anything.

The publicity for the NCEA makes great play of the fact that both internal and external assessment will be used, but the assessment of individual Achievement Standards is to be by one or the other. There is to be no cross-moderation and no overall mark for the subject, so the idea that assessment tasks amount to different samples of a student's performance in a subject is lost. There is an enormous difference between a subject assessed by a combination of samples, employing various methods as appropriate, leading to an overall mark and several components assessed exclusively either by internal assessment or external assessment and reported separately. This fundamental difference would remain if the relative amounts of internal and external assessment stayed the same as in current qualifications or even if the balance shifted in favour of external assessment.

Education officials appear to reject all forms of scaling as *de facto* unfair and undesirable. Of course, like any other instrument, methods of scaling can be abused.

But they do have significant advantages. The blanket rejection of scaling puts an enormous burden on moderation processes and on getting the standards as clear and unambiguous as possible so that assessment can be made consistently by hundreds of assessors of different subjects, in different schools and from year to year. The danger here is of trivialising important aspects of education.

#### **4.6 Reporting of results**

It is claimed that the detailed information presented in relation to the Achievement Standards will be a great advance on the reporting of an overall figure for performance in a subject (Fancy, 2000). However, the reverse is the case. Take English as an example. Much of the apparently detailed information on ability to "produce creative writing" or "give a talk in a formal situation" will depend on just one sample of performance. Moreover, the single sample in these cases is to be by internal assessment. Judgments will therefore be made on limited assessments from different topics in different circumstances by different people. The numbers to emerge will not carry much meaning.

Neither will they necessarily be all that helpful to the intended users of the NCEA, like employers and universities. These users will tend to be looking for accurate, easily interpreted, rounded information on applicants. They want to make judgments about general ability as well as what a person knows; that is, they will require good summary assessments showing performance relative to that of peers. The highly detailed transcripts envisaged for the NCEA will overload the potential user and strenuous efforts seem to have been made to avoid direct comparisons. The universities are seeking a simple aggregate mark per subject (*New Zealand Education Review*, 17 March, 2000).

The use of only three levels for the reporting scale clearly needs rethinking. It lacks differentiation of achievement, lumping too many different performance levels into one of three grades – credit, merit and excellence. It fails to do justice to the really high performers who need challenge and recognition by qualifications of rarity value (Austin, 2000). It would appear from lack of mention in recent official statements that 'scholarship' is to be abandoned as a separate Level 4 and this too will disadvantage the really high achievers. The three-grade scale will also lead to egregious errors when students miss out on one gross level for another gross level (for example when a student just misses excellence and is awarded merit) and when the difference in performance is within the error of measurement range.

#### **4.7 Pedagogical consequences**

The official position (Fancy, 2000) seems to be that the NCEA will have little impact on what is taught and how it is taught since it is concerned with assessment and not the curriculum or courses. This is naïve. Assessment and examinations send signals about

what is important and what is not. It is common experience that past exam papers are the best way of finding out what a course is about rather than wading through curricula, syllabuses or prescriptions. Indeed, the NCEA implicitly recognises this because the very general statements of the Achievement Standards are given flesh through the exemplars of assessment tasks or specimen examination questions.

The structure of the NCEA can therefore be expected to have a very considerable impact on pedagogy. It is highly likely that the subjects will no longer be treated as such but will be organised into the Achievement Standards. Where these are internally assessed the courses will be given over to the project work that is required. Where the Achievement Standards are to be externally assessed it is hard to see, in the absence of prescriptions, what teachers can do other than focus on, and teach to, the few exemplars of likely topics that are given. In subjects where flair, creativity, innovation and lateral thinking should be encouraged, a dreary regularity and sameness can be expected.

As stand-alone subject components, Achievement Standards are separate standards without reference to any desirability of integrating understanding across different aspects of a subject. The dissolution of subjects into Achievement Standards will therefore result in loss of disciplinary integrity and their separate assessment in the loss of stress on the ability to integrate knowledge and identify connections that is often a characteristic of high achievement students.

#### **4.8 Workload**

The fairest and most time-efficient way of assessing learning across a whole school system is often through common tasks under standard conditions independently marked. Examinations are a good example. Not all learning goals are conveniently assessed through three-hour written papers, for example where some practical activity is involved. But in these circumstances it is often possible to have assignments that are externally set and marked.

On other occasions internal assessment is necessary and the problem here is that students will be judged on different tasks in different conditions by judges personally known to them (with the advantages and disadvantages that entails) working to their own standards. It becomes very difficult then to make the assessments comparable across schools, and a considerable amount of effort has to go into trying to ensure fairness. This can lead to what Wolf (1995) has described as the spiral of specification, where ever more desperate attempts are made to pin down the requirements unambiguously. It can also lead to a massive recording load plus layer upon layer of moderation as the assessors are checked by verifiers who themselves have to be scrutinised. The pedagogical impact of the NCEA will be exacerbated by the extra time that has to be given over to assessment and the reduction of teaching time.

The cumulative nature of the award means that there could also be major timetabling problems. A student obtaining only a proportion of the credits needed for the NCEA at Level 1 may wish to catch up in Year 12, as well as working towards Level 2. But different students will need to make good different things. For schools it could be a nightmare trying to fit it all in. The problems arising from students taking individual externally assessed Achievement Standards would seem particularly difficult to manage.



## **CONCLUSIONS AND RECOMMENDATIONS**

### **5.1 Introduction**

It is clear from the preceding analysis that the NCEA carries with it the potential for very considerable harm. The basic concepts have never been subject to public submissions nor, as far as is known, to peer review by internationally recognised experts in the field of senior school qualifications and related areas of curriculum and assessment. Public consultation has been limited to development of the details. Moreover, the proposed system departs from the present system in very significant ways and has not been trialled.

Research summarised in Chapter 3 of this report indicates that the NCEA has no counterpart – at least no successful one – anywhere else in the world. Indeed, in several respects it moves in the opposite direction to that indicated by countries performing best in international surveys. This last observation is not surprising given the scheme's obvious limitations. Nor, regrettably, is it surprising that such a scheme takes hold in a country with an ideological penchant for large-scale educational experimentation in curricular and assessment arrangements based on little more than assertion and what 'feels good'.

The unusual nature of the NCEA does not appear to be appreciated by the Ministry and the NZQA who view the NCEA as a reasonable educational compromise between traditional exams and Unit Standards, and as evolutionary rather than a radical new departure from the current system (Ministry of Education and NZQA, 2000; Fancy, 2000). Such statements are exceedingly worrying because they indicate that those who developed the scheme have limited understanding of its educational implications.

The Education Forum's strong preference is to put the NCEA initiative on hold pending a thorough review of senior school qualifications and the related issue of the curriculum. Certainly there are issues and problems to address with the present system of senior school qualifications, but implementing the NCEA in its present form will only prolong uncertainty as it will be unstable and major revision will eventually have to be undertaken. This is what happened in the Australian state of Victoria with its VCE, and there are reasons to believe the fate of the NCEA may well be even worse.

If going back to the drawing board is not a politically acceptable option, then the optimal approach would involve recasting the concept of an NCEA, and within it to reshape Achievement Standards in a way that reduces the very considerable problems with their present design.

To achieve these objectives the adoption of a six-point strategy is recommended:

- accept that the NCEA is an overarching framework potentially bringing together a wide range of qualifications that can be structured and assessed in different ways, with each having its own identity and purpose, but with no predetermined linkages;
- affirm the original position which was that the School Certificate and Bursary were to remain, though accepting that some modifications may well be desirable;
- introduce a new examination-based qualification at Year 12;
- make Achievement Standards available as alternatives to School Certificate, a new Year 12 examination and Bursary *but* provide for: overall subject scores; external examination where possible; specify content; use level descriptors; and cross-moderate what is internally assessed against what is externally assessed;
- retain Unit Standards as presently proposed;
- consider a 'framework-type' qualification for Year 12 as a major school exit point; and
- clarify the criteria that other exams and qualifications should meet if they are to be recorded on the NCEA.

These points are further discussed below.

## 5.2 Consider the NCEA as a framework

An essential start is to clarify the potential for confusion between 'qualification' and 'framework'. The Ministry seems to regard the NCEA both as a qualification and a framework. It refers to the NCEA as a qualification whereas its booklet (written with the NZQA) presents it as a framework – as a certificate certifying a variety of separate qualifications including Achievement Standards, curriculum-based and ITO-developed Unit Standards and "other exams or qualifications" (Ministry of Education and NZQA, 2000).

The distinction between qualification and framework is important because the Ministry's approach is leading it to put the emphasis on a tidy schematic structure with predetermined linkages between qualifications by means of a common currency rather than on what is required of the qualifications themselves. If one builds up from the purposes of qualifications for students, educators and employers the logical steps are to decide: (1) what should be offered; (2) how it should be assessed; (3) how it should be represented in a qualification; and (4) what advantages there might be to have

formal links between qualifications. This point has been made on a number of occasions, most recently by the Education Forum in its bulletin on Achievement 2001 (Irwin, 1999c).

If it is accepted that the NCEA is a framework document recording a variety of qualifications then the issue of linkages between the individual awards must be left open for investigation. To impose from the start a particular assessment methodology and linkages between qualifications means that bureaucratic tidiness has priority over educational and informational concerns, but unfortunately this is precisely the approach hitherto adopted.

### 5.3 Retain School Certificate and Bursary

If it is accepted that the NCEA is, in fact, an overarching framework then the constituent qualifications must be allowed to have their own identity and purpose. School Certificate and Bursary already have status and wide acceptance, and this is an enormous advantage. It would be foolhardy, even irresponsible, to abolish them in order to ensure that the new and untried Achievement Standards have little or no competition. School Certificate and Bursary should therefore be retained as it may have been originally intended.<sup>18</sup> However, Achievement Standards at Levels 1 and 3 are not the old School Certificate and Bursary with new names.

It is likely that the School Certificate and Bursary will need improving and adapting to the changing nature of upper secondary schooling. But every effort should continue to be made to do this from the point of view of building on the strengths and reputations of qualifications that already exist. Throwing everything into the Achievement Standards melting-pot seems to have been undertaken more from a desire for bureaucratic tidiness than for any intrinsic educational reasons.

The analysis presented in Chapter 2 reveals that more than 80 percent of students now go on to Form 6 (Year 12). It is also relevant that three subjects (English, maths and science) account for about 55 percent of subject entries in Year 11, and 10 subjects account for 87 percent of all such entries. This suggests that School Certificate might usefully be scaled down somewhat in subject coverage and become an examination of the core subjects and a limited number of 'non-conventional' options. In this way it could be reconceptualised more as a test of basic knowledge and understanding and as a formative examination to provide useful information about courses and programmes to be studied at Years 12 and 13. It would also provide students with some useful practice in examinations. Further, a reduction in subject options at Year 11 could

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<sup>18</sup> Originally School Certificate and Bursary examinations were to be the externally assessed components of each subject. However, it was also stated that examination marks would not be scaled and that results would show how well students have done against each other and against national standards. There are some seemingly contradictory elements here so it is not entirely clear what was in fact intended.

reduce significantly the overall assessment burden for all concerned in the senior school.

#### **5.4 Examinations at Year 12 – a key school exit point**

The decision to discontinue the Sixth Form Certificate at Year 12 is to be welcomed. But this should be done only after a suitable replacement has been developed for it within the overarching framework of the NCEA.

In England where Year 12 has similarly become a major exit point, the solution that has been adopted (DfEE, 1999) is to make it, in effect, a halfway house to Year 13. The equivalent of the Bursary, the A Level, has been reorganised on a content basis so that half is covered in the first year (Year 12) and the rest in the second (Year 13). There are examinations at the end of the first year and these can lead to a qualification in their own right, the Advanced Subsidiary (AS). On the other hand, studies can be continued into the second year for the full A Level. It is envisaged that students will take five ASs in Year 12 and continue with three or more to A Level.

The statistics presented in Chapter 2 suggest that this approach could be adopted in New Zealand. The main subjects studied in Year 12 are also the main subjects studied in Year 13. It ought therefore to be feasible to divide them and have examinations at the end of Year 12 as well as Year 13. The government's decision to introduce external assessment into Year 12 is welcomed.

With arrangements of this kind it would be possible for students who do not wish to continue to Year 13, or who are uncertain of their plans, to take examinations and obtain a worthwhile award. Students who were sure of their intentions could pass up the opportunity of sitting papers at this stage. Alternatively, the courses could be modularised on a content basis and all students could complete a set of modules by the end of Year 12, which the leavers would cash in for an exit qualification.

Not all Year 12 courses would necessarily lead to Year 13 courses and they could be complete within themselves. It would be perfectly possible to accommodate within these arrangements the so called non-conventional subjects.

The Year 12 qualification lacks the ready-made branding of the School Certificate and Bursary. Careful thought will therefore have to be given as to what to call it. "Higher School Certificate" could be confusing given its past usage. A term such as "Advanced School Certificate" would indicate its half-way position between the School Certificate and Bursary examinations.

## 5.5 Redesign Achievement Standards

The present proposals for Achievement Standards will have disastrous consequences in terms of fragmenting subjects, their impact on pedagogy, unreliable assessment, a heavy assessment workload, and non-user friendly reporting of results. As presently designed they are bound to lead to strife and dislocation and will eventually require major reconstruction. It would be far, far better to do the necessary redesigning now. This is not to say that all difficulties can be foreseen. Obviously this is not the case. But at least the major problems that have been identified should be addressed and then the redesigned Achievement Standards trialled before becoming available nation-wide.

If Achievement Standards are to gain standing within the schools sector and among users of school exit qualifications, mainly tertiary providers and employers, it will be essential to address their inherent weaknesses. If they are redesigned in the way outlined below, schools will be able to offer School Certificate, the new Sixth Form examination (see 5.4 above), Bursary, and/or Achievement Standards and other qualifications (see 5.8 below). If these qualifications become closer in concept it may well be able to develop combination rules under which subject scores can be aggregated in some way.

Three aspects of the Achievement Standards need to be changed.

### 5.5.1 *Overall subject marks or grades*

It is essential that a way of producing aggregated results for subjects is provided. Assessment must acknowledge the integrity of subjects and provide reliable information to those who have to make decisions on the basis of the results. Overall assessment is essential for subject integrity, sound pedagogy and countering the problem of low levels of reliability that can be expected of Achievement Standards individually assessed (Hall, 2000).

It is also essential that internally assessed Achievement Standards provide a broader range of grade than simply credit, merit and excellence. The ESD project funded by Waikato University's School of Education could usefully be consulted as an example of a standards-based model with multiple grades (Hall, 1999; Locke and Hall, 1999; Locke, 1999). The ESD project was set up to provide a coherent, rigorous, senior English programme, using standards-based assessment and national moderation procedures, as an alternative to Unit Standards. Moreover it is the only recent, professionally evaluated, trial in New Zealand of an achievement-based system at the senior school level. In the circumstances it is astonishing that the New Zealand education authorities appear to have disregarded it in their latest redesign of school qualifications.

### 5.5.2 *External examination and cross-moderation of internal assessment*

The Ministry has maintained (Fancy, 2000) that what was externally examined will continue to be so. However, the form of the examinations has still to be declared.

The Ministry's claim that external and internal assessment will be used where appropriate glosses over the point that usually there will be only one or the other, and no aggregation or cross-moderation is envisaged. If the NCEA is not to encounter the problems of authenticity experienced with the VCE (see Chapter 3) as well as unacceptably low reliability, it is essential that internal assessments are moderated against externally examined components or, alternatively, against some form of externally set and marked test such as the Victorian GAT.

### 5.5.3 *Specification of standards*

It makes no sense to seek to grade students by reference to loose, general and overlapping statements of what constitutes credit, merit and excellence. There can be no real progress in overcoming the inherent problems in present proposals as long as the Ministry does not admit that grading fairly must involve direct comparisons between the performances of the students and fails to ensure that the assessment methods used allow for this.

Overall assessment *de facto* requires prescriptions; a few exemplars are not enough. If the pattern of assessment is to be educationally sound the information provided by Achievement Standards must be supplemented by descriptions of the ground to be covered. As already noted, this has already been realised in mathematics where there is a prescription in the guise of explanatory notes. But the problem is not confined to maths, and it needs to be accepted that Achievement Standards have to be accompanied by statements of content. The question whether Achievement Standards are the most appropriate way of specifying levels of performance needs also to be addressed.<sup>19</sup>

## 5.6 Unit Standards

Unit Standards are already being taken at a number of schools, usually by students for whom the traditional more academic route of School Certificate and Bursary is unsuitable. Although, as noted in Chapter 2, they make a relatively small contribution to the education of 15- to 18-year-olds, there is no reason to remove this option. However, it can be anticipated that over time Achievement Standards, if redesigned as recommended above, will replace Unit Standards for most subjects and occupational courses. The redesigned Achievement Standards would have advantages in being

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<sup>19</sup> England now specifies its national curriculum in terms of content and level descriptors having rejected its equivalent of Achievement Standards, attainment targets (Qualifications and Curriculum Authority (QCA) and DfEE, 1999).

more reliable, having less emphasis on internal assessment and therefore imposing fewer assessment demands on teachers, and having greater subject integrity. It is possible, therefore, that over time Unit Standards, at least in conventional subjects, could be phased out at the school level.

### 5.7 A 'framework' approach at the Sixth Form (Year 12) level

The NCEA, as an overarching framework, could well come into its own at the Year 12 level. In Year 11 most students will take the School Certificate, assuming it is retained as originally envisaged and as recommended above, and at Year 13 the Bursary has a specific purpose. Therefore, in neither of these years is there a real need for an overarching award. But at Year 12 there will be students seeking to recover ground lost in the School Certificate, those taking redesigned Achievement Standards (5.5 above), those broadening out into the non-conventional subjects and those undertaking occupational learning in the workplace. There is a case therefore for considering some overarching award for this major exit point. This, however, does not have to be, indeed should not be, based on a common currency of Achievement Standards. It could more appropriately be worked out through some scoring system for the subjects and courses themselves.

### 5.8 Other exams and qualifications

The Ministry of Education has advised that:

The Ministry sees its responsibility ... as being able to offer a rigorous, credible, meaningful, valued and valuable qualification to those students who wish to gain it. However, no student is required to undertake study or assessment for any particular qualification. The presence or otherwise of an NCEA does not prevent any student from studying towards or gaining access to any other qualification. (McMahon, 2000)

This is welcomed. It does, in fact, affirm that the present situation as regards state examinations is unaffected by the NCEA initiative. A few schools do not offer any of the existing state examinations. Some New Zealand students already sit the International Baccalauréate. The increasing number of schools participating in the examinations offered by the New Zealand Education and Scholarship Trust (NZEST) shows clearly the wide concern for a demanding, independent external examination at the end of schooling.<sup>20</sup>

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<sup>20</sup> About half (217) of New Zealand's secondary schools now participate in the NZEST examinations. They include both co-educational and single-sex schools and are located in all parts of the country. The numbers of candidates and subject entries have increased from 1,329 and 3,705 respectively in 1992 to 1,910 and 5,438 respectively in 1999.

It is important that New Zealand's own school qualifications should be open to challenge by, and comparison with, the best examinations that the English-speaking world can offer. In any case our students deserve the best assessment services wherever they are to be found. Where the quality of state assessment services is in doubt it is all the more important that schools can offer their students alternatives. It is understood that, in Victoria, dissatisfaction with the VCE led to a significant increase in the number of schools offering the International Baccalauréate. The same trend away from state qualifications to private sector qualifications can be expected in New Zealand if the NCEA is introduced in its present form. In fact one of New Zealand's state schools, prompted by dismay over the NCEA proposals, is negotiating with Cambridge University to offer its students the Cambridge University's A Level international examinations which it considers will better suit the needs of its students (Morris, 2000). A number of other secondary schools have expressed interest in doing the same.

It is also the case that the quality of New Zealand's present state examinations have been under criticism. For example, the serious errors in the 1995 School Certificate science examinations revealed that "the examining panel displayed a seriously flawed understanding of elementary scientific concepts" (Stedman, 1996). Austin (2000) commented, in respect of the same examination, "That a public exam paper could be set and graded by people who clearly had less knowledge of the subject than some of the students, was nothing short of outrageous". This apparently is not an isolated incident: Austin went on to observe that "Each year there are similar complaints about the annual national examinations".

An extremely worrying aspect of the debate that followed the 1995 School Certificate science examination debacle was the alleged complacency of the NZQA and unwillingness to admit the mistakes promptly and to accept responsibility for them.<sup>21</sup> This may not be untypical of those government suppliers of services enjoying a monopoly of provision.

The history of the development of the NCEA is unfortunately also one in which government agencies – the Ministry of Education and the NZQA – having determined what is to be done, limit consultation to matters of detail and implementation and refuse to countenance criticism or to enter into serious dialogue with those who favour an alternative course of action. The same disdain for serious dialogue was seen in the development of the National Qualifications Framework and the New Zealand Curriculum Framework. Given that government agencies cannot be expected to act quickly, if at all, to remedy the problems in the NCEA that will undoubtedly emerge, it is all the more important that schools have alternatives to offer.

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<sup>21</sup> For a description of the debate and discussion of the lessons to be derived from the incident see Stedman (1996).

The trend towards specifying curricula in terms of outcomes has unfortunately also led to an uncritical drift into the affective domains with all the problems of 'political correctness' and educational fads and fashions. This will undoubtedly lead to the situation in which to score well in assessment tasks and examination questions will require politically correct answers on such matters as biculturalism, multiculturalism, the Treaty of Waitangi, gender and such like. A more general criticism of the 1995 School Certificate science exam referred to above included the framing of questions in the context of relevant situations such as compost heaps and food poisoning. This example of the current fad to make education 'relevant' resulted in situations that were "much too complex for an elementary analysis" (Stedman, 1996). At the same time "little study of science was needed to score well" and, according to one commentator, the "paper amounted to an IQ test, rather than a test of scientific knowledge and ability" (Stedman, *ibid*).

Thus, for several reasons, it is entirely healthy that it should remain open to New Zealand schools to use alternative examination services in the best interests of their students. Overseas examination services such as those offered by the International Baccalauréate and the Cambridge University's international O Levels and A Levels have wide international standing. The local NZEST examinations are already highly regarded locally and may develop a wider, international recognition over time as could other locally developed examination services. If the designers of the NCEA are as confident of its design and the support provided for it by local and international 'best practice' as they appear to be they will have no hesitation in allowing schools to choose between it and other qualifications services.

It would be useful if international awards were recorded on the NCEA and, where appropriate, some level equivalence were noted. It is envisaged that the sort of overseas awards that are presently, and might in the future, be taken by New Zealand students would readily satisfy any quality criteria that New Zealand authorities might wish to set. However, some thought could usefully be given to the issue.

## 5.9 Summary of recommendations

It is recommended that:

- (a) The NCEA be understood as a certificate recording a range of qualifications, with each constituent qualification having its own identity and purpose and being structured and assessed in different ways. There would be no predetermined linkages between the qualifications.
- (b) School Certificate and Bursary should be retained as was originally announced. School Certificate could be reconceptualised as a formative examination concentrating on core subjects of English, maths and science and a narrower range of other subjects.

- (c) At the Sixth Form a new examination is required to replace the present Sixth Form Certificate. This could be a half-way step to Bursary and set in terms of modules that comprise half the full Bursary courses, and possibly named Advanced School Certificate or something similar. A wider range of occupational and vocational options than available in the narrowed-down School Certificate would be offered in recognition of the Sixth Form's place as a major school exit point.
- (d) A 'framework' or 'overarching' award approach is particularly suited for those leaving school at the end of the Sixth Form (Year 12) and leaving with a range of different types of qualifications, for example School Certificate, Unit Standards and (redesigned) Achievement Standards, and the new Sixth Form examination. This could be by aggregation involving a scoring system for the subjects and courses taken – not on some attempted common currency of Unit or Achievement Standards.
- (e) Achievement Standards must be redesigned to overcome reliability, pedagogy and workload problems and to restore subject integrity. This can be achieved by:
- introducing overall subject scores or marks;
  - ensuring that what is assessable by externally set and marked examinations is so assessed and that internally assessed components are moderated against external assessments or against an externally set and marked general test; and
  - assessment should allow for comparisons of students' performances and assessment criteria should include the content to be covered and level descriptors.
- (f) Some criteria need to be established about which non-state qualifications are to be recorded on the NCEA while recognising that some might stand outside the NCEA.

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## APPENDIX A

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### Education Forum

The Education Forum has been formed to contribute to education policy through research and debate on the current issues, structures, and expectations at all levels of New Zealand education.

The Forum believes that New Zealand education requires an approach to learning and achieving which encourages all individuals to reach their full potential, and which will take New Zealand to the leading edge of international performance and achievement.

The Forum is an association of individuals who have a common concern for the future direction of New Zealand education. The membership is drawn from primary, secondary and tertiary sectors of education, together with leaders of industry and commerce.

The principles incorporated in the above statements include the following:

- A commitment to excellence and high expectation in all human endeavour, based on a lifelong desire for learning.
- The belief that the community/government should ensure that all young New Zealanders have access to quality education.
- The teaching of values and life skills which will preserve the dignity of the individual and the integrity of the family.
- The acceptance of healthy competition for both individuals and the education sector.
- The encouragement of cooperation, creativity, adaptability and enterprise.
- The encouragement and recognition of personal responsibility, goal setting and achievement in all endeavours, through self-discipline and hard work.
- The acceptance of a compulsory core curriculum in primary and secondary schools.
- The necessity for high standards of assessment of student performance and of accountability of teachers and institutions.
- The promotion of a New Zealand cultural identity.
- The key involvement and responsibility of parents in their children's education.
- The emphasis on the value of parental choice and the self-management of education institutions.
- The development of closer links between education institutions and industry.

**PO Box 38–218 Auckland 1730**

**Telephone: 09–273–1860 Facsimile: 09–273–1861**

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## APPENDIX B

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### Members of the Education Forum

Mr Byron Bentley  
Principal  
Macleans College

Mr Simon Carlaw  
Chief Executive  
New Zealand Manufacturers Federation

Mr John Fleming  
Principal  
Pt Chevalier School

Mrs Alison Gernhoefer  
Principal  
Westlake Girls' High School

Dr John Hinchcliff  
Vice-Chancellor  
Auckland University of Technology

Mr Roger Kerr  
Executive Director  
New Zealand Business Roundtable

Mr Allen McDonald  
Retired Secondary School Principal

Mr John Morris  
Headmaster  
Auckland Grammar School

Mr Roger Moses  
Headmaster  
Wellington College

Mr Phil Raffills  
Principal  
Avondale College

Mr John Taylor  
Headmaster  
King's College

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## APPENDIX C

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### Education Forum Reports and Submissions on the Curriculum Framework and Constituent Curricula

#### English in the New Zealand Curriculum

A submission on the draft, prepared with the assistance of Professor CK Stead

April 1994

#### Curriculum, Assessment and Qualifications

An evaluation of current reforms by Michael Irwin

May 1994

#### Mathematics in the New Zealand Curriculum

A review by Professor Geoffrey Howson

August 1994

#### The Relationship Between Science and Technology in the New Zealand Curriculum

A paper by Professor Edgar W Jenkins

November 1994

#### Technology in the New Zealand Curriculum

A submission on the Draft, prepared with the assistance of Andrew Breckon

November 1994

#### Social Studies in the New Zealand Curriculum

A submission on the Draft, prepared with the assistance of Dr Geoffrey Partington

August 1995

#### Science in the New Zealand Curriculum

A review by Professor Peter Kelly

November 1995

#### Social Studies in the New Zealand Curriculum

A Submission on the Revised Draft, prepared with the assistance of

Dr Geoffrey Partington

October 1996

#### Health and Physical Education in the New Zealand Curriculum

A submission on the Draft, prepared with the assistance of Professor David Aspin and the Reverend Dr Murray Rae

September 1998

#### The Arts in the New Zealand Curriculum

A submission on the Draft, prepared with the assistance of Professor David Aspin

November 1999

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## REFERENCES

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- American Federation of Teachers (AFT) (1993), *AFT Criteria for High-Quality Standards*, American Federation of Teachers, Washington.  
<http://www.aft.org/research/reports/charter/csweb/c.htm>
- American Federation of Teachers (AFT) (1999), *Making Standards Matter 1999*, American Federation of Teachers, Washington.  
<http://www.aft.org/edissues/standards99/judging.htm>
- Austin, L (2000), "Shades of 19th Century in Using Overseas Exams", *New Zealand Herald*, 29 June.
- Brown, T and Ball, S (1992), *A Report on the VCE Verification Process*, The Victorian Board of Studies, Melbourne.
- Creech, W and Donnelly, B (1998), *Assessment for Success in Primary Schools*, Green Paper, Ministry of Education, Wellington, May.
- Dearing, R (1996), *Review of Qualifications for 16–19 Year Olds*, School Curriculum and Assessment Authority, London, March.
- Department of Education, Employment and Training (DEET) (Victoria) (2000), *Ministerial Review of Post Compulsory Education and Training Pathways in Victoria*, Interim Report, Department of Education, Employment and Training, Australia, April.  
<http://www.eduvic.vic.gov.au/>
- DfEE (1997), *Qualifying for Success: A Consultation Paper on the Future of Post-16 Qualifications*, London.
- DfEE (1999), "A Level Curriculum Will Guarantee Standards", *DfEE News*, 19 March.
- Donnelly, K (1997), *Asian Education Research Project*, Education Strategies, Melbourne, January.
- Donnelly, K (2000), *New Zealand's National Certificate of Educational Achievement (NCEA): An International Perspective*, Education Forum, Auckland.
- Education Forum (1998), *Policy Directions for Teacher Education and Training in New Zealand – A Submission on the Government Green Paper "Quality Teachers for Quality Learning, a Review of Teacher Education"*, Education Forum, Auckland, July.
- Education Review Office (ERO) (2000), *In Time for the Future – A Comparative Study of Mathematics and Science Education*, Education Review Office, Wellington, June.
- Fancy, H (2000), Letter to Michael Irwin of the New Zealand Business Roundtable, 4 April.

Hall, C (1999), *Evaluation of the Year 12 English Study Design Trial 1998*, Victoria University of Wellington, Wellington, February.

Hall, C (2000), "National Certificate in Educational Achievement: Issues Related to Reliability, Validity and Manageability" (publication pending).

Irwin, MDR (1994), *Curriculum Qualifications and Assessment – An Evaluation of Current Reforms*, Education Forum, Auckland, May.

Irwin, MDR, Elley, WB, and Hall, C (1995), *Unit Standards in the National Qualifications Framework*, Education Forum, Auckland, May.

Irwin, MDR (1997), "The National Qualifications Framework: Where to Now?", *ACCESS*, Volume 16, Number 2, pp 14–26.

Irwin, MDR (1999a), "A Decade of Curricular Reforms", in Thrupp, M (ed), *A Decade of Reform in New Zealand Education: Where to Now?*, School of Education, University of Waikato, Hamilton.

Irwin, MDR (1999b), "Achievement 2001", NZCER Examining Assessment Conference, Wellington, October.

Irwin, MDR (1999c), "Achievement 2001, or yet another Educational Disaster Looming", a special bulletin published by the Education Forum, October.

Locke, T and Hall, C (1999), "The 1998 Year 12 English Study Design Trial: A Standards-based Alternative to Unit Standards", *New Zealand Annual Review of Education* 8, pp 167–187, School of Education, Victoria University of Wellington, Wellington.

Locke, T (1999), "Lacks of Achievement 2001", *English in Aotearoa*, 39, 62–67.

Manno, B (1994), *Outcomes-Based Education: Miracle Cure or Plague?*, Hudson Institute Briefing Paper Number 165, June.

McMahon, T (2000), Letter as Project Manager, Qualifications Development Group, to Michael Irwin of the New Zealand Business Roundtable, 7 April.

Ministry of Education (1993), *The New Zealand Curriculum Framework*, Learning Media, Wellington.

Ministry of Education (1996), *Education Statistics of New Zealand 1996*, Data Management and Analysis Division, PO Box 1666, Wellington.

Ministry of Education (1997a), *A Future Qualifications Policy for New Zealand: A Plan for the National Qualifications Framework*, Green Paper, June.

Ministry of Education (1997b), *Education Statistics of New Zealand 1997*, Data Management and Analysis Division, PO Box 1666, Wellington.

Ministry of Education (1998a), *Education Statistics of New Zealand 1998*, Data Management and Analysis Division, PO Box 1666, Wellington.

Ministry of Education (1998b), *Secondary School Qualifications Improved and Updated for 21st Century*, Media Release, 5 November 1998.

Ministry of Education (1999), *Developing Achievement Standards*, Issue 1, Wellington, June.

Ministry of Education (2000a), *Education Statistics of New Zealand 1999*, Data Management and Analysis Division, PO Box 1666, draft in preparation, Wellington.

Ministry of Education (2000b), *Achievement 2001: Frequently Asked Questions*.  
[www.minedu.govt.nz/schools/quals/ncea.html](http://www.minedu.govt.nz/schools/quals/ncea.html)

Ministry of Education and New Zealand Qualifications Authority (2000), *The National Certificate of Educational Achievement: An Introduction for Parents and Students*, booklet published by the Ministry of Education and the New Zealand Qualifications Authority, Wellington. This booklet is undated but is thought to have been released in early 2000.

Morris, J (2000), "Levelling Tall Poppies: Current Educational Trends. Should We Be Worried?". Speech to Epsom National Party breakfast meeting, 23 June.

*New Zealand Education Review* (2000), "Aggregate Entrance Mark Sought", 17 March.

New Zealand Qualifications Authority (1996a), *History Assessment Guide*, Wellington, November.

New Zealand Qualifications Authority (1996b), *Physics Assessment Guide*, Wellington, November.

Qualifications and Curriculum Authority and Department for Education and Employment (1999), *The National Curriculum for England*, London, November.

Reynolds, D (1996), *Worlds Apart? A Review of International Surveys of Education Achievement involving England*, HMSO, London.

Smithers, A (1997), *The New Zealand Qualifications Framework*, Education Forum, Wellington.

Stedman, G (1996), "Assessment, Accountability and the 1995 School Certificate Science Examination", *New Zealand Annual Review of Education*, Victoria University of Wellington, Wellington.

Stevenson, H and Stigler, JW (1992), *The Learning Gap*, Summit Books, New York.

Stigler, J (1999), *The Teaching Gap*, The Free Press, New York.

Wolf, A (1995), *Competence-Based Assessment*, Open University Press, Buckingham.

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## LIST OF ACRONYMS

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AFT	American Federation of Teachers
APEC	Asia-Pacific Economic Cooperation
AS	Advanced Subsidiary
CATs	Common Assessment Tasks
DEET	Department of Education, Employment and Training
DfEE	Department for Education and Employment
ERO	Education Review Office
ESD	English Study Design
GAT	General Achievement Test
GNVQs	General National Vocational Qualifications
IEA	International Association for the Evaluation of Educational Achievement
ITOs	Industry Training Organisations
NCEA	National Certificate of Educational Achievement
NQF	National Qualifications Framework
NVQs	National Vocational Qualifications
NZEST	New Zealand Education and Scholarship Trust
NZQA	New Zealand Qualifications Authority
OBE	Outcomes-based education
OECD	Organisation for Economic Co-operation and Development
QCA	Qualifications and Curriculum Authority
TIMSS	Third International Mathematics and Science Study 1995
VCE	Victorian Certificate of Education