The Impact of Research on the Evolution of Secondary Qualifications in New Zealand

David Philips

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Abstract

This paper provides a mini case study of the reform of secondary qualifications in New Zealand from the late 1990s to the present. It attempts to show how a significant reform continues to develop after its implementation using a model based on stages of policy adoption. It focuses upon three issues that needed to be addressed in order for the new National Certificate of Education (NCEA) to be more fully integrated into the New Zealand education system. Reforms in New Zealand are often reviewed by other systems looking to enhance their own systems.

Introduction

As countries over the past ten years have reformed their national qualifications systems, secondary school qualifications have evolved in keeping with the criteria underpinning the new qualification frameworks. Changes to secondary qualifications in New Zealand since the early 2000s, as part of implementing the National Qualifications Framework (NQF) - the NQF has ten levels with levels one to three equating to the last three years of secondary education and level ten being a doctorate - have interested other education jurisdictions developing national qualifications frameworks and revamping their secondary qualifications.

The focus of this paper is on how research into and reports on aspects of the reform of secondary qualifications, i.e., those available to students in secondary schools, have contributed to the reshaping of the secondary qualifications. This paper describes the original design of the National Certificate of Educational Achievement (NCEA) progressively implemented in New Zealand schools from 2002 till 2004 and analyses how it has been modified into its current shape (mid-2012). Using a model first applied in The Switchmen of History this paper highlights the relative contributions of research findings, stakeholder comment and government intervention on the shape of the NCEA over approximately ten years. The model provides a theoretical framework based upon stages in educational policy development, including the behaviour of policy making actors (ministers and government agencies), the teaching profession, students and parents.

Why New Zealand? And why talk about this at BERA? In a number of forums, the New Zealand curriculum and qualification system have been cited as a model for standards based approach towards educational achievement. More recently, for example, it was one of the countries investigated as part of the background to the Expert Review of the Curriculum in England and Wales. The types of issues that have arisen as part of embedding the new qualification system over the past twelve years may serve as useful examples for other jurisdictions as they evaluate their own educational practices and ways of improving them.

Background
Many countries over the past decade have either launched major reforms of their qualifications or continued to enhance reforms that were begun earlier. These reforms are part of a global effort to tighten the links between education and the economy, firstly in order to ensure a better return for government investment by reducing the time taken to gain qualifications, to make the requirements more transparent and to emphasise the quality of the qualifications and the agencies where the qualifications are gained, and secondly to increase the levels of skill in the workforce and therefore the employability of workers. In New Zealand various policies were implemented to assist in meeting these goals, including defining the standards that students are expected to achieve in their learning at successive stages and in different subjects and for the award of qualifications.

Educational reforms always have a history and appear to be always a work in progress. While the evolution of the development of the NCEA is not the primary focus of this paper, as part of understanding how secondary qualifications in New Zealand have changed in recent decades, various models were developed as part of a doctoral study in the mid-1990s. In one of the models, seven phases of policy development were posited: accumulation, or noting ideas or policies being used in other countries; incubation, or noting that some of these ideas or policies may provide solutions to problems in one’s own country; assimilation, or the emergence of a preferred policy solution in official policy documents; translation, or developing the preferred policy solution into specific ideas or policies; contextualisation, or setting the policy into the local, national context; refraction, or meeting any responses, including conflicting ones, from the community affected by the policy, and making appropriate adjustments; and resolution, or arriving at a preferred solution to the policy issue. For the purposes of this paper the last four stages are the most pertinent.

In each of these stages it is possible to map the stakeholders’ or actors’ behaviours, the issues and/or debates, the reports produced, including research studies, government papers and/or academic critiques, and the ‘settlements’ or positions reached, however temporary. Some of the critical moments in the life of the NCEA are grouped as part of a timeline within this paper according to some of the stages in this model with a brief commentary highlighting some of the key reports and policy decisions affecting the nature of the NCEA.

Prior to the implementation of the NCEA concerns were already being expressed about the likely implications of the National Qualifications Framework for secondary school qualifications (Philips, 1998, Lee & Lee, 2001; Hall, 2001). As a result, while the NCEA was initially being implemented, the New Zealand Qualifications Authority (NZQA) conducted research on its impact, including students’ and teachers’ responses to the NCEA, stakeholders’ perceptions of its challenging features and recommendations for potential improvements. Critiques by academics, educators and the public were analysed. Other agencies, such as universities and independent policy think-tanks, also conducted research. These studies collectively included surveys, interviews with students and teachers (e.g., on management of assessment, assessment and course design, targeting of student achievement), observations within classrooms and literature reviews (e.g., on standards-based assessment) and the views expressed were noted and taken into account when policy or procedural changes were being evaluated.

For convenience the immediate phase preceding the NCEA’s implementation is called ‘Translation’ whereby the Government’s intent to reform secondary qualifications is ‘translated’ into action. Key activities included:
Late 1997, the New Zealand Government announced a policy called ‘Achievement 2001’, involving a complete overhaul of the secondary school qualifications system. Under the new system, students would be assessed at three, or possibly four, levels of the same qualification, to be called the National Certificate of Educational Achievement, which would be registered on the National Qualifications Framework.

In 2000, the start date for the new qualification was delayed a year, to 2002, because the system was deemed to be not ready, either at school level or at central agency level.

The National Certificate of Educational Achievement

Following the announcements of the planned changes, the National Certificate of Educational Achievement (NCEA) was introduced as the main secondary school qualification between 2002 and 2004. This phase can be called ‘Contextualisation’, and the key steps were:

- In 2002, NCEA Level 1 was introduced and the first group of students and teachers began to experience the new qualification.

- Over 2003 and 2004, Levels 2 and 3 were introduced, and also the separate Scholarship examination, which was registered on the Framework at Level 4, but whose content was derived from the Level 3 standards.

- As each level was introduced, the previous qualification at that level was discontinued, except the Year 12 qualification, Sixth Form Certificate, which was allowed to continue for a further two years by schools that were not ready to move to Level 2 in 2003.

- In September 2004, the Minister of Education, Hon. Trevor Mallard, announced at a PPTA Annual Conference, that there would be a low-key review of the NCEA system during 2005, to inform strategic planning of future work to refine the qualification system.

- By the end of 2004, the qualification was firmly entrenched in New Zealand schools, and the first phase of implementation was complete.

The NCEA replaced School Certificate, University Entrance, Sixth Form Certificate and University Bursary qualifications.

The following description provides a context for later comment and gives an overview of the new secondary qualifications. The New Zealand school education system comprises 13 years. Children may start school at age five and the majority do so, although schooling is not compulsory until the age of six and remains compulsory until age 16. There is a compulsory national curriculum for Years 1 - 10. Students progress to the next year of schooling at the beginning of each school year, except for entry to Years 12 and 13, in which case each school decides its own policy. Multi-level study in Years 11, 12 and 13 is common. Most students remain at school at least until Year 11, although retention rates at Years 12 and 13 are reasonably high. A few schools offer Year 14 programmes.

The NCEA is a qualification registered on New Zealand’s National Qualifications Framework (NQF). It is available at three levels: NCEA Level 1, which is a Year 11 qualification; NCEA Level 2, a Year 12 qualification; and NCEA Level 3, a Year 13 (final secondary) qualification. Students do not necessarily complete the qualification in the Year level stated. Since 2004, school leavers present results related to the NCEA and other nationally registered qualifications to gain entrance to university. These
results are gained in nationally registered unit standards and achievement standards, both of which have specified learning outcomes and assessment criteria. All standards are assigned a credit value, which represents the extent of learning involved. Credit is awarded in each standard when the required level is achieved. High performance may be recognised in achievement standards through merit and excellence levels. Results for unit standards are reported as achieved credit only. Assessment for the NCEA is both internal, or school-based, and external, through examinations conducted by NZQA. These are generally written examinations, or for some subjects based on inspection of portfolios of student work. Each subject grouping includes both internally and externally assessed standards. All unit standards are internally assessed.

A full year’s study in a subject is represented by standards totalling between about 20 and 24 credits. Schools make their own decisions about how many standards will be assessed over a full year’s study in each subject and, as standards vary in credit value (usually between 3 and 6 credits), the number of credits a student may potentially gain varies by subject. Generally, students study five subjects, but they may combine ‘full subjects’ and ‘part subjects’ depending upon the organisation of a school’s teaching and learning programmes; hence they are likely to be enrolled for between 100 and 120 credits.

Students build upon NCEA Levels 1 and 2 to achieve NCEA Level 3, which is designed to acknowledge achievement across a range of learning areas in the New Zealand curriculum and provides an advanced foundation for further study or employment. Students certified at Level 3 are identified as having the knowledge and skills to solve unfamiliar problems, access, analyse and use information effectively and work independently. All NCEA awards are gained by accumulating credits. Level 3 requires a minimum of 80 credits, 60 of which must have been achieved at this level, and 20 at Level 2 or above. The NCEA Level 3 replaced the University Entrance, Bursaries and Scholarship awards in 2004.

At the same time that the new qualifications were being embedded within the New Zealand education system, several aspects were considered to be flawed by teachers and principals, with substantial criticism of the Government’s NCEA policy. For the purposes of this paper, these aspects were ‘refracted’ or seen in a new light and raised issues that led to a re-evaluation of some aspects of the policy, a phase that can be called ‘Refraction’. A small number of issues illustrating refraction are analysed, based on research studies and other reports addressing these issues. These include: tightening up the consistency of results; how changes have been made to the activities required in order to maintain consistent interpretation of standards; and ways of increasing student motivation.

Analysis of Issues Arising from the Implementation of the NCEA

Issue One: Improving the consistency of reported results

In the first three years of the implementation of the NCEA, the proportion of results of each of the ‘Achieved’, ‘Merit’ and ‘Excellent’ levels awarded for each standard varied from standard to standard, and within a particular subject. Such variation was not considered problematic by central authorities, as it was accepted that some standards were more difficult to achieve than others both within a subject and between subjects. This also applied across the successive levels, i.e., NCEA level one, NCEA level two and NCEA level three. However, some schools/teachers and parents were concerned about what was perceived to be too much variability in results and this issue came to a
head when the results of the 2004 Scholarship examination were released as the number of Scholarships awarded in some subjects was considerably different from the last year of the old Scholarship examination.

As a result, the State Services Commission was asked to conduct an enquiry. Its report was released in July 2005 in response to a request by the Associate Minister of Education to assess whether the apparent variation in NCEA results both between subjects and between years (where valid comparisons are possible) reflects deficiencies in NZQA systems.

The review team found that, notwithstanding implementation difficulties, NCEA was enhancing learning outcomes for students and improving teaching practice. Overall, it was acknowledged that the implementation of the NCEA had been a massive undertaking and NZQA deserved credit for what had been achieved to date, as did the teaching profession. However, NZQA’s focus on the implementation of the NCEA was not considered to be sufficiently strategic and the implementation path to have been too steep.

The review team made a number of recommendations to NZQA regarding the administration of NCEA, including that:

- NZQA should implement a scaling system for results that are outside the bands of accepted tolerance, unless there is a defendable explanation for that variation.
- NZQA should look at ways it can improve the validity of moderation by randomly sampling student work and opening all standards to selection for moderation
- Schools should report to NZQA when students fail to achieve standards (they were previously not required to) and NZQA should develop a nationally consistent approach to reporting non-achievement.

Addressing these recommendations led to much closer monitoring of the variability of students’ results across Scholarship subjects and the achievement standards making up the NCEA, as well as the implementation of changes to the reporting of non-achieved standards. Staff at NZQA conducted analyses to determine the acceptable range of performance for each level (Excellent, Merit, Achieved and Not Achieved) for each standard and the percentages of students attaining each level were closely checked while marking was taking place each year. Similarly, for Scholarship, an expert group checked the percentage of students gaining awards in each subject to ensure that they remained within an acceptable range. These activities bolstered the public’s and politicians’ confidence in the quality and consistency of the students’ results.

**Issue Two: Improving consistent interpretation of standards**

Since the initial implementation of the NCEA, in common with most qualifications, a strong emphasis has been placed on moderation, i.e., ensuring that the standard (or description of what needs to be demonstrated by the learner to show that the requirements for gaining credit have been met) is interpreted consistently by all teachers and assessors, across all sites. To promote national consistency of judgements against the achievement and unit standards, moderators check samples of students’ work marked in selected subjects across samples of schools.

Both internal and external assessments involve moderation and moderators. In external assessment, independent moderators review papers set by external examiners, and evaluate
whether the papers and associated marking schedules are valid instruments for assessing the relative standard. Moderation for internal assessment occurs both internally and externally. Teachers send away assessment activity, marking schedules and samples of, student’s work to NZQA moderators, who check that the teachers’ judgements are at the national standard, and then send a report back to the principal. Moderators are contractors, not full-time employees, and must be qualified subject teachers, tutors and school advisors.

Some teachers were concerned that the external moderation of internal assessment system lacked credibility for several reasons. Some thought there should be more moderation that the current level was inadequate to make a full determination of quality and was not tough enough. They were also concerned about inconsistencies in moderator judgements and of ‘pettiness’ by moderators and believed that they should be able to enter into dialogue with moderators when communication between them was forbidden during moderation. There were also concerns about the lack of knowledge around the moderation appeals process and the disincentives for teachers to use it. The PPTA recommended that the moderation system be urgently reviewed.

In a study conducted by NZQA (2007) examining how teachers had changed their moderation practices with level 3 NCEA, most participants reported that internal moderation was more common and regarded if as a positive feature of the new system, and many noted that it was now a more formalised process. Teachers commonly reported on increase in check marking, generally conducted with other features in the department. Some also reported an increase in working with teachers in other schools while others commented that the amount of dialogue around student work had increased with each year of level 3 standards. A few teachers raised issues, including the increased amount of time required to implement internal moderation and the difficulty of finding time to meet with other teachers.

Teachers were mostly positive about the increase in external moderation that occurred with Level 3 standards. Minimal changes in teachers’ practice were noted regarding external moderation over the first three years of Level 3 NCEA. Teachers reported a variety of approaches when sending assessments to NZQA for moderation. Some teachers disregarded the policy of submitting borderline assessments due to pressure from school management. Concerns about the external moderation process included the consistency of standards across schools and the lack of detailed feedback from moderators. Suggestions were made for more contact between teachers and moderators, and for teachers to be seconded to work in schools as full-time moderators.

In the three years of the study, however, teachers mentioned concerns about the lack of consistency between schools, the lack of detailed feedback, the frequency and timing of moderation and the anonymity of moderators. In addition, several teachers recommended an alternative moderation system, with teachers being seconded to work in schools as fulltime moderators.

**Issue Three: Increasing student motivation**

A report based upon teachers’ views of the NCEA (NZPPTA, 2005) commented that student behaviour demonstrated a greater concern with credit accumulation than with learning. Students in the middle range of ability were more likely to take a minimalist approach, with some stopping work once they had achieved the number of credits necessary for the relevant certificate. Research conducted by NZQA also indicated that many students were adopting a strategic approach towards
the collection of credits, not only on the basis of which credits were easiest to attain but which ones would allow them to demonstrate higher levels of achievement.

It is difficult to investigate students’ motivation to achieve under the NCEA without also exploring the phenomenon of credit collection. Credit collection can be defined as a range of behaviours focused on the accumulation of credits for qualifications rather than learning. This includes students choosing only to attempt a task when it is formally assessed, a focus on just gaining ‘Achieved’ credits rather than higher levels of achievement, and opting out of assessments that are worth a low number of credits. In this study the term credit collection encompassed both the general accumulation of credits and the strategic accumulation of credits to limit workload.

Credit collection and concerns with student motivation were the two dominant themes to emerge from the study Assessment Practices of Level 3 NCEA Teachers in relation to impacts of Level 3 NCEA on students. The two themes appeared to be inextricably linked. Students who credit counted often lacked motivation to participate in non-assessed activities, limited their efforts to attain ‘Achieved’ grades and focused on gaining only enough credits to attain Level 3 and university entrance. These two issues were commonly reported together in literature and were also interwoven throughout discussions with many teachers. This section therefore discusses the two themes simultaneously.

In this study, most teachers perceived the change from Bursary in student motivation and the adoption of credit collection behaviour as negative. A myriad of possible factors influencing student motivation and/or the credit focus of students was identified by teachers, many of which were consistent with the factors identified in the research above including:

- The ability to ‘pick and choose’ assessments
- Lack of participation in the classroom
- A focus on ‘Achieved’
- Preference for internal standards
- Results focused for tertiary study
- Lack of competition
- School culture and politics
- Personality traits

The relationship between teachers and students appeared to play an important role in how issues such as credit collection were dealt with in the classroom and school. It was claimed that teachers fed into the credit collection cycle through encouraging achievement in assessment, which most often involved discussing credits. Some reported that this gave the direct message to students that if a classroom activity did not involve credits, it was not worth the effort.

Teachers generally acknowledged that they needed to encourage pupils to aim for higher levels of achievement. Evidence suggested that teachers were putting more emphasis on achieving at a higher level with some clearly spending the time to reflect on their practices and to make changes to increase student motivation and lessen the credit collecting behaviour.
The key findings from this study were that teachers observed a range of credit collecting behaviour and motivation levels of students, student motivation and credit collection behaviour remained significant concerns, there was some evidence to suggest that student motivation was improving and credit collection behaviour was diminishing and increased student awareness of the importance of ‘Merit’ and ‘Excellence’ results for entry into some tertiary courses. On the other hand, most teachers perceived credit collection behaviour negatively, with some believing that while it showed smart and strategic decision making by students facing high workloads, there were potential risks for on long-term learning. As a result, some teachers, departments and schools were developing strategies to combat low student motivation and the negative aspects of credit collection behaviour.

The study by Meyer et al grouped students into two categories, those with a high motivation orientation and those with a low motivation orientation. The statistics on the relationship between motives and numbers of achieved standards showed that there was a negative relationship between the motive to do just enough and the number of credits achieved. This meant that those students who reported this motive were acquiring fewer credits. This may mean that many of them will not obtain enough credits to actually get by, because people do not always achieve exactly what they aim for. So students aiming to do just enough may actually fail to achieve their goal, not because they lack the required ability but because their motivation orientation leads them to achieve less than they are capable of. If these same students are motivated to do their best, they are more likely to pass the required number of credits, and also obtain Merit and Excellence grades.

Students scoring high on wanting to demonstrate Excellence were likely to have a higher grade average on achievement standards, more likely to achieve credits with a grade of Merit or Excellence, and accumulated achievement standards rather than unit standards. Students who chose subjects based on future goals or personal interest in or enjoyment of the subject were more likely to enrol in achievement standards and showed higher academic achievement. They were less likely to take unit standards, more likely to achieve a grade of Merit or Excellence on achievement standards, and had higher grade point averages (GPAs) overall (results likely to be affected by increased opportunities associated with achievement standards in comparison with unit standards). Students who gained unit standard credits were likely to gain fewer achievement standard credits, and they were more likely to select subjects based on external influences than because of either future goals or interest.

There was evidence that certain design features about the assessment of achievement standards were disincentives to maximising student motivation and achievement, for both high achievers and all students. These included the ability to not do parts of a course that the student did not like, not completing assessments where the student expected to do poorly, being able to avoid subjects and standards seen as challenging to one’s learning, and not sitting external examinations, particularly once the student has achieved the minimum number of credits needed. Such features were considered to have a negative long-term impact on persistence and endeavour factors seen as necessary for being successful in the future. The students who commented were adamant about what they saw was an illogical and unfair system where it was possible to fail certain achievement standards despite passing Merit or Excellence questions. Those students who attained primarily unit standards showed less positive motivation orientations and more limited achievement outcomes than students who attain primarily achievement standards, where Merit and Excellence are available.
options. Some students commented on feeling disadvantage by the lack of opportunity to demonstrate Merit or Excellence for unit standards generally.

Other aspects where changes were considered necessary related to how student’s results were reported, including overall achievement in a subject (as only the components were graded) and the presentation of results as well as the name of results’ certificate.

The ‘Resolution’ of the NCEA
As a result of the research, criticisms and policy re-evaluation, a ‘resolution’ was reached about the shape of the NCEA. Key steps included the following:

- In November 2006, a new-look Record of Learning and Result Notice was developed.
- In 2007, a suite of improvements to the NCEA were announced by the Minister of Education. Among the first to be announced in July was NCEA certificate endorsement designed to recognise student achievement at Merit or Excellence level across all learning areas. In November, ‘Managing National Assessment’ reports for secondary schools were made available online.
- From the beginning of 2008, full-time moderators took up their appointments as part of a process to increase the amount of internally assessed student work undergoing moderation (approximately 10%).
- Reporting of Not Achieved results was introduced for internally assessed standards, and in March, a new monitoring process was announced, which would compare internal and external assessment data for NCEA.
- In April 2008, the Record of Learning was renamed Record of Achievement, to better reflect its purpose. In May, random selection of internally assessed student work for external moderation was introduced, to increase public confidence in the credibility of internal assessment.
- In July 2009, consultation was completed on the draft level 1 standards and draft level 1-3 subject matrices. New rules on further assessment opportunities for internally assessed standards were introduced in July 2009, allowing one further assessment opportunity (re-sit) per student per standard per year.
- In April 2010, Education Minister Anne Tolley announced the introduction of Course Endorsement for NCEA, to begin in 2011. Course Endorsement enables students with strong performances in individual courses to gain Excellence or Merit endorsements in those courses. Students will receive an Excellence endorsement for a course if they gain 14 credits at Excellence level, while students gaining 14 credits at Merit (or Merit and Excellence) will gain a Merit endorsement. To ensure students are capable of performing well in both modes of assessment, in most courses at least three of the 14 credits must be from internally assessed standards, and three from externally assessed standards.
Conclusions

Research findings have played a significant role in modifying the NCEA, particularly in shifting focus from a wide range of standards with three broad levels of achievement to more tightly defined standards and increased recognition of achievement overall and within subject clusters. As in other countries, however, the evolution of secondary qualifications’ policy is complex, stemming as much if not more from advocacy by influential stakeholders, such as school principals and academics, and ministerial interventions, as from research. In New Zealand the concerns of different stakeholders appear for now to have been addressed and the NCEA after twelve years is more accepted as an integral part of the education landscape.

References


Dr David Philips
Executive Director
Assessment and Reporting Division
Victorian Curriculum and Assessment Authority

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