Final Report

The Impact of the NCEA on Student Motivation

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Submitted by

Luanna Meyer, John McClure, Frank Walkey,
Lynanne McKenzie & Kirsty Weir

College of Education and School of Psychology
Victoria University of Wellington

TE WHARE WĀNANGA O TE ŪPOKO O TE IKA A MĀUI

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of analyses; and supported ongoing communications between our project staff and key MOE and NZQA staff as needed. Kirsty Weir was also crucial to our ability to carry out this project. She not only assisted with the focus groups, she also carried out the majority of our statistical analyses—often responding on short notice to sudden insights requiring just *one more table*.

Of course, none of this would have been possible were it not for the willingness of the thousands of secondary school students who completed surveys and participated in focus groups and individual interviews. These young people didn't have to participate in a research project that meant filling out yet another "measure" nor did they have to spend time with our interviewers—adults who were unfamiliar to them but whom they trusted to share their ideas and perceptions. We are grateful to them and believe that their willingness to participate in this knowledge discovery process bodes well for the next generation of parents, teachers and those in the community who will ultimately be responsible for New Zealand's educational system and outcomes.

Luanna Meyer
John McClure
Frank Walkey

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EXECUTIVE SUMMARY

The Impact of NCEA on Student Motivation project was funded by a Ministry of Education research contract awarded to researchers at Victoria University in the College of Education and the School of Psychology. This multi-method research project investigated the relationship between New Zealand's National Certificate of Educational Achievement (NCEA) and student motivation to learn based on survey and interview data with a large sample of students from 20 demographically representative secondary schools from throughout the country. Students in these schools attending Years 10, 11, 12 and 13 in 2005 participated in the research from late 2005 to early 2006, completing a self-report survey and allowing access to official achievement records where available. Student input was also obtained through focus group and individual interviews. Focus groups with parents and teachers provided additional input regarding issues raised from the student voices.

These data were analysed both quantitatively and qualitatively as appropriate, providing evidence of interrelationships among how students think about study choices, their school learning and various aspects of NCEA and other assessments. For students in Years 11-13, these self-reports were correlated with actual student achievement and other self-reports regarding future plans and what they liked or disliked about NCEA and the Record of Learning (ROL). The results provide a substantive source of information regarding student perspectives on motivation and NCEA and the relationship of those attitudes and predispositions to their actual academic achievement and learning patterns.

Key findings are consistent with existing motivation theory and research but also reveal issues specific to NCEA of relevance to school efforts to maximise student motivation and academic performance. Our key findings include information regarding strengths associated with features of NCEA as well as concerns regarding some qualifications design aspects that might require modification to enhance the likelihood of achieving the original goals set for implementation of NCEA as a standards-based qualification.

Key Findings

In this section, we present key findings organised into four areas: influences on subject choices, the relationship of achievement and motivation orientation, qualification design issues, and understandings about NCEA. We also provide an overall summary of areas of major agreement regarding positive perceptions about certain features of NCEA and concerns regarding the impact of some aspects of NCEA that might be modified or adapted to better support student learning and motivation.

Influences on Subject Choice

- Students predominantly chose subjects because they were of interest to them and, secondly, because the subject was related to a future job or career goal. They were less influenced by advice from parents, friends, or school personnel such as teachers, deans or careers advisors.

- However, students achieving fewer credits and with the lowest grade averages were more likely to choose subjects because of external factors such as what their friends were doing, or chose options that fitted into their schedule or part-time work commitments.

- Girls were more likely than boys to make subject choices based on future career goals and personal interests, but there were no gender differences for the influence of external factors.

- As students progressed in the senior school, influences on subject choice shifted towards selecting what interested them and what they need for future career or job goals. However, this finding could be affected by changes in the student population as well as maturation. Students more influenced by external factors at Year 11 may be those leaving school early, thus affecting findings for Year 13.

- Students in the senior school who were motivated by *Doing My Best* were most likely to select subjects based on interest and career goals, while students motivated by *Doing Just Enough* chose subjects because of external factors and not because of interest or career goals.

- Different motives for subject choice had significant relationships to what students like and dislike about NCEA. Students who chose subjects because of interest and importance for future goals were high on the *Getting Feedback* and *Excellence* and low on the *Work Avoidance* factors. Students who based subject choice on external factors were high on *Work Avoidance* and also somewhat high on *Getting Feedback*.

- Asian students attributed their subject choices to utility or importance more than European and Māori students, and Pasifika students attributed subject choices to this factor more than did European or Māori students. Māori and Pasifika students attributed subject choices to external influences more than European and Asian students; they were also less likely to attribute subject choices to interest than European and Asian students.

- Receiving a fee rebate was not related to subject choices based on interest, but was associated with being influenced by external factors and by the utility or importance of the subject more than for students not receiving a fee rebate.

Relationship of Motivation and School Achievement

- The strongest predictors of high academic achievement and higher grades were a high motivation orientation towards *Doing My Best* and a low motivation orientation towards *Doing Just Enough*. Longitudinal research with the Year 10 students could investigate whether early self-ratings on these motivation orientations predict student achievement.

- Self-reports of being motivated by *Doing Just Enough* predicted fewer credits achieved, and students who scored high on *Work Avoidance* were less likely to gain achievement standard credits overall or with Merit or Excellence, had a lower grade average, and were more likely to gain unit standards. The grade average finding is likely to be affected by disproportionately lower opportunity to demonstrate Merit on unit standards.

- The statistics on the relationship between motives and numbers of achieved standards show that there was a negative relationship between the motive to do just enough and the number of credits achieved. This means 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.

- Ethnicity was related to the numbers of unit standard credits attained, with Māori and Pasifika students achieving more unit standard credits than European and Asian students, and Asian students achieving fewer unit standards than European students.

- Getting feedback on their academic achievement was an issue for a diverse group of students and not only those who are either high or low achieving. Students from low decile schools were more interested in getting feedback than those from middle and high decile schools.

Qualification Design Issues

- There is evidence that the 80-credit requirement encourages a minimalist approach by students. Many students agreed that it was hard to be motivated to do more than the minimum 80 credits and many indicated there is little motivation to aim for Merit or Excellence when these credits carried no extra value.

- Students who commented on opportunities to attain Merit and Excellence generally expressed perceptions that the system did not adequately recognise achievement at the level of Merit and Excellence.

- Students commented that the current grade bands of Achieved, Not Achieved, Merit and Excellence were too broad and do not provide enough information on their learning and performance. Many students added suggestions for letter grades, options to score each achieved band as high/middle/low, and a system of percentage points.

- Some students wanted to be able to compare themselves with others, and many students wanted more feedback regarding their own performance. Students wanting comparison information were most likely to ask for percentage grades.

- Students were extremely positive about the mix of internal and external assessment, which they saw as an opportunity to guide their learning as they mastered learning goals and to spread their workload across the year.

- Students were more positive about internal assessment than external examinations, but many students felt strongly that external examinations were important as evidence of quality and consistency across schools and in order to have information that will be respected for University Entrance, by employers, and internationally.

- 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 include the ability to not do parts of a course that the student didn't 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 could 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 is 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 disadvantaged by the lack of opportunity to demonstrate Merit or Excellence for unit standards generally.

- Students expressed concerns about uneven opportunities for subject choices and access to study at the next level of NCEA across schools, with students at some schools reporting that they felt disadvantaged in comparison with students at other schools where more choices and opportunities seemed to be available.

- Students expressed perceptions that standards differed in level of difficulty and time required for assessment across subjects.

Understandings about NCEA

- Students interviewed late in Year 10 reported that their knowledge of NCEA was limited, but those interviewed again early in Year 11 reported that their schools and subject teachers had already provided them with information about NCEA generally, achievement standards, choosing subjects and accumulating credits towards the certificates.

- Students saw a number of positive features in NCEA, particularly with regard to its flexibility and choice options. However, there were also concerns expressed by some students, teachers and parents regarding whether all students were mature enough to make decisions that could have an important impact on future opportunities.

- Students and parents reported having read and seen media reports about NCEA that were primarily negative, and those who commented that things still needed to be "fixed" were also likely to state that they felt the system appeared to be getting better.

- Where students expressed personal concerns about NCEA, these focused primarily on issues important to them individually rather than on the system overall, such as getting feedback or more information from grade bands. Students were also most likely to express interest in the international reputation of NCEA and what employers or overseas universities think about NCEA.

- Students and parents interviewed early in 2006 reported that they had seen television advertisements about the Team-Up website, and they indicated they intended to visit the website though had not yet done so.

- Students reported that their parents did not understand NCEA unless they had an older sibling already involved in NCEA. During our interviews early in 2006, students and parents often mentioned that they had recently received information from school about NCEA.

- Parents indicated their strong support for NCEA in principle while showing a willingness to critique aspects that, from their perspective, require modification and improvement based on their judgement of impact on students.

Overall Key Findings: Positive Perceptions and Concerns

There was general agreement overall across teachers, parents and students as well as across our various data sources with regard to major key findings. These included generally positive perceptions regarding the impact of internal assessment on both teaching and student learning; more opportunities for success by lower achieving students who might otherwise have failed; and increased choice and flexibility that can be exercised by students in selecting areas of study and assessment. Students generally viewed internal assessment as enhancing their study patterns and performance as well as enabling them to pace their workload better than what would otherwise occur with only end of year examinations. They commented frequently as well about opportunities to improve their performance by repeating internal assessments. Teachers reported that internal assessment had sharpened their awareness of the effectiveness of their teaching and focused their teaching on those issues that were seen as most important and/or relating to the various achievement standards.

Areas of concern included perceptions by students and parents of inconsistencies and variability across subjects and schools, including what some saw as unclear, inconsistent and/or unfair marking and grading criteria and practices; whether aspects adequately motivate and recognise excellence; and certain patterns of credit accumulation seen as disincentives for students not already motivated to do their best. While positive about opportunities for all students to achieve different three levels of NCEA, students and teachers also expressed concern that the 80-credit requirement could be a maximum rather than minimum goal, negatively affecting motivation by some students to continue learning after attaining the credits needed. Teachers and parents were positive about the overall impact of NCEA on many students, particularly those who were low achieving, felt that high achieving students would work hard no matter what, but had concerns that some aspects of credit accumulation and assessments could motivate students to "do just enough" rather than do their best. Teachers and students were concerned about the possibility that assessment could drive teaching and learning rather than the curriculum. There was some concern by teachers that assessment could fragment subject understandings in some areas where integration, synthesis and/or evaluation across standards were seen as critical. There were many insightful suggestions regarding how the assessments and qualification aspects might be adapted or refined to address concerns.

Future Research Issues

Students' school performance will be influenced by their beliefs about their own abilities as well as by existing motivation orientations and personal characteristics such as perseverance. These in turn are influenced by demographic and environmental variables such as gender, ethnicity, socioeconomic status, family, school characteristics, and teacher behaviours—all of which can be relevant to the design of effective interventions that will have a positive impact on learning. Our findings are consistent with existing theory and international research evidence revealing strong relationships between school performance and motivation orientations and highlighting the need to incorporate understandings of student motivational orientations and beliefs into educational practice. These student dispositions and attributions are themselves amenable to change and can be influenced by what teachers do. In fact, there is strong support for the proposition that the design of effective interventions towards achieving a long-term impact on student learning outcomes requires consideration of student motivational orientations for anything other than short-term behaviour change.

Longitudinal research is required to investigate variables associated with enhanced student motivation and school learning and the design of effective interventions at secondary level towards positive educational outcomes. Findings for this large sample of students from Years 10-13 could provide a starting point for any future design alterations and modifications of teaching and assessment in our secondary schools. For example, the younger students in our sample could be followed forward to investigate the predictive validity of their responses on selected survey items to later actual achievement, providing a potentially useful tool to incorporate into the design and evaluation of interventions to better motivate student academic and school achievement.

Longitudinal research would also enable our educational system to monitor for unanticipated positive and negative side effects based on the actual evidence of student attitudes and achievement, rather than media reports or political agenda. Particularly when an educational innovation is motivated by presumed benefits to students, outcomes should be monitored to investigate those features of the innovation that are either working well or require modification. Recommendations from various stakeholder groups will be informed by perceptions of positive and negative aspects of the qualification for students and their learning, and this stakeholder input is important and relevant for determining the affordability, social acceptability and perceived utility of approaches to the assessment of learning outcomes and the award of qualifications. However, empirical evidence of patterns of impact on motivational orientations and student achievement is crucial to educational decision-making. Student voice and longitudinal data of student perceptions and educational achievements can offer compelling evidence to guide directions in educational policy and qualifications design.

Interestingly, we have only limited information about what parents know and think about various dimensions of our educational system and particular educational innovations in comparison with what we know about professional perspectives. Parents are key stakeholders in this process, were themselves part of the educational process at one time, and play a critical role in the governance of our schools. Future research might also include more information on parent perceptions and knowledge about the qualification and aspects of assessment of learning and achievement. In particular, their understandings of student motivational orientations can play an important part in the design and evaluation of educational approaches designed to enhance outcomes for our young people.

INTRODUCTION

Project Overview

The Impact of NCEA on Student Motivation project was funded by a Ministry of Education research contract awarded to researchers at Victoria University in the College of Education and the School of Psychology. This multi-method research project investigated the relationship between New Zealand's National Certificate of Educational Achievement (NCEA) and student motivation to learn based on survey and interview data with a large sample of students from 20 demographically representative secondary schools from throughout the country. Students in these schools attending Years 10, 11, 12 and 13 in 2005 participated in the research from late 2005 to early 2006, completing a self-report survey and allowing access to official achievement records where available. Student input was also obtained through focus group and individual interviews. Focus groups with parents and teachers provided additional input regarding issues raised from the student voices.

These data were analysed both quantitatively and qualitatively as appropriate, providing evidence of interrelationships among how students think about study choices, their school learning and various aspects of NCEA and other assessments. For students in Years 11-13, these self-reports were correlated with actual student achievement and other self-reports regarding future plans and what they liked or disliked about NCEA and the Record of Learning (ROL). The results provide a substantive source of information regarding student perspectives on motivation and NCEA and the relationship of those attitudes and predispositions to their actual academic achievement and learning patterns.

Key findings are consistent with existing motivation theory and research but also reveal issues specific to NCEA of relevance to school efforts to maximise student motivation and academic performance. Strengths associated with features of NCEA are highlighted, as are areas of concern that may point to specific design modifications and changes that could enhance aspects of this standards-based assessment system and prospects of achieving the original goals set for implementation of NCEA. A recommendation for future research that would build on the current findings is made for future consideration. This recommendation focuses on the need for longitudinal research that assesses the longer-term relationship between students' attitudes and their actual achievement performance in NCEA.

Doing Research on the Impact of NCEA and Assessment on Motivation

New Zealand's NCEA is a standards-based assessment of student learning designed to provide three levels of a national qualification to students presenting with different study interests and portfolios across the curriculum along with a range of subjects taught nationally at secondary level. There are various features of NCEA that are both innovative and break with long-standing tradition, any of which could reasonably be the focus of formal research investigation. For example, unlike with the norm-referenced and scaled examinations of the previous system, the standards-based assessments for today's students do not focus on comparisons across students but on how well the student performs in relationship to a standard, that is, a particular learning outcome. In addition to this major change in what assessment means for students, NCEA signifies systems changes for teachers and schools. Whereas assessment under the previous system comprised external examinations held at the end of the school year, NCEA comprises a mix of internal and external assessments. It is the secondary teachers themselves who conduct internal

assessments and these assessments occur throughout the school year. Prior to NCEA, only some teachers would have had experience in formal assessment and grading responsibilities for results that will now become part of the student's permanent academic record. Finally, the achievement standards themselves had to be written across the curriculum, along with additional assessments of Merit and Excellence for each standard. This endeavour is, clearly, a massive social and educational change for student, parent, teacher and the system itself.

The implementation of NCEA was intended to achieve particular educational outcomes for students and to ensure that students' futures be informed by evidence that they had met learning outcomes in areas important to the students themselves and to society (Ministry of Education, 2001; Alison, 2005). It was intended that NCEA be better suited to supporting learning for all students, and not only those who were high achieving. Standards-based assessment generally reflects a philosophical commitment to learning by all students, and this was another factor leading to its implementation given concerns that too many students were leaving school early with too few skills. Finally, aspects of NCEA were specifically designed to enhance the likelihood of student engagement in learning, making informed choices about their own study, and becoming more independent as learners generally. Whether or not such goals are achieved, however, can only be demonstrated longitudinally based on evidence of the impact on students. Some of this evidence can only be gathered through longitudinal research examining outcomes for students. Nevertheless, some aspects can be addressed initially, and this project was designed to do this.

Critical questions that can be addressed include the impact of NCEA on student academic behaviour, including motivation to learn, whether they feel challenged to do well academically in school, and what influences students when they do make particular academic choices. A key feature of this research report is its emphasis on student perspectives and voices: What do students think and say about the impact of NCEA on their learning and academic behaviour? While much has been written about the impact of NCEA on teachers and about various technical aspects of NCEA, information available to date from the students themselves is limited (Alison, 2005; Hipkins, Vaughan, Beals & Ferral, 2004). Hence, this research project was funded to conduct research over a period of approximately six months to focus on the following issues:

What is the connection between student choice and student learning?
What is the impact of design features of NCEA on student enjoyment and motivation?
What is the relationship between student motivation and student achievement?

In order to carry out this research, we reviewed the existing international literature relevant to these issues. This review was not the focus of our project, however, but was carried out to inform our methodological approach and measurement design. Hence, while a comprehensive review of the literature is beyond the scope of the project or this research report, this introductory section will highlight briefly key work in this area that has been considered in our own approach.

Relevant Motivation Theory and Research Findings

There is an extensive literature on learning motivation and motivation orientations to learning, both theoretical and evidence-based. The American Educational Research Association (AERA) has an entire special interest group on Motivation that sponsors dozens of research-based presentations at its international conference each year. The *Annual Review of Psychology* features a motivation chapter, updated regularly to reflect the extensive psychological literature relevant to the area. For decades, the *Nebraska Symposium on Motivation* has been sponsored regularly to feature key theorists and researchers.

Leading theorists whose works have had a major influence on the knowledge base include Dweck, Eccles, Weiner and many others. Weiner's (e.g. 1985) attributional model of motivation proposes that the attributions people make for their successes and failures shapes their emotional and motivational reaction to these outcomes. He noted that people may attribute any given outcome to causes such as effort, ability, the difficulty of a task, and luck, or other causes. He also suggested that these causes differ on several key dimensions, such as locus and stability. The locus dimension refers to the fact that some causes are located primarily inside the person, such as with ability and effort, whereas others are more external to the person, such as the difficulty of an exam, the teacher or luck. A second key dimension is the stability of a cause. Some causes are seen as stable and hard to change, such as ability, whereas others such as effort are seen as less stable and easier to change. Weiner showed that when people attribute their failures to stable causes such as lack of ability, they are more likely to lose motivation and get depressed, whereas if they attribute failures to unstable causes such as effort they are more likely to persist or try harder. One practical implication of Weiner's theory of the interrelationships of attributions, effort and achievement is that when a teacher sees a child struggling with a new task, one would never say, *"Keep trying, it's easy!"* but should instead say, *"That's very hard, you'll really have to work at it and I'll check later to see if you need more help."* If children believe something is easy and they find themselves struggling, they'll attribute failure not to lack of effort but to ability.

Closely related to these ideas are views of intelligence—ability—as either a static entity (an individual characteristic) that cannot be changed or an incremental set of skills and knowledge that can be expanded. Dweck and her colleagues have presented evidence that children and adults can take on one or the other of these concepts of ability (Dweck, 1992; Elliott & Dweck, 1988; Dweck & Leggett, 1988). Most adults use a combination of the two, believing oneself to have a natural talent for some things and being capable of learning others. What is destructive is for children as learners to internalise beliefs that they are simply not smart enough to do what is expected of them in school. Unless children do persist with a new task that is difficult, they will of course initially experience challenge and even failure. What needs to happen is for them to experience an incremental accumulation of "skills and knowledge" so that they develop a sense of self-efficacy and will keep learning to learn. If they do not, but instead come to believe they are not smart enough to do something, they will adopt what Diener and Dweck (1978) labelled a maladaptive helpless-orientation. If on the other hand they have experienced success following initial failure on tasks and if they attribute that eventual success to factors over which they have control—such as endeavour, problem solving and so on—they will persist with difficult tasks.

Self-perception of ability and ideas of self-efficacy are major components of motivational theory (Meece, Eccles & Wigfield, 1999). If students think they can do something—even if it requires hard work—they are more likely to persist in learning activities, and their own self-esteem will be enhanced even further when they do succeed. Consider again the teacher who tells a child to persist because the task is indeed difficult versus the teacher who says something is easy. Children who've heard the first message have reason to be

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pleased with themselves if they succeed. Children who've heard the second message have no reason to value success—after all, the task is easy—and their self-esteem is jeopardised if they cannot succeed. When children come to believe that they will generally fail on tasks that they initially find difficult, they are not motivated to try. Indeed, they will be strongly motivated to avoid trying—an orientation that has been labelled as "work avoidant"—in order to protect themselves from what they see as an inevitable failure and further damage to their self-esteem (Meece, Blumenfeld & Hoyle, 1988). Nicholls and colleagues have also referred to work-avoidant goals as similar to academic alienation (Nicholls, 1992; Nicholls, Cheung, Lauer & Patashnick, 1989). Indeed, Atkinson and Raynor (1974) consider two of the basic concepts in achievement motivation theory are motive to achieve success and motive to avoid failure.

Students' classroom performance will be influenced by their beliefs about what causes success or failure (Nicholls, 1992; Nicholls et al, 1989). Conversely, students' specific motivational beliefs are influenced by environmental variables such as school culture, organisational features, and teacher behaviour (Eccles & Midgley, 1989; Eccles & Wigfield, 1995).

Eccles and Wigfield and their research colleagues have conducted extensive educational research investigating the impact of different expectancies, motivational orientations and task-value constructs on young people's beliefs about their learning and behaviour during learning tasks. Of interest to us is their research on how task values develop over time in school settings with adolescents in particular. As primary children grow older, they increasingly differentiate the utility or importance of a task. Whereas young children focus on interest values—whether they like something—older children increasingly lose interest in subjects such as mathematics for example. Eccles and her colleagues emphasise that secondary school is a mismatch for adolescent student needs for autonomy and control, such that a lack of motivation for school is inevitable unless its structure and organisation provide a vehicle for teenagers to exercise self-control and regulation (Eccles & Midgley, 1989; Wigfield & Eccles, 1992). Hence, giving secondary students opportunity to make choices and have an influence on their own learning and school participation is supported in theory by the existing research literature.

Reflecting Existing Theory in the Research Design

Our approach to investigating the impact of NCEA on student motivation has been guided by the existing, rich theory and research evidence available internationally about these issues. The design of the measures used in this research has been informed by this prior work as well as by the research questions framed in the proposal specifications by the Ministry of Education (MOE). In Appendix A, we provide a glossary for the reader covering key terms and important concepts referenced throughout the report. Appendix B provides a listing of the original research questions posed by the MOE, accompanied by information regarding data sources for each question and references to page numbers of the report where relevant information is provided. Some of these original questions require evidence available only from longitudinal research that cannot be answered based on our data. However, this research project does provide evidence gathered at one point in time that could be the basis for future longitudinal research with selected student cohorts. Patterns of correlations across variables collected within a limited timeframe can support hypotheses for future research. However, longitudinal data are needed for validation of functional relationships associated with aspects of educational design and innovation, such as those associated with NCEA to date.

OVERVIEW OF RESEARCH METHODS

Multiple Methods and Analysis Procedures

Our research approach was multi-method, including both quantitative and qualitative analyses of multiple sources of data from students, teachers and parents. The major purpose of this research is to investigate student perceptions and experiences of NCEA, so our emphasis for data collection included student surveys, student focus groups and individual student interviews. We also interviewed parent and teacher focus groups for the purpose of triangulation with student self-reports and to inform our own hypotheses regarding the meanings and interpretations of findings emerging from the student data. Finally, we accessed students' end of the year Records of Learning from the New Zealand Qualifications Authority (NZQA), allowing the investigation of relationships between student self-report on attributions and plans with actual student achievement and patterns of learning as recorded in the official record.

A particular strength of the data set is the potential that it establishes for future, longitudinal research. Our large student cohort across Years 10-13 at 20 New Zealand secondary schools could now be followed longitudinally to investigate patterns of the impact of aspects of NCEA on students over time. Regrettably, no such comparative data are available for student cohorts under the previous system that relied on School Certificate, Sixth Form Certificate, and Bursary and Scholarship Examinations to assess student academic performance. Even though our findings cannot be compared to the results of previous practices, they can ensure a baseline for future investigation—both for the ongoing operation of NCEA and for any future educational innovations in this area that might be implemented.

Literature Search for Key Theory and Relevant Research

We also undertook a review of the national and international literature in selected areas relevant to our research. While this was not a major review, our search went beyond the existing New Zealand research (e.g. *Learning Curves* and *Teachers Talk about NCEA*) to investigate theory and research findings that informed the design of our measures and the interpretation of findings that emerged. This review included a comprehensive review of entries in the April 2006 annual meeting of the American Educational Research Association (AERA), with specific focus on presentations on Motivation and Achievement. Personal email contact was made with colleagues who presented relevant research at that meeting, which is the largest, and widely regarded as perhaps the most respected, annual international conference for educational researchers. In addition, key journal articles and monographs were sourced from the PsycInfo and ERIC databases using key terms relating to motivation and student achievement. Because our focus is on understanding the impact of NCEA on student motivation to achieve in school, this review did not encompass standards-based assessment unless the material was focused on the impact on student motives, attitudes and achievement.

Ethics Review and Approval

As the project involves research with human participants, the VUW Human Ethics Committee formally reviewed and approved all data collection and research procedures. This formal ethical review process ensures that all ethical issues are considered and addressed in a satisfactory manner that protects those involved and minimises the potential for harm that is always present in any research with human participants.

Individual considerations also included protection for the confidentiality of the data and anonymity of individual information from students and others. The confidentiality of the data is assured through coding systems, limited designated access to information by qualified project personnel only, and secure/locked data locations throughout the time period of the project and for any data archived subsequently. Informed and signed consent was sought from participants in the surveys, focus groups and individual interviews.

The VUW Human Ethics Committee reviewed and approved two separate applications made for phases of the research. The first application addressed only the student survey procedures and measure because of the urgency of reaching senior school students prior to their departure at the end of the year; this ethics review was completed with approval granted on 31 October 2005. Subsequently, the second Ethics application covering remaining data collection procedures was reviewed in November, with the final letter of approval received on 1 December 2005.

In addition, only qualified members of the research team know the identity of the 20 participating schools. School identities will not be publicly revealed at any time and will be kept confidential throughout the research; this also means that neither the Ministry of Education nor NZQA knows which schools are involved in the research. Any data disaggregated for various analyses will not be described in research reports or publications in such ways as to allow identification of individual schools or persons. This is important for the integrity of the research and was reassuring to some schools that would have been unwilling to participate if their participation were known publicly.

Because this research involves evidence of student and other persons' perceptions regarding NCEA, we also consider that the dissemination of our research findings carries additional responsibilities. There are national and international reputation harm issues to be considered in the dissemination of information that could be used to discredit the New Zealand educational system, its schools, its teachers, and its governing Boards of Trustees. It is important to view the information emerging from this research as evidence to inform the ongoing refinement and continued improvement of design and implementation features of the qualification. Continued improvement of key design features and aspects of NCEA will assist in ensuring that our education system fulfils its duty to educate our students appropriately to achievement, their future goals. Thus, our approach is to investigate the relevant issues thoroughly and to share information with the potential to support continued development of positive aspects, as well as to assist in problem solving wherever patterns emerge that could have a longer-term negative impact unless certain issues are addressed.

RESEARCH PARTICIPANTS

School Participants

A purposive sample of secondary schools was identified and invited to participate in the project. Participation entailed serving as the source of all student, teacher and parent data. In all, 20 schools agreed to participate despite the lateness in the school year when this project was commissioned. The schools were located in both the North (15) and South (5) Islands. Eight schools were located in Auckland or the Auckland region, with 11 schools in all located in the larger urban centres (Auckland, Christchurch and Wellington). The nine other schools were located in smaller cities or towns (both North and South Island) or in rural areas, including schools in Northland, on the East Coast and in the South Island. Schools served various age ranges, including two area schools serving younger ages as well as secondary; the sample also included a mix of school sizes from among the largest to among the smallest secondary schools in New Zealand. The schools en a diverse student population with at least some schools including significant percentages of Māori, Pasifika, international, Asian and other immigrant groups and others as well as New Zealand European; two of the schools were Māori immersion.

Schools were primarily co-ed state schools, but also included one integrated state school, one state boys' school and one state girls' school. Schools were also selected to represent a range of decile levels, as follows: three schools at decile 1; two schools at decile 2; one school at decile 4; three schools at decile 5; two schools at decile 6; three schools at decile 7; one school at decile 8; two schools at decile 9; and three schools at decile 10. None of the secondary schools offered CIE (Cambridge International) in addition to NCEA, though one of the sample schools had just discontinued offering CIE in one subject at the end of 2004.

Student Participants

A major emphasis of the research project was to gather information directly from students themselves, reflecting the students' voice about the impact of NCEA on their learning and behaviour rather than relying on indirect sources of information about student opinions and experiences from teachers, parents or others. To do this, a survey was administered late in 2005 to the large sample of students from 20 secondary schools selected to represent major school types and geographic regions. Selected schools agreeing to participate in the research included the different deciles, sizes, locations (rural, small town, urban as well as both North and South Island), and types (single-sex, co-ed as well as both state and integrated) representative of secondary schools across New Zealand. In addition, students from a sub-sample of these schools were interviewed early in 2006 regarding issues raised from the survey, either face to face as part of a focus group or individually by telephone.

Student input was also sought through focus groups conducted with Year 10 students at the end of the 2005 school year and with Year 12-13 students early in 2006; the latter group had of course been in Years 11-12 in 2005. Individual interviews were also carried out by telephone early in 2006 with 14 students in Year 11 who had participated in either the survey or a focus group at the end of their Year 10 and expressed willingness to be individually interviewed. Interviewees were selected randomly from this list across a range of school characteristics, with students who could be contacted and scheduled for an interview in late February to early March comprising this sample.

Finally, actual achievement data for selected variables were provided by NZQA early in 2006 for Year 11, Year 12 and Year 13 students from their official Records of Learning. Achievement files for the individual students organised according to each student's National Student Number (NSN) were entered onto an Excel spreadsheet we provided to NZQA. We then merged this achievement data with the individual records of student survey responses to permit further data analysis of relationships between the survey self-reports and actual school achievement.

Parent and Teacher Participants

Student perceptions, motivation and achievement were the major foci of our research. Nevertheless, several focus groups were conducted with parents and with teachers as key stakeholders, with an emphasis on investigating their perceptions regarding the impact of NCEA on students. This was not a major focus, however, as various other reports have been published and other projects are focused on teacher input, for example (Alison, 2005; Starkey & Stevens, 2005). Our purpose in gathering these data was focused on probing issues arising from the student data rather than any attempt to elaborate other perspectives. Similarly, the parent focus groups were focused on issues and questions arising from student input rather than investigation of what parents think about NCEA. Focus group procedures and data collection were as described in the next section.

DATA COLLECTION AND ANALYSIS

The Student Survey

Design of the Student Survey

A student survey was designed based on general knowledge of the literature on student achievement and motivation, aspects of the assessment of learning, and features of NCEA. The *NCEA Survey of Students* is a student self-report measure comprising responses to items representing selected demographic variables, current activities and future plans, self-ratings on aspects related to learning and motivation—including the impact of NCEA on individual academic behaviour—and answers to two open-ended questions. Individual survey items were constructed consistent with existing work in this area but ensuring that Research Questions listed in the RFP relevant to student attitudes and motivation would be specifically addressed (see Appendix A). Survey items thus reflected general attitudinal constructs described in existing theory and research in areas relevant to student motivation, but they were neither adapted nor taken directly from existing published surveys that have been developed and used in research overseas. The potential item bank was also informed by input and review from a small sample of tertiary teacher educators and school support advisors with recognised expertise regarding aspects of NCEA.

One version of the student survey was produced for students in Years 11-13 (who were participating in Levels 1-3 of NCEA) and another for those in Year 10, with very minor changes for the Year 10 group who were not yet formally participating in NCEA. Copies of the two surveys are provided in the appendices.

A draft of the survey was piloted with two separate, small samples of students not otherwise involved in the research. One group represented students described as high-middle to high achieving, and the other students described as low achieving. Students in the pilot were interviewed immediately afterwards for critique of any aspect of the survey. Based on an analysis of this input, the researchers rewrote individual items and refined the response scale. The length of time students took to complete the survey during the pilot was also monitored, and students were asked whether the survey was too long and/or difficult to understand. Students in the pilot took from less than 10 minutes to a maximum of 20 minutes to complete the survey, and they were unanimous in affirming that the length was about right and it was not too difficult to understand and complete. Hence, the length was not modified and the general approach to completing the survey was maintained.

Structure and Content of the Survey

Relevant achievement data and other factual information regarding students was available from official records, thus self-report of this type of information was not included in the survey but gathered from the students' Records of Learning when available several weeks later. The two exceptions were that students were asked to note gender and year in school, thus providing two possibilities for minimal checking of the extent to which students responded truthfully.

Two other questions requested information not available on the ROL but of interest for the research—whether the student had a part-time job (yes/no) and student status (either domestic New Zealand/permanent resident or international).

Students were also asked about future plans regarding school completion and plans after leaving school:

- *Level of NCEA the student planned to finish before leaving school:*

    NCEA Levels 1, 2 and 3 (asked to tick all that apply)

- *Three things the student is most likely to do after leaving school:*

    Students were asked to indicate their priorities by entering 1 for their first choice, 2 for their second choice and 3 for their third choice. A list of 12 possibilities plus "other" included choices related to further study, employment, time overseas, a gap year, getting married and/or starting a family, doing professional sports, and just hanging out while deciding what to do. The list was developed with input from the pilot using a sample of students not involved in the larger study.

Attitudes towards aspects of motivation, achievement and NCEA were assessed through self-ratings. Three sections of the survey requested that students rate themselves numerically on a Likert-type 4-point scale anchored as follows for each of the three sections:

- *Influence on choice of subjects*

    Items 7-22 were rated using 1 = this doesn't matter to me at all, 2 = this has little influence on my decisions, 3 = this has some influence on my decisions, or 4 = this is a big factor in making decisions

- *How students think about their school learning*

    Items 23-43 were rated using 1 = this is not at all like me, 2 = this is sometimes like me and sometimes not like me, 3 = this is mostly like me, or 4 = this is definitely like me

- *What students like/don't like about NCEA and other assessments*

    Items 46-59 were rated using 1 = not important, 2 = sometimes important, 3 = important, or 4 = very important.

On the final page of the survey, items 60 and 61 each provided three spaces for the student to record what he/she likes/dislikes about the NCEA (and the Record of Learning). The survey for the Year 10 students asked them to list the three things they thought they would like/dislike.

Selection of the Survey Sample

The procedures for obtaining participants were complicated by the lateness in the school year when the project was commissioned, resulting in tight timelines for attaining informed consent and then survey completion by the students who were within days of finishing the school year. Administration of the surveys to students was done through our sample of secondary schools and required two separate stages. Firstly, schools were sent sufficient student information sheets and consent forms according to the figures provided for each year level population at each school. Schools then distributed these to the students differently depending upon when students were available, and student attrition could occur at this stage based on absence on the day the information was distributed, uneven distribution of the information to students by schools, and of course by withholding of consent by individual students, whether by intent or through failing to return the consent form within a tight timeline of only one to two days. Consents were couriered to our Research Office and surveys were then couriered back to the individual schools with survey booklets individually labelled for the students who had provided consent. For students in Years 11-13, the booklets were labelled with student National Student Numbers so that surveys completed without names identified could nevertheless be coded for the correct student achievement data. Schools then distributed the blank surveys to students during a

time convenient to them for completion; this was generally during a form class, but varied so that in some schools it might have been administered during a particular subject period. Further attrition was possible at this point if students were absent on the day the survey was administered; many seniors in particular may have completed requirements and left school prior to exams, so that absences were an issue. Completed surveys were then boxed and couriered to our Research Office. Year 11-13 student surveys were completed in the last two weeks before senior school classes ended, between 27 October and 9 November 2005. Year 10 surveys were completed two weeks later, 24 November to early December 2005, with the exception of one school that was unable to administer the Year 10 survey by the deadline and did so in the first week of term in February 2006.

In preparation for distribution of student surveys, and as a starting point, the method used was to take the total school population and multiply by three-fifths this figure representing an approximate number of students who would be enrolled in the three final years (i.e. Years 11, 12 and 13). Schools were consulted to clarify these numbers, which were then adjusted as directed. The same method was used to calculate approximate number of students enrolled in Year 10, that is, one-fifth of total school population; again, schools were consulted to confirm figures.

Student Achievement Data

Students participating in the survey consented to our having access to their NZQA Records of Learning, and the official results for the relevant level/s of NCEA were available early in 2006 from NZQA. No comparable information on the academic performance of Year 10 students was available, but with their NSNs and consent, these students could be followed in subsequent years as part of longitudinal research that might be undertaken. Representatives of our research team, NZQA and the MOE met formally and engaged in a series of communications to reach agreement regarding the achievement and other information that would be provided by NZQA from the student records. For each student, the following information was entered into the data set:

- Total credits achieved (achievement standards and unit standards)
- Total achievement standard credits attained, then broken down by the categories: Achieved, Achieved with Merit, Achieved with Excellence
- Achievement standard (excluding unit standards) "grade average" across credits, where Not Achieved = 0, Achieved = 1, Merit = 2, and Excellence = 3
- All NCEA qualifications attained to date (Levels 1, 2, 3)
- UE achieved (1 = no, 2 = yes)
- Number of additional qualifications attained (e.g. a national certificate)
- Total number of Standards Not Attempted (SNAs)
- Total number of unit standards achieved
- The "grade average" on the Record of Learning (range 1 – 100).

NZQA also provided individual student gender, ethnicity (as entered in the NZQA database) and fee rebate status. This last variable provides one measure of individual student socioeconomic status independent of the school's decile level.

Frequency statistics were carried out for each of the entered variables across students. Most importantly, major analyses of interest to the research questions clarify possible relationships between student academic achievement (as measured by performance on NCEA) and student self-reports regarding motivation, learning behaviour and their attitudes towards aspects of NCEA. Analyses also investigated relationships between actual student academic achievement and survey responses organised by key

demographic variables (gender, school decile, etc) and self-reported future plans, part-time work and so on. Reliable interrelationships could result in the identification of patterns that could provide educationally meaningful information that might be utilised in future research, and intervention research in particular. Thus, multiple regression analyses were conducted to investigate relationships between student achievement and student self-reports.

Focus Groups

Focus Group Procedures

Focus groups were conducted according to standard procedures (Krueger, 1994) with two researchers present at each. One of the researchers with expertise and experience in focus group methodology trained the additional facilitators and note-takers; the experienced facilitator and note-taker also conducted the first two focus group sessions to model the process for the two facilitators/note-takers who carried out the remaining six focus groups. Each focus group took approximately one hour and was conducted in a central, private location designated by the school. Following introductions, the facilitator summarised the purpose of the focus groups, reminded students that participation was voluntary and that they could decline to participate, and asked students to complete the informed consent form. The facilitator then read out all four questions that would be asked and indicated that the second person present would serve as note-taker to record verbatim (to the maximum extent possible) comments relating to each question, providing opportunity for students to make corrections, additions or deletions after discussion on each question was exhausted and before moving on to the next question. This process is affirming for the students and meets the requirements for interviewee validation of the data, thus eliminating the need to check for veracity and agreement later. This note-taking approach also eliminates the need for electronic taping of the session as well as later transcription and cross-checking of the session responses.

Notes from each focus group were typed into Word files within 24 hours of each session for subsequent manual analysis.

Year 10 Student Focus Groups

In early December 2005, interviews were conducted with eight focus groups of Year 10 students at four secondary schools—two in the Auckland region, one in Christchurch and one in the Wellington region, from high, middle and low decile schools. One issue of interest was whether students had different attitudes towards NCEA that might be related to actual achievement. To investigate this issue in the interim until actual student achievement data were available the following year, we relied on school nominations of students according to academic performance. Schools were asked to nominate participants representing students regarded as academically "high" (two groups), "low" (two groups) and "in the middle" (four groups). The identities of the three group categories were confidential, and student participants were not informed of these group identities. Participation in the focus groups was voluntary, and student consent forms were signed in accordance with our ethics approval. A total of 62 students participated in the focus group interviews, comprising both boys and girls and representing diverse ethnic groups as well as variations in the decile ratings of the schools; there were 25 student participants from Auckland, 15 from Wellington and 12 from Christchurch.

Year 10 focus group student participants were asked to respond to four questions:

What do you know about NCEA? Who told you or how did you learn about NCEA?

For you personally, what sounds good about NCEA? What doesn't sound good about NCEA?

How do you think NCEA will affect your study at school? How will it affect your subject choices?

What kind of feedback on your work matters to you? What kind of information would you like to have about your own learning and why?

Responses to the questions were analysed manually by a senior researcher with expertise in qualitative data analysis as evidenced by numerous previously published research reports and supervision of doctoral students using grounded theory qualitative analysis (Charmaz, 2006; Maxwell, 2005; Strauss & Corbin, 1998). Analysing the data manually using grounded theory allows themes to emerge from the empirical data, in this case student comments from the focus groups. These themes emerging from a sample of the data set then allowed us to identify appropriate codes for use of a qualitative software analysis package that could manage a larger and multiple data sets including analyses across the different data. Also, the findings emerging from the early manual analysis of the data sub-sample were then used to inform the design of subsequent focus group questions.

Year 12-13 Student Focus Groups

In March 2006—by which time students had their NCEA results from 2005—four Year 12-13 student focus groups were interviewed at two schools in the North Island, one of which was located in the Auckland region. Each school organised one Year 12 and one Year 13 focus group.

The original plan to interview a slightly larger number of six to eight focus groups was altered for two reasons, one logistical and the other supported by our data: (a) firstly, the majority of the 20 secondary schools in the sample were unable to organise focus groups during Term 1 due to logistical issues as well as other demands on staff, student and parent time; and (b) secondly, we determined that the four student focus groups provided sufficient triangulation and explanation for themes emerging from the other data sources as no "novel" issues emerged after the first group interview that would have required further data to be collected. Students were asked to respond to the following questions:

What do you like best about NCEA? Least?

Do you think that NCEA makes you study hard and do well? Why or why not?

Are you satisfied with how your Record of Learning looks and the information it gives you? Would you like anything to be different? If so, what?

Does doing well on all three levels of NCEA matter? Why or why not?

Parent and Teacher Focus Groups

The study employed a relatively small number of parent and teacher focus groups, because the mandate of the research was to clarify student perceptions of NCEA, and parent and teacher perspectives have been assessed in other research. However, this selection of the smaller numbers of teacher and parent focus groups entails that they may not capture the full range of parent and teacher opinions on NCEA.

Two parent focus groups for schools in two different regions were conducted in late March and early April 2006; one school was in the lowest and one in the highest decile range. For both groups, the facilitator and note-taker were experienced parent trustee board members who were experienced in conducting parent meetings and who were trained by the researchers in formal focus group procedures. Parents were not informed of any findings from the student research. Specific questions for the parent groups were based generally on the research questions but refined with major input from these two parent leaders, as follows:

>*What kinds of things make your child/children like school?*

>*What makes your child/children work hard?*

>*What prevented kids working hard?*

>*What do you know about NCEA?*

>*Do you think it's a good qualification for your child?*

>*Does your child talk about NCEA?*

>*What kinds of information has the school given you?*

>*Do you think that NCEA works best for any particular children?*

>*Does it disadvantage any particular children?*

>*With NCEA, kids have lots of choices (provide examples)? Which choices do you think are good? Which are bad?*

>*Have you had experience of the previous system, with older children, yourself? If so, compared to the old system do you think NCEA is better or worse? Explain.*

Two teacher focus groups were conducted, one each in the Auckland and Wellington regions and one mid-decile and one high-decile; one of these focus groups was carried out in Term 1 of 2006 and the second early in Term 2. These focus groups were designed to clarify teacher perspectives on issues and themes emerging from student data, though the teachers were not informed of patterns in the student findings. Questions for these focus groups were:

>*What kinds of things do you think have an impact on student motivation and student achievement?*

>*Do you think that NCEA motivates students differently who are high achievers, low achievers, or "students in the middle"? Can you give us some examples? Do you think NCEA motivates students differently compared to previous systems?*

>*NCEA offers students lots of choices, including subject choices, assessment choices, being able to enter for standards as early as Year 10, take credits across levels, and so on. Which choices do you think are good and why? What things would you change and why?*

>*Do you have any evidence (including anecdotal) that students slack off more than they did before NCEA. For example, do lots quit after getting 80 credits, deliberately decide not to sit externals once they've passed internals, leave exam books blank on purpose for a "standard not attempted" rather than a fail, etc? Should any of these things be changed, and how? Are you satisfied that NCEA is an appropriate system to measure students' achievement? Why/ why not?*

Individual Student Interviews

At the December focus group interviews and on the survey consent forms, students were asked to indicate if they would agree to an individual follow-up telephone interview; 335 survey students and 33 Year 10 focus group students consented, providing telephone numbers to us. Early in 2006, students representing different schools were contacted by phone at the number/s provided. We were able to schedule follow-up telephone interviews between late February and early March 2006 with 14 Year 11 students whom we were able to reach during this timeframe. It is important to note that these students were Year 10 in 2005 at the time of surveys and focus groups conducted with that year group.

The questions for the individual interviews were designed to probe issues raised in either the earlier focus group sessions or preliminary data analysis for the survey:

Now that you are in Year 11, what have you learned about NCEA Level 1?

Where did you get your information about NCEA? Have you had any kind of presentation at school or from teachers about how it works? Have you looked at the Tana Umaga Team-Up website? What do you think?

What subjects are you taking? Some are compulsory, but can you tell us which ones you chose to take and why you chose each one? Probes: Do you need this subject for the future (for what?)? How did you know that? Did someone at school give you advice? A teacher/s? Did your parents/family influence your choices? How? Did your friends influence your choices? How?

Now that you are into NCEA Level 1, what do you think you will like about it? Not like?

How do you think NCEA will influence your study habits and achievement (or learning)? Some people have talked about whether NCEA is fair or unfair to students or good or bad for students. What can you say about that?

What do you know about the Record of Learning that you will get, and what do you think about it? Probe: What do you think about the information provided? The grades into four categories—Achieved, Not Achieved, Merit, Excellence? Is there anything else you'd like to know?

What kind of feedback do you like to get from school about your work? What do you think about internal assessment and external, end of year exams?

What does your family think about NCEA? Have they looked at the website about NCEA? Have they gone to any information sessions about NCEA or read anything else about it that has influenced them?

Students have lots of different opinions about whether NCEA is easier or harder than the system before NCEA, and whether it will make them work harder and do better or allow them to slack off. What do you think? What do your friends think? We've been told by some students that they plan to slack off as soon as they have their 80 credits—what do you think about this? Some students have mentioned leaving exam scripts blank if they decide not to finish an exam—what do you think about this?

Students have lots of different opinions about whether NCEA with internal and external assessments means harder workloads or a better spread of workload across the year that would help their study. What do you think? What do your friends think?

Do you think you'll finish all three levels of NCEA? What do you plan to do after you finish school? Do you think school is or is not important to your future? Why? What career path/job are you planning or hoping to do? What do your parents want you to do?

Telephone interviews were conducted primarily during evenings, and the time for each interview ranged from approximately 45 minutes to an hour. Notes were taken of key points during the interviews and, for each interviewee, summarised for confirmation before completing each telephone conversation. These notes were then entered into Word documents for subsequent manual analyses according to standard qualitative analysis procedures described in Bogdan and Biklen (1998).

RESEARCH RESULTS

Student Survey Results

Survey results were analysed both quantitatively and qualitatively as appropriate for the different sections. Student responses to the questions regarding what they like or dislike about the NCEA (and the Record of Learning) were entered verbatim into individual student records as Word documents and then analysed using QSR N6 (see the section below reporting the results of this analysis) towards the identification of meaningful patterns. Frequency statistics were compiled for responses to the demographic and future plans questions; these frequencies are reported and were also utilised as moderator variables in analyses of the impact of these variables on other variables such as the self-ratings of motivation and learning behaviour and actual achievement as recorded in the students' academic records. The three sections of the survey comprising sets of individual items were factor analysed to identify subscale patterns—meaningful constructs—representing student dispositions and attitudes. These subscales could then be analysed for relationships with other variables, including demographic information, reported future plans and actual achievement data.

Characteristics of Student Survey Participants

As described above, a total of 13,540 consent forms were dispatched to schools for the senior students, and 5465 surveys were separately dispatched for Year 10 students. Based on the number of consent forms returned, our student response rate for the senior group represents an average of 31%, ranging from 9% to 86% across individual schools. The response rate for the Year 10 student cohort represents an average of 45% across schools, ranging from 9% to 70% for individual schools. Although the resultant sample size of almost 6000 students is extremely large for this type of research, and represents a selection from all types of school, there may be imperfections in the data set due to unknown factors that might have influenced the proportion and nature of students who consented to do the survey but who did not actually complete it. These factors include the possibility that some teachers did not distribute the survey due to other pressures late in the school year, student absenteeism on the day, and logistical failures to connect individual blank questionnaires (labelled by student number) to students who consented to complete the survey. However, the fact that the sample is large at all age levels and contains large numbers across all types of school and decile levels suggest that the data and the findings based on the data are extremely robust.

Year 10 Students

Two thousand, one hundred and forty-two (2142) participants initially completed the junior survey. As 59 participants completed less than 95% of the survey, they were deleted from the sample. Out of the remaining 2083 participants, 1049 were male, 1032 were female, and two did not report their gender. Two thousand and three participants (2003) were in Year 10, and 70 were in Year 11. One thousand nine hundred and seventy-six (1,976) participants were domestic students, 79 were international students, and 38 did not report their student status. Schools were grouped into low, middle or high decile for selected analyses, with low = deciles 1-2, middle = deciles 3-8, and high = deciles 9-10 (as recommended by Wylie et al, 2006). Two hundred and nine students (209, 10%) were from low decile schools, 1250 (60%) were from middle decile schools, and 624 (30%) of the students were from high decile schools.

No ethnic information was gathered from the participants directly, as this is available from student records. Of the Year 10 students, 598 or nearly 29% reported having a part-time job, 1471 or nearly 71% reported they were not currently working, and 14 did not complete this item.

Senior Students, Years 11-13

Initially, 3790 students completed the senior survey. As 79 of these participants completed less than 95% of the survey, they were deleted from the sample. A further 142 participants were deleted from the sample because their NCEA results could not be obtained, leaving a final sample of 3569 senior students. There were 1736 males (49%), and 1827 (51%) females, with six students not completing this item. Fifty-seven (57) participants were in Year 10, 1532 were in Year 11, 1237 were in Year 12, and 739 were in Year 13. Four participants did not report which year they were in at school. The Year 10 students in this senior sample were already gaining NCEA credits, so that they were thus were more likely to be high achieving students.[1] The great majority of participants (n= 3290, 92%) reported that they were domestic students, and 191 (5%) reported being international students, with 88 not completing this item. Two hundred and fifty-eight participants (258, or 7%) were in low decile, 2185 (61%) were in middle, and 1126 (32%) were from high decile schools. No ethnic information was gathered from the participants, as this information is available from student records. Of the senior school students, approximately half (47%, n = 1688) reported they had a part-time job, 1869 (52%) reported that they were not currently working, and 12 students did not complete this item.

Factor Analyses of Survey Responses

The items organised into separate results for the three sections of the questionnaire—influences on subject choices, how one thinks about school learning, and likes/dislikes about NCEA and other assessments—were first examined by factor analyses. Factor analysis is a method that shows which clusters of items (questions) group together based upon patterns in individual student responses. It also controls for idiosyncracies in the wording of individual items. In order to identify a stable factor structure, the data set was randomly divided into two equal sections. Factor analyses were carried out initially for the Year 11-13 student responses, which were available several weeks before those of the Year 10 students.

Based on Scree plots (Cattell, 1966), two- and three-factor structures were identified as likely outcomes, and the appropriate analyses using Varimax rotation were then undertaken on each of the data subset halves. The responses to Section 2 (influences on subject choices) and Section 5 (what students like/ do not like about NCEA and other assessments) resulted in readily interpretable, three-factor structures; a two-factor structure was derived from Section 3 (how students think about school learning) responses to items on the survey. These structures were confirmed using analyses of the second random subset half of the data, which showed identical patterns of rotated factor loadings. Individual factor loadings generally varied only at the second decimal place. These are extremely strong results statistically, and the two halves of the data set were then combined to re-run the factor analyses for the total data set. The dimensions identified are described below.

A subsequent factor analysis conducted with the Year 10 students—whose relative lack of experience with NCEA could have been associated with different survey response patterns—revealed basically identical factor structures. However, we report the results separately for the Year 10 versus the Year 11-13 student groups, given that the absence of achievement data for the Year 10 student group means that the regression analyses could not be conducted for this group. In the subsequent section, we describe key interrelationships between student self-report on the survey and student achievement

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[1] We found that these Year 10 students (no more than 3% of the NCEA Level 1 cohort across these schools) responded to the survey most like the Year 13 students, and that they should be regarded as a selected sample that should not be included in any analyses comparing students across Years 11-13 except perhaps as a special example. For trends across Years 10-13 inclusive, analyses will use the Year 10 students enrolled in Year 10 rather than including the small group of Year 10s who completed the survey with Year 11 students.

data from the actual records of learning. Where statements are made regarding particular findings, these are statistically significant unless indicated otherwise.

Two sections of the survey—influences on subject choice and how students think about their school learning—allow investigation of factors that might mirror dimensions of motivation orientation identified in the existing theoretical and research literature. A third section of the survey focused more specifically on dimensions of NCEA and assessment generally to provide information directly relevant to student perceptions of the impact of current practices on their motivation and achievement.

Section 2: Influence on subject choices

The factor analyses on items dealing with subject choice showed that the items grouped into three factors, which suggests that students viewed three aspects related to motivation as having an influence on their subject choices. Each factor had between five and eight items (see below), and the same factor structure emerged from both the Year 10 and the Year 11-13 data sets. These factors were named:

1. *Utility or Importance*

   Needed to achieve a future goal based on judgement such as "It is related to a future job or career" or advice "I need it for University Entrance". Items 10, 14, 15, 16, 18, 19 and 22 loaded on this factor, with loadings ranging from .48 to .64 and an acceptable internal reliability of .69

2. *External*

   External factors unrelated to subject content or career pathways, including "My friends are taking it" or making choices based on convenience such as "It fitted into my timetable" and "The subject was easy". Items 7, 13, 17, 20 and 21 loaded on this factor, with loadings ranging from .49 to .67 and an acceptable internal reliability of .63

3. *Interest*

   Reflecting personal interest and enjoyment of the subject, such as "I'm interested in the subject" and "I enjoy the subject". Items 8, 9, 12, 18 and 19 loaded on this factor, with loadings ranging from .40 to .80 and an acceptable internal reliability of .70.

The factors *Utility/Importance* and *Interest* parallel the existing literature on motivation theory and research on the impact of achievement task values on self-directed behaviour by students, whereas the factor we labelled *External* appears to deal with different motives such as wanting to be with friends and taking options perceived to be easy. Students scoring high on the *External* factor score low on both the other two, motivation-related factors. This pattern suggests that these are the students already disengaging from secondary school study, clearly indicating that their subject choices are not really related to the subjects themselves but to convenience and what others are doing.

The three items that students rated highest in terms of accounting for their subject choices were all items in the *Interest* factor *("I'm interested in the subject"*, *"I enjoy the subject",* and *"It is related to what I will study in the future"*). The items rated the lowest fell under both the *External* factor (e.g. *"It fitted my timetable", "My friends are taking it"*), and the *Utility* factor *("It was suggested to me by the Dean or careers advisor at school"*, although some items under the *Utility* factor were rated high (e.g. *"It is related to a future job or career goal"*). These data show that students thought that the strongest factor in their subject choice was interest.

For the Year 11-13 students, the three motives for student choice showed significant relations to actual student achievement, as measured by NCEA results. However, these relations differ significantly for the three motives. Both the *Utility/Importance* and *Interest* motives relate positively to students' grade point average (GPA) scores and their attainment of Merit and Excellence grades. They also show a much more modest (although still significant) relation to the number of achieved grades. Further, they relate positively to the number of achievement standards passed and negatively to the number of unit standards passed. In other words, students who attribute their subject choices to these two motives have passed more achievement standards than unit standards.

In contrast, the *External* factor shows a negative relation to GPA grades and to all levels of passes (Achieved, Merit and Excellence). This indicates that students who attribute their subject choices to external factors unrelated to subject content or pathways have obtained significantly lower levels on all of these achievement measures; thus their actual achievement is lowest. *External* does however show a positive relation to the number of unit standards passed. Given that the development of unit standards included an emphasis on skills for industry, evidence that students are selecting unit standards not because of job interests but because of convenience factors seems important. Unit standards would seem to be appealing most to those students who lack interest in specific subject content or future career pathways. This negative relationship to positive patterns of student motivation suggests that further investigation of the role played by unit standards under NCEA is needed.

Section 3: How students think about their learning

The factor analyses showed that the items dealing with students' views about their school learning grouped into two factors, revealing two opposing points of view or approaches to learning and achievement. The same factors were shown with the Year 10 data and the Year 11-13 data. Each factor had between nine and twelve items as follows:

1. *Doing My Best*

    Includes items dealing with students valuing work that leads to Merit or Excellence (e.g. "I expect to get or at least Merit when I try"), getting a good education (e.g. "I aim to get a good education, not just completing tasks to get credits"), and doing their best (e.g. "I strive for Merit or Excellence even when I don't need this to achieve my goals"). Twelve items loaded on this factor, including items 24, 26, 27, 28, 29, 30, 31, 32, 35, 37, 40 and 42. Note that item 29 ("For me, getting Achieved is good enough") was reverse coded to reflect its negative loading on this factor. Loadings ranged from .49 to .76, and this subscale had high internal reliability (.85)

2. *Doing Just Enough*

    Comprises items relating to doing the minimum work required to achieve goals (e.g. "I work for the number of credits I need at each level, no more"), friends' opinions (e.g."What my friends think influences whether I work in school"), and paid work outside school (e.g. "The subject interferes with part-time work commitments"). High scores on this second factor would imply a student who is motivated to do just enough to get by at school rather than being focused on doing the best he/she can. Items 23, 29, 33, 34, 36, 38, 39, 41 and 43 loaded on this factor, with loadings ranging from .39 to .67. Internal reliability was acceptable (.72).

Interestingly, item 29 ("I don't think school really matters in the long term") did not load above .40 for either factor, suggesting that student responses to this item varied and were not particularly related to being either achievement-oriented or not particularly concerned with doing their best in school.

For the Year 11-13 students, these two motives relating to their own learning showed significant relations to actual student achievement, as measured by NCEA results. As with subject choice, these relationships differ significantly for the two motives. The *Doing My Best* approach correlates positively with students' GPA scores and their obtaining Merit and Excellence grades as well as the total number of credits obtained. This same motive also relates positively to achievement standards and negatively to unit standards. In other words, those students who think about their school learning as *Doing My Best* have passed more achievement standards but have passed fewer unit standards.

In contrast, the factor *Doing Just Enough* shows a negative relation to GPA grades and all levels of passes (Achieved, Merit and Excellence), with the exception of unit standards. This finding shows that students who approach their learning from the *Doing Just Enough* point of view have obtained significantly lower levels on all measures of actual achievement, apart from unit standards. These results suggest again that students enrolled in and completing unit standards are the same students who appear to be poorly motivated to work to improve their school learning. Students who are enrolled in and completing NCEA achievement standards, in contrast, are more likely to be those who report working hard to do their best.

An analysis on the relation of the *Doing Just Enough* motive and plans for the future showed that this motive correlated negatively with plans to go to university (either in New Zealand or overseas, and correlated positively with plans to go on to other tertiary training or get a full-time or part-time time job immediately after school, or "just hang out".

Section 5: What students like/dislike about NCEA and other assessments

Items in this section of the survey dealt with student likes and dislikes about NCEA and other assessments, revealing item groupings into three factors or different patterns of likes/dislikes. Student responses to this part of the survey can be compared to theory and findings in the literature on student motivational or goal orientations; for example, previous motivational researchers have described and investigated patterns associated with the *Work Avoidance* orientation (Meece, Blumenfeld & Hoyle, 1988; Nicholls, 1989; Nicholls, Cheung, Lauer & Patashnick, 1989). Factors were virtually identical for both the Year 10 data and the Year 11 to 13 data. Each factor had between four and five items labelled as follows:

Work Avoidance

This first factor comprised items relating to viewing NCEA as providing easy options that were attractive to the student interested only in doing the minimum required, such as "not having to do parts of a course that I don't like when I don't need those credits"; and "being able to relax after I get my 80 credits". Five items loaded high on this factor—items 46, 54, 55, 56 and 57—with loadings ranging from .50 to .75. This subscale had acceptable internal reliability (.71)

Getting Feedback

This factor comprised items focusing on the feedback given about academic performance and aspects of assessment including internal assessment (e.g. "Getting feedback on my work"; and "taking subjects where the teacher assesses my work during the course rather than only through a final exam"). Five items loaded on this factor—items 47, 48, 49, 50 and 51—with loadings ranging from .56 to .75 and an acceptable internal reliability (.67).

The Excellence Factor

The third factor comprised items relating to doing more than was necessary in order to maximise one's achievement and wanting more opportunities to demonstrate high achievement (e.g. "Being able to seek more than the minimum credits whenever I wish"). Items 52, 53, 58 and 59 loaded on this factor with factor loadings ranging from .43 to .69 and only moderate internal consistency (.48).

For the Year 11-13 students, two of these three patterns of assessment likes and dislikes—*Work Avoidance* and the *Excellence Factor*—showed clear relations to actual student achievement, as measured by NCEA results. These relationships were significantly different, however. The *Work Avoidance* attitude related negatively to students' GPA scores and their total credits gained, as well to Merit and Excellence grades. In contrast, the *Excellence* attitude related positively to all of these measures of actual achievement. The *Getting Feedback* attitude showed a very weak (although still significant) relationship to the number of Achieved grades. This result suggests that getting feedback on their academic achievement and attitudes towards internal assessment are issues for a more diverse group of students—not, for example, only those who are either high or low achieving.

Relationships across Factors and Predicting Achievement

Where statements are made regarding particular findings, either in terms of a correlation between two variables or a difference between two variables, these findings are statistically significant unless indicated otherwise.

Key Relationships among Factors

Correlations were calculated between influences on student subject choices (Section 2) and the student motivation orientation towards *Doing My Best* (from Section 3). Students who reported being motivated by *Doing My Best* and who reported that they enjoy their learning were more likely to select subjects based on *Utility/Importance* r(3657) = .52, p < .001, and Interest r(3657) = .37, p < .001. Furthermore, these students were less likely to select subjects based on *External* influences r(3657) = -.21, p < .001. Thus, students who are motivated to do their best and who enjoy their learning are more likely to select subjects based on the potential of those subjects for achieving future goals and how interesting they find the subject. Students who reported doing only as much as they needed to get by were more influenced by *External* influences unrelated to the subject, such as whether they like the teacher, it fits into their day, or their friends are taking it.

Predicting Achievement

Regression analyses were performed to investigate which factors from all sections of the questionnaire are the strongest predictors of actual student achievement in the form of grades passed and GPA scores.

Students who scored high in reporting that they choose subjects based on their *Utility and/or Importance* for the future were more likely to achieve achievement standards rather than unit standards, achieve a grade of either Merit or Excellence on achievement standards, and have a higher GPA score. Likewise, students who reported choosing subjects based on subject *Interest* were more likely to attain achievement standards on all three levels and have a higher GPA score. Both of these groups were less likely to achieve unit standard credits, a finding that could be an artefact of higher achieving students taking subjects which offer achievement standards in order to achieve Merit and Excellence (an interpretation supported by our focus group findings). Students who gained unit standard credits were less likely to gain achievement standard credits r(3567)=-.49, p<.001. In contrast, students who reported selecting subjects based on *External* influences were less likely to gain achievement standard credits of all three

levels, were more likely to achieve unit standards, and had lower GPA scores. In sum, choosing subjects based on future goals (*Utility/Importance*) and how interesting the subject is was associated with higher student achievement, whereas choosing subjects because of *External* influences was associated with lower student achievement.

Table 1. Correlations between Section 2 factors and credits and grades attained

	Total credits	Unit standards	Achievement standards
Utility/Importance	.16***	-.12***	.20***
External	-.25***	.16***	-.30***
Interest	.26***	-.12***	.28***

*** = *p*<.001

	Grade of Achieved	Grade of Merit	Grade of Excellence	GPA
Utility/Importance	.05**	.17***	.19***	.19***
External	-.13***	-.27***	-.22***	-.23***
Interest	.13***	.25***	.20***	.25***

** = *p*<.01,   *** = *p*<.001

The two motivation orientations revealed in responses to Section 3 of the survey—*Doing My Best* and *Doing Just Enough*—also were related to actual student achievement. Being motivated towards *Doing My Best* was related to higher achievement in achievement standards of all levels. In contrast, the attitude of *Doing Just Enough* was associated with lower achievement on achievement standards. These results suggest that students who are motivated to work because they strive to achieve as much as they can are likely to be the students who achieve to the highest level. However, students who want to do the minimum effort to meet their goals are likely to achieve fewer credits, especially credits of Merit or Excellence (see Table below).

Table 2. Correlations between Sections 3 and 5 and credits attained

	Total credits	Unit standards	Achievement standards
Doing My Best	.40***	-.22***	.46***
Doing Just Enough	-.46***	.23***	-.52***
Work Avoidance	-.35***	.13***	-.38***
Getting Feedback	-.01	.06***	-.04**
Excellence Factor	.12***	-.12***	.17***

** = *p*<.01   *** = *p*<.001

Aspects of NCEA that students like or dislike—Section 5 of the survey—were also related to student achievement. As can be seen from Table 3, students who scored high on the *Work Avoidance* factor were less likely to gain achievement standard credits, or achieve standards with the grade of Merit or Excellence; and they were also likely to have a lower GPA. The *Getting Feedback* factor showed weak correlations with student outcomes, and thus was not strongly related to student achievement. However students who scored higher on the *Excellence Factor* were also likely to have a higher GPA, were more likely to achieve credits with a grade of Merit or Excellence, and were more likely to gain achievement standards. In sum, students who reported being motivated to achieve (e.g. the *Excellence Factor*) were more likely to have better performance outcomes, than those who were motivated to aim for the minimum number of credits, as in the *Work Avoidance* factor.

Table 3. Correlations between Section 3 and Section 5 attitudes and grades

	Grade of Achieved	Grade of Merit	Grade of Excellence	GPA
Doing My Best	.06**	.45***	.46***	.46***
Doing Just Enough	-.15***	-.49***	-.41***	-.46***
Work Avoidance	.10***	-.35***	-.32***	-.33***
Getting Feedback	.03*	-.05**	-.08***	-.04**
Excellence Factor	-.06***	.18***	.24***	.21***

* = *p*<.05, ** = *p*<.01   *** = *p*<.001

Overall, our results showed that the two factors from Section 3—*Doing My Best* and *Doing Just Enough*—were the strongest predictors of actual achievement. Not surprisingly, the *Doing Just Enough* pattern was a stronger (negative) predictor of the number of grades achieved (that is, predicting less grades achieved), and the *Doing My Best* factor was a stronger (positive) predictor of GPA scores (that is, predicting higher grades).

These results suggest the possible utility of designing a shorter, screening instrument comprising a few items that load strongly on these two factors relating to how students think about their learning. Such a screening instrument could potentially identify students early, prior to Year 11, who might be most at risk for low achievement, leaving school early with fewer qualifications, and valuing school subjects the least. These students might benefit from targeted intervention, provided that intervention did not stigmatise but instead enhanced their ability to see the impact of effort on their school achievement and the relationship between what they do in school and what they can then do after school. Because we administered the survey to Year 10 students who were not yet participating in NCEA Level 1, longitudinal research could investigate any possible relationships between how they responded to the survey and their future actual patterns of achievement under NCEA.

Clearly, one factor that will have an impact on student achievement overall is the differential availability of opportunity to demonstrate and receive recognition for merit and excellence on unit standards in comparison with achievement standards. Many unit standards were originally proposed and designed by industry organisations as pathways to work following secondary school. However, the ability to be meritorious or excellent may be just as feasible and just as important to the trades and other vocational areas as it is for more "academic" subjects. In an age of increasingly sophisticated and complex technology as well as rapid change, this is becoming increasingly so. Theories of cognition do not restrict higher order thinking to academic domains. For example, excellence can be demonstrated in those who attain master status as chefs, fashion designers, builders, plumbers and so on in the form of problem-solving, creativity and evaluation. Recognition of a continuum of quality for what are now unit standards would be a challenge to the do-it-yourself and "she'll be right" attitudes that commonly accompany claims that anyone can do a good job without professional skills, knowledge and/or training. Such attitudes may have been adequate historically to deal with vocational challenges in the past. But it may well be that moving on to recognise value in encouraging vocationally oriented students to also "do their best" is critical to ensuring that students preparing for work after school are not instead prepared only for short-term jobs rather than long-term career attitudes adaptive for constantly changing expectations and environments.

Impact of Gender, School, Decile Level, and Year in School

Influences on Student Subject Choice (Section 2)

Female students attributed their subject choices to the *Utility/Importance* motive and the *Interest* motive significantly more than male students. However, there were no differences between female and male students in self-ratings of *External* influences on subject choice.

In regard to year at school, Year 12 and Year 13 students reported that *Utility/Importance* and *Interest* shaped their subject choice significantly more than Year 11 students did. There could be two explanations for these results. By Years 12 and 13, many students who were influenced by *External* factors may have left school and/or students are more likely to make informed subject choices in their last two years of school than they do earlier on. In addition, at year 11 males attribute their subject selections to *External* reasons more than females, whereas males and females do not differ on this factor in Years 12 and 13. These results suggest that for males there is a shift away from *External* to *Utility/Importance* influences on subject choices at the higher levels of secondary, whereas for females the pattern of influences is constant across these three senior years. We don't know, of course, whether some of these differences might be explained by the absence in Years 12 and 13 of boys who would have reported being influenced by *External* factors in Year 11 but leave school early; longitudinal research would be needed to investigate this.

Students from low decile schools reported selecting subjects based on *External* influences significantly more than students from both middle and high decile schools. Students from low decile schools also attributed their choices to *Interest* significantly less than students from middle decile schools, who in turn linked their choices to *Interest* significantly less than students from high decile schools.

Impact on How Students Think about Their Learning (Section 3)

Female students reported the *Doing My Best* perspective on their learning significantly more than male students, whereas males and females did not differ on the *Doing Just Enough* factor. This signifies that there is no relationship between gender and attitudes towards effort for those aspects of NCEA that could allow students to choose doing the minimum (e.g. item 46 "Being able to relax after I get my 80 credits").

In regard to year at school, Year 13 students did not differ from Year 12 students but were more likely to show the *Doing My Best* perspective than Year 11 students. Year 11 and Year 12 students were more likely to have the *Doing Just Enough* perspective than Year 13 students.

Responses from students in low decile schools were significantly more likely to self-report the *Doing Just Enough* attitude than those from students in both middle and high decile schools. Interestingly, students at Year 13 in low decile schools looked more like their peers in Year 13 in middle and high decile schools on *Doing My Best* than did those in Years 11 and 12. This suggests that the low decile schools in our sample have retained a motivated group of Year 13 students whose school achievement and self-reported motivation patterns are more alike than different from their peers in the middle to high decile schools. If this pattern continues, it suggests that efforts to encourage academic achievement irrespective of some school characteristics such as decile level is having some success at Year 13 under NCEA. At the same time, we note that Year 13 students at low decile schools also scored significantly higher than their Year 13 peers at higher decile schools on the *Doing Just Enough* factor. Clearly, these issues merit further investigation.

Impact on Student Attitudes towards NCEA and Assessment (Section 5)

With regard to likes and dislikes, male and female students did not differ on the *Work Avoidance* factor or the *Excellence Factor*. However, females scored higher on the *Getting Feedback* factor, indicating that they may place more value on the ongoing feedback that is afforded by the NCEA system that includes year-long internal assessment as well as end of year external examinations.

In regard to year at school, Year 11 students were higher on the *Work Avoidance* motive than Year 12 or 13 students, and were lower on the *Excellence Factor* than Year 13 students. Again, this pattern of differences across year levels may be affected by changes in the year group samples. For example, students high on *Work Avoidance* and low on the *Excellence Factor* may be those likely to leave school prior to Year 13 unless other factors intervene with these dispositions. Also, as students progress through NCEA and the senior school, these dispositions could shift as they become more focused on where their studies could take them after school. Only longitudinal research with intact year group cohorts could address this, such as might now be undertaken with the students in this study.

Students from low decile schools scored higher on the *Work Avoidance* factor than students from middle decile schools, who in turn scored higher on this factor than students from high decile schools. Students from low decile schools also scored higher on the *Getting Feedback* factor than students from middle and high decile schools. This suggests that assessment opportunities provided by NCEA might be having a positive impact on students in lower decile schools in particular.

Future Plans

Section 4 of the survey asked students to report which levels of NCEA they expected to attain (instructions said to tick all that apply) and what they expected to do after they left school. The next table summarises student self-reports regarding what level of NCEA they expected to achieve. Note that the Year 10 NCEA group are the small number of students enrolled in NCEA Level 1 standards who completed the survey along with the Year 11 group; the Year 10 general data represents the large sample of Year 10 students.

Table 4. The level of NCEA students indicating they plan to finish before leaving school

	NCEA Level 1	NCEA Level 2	NCEA Level 3
Year 10 general	6%	17%	77%
Year 10 NCEA	0	5%	95%
Year 11	6%	18%	76%
Year 12	1%	15%	84%
Year 13	1%	6%	93%

Further analyses of these data revealed that 3% of the overall sample reported plans to leave school with Level 1 only, 14% reported that Level 2 would be the highest qualification they anticipated completing, and 83% expected to finish Level 3. The percentage reporting they expected to complete NCEA Level 3 was higher for Year 12 and Year 13 students than for Year 10 and 11 students; indeed, 93% of the students in Year 13—who were completing the survey just prior to external examinations for these student groups at the end of 2005—indicated they planned to attain NCEA Level 3. This suggests that students become more positive about finishing school and attaining the highest qualification as they advanced through the senior school with more direct experience with NCEA. Of course, we cannot ascertain from this cross-age sample

whether this increased expectation is partially the result of students with lower expectations having left school at earlier stages. Longitudinal research could address this question.

Students were also asked to indicate what they would most likely be doing when they left school, and the survey asked that they list up to three choices. Note that in each of the next two tables, each cell indicates the percentage of students who listed that option as their first, second or third choice and the percentage who did not choose that option for any of these choices. The rows should add to 100% of all students and where columns do not add to 100% this is because individual students indicated more than one option for a particular choice (e.g. two options both ticked as 1st choice).

The next table summarises student responses regarding what they thought they would be mostly likely to be doing when they left school.

Table 5. Percentage of students' self-reports of plans after leaving school

	1st choice	2nd choice	3rd choice	Not chosen
University	64	11	4	21
Other tertiary	8	12	6	74
Vocation	2	3	4	92
Work full-time	8	11	13	68
Work part-time	10	16	11	63
Travel	7	14	15	65
Get married	1	2	8	89
Hang out	2	2	6	89
Overseas 1	4	10	9	77
Overseas 2	1	4	6	89
Overseas 3	3	11	8	78
Pro sports	2	3	6	89
Other	4	3	10	84

Numbers in the table represent percentages. Overseas 1 is "Go overseas for a while, then do a tertiary degree here in New Zealand"; Overseas 2 is: "Go overseas to work indefinitely"; Overseas 3 is: "Go overseas for tertiary study"

As can be seen from the table, by far the most common expectancy was going to university, with 64% of students across all year groups listing this as their first choice. The percentage listing university as first choice increased at higher levels of school, with 75% of Year 13 students listing it as their first choice. For contrast purposes, the next table includes survey responses from Year 13 students only.

Table 6. Year 13 student responses regarding what they expected to do after finishing school

	1st choice	2nd choice	3rd choice	Not chosen
University	75	8	4	13
Other tertiary	6	15	9	70
Vocation	1	2	5	92
Work full-time	8	13	16	63
Work part-time	7	16	12	65
Travel	4	12	16	68
Get married	1	1	8	90
Hang out	1	1	6	92
Overseas 1	4	9	10	77
Overseas 2	1	2	6	91
Overseas 3	3	13	8	76
Pro sports	1	2	6	91
Other	3	2	8	87

Numbers in the table represent percentages

The second highest expectancy across the total sample comprising all year groups was of working full-time (10%) or part-time (8%), and the third highest (8%) was to attend another tertiary education programme such as a polytechnic or wananga. Other options cited by more than 2% of students as their first choice included travel and going overseas, either or to do tertiary study overseas or before taking up tertiary study in New Zealand.

Impact of Ethnicity, Student Status and Fee Rebate

The results in this section summarise relationships between ethnicity and other student factors and student achievement, motivation orientations, and future plans according to relevant official records and self-reports. These analyses were carried out for the senior secondary students in Years 11-13, for whom actual achievement data are available from NCEA. Where statements are made regarding particular findings, these are statistically significant unless indicated otherwise.

Ethnicity

Ethnicity information was available from official records for 3661 Year 11-13 student participants. Of these, 1925 were European, 854 were Asian, 279 were Māori, 277 were Pasifika, 183 were classified as "other", and 51 did not have an ethnicity specified. Eighty-three percent of the Asian students in this sample were domestic students, and 17% were International students. The "other" category comprised students identified by a national origin or ethnicity other than the four noted above (e.g. Somali or Afghan); hence, results are reported for this category as it represents ethnicities other than Māori, Pasifika, European or Asian. Because the "not specified" group were individuals about whom the Ministry did not have ethnic information, this group was omitted from all analyses as these students could overlap in ethnic identity with the other categories in unknown ways and thus do not necessarily represent another ethnic identity. This last group were also a very small percentage of the overall sample (approximately 1%).

Do different ethnic groups choose subjects for different reasons? (Student Survey, Section 2)

Asian students attributed their subject choices to *Utility/Importance* more than European, and Māori students, and Pasifika students also attributed their subject choices to *Utility/Importance* more than European and Māori students. Māori and Pasifika students attributed their subject choices to *External* influences more than European and Asian students. Pasifika attributed their subject choices to *Interest* less than Europeans and Asians, and Māori students also attributed their subject choices to *Interest* less than Europeans.

Do different ethnicities perceive their learning differently? (Student Survey, Section 3)

Māori reported the *Doing My Best* motive less than the other three ethnic groups, and European and Pasifika students reported this motive less than Asian students. Pasifika and Māori students reported the *Doing Just Enough* motive more than European and Asian students. There was no difference between European and Asian students for this motivation orientation.

Do different ethnic groups like/dislike different things about NCEA? (Student Survey, Section 5)

Pasifika and Māori students scored higher than the other ethnic groups on the *Work Avoidance* factor, and there was no difference between European and Asian students on this factor. Pasifika students scored higher on the *Getting Feedback* factor than European and Asian students. Māori students scored lower on the *Excellence Factor* than Asian and Pasifika students, and Asians scored higher on this factor than Europeans.

Future plans (Student Survey, Section 4)

Table 7. What levels of NCEA do students of different ethnicities expect to complete?

	Level 1	Level 2	Level 3
European	3%	16%	81%
Asian	1%	6%	93%
Māori	10%	24%	66%
Pasifika	1%	21%	78%
Other	2%	12%	86%
Total numbers for expected level	104	510	2,955

The students' expectations as to what they would be doing following secondary school are reported in Table 8. Inferential statistics have not been performed on these data given the number of expectation categories and comparisons; however, it appears that there would be significant differences between ethnic groups in some categories. For example, there appear to be differences in the numbers who plan to go to university as their first expectation preference following secondary school (Asian 89%, Pasifika 58%, European 56%, Māori 39%).

Table 8. What do students expect to do when they leave school?

	European				Asian				Māori				Pasifika				Other			
	1st	2nd	3rd	NS	1st	2nd	3rd	NS	1st	2nd	3rd	NS	1st	2nd	3rd	NS	1st	2nd	3rd	NS
University	56	12	6	26	89	6	1	4	39	15	7	39	58	10	7	25	68	12	3	17
Other tertiary	9	11	5	75	2	16	10	72	10	11	5	74	13	12	6	69	7	7	4	82
Vocation	1	2	3	94	1	5	8	86	3	3	1	93	4	4	4	88	2	2	4	92
Work full-time	11	12	13	64	2	8	13	77	15	9	18	58	7	10	15	68	4	11	12	73
Work part-time	11	15	10	64	5	17	12	66	18	15	11	56	17	18	10	55	5	13	11	71
Travel	8	14	15	63	3	11	14	72	8	14	15	63	7	14	12	67	7	16	14	63
Get married	1	2	6	91	1	1	11	87	2	1	9	88	1	1	8	90	2	3	8	87
Hang out	2	2	6	90	1	3	8	88	4	2	6	88	4	1	7	88	3	2	4	91
Overseas 1	5	11	9	75	2	10	11	77	4	7	6	83	5	5	9	81	4	7	7	82
Overseas 2	1	3	5	91	1	5	10	84	1	3	5	91	2	3	5	90	2	5	5	88
Overseas 3	2	7	7	84	5	24	12	59	2	4	5	89	4	7	6	83	5	10	8	77
Pro sports	2	3	4	91	1	2	8	89	5	6	6	83	6	7	6	81	1	2	2	95
Other	5	2	6	87	2	3	18	77	5	6	6	83	6	7	6	81	1	2	2	95

NS= Not selected. All numbers in the table represent percentage values

Achievement by ethnicity

The achievement data reported in this section were taken from the official records of learning for the Year 11, Year 12, and Year 13 students (as appropriate, depending on the analysis of interest) in our sample.

Table 9. What percentage of Year 13 students in different ethnic groups achieved University Entrance?

	UE gained	UE not gained	Number of students
European	77%	23%	372
Asian	76.5%	23.5%	217
Māori	35%	65%	46
Pasifika	29%	71%	56
Other	55%	45%	40

Were there ethnic group differences in the numbers of credits and levels of achievement?

An analysis was performed comparing ethnic groups on several achievement measures: total credits, total unit standard credits, total achievement credits (and by standard of Achieved Merit and Excellence), and GPA. We found that Māori and Pasifika enrol in unit standards more than European and Asian students who are more likely to enrol in achievement standards. Thus, for some analyses, this ethnic pattern will also result in a finding of lower grade averages for Māori and Pasifika students to the extent that unit standards completed do not include opportunities to earn Merit and Excellence parallel to those available for achievement standards.

Total credits achieved

There were patterns in the total number of credits achieved (both achievement standards and unit standards) by students in different ethnic groups. As illustrated in the graph below, Pasifika students on average achieved the fewest total credits. Māori students achieved fewer credits than Asian and European students, but there were no differences in the total number of credits achieved by Asian and European students (see Figure 1).

Figure 1. Total credits achieved by different ethnic groups
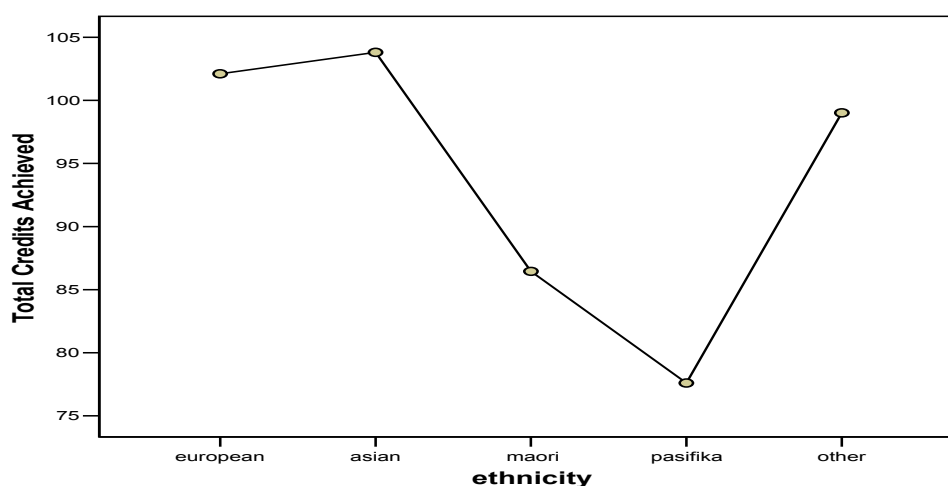
Total unit standard credits

Ethnicity was related to the numbers of unit standard credits attained. Māori and Pasifika students achieved more unit standard credits than European and Asian groups, and Asian students achieved fewer unit standards than European students (see Figure 2).

Figure 2. Total unit standards completed by ethnicity
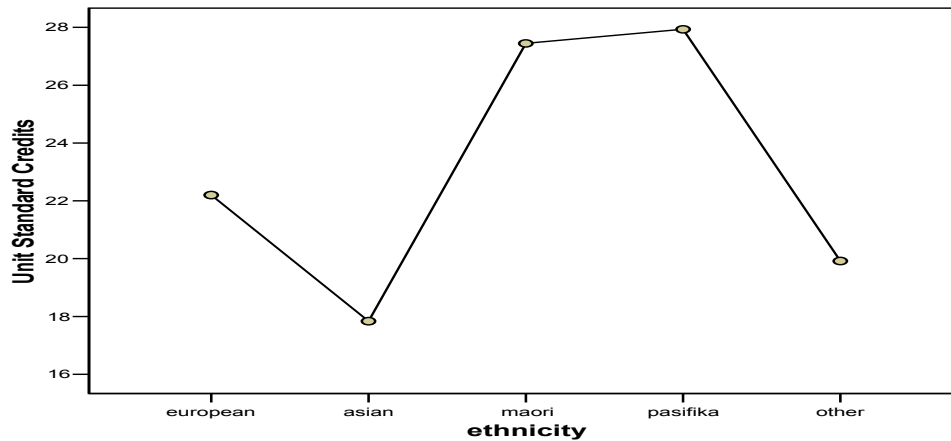
Total achievement standard credits

Different ethnic groups achieved different numbers of achievement standard credits. Pasifika students gained fewer achievement standard credits than all other ethnic group, and Māori students gained fewer achievement standards than European and Asian ethnic groups (see Figure 3).

Figure 3. Total numbers of achievement standard credits by ethnicity
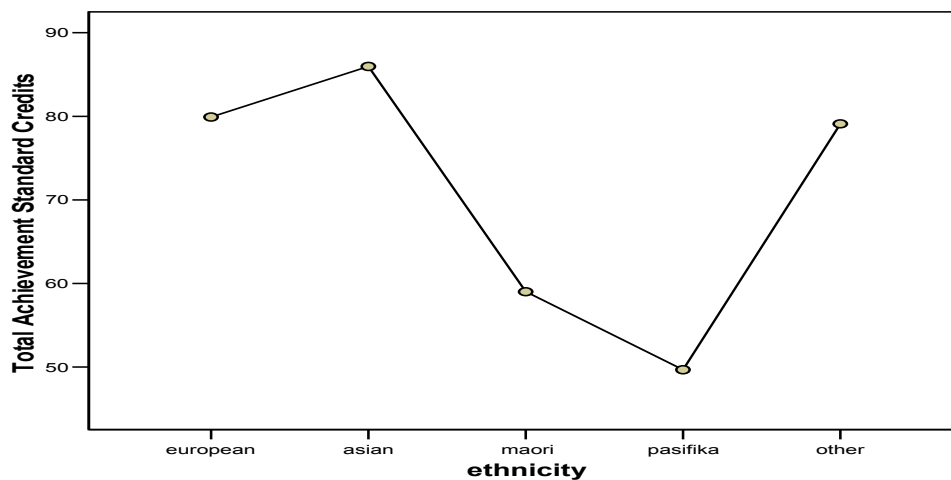
Achievement standards attained as Achieved (A)

There were differences by ethnicity in the percentages of students gaining a final result of Achieved (A) for achievement standards attempted. Pasifika students gained the standard of Achieved significantly less than all other ethnic groups. European students gained more standards with Achieved than all other ethnic groups (see Figure 4).

Figure 4. Numbers of achievement standards with Achieved by ethnicity
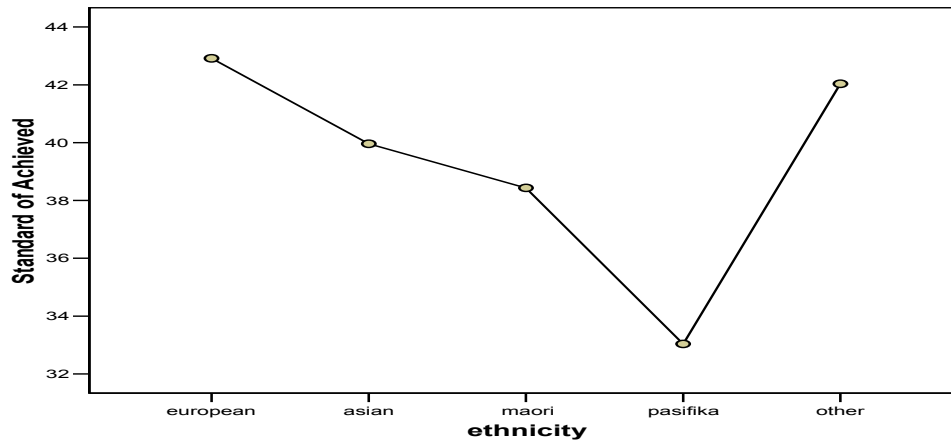
Achievement standards attained with Merit (M)

Māori and Pasifika students gained significantly fewer achievement standards with Merit than Asian and European students. Asian students achieved more standards with Merit than European students (see Figure 5).

Figure 5. Numbers of achievement standards with Merit by ethnicity
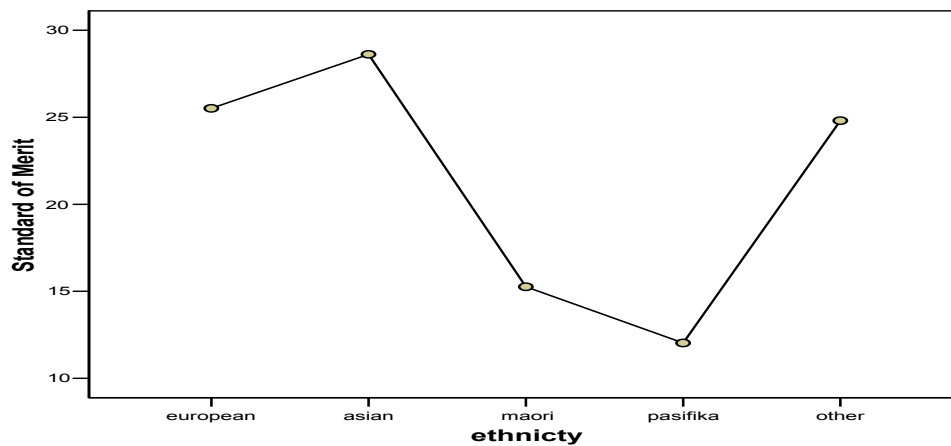
Achievement standards attained with Excellence (E)

Asian students achieved more achievement standard credits with Excellence than all other ethnic groups. Māori and Pasifika students achieved fewer standard credits with Excellence than all other ethnic groups (see Figure 6).

Figure 6. Numbers of achievement standards attained with Excellence by ethnicity
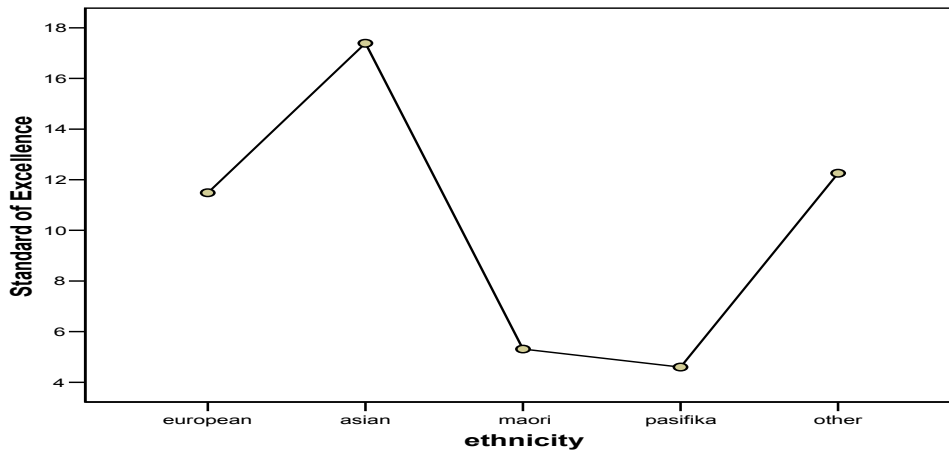
Grade point average (GPA)

Asian students had higher GPA scores than any other ethnic group. Māori and Pasifika students had lower GPA scores than other ethnic groups (see Figure 7). We caution that these results will be affected by ethnic pattern differences in enrolment in unit standards with very limited access to Merit (or Excellence) grades.

Figure 7. GPA by ethnic group
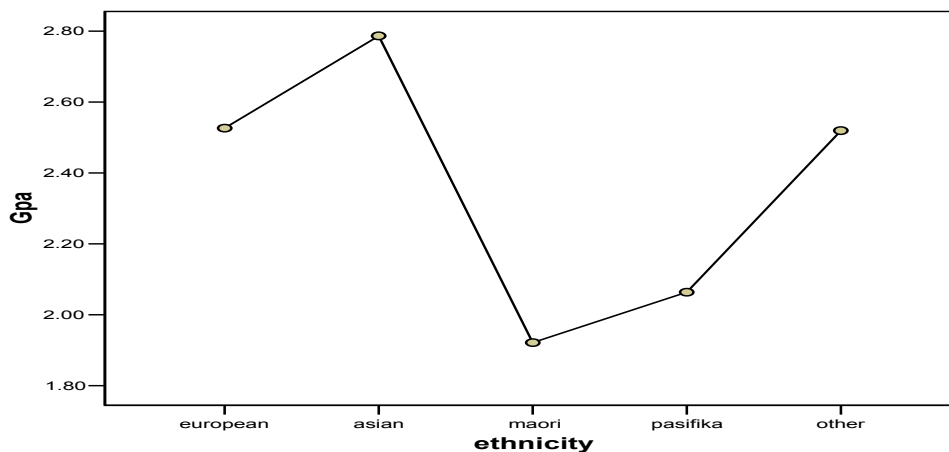
Table 10. Mean credits by ethnicity across all achievement variables

	European Mean	Asian Mean	Māori Mean	Pasifika Mean	Other Mean
Total	101.89	103.69	84.93	76.38	97.19
Total Unit	22.27	17.83	28.25	28.50	19.83
Total Ach	79.62	85.86	56.68	47.87	77.37
Achieved	42.76	39.91	36.92	31.84	41.11
Merit	25.42	28.58	14.66	11.60	24.26
Excellence	11.44	17.37	5.10	4.43	11.99
GPA	2.53	2.79	1.92	2.06	2.52

Total	= total credits gained
Total Unit	= total unit standards gained
Total Ach	= total achievement standards gained
Achieved	= Achievement standards with level of Achieved
Merit	= Achievement standards with level of Merit
Excellence	= Achievement standards with level of Excellence
GPA	= Grade point average

We also performed a quartile split on GPA score and then calculated the percentage of students who fell into the quartiles. Again, these results will be affected by disproportionate enrolment in unit standards by ethnicity, so that actual potential for high achievement is limited by the opportunities provided to the students—hence affecting their final results. The data are shown in Table 11.

Table 11. Quartile GPA performance by percentage of students in different ethnic groups

	0-25% Lowest Q	25-50% Low mid-Q	50-75% High mid-Q	75-100% Highest Q
European	23%	25%	28%	24%
Asian	19%	21%	23%	37%
Māori	45.5%	25%	20.5%	9%
Pasifika	35%	35%	18%	12%
Other	22%	29%	24.5%	24.5%

Achievement by Student Status: Domestic versus International

Influences on subject choice (Student Survey, Section 2)

Domestic and international students did not differ in attributing their subject choices to *Utility/Importance*. However, international students attributed their choices to *External* influences more than domestic students, whereas Domestic students attributed their choices to *Interest* in the subject more than international students (M=16.08, S.D.= 3.19).

How students think about their learning (Student Survey, Section 3)

Domestic and international students did not differ in reporting the *Doing My Best* motive; however, international students reported the *Doing Just Enough* motive more than domestic students.

Likes and dislikes regarding NCEA (Student Survey, Section 5)

Domestic and international students did not differ on either the *Excellence* or *Getting Feedback* factors. However, international students scored higher on the *Work Avoidance* factor than domestic students.

What levels of NCEA do domestic versus international students expect to complete?

Table 12 presents the percentages of domestic versus international students by the highest level of NCEA they expected to complete.

Table 12. Domestic versus international students' expected completion

	NCEA Level 1	NCEA Level 2	NCEA Level 3
Domestic students	3%	14%	83%
International students	4%	9%	87%
Total numbers	97	488	2,896

Achievement by Socioeconomic Status (SES)

To some extent, school decile level provides an estimate of socioeconomic status (SES), and we have reported findings by school decile elsewhere in the report. However, the decile statistic represents an aggregate designation for the catchment area of the school, not the actual SES for individual students as students whose families have quite different economic circumstances can be attending different schools. The closest statistic available that does provide an indicator that the student's family has lower economic resources is fee rebate status. Note that it can be concluded that those who qualify for the fee rebate have lower SES, whereas the contrary may not be the case; while it is likely that those not receiving a fee rebate have a higher SES, this group not receiving the fee rebate may still contain individuals who have chosen not to access the fee rebate for whatever reason. Overall, 15% of the senior school students in our sample were receiving a fee rebate.

TABLE 13 represents the number of students from each ethnic group who received a fee rebate. Numbers in the Table are percentages.

Table 13. Students receiving a fee rebate by ethnicity

Ethnicity	Fee rebate	No fee rebate
European	11%	89%
Asian	14%	86%
Māori	25%	75%
Pasifika	34%	66%
Other	19%	81%
Total	15%	85%

Influences on subject choice (Student Survey, Section 2)

Receiving a fee rebate did not influence subject choices based on subject interest. However, students who received a fee rebate attributed their subject choices to *Utility/Importance* marginally more than students who did not receive a fee rebate. Students who received a fee rebate also attributed their subject choices to *External* influences more than students who did not.

How students think about their learning (Student Survey, Section 3)

Receiving a fee rebate did not affect student perceptions that they were motivated by *Doing My Best*. However, students who received a fee rebate reported *Doing Just Enough* more than students who did not receive a fee rebate.

Likes and dislikes regarding NCEA (Student Survey, Section 5)

Students who received a fee rebate scored higher on the *Work Avoidance*, *Getting Feedback* and *Excellence* factors than students who did not receive a fee rebate.

What levels of NCEA do fee versus fee rebate students expect to complete?

Table 14 provides a summary of student responses regarding the level of NCEA they expected to complete according to fee rebate status. A chi square analysis showed that a significantly higher proportion of no rebate students expected to complete NCEA level 3.

Table 14. NCEA—No fee versus fee rebate students' expected completion

	NCEA Level 1	NCEA Level 2	NCEA Level 3
Fee rebate	4%	18%	78%
No fee rebate	2%	14%	84%
Total numbers	104	510	2955

Part-time Work

Earlier in this report, we reported the high percentage of students overall who indicated on the survey that they were working part-time (nearly a third at Year 10 and almost half in the senior school). The percentage of students in the three decile groupings (low, middle, or high) doing part-time work is shown in Table 15. A chi square analysis showed that the proportion of students doing part-time work did not differ across the three decile categories.

Table 15. Percentages reporting part-time work by school decile levels

	Part-time work	No part-time work	Total numbers
Low decile (1-2)	44%	56%	251
Middle decile (3-8)	48%	52%	2152
High decile (9-10)	47%	53%	584
Total students	1662	1844	3506

The percentage of students in the five ethnicity categories doing part-time work is shown in Table 16. A chi square analysis showed that the proportion of students doing part-time work differed significantly across the groups, with European and Māori students reporting part-time work more than Asian or Pasifika students.

Table 16. Percentage of students reporting doing part-time work by ethnicity

	Part-time work	No part-time work	Total numbers
European	56%	44%	1921
Asian	31%	69%	854
Māori	46%	54%	278
Pasifika	35%	65%	273
Other	52%	48%	182
Total numbers	1662	1844	3506

We investigated the impact of self-reported part-time work on both the total number of credits attained and the grade point average. Students reporting part-time work had lower grade point averages in comparison with other students, as shown by a negative correlation between the two variables $r(3485) = -.037$, $p < .03$. However, this correlation, although statistically significant, is not high, and the relationship could be confounded by a large percentage of students who work part-time completing primarily unit standards that by definition limit opportunities for higher grade averages (e.g. Māori). There was no difference in the total number of credits attained (a total number of both achievement and unit standard credits) by part-time work.

Qualitative Analysis of Focus Group and Interview Data

Coding the Data

To summarise, qualitative data for the project include: (a) responses to the two open-ended questions on the surveys (likes/dislikes about NCEA and the Record of Learning); (b) Year 10 and Year 12-13 focus group responses; (c) teacher focus group responses; (d) parent focus group responses; and (e) individual interviews with Year 11 students.

The analysis of this very large pool of data required the use of the Qualitative Software and Research (QSR) N6 package, previously known as QSR NUD*IST (see www.qsrinternational.com for more information). This software is designed to assist researchers in analysing qualitative data efficiently and consistently. Further, this software enables merging of qualitative data with other data such as quantitative survey data, thus facilitating additional analyses investigating relationships across different sources of information. Programme options enable a researcher trained in the application of QSR N6 to create and modify categories of different statements in the data and then measure their frequencies. N6 allows the researcher to ask pertinent questions of the data, such as searching the full data set for all instances of a particular word of phrase or investigate how two ideas relate to each other. Use of a software package for qualitative analysis does not, however, mitigate the need to reference theory in selecting what will be coded and how. Exploratory reviews of sample narrative assist in identifying what appear to be key words and phrases associated with particular answers or ideas; unless this prior conceptualisation has occurred through manual searching of a sample of the data, the researcher is at risk of missing entries needed for valid analysis. Hence, as noted previously, we included a pilot "manual" review of approximately 200 of the student responses—selected randomly—to those questions that would be eventually coded with QSR N6 to inform the coding process.

The following procedures were used to prepare the data:

- Responses to open-ended survey questions were recorded as Word documents
- Documents were then uploaded into QSR N6
- Quantitative (SPSS data files) were uploaded into QSR N6

- Command files were created[2]
- Several trial reports were run to familiarise the researchers with programme capabilities in relationship to our data set
- Specific reports considered informative for this project were run for gender by category, University Entrance by category, and GPA by gender.

To code the open-ended responses to the like/dislike questions on the survey, a representative sample of 200 surveys was manually coded to identify topic categories and key words/phrases for subsequent coding into the QSR data set. The following eight categories listed in order of the frequency of comments on each category emerged from the initial, grounded theory review of the data:

- Assessment—internal and external assessment, re-sits, examinations, credits, Record of Learning, marking system, comparisons to peers

- Level of difficulty—chance to pass; seen as easy or hard

- Future prospects—encompasses tertiary studies, goals, career, employers

- Understanding NCEA—good/poor advice, development of system

- Fees and practicalities—paperwork, costs, changes

- Motivation—interest in study and school, to achieve and succeed

- Teachers—related to teacher behaviour and teaching practices

- Subject choice/flexibility—selecting subjects and standards, studying different levels across years.

Summaries were then prepared along with sample typical comments recorded on the survey for inclusion in this report. A parallel process was used to code the results of focus group and individual interviews.

Student Responses to the Open-ended Questions

Students completing the survey were also provided opportunity to list at least three things they like and 3 things they do not like about NCEA and the Record of Learning. The 10,946 written statements made by students across all age levels were coded into the eight categories above (note that these data include students across Years 10-13). Of these statements, by far the most frequently occurring category was *Assessment*, with 6,473 comments or 59% of the total. The second most frequently cited issue was *Level of Difficulty* (2,508 comments or 23%). Hence these two issues together elicited 76% of student written responses to the questions about what three things they liked or did not like about NCEA and the Record of Learning. The third most frequently named aspect was *Future Prospects* (4.5%)*,* followed by *Understanding* NCEA (4.4%) and *Fees and Practicalities* (3%). Fewer comments were made in the categories of *Motivation* (2.5%), *Teachers* (2%) and *Subject Choices/Flexibility* (less than 1%). Students made 5,166 "like" comments and 5,780 "do not like" comments--approximately equal numbers of both positive and negative comments overall.

The distribution of comments by Year 13 students who attained University Entrance in 2006 was almost identical to the proportion of comments for the coding categories across all students.

This section summarises issues raised under each category with specific examples of what the students wrote. In addition, Table 17 provides a detailed breakdown of like/do

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[2] Command files are customised files of command messages instructing QSR to carry out a number of actions, that is, commands to search for all instances when the topic categories occur in the text.

not like comments according to the coding categories for only those students who had personal experience with NCEA, that is, who were at the time of the survey completing at least one and up to three year/s with NCEA. Thus, the Year 10 students included in this table are *not* the larger group of Year 10 students completing the survey prior to direct experience with NCEA. This separate, small group of Year 10 students are those completing aspects of study at NCEA level 1 prior to Year 11, a group we describe elsewhere in this report as most likely to be high achievers and similar to Year 13 students in their motivational patterns.

Assessment

By far the highest percentage of comments related to particular assessment issues (59%). It should be noted that although there was a separate coding category for motivation, many of the student comments on assessment features concerned the effect of those features on motivation. Because the assessment category accounts for so large a portion of the data, we analysed further to look for sub-categories that related to meaningful issues for students. Both for this issue of *Assessment* and for *Level of Difficulty*, students listed this as what they like as well as what they do not like about NCEA in identical numbers. Students made slightly fewer comments regarding assessment aspects they liked (48.5%) in comparison with aspects they did not like (51.5%). Note also that student comments regarding whether they like or dislike something about assessment are open to interpretation as to whether those are positive or negative. For example, students can report that they like internal assessment because it allows them to pace their learning, they like internal assessment because they can avoid external assessment, or they like assessment re-sits because it is easier to get an Achieved result. All of these entries under comments about what students like would be coded under *Assessment* but might be seen differently as either positive or negative aspects by teachers and parents.

The majority of comments made by students in the code Assessment related to five issues. Note again that student comments can be regarding what was liked as well as what was not liked about a particular aspect of NCEA and the Record of Learning. For each of the five Assessment issues raised most often, we provide a sample of student comments to clarify and highlight strong patterns in student responses (examples are verbatim as written by students). Some of these comments have been annotated to note those made by a male or female students who achieved a grade point average of 75% or higher:

1. ***Incentives to get Merit or Excellence***

    - *I do not like that you do not get extra credits for getting Merit or Excellence*

    - *The fact that the higher achievers get the same amount of credits as the basic achievers—no incentive to gain higher marks*

    - *We are only motivated to get Achieved. Why try harder when we can get the same amount of credits?*

    - *Doesn't push people to be the best they can—they stop at Achieved*

    - *Bad thing—aims to be mediocre eg Achieved is good enough because it's the same credits as Excellence*

    - *I can look as good as someone who gets 100% as long as I pass.*

2. ***Internal assessment and assessment across the year***

    - *Cannot slack off during the year because there are internals*

    - *Series of smaller goals keeps motivation levels up*

    - *Having assessments throughout the whole year encourages constant effort*

- *I like the fact that you can re-sit internal assessment to improve or have another chance at passing*

- *Too many internals—students are burnt out by the time they do externals, especially Year 12* (High Achieving Girl)

- *I don't like internal assessments unless strictly necessary (e.g. research or laboratory work). If tested at the final exam it pushes us to let the knowledge stay long term, otherwise we just forget about it after the assessment* (High Achieving Girl)

- *The questions, especially those at Excellence level, are far more challenging compared to the old system, e.g. maths, and also more subjects require you to link different ideas together, which I think is important. Internal assessment assess those skills that cannot be assessed in external written exams, e.g. practical skills* (High Achieving Boy).

3. *The 80-credit/minimum credit requirement*

- *People can just slack off after they get the credits they need—can be disruptive*

- *NCEA makes self-motivation very difficult, when you know you will pass anyway, why study?*

- *You can slack off really easily*

- *Sometimes I feel unmotivated to gain more than the credits required*

- *There should be different amounts of credits available for each achievement level, e.g. Achieved = 2 credits; Merit = 3 credits; Excellence = 4 credits, to keep students motivated*

- *Being able to pass before the external exams*

- *People are only concerned about how many credits the test/exam is worth, if it is nothing, no one really bothers (*High Achieving Girl).

4. *Number and size of the grade bands*

- *The lack of marks other than Achieved, Merit and Excellence—we need a mark as we don't know if it's a great Excellence or a barely there Excellence*

- *Merit covers such a broad range as does Achieved—no sense of "achievement" or motivation*

- *Brings the smart people down and the dumb people up instead of aiming for the best each individual can do, we need a 0-10 scale-based system*

- *Bad—that we don't get a percentage mark, it would make me try harder*

- *Cannot distinguish how high your mark actually is* (High Achieving Boy).

5. *Getting feedback on performance*

- *You can keep a record of what achievements or failures you have*

- *You can see what you passed, what you didn't and what you haven't done*

- *They don't put NA on your results* (High Achieving Girl)

- *The marking criteria linked with the vague questions in externals leaves too much for discussion and opinions* (High Achieving Girl)

- *Bad—the long period of time it takes to get results back* (High Achieving Boy)

- *I like the fact you are told what you need to learn, it just comes to how hard you try* (High Achieving Boy).

Level of Difficulty

The 2508 comments about Level of Difficulty comprising 23% of all comments included slightly more comments from girls than boys. Students listed this category under the list for what they like as well as what they do not like in virtually identical proportions. Student comments addressing the Level of Difficulty included both negative and positive statements about the common perception that NCEA was easier than the "old system", that is, students generally saw NCEA as making it easier to pass but could see this as both a good thing and a bad thing. Typical comments included:

- *Get the credits no matter what grade you get*

- *Some subjects are easier to get credits, e.g. Geography where you get five credits for a poster*

- *It encourages people to be average*

- *It doesn't encourage you to try your hardest. There is no benefit to getting Merit and Excellence rather than Achieved. Same number of credits for all grades.*

- *I felt that it does not push a student to strive for Excellence* (High Achieving Girl)

- *Some easier subjects give more credits than hard ones* (High Achieving Boy)

- *Good—much easier to get a perfect mark. Excellence covers low 80% - 100% in terms of marks. Bad—very little motivation for doing well in Level 1 and Level 2 since only Level 3 credits matter* (High Achieving Boy)

- *In Merit/Excellence questions in all subjects, understanding and communication skills are being tested. This is true learning as opposed to memorisation in bursary* (High Achieving Girl).

An issue that appeared frequently in student comments relates to an apparent anomaly that it was possible to fail an achievement standard—that is, not attain credit for Achieved—despite having successfully answered Merit and/or Excellence questions:

- *Even if you answer Excellence question, grade dragged down if fail Achievement question.*

This was said to occur even if the student attained the higher level questions and the majority of questions overall, and students consider this to be illogical. Some suggested that partial marks should be awarded to recognise partial success:

- *Exams all or nothing, not part marks*

- *Entire mark on a paper affected by one fail.*

Investigating the extent to which it was possible to fail achievement standards despite passing Merit or Excellence questions was beyond the scope of our research project. Nevertheless, prior to conducting focus groups and the individual interviews, it was important to clarify that the students were correct that this could occur. We sought advice from several subject specialist teachers who provided us with examples where this could occur for achievement standards in Geography, Music, Biology and Mathematics but indicated no such examples could be found for Chemistry or Physics. Further, examples could be found for both internal and external assessments.

Future Prospects

Four hundred and ninety-five students (4.5% of the total) wrote a comment relating to future prospects, fairly evenly divided between boys and girls. Slightly more comments were made in the "like" list (57%) in comparison with comments regarding what they do not like. Comments ranged from an extremely positive if general statement such as *"Gives us an idea of what's going to happen in the future"* and *"It's easy to know what to study in each level so you can make goals"* to sweeping negative generalisations such as *"It's not recognised in other countries"* and *"You cannot change the options when I decide*

to change my future". Comments about whether employers understood NCEA and the Record of Learning were generally negative:

- *Employers cannot easily understand NCEA or ROL*

- *My past employer couldn't understand it*

- *Employers don't know much about it, so when they see it on your CV it means nothing to them*

- *Rather than an overall mark for a subject, NCEA can have too much information (for employers, etc)*

- *The Record of Learning is two pages for an employer to read and it is much easier to see with a percentage in each subject how intelligent a person is*

- *Apparently employers have trouble understanding the system. This is probably more significant for people not going to university*

- *Employers cannot tell if you're a dimwit who just scraped past or a genius, by seeing you passed NCEA level 3.*

There were both negative and positive comments about the relationship of NCEA to University Entrance:

- *Clear and easy goals for reaching University Entrance*

- *Not detailed enough. Overseas universities do not really value NCEA grades (A, M, E), very vague, range is too broad, would rather A, B, C, D grades*

- *It's unfair. For different marks get the same credits and get into the same uni*

- *The GPA seems quite impractical and deceiving. It is quite less hard work for levels 1, 2 and 3 compared to other countries. This means I learn less or all further knowledge depends on uni study. This means I will have to slog at uni because I won't know how to work hard enough*

- *It's hard to understand the results. Universities overseas have problems analysing the results as the achievement/unit standards are confusing.*

Understanding NCEA

Comments in this category (489 comments, 4.4% of the total) generally referred to confusion or lack of understanding about NCEA. The majority or 73% of these comments were in the "do not like" list (356). Comments were sometimes very general and generalised, such as *"Teachers and students don't understand it"* and *"Family doesn't understand it, not explained".* Comments in this category can overlap with those in the *Future Prospects* category, where students had mixed opinions about whether employers and overseas universities could interpret NCEA and the Record of Learning. Given these comments suggesting that NCEA was still confusing to at least some stakeholders, we designed specific probe questions for the 2006 focus group interviews with parents and students as well as for the individual student interviews to determine whether they were aware of sources of more information regarding NCEA.

Fees and Practicalities

A total of 337 (3%) comments related to issues such as time required for paperwork, costs associated with the system or the inconvenience of various changes arising from the new system. Two-thirds of these comments were on the "do not like" list. Students generally objected to fees associated with NCEA and felt these assessments should be available without this expense.

Motivation

Two hundred and ninety-two comments (2.5%) were made as to whether NCEA was seen as a positive or negative influence on motivation to learn and/or achieve. It should be noted that many of the comments concerning assessment (above) also concerned the effect of the current design of aspects of NCEA assessment on motivation. Two-thirds of the comments mentioning motivation were on the list of things students reported that they "do not like". Note also that many of the comments coded under assessment also relate to motivation but would not be coded as such because that word was not mentioned in the response. Typical comments from girls included the following:

- *Assesses me throughout the year so keeps me motivated*
- *I dislike the lack of motivation to get high marks cause you get the same number of credits* (High Achieving Girl)
- *Sometimes I feel unmotivated to gain more than the credits required*
- *Gaining credits for things during the year keeps up motivation*
- *There is no motivation to get higher than Achieved*
- *NCEA makes self-motivation very difficult. When you know you will pass anyway, why study?*
- *After you have your 80 credits there is no motivation to do better*
- *No need to try hard, no motivation to work hard. Can slack off for most of the year and still pass*
- *Too easy to pass, which decreases motivation.*

The majority of comments students made were negative regarding the impact of two design features of NCEA on motivation, relating primarily to the 80-credit minimum and lack of incentives to achieve Excellence. The overall proportion of comments made in this category was small but consistent with the large number of related comments made regarding *Assessment*.

Teachers

Students made very few comments referring to teacher behaviour or attitudes towards NCEA, only 263 (2%) in all. Seven out of 10 comments (over 71%) were on the "do not like" list, with most comments directed to particular actions of teachers—such as marking—rather than teachers themselves. The few comments made reflecting a perception that teachers were "teaching to the test" were approximately equally divided for those who listed this as something they liked versus those who listed it as something they did not like. One student noted, *"Teachers become tempted to just teach for Achieved level because sometimes that is what the majority of the class aims for – credits, not actual learning."*

Subject Choice/Flexibility

Only 89 comments (slightly less than 1%) were made related to the flexibility and choices provided by NCEA, with 72% of these comments on the list of things that students like. Comments that relate to this issue overlap with other codes such as *Assessment*, and further analyses of these data can investigate themes in student responses towards informing future discussion of this design feature of NCEA. As noted, these comments were most often listed as things they liked about NCEA and the Record of Learning:

- *Option to withdraw/not sit certain standards*
- *Ability to make up ground in strong subjects*
- *Being able to choose what I'll be tested on*
- *You get second chances if you fail*

- *Ability to do one assessment and use same material for another subject*
- *I like the flexibility of multi-level study, and that courses can be tailored with the standards necessary for the student*
- *There are lots of credits available. NCEA is flexible.*

Typical negative comments about perceived flexibility or choices associated with NCEA included the following:

- *Too much freedom when students are too immature to make important choices*
- *Not enough subject choice when you reach Level 3*
- *Some schools cannot offer enough credits in a subject, can't support subject*
- *Too much is left up to interpretation by the schools, so my school chooses not to be flexible and extend me, while arbitrarily pushing unit standards on me because "everyone else is doing them"*
- *Too much flexibility is given between schools as to what they offer*
- *Grading system is not flexible. If you miss an Achieved question that you have to get for Achieved, you have no chance of passing.*

Table 17. What NCEA Level 1-3 students like/do not like about NCEA and the Record of Learning

COMPARISON OF LIKE PERCEPTION RESPONSES BY CATEGORY AND YEAR LEVEL (% represents response by total for each category)

year	perception	future	% of total like future cat	assessment	% of total like assess cat	level of difficulty	% of total like lev dff cat	teachers	% of total like teac cat	subject choice	% of total like subject cat	motivation	% of total like mot cat	Practicalities	% of total like prac as cat	Understandings	% of total like conf cat	total
10	like	4	5.19%	36	1.77%	10	1.11%	0	0.00%	0	0.00%	0	0.00%	1	1.09%	1	1.54%	52
11	like	36	46.75%	818	40.30%	335	37.26%	21	51.22%	11	26.83%	30	45.45%	21	22.83%	25	38.46%	1297
12	like	31	40.26%	733	36.11%	346	38.49%	11	26.83%	15	36.59%	20	30.30%	34	36.96%	17	26.15%	1207
13	like	6	7.79%	443	21.82%	208	23.14%	9	21.95%	15	36.59%	16	24.24%	36	39.13%	22	33.85%	755
total like		77		2030		899		41		41		66		92		65		3311

COMPARISON OF DISLIKE PERCEPTION RESPONSES BY CATEGORY AND YEAR LEVEL (% represents response by total for each category)

year	perception	future	% of total dislike future cat	assessment	% of total dislike assess cat	level of difficulty	% of total dislike lev dff cat	teachers	% of total dislike teac cat	subject choice	% of total dislike subject cat	motivation	% of total dislike mot cat	Practicalities	% of total dislike prac as cat	Understandings	% of total dislike conf cat	total
10	dislike	2	1.49%	42	1.95%	11	1.41%	2	1.48%	0	0.00%	3	1.91%	4	2.22%	4	1.44%	68
11	dislike	46	34.33%	859	39.86%	309	39.51%	49	36.30%	5	27.78%	46	29.30%	69	38.33%	116	41.73%	1499
12	dislike	57	42.54%	766	35.55%	297	37.98%	54	40.00%	5	27.78%	70	44.59%	65	36.11%	101	36.33%	1415
13	dislike	29	21.64%	488	22.65%	165	21.10%	30	22.22%	8	44.44%	38	24.20%	42	23.33%	57	20.50%	857
total dislike		134		2155		782		135		18		157		180		278		3839

COMPARISON OF LIKE AND DISLIKE PERCEPTION RESPONSES BY CATEGORY AND YEAR LEVEL (% represents response by total for year level)

year	perception	future	% of total	assessment	% of total	level of difficulty	% of total	teachers	% of total	subject choice	% of total	motivation	% of total	Practicalities	% of total	Understandings	% of total	total
10	like	4	7.69%	36	69.23%	10	19.23%	0	0.00%	0	0.00%	0	0.00%	1	1.92%	1	1.92%	52
10	dislike	2	2.94%	42	61.76%	11	16.18%	2	2.94%	0	0.00%	3	4.41%	4	5.88%	4	5.88%	68
11	like	36	2.78%	818	63.07%	335	25.83%	21	1.62%	11	0.85%	30	2.31%	21	1.62%	25	1.93%	1297
11	dislike	46	3.07%	859	57.30%	309	20.61%	49	3.27%	5	0.33%	46	3.07%	69	4.60%	116	7.74%	1499
12	like	31	2.57%	733	60.73%	346	28.67%	11	0.91%	15	1.24%	20	1.66%	34	2.82%	17	1.41%	1207
12	dislike	57	4.03%	766	54.13%	297	20.99%	54	3.82%	5	0.35%	70	4.95%	65	4.59%	101	7.14%	1415
13	like	6	0.79%	443	58.68%	208	27.55%	9	1.19%	15	1.99%	16	2.12%	36	4.77%	22	2.91%	755
13	dislike	29	3.38%	488	56.94%	165	19.25%	30	3.50%	8	0.93%	38	4.43%	42	4.90%	57	6.65%	857
	total	211		4185		1681		176		59		223		272		343		7150

Individual Interviews with Year 11 Students

Students who had participated in Year 10 focus groups at the end of 2005 were characterised by their schools academically as either high achieving students, average students or students who might be regarded as low achieving; longitudinal research which tracks actual achievement on NCEA during Year 11 would of course provide information about their actual achievement levels under NCEA. Given that this is a small sample (n = 14), no attempt will be made at this point to identify patterns across the data. However, the purpose of these interviews was to probe issues arising from the survey in particular, so we have included pertinent comments made by students in response to our interview questions (see the list of questions on pp 15-16).

Students indicated that what they knew about NCEA was based on initial information provided at school plus through booklets and information sheets about NCEA, Scholarship and University Entrance that were distributed at their schools. At the start of Year 11, class teachers distributed information to them about the year's assessments in each subject. One low achieving student commented *"An NCEA course book was given out for the majority of my subjects. Made it quite clear. Teachers explained all about NCEA to the class and went over it until everyone understood. My mum understands it, probably because I am the third child to go through this system."*

In at least one school, letters were sent home explaining NCEA. The majority of those interviewed said they were aware of the Team-Up website and had seen the television advertisements about the site, but none had actually looked at the site nor had their families according to the students. One high achieving student commented *"I haven't seen the website but am interested and will have a look at it."* Students had generally not discussed NCEA with their parents, and most indicated their parents knew little about the system other than those with an older sibling and direct experience.

Students were very positive in anticipation of a mix of internal and external assessments, and they commented favourably about internal assessments allowing students to pace their learning and workload throughout the year. Students at all levels of achievement preferred this pattern and indicated they wanted feedback in the marking of the assessments. One high achieving student said *"Grades of Excellence, Merit, etc would be better if they used numbers. This will help us know how close we are to moving to the next level."* A middle achiever stated *"It's not very good for high achievers… Would rather have marks as a percentage or A, B, C, D, E, F as it's easier to understand."* Virtually all students who commented on recognition of excellence under NCEA—across all three levels of achievement—said that NCEA did not sufficiently reward excellence and those who worked harder as they received the same number of credits regardless of the level of performance.

Regarding influences on their subject choices, students had only general ideas about their future pathways and did not appear to identify subjects based on future choices of career. Students seemed very focused and informed about their subject choices, emphasised choosing subjects they were interested in and enjoyed, and most indicated that their families were happy with their choices as long as they did enjoy the subjects. Two students indicated that their parents had clear preferences for a future career direction for them, but this was the exception and most students indicated their parents did not influence their choices. Every student interviewed expressed the intention of completing all three levels of NCEA, and most indicated they hoped to attain University Entrance.

Focus Group Results

Year 10 Student Focus Group Results

At the time we interviewed the eight Year 10 focus groups late in 2005, these students were not yet enrolled in NCEA. Thus, the knowledge and perspectives shared by these students reflect what they have heard and/or believe about NCEA rather than their direct experiences. Thus, we do not report student comments in detail here but instead summarise major patterns in their responses, indicating whether a particular point of view was expressed by only a few or by more students, including any response patterns more typical of a particular achievement level. According to what students in these groups told us, schools generally and individual teachers vary greatly in the amount of information provided to students and their families about NCEA. Students typically reported that their parents/whānau don't understand NCEA, and many students commented that they did not receive sufficient information from their teachers—a few students stated that at least some of their Year 10 teachers also did not understand NCEA.

Even thought these Year 10 students had not yet begun NCEA level 1, their perspectives are interesting. It was late in the school year, and they had already had the opportunity to make some subject choices for Year 11 requiring some understanding of how NCEA works. Nevertheless, it is important to acknowledge that this section reports indirect knowledge and beliefs rather than firsthand experience with NCEA.

The Year 10 students we interviewed were generally aware that there are three levels of NCEA and that they need 80 credits to pass; they are less clear about requirements for University Entrance. One school of the four appears to have conducted NCEA information meetings for Year 10 students, parents and teachers. Some students stated their belief that NCEA is easier to pass than the previous system, and students in the high achieving groups were most likely to express this point of view.

Students were generally positive about internal assessment, which they saw as a beneficial complement to external assessment. Students also commented on the fact that internal assessment was a year-long workload, requiring that they study and pass assessments throughout the year rather than just at year's end. Low achieving students are most likely to comment negatively on the workload issues; one student commented that internal assessments "interfere[ing] with your social life". Students' comments were also largely favourable about being able to make choices in a system they saw as flexible. These included subject choices, credit choices, opportunities to re-sit assessments, deciding what to be tested on, and not showing up for exams or doing more credits once they had accumulated what they needed to pass.

High achieving students were most likely to express the view that NCEA would not sufficiently recognise their achievements; there was also frequent comment across all achievement levels that four grades provided insufficient feedback on performance and they wanted percentages and/or more feedback on how they performed. Many students had heard that it was possible to get a Not Achieved despite passing Merit and/or Excellence questions for an achievement standard if one failed an Achieved question, and they commented regarding the "unfairness" of this outcome.

Middle and low achieving students were more likely than high achievers to comment favourably on the month study break prior to end of year external exams, and students in all groups commented favourably about the prospect of being able to "flag off" the remainder of the year once they had the credits they needed.

Students in the focus groups mentioned the negative media coverage of NCEA throughout their responses to the four questions. A few students commented that they felt it was unfair they were the "guinea pigs". One student commented that that those in charge should have gotten it right before "playing around with our future". There were also occasional comments regarding the unfairness of costs to sit NCEA exams, e.g. "Why do we need to pay to learn?"

Year 12-13 Student Focus Group Results

Four focus groups with students in Years 12-13 (who had been in Years 11-12 when they completed the student survey in late 2005) were held in late March 2006 and involved students at two schools, one decile 6 and the other decile 10. Because these students had completed either one or two full years under NCEA, we report their comments in more detail. Student responses were categorised across questions into the codes revealed on the open-ended survey response.

Students were positive in general about studying for a combination of internal and external assessments, gaining credits, and the opportunity to re-sit assessments when needed. They saw the combination of internal and external assessments as affording a spread of workload and encouraging learning throughout the year. Some students indicated that internals were particularly beneficial, possibly more so for average students with assessments occurring immediately after engagement in learning activities. Students emphasised that what they liked about *Assessment* included:

- *Can pass credits throughout the year, working towards achieving 80 credits for the first level which takes the pressure off*

- *It's easy to pass, e.g. in maths need to only get limited number of answers right and pass*

- *Can re-sit exams*

- *Internal assessments keeps you learning throughout the year and gives opportunities to pass*

- *Internals if something is wrong then you get to re-sit*

- *Internals are way easier because you are tested after you learn the topic*

- *Don't have to study hard for credits*

- *Don't have to cram at the end of the year because assessment is spread throughout the year.*

Regarding things they disliked about *Assessment* under NCEA, most students indicated they preferred specific grades or percentages. They were concerned about what they perceived as the broad range within grade bands, the timing of assessments, lack of recognition for higher achievement, and a marking system they see as inconsistent across subjects, teachers and schools. The following comments were made:

- *Don't receive percentage marks*

- *Don't like that you can get an Excellence and Merit questions correct and still only get Achieved overall*

- *[Getting a] percentage would allow you to compare and compete*

- *Don't like that we don't get more credits for higher marks*

- *Don't get credits for in-depth answers, they want you to regurgitate*

- *All assessments happen at the same time therefore it puts us under pressure and is stressful*

- *The ROL should identify the amount of credits including the total passed*

- *More recognition, i.e. credits for achieving Excellence*

- *Should tell us if we get UE or not*

- *Not Achieved needs to be in there as well.*

In terms of *Level of Difficulty*, students were generally positive about NCEA, indicating that the combination of internal and external assessments allowed for a workable distribution

of workload across the year. Some saw this as decreasing student workload, while other students thought the combination of assessments increased workload and made them work harder. Many students commented that they felt it was easy to pass or achieve credits. Comments supporting NCEA included:

- *Internals and externals decrease workload at end of year*

- *It's easy to pass, e.g. in maths need to only get limited number of answers right and pass*

- *It's easy, e.g. I made up quotes as examples and got it right*

- *Don't have to study hard for credits*

- *Pass before year's ended*

- *Internals are way easier because you are tested after you learn the topic*

- *Achievement standards are harder than unit standards and can pass with unit standards more easily*

- *Internals and externals decrease workload at end of year*

- *Level 1 is easy.*

While the majority of those interviewed were positive about the *Level of Difficulty*, others—characterised as higher achievers—were not as positive. The higher achieving students said they were less motivated to focus on their studies when the work was easier:

- *Doesn't motivate to do homework and try hard*

- *Don't like it being so easy*

- *The marking system goes by your lowest mark which is unfair*

- *Percentages aren't really accurate, e.g. I got some things wrong and still got 100% for Geography*

- *Can learn on the day and can pass easily*

- *The step up is big between Level 1 and Level 2. Doesn't prepare us. Level 1 is more like revision. Make it more even. I was in shock in Level 2*

- *Level 2 maths is more difficult than Level 1 and Level 3 which is more focused; Level 2 maths covers all aspects of maths, it is broad and then becomes focused at Level 3.*

Regarding the code category for *Teacher*, some students indicated that teachers were keen to assist students in learning, while other students were quite critical of teachers. Students were particularly concerned about the consistency of what is being taught and the level of assessment, between subjects, teachers and schools. An example of what students like was *"Teachers want to help us—means get a chance of passing."* Examples of what students did not like about NCEA included:

- *Different teachers interpret answers differently and set assessments differently*

- *Teachers don't interpret to the national standard but rather to the student's personal ability*

- *What you learn is sometimes irrelevant and you don't get tested—we studied too much for externals*

- *Teachers give too much help for re-sits—feels like you're cheating. Students also can give others the answers*

- *Marking between teachers isn't always consistent, and between years.*

Regarding *Subject Choice and Flexibility*, students were positive about various aspects including the ability to achieve credits throughout the year:

- *[Students] can pass credits throughout the year, working towards achieving 80 credits for the first level which takes the pressure off*

- *Internals if something is wrong then you get to re-sit*

- *Externals are good because you can choose different papers.*

In terms of *Motivation*, interest in study and school, and the focus on achieving and succeeding, students were split in their opinions about the NCEA and its impact. They enjoyed the choice of subjects and said that the choice of internals and externals encouraged many to work consistently throughout the year. However, some students indicated that they didn't need to work to pass, particularly in the first two levels, so felt that NCEA was easier than the previous system; as they had no personal experience with a system other than NCEA, this belief was said to be based on what they had heard from others including siblings, friends or parents. Others noted that they worked to improve their GPA and they liked to achieve Merit or Excellence even though this achievement wasn't recognised on their record. Some students were concerned about the perceived inconsistency in delivery, teacher interpretation and the marking system, and they resisted being "lumped in" with the majority or average achievers—hence they tended to identify the system as encouraging mediocrity. Comments included:

- *Internal assessments keeps you learning throughout the year and gives opportunities to pass*

- *Take easy subjects and get into uni[versity]. May even get more credits than hard subjects*

- *If you have the ability then why not try hard?*

- *It doesn't make me study harder as there is no effort needed except when exams are due*

- *NCEA keeps you working throughout the year*

- *Internals make me study harder*

- *Some tried really hard in first year, but didn't in Year 12 because there was no reason to*

- *Try harder because it influences your GPA*

- *No, because only need Level 3. Level 1 and 2 are easy enough - don't need to try until Level 3 to get Merit or Excellence*

- *Don't need to do as well because get same credits*

- *It matters for you personally, doing well in all three levels motivates you for the future*

- *Yes, doing well matters. You need the qualification to get into university*

- *Level 1 doesn't matter, it's an introduction year only. Level 2 and 3 are more important*

- *Good to see Excellence on your record.*

In contrast to the above list of things that students liked about NCEA, they made the following comments on things they do not like:

- *Rewards for working harder would be good*

- *We're learning to pass and not to try beyond that*

- *It's silly that you can bring credits forward – no incentive to achieve next year*

- *By not showing the "not achieve"' results tells students or people that it is OK to fail*

- *Level 1 and 2 don't prepare you for Level 3, the early years "slack you off"*

- *No motivation, it's good for people who are just passing*

- *Everyone gets rewarded the same way even if they do better*

- *No it makes you slack – think I can re-sit it!*

- *No incentive to get more than 80 credits. What's the point after you reach 80?*

- *Internals not too hard, don't need to work for them*

- *Don't study because have just learnt it in internals*

- *No point in studying until the assessment, if there are only two credits you don't study hard.*

No specific comments were made in the focus groups about the paperwork, *Fees and Practicalities* of the system. With respect to *Understanding NCEA*, most students who are undertaking Level 2 or 3 said they understood what is required of them to achieve credits and proceed to the next level. However, they were critical of the Record of Learning as they felt it was incoherent. Some comments include:

- *Keep track of our progress, don't have to guess*

- *People are more equal*

- *The ROL is incoherent – you get an instructions sheet but it is not easy to interpret*

- *It doesn't show Not Achieved – which is good to show our parents or a potential employer. However it is not the whole story.*

Teacher Focus Group Results

As noted earlier, two focus groups of teachers at one mid and one high decile range schools were asked to respond early in 2006 to four questions towards probing issues related to the impact of NCEA on student motivation to learn and achieve. Teacher responses to the first question asking their opinion of what has an impact on student motivation and achievement included:

- *We run alternative programmes to keep students in the exam system*

- *There is a larger emphasis on staying in school. More students remain in English due to pressure to get literacy in Level 1 and 2*

- *High community expectations from outside school and friends - there is not a great emphasis placed on academic achievement and excellence. At this school the community view is that education constitutes being in class – just need to be here, legally, they think just being here is learning and many student just copy*

- *Up to Year 12 very passive learning, there is a desire for spoon feeding, while at Year 13 students are a little more motivated*

- *Most students have commitments outside school to earn money – school limits their ability to work*

- *The extra workload puts pressure on the students*

- *"Is this for credits?" is the most common question.*

Overall, teachers described a variety of existing challenges in the senior school that could be expected to have an impact on motivation and learning, regardless of the particular assessment or qualification system experienced by students. These included pressure from the community that competed with academic achievement, student predispositions acquired from previous schooling that did not require assessments for students, work

outside school (a high percentage of students reported part-time work across our sample) and student workloads resulting from a combination of factors.

Our second question for teachers was designed to probe whether they felt that NCEA had different motivational effects on students who were high achievers, average students and low achievers. We asked for examples from teachers, and we also probed whether teachers thought NCEA motivated students differently compared with the previous system. They responded:

- *There is a big difference between Excellence and Merit and it is much harder to get E than A in externals*

- *In some areas it's easier to get an Achieved*

- *Achieved would have failed in previous system*

- *For students who haven't worked throughout the year, under NCEA have a chance in third term to get on track, whereas in the previous system they would have given up in term 3*

- *For test students ask, "Is it worth anything?" If there are no credits, they won't do it*

- *They are cunning, they know the system and they do the least*

- *More come back on teachers because they are not marking properly*

- *Parents expect students to pass, and students want to know examples of Excellence*

- *Externals are the biggest problem. Students build up credits and walk out of the exam and don't do any more - they need to look at the external but they don't realise that*

- *It's wonderful to have these choices to keep these kids in school doing Year 13*

- *We only had 11 students enter for Scholarship, six turned up and just one completed the exam. The year before four entered, two turned up and one passed.*

These teachers suggest that NCEA does provide more opportunities for students to achieve in comparison with the previous system, and they also note that there seemed to be higher expectations by students and families alike that they would succeed in school. When one teacher in the focus group at the high decile school made the comment quoted above regarding students having choices that kept them in Year 13, there was immediate consensus in the group that this was a positive aspect for students who needed help to achieve.

Teachers were also asked whether they thought that the choices associated with NCEA—subject choices, assessment choices, choosing as early as Year 10 to take Level 1 credits, and so on—were good for students, and why. Similarly, they were asked what they might change and why. Comments reflected a range of opinions:

- *Students decide what unit to take in exam, and often opt out of the exam or leave exams*

- *They choose subjects and as a consequence we have Year 13 students who haven't taken university entry subjects and therefore can't get into university*

- *Students don't think Year 10 is too early to make those decisions and they don't link success in a subject to moving on to university, etc*

- *The students want to be spoon fed—NCEA makes more people fail because people want spoon feeding, e.g. doing a research credit, it's an open book exam! It took them two weeks because they wanted the material given to them, which we ended up doing because we have to move on*

- *Kids and parents don't understand the choices. Kids do play the system, but don't make informed choices*

- *Literacy is a problem. In English there are two pathways—unit standards and achievement standards; unit standards are much easier, the same level is not expected. For example, ESOL who are fee paying, there is a push to get them through*

- *The disparity between unit and achievement standards needs to be addressed. There could be a combination.*

Finally, teachers were asked whether they had any evidence that students "slack off" more than they did before NCEA and whether any changes were needed to prevent this. They were also asked if they were satisfied that NCEA measures student achievement appropriately and why/why not. Teachers did not express any clear views comparing the two systems, other than to communicate that the changes involved were a communications challenge for students and their families and a continuing workload challenge for teachers:

- *Don't like irregularities between schools—it's left up to school how they produce work. Whatever they do, the criteria are the same but how do you monitor where the information is from, e.g. some is written on computers so we make everyone use pen and paper, which challenges grammar and spelling. Some tutors even write the piece for the students*

- *Students will not come to school if they aren't getting credits, e.g. don't come to practice and others don't come to externals*

- *By the end of last year, students were very aware of credits but they know less about university entry. They rely on careers counselling for that*

- *They know they have to get credits, but the good kids slack off. However other teachers thought the average kids slack off, while the highly academic don't slack off*

- *It's a better system than previous because it's done in bits but it is important to get a better understanding between unit and achievement standards*

- *It's a time of upheaval for education in New Zealand and we are in the middle of it*

- *Compared to old system, NCEA is a lot of work for teachers—the paperwork is extensive. It's a bureaucratic nightmare to get assessments consistent*

- *Due to chances of re-sitting, teaching can get too bogged down with marking*

- *The variance of standards of externals is one of the worst things about the system.*

Comments made in the focus group by the teachers were further analysed according to the eight categories of responses identified by students requesting them to list three things they liked/did not like about NCEA. Regarding *Future Prospects*, some teachers were concerned that because students could choose their subjects, Year 13 students who had intended to go to university would not be able to do so as they hadn't chosen the required University Entrance subjects. Regarding *Assessment*, the teachers noted that students decide what unit to take in an examination and can opt out of external exams altogether or leave school early. There was concern as well regarding the disparity between unit and achievement standards and problems for students attempting to combine the two.

On the theme of *Level of Difficulty*, teachers in the groups felt overall that it was easier for students to achieve under NCEA and some of those now attaining achievement standards would have failed in the previous system. Teacher comments regarding *Subject Choices and Flexibility* focused on concern regarding the disparity between unit and achievement standards, with literacy seen as a particular problem. English offers both unit standards and achievement standards as pathways for students, and teachers reported that students were being encouraged to enrol in unit standards as the easier option for ESOL fee-paying students. Finally, teachers made a number of comments about the impact of

NCEA on student *Motivation*, generally considering that NCEA motivates students differently from the previous system. They suggested that some students manipulated the system to do the least amount of work to move to the next level. They commented that as students build up their credits, they walk out of external exams. Teacher comments that learners at Year 12 are still quite passive and they become more motivated in Year 13 are consistent with our student survey findings.

Parent Focus Group Results

Parent focus groups were conducted at two schools, one at decile level 2 and the other level 7. There were 13 parent participants in attendance at the decile 2 school and seven at the decile 7 school. School personnel described parent participants at the first school—including Māori and Samoan parents—as representative of the school population, while the parents from the second school were described as being less representative of that school. Focus groups were conducted in the evening in a suitable meeting room.

At the lower decile school, parents discussed the influence teachers had on student motivation and performance and emphasised the impact on students of the teacher's own motivation, demeanour, approach and commitment. In contrast, at the higher decile school, parents made minimal reference to teachers and their role in terms of student motivation, performance and subject choice but instead seemed to view teachers as "servants" to education and as service providers rather than people to be acknowledged for their input and held in high regard. Both schools were reported to have shown support for NCEA and had distributed high standard written information to parents. This included booklets and pamphlets on NCEA, University Entrance requirements and subject choices.

Parents supported NCEA as a suitable system for *Future Prospects*. They felt that from Year 10 onwards, students were encouraged to think about their future and plan their pathways, either to aim for University Entrance by following an academic pathway or take a vocational route. Some parents were concerned about too many choices, making it difficult for Year 10 students to identify their goals. With respect to choices, parents commented:

- *Fair bit of stress; need to make choices for entry to university*

- *Too many choices; not many children at that age know what they want to do when they leave*

- *Some children make choices that will limit options, that is, dropping science and maths at Year 12 for food technology.*

Parents acknowledged the choice of internal and external *Assessments* had benefits for their children and noted that internals were particularly beneficial for children who became stressed by final examinations. The following are indicative comments:

- *Noted that exams don't accurately reflect how well a kid is doing and strong support for internal assessment*

- *Better for children who don't like exams*

- *Better for those motivated to work throughout the year.*

Parents remarked on what they saw as inconsistencies with the marking system between subjects, teachers and schools and between internal and external assessments. They were, however, generally appreciative of the information provided on the Record of Learning. The following quotes reflect these comments:

- *Standards of marking are inconsistent between teachers*

- *Lots of information is available on the Record of Learning*

- *The ROL assists when I employ somebody. I know what they can do*

- *Strong support for ROL; the parents understand it and know where their kid is succeeding.*

Parents commented that, as with the marking system, they perceived inconsistencies between subjects in terms of the *Level of Difficulty* of the opportunity for students to pass the subject:

- *Switches off when too hard*

- *Some subjects easier to gain credits in than others*

- *Uniform standard as to what is an Excellence, Merit or achievement*

- *Unit standards have two grades, pass and fail*

- *There are prerequisites to progress to the next level, but different within subjects*

- *Grades vary between subjects and between schools, e.g. maths may be made up of different credits between schools*

- *Effort to get credits is significantly different for some subjects*

- *It seems to be drip-feeding excellence which is pulling kids forward.*

Comments coded as fitting into the *Teacher* category generally reinforced students' desire to have positive, quality teachers able to motivate learning capabilities in their students:

- *Quality of teaching, positive relationship, exciting*

- *Special teachers can motivate*

- *Lack of curiosity or teacher understanding can de-motivate kids*

- *Poor teaching or classroom management can disadvantage students*

- *Strong culture of learning led by the philosophy of the school*

- *Cautious teachers—just sticking to the subject and not motivating or making it interesting/doing the minimum.*

Many parents saw *Subject Choice* as important to their own child's motivation. Others felt the amount of choice in selected subjects was too reliant on children's decision-making. Parents commented:

- *Variety of subject choices*

- *Needs to be a control or guidance from school to stop kids doing the wrong thing*

- *Students are more able to choose direction, can choose subjects and find out what they are good at.*

In terms of *Motivation*, some parents indicated that their children were motivated by a range of influences, including self-motivation, choice, future plans or goals, peer pressure or teacher influence. Typical examples of parent comments relevant to the "motivation" category include:

- *My child is a high achiever and very academic—will succeed anyway*

- *Choice motivates my kids*

- *Future plans—knows what is required, the prerequisites to get where they want*

- *Small increments are motivating*

- *Kids can work on weaknesses*

- *Child who is not as focused can do it in bite sizes*

- *Important to weigh up what is expected, break it down, manage the workload, be methodical and organised*

- *If students want to achieve they will*

- *NCEA feedback is an incentive to kids as they can see where there are at*

- *Working at a higher level has a huge advantage*

- *Child can find out what he is good at*

- *Students are more aware of how the system works.*

The parents considered that children were generally strategic and were in control of their education and ultimately their destiny. There was agreement that NCEA may have a de-motivating impact on children as they can slack off when they reach their required number of credits:

- *Students can be strategic; if it doesn't count, they don't need to do it*

- *Kids to decide how high their wall is—not a barrier but they can decide if it's just Achieved or higher like a Merit or Excellence*

- *NCEA works for savvy kinds who know how to use the system to their advantage*

- *Kids are in control of their education*

- *Could be bad for academic kids as they can cruise*

- *Peer pressure to not succeed*

- *Kids may not push themselves once they get the number of standards because they don't need to*

- *Don't see much difference between motivation of children in either system.*

Parents were comfortable with the information provided to them but concerned about timetabling issues that inhibited subject choices. There was also concern about teacher workloads and associated administrative and marking responsibilities. Parents also commented that whilst the NCEA system provided advantages to some students, others were disadvantaged.

- *More comfortable when we found out more*

- *The difference with the old system is that students could have a break*

- *Information evening specifically for NCEA*

- *Course booklet to select subjects*

- *Information every week, very good*

- *College has done a good job in spite of the media*

- *School's positive attitude made the difference*

- *Information also available in front of study guide which also provides information about what is required for University Entrance and entry to tertiary courses*

- *School embracing it, we think it's fantastic*

- *Depends on what the school offers*

- *NCEA is an incredible workload for teachers, more administration.*

Parents commented that the following were instances where students were advantaged by the NCEA system:

- *NCEA helps the average to low kids to get same results*

- *Works best for child with solid work ethics*

- *Better for those stressed by exams*

- *Kids more likely to achieve because learning in chunks*

- *Can choose vocational or academic path.*

Parents' comments about disadvantages were not necessarily specific to NCEA:

- *Children who lack external support*

- *First year is the hardest, second year you can choose something different; if not can tailor a course*

- *Students in employment.*

The parents who participated in the two focus groups were well informed and had clear understandings about NCEA, irrespective of school decile or socioeconomic group. The following comments represent these understandings.

- *Is a fairer system with recognition of achievement throughout the year*

- *There are a lot of levels—parents referring to the five streams where bottom one does no external assessment and top stream is more academic and does assessment*

- *You can make national comparisons to see school progress*

- *There are different levels and student can decide the amount of effort to put in (i.e. if you want Merit/Excellence)*

- *It reflects what happens in the workplace, you have to work all the time*

- *Consistency of effort required for NCEA; kids work hard all year and not focused on exams at the end*

- *System reflects what students can do*

- *High achievers are not necessarily happy with the system*

- *Better than School Cert where can do well all year and then fail in one exam at end.*

What was particularly interesting was that the responses from these two, very different parent, focus groups—both strongly supportive of NCEA—were virtually identical conceptually. To some extent, this may be a function of strong school support for NCEA that was indicated by the parents in both groups. It could also have been attributable to an increased likelihood that engaged parents who were supportive of NCEA were those most willing to spend an evening attending a meeting to discuss NCEA when invited. Nevertheless, the similarities in these, clearly informed, parent responses are surprising, given the diversity in the schools themselves. These support NCEA in principle while demonstrating a willingness to critique aspects that, from their perspective, require modification. They also made clear their expectations that NCEA is still in development phase and will make continued accommodations based on evidence that changes are needed to address issues arising from student behaviour and achievement.

KEY FINDINGS

Our key findings are organised into four areas: influences on subject choices, the relationship of achievement and motivation orientation, qualification design issues, and understandings about NCEA. We also provide an overall summary of areas of major agreement regarding positive perceptions about certain features of NCEA and concerns regarding the impact of some aspects of NCEA that might be modified or adapted to better support student learning and motivation.

Influences on Subject Choice

- Students predominantly chose subjects because they were of interest to them and, secondly, because the subject is related to a future job or career goal. They were less influenced by external factors such as advice from parents, friends, or school personnel such as teachers, deans or careers advisors.

- However, students achieving fewer credits and with the lowest grade averages were more likely to choose subjects because of external factors such as what their friends were doing, or chose options that fitted into their schedule or part-time work commitments.

- Girls were more likely than boys to make subject choices based on future career goals and personal interests, but there were no gender differences for the influence of external factors.

- As students progressed in the senior school, influences on subject choice shifted towards selecting what interested them and what they need for future career or job goals. However, this finding could be affected by changes in the student population as well as maturation. Students more influenced by external factors at Year 11 may be those leaving school early, thus affecting findings for Year 13.

- Students in the senior school who were motivated by *Doing My Best* were most likely to select subjects based on interest and career goals, while students motivated by *Doing Just Enough* chose subjects because of external factors and not because of interest or career goals.

- Different motives for subject choice had significant relationships to what students like and dislike about NCEA. Students who chose subjects because of interest and importance for future goals were high on the G*etting Feedback* and *Excellence* and low on the *Work Avoidance* factors. Students who based subject choice on external factors were high on *Work Avoidance* and also somewhat high on G*etting Feedback*.

- Asian students attributed their subject choices to utility or importance more than European and Māori students, and Pasifika students attributed subject choices to this factor more than European or Māori students. Māori and Pasifika students attributed subject choices to external influences more than European and Asian students; they were also less likely to attribute subject choices to interest than European and Asian students.

- Receiving a fee rebate was not related to subject choices based on interest, but was associated with being influenced by external factors and by the utility or importance of the subject more than for students not receiving a fee rebate.

Relationship of Motivation and School Achievement

- The strongest predictors of high academic achievement and higher grades were a high motivation orientation towards *Doing My Best* and a low motivation orientation towards *Doing Just Enough*. Longitudinal research with the Year 10 students could investigate whether early self-ratings on these motivation orientations predict student achievement.

- Self-reports of being motivated by *Doing Just Enough* predicted fewer credits achieved, and students who scored high on *Work Avoidance* were less likely to gain achievement standard credits overall or with Merit or Excellence, had a lower grade average, and were more likely to gain unit standards. The grade average finding is likely to be affected by disproportionately lower opportunity to demonstrate Merit on unit standards.

- The statistics on the relationship between motives and numbers of achieved standards show that there was a negative relationship between the motive to do just enough and the number of credits achieved. This means 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, were 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, were more likely to achieve a grade of Merit or Excellence on achievement standards, and had higher grade point averages 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.

- Ethnicity was related to the numbers of unit standard credits attained, with Māori and Pasifika students achieving more unit standard credits than European and Asian students, and Asian students achieving fewer unit standards than European students.

Getting feedback on their academic achievement was an issue for a diverse group of students and not only those who are either high or low achieving. Students from low decile schools were more interested in getting feedback than those from middle and high decile schools.

Qualification Design Issues

- There is evidence that the 80-credit requirement encourages a minimalist approach by students. Many students agreed that it was hard to be motivated to do more than the minimum 80 credits and many indicated there is little motivation to aim for Merit or Excellence when these credits carried no extra value.

- Students who commented on opportunities to attain Merit and Excellence generally expressed perceptions that the system did not adequately recognise achievement at the level of Merit and Excellence.

- Students commented that the current grade bands of Achieved, Not Achieved, Merit and Excellence were too broad and do not provide enough information on their learning and performance. Many students added suggestions for letter grades,

options to score each achieved band as high/middle/low, and a system of percentage points.

- Some students wanted to be able to compare themselves with others, and many students wanted more feedback regarding their own performance. Students wanting comparison information were most likely to ask for percentage grades.

- Students were extremely positive about the mix of internal and external assessment, which they saw as an opportunity to guide their learning as they mastered learning goals and to spread their workload across the year.

- Students were more positive about internal assessment than external examinations, but many students felt strongly that external examinations were important as evidence of quality and consistency across schools and in order to have information that will be respected for University Entrance, by employers, and internationally.

- 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 include 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 could 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 is 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 attained primarily achievement standards, where Merit and Excellence are available options. Some students commented on feeling disadvantaged by the lack of opportunity to demonstrate Merit or Excellence for unit standards generally.

- Students expressed concerns about uneven opportunities for subject choices and access to study at the next level of NCEA across schools, with students at some schools reporting that they felt disadvantaged in comparison with students at other schools where more choices and opportunities seemed to be available.

- Students expressed perceptions that standards differed in level of difficulty and time required for assessment across subjects.

Understandings about NCEA

- Students interviewed late in Year 10 reported that their knowledge of NCEA was limited, but those interviewed again early in Year 11 reported that their schools and subject teachers had already provided them with information about NCEA generally, achievement standards, choosing subjects and accumulating credits towards the certificates.

- Students saw a number of positive features in NCEA, particularly with regard to its flexibility and choice options. However, there were also concerns expressed by some students, teachers and parents regarding whether all students were mature enough to make decisions that could have important impact on future opportunities.

- Students and parents reported having read and seen media reports about NCEA that were primarily negative, and those who commented that things still needed to be "fixed" were also likely to state that they felt the system appeared to be getting better.

- Where students expressed personal concerns about NCEA, these focused primarily on issues important to them individually rather than on the system overall, such as getting feedback or more information from grade bands. Students were also most likely to express interest in the international reputation of NCEA and what employers or overseas universities think about NCEA.

- Students and parents interviewed early in 2006 reported that they had seen television advertisements about the Team-Up website, and they indicated they intended to visit the website though had not yet done so.

- Students reported that their parents did not understand NCEA unless they had an older sibling already involved in NCEA. During our interviews early in 2006, students and parents often mentioned that they had recently received information from school about NCEA.

- Parents indicated their strong support for NCEA in principle while showing a willingness to critique aspects that, from their perspective, require modification and improvement based on their judgement of impact on students.

Overall Key Findings: Positive Perceptions and Concerns

There was general agreement overall across teachers, parents and students as well as across our various data sources with regard to major key findings. These included generally positive perceptions regarding the impact of internal assessment on both teaching and student learning; more opportunities afforded to lower achieving students who might otherwise have failed so that they can instead succeed in school; and increased choice and flexibility that can be exercised by students in selecting areas of study and assessment. Students generally viewed internal assessment as enhancing their study patterns and performance as well as enabling them to pace their workload better than what would otherwise occur with only end of year examinations. They commented frequently as well about opportunities for repeat assessments afforded by internal assessment. Teachers reported that internal assessment had sharpened their awareness of the effectiveness of their teaching and focused their teaching on those issues that were seen as most important and/or relating to the various achievement standards.

Areas of agreement regarding concerns included perceived inconsistencies and variability across subjects and schools; what some students saw as unclear, inconsistent and/or unfair marking and grading criteria and practices; qualification design aspects that are not seen as adequately motivating or recognising excellence; and credit accumulation as a disincentive to learn for those who do not have positive motivation orientations to do their best. Students, parents and teachers were positive about the potential for students to achieve the number of credits needed to attain the three levels of NCEA, but also expressed concern that the 80-credit requirement was being seen as a maximum rather than minimum goal so that student motivation to continue learning could be affected negatively once the limit was reached. There was frequent comment from students regarding an apparent anomaly in being able to succeed on Merit and/or Excellence questions while failing an Achieved question and thus failing the achievement standard; there is evidence that this demotivating outcome is possible in some subject areas for both internally and externally assessed standards. While few students have personally experienced this assessment result, a larger number discussed this anomaly as unfair and illogical. Students also frequently expressed the view that some aspects of NCEA did not motivate them to work hard or attain excellence. Teachers and parents were positive about the overall impact of NCEA on many students, particularly those who were low

achieving, felt that high achieving students would work hard no matter what, but had concerns that some aspects of credit accumulation and assessments were motivating students to "do just enough" rather than do their best.

Concerns that were expressed regarding whether assessment adequately motivates or recognises excellence were accompanied by many insightful suggestions regarding how to adapt or refine the qualification to do so; a frequent suggestion was that the qualification be awarded with Merit or Excellence when students perform at a higher level. Where students commented about marks and grades, they expressed a desire for broader grade bands or percentages to give them more feedback than was available from grade bands of Achieved, Merit or Excellence. There was some concern by teachers that assessment could fragment subject understandings in some areas where they felt that integration, synthesis and/or evaluation were important across standards. There were also concerns that the accumulation of primarily unit standards towards NCEA could disadvantage students where unit standards do not provide opportunity to earn and demonstrate Merit and Excellence.

RECOMMENDATIONS FOR FUTURE RESEARCH

Students' school performance will be influenced by their beliefs about their own abilities as well as by existing motivation orientations and personal characteristics such as perseverance. These in turn are influenced by demographic and environmental variables such as gender, ethnicity, socioeconomic status, family, school characteristics and teacher behaviours—all of which can be relevant to the design of effective interventions that will have a positive impact on learning. Our findings are consistent with existing theory and international research evidence revealing strong relationships between school performance and motivation orientations and highlighting the need to incorporate understandings of student motivational orientations and beliefs into educational practice. These student dispositions and attributions are themselves amenable to change and can be influenced by what teachers do. In fact, there is strong support for the proposition that the design of effective interventions towards achieving a long-term impact on student learning outcomes requires consideration of student motivational orientations for anything other than short-term behaviour change.

Future research is needed to investigate further variables associated with enhanced student motivation and school learning; the feasibility of a predictive measure to identify students with less positive achievement motivation patterns that place them at risk for low achievement without intervention; and the design and evaluation of effective interventions at secondary level towards positive educational outcomes. Teacher and professional understandings of the kinds of messages that encourage positive motivation orientations towards achievement must also be informed by such research.

Research on student motivational orientations, attitudes and predispositions, and interrelationships of these student characteristics with actual academic performance requires longitudinal research to validate findings of correlational relationships. We lack a "baseline" of evidence in New Zealand with regard to these factors under the previous system. However, the findings emerging from this research could provide a starting point for any future design alterations and modifications of teaching and assessment in our secondary schools. It would be possible, for example, to investigate the predictive validity of a short, subscale self-report measure that students could complete early in secondary school; a subscale of those items most highly predictive of subsequent achievement by the Year 10 students in our sample could be identified empirically by following this group longitudinally. A functional relationship between scores on such a measure with actual educational outcomes at the time they leave school would provide a useful tool to incorporate into the design and evaluation of interventions to better motivate student academic and school achievement.

Longitudinal research would also enable our educational system to monitor for unanticipated positive and negative side effects based on the actual evidence of student attitudes and achievement, rather than media reports or political agenda. Particularly when an educational innovation is motivated by presumed benefits to students, it is crucial that outcomes be investigated and reliably associated with features of the innovation that are either working well or require modification. Recommendations emerging from various stakeholder groups will be informed by perceptions of positive and negative aspects of the qualification for students and their learning, and this stakeholder input is important and relevant. Stakeholder input will be crucial, for example, in determining the affordability, social acceptability, and perceived utility of approaches to the assessment of learning outcomes and the award of qualifications. However, empirical evidence of patterns of impact on motivational orientations and student achievement provide the strongest support for directions in educational policy development and qualifications design.

To date, only limited information is available regarding what parents know and think about various dimensions of our educational system and particular educational innovations. We

know a great deal more about professional perspectives. Parents are key stakeholders, were themselves part of the educational process at one time, and play a critical role in the governance of our schools. Future research might also include more information on parent perceptions and knowledge about the qualification and aspects of assessment of learning and achievement. We don't know, for example, what parents think about encouraging their children to strive for excellence whether the goal is full-time work immediately after secondary school or attending university. Parents are key to the development of children's motivation orientations, and they can communicate crucial messages about achievement, perseverance and striving to do one's best rather than doing just enough. In particular, their understandings of student motivational orientations can play an important part in the design and evaluation of educational approaches designed to enhance outcomes for our young people.

REFERENCES

Alison, J (2005). *Teachers talk about NCEA.* Wellington: New Zealand Post Primary Teachers Association.

Atkinson, JW, & Raynor, JO (1974). *Motivation and achievement.* Washington, DC: Winston & Sons.

Bogdan, R, & Biklen, SK (1998). *Qualitative research for education: An introduction to theory and methods, 3rd ed.* Boston: Allyn & Bacon.

Cattell, RB (1966). The scree test for the number of factors. *Multivariate Behavioral Research, 1,* 245-276.

Charmaz, K. (2006). *Constructing grounded theory: A practical guide through qualitative analysis.* London: Sage.

Diener, C., & Dweck, C. (1978). An analysis of learned helplessness: Continuous changes in performance, strategy, and achievement cognitions following failure. *Journal of Personality and Social Psychology, 36,* 451-462.

Dweck, CA (1986). Motivational processes affecting learning. *American Psychologist, 41*(10), 1040-1048.

Dweck, CA (1992). The study of goals in psychology. *Psychological Science, 3*(3), 165-167.

Dweck, CA, & Leggett, EL (1988). A social-cognitive approach to motivation and personality. *Psychological Review, 95,* 256-273.

Eccles, JS, & Midgley, C (1989). Stage-environment fit: Developmentally appropriate classrooms for young adolescents. In C Ames & R Ames (Eds), *Research on motivation in education* (vol 3, 139-186). San Diego: Academic Press.

Eccles, JS, & Wigfield, A (1995). In the mind of the actor: The structure of adolescents' achievement task values and expectancy-related beliefs. *Personality and Social Psychology Bulletin, 21,* 215-225.

Elliott, ES, & Dweck, CS (1988). Goals: An approach to motivation and achievement. *Journal of Personality and Social Psychology, 54,* 5-12.

Hipkins, R, Vaughan, Beals, F, & Ferral, H. (2004). *Learning curves: Meeting student needs in an evolving qualification regime.* Wellington: New Zealand Council for Educational Research.

Krueger, RA (1994). *Focus groups: A practical guide for applied research, 2nd ed.* Thousand Oaks: Sage.

Maxwell, JA (2005). *Qualitative research design: An interactive approach, 2nd ed.* Thousand Oaks: Sage.

Meece, J, Blumenfeld, PC, & Hoyle, RH (1988). Students' goal orientation and cognitive engagement in classroom activities. *Journal of Educational Psychology, 80,* 514-523.

Meece, J, Eccles, JS, & Wigfield, A (1990). Predictors of math anxiety and its influences on young adolescents' course enrolment intentions and performance in mathematics. *Journal of Educational Psychology, 82,* 60-70.

Ministry of Education (1999). *Achievement 2001: Report from the Secondary Schools Sector Forum.* Wellington, New Zealand: Author.

Nicholls, J (1989). *The competitive ethos and democratic education.* Cambridge, MA: Harvard University Press.

Nicholls, J, Cheung, P, Lauer, J, & Patashnick, M (1989). Individual differences in academic motivation: Perceived ability, goals, beliefs, and values. *Learning and Individual Differences, 1,* 63-84.

Strauss, A, & Corbin, J (1998). *Basics of qualitative research: Techniques and procedures for grounded theory, 2nd ed.* Thousand Oaks: Sage.

Team-up (2004). *http: www.teamup.co.nz*

Weiner, B. (1985). An attributional theory of achievement motivation and emotion. *Psychological Review, 92*, 548-573.

Wigfield, A, & Eccles, JS (1992). The development of achievement task values: A theoretical analysis. *Developmental Review, 12,* 265-310.

Wylie, C, Hodgen, E, Ferral, H, Dingle, R, Thompson, J, & Hipkins, R (2006). *Growing independence: A summary of key findings from The Competent Learners @ 14 Project.* Wellington: New Zealand Council for Educational Research.

Appendices

APPENDIX A:
Glossary of Key Terms

APPENDIX B:
Research Questions and Data Sources

APPENDIX C:
Year 10 Student Survey and Year 11-13 Student Survey

APPENDIX D:
Survey Subscale Factor Structures and Item Loadings

APPENDIX A:

Glossary of Key Terms

Glossary of Key Terms

Achievement Motivation	Cognitive dispositions or attribution judgements affecting one's approach to learning tasks and achievement goals.
Achievement Standards	Statements of learning outcomes describing topics, skills and understandings of academic secondary school subjects and which carry credits towards attaining Levels of NCEA.
AME	AME is the acronym sometimes seen to refer to the NCEA grade range for achievement standards passed as A for Achieved, M for Merit and E for Excellence.
Assessment	A measurement of student learning, occurring at the level of separate unit or achievement standards within subjects under NCEA.
External Assessment	End of the school year measures of student learning that are formal and invigilated, generally by examination or submission of a portfolio appropriate to the subject area.
Internal Assessment	Ongoing assessments or assignments administered and marked at the school level by teachers within subjects.
NCEA	The acronym for New Zealand's National Certificate of Educational Achievement, a national qualification comprising three Levels (1-3) available to students in the senior secondary school generally in Years 11-13. NCEA is standards-based and provides pathways to tertiary education and workplace training; the qualification is recognised for University Entrance in New Zealand and Australia as well as internationally for through inclusion in the publication *International Qualifications for Entry into Higher Education* used by the UK and other countries for tertiary entrance and selection.
Qualifications Design	Aspects and requirements of NCEA relating to the accumulation of credits; how standards are assessed; options for subject and credits from either unit standards or achievement standards; features of internal assessment and external examinations or portfolio assessments; and the award of grades including Not Achieved, Achieved, Merit and Excellence as well as the designation of Standard Not Attempted.
Record of Learning	A personalised list of all credits gained by an individual students from achieving standards including information on level performance such as Achieved, Not Achieved, Merit, Excellence and Standard Not Attempted (SNA).
Student Choice	Decisions that students make about their education and that can be affected by judgements of interest, utility/importance and/or external factors. Under NCEA, these include which elective subjects to take beyond requirements; the selection of standards for being assessed; making decisions regarding whether to attempt Merit or Excellence; re-sitting and/or re-submitting internal assessments and assignments; and enrolling in credits across levels and years in school.

Student Enjoyment Learning affected by and subjects selected based on personal interest in a subject or topic as distinct from factors such as future career prospects, advice from others, or peripheral factors such as following choices made by one's friends.

Student Learning Outcomes What students know, understand, and/or can do for subjects or topics. In NCEA, student learning is assessed against standards, and results are recorded on the individual Record of Learning for each Level and across the senior secondary school years.

Unit Standards Statements of learning outcomes describing topics, skills and understandings of a secondary school subject and which carry credits towards attaining Levels of NCEA. Most unit standards were originally designed for vocational subjects.

APPENDIX B:

**Research Questions and
Data Sources**

Research Questions (as listed in the MOE RFP)	Possible Data Source/s and Limitations of Data to Address the Question/s	Findings and Page References
Overall Focus of Research 1. Connection between student choice (within and between courses) and student learning	Correlation between student ratings on Section 2 of Student Survey and data from Records of Learning (ROL)	Key Findings, pp 65-66
2. The impact of credit acquisition and course design on student enjoyment and motivation	Section 3 of Student Survey *Q 34-37, 39-42* Student focus groups	Key Findings, pp 66-67
3. The relationship between student motivation and student achievement	Correlation between student survey factors and data from students' ROL	Key Findings, pp 65-66
Student Choice and the Ways it Guides Learning 1. Why are particular subjects chosen?	Section 2 of surveys All questions, i.e. *7-22* Focus group responses	Influences on Subject Choices, pp 25-26
2. What criteria do students use to decide within subjects where their attention is focused?	Section 2, *Q 10,18,19,21,22;* Focus group responses Year 11 student interviews	Teacher responses, pp 58-61 Student comments, pp 50-51, 53-54
3. Do they communicate the reasons for these choices to parents? To teachers?	Parent and teacher focus groups Teacher interviews	Focus group results, pp 58-62
4. How do these choices relate to their enjoyment of learning?	Section 2, *Q 8,9,10,12,18,19,20* Section 3, *Q 24,30,35,37,40,42*	Interest factor, pp 25-26
5. How do they relate to their future choices of subjects?	Section 2, Q 8, 9, 12, 14-22 Focus group responses	Utility/Importance factor, p 25
6. Are there marked differences in the ways particular groups of students make their choices about the effort they put in and how are they characterised?	Section 3 and Section 4 Comparisons by age, gender, school decile, and ethnicity	Ethnicity, pp 34-41 Student status, pp 41-42 Fee rebate/SES, pp 42-43 Decile level, pp 30-31
7. Do Year 10 students have a deep enough understanding of the range of options to make informed course choices?	Year 10 focus group data Year 11 student interviews Parent and teacher focus groups Survey open-ended responses	Student responses, pp 45-58 Parent responses, pp 1-64 Teacher responses, pp 58-61
8. In what ways has control shifted from teacher to student in terms of where they put their effort?	Survey *Q 46, 55, 56, 57, 58* Focus group responses from students, teachers, parents	Teacher responses, pp 58-61 Year 12-13 student comments, pp 55-58
9. How do the reasons a student has for taking a course relate to their motivation to do well within a course? (Are students more motivated to do well in options they have chosen or in courses required for University Entrance?)	Section 2, *Q 7-16, 18-22* Section 3, *Q 23-42* Correlation between these sections and achievement on the Record of Learning	Interest and Utility/Importance factors, pp 25-26

Research Questions (as listed in the MOE RFP)	Possible Data Source/s and Limitations of Data to Address the Question/s	Findings and Page References
Qualification Flexibility & Design 1. How does banking and carrying credits influence student motivation?	Section 2, *Q 11* Section 3, *Q 31,36,37,39,41,42* Section 5, *Q 46-48, 53-58* Student interviews and focus groups	While general information is available from the survey, students did not comment on this aspect in the focus group interviews
2. How do the ways students focus their efforts relate to their enjoyment of learning?	Correlation between achievement on the Record of Learning and survey Section 3, *Q 35, 38, 39, 40, 42* Student focus groups	Interest factor, pp 28-29
3. Do credit requirements encourage minimalism? If so, which groups of students are affected by this?	Student focus groups (high, mid, low) Comparison of Record of Learning with student responses on survey by selected demographic variables (achievement levels, gender, ethnicity, response to Q 45)	Key Findings, pp 65-68
4. How has course design benefited or hindered student engagement?	Student focus groups (high, mid, low) and Sections 5 and 6. Teacher and parent perspectives from focus groups	Qualifications Design Issues, pp 67-68
5. Does the diversification of assessment have a particularly motivating impact on one gender or the other?	Factor analysis of survey and comparison of factor scores by gender Comparison by gender with individual items and aggregate of Q 21, 48, 52, *57,58,59* Coding analysis of open-ended responses to Q 60-61	Impact of gender, pp 30-31
6. Are there significant differences in patterns of engagement and motivation related to student ethnicity?	Factor analysis of survey and comparison of factor scores by ethnicity and correlated with school decile level	Ethnicity and decile level Key Findings and pp 30-31 and 34-41
7. Do high, middle and low achievers respond in particular ways to the qualification and how is this influenced by ethnicity and gender? (Focus on which girls? And which boys?)	Aggregate rating of all responses across questions with "NCEA" in the stem, comparison of ratings by ethnicity and by gender; multiple regression analysis of gender, ethnicity, anything else? (*Q 32, 33, 44, 50, 53, 57*) Coding/analysis of open ended responses to Q 60-61 (Note: for these analyses, need ROL data entered)	Key Findings: • Influences on subject choice, p 65 • Relationship of motivation and school achievement, pp 65-66 • Qualifications Design Issues, pp 66-67
8. Does assessment at three levels in the senior school lead to "overstrain" particularly at Year 12?	Student focus groups Analysis of open-ended *Q 60-61*	Data not sufficient to draw conclusions; to address this issue adequately, in depth interviews late in Year 12 would be needed (outside the timeframe for this project)

Research Questions (as listed in the MOE RFP)	Possible Data Source/s and Limitations of Data to Address the Question/s	Findings and Page References
9. Does entering for standards at Year 10 influence motivation? And if so, how?	Student focus groups Teacher focus groups Parent focus groups	Not appropriate to draw conclusions: investigating a causal relationship such as this requires longitudinal data
Student Motivation and Student Achievement 1. How do perspectives differ on the links between student motivation and student achievement? (from students, teachers and parents)	Student, parent and teacher focus groups Correlation between Section 3 and Record of Learning	See Key Findings
2. Identify any links between high motivation and patterns of achievement	Correlation between Section 3 and Record of Learning	See Key Findings
3. How do various factors influence this pattern of achievement (the organisation of the school, teacher advice, parents' understanding)?	Student, teacher and parent focus groups: Indirect information only, forming basis of hypotheses for future research	This project did not directly gather evidence of school, home, community factors, and addressing this question requires future research
4. How are schools providing an environment that encourages motivation and how are they able to do this?	Student, teacher and parent focus groups; indirect information only, forming basis of hypotheses for future research	Suggestions are made for longitudinal research that would be the approach required to address this question

APPENDIX C:

**Year 10 Student Survey and
Year 11-13 Student Survey**

Your name: …………………………………………

Your student number (NSN):   …………………………………………

NCEA Survey of Year 10 Students

2005

Section 1: Descriptive Information

1. Name of school

   _____

2. Your student number (NSN)

   _____

3. Gender *(Please tick)*

Male	☐
Female	☐

4. Student status *(Please tick)*

Domestic NZ/permanent resident	☐
International	☐

5. Year in school *(Please tick)*

Year 10	☐
Year 11	☐
Year 12	☐
Year 13	☐

6. Do you have a part-time job? *(Please tick)*

Yes	☐
No	☐

Section 2: **We are interested in what or who will influence your decisions when you select subjects for Year 11.**
Please rate each of the following possible influences using this scale: (Please circle the number closest to your opinion)
1 = this does not matter to me at all
2 = this has little influence on my decisions
3 = this has some influence on my decisions
4 = this is a big factor in making decisions

		Doesn't matter	Little influence	Some influence	Big factor
7.	The subject is easy	1	2	3	4
8.	I'm interested in the subject	1	2	3	4
9.	I'm very good at the subject	1	2	3	4
10.	The assessment will include opportunities for Merit and Excellence and not just Achieved	1	2	3	4
11.	The subject gets me the number of credits I need	1	2	3	4
12.	I enjoy the subject	1	2	3	4
13.	My friends will be taking it	1	2	3	4
14.	My family/whānau want me to take it	1	2	3	4
15.	It's suggested by the Dean or Careers Advisor at school	1	2	3	4
16.	A teacher influences me to take it	1	2	3	4
17.	It fits my timetable	1	2	3	4
18.	It is related to what I might study at tertiary in future	1	2	3	4
19.	It is related to a future job or career goal	1	2	3	4
20.	I like the teacher who teaches the subject	1	2	3	4
21.	Because the subject is assessed by assignments and not final exams	1	2	3	4
22.	I need it for University Entrance	1	2	3	4

Section 3: **We are interested in how students think about their school learning**

Please rate each sentence listed below using this scale (Please circle the number closest to your opinion):

1 = this is not at all like me
2 = this is sometimes like me and sometimes not like me
3 = this is mostly like me
4 = this is definitely like me

		Not me	Sometimes me	Mostly me	Definitely me
23.	I need to be encouraged to work in school as I sometimes have other priorities	1	2	3	4
24.	I think my school work is important for my future goals in life	1	2	3	4
25.	I don't think school really matters in the long term	1	2	3	4
26.	My teachers think that I work hard and try to do my best	1	2	3	4
27.	My teachers think that I'm a strong student academically	1	2	3	4
28.	I expect to get Excellence or at least Merit when I do NCEA	1	2	3	4
29.	For me, getting Achieved will be good enough	1	2	3	4
30.	I love to study in school for learning's sake	1	2	3	4
31.	It will bother me if I get a Not Achieved	1	2	3	4
32.	My family/whānau expects me to get all three levels of NCEA, 1, 2, and 3	1	2	3	4
33.	If I get just NCEA Level 1 or possibly NCEA Level 2 before I leave school, I'll be satisfied and have no plans to finish Level 3	1	2	3	4
34.	I'll do just what I have to do in order to get University Entrance	1	2	3	4

		Not me	Sometimes me	Mostly me	Definitely me
35.	I will strive for Merit or Excellence even when I don't need this to achieve my goals	1	2	3	4
36.	I will work for the number of credits I need at each level, no more	1	2	3	4
37.	I want credits from school that lead to a good job or career	1	2	3	4
38.	What my friends think influences whether I work in school	1	2	3	4
39.	I prefer credits that point to life skills and vocational job-related skills to those that are just academic or leading to further study	1	2	3	4
40.	I want to take credits that allow me to try for Merit or Excellence, rather than just Achieved	1	2	3	4
41.	Once I have my 80 credits, I'll be satisfied	1	2	3	4
42.	I aim at getting a good education, not just completing tasks to get credits in NCEA	1	2	3	4
43.	The subject would interfere with part-time work commitments	1	2	3	4

Section 4: **What do you think you will most probably do when you leave secondary school with NCEA?**

44. Which levels of NCEA do you plan to finish before you leave school?
(*Please tick all that apply*)

NCEA Level 1	
NCEA Level 2	
NCEA Level 3	

45. When you leave school, what are you most likely going to do? *Pick up to **three** things on the list below with:*
          1 = first choice
          2 = second choice
          3 = third choice

Choice

Go to university	
Attend another tertiary education programme like a polytechnic or wananga	
Enrol in a vocational programme to prepare me for work	
Work full time	
Work part time while I decide what to do	
Travel, maybe overseas	
Get married and/or start a family	
Just hang out while I decide what to do	
Go overseas for a while, then do a tertiary degree here in New Zealand	
Go overseas to work indefinitely	
Go overseas for tertiary study	
Do professional sports full time	
Other	

Section 5:	What do you like or not like about NCEA and other approaches to assessment?

Please rate using the following scale:

1 = not important
2 = sometimes important
3 = important
4 = very important

	Not important	Somewhat important	Important	Very important
46. Being able to relax after I get my 80 credits	1	2	3	4
47. Having the opportunity to get credit for things as I go along	1	2	3	4
48. Being able to get credit for the parts I know rather than just being tested on whole subjects	1	2	3	4
49. Getting feedback on my work	1	2	3	4
50. Spending time working on NCEA assessments	1	2	3	4
51. Taking subjects where the teacher assesses my work during the course rather than only through a final exam	1	2	3	4
52. Having a final end-of-course external exam with a grade scaled so I can compare myself with others	1	2	3	4
53. Being able to study different subjects at different levels of NCEA during a particular year (for example, taking one Level 2 subject in Year 11 along with my Level 1 subjects)	1	2	3	4

	Not important	Somewhat important	Important	Very important
54. Being able to pick up achievement standards from an earlier level later on (for example, waiting to get Level 1 Numeracy credits in Year 12 along with my Level 2 subjects)	1	2	3	4
55. Not having to do parts of a course that I don't like when I don't need those credits	1	2	3	4
56. Being able to choose <u>which</u> parts of the course I want to study	1	2	3	4
57. Not having to pass more than 80 credits to get my NCEA	1	2	3	4
58. Being able to seek more than the minimum credits whenever I wish	1	2	3	4
59. I would like more detail about my marks, not just Achieved/ Not Achieved, Merit and Excellence	1	2	3	4

60. Name up to **three** things you think you will like about the NCEA and the Record of Learning?

    (i)

    (ii)

    (iii)

61. Name up to **three** things you think you will not like about the NCEA and the Record of Learning?

Thanks heaps for doing this survey. We appreciate it.

Your name: ……………………………………….…

Your student number (NSN): ………………………………………….…

TE WHARE WĀNANGA O TE ŪPOKO O TE IKA A MĀUI

VICTORIA
UNIVERSITY OF WELLINGTON

NCEA Survey of Students

2005

Victoria University of Wellington College of Education
Te Whānau o Ako Pai ki Te Whare Wānanga o te Ūpoko o te Ika a Maui

Section 1:   Descriptive Information

1.   Name of school

_____

2.   Your student number (NSN)

_____

3.   Gender *(Please tick)*

Male	
Female	

4.   Student status *(Please tick)*

Domestic NZ/PR	
International	

5.   Year in school *(Please tick)*

Year 10	
Year 11	
Year 12	
Year 13	

6.   Do you have a part-time job? *(Please tick)*

Yes	
No	

		Doesn't matter	Little influence	Some influence	Big factor
Section 2:	**We are interested in what or who influences your decisions when you select subjects**.				

Section 2: **We are interested in what or who influences your decisions when you select subjects**.

Please rate each of the following possible influences using this scale: (Please circle the number closest to your opinion)

1 = *this does not matter to me at all*
2 = *this has little influence on my decisions*
3 = *this has some influence on my decisions*
4 = *this is a big factor in making decisions*

		Doesn't matter	Little influence	Some influence	Big factor
7.	The subject is easy	1	2	3	4
8.	I'm interested in the subject	1	2	3	4
9.	I'm very good at the subject	1	2	3	4
10.	The assessment included opportunities for Merit and Excellence and not just Achieved	1	2	3	4
11.	The subject gets me the number of credits I need	1	2	3	4
12.	I enjoy the subject	1	2	3	4
13.	My friends are taking it	1	2	3	4
14.	My family/whānau wanted me to take it	1	2	3	4
15.	It was suggested to me by the Dean or Careers Advisor at school	1	2	3	4
16.	A teacher influenced me to take it	1	2	3	4
17.	It fitted my timetable	1	2	3	4
18.	It is related to what I will study at tertiary in future	1	2	3	4
19.	It is related to a future job or career goal	1	2	3	4
20.	I like the teacher who teaches the subject	1	2	3	4
21.	Because the subject is assessed by assignments and not final exams	1	2	3	4
22.	I need it for University Entrance	1	2	3	4

Section 3:	We are interested in how students think about their school learning

Please rate each sentence listed below using this scale (Please circle the number closest to your opinion):

1 = this is not at all like me
2 = this is sometimes like me and sometimes not like me
3 = this is mostly like me
4 = this is definitely like me

		Not me	Sometimes me	Mostly me	Definitely me
23.	I need to be encouraged to work in school as I sometimes have other priorities	1	2	3	4
24.	I think my school work is important for my future goals in life	1	2	3	4
25.	I don't think school really matters in the long term	1	2	3	4
26.	My teachers think that I work hard and try to do my best	1	2	3	4
27.	My teachers think that I'm a strong student academically	1	2	3	4
28.	I expect to get Excellence or at least Merit when I try	1	2	3	4
29.	For me, getting Achieved is good enough	1	2	3	4
30.	I love to study in school for learning's sake	1	2	3	4
31.	It bothers me if I get a Not Achieved	1	2	3	4
32.	My family/whānau expects me to get all three levels of NCEA, 1, 2, and 3	1	2	3	4
33.	If I get just NCEA Level 1 or possibly NCEA Level 2 before I leave school, I'll be satisfied and have no plans to finish Level 3	1	2	3	4
34.	I'll do just what I have to do in order to get University Entrance	1	2	3	4

		Not me	Sometimes me	Mostly me	Definitely me
35.	I strive for Merit or Excellence even when I don't need this to achieve my goals	1	2	3	4
36.	I work for the number of credits I need at each level, no more	1	2	3	4
37.	I want credits from school that lead to a good job or career	1	2	3	4
38.	What my friends think influences whether I work in school	1	2	3	4
39.	I prefer credits that point to life skills and vocational job-related skills to those that are just academic or leading to further study	1	2	3	4
40.	I want to take credits that allow me to try for Merit or Excellence, rather than just Achieved	1	2	3	4
41.	Once I've got my 80 credits, I'm satisfied	1	2	3	4
42.	I aim at getting a good education, not just completing tasks to get credits	1	2	3	4
43.	The subject interferes with part-time work commitments	1	2	3	4

Section 4: What do you think you will most probably do when you leave secondary school with NCEA?

44. Which levels of NCEA do you plan to finish before you leave school? (*Please tick all that apply*)

NCEA Level 1	
NCEA Level 2	
NCEA Level 3	

45. When you leave school, what are you most likely going to do? *Pick up to **three** things on the list below with:*

> *1 = first choice*
> *2 = second choice*
> *3 = third choice*

	Choice
Go to university	
Attend another tertiary education programme like a polytechnic or wananga	
Enrol in a vocational programme to prepare me for work	
Work full time	
Work part time while I decide what to do	
Travel, maybe overseas	
Get married and/or start a family	
Just hang out while I decide what to do	
Go overseas for a while, then do a tertiary degree here in New Zealand	
Go overseas to work indefinitely	
Go overseas for tertiary study	
Do professional sports full time	
Other	

Section 5: **What do you like or not like about NCEA and other approaches to assessment?**
Please rate using the following scale:

1 = not important
2 = sometimes important
3 = important
4 = very important

	Not important	Somewhat important	Important	Very important
46. Being able to relax after I get my 80 credits	1	2	3	4
47. Having the opportunity to get credit for things as I go along	1	2	3	4
48. Being able to get credit for the parts I know rather than just being tested on whole subjects	1	2	3	4
49. Getting feedback on my work	1	2	3	4
50. Spending time working on NCEA assessments	1	2	3	4
51. Taking subjects where the teacher assesses my work during the course rather than only through a final exam	1	2	3	4
52. Having a final end-of-course external exam with a grade scaled so I can compare myself with others	1	2	3	4
53. Being able to study different subjects at different levels of NCEA during a particular year (for example, taking one Level 3 subject in Year 12 along with my Level 2 subjects)	1	2	3	4
54. Being able to pick up achievement standards from an earlier level later on (for example, getting Level 1 Numeracy credits in Year 12 along with my Level 2 subjects)	1	2	3	4

		Not important	Somewhat important	Important	Very important
55.	Not having to do parts of a course that I don't like when I don't need those credits	1	2	3	4
56.	Being able to choose <u>which</u> parts of the course I want to study	1	2	3	4
57.	Not having to pass more than 80 credits to get my NCEA	1	2	3	4
58.	Being able to seek more than the minimum credits whenever I wish	1	2	3	4
59.	I would like more detail about my marks, not just Achieved/ Not Achieved, Merit and Excellence	1	2	3	4

60. Name up to **three** things you like about the NCEA and the Record of Learning?

    (iv)

    (v)

    (vi)

61. Name up to **three** things you do not like about the NCEA and the Record of Learning?

Thanks heaps for doing this survey. We appreciate it.

APPENDIX D

**Survey Subscale Factor
Structures
and Item Loadings**

Item loadings on the three-factor model of Influences on Subject Choices for the Year 11-13 Student Survey results

Item Number and Name	Utility/Importance	External Factors	Interest
q15 It was suggested to me by the Dean or careers advisor at school	.64	-	-
q22 I need it for tertiary entrance	.63	-	-
q18 It is related to what I will study at tertiary in the future	.61	-	.40
q16 A teacher influenced me to take it	.61	-	-
q19 It is related to a future job or career goal	.56	-	.40
q10 The assessment included opportunities for Merit and Excellence and not just achievement	.48	-	-
q14 My family/whānau wanted me to take it	.48	-	-
q21 Because the subject is assessed by assignments and not final exams	-	.67	-
q13 My friends are taking it	-	.65	-
q7 The subject is easy	-	.61	-
q20 I like the teacher who teaches the subject	-	.56	-
q17 It fitted my timetable	-	.49	-
q8 I'm interested in the subject	-	-	.80
q12 I enjoy the subject	-	-	.78
q9 I'm very good at the subject	-	-	.62
q11 The subject gets me the number of credits I need	-	-	-

Item loadings on the two-factor model for how students think about their school learning for the Year 11-13 Student Survey responses

Item Number and Name	Doing My Best	Doing Just Enough
q35 I strive for Merit or Excellence even when I don't need this to achieve my goals	.76	-
q40 I want to take credits that allow me to try for Merit or Excellence, rather than just Achieved	.72	-
q28 I expect to get Excellence or at least Merit when I try	.70	-
q42 I aim at getting a good education, not just completing tasks to get credits	.65	-
q24 I think my school work is important for my future goals in life	.65	-
q27 My teachers think I am a strong student academically	.59	-
q26 My teachers think I work hard and try to do my best	.59	-
q30 I love to study in school for learning's sake	.57	-
q29 For me, getting Achievement is good enough	-.51	.50
q31 It bothers me if I get a Not Achieved	.50	-
q37 I want credits from school that lead to a good job or career	.50	-
q32 My family/whānau expects me to get all three levels of NCEA, 1, 2, and 3	.49	-
q36 I work for the number of credits I need at each level, no more	-	.67
q41 Once I've got my 80 credits, I'm satisfied	-	.63
q39 I prefer credits that point to life skills and vocational job-related skills to those that are just academic or leading to further study	-	.56
q38 What my friends think influences whether I work in school	-	.53
q33 If I get just NCEA Level 1 or possibly NCEA Level 2 before I leave school, I'll be satisfied and have no plans to finish Level 3	-	.51
q43 The subject interferes with part-time work commitments	-	.48
q23 I need to be encouraged to work in school as I sometimes have other priorities	-	.48
q34 I'll do just what I have to do in order to get University Entrance	-	.39
q25 I don't think school really matters in the long term	-	-

Item loadings on the three factor model of aspects of NCEA which students like and dislike for the Year 11-13 Student Survey results

Item Number and Name	Work Avoidance	Getting Feedback	Excellence
q55 Not having to do parts of a course that I don't like when I don't need those credits	.75	-	-
q56 Being able to choose which parts of the course I want to study	.70	-	-
q57 Not having to pass more than 80 credits to get my NCEA	.70	-	-
q46 Being able to relax after I get my 80 credits	.62	-	-
q54 Being able to pick up achievement standards from an earlier level later on	.50	-	-
q47 Having the opportunity to get credits for things as I go along	-	.75	-
q51 Taking subjects where the teacher assesses my work during the course rather than only through a final exam	-	.68	-
q50 Spending time working on NCEA assessments	-	.60	-
q49 Getting feedback on my work	-	.56	-
q48 Being able to get credit for the parts I know rather than just being tested on whole subjects	-	.56	-
q53 Being able to study different subjects at different levels of NCEA during a particular year	-	-	.69
q52 Having a final end-of-course external exam with a grade scales so I can compare myself to others	-	-	.65
q59 I would like more details about my marks, not just Achieved/ Not Achieved, Merit or Excellence	-	-	.52
q58 Being able to seek more than the minimum credits whenever I wish	-	-	.43

Item loadings on the three-factor model of influences on subject choices for the Year 10 Student Survey results

Item Number and Name	Utility/Importance	External Factors	Interest
q22 I need it for University Entrance	.67		
q15 It's suggested by the Dean or Careers advisor at school	.63		
q16 A teacher influences me to take it	.61		
q18 It is related to what I might study at tertiary in future	.57		.46
q10 The assessment will include opportunities for Merit and Excellence not just Achieved	.50		
q11 The subject gets me the number of credits I need	.49		
q14 My family/whānau want me to take it	.44		
q13 My friends will be taking it		.67	
q20 I like the teacher who teaches the subject		.64	
q21 Because the subject is assessed by assignments and not final exams		.62	
q7 The subject is easy		.61	
q17 It fits my timetable		.51	
q8 I'm interested in the subject			.78
q12 I enjoy the subject			.77
q9 I'm very good at the subject			.58
q19 It is related to a future job or career goal	.50		.55

Item loadings on the two-factor model for how students think about their school learning for the Year 10 Student Survey results.

Item Number and Name	Doing My Best	Doing Just Enough
q40 I want to take credits that allow me to try for Merit or Excellence rather than just Achieved	.72	
q35 I will strive for Merit or even when I don't need this to achieve my goals	.72	
q28 I expect to get Excellence or at least Merit when I do NCEA	.71	
q24 I think my school work is important for my future goals in life	.65	
q42 I aim at getting a good education, not just completing tasks to get credits in NCEA	.65	
q26 My teachers think that I work hard and I do my best	.59	
q37 I want credits from school that lead to a good job or career	.58	
q27 My teachers think that I'm a strong student academically	.57	
q32 My family/whānau expects me to get all three levels of NCEA, 1, 2, and 3	.54	
q30 I love to study in school for learning's sake	.51	
q31 It will bother me if I get a Not Achieved	.42	
q36 I will work for the number of credits I need at each level, no more		.69
q41 Once I have my 80 credits, I'll be satisfied		.62
q43 The subject would interfere with part-time work commitments		.61
q33 If I get just NCEA Level 1 or possibly NCEA Level 2 before I leave school, I will be satisfied and have no plans to finish Level 3		.58
q38 What my friends think influences whether I work in school		.53
q39 I prefer credits that point to life skills and vocational job-related skills to those that are just academic or leading to further study		.53
q29 For me, getting Achieved will be good enough		.52
q23 I need to be encouraged to work in school as I sometimes have other priorities		.51
q25 I don't think school really matters in the long run		.47
q34 I do just what I have to do in order to get University Entrance		.41

Item loadings on the three-factor model of aspects of NCEA that students like and dislike for the Year 10 Student Survey results

Item Number and Name	Work Avoidance	Getting Feedback	Excellence
q47 Having the opportunity to get credits for things as I go along	.68		
q49 Getting feedback on my work	.67		
q51 Taking subjects where the teacher assesses my work during the course rather than only through a final exam	.59		
q50 Spending time working on NCEA assessments	.53		
q48 Being able to get credits for the parts I know rather than the just being tested on whole subjects	.52	.46	
q59 I would like more detail about my marks, not just Achieved/Not Achieved, Merit or Excellence	.47		
q58 Being able to seek more than the minimum credits whenever I wish	.44		
q55 Not having to do parts of a course that I don't like when I don't need those credits		.73	
q57 Not having to pass more than 80 credits to get my NCEA		.67	
q46 Being able to relax after I get my 80 credits		.67	
q56 Being able to choose which parts of the course I want to study		.65	
q52 Having a final end-of-course external exam with a grade scaled so I can compare myself to others			.74
q53 Being able to study different levels of NCEA during a particular year (e.g. taking one Level 2 subject in Year 11 along with my Level 1 subjects)			.73
q54 Being able to pick up achievement standards from an earlier level later on (e.g. waiting to get Level 1 numeracy credits in Year 12 along with my Level 2 subjects)			.57