

# Shaping our futures: Meeting secondary students' learning needs in a time of evolving qualifications

**Final report of the Learning Curves project**

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# Executive summary

This is the third in a series of reports of findings from NZCER's Learning Curves project. The project has documented changes in the subject and assessment choices offered to senior students in six medium-sized New Zealand secondary schools as the NQF/NCEA qualifications reforms were progressively implemented from 2002 to 2004. It has also investigated how students perceive and make their subject choices within the context of each school's curriculum policies and practices.

In 2004 the principal and five HODs (of English, mathematics, science, technology, and the arts) were interviewed, as they had been in 2002 and 2003. This report captures differences *between* the schools whereas the first two reports generalised patterns across them.

Students at Years 11–13 were surveyed in 2004 and a number of focus group conversations were also carried out. Thus work with the students constituted a greater proportion of the (expanded) fieldwork time than had been the case in the first two years. Accordingly, this report has a greater focus on the *students'* experiences of the NCEA than either of the first two reports. It describes strategies students use to manage their assessment workloads for the NCEA, their perceptions of its value as a qualification, and the ways they are positioned as active producers of an individualised qualification, within an overarching pathways metaphor of schooling.

The report concludes with a brief “stocktake” of the NCEA, and the changes that have accompanied its implementation, against a theoretical listing of the many deeply held ideas and assumptions that are implicated in assessment change. It concludes that many such assumptions have yet to be addressed, and that ongoing change, on a somewhat broader front, will be necessary if the qualifications reforms are to deliver more effective ways of credentialling learners for their adult lives in the 21<sup>st</sup> century.

## School-specific differences

The overall philosophy of the staff, the beliefs and actions of the students, the organisational aspects of each school, and some demographic characteristics such as location and decile, come together to create a unique institution. For example, City Schools A and B shared some differences that set them apart from the other schools in the sample. Both are in urban locations, close to universities and all the cultural amenities of a city. Most of the students who identified as Asian and many of the refugee students, or students of “other” ethnicity, attended one or other of these schools. Many students who said they skipped internal or external assessments in Year 12 or

13 English came from these schools. In both schools students were more likely (compared to the overall sample) to choose combinations of more traditional curriculum subjects. The similarity is interesting because the ethos of each school seemed somewhat different. City School A—the girls’ school—had a focus on helping all students learn via broad and balanced curriculum. It had more compulsory subjects than the other five schools, and was the only one to make English compulsory at Year 13. By contrast City School B—a liberal, non-uniform co-educational school—had a focus on supporting greater student autonomy and freedom in choosing appropriate subjects and pathways. Accordingly, it offered more optional choices at Years 11 and 12 than the other five schools, and almost as many choices at Year 13.

The principal of Town School E had a singular vision of seamless learning pathways through school and beyond that was shared by key members of the senior management team. In this school, some subjects were beginning to diversify across traditional curriculum boundaries and there was a focus on the many national certificates that could be gained within the National Qualifications Framework, not just on the NCEA. The school’s emphasis on unit standards provided a means of assessing course components linked to a much wider range of learning opportunities. In keeping with the gradual broadening of learning pathways, this was the only school of the six to offer a greater number of choices at Year 13 than at Year 12.

Town Schools D and F both worked hard to accommodate the learning needs of a diverse range of students. Both were somewhat vulnerable to the loss of more “able” students because they were in towns within driving distance of regional cities that had a number of secondary schools. In both locations this dilemma created tensions between meeting the needs of some students for alternative pathways and keeping other students engaged and challenged in their home-town school. Town School F had a very active curriculum committee. There was a sense that the allocation of resources to various combinations of courses was constantly under view. Two HODs mentioned the intention to offer half-year courses as one way of maximising the potential for choice. HODs at Town School D similarly described a yearly process of juggling and revising components within courses, and in the overall mix of courses offered. Nothing can be taken for granted in these environments where there can never be an ideal solution to curriculum and timetabling challenges. Students in these two schools also shared some patterns of responses to the NCEA. Perhaps reflecting the yearly debate and juggling of subjects and timetables, the Year 13 students in both schools were more likely than those in the other schools to say that NCEA results in earlier years had influenced their subject choice. The Years 11 and 12 students from all the town schools were more likely to say they had skipped an internal assessment, and many of the Year 11 students who said they had skipped an internal English assessment came from either Town School D or F.

City School C has the lowest decile rating of the six Learning Curves schools and has a greater proportion of students from Māori and/or Pacific backgrounds on the roll than any of the other five schools. In this school, the need for more time and skills practice for students who lacked the necessary background or personal confidence to make speedy learning gains was a common theme. Restructuring to create more learning time was being tried out at various levels of school

organisation, from the timetable structure to the content and organisation of individual courses. HODs in this school were more likely to discuss the importance of helping some students to gain the literacy and numeracy credits that would keep their learning pathways open beyond school. Perhaps reflecting their learning challenges and awareness of the importance of gaining credits where they could, students in City School C were less likely than most other students to say they had skipped an external assessment, especially the Year 12 students. The Pacific students here were more likely than all other students to agree that the NCEA is a valuable qualification and that unit standards are easy to get.

## Taking different versions of subjects

Analysis of 2003 course information led us to describe three different types of courses that we called traditional-discipline, locally-redesigned, and contextually-focused. The 2004 fieldwork revealed patterns in the ways students combined these types of courses, with each other and with their optional subjects.

**Traditional-discipline courses** look similar to the sorts of courses most students would have taken pre-NCEA and are typically mainly assessed by full suites of achievement standards. In 2004, a majority of Year 11 students were taking English courses of this type (77 percent). Slightly fewer took equivalent versions of science (70 percent) and fewer still traditional-discipline mathematics (58 percent). A similar pattern was found at Year 12 where 72 percent of students chose traditional-discipline English, 56 percent took at least one of biology, chemistry, or physics, and 46 percent chose an equivalent version of mathematics. (Note that both the science and mathematics choices are optional at Year 12.) Compared to the overall cohort, Pākehā students were more likely to be taking traditional-discipline versions of these “core” curriculum courses.

There are two types of alternatives to traditional-discipline courses. **Locally-redesigned courses** take advantage of the NQF/NCEA flexibility to mix and match achievement and unit standards, sometimes at one or more NQF levels, sometimes from more than one discipline area, to provide courses to meet identified learning needs of specific groups of students. **Contextually-focused courses** locate learning in contexts of relevance to learners and are typically totally internally assessed, mainly with unit standards. Fewer students took these alternative courses. A small number of Year 11 students (10 percent) were taking alternative versions of English, and 32 percent, mainly Pacific or Māori students, were taking alternative versions of mathematics. At Year 12, 15 percent of students took an alternative version of English, while 23 percent took an alternative version of mathematics. Again Pacific or Māori students tended to take this type of mathematics. Eleven percent of students took an alternative Year 11 science course and 5 percent took an extension course or science at another year level. In Year 12 students wanting an alternative to the traditional sciences could often access employment-focused options such as electronics, forestry, or aqua-culture.

The cluster analysis revealed a strong tendency for students to combine both core and optional subjects of the same “type”. For example 49 percent of all Year 11 students combined traditional discipline versions of English, mathematics, and science. They were also likely to have chosen other traditional-discipline subjects such as history, geography, languages, economics, and graphics. Nearly a quarter (22 percent) of the Year 11 students took combinations that included alternative versions of the three core subjects (or in some cases that did not identify a version of English despite its compulsory status). These students were more likely to choose combinations of optional subjects with a strongly practical feel, such as practically-oriented versions of technology, computer studies, transition courses, or agriculture/horticulture. The remaining 29 percent of Year 11 students either combined traditional-discipline English with an alternative version of mathematics, or vice versa, with a corresponding “mix” of different types of optional subjects.

Similar patterns, albeit in fewer clusters, were found at Years 12 and 13. Notwithstanding the wide range of subject choices schools offer across the senior years, there is something of a conservative feel to the combinations of subjects students actually take in Year 13. A quarter of the responding Year 13 students had continued with traditional-discipline versions of subjects in all three core curriculum areas (i.e. English combined with statistics and/or calculus, and one of the three sciences). However, nearly a third of the Year 13 students were taking a subject combination with a strongly “alternative” feel, where an alternative version of English was likely to be the only remaining core subject. Māori and Pacific students were over-represented in this cluster.

## **The relative popularity of optional subjects**

The overall pattern of top-rating Year 11 options remained quite stable across the three years of the study. History (21 percent in 2004) remained the top optional choice, as it was in both 2003 (20 percent) and 2002 (21 percent), albeit with some school-specific differences in uptake. When collated as a group, the various technology options (for example hard materials or food technology) were also very popular. Three of the four arts subjects (visual arts, music, and drama) were taken by 10 percent or more of students across the schools. There were some gender and ethnicity differences in subject uptake, although these were likely to be related to school effects in some cases. For example history was very popular at City School A and was more popular with girls overall, as well as with Pākehā students.

At Year 12, both types of mathematics and the three traditional sciences were all popular optional choices. History was overtaken in the popularity stakes by “vocational pathways” subjects (for example chef training and journalism) and by PE and sports studies. All three of these subjects (or subject types in the case of vocational pathways) were relatively more popular with boys, as was physics. Other popular subjects were mostly the same as those chosen at Year 11, although practical technology slipped below 10 percent. Again, history was more popular with girls.

Versions of English, mathematics, and sciences—all subjects that are compulsory at lower year levels—occupied the six top-rating slots at Year 13, when almost all choices were optional. Visual arts continued to be popular, along with PE and vocational pathways subjects. Although history continued to be taken by more than 10 percent of the cohort, its relative popularity had slipped still further. Physics, calculus, and vocational and sports subjects were more popular with boys, while traditional-discipline versions of English, history, geography, and the visual arts were more popular with girls.

A comparison of the Years 12 and 13 subject choice data with national trends showed that these patterns of relative overall popularity were remarkably close to national patterns of participation in English, mathematics, and science-related subjects. There were minor variations in uptake where other subjects could be directly compared, which is scarcely surprising in light of the school-related variations we found in our small sample.

## **Students' and teachers' perceptions of the NCEA**

In 2004 most responding students were happy with their subject choices. Most students across all three year levels saw the NCEA as a valuable qualification and thought that their teachers and parents did too.

In 2003 some teachers reported a perception that credits gained from achievement standards were of more value than those gained from unit standards. Views amongst the teachers on this point were mixed in 2004, with some holding strong perceptions of difference and others saying students did not mind how their credits were gained. The students' survey responses showed widespread agreement that credits gained from both sources were valuable, with a slightly greater level of support for the statement that "credits gained from achievement standards are valuable". Where students did perceive a difference, they were likely to feel that achievement standards had more currency in competitive situations, such as gaining entry to university courses or seeking employment. By contrast, unit standards were valued by both teachers and students for the opportunity they provided to assess more practical aspects of learning. Focus group comments suggested that students might be more familiar with one type of standard than the other, depending on the type of subjects they were taking in combination.

Many teachers were reluctant to compare the relative worth of credits gained from internal or external assessment events, saying that they measured different things. Where differences were perceived, teachers generally saw externally gained credits as more valuable, mainly because of concerns about moderation issues and consistency between schools. While opinions can obviously vary between the teachers in any one school, there were some school-related differences in these perceptions overall. Students differed from their teachers in that they placed slightly more value on credits gained from internal assessments. They seemed to see these as the main source of credits from which to strategically build a qualification, with externally assessed credits forming an end-of-year insurance backstop. Again, we found some patterns of differences in responses

from students in different schools. For example Town School E's Year 13 students tended to prefer credits for internally assessed standards, which is in line with the school's policy of using unit standards (always internally assessed) whenever possible.

As might be anticipated, students taking subject combinations weighted towards traditional-discipline subjects were more likely to agree that they did well in external assessments. These students were also more likely to discuss the motivation to strive for better learning provided by the three-level structure of the achievement standards (where it is possible to achieve, achieve with merit, or achieve with excellence). However the same students were also more likely to perceive they did well in internal assessments. Students taking course combinations with a more "alternative" subject orientation were less likely to agree they did well in either external or internal assessments. For such students, assessment may remain an anxious hurdle, no matter how it is carried out.

## **Students' strategies for coping with the NCEA**

The second Learning Curves report found that some teachers were becoming concerned about students who chose to skip assessments. All the HODs were asked about this in 2004, with rather mixed results. Some were indeed very concerned and described measures such as sending a letter home to parents. Other teachers actively helped students to decide which assessments to skip as a means of managing their workloads.

About a quarter of Year 11 students, compared with 40 percent of Year 13 students, said they had skipped an assessment at some time (which, for Year 13 students, could have been at any time across two-and-a-half years). Students were more likely to have skipped an internal assessment than an external assessment, and English was the subject where this was most likely to occur.

Many students saw choosing to skip as a legitimate strategy for managing over-assessment, or for avoiding the likelihood of failure or potentially embarrassing assessments such as speeches in English. However the extent to which students said they did these things themselves was somewhat less than teachers' concerns in 2003 had led us to anticipate. Often they simply reported that they knew others who did this, while they personally felt they could not afford to squander any chance to gain credits. This feeling probably abated as students' confidence and experience with the NCEA grew.

One of the HODs noted that students have always skipped assessments so this practice is not new to the NCEA. What is new however is the extent to which students can now make *strategic* decisions about how they will accumulate the credits they need for their overall qualification—provided they understand how the system works. Again, we found that the students taking courses weighted towards traditional-discipline subjects were more likely to know how to make good strategic decisions of this type, and accordingly to only choose to skip when they needed to maximise learning success in those assessments they retained. By contrast, students who took

more “alternative” combinations of subjects were more likely to make ad hoc decisions, or to not be in command of their credit totals at all.

## Student motivation and the “production” of a qualification

Students’ decision making for managing their assessments was influenced by their strategic understanding of the assessment system and by the factors that motivated them as learners. Their perceptions of the NCEA’s value as a qualification were closely tied to their views of relevance and to the different ways they engaged with learning and assessment. Different groups of students actively participated in the production of quite different types of NCEA qualifications, with associated differences in the “learning pathways” they kept open.

For students taking contextually-focused courses, notions of relevance tended to be tied to usefulness and applicability of learning to everyday life, and to prospects for employment beyond school. By contrast, students taking mainly traditional-discipline courses related relevance to future study plans or to ideas of “learning to learn”. As might be expected, responses of students taking locally-redesigned courses tended to fall between these two poles.

Some students seemed *behaviourally* motivated by the NCEA. They were interested in the number of credits on offer, and whether these were a “fair trade” for the work involved in passing. Of all the strategies for managing the NCEA available to students, they were most likely to avoid failure (as they saw it) by skipping assessments they did not feel confident of passing. Students taking locally-redesigned and contextually-focused courses were more likely to take such approaches than students taking traditional-discipline courses.

Other students were more *emotionally* engaged with NCEA. They were aware of the potential importance of their Record of Learning, and actively kept track of their credits. These students were more concerned to produce a point of difference in the qualification they achieved, with an associated likelihood of increased motivation to gain merit or excellence passes, or in some cases, simply to accumulate higher credit totals. For these students, perceived inconsistencies in different subject teachers’ practices when making “holistic” judgements of the level achieved could be a source of bewilderment and indignation.

A small number of students were *cognitively* engaged. They actively pursued challenging learning experiences, although the satisfaction they gained from these often had to be weighed against strategic management of workload pressures from too many assessments at the same time. These students were also motivated by the opportunity to gain merit and excellence, although they were the students most likely to want to see such achievements acknowledged with the award of additional credits or an acknowledgement of credit type (from unit or achievement standard) on their Record of Learning.

## Learner identities and assessment careers

While some students do see themselves as successful learners, it seems that many are more likely to see themselves as successful collectors of credits. Accordingly, they are developing assessment careers that use compliance and risk-management strategies to maximise credit gains with little critical regard to the value of actual learning gains. This is of concern because such learner identities and assessment careers are no more conducive to lifelong learning than were previous methods of assessment for qualifications. It seems unlikely that this situation can change while students are over assessed.

The NCEA has opened up so-called learning pathways. However the intended parity of esteem for qualifications has not been matched by the reality of perceptions and practice. If anything, the widespread acceptance of the pathways metaphor has contributed to a hardening of the academic/vocational divide by producing active compliance with the sorting of students into strongly differentiated courses that provide quite different types of learning experiences. While some students do experience strongly practical learning, the “intellectualisation” of their subjects has been strongly resisted. And “academic” students who want to study subjects with a strong practical element are still likely to have the suitability of their choice questioned. Neither group has achieved a balance of within-subject learning that is both academic and practical, as recommended in future-focused reviews of education.

Notwithstanding its early promise, we have to conclude that the hopes for the NCEA as an assessment system that provides better support for lifelong learning are “not yet achieved”.

## Rethinking assessment change

Reforming an assessment system is not just a matter of changing the structure of the assessment instruments and procedures used, although that has understandably been the focus of the NCEA reforms to date. Ideas and assumptions about the nature of knowledge and learning, the relative emphasis that should be given to different purposes for assessment, and issues of power and control of assessment and learning processes, are all implicated. At present the NCEA seems more akin to a complicated system, but it could be rethought as a complex system, where changes to *all* the interconnected parts become a focus for attention. Tentative ideas for how this ongoing change process might proceed are explored in the final section of the report.

# 1. Introduction

This is the third in a series of reports of findings from NZCER's Learning Curves project. The project has documented changes in the subject and assessment choices offered to senior students in six New Zealand medium-sized secondary schools<sup>1</sup> as the NQF/NCEA qualifications reforms were progressively implemented from 2002 to 2004. It has also investigated how students perceive and make their subject choices within the context of each school's curriculum policies and practices.

The first report, *From Cabbages to Kings*, was released in mid-2002. This report documented the timetabling and subject-choice practices at each school, and captured early impressions of the NCEA implementation from five HODs and the principal. The student component of the research was limited to Year 11—the so-called “guinea pig” students—the first to experience the NCEA implementation in all three of their years in the senior secondary school.

The second report, *Shared Pathways and Multiple Tracks*, was released in early 2004. This reported fieldwork findings from the second year of the project and the NCEA implementation programme (2003) and pursued developments and issues raised by the teachers in the first year of fieldwork (2002). One focus of the second report concerned the nature of the differentiated courses being offered to students in the compulsory subject areas of English, mathematics, and science, with three different “types” of courses being described. The student components of the fieldwork programme in the third year (2004) used these course types as a means of exploring an emergent picture of different types of learning pathways for different groups of students. Both Year 11 and Year 12 students were surveyed in the second year, and their reasons for choosing subjects were probed more deeply than in the first year.

The first report captured the broad pattern of students' subject choices but could not differentiate options within subjects. The second report did this, but could not report on the extent of multilevel combinations. An advantage of having three attempts to perfect a survey format in a changing, complex environment is that the third version (used in 2004) allowed us to paint a much clearer school-specific picture of the various permutations of students' choices. In 2004 students at Years 11–13 were surveyed and some focus groups were also carried out. This report has a greater focus on the *students'* experiences of the NCEA than either of the first two reports. It extends this focus beyond subject choices to discuss students' perceptions of the NCEA and the strategies they use to manage their assessment for qualifications whilst engaged in “learning pathways” of differing

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<sup>1</sup> As can happen in any long running study, there have been some shifts in the comparative size of the schools. For several reasons, Town School F has become relatively smaller than the others.

types. Another point of difference is that this report captures differences *between* schools, where the first two reports generalised patterns across them.

## Structure of the report

The report is divided into eight sections as follows.

### Section Two: Methodology

This section outlines the methodology used for gathering and analysing data in the third year of fieldwork (2004). It includes a brief overview of the statistical analysis used to determine likely *combinations* of subjects being taken by students.

### Section Three: Choosing subjects

This section reports findings from the 2004 interviews with the principal and the five selected HODs from each school, as well as the analysis of subject choice documents provided by each school when the student surveys were being prepared. The teachers' comments have been distilled to report on the subtle but distinctly different ways the interviewees in the different schools discussed the challenges of meeting the learning needs of all students, within the very evident resource constraints that were outlined in the first report, *From Cabbages to Kings*. The students' survey responses have been used to report on the relative popularity of different courses and options within each school.

### Section Four: A school ethos for learning

This section reports on the overall patterns of the subjects that students chose within the timetable framework and subject-choice policies of their schools. As in Section Three, school-specific differences are teased out. Patterns of participation in the various versions of English, mathematics, and science are reported, as are the ways students were most likely to combine the subjects that made up their overall course. Survey questions that asked about students' and parents' happiness with subject choice are also briefly reported.

### Section Five: Student perceptions of the NCEA

At this point the focus of the report shifts to students' *perceptions* of aspects of the NCEA, as opposed to the subject choices they had made within its overall constraints and opportunities. Data from the student surveys and focus groups are interwoven to report on students' views of their own and others' perceptions of the overall value of the NCEA as a qualification. The second report identified issues related to teachers' perceptions of the relative worth of achievement or

unit standards, and internal or external assessment events. This section reports students' views of those issues for the first time.

## **Section Six: Student strategies for the NCEA**

To what extent are students selectively choosing to skip assessment events, and for what reasons do they do so? These issues were raised by teachers in the second year of the fieldwork, and are explored from the students' perspectives in this section. Again, findings from student surveys and focus groups are interwoven to build a richer picture of students' motivations to respond to the NCEA in the ways that they have.

## **Section Seven: Negotiating pathways and developing assessment careers: A critical review of the NCEA and student learning needs**

In this final section we discuss the interaction of students' perceptions and strategies with school ethos, the NCEA/NQF assessment system, and the broader socio-political context of schooling within a pathways-based framework for formal education and lifelong learning in an emerging "knowledge society". We observe that students' "assessment careers" are formed through the interaction of perceptions, dispositions, and the broader context that allow students to produce their NCEA qualifications. Yet a focus on the production of individualised NCEA qualifications and the mechanics of assessment may turn away from a critical focus on students' learning needs. Finally then, and bearing in mind the three short years of NCEA reforms so far, we consider the ways in which the NCEA could continue the journey towards meeting student needs in terms of future-focused lifelong learning.



## 2. Methodology

### Introduction

The Learning Curves research has taken place over three iterative cycles. Starting from the first round of fieldwork in 2002, we reacted to each year's findings by adjusting our focus the following year. While this makes it a little more difficult to follow some trends across the three years, it has meant that we could progressively refine the methods we used for capturing interesting and useful data about schools' subject choice policies and their impact on students' decision making and learning programmes. This section outlines the broad sweep of the 2004 fieldwork, then elaborates on some aspects of the subsequent analysis.

### The 2004 fieldwork schedule

For operational reasons, we visited the six Learning Curves schools somewhat later in 2004 than in 2003 and 2002. Students were nearing the middle of their year's work and this seemed like a good time to capture more of the flavour of their learning experiences and assessment decisions. We were in each school for two full days in 2004, whereas the previous visits had been of just one day's duration. On these two days we carried out:

- a follow-up interview with the principal;
- interviews with the HODs of English, mathematics, science, technology, and the arts<sup>2</sup> (in most cases these were also follow-up interviews although we did encounter a few changes of personnel);
- a short survey of all students willing to participate at each of Years 11, 12, and 13; and
- three focus group discussions at each of Years 11, 12, and 13—a total of nine groups in each school. At each year level we attempted to target each group at students with different types of learning experiences, based on the combinations of subjects they were taking.

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<sup>2</sup> See the first Learning Curves report (Hipkins & Vaughan, 2002a) for a rationale for this selection of curriculum areas.

## The student survey

The student surveys used in 2004 were shorter than those used in 2003 and they mainly addressed different issues. We surveyed students at Years 11, 12, and 13 in all six schools—a considerable expansion on this aspect of the fieldwork.

As in 2003 each survey included a subject choice component that was specific to each school. This was carefully prepared in advance, using information for each school's 2004 prospectus. The actual names that schools assigned for subjects and options within subjects were used, so that students could more easily recognise their classes. The school-specific data was then collated into broad groupings of like subjects by the method described below.

In 2003 we had found that a list of subjects focused on one year level did not adequately capture the extent of multi-levelling (Hipkins, Vaughan, Beals, & Ferral, 2004). Accordingly, the 2004 survey for every student included all the subjects offered at all three senior secondary levels at that school. Students could indicate subject combinations that crossed levels, or that were all at the same year level, as appropriate to their circumstances.

Other survey questions focused on students' perceptions of the NCEA and sought to gather data about the extent of practices such as skipping assessments that we had found to be of concern to teachers (Hipkins et al., 2004). Many of these questions took the form of Likert scales. Unlike the very long 2003 survey there was no evidence of response fatigue. In fact the open-ended question at the end of the survey was answered by many of the students, indicating their interest and willingness to write about the topics raised.

## Survey response rates

Table 1 shows an overall decline in the response rate of Year 11 students across the three years of the fieldwork for this project. City School A is the obvious exception with a 90 percent return in 2004. Also, response rates remained consistently high at Town School F.

Table 1 **Comparative survey response rates at Year 11 (2002, 2003, and 2004)**

School	No of 2004 students	No of 2004 responses	% response 2004	% response 2003	% response 2002
City School A	149	134	90	87	68
City School B	202	110	55	82	67
City School C	160	75	47	89	56
Town School D	183	98	54	52	66
Town School E	225	164	73	76	93
Town School F	126	104	83	88	88
<b>TOTAL</b>	<b>1045</b>	<b>685</b>	<b>67</b>	<b>79</b>	<b>88</b>

There are various possible explanations for this trend. As for the 2003 decline, it could be related to conditions under which the surveys were administered. The greater reliance on individual

teachers to administer the 2003 survey (Hipkins et al., 2004) was further extended in 2004 when the researchers were busier with focus groups and had less time to troubleshoot and follow up on survey collection. Questionnaire fatigue on the part of the teachers, who had been asked to help us three years running, could have been a factor. The fact that we found whole classes in certain subjects to be missing from the subject analysis certainly points to that possibility (see Section Three). An intriguing possibility (but one that can only be speculative) is that students are becoming more independent in making decisions about optional choices, such as the voluntary completion of researchers' questionnaires. Data presented in this section point to increasing levels of student autonomy when exercising assessment choices, and there may have been a carry-over effect from that. If this was the case, we would expect to see rates of return drop even more at Years 12 and 13, when students have had more opportunities to make choices about their assessments. While the next two tables show that this is indeed the case, survey fatigue offers an alternative explanation. For the Year 13 students, in particular, this was their third *Learning Curves* survey. Although the content of the survey was very different, some students doubtless opted not to take part without first establishing this change of focus.

Table 2 **Comparative survey response rates at Year 12 (2003 and 2004)**

School	No of 2004 students	No of 2004 responses	% response 2004	% response 2003
City School A	141	92	65	91
City School B	302	194	64	67
City School C	147	70	48	54
Town School D	137	59	43	61
Town School E	160	96	60	87
Town School F	112	68	61	59
<b>TOTAL</b>	<b>999</b>	<b>579</b>	<b>58</b>	<b>70</b>

Table 3 **Survey response rates at Year 13 (2004)**

School	No of 2004 students	No of 2004 responses	% response 2004
City School A	125	82	66
City School B	205	116	57
City School C	101	30	30
Town School D	82	39	48
Town School E	114	58	51
Town School F	76	33	43
<b>TOTAL</b>	<b>703</b>	<b>358</b>	<b>51</b>

The low response rates at City School C (all year levels), Town School D (Years 12 and 13), and Town School F (Year 13) may have introduced some bias to the findings where particular groups of students did not return completed surveys. Several instances where we detected missing classes of students are described in the analysis (for example we did not collect responses from Year 13

students who were taking Year 13 mathematics at City School C, although we know such a class did exist). Accordingly the findings can only be generalised to the students who answered the questionnaire.

## Demographic patterns in survey responses

### *Gender*

With the obvious exception of the two single sex schools (City School A and Town School E) there were reasonably even response rates from male and female students at Year 11. Somewhat more males responded to the Year 12 survey at City School C and the Year 13 survey at City School B. Noticeably more Years 12 and 13 females responded to the survey at Town School D.

Table 4 **Patterns of Year 11 percentage response rates by gender**

Gender	City A (n=134)	City B (n=110)	City C (n=75)	Town D (n=98)	Town E (n=164)	Town F (n=104)
Male	-	48	45	46	100	51
Female	100	43	51	52	-	44
Missing	-	9	4	2	-	5

Table 5 **Patterns of Year 12 percentage response rates by gender**

Gender	City A (n=92)	City B (n=194)	City C (n=70)	Town D (n=59)	Town E (n=96)	Town F (n=68)
Male	-	54	64	31	100	47
Female	100	46	36	69	-	53

Table 6 **Patterns of Year 13 percentage response rates by gender**

Gender	City A (n=82)	City B (n=116)	City C (n=30)	Town D (n=39)	Town E (n=58)	Town F (n=33)
Male	-	57	47	33	100	42
Female	100	43	53	67	-	58

### *Ethnicity*

A prioritising procedure was used to classify the ethnicity of the survey respondents. Identification as a Māori was top of the priority list. So, for example, those students who said they were Māori-Pacific were coded as Māori. Pacific identity was determined next. Thus students who said they were Pacific-Asian were coded as Pacific. Asian status was determined next, followed by Pākehā status. Remaining students were classified as “other”. This provides a means of assigning one ethnicity per student, but at the cost of the loss of secondary identifications.

Results of the analysis, showing the diversity of ethnic composition of the student population in all six schools, are summarised in the next table.

As a general pattern, 70 percent or more of respondents from the town schools were Pākehā. Significantly more respondents from City School C and Town School D were Māori students (20 percent or above). There were more Asian respondents at City School A (20 percent) and more Pacific respondents at City School C (38 percent). City Schools A and B had higher proportions of respondents of other ethnicity (e.g. African, Other European, American, Indian, etc.). A number of students at City School B did not complete the question on ethnicity, doubtless reflecting the liberal ethos of this school, where students are more accustomed to exercising their rights to respond critically if they disagree with something (see Section Three).

Table 7 **Ethnic composition of student populations in each school (percentage of total school population, Years 11–13 combined)**

Ethnicity	City A (n=310)	City B (n=429)	City C (n=175)	Town D (n=197)	Town E (n=324)	Town F (n=206)
NZ European/Pākehā	47	59	29	75	73	79
Māori	8	11	22	20	9	14
Pacific	11	3	38	0	4	0
Asian	20	12	6	0	7	0
Other	14	14	6	5	7	6

Another way of analysing this data is to combine all the student numbers for any one ethnicity and then find the percentage of these students in each school. The next table shows the different pattern this analysis reveals. For example, 5 percent of the Pākehā respondents and 51 percent of the Pacific respondents were studying at City School C. By contrast, between them Town Schools D and F accounted for just 2 percent of the Pacific respondents and 2 percent of the Asian respondents. Reflecting the multicultural character of central urban city schools, between them City Schools A and B accounted for 77 percent of the Asian respondents and 67 percent of the students of other ethnicity.

Table 8 **Percentage representation of whole population of each ethnic group in each school (Years 11–13 combined)**

Ethnicity	NZ European/ Pākehā (n=1000)	Māori (n=207)	Pacific (n=129)	Asian (n=148)	Other (n=157)
City School A	15	12	27	43	27
City School B	26	23	11	34	40
City School C	5	18	51	7	6
Town School D	15	19	1	1	5
Town School E	24	15	9	15	14
Town School F	16	14	1	1	8

These variations in ethnic composition may account for some of the between-school variations, although these are more apparent in each school’s “ethos” than in the patterns of student responses. Other research suggests that to describe these variations more fully we would need access to other demographic data that we did not gather—for example parental income, occupation, and mother’s level of education may have a bearing on school social mix.

## Analysis of the survey data

The data sets at each year level were initially collated to yield frequency responses from across all six schools. The findings in Section Three primarily report patterns at this generalised level. We had gained an impression of school-specific differences in 2002 and 2003. The refinements we made to the 2004 subject-choice aspects of the survey (see above) allowed us to pursue these impressions in 2004 by seeking statistical differences in response patterns from students in the different schools. Findings in Section Four that refer to actions or beliefs that students were “more likely to” show, or that were reported by “more students than expected”<sup>3</sup> are instances where chi-square tests<sup>4</sup> revealed significant differences between the responses of the whole cohort and the responses in any one school.

## Grouping school-specific subject codes

In 2003 we described three different “types” of subjects in the core curriculum areas of English, mathematics, and science. For reasons that are explained in the second report we called these *traditional-discipline*, *locally-redesigned*, and *contextually-focused* subjects (Hipkins, 2004; Hipkins et al., 2004). A brief summary of their distinguishing features is included in Section Three. These terms would have meant nothing to the students in each school and so the school-specific survey forms called these subjects what their school called them. As a first step in the data analysis, we coded responses from across the schools into the three subject types.

Because response numbers were often low in locally-redesigned and contextually-focused courses in the same subject, we regrouped these and called them “alternative” courses. This allowed us to keep the distinction between traditional courses and those designed to meet the learning needs of different groups of students in the statistical analyses that followed.

At another level of generality, we collated all subjects within a curriculum area at each year level. For example Year 11 English might include a traditional-discipline and a contextually-focused version. It might also include subjects that students took instead of, or as additional to, English. These curriculum area groupings are shown in Table 9. Note that the groupings cannot correspond

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<sup>3</sup> Or, of course fewer students than expected, or students who were less likely to do or think something.

<sup>4</sup> At the 5 percent level of significance (a 1-in-20 likelihood that the differences could have occurred by chance).

to practice in every school because this varied. For example electronics is administered by the technology curriculum area in some schools and by science in others. We needed to make one overarching decision and opted for science because this seemed to better reflect the type of practical learning that took place. Accounting is similarly administered within the mathematics curriculum area in some schools, but not others.

The coding of transition subjects and vocational pathways subjects requires some elaboration. Transition covers a group of relatively well-established subjects taken by students in school-to-work schemes such as those operated under the Gateway scheme. However we had been aware that in the first two years of Learning Curves our analysis missed the prevalence of certain sorts of vocationally-oriented subjects when these were reported separately. This year we grouped them together, but coded them in a way that also allowed us to allocate them within the broadly relevant curriculum area. Table 10 shows the way we did this. Similarly, collating all the various permutations of practically-oriented technology subjects allowed us to better represent the popularity of this curriculum area (see Table 9).

Table 9 Procedure for grouping subjects into broad curriculum areas

Curriculum area	Subjects included
English	All versions of English Media studies ESOL
Mathematics	All versions of mathematics Accounting Calculus Statistics
Science	All versions of science  All versions of biology, chemistry, physics, agriculture, and/or horticulture Electronics
Health and PE	All combinations of Health, PE, and life skills Recreation and sports studies Outdoor education Food and nutrition or home economics
Social sciences	Social studies Geography History Economics Combinations of economics and accounting Tourism and hospitality Classical studies
Languages	All European languages (as one sub-group) Latin All Asian languages (as one sub-group) Te reo Māori Samoan
Technology	Any combination of hard materials, soft materials, food, fabric technology was grouped as "practical technology" Graphics and Design technology were grouped as "graphics and design" Information management (IM or TIM) Legal studies and IM Computer studies
The arts	Music (vocal studies was also grouped as music) Drama Dance  Visual arts (at Year 13 breaks out into painting, printmaking, sculpture, and design) Photography Art history Māori and Pacific art and Māori PA were grouped as "cultural arts"

Table 10 The nature of “vocational pathways” subjects

Specific examples of subjects offered	Curriculum area with which associated
Automotive training	Technology
Furniture making	
Chef training	
Carpentry	
Technology in the performing arts	Arts
Journalism	English
Film and TV studies	
Young enterprise	Social science
Marine science	Science
Forestry	
Agriculture	
Nannying	Miscellaneous

## The cluster analyses

In 2002 and 2003 we were aware that certain students seemed to be taking *combinations* of courses of similar types. For example those taking a contextually-focused course in one subject were also likely to be taking a similar course in another subject. The improved subject-specific data we gathered in 2004 allowed us to explore a method of clustering subject combinations to further investigate these suspected patterns. Students were grouped (clustered) according to their reported subject choices—that is, those with broadly similar combinations of subject choices were grouped together. We then compared these patterns of subject choice across three demographic variables: school, gender, and ethnic group. Full details of the method used can be found in Ferral (2005) and the results are reported in Section Three.

## Focus group conversations

In 2004 we added a new component to the fieldwork in the six schools. We were conscious that the Year 13 students—the so-called “guinea pig” group for the NCEA implementation—would be leaving school at the end of the year and we wanted to capture some snapshots of their thinking in more detail than could be provided by a quantitative survey. With the cooperation of the schools, we devised a series of semi-structured questions to be used in conversation with small focus groups of students at each of the three year levels of the senior secondary school.

The questions were designed to probe more deeply into issues that had arisen in the 2002 and 2003 survey responses and in comments made by the HODS. There were some small differences in question composition at the different year levels, to allow for differences in the students’

NCEA experiences to that point. (For example, the Year 11 students were yet to experience external examinations.)

We asked each school to organise three groups at each year level, corresponding as far as possible to the three different types<sup>5</sup> of subjects that we had described as a result of our analysis of the structure of 2003 subject courses. In this way, we sought to hear the views of students with a wide range of abilities and who may have had different types of learning experiences. These conversations were taped and converted to brief notes for further analysis.

In the event we carried out eight rather than nine focus group conversations in Town School F. In total, there were 53 focus groups; 18 at Year 11, 18 at Year 12, and 17 at Year 13. The average size for a group was six students. A few were smaller and a few larger.

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<sup>5</sup> Traditional discipline, locally-redesigned, contextually-focused.

## 3. Choosing subjects

### Introduction

This third Learning Curves report has a central focus on the students and their thoughts, choices, and actions in the NCEA qualifications regime. It is important to keep in mind that these are not unconstrained choices and actions. Rather, they take place within a framework of possibilities shaped by the schools and the decisions of the adults associated with them. This section sketches broad patterns of the “framework” of school policy and practice, within which students make their choices, while the next section extends the picture of these constraints by describing school-specific differences.

This section also continues the reporting of the overall patterns of the subjects that students choose within the timetable framework. While these subject-choice patterns may not seem to be constraints as such, in reality the popularity of subjects determines the likelihood that they will continue to be offered at all, and whether they will appear on one or more timetable line, providing flexibility of combinations, and so on.

The second Learning Curves report suggested some evidence that students’ participation in particular English or mathematics options was associated with also taking particular optional subjects. Investigating this more closely, this report describes the types of subject *combinations* that different students chose in 2004. They reflect school practices such as the subject combinations placed on the same timetable line, amongst which students must make constrained choices (Hipkins & Vaughan, 2002a). Perhaps even more importantly, findings from the second Learning Curves report suggest that the clusters also reflect the advice provided by the deans—advice that strongly guides certain types of students to certain types of subjects (Hipkins et al., 2004).

### Aspects of the subject-choice framework

We begin by reporting on the overall framework within which students make subject choices at each school. Aspects that constrain the choices they can make include:

- the number of subjects they are permitted to take;
- the number of these subject “slots” that are taken up by compulsory subjects; and
- the distribution of overall choices across all the subject areas of the curriculum.

## Number of subjects taken

Sixty-seven percent of the responding Year 11 students were taking six subjects, with 23 percent taking 7 subjects—something that was much less likely to happen at either Year 12 or Year 13. Most of the responding Year 12 students (77 percent) were taking six subjects, with 15 percent taking five subjects. There is a clear trend for students to reduce the overall number of subjects they study at Year 13. Most of those responding at this level (66 percent) were taking five subjects, with 16 percent taking six subjects and 10 percent taking four subjects.

## Compulsory subjects

Although they tend to take more subjects overall, Year 11 students have a constrained range of choices because both English and mathematics are compulsory, as is science in five of the six schools, and health/PE in one of them. Thus most students have three “free” choices, at best. At Year 12, English—or some other subject that can help students gain literacy credits—is compulsory, restricting optional choices to five or four subjects. At Year 13 all choices are open, at least in theory. In reality, Year 12 and 13 choices may be constrained by subjects chosen in previous years, because there are entry prerequisites for many courses.

## Number of choices on offer

In the first Learning Curves report we outlined the ways in which timetabling and resource constraints limit the number of courses schools can offer (Hipkins & Vaughan, 2002a). Nevertheless, within these constraints, there is considerable variation in the ways schools put together subject choices and combinations. While Section Four explores the way the “ethos” of each school contributes to the decisions they ultimately make, this section reports the results, in terms of the actual choices offered to the students, and the ways they take these up.

The next three tables show the overall numbers of courses within the different curriculum areas offered in each of the schools. Note that there are various ways subjects can be collapsed into these larger groupings. The collation method used in this research was outlined in the methodology section. For example, ICT is included in technology and transition subjects are collated with the vocational category. Subjects were counted in this overall category if they related directly to potential pathways beyond school—for example “carpentry” or “forestry”.

At Year 11 an average of 29–30 subjects was offered in 2004 at any one school, with a range from 25 to 36 subjects, including variations within subjects.

Table 11 **Number of subjects offered in each curriculum area at Year 11 in 2004**

Curriculum area	City A	City B	City C	Town D	Town E	Town F
English	3	4	3	2	3	2
Mathematics	4	3	5	4	3	4
Science	2	3	3	5	4	3
Health and PE	2	6	3	2	2	4
Social sciences	3	3	4	3	3	3
Languages	5	3	4	3	3	2
Technology/ICT	4	8	5	5	3	8
The arts	4	4	2	3	2	3
Vocational/transition	1	2	1	2	2	0
<b>TOTAL</b>	<b>28</b>	<b>36</b>	<b>30</b>	<b>29</b>	<b>25</b>	<b>29</b>

NB: Shaded cells indicate curriculum areas where there is a compulsory option students need to take in addition to their optional choices.

Reflecting the opening up of choice when only English remains compulsory, all six schools offered more subject options at Year 12 than at Year 11. The average number offered was 37, with a range from 31 to 47 subjects. At City Schools A and B wider ranges of arts options were offered. At the other four schools, these options did not open up until Year 13, when visual art splits into several separate subjects. Town School D offered the widest range of science options at Year 12, and Town School E offered more courses in the English curriculum area.

Table 12 **Number of subjects offered in each curriculum area at Year 12 in 2004**

Curriculum area	City A	City B	City C	Town D	Town E	Town F
English	3	4	4	3	5	3
Mathematics	4	4	3	3	3	3
Science	3	5	3	7	6	5
Health and PE	4	3	4	3	4	4
Social sciences	4	7	5	4	4	3
Languages	5	3	4	3	1	1
Technology/ICT	5	8	6	6	2	6
The arts	7	6	3	3	2	4
Vocational/transition	2	7	1	5	4	6
<b>TOTAL</b>	<b>37</b>	<b>47</b>	<b>33</b>	<b>37</b>	<b>31</b>	<b>35</b>

NB: Shaded cells indicate curriculum areas where there is a compulsory option students need to take in addition to their optional choices.

With the exception of Town School E, the schools offered the same number or fewer choices at Year 13 than at Year 12. The average was 33, with a range from 25 to 37.

Table 13 Number of subjects offered in each curriculum area at Year 13 in 2004

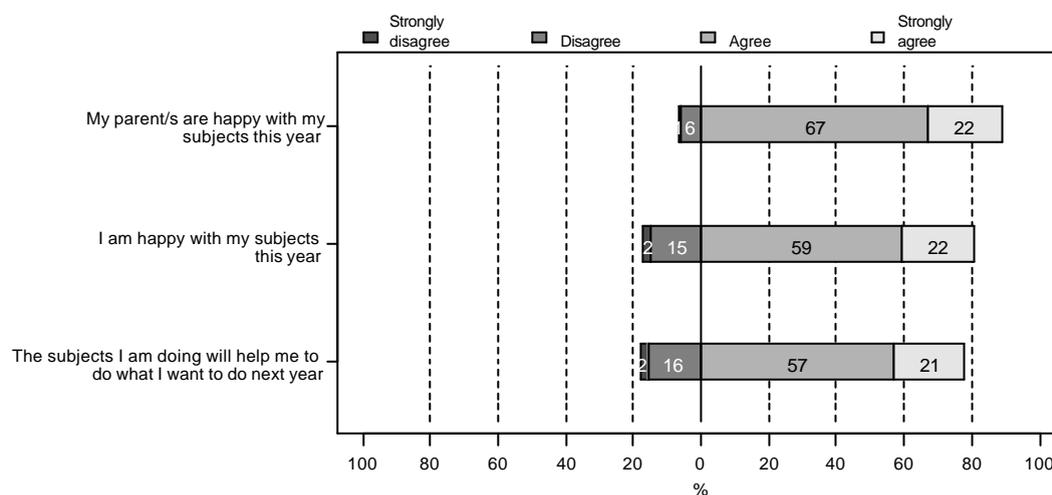
Curriculum area	City A	City B	City C	Town D	Town E	Town F
English	3	4	4	1	3	1
Mathematics	4	3	3	3	3	3
Science	3	3	3	4	4	4
Health and PE	4	2	2	2	3	4
Social sciences	5	5	5	4	5	3
Languages	5	3	4	3	1	1
Technology/ICT	4	3	3	3	3	6
The arts	7	7	5	3	6	7
Vocational/transition	2	5	4	2	7	3
<b>TOTAL</b>	<b>37</b>	<b>35</b>	<b>33</b>	<b>25</b>	<b>35</b>	<b>32</b>

NB: Shaded cells indicate curriculum areas where there is a compulsory option students need to take in addition to their optional choices.

## Student views about subject choice

Schools go to considerable lengths to provide a range of options for students. Were their efforts appreciated by the students themselves? As the next figure<sup>6</sup> shows, most Year 11 students were happy with their subject choices and felt their parents were happy too.

Figure 1 Year 11 student happiness with subject choice

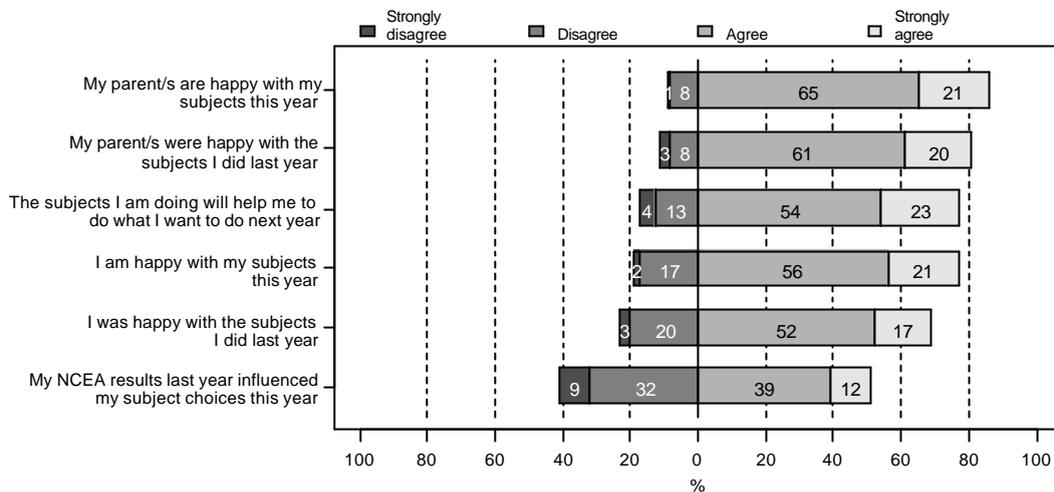


The pattern was much the same at Year 12 when students were asked to reflect on both their Year 11 and Year 12 choices. Again, there was slightly more agreement that parents were happy than that the students themselves were happy. This small difference possibly reflected instances where

<sup>6</sup> Note that in this, and the following figures that report responses to Likert-style questions, percentages do not add to 100 where not all students responded to the question concerned.

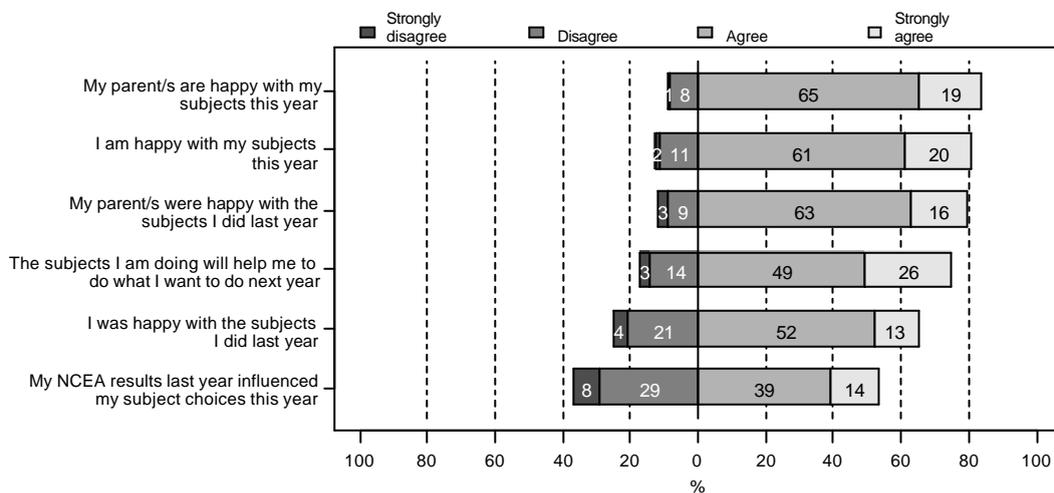
parents had persuaded students to do subjects they might not otherwise have chosen. Most students were happy that their choices are appropriate for their future plans.

Figure 2 Year 12 student happiness with subject choice



Almost as many students said they were not influenced by the previous year’s NCEA results when making the current year’s subject choices as said they were. The pattern at Year 13 is similar again, with most students happy that their choices are appropriate for their future plans.

Figure 3 Year 13 student happiness with subject choice



Around 17 percent of students at each of the three year levels felt that their subjects would not help them in the following year. However, somewhat more Year 12 and 13 students were happier with their current choices than their previous year’s choices. This suggests some adjustments may have been made from year to year.

The patterns reported here held across all the schools and there were no gender differences in responses. Since all the schools go to considerable lengths to provide courses of interest and

learning benefit to a wide range of students, they will doubtless be gratified to see that these efforts are by and large appreciated by the students.

## “Choices” within compulsory subjects

Within the compulsory subjects there are still “choices” to be made. The second Learning Curves report described the nature of variations offered (Hipkins et al., 2004). Analysis of 2003 course information (from the second year of the project) led us to describe three different types of courses:

- **traditional-discipline** courses look similar to the sorts of courses most students would have taken pre-NCEA and are typically mainly assessed by full suites of achievement standards;
- **locally-redesigned** courses take advantage of the NQF/NCEA flexibility to mix and match achievement and unit standards, sometimes at one or more NQF levels, sometimes from more than one discipline area, to provide courses to meet identified learning needs of specific groups of students; and
- **contextually-focused** courses locate learning in contexts of relevance to learners and are typically totally internally assessed, mainly with unit standards.

We next outline overall patterns of uptake of these various options within the compulsory subjects of the “core” curriculum.

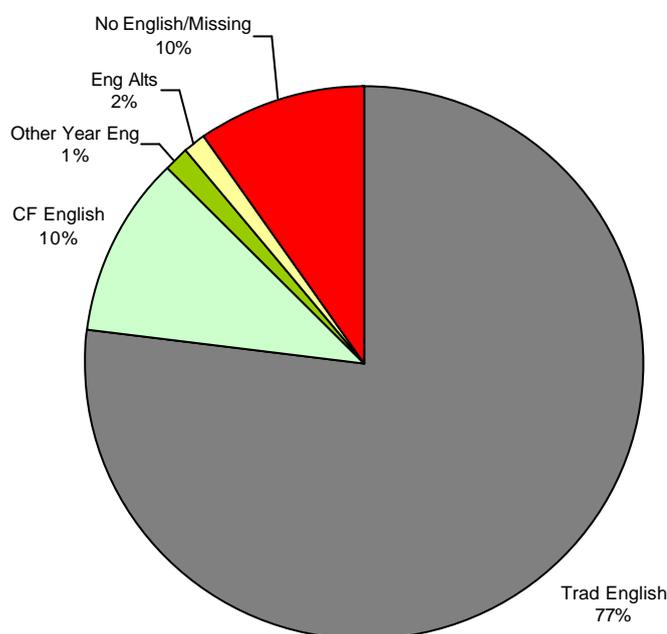
## Versions of English

As we would expect, given its compulsory status, most of the 2004 Year 11 students (90 percent) said they were taking some form of English. The majority of them (77 percent), especially the Pākehā students, were doing a traditional discipline version of English. Just 10 percent said they were taking a contextually-focused version, a very similar proportion to the last round of fieldwork (11 percent of students took such courses in 2003). No students were taking a locally-redesigned type of English at Year 11—something we also reported in the last round, when the English HODs said they preferred to provide within-course differentiation for most students. The contextually-focused courses typically had a specific focus on gaining literacy credits rather than wider learning across the English curriculum (Hipkins et al., 2004, p. 93). A very small number (2 percent) said they were taking an alternative to English<sup>7</sup>. Overall participation patterns are shown in the next figure.

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<sup>7</sup> Students at City School B, for example, could choose to take Te Reo instead of English, or as well as English (see Hipkins & Vaughan, 2002a, p. 35).

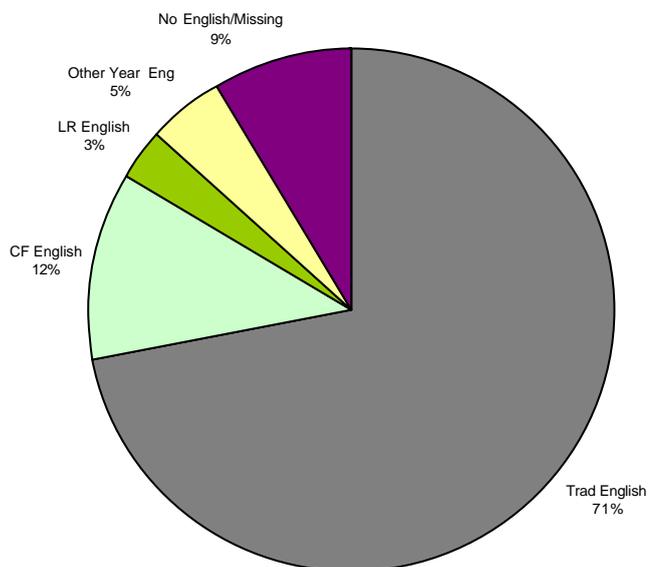
Figure 4 Patterns of student participation in Year 11 English



The pattern of overall participation was very similar at Year 12, with 91 percent of respondents taking some form of English. Compared with Year 11, the opening up of different types of learning pathways at Year 12 is reflected in the increasing diversity of types of English being studied (see Figure 5, next page). Seventy-two percent of all students (again mainly Pākehā) were taking a traditional-discipline version. Twelve percent of students were taking a contextually-focused version of the subject and a small number of students were taking a locally-redesigned version (3 percent). More students than at Year 11 (5 percent) said they were taking English at another year level, predominantly at Year 11 although five students were taking a Year 13 course.

Like other subjects that are compulsory in Years 11 and 12, English continued to be a popular *choice* at Year 13 (although it remained compulsory at City School A—see Section Four). Two-thirds of the responding students (66 percent) continued to take some form of English in Year 13. A traditional-discipline version of Year 13 English was amongst the overall top four optional subjects at this level, being taken by just under half (45 percent) of the students. Reflecting the increasingly flexibility of learning pathways provided by the NCEA, 18 percent of Year 13 students were taking English at another level, predominantly a Year 12 traditional-discipline course. Only 4 percent of the responding students were taking contextually-focused English and they all came from either City Schools A or C, the only two schools where this type of English was offered at this year level. Such differences in availability are a reminder of the impact of the overall structure of the schools' timetabled choices on the various pathways open to students.

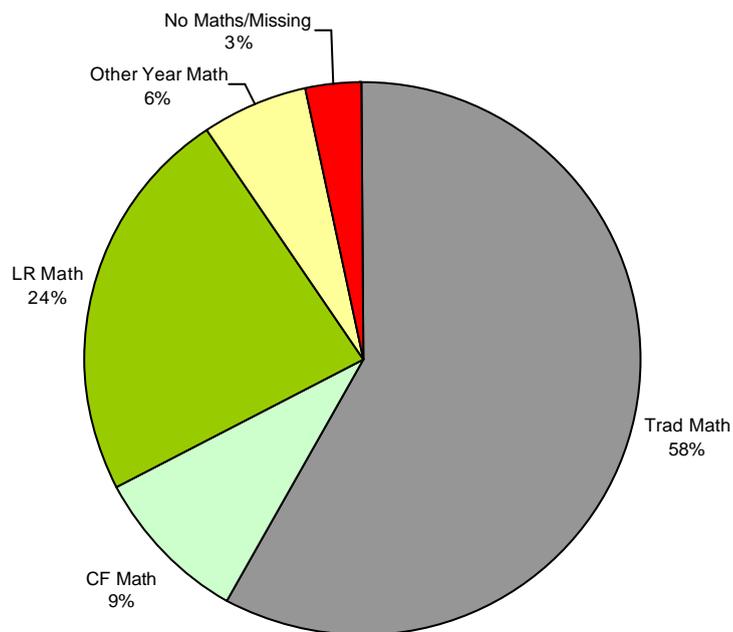
Figure 5 Patterns of student participation in Year 12 English



### Versions of mathematics

As the next figure shows, most responding Year 11 students (97 percent) were taking some form of mathematics.

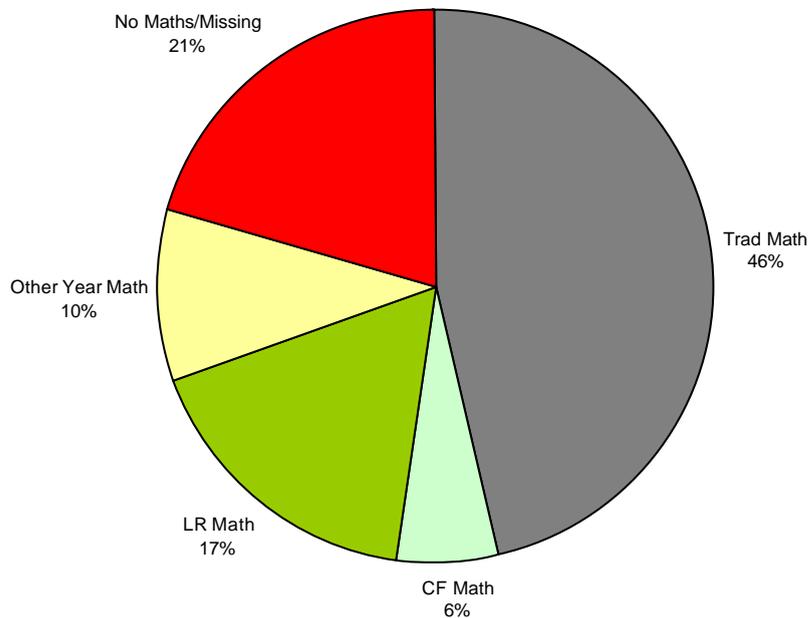
Figure 6 Patterns of student participation in Year 11 mathematics



Just over half (58 percent) of the Year 11 students were taking a traditional-discipline version, and they were mainly Pākehā students. Another 32 percent, mainly Pacific or Māori students, were taking contextually-focused or locally-re-designed courses. Students taking such courses were also more likely to be taking an alternative version of English. A small number of Year 11 students (6 percent) were taking mathematics at another year level, predominantly a Year 12 traditional-discipline course. Fewer students took Year 11 English at another year level (1 percent).

While mathematics becomes optional at Year 12, the majority of students (79 percent) continued to take a version of the subject. Just under half (46 percent of all Year 12 students, mainly Pākehā) were studying a traditional-discipline course. Ten percent of this Year 12 cohort were taking mathematics at another year level, and they were fairly evenly split between the different options offered at either Year 11 or Year 13. This makes something of a contrast with English, where Year 12 students taking English at another year level were more likely to be taking a Year 11 course than a Year 13 course (see above). This could reflect the traditional status of mathematics, and a preferred subject for “accelerated” students, which accounts for the trend to Year 13 uptake in this subject. Equally it could reflect the importance of gaining the literacy credits needed to complete an NCEA qualification, which would account for the trend to Year 11 English.

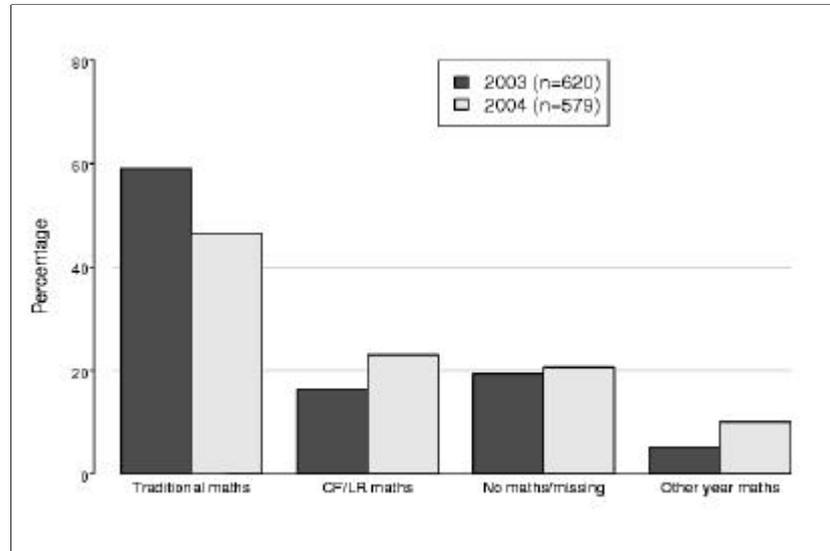
Figure 7 Patterns of student participation in Year 12 mathematics



As the next figure shows, compared to 2003, there was a drop in the proportion of the Year 12 cohort who took a traditional-discipline version of mathematics. This could reflect greater uptake of alternative courses in 2004 or perhaps differences in the perceived learning needs of the two cohorts. Those taking contextually-focused or locally-re-designed mathematics in 2004 were

mainly Pacific or Pākehā students. Again, students taking such courses were also more likely to be taking an alternative version of English.

Figure 8 **Patterns of participation in Year 12 mathematics in 2003 and 2004**



As for English, mathematics continued to be a popular choice at Year 13. More than half the students (58 percent) had chosen one or more mathematics options. Both mathematics with statistics (33 percent), and mathematics with calculus (25 percent), were in the overall top four optional subjects. Fifteen percent of students were taking mathematics at another year level, with Year 12 traditional-discipline courses being slightly more popular than Year 12 locally-redesigned courses.

### Versions of science

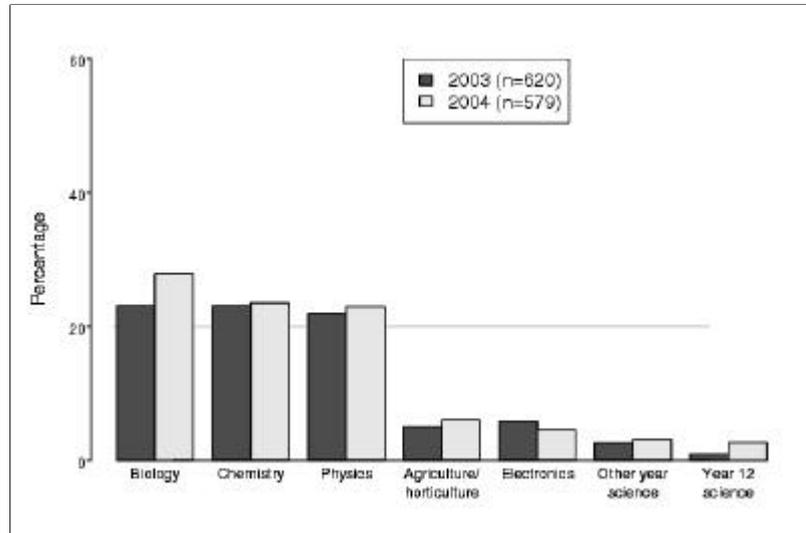
Many Year 11 students (70 percent of the cohort) were taking a traditional-discipline version of science. A range of alternatives was also available, with 11 percent of students taking either a locally-redesigned or contextually-focused course, and 5 percent of students taking an extension course or science at another year level. Thirteen percent did not report taking a version of this subject. While this pattern indicates that a range of types of science pathways begin to open up at Year 11, it is at Year 12 that we see the full unfolding of this potential.

Fifty-six percent of the Year 12 cohort were taking at least one science subject in 2004 (54 percent in 2003). Perhaps reflecting the compulsory status of science in five of the six schools at Year 11, the three traditional science disciplines all feature in the most popular option choices. As with mathematics, science appears to be a curriculum area that retains a high relative status in a crowded curriculum where optional subjects can jostle for space.

In addition to the three traditional-discipline science options, students could choose from a range that, across the schools, included agriculture/horticulture-based subjects, electronics, Year 12 science, and another year level science. The next figure compares patterns of uptake of Year 12

sciences by the 2003 and 2004 cohorts and shows minimal differences in the uptake of the various options.

Figure 9 Science subjects chosen by the 2003 and 2004 Year 12 student cohorts



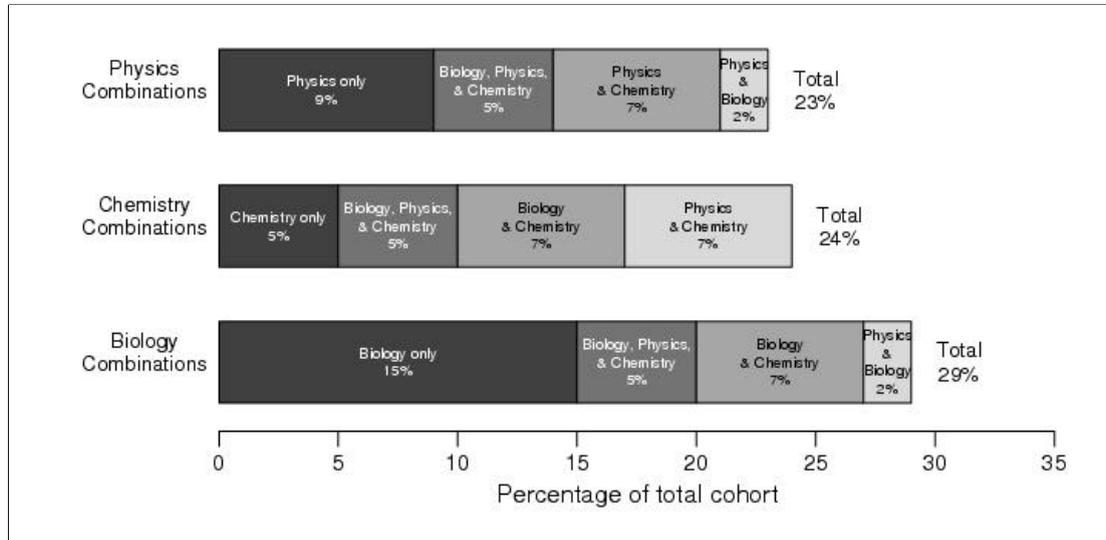
Clearly, traditional “academic” pathways are not the only types of pathways that include science choices. Agriculture/horticulture and electronics were the two most popular “alternative” Year 12 science choices<sup>8</sup>, despite only being offered in four of the six schools. However, it seems some alternative pathways peter out at the end of Year 12. In 2004 electronics was not offered by any of the six Learning Curves schools at Year 13 and one school no longer offered a combination of agriculture and horticulture at this year level. The apparent fall in numbers of students studying sciences in Year 13 (see below) may partially reflect the loss of students taking these types of options. While this is only a snapshot of what may be happening nationally, this trend bears further investigation, and again highlights the impact of school-specific factors on students’ choices.

The availability of a range of choices enables students to put together combinations of sciences. For those who intend to go on to study sciences at tertiary level such choices carry certain pathways implications. The Australian Committee for the Review of Teaching and Teacher Education (2003) noted that “it is the package of subjects taken in combinations that provides an indication of students’ orientations and which influences their future options, choices and pathways” (p. 8). They also noted that the combination of two physical sciences—i.e. chemistry and physics—is of particular interest because these subjects are a “foundation for further science-based studies” (p. 8). The next figure shows the patterns of combinations of the three most popular options made by Year 12 students in 2004. The combination of physics and chemistry—

<sup>8</sup> Electronics is often recorded as a technology subject in New Zealand, including in Ministry of Education statistics.

identified by the Australian Committee as being important for continuing academic pathways in the sciences—was being taken by just 12 percent of the Year 12 cohort.

Figure 10 **Patterns of Year 12 students' combinations of science subjects**

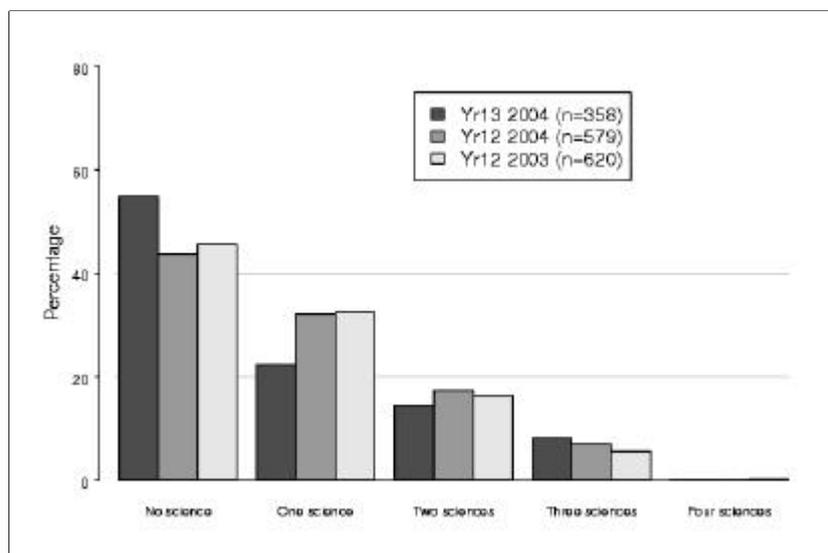


Forty-five percent of the Year 13 cohort took at least one science subject, compared to 56 percent who were doing so at Year 12. Biology continued to find a place in the overall top four optional subjects, with physics and chemistry close behind.

The next figure combines overall participation patterns at Year 12 in 2003 and 2004 (see above for details) with those at Year 13 in 2004. While we cannot say for certain that the same students responded to the Year 12 survey in 2003 and the Year 13 survey in 2004, the overall picture is of a relatively stable pattern of choices. It seems likely that most of the students who took sciences in Year 12 continued to do so in Year 13.

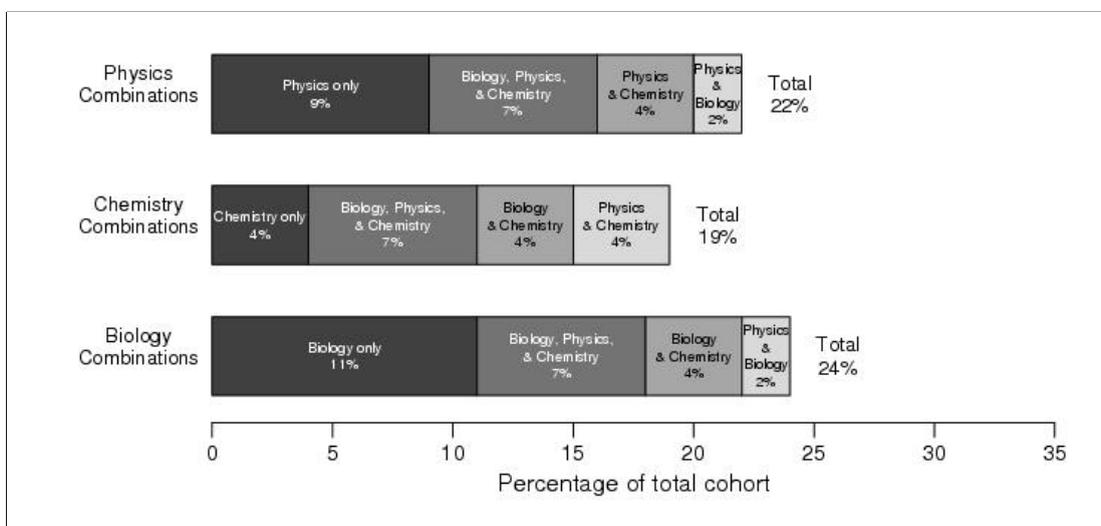
Biology was relatively more popular with the girls at City School A. While other larger studies have reported that biology is more popular with girls generally (Fullarton, Walker, Ainley, & Hillman, 2003) our data cannot disentangle the overall gender effect from the school effect. We found no gender differences in the popularity of biology in the four co-educational schools. Similarly, physics, which is generally reported to be more popular with boys (Fullarton et al., 2003) was being taken by higher than expected numbers of students at Town School E—the only boys' school in the sample—but we found no significant gender differences in the four co-educational schools.

Figure 11 Patterns of participation in Years 12 and 13 sciences



As at Year 12, some students combined two or three science subjects in their overall course. As the next figure shows, the pattern again is very similar to that found at Year 12, with 11 percent of students taking both of the physical science traditional-discipline options (i.e. physics and chemistry).

Figure 12 Patterns of Year 13 science subject combinations



## Choices of optional subjects

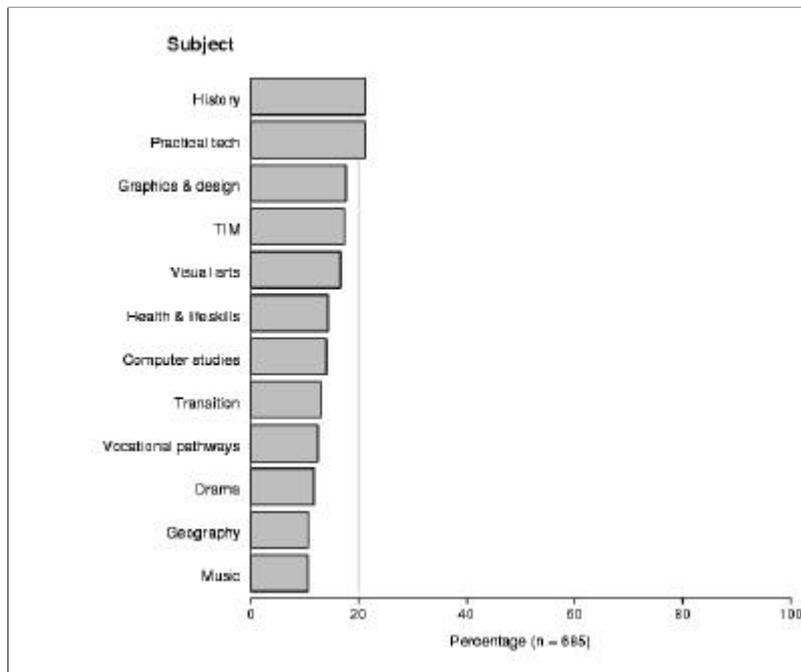
Years 11 and 12 students' choices from the range of optional subjects available followed a similar pattern in 2004 to the previous two years. Year 13 students' choices are reported for the first time in this project.

## Choices at Year 11

The next figure shows the optional subjects being taken by 10 percent or more of the overall Year 11 cohort. History (21 percent) remains the top optional choice, as it was in both 2003 (20 percent) and 2002 (21 percent). Practical technology, health and life skills, and vocational pathways did not feature in the earlier reports because the various subjects that make up these groupings (see Section Two) were counted separately in 2002 and 2003. The cluster analysis reported later in this section highlighted their importance for certain groups of students, and so for this report we have counted them in a way that reflects their prevalence and influence.

Graphics and design, text and information management (TIM or IM), and geography all continue to be popular, as they were in 2002 and 2003. Two of the arts disciplines (music and drama) joined visual art in the top subjects list in 2003 and remained there in 2004. Similarly computer studies, which appeared in the top subjects list in 2003 continued to be popular in 2004.

Figure 13 Popular Year 11 subjects across the schools



### School effects

Behind this overall pattern, there are interesting differences in the popularity of subjects in the different schools. The next table reports percentages of students at each school taking each subject. Any row that contains one bold and one italicised entry shows a subject where we found a school effect. For example history is even more popular at City School A than its overall popularity would suggest, and hence is bolded in the table. It is less popular at Town School D, and hence this entry is italicised. By contrast geography is more popular than expected at Town School D, but less popular at City School B. There were no school effects for graphics and music, which were relatively popular in all the schools.

Table 14 School effects for the most popular optional subjects at Year 11

Subject	City A % (n=134)	City B % (n=110)	City C % (n=75)	Town D % (n=98)	Town E % (n=164)	Town F % (n=104)
History	<b>38</b>	29	15	8	15	17
Practical tech	15	15	24	17	12	<b>51</b>
Graphics	12	21	17	16	22	16
TIM**	17	<i>10</i>	<b>49</b>	23	-	24
Visual art	13	<b>26</b>	21	10	12	21
Health**	-	<i>10</i>	43	-	-	<b>53</b>
Computers**	-	<i>1</i>	-	8	<b>41</b>	18
Transition**	<b>54</b>	<i>1</i>	12	6	-	-
Vocational**	-	<i>8</i>	-	-	<b>46</b>	-
Drama**	<i>8</i>	19	-	11	-	<b>36</b>
Geography	11	3	11	<b>28</b>	4	14
Music	9	15	13	4	9	14

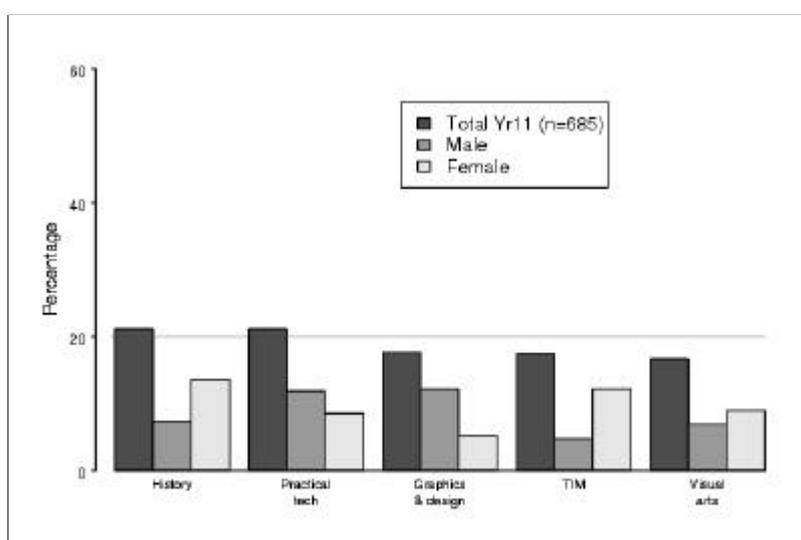
\*\* Subject not taught at all schools.

Where there is a school effect for a subject, **bold** print shows the school with the highest percentage of students taking a subject and *italic* print shows the school with the lowest percentage.

### Gender and ethnicity effects

School-specific differences highlight the difficulty of disentangling variables in analysis of subject choices. Because City School A is a girls' school, the popularity of history in that school doubtless contributed to its overall popularity with female students. The next figure shows trends in gender-related choices of the most popular subjects at Year 11 in 2004. Where offered, female students were more likely to be taking text and information management (TIM), whereas males were more likely to be taking computer studies. Males were more likely to choose graphics and design.

Figure 14 Gender differences in subjects taken by 15 percent or more of Year 11 students



Where females tended to choose transition subjects, males chose vocational pathways subjects (see Section Two for definitions). Females were also more likely to choose drama.

We also found ethnicity-related differences in subject choices but, as for gender, it is not possible to disentangle some of these from school effects. The most popular subjects for Pākehā Year 11 students were history (25 percent of this group), practical technology, and graphics and design (both 22 percent). Most popular with Māori students were visual arts (23 percent), practical technology (22 percent), and te reo Māori (19 percent)—a subject that did not make the overall most popular list.

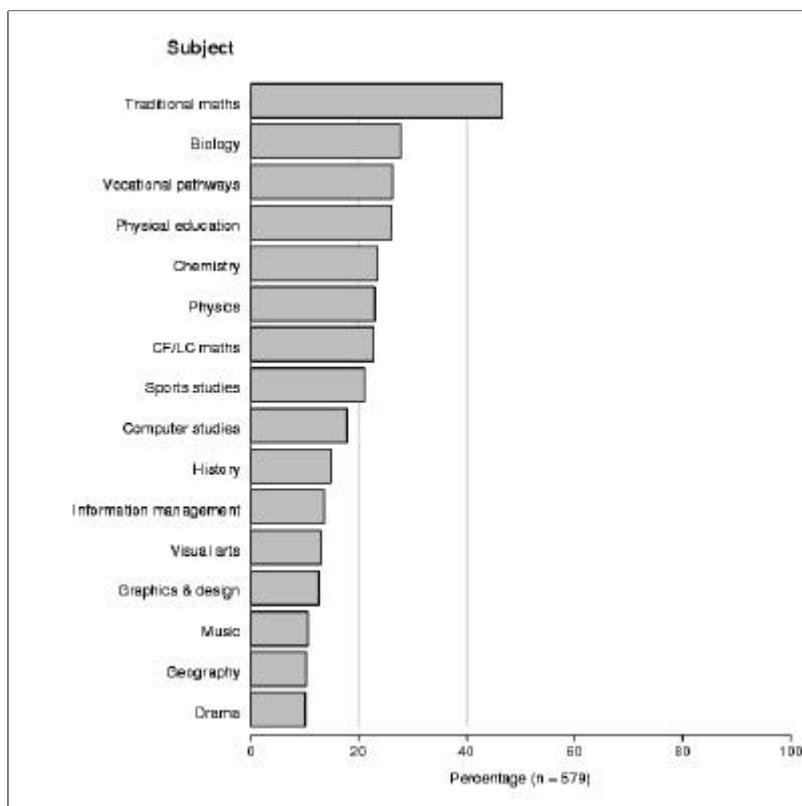
The overlaps between school, ethnicity, and gender effects suggest a picture of differences in perceptions about “relevance” and, perhaps, the learning needs of students in the different schools. This suggestion is further explored in Section Four.

## Choices at Year 12

As already noted, English remains compulsory and almost half of the Year 12 cohort (46 percent) continued to take a traditional-discipline version of mathematics in 2004, even though it becomes an optional choice.

The next figure shows the other optional subjects being taken by 10 percent or more of the overall Year 12 cohort. Vocational pathways subjects, PE, and sports studies were all more popular with the Year 12 cohort than history. Sports studies and history showed little change in participation rates from 2003. The seemingly large increase in uptake of vocational pathways subjects (from 17 percent in 2003 to 26 percent in 2004) doubtless reflects the redefinition of this cluster for the 2004 analysis (see Section Two). Compared with 2003, fewer students chose a version of computer studies (18 percent in 2004 vs. 27 percent of the 2003 cohort), while media studies, accounting, and transition all slipped below 10 percent.

Figure 15 Popular Year 12 subjects across the schools



### School effects

The next table shows differences in the popularity of Year 12 subjects in the different schools. As for the Year 11 analysis, there is a pattern of differing relative popularity of the subjects across the schools. For example, as in Year 11, the girls in City School A chose history in higher than expected numbers and drama continued to be very popular in Town School F. Traditional-discipline mathematics was taken by a greater proportion of students at City School A, while other versions of Year 12 mathematics were taken by relatively more students in Town Schools D and E. Music continued to be popular across all the schools, as was visual arts.

Table 15 School effects for the most popular optional subjects at Year 12

Subject	City A % (n=92)	City B % (n=194)	City C % (n=70)	Town D % (n=59)	Town E % (n=96)	Town F % (n=68)
Trad maths	<b>73</b>	40	30	56	32	57
Biology	41	22	<i>10</i>	39	20	<b>46</b>
Vocational	13	41	10	15	<b>46</b>	<i>1</i>
Phys ed	22	21	9	24	41	<b>46</b>
Chemistry	<b>35</b>	19	<i>11</i>	31	31	18
Physics	24	20	17	22	<b>39</b>	<i>16</i>
CF/LR maths	<i>11</i>	20	31	<b>32</b>	<b>32</b>	18
Sports	0*	<i>19</i>	20	31	27	<b>40</b>
Computers	<b>33</b>	2	27	14	28	24
History	<b>22</b>	19	13	12	<i>8</i>	9
TIM**	15	10	27	22	-	21
Visual arts	11	16	7	17	10	12
Graphics	7	10	16	10	<b>24</b>	12
Music	9	13	16	5	7	9
Geography	0*	12	3	<b>27</b>	11	12
Drama**	2	18	11	-	-	<b>19</b>

\* Subject offered but no respondents taking this subject.

\*\* Subject not taught at all schools.

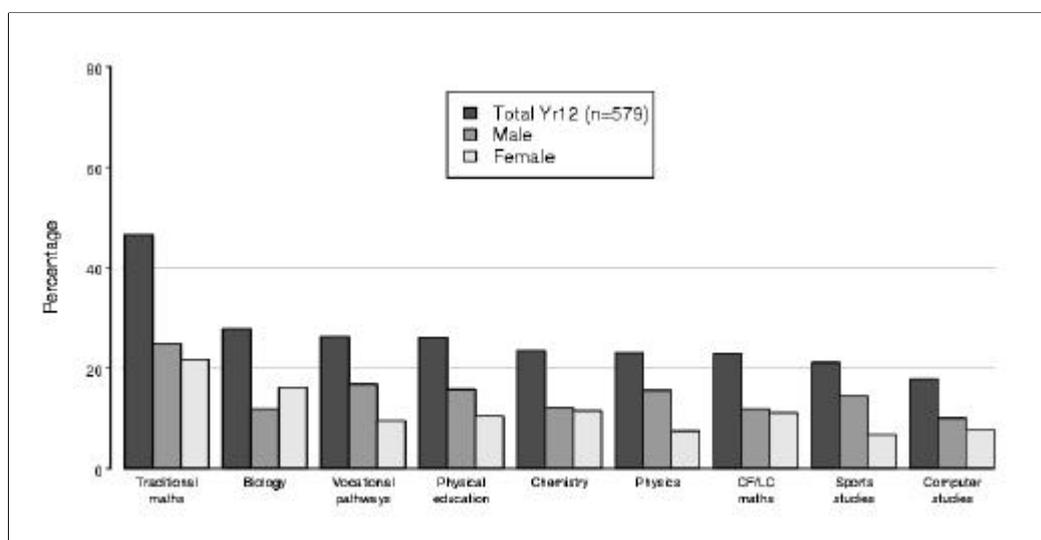
Where there is a school effect for a subject, **bold** print shows the school with the highest percentage of students taking a subject and *italic* print shows the school with the lowest percentage.

### *Gender and ethnicity effects*

Bearing in mind the above caution about school effects, the next figure shows patterns of gender differences in the uptake of popular Year 12 subjects. In addition to physics, higher than expected numbers of male students chose vocational pathways, physical education, and sports studies. Media studies, and graphics and design were also taken by higher numbers of males than females. Media studies was a popular and well-established option at Town School E, the boys' school.

As already noted, biology was more popular with females (33 percent of cohort) than males (23 percent of cohort). Several other subjects that did not feature on the overall top 15 percent of options were relatively more popular with girls. These were visual arts, classics/Latin, photography, drama, tourism/hospitality, and life skills.

Figure 16 Gender differences in subjects taken by 15 percent or more of Year 12 students



Patterns of differences in subject choices related to ethnicity were also difficult to disentangle from school effects. With this caution in mind, we found that higher than expected numbers of Year 12 Pākehā students had chosen traditional-discipline mathematics, the three traditional science disciplines (biology, chemistry, physics), history, visual arts, graphics, and drama. Māori and Pacific students were more likely to be taking contextually-focused or locally-redesigned mathematics courses, and Asian students to be taking computer studies.

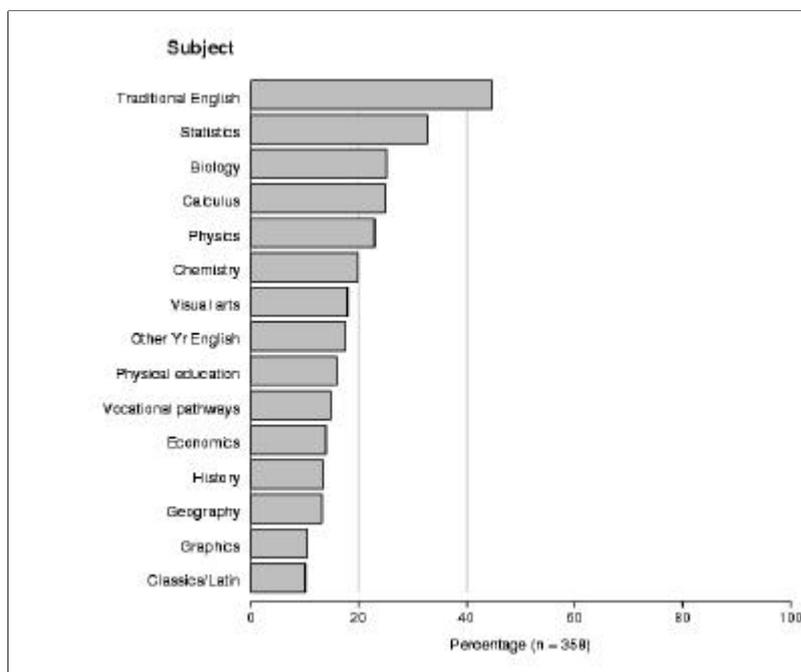
## Patterns of choices at Year 13

The next figure shows the optional subjects being taken by 10 percent or more of the overall Year 13 cohort. Across these six schools a clear pattern emerged. Subjects that were compulsory in Year 11 and Year 12 (English, mathematics, science, and to a lesser extent PE) continued to be the most popular choices at Year 13. The overall top four optional subjects were traditional-discipline English, mathematics with statistics, biology, and mathematics with calculus. Physics and chemistry were close behind. Overall, 58 percent of the responding cohort continued to take one or more mathematics options and 45 percent continued to take at least one science subject.

Fifteen percent of Year 13 students were taking mathematics at Year 12, with numbers almost evenly split between traditional-discipline and locally-redesigned courses. Eighteen percent were taking English at another year level, again predominantly a traditional-discipline Year 12 course. Here we see evidence of increased opportunities for students to work at their own pace by taking a subject considered vital<sup>9</sup> to their overall pathway at another year level.

<sup>9</sup> Since students need both literacy and numeracy credits to be awarded their overall NCEA.

Figure 17 Popular Year 13 subjects across the schools



Other popular Year 13 subjects were visual arts, PE, and vocational pathways. There were noticeably fewer “alternative” types of popular subjects than at the other year levels and as already noted, fewer choices were offered overall than at Year 12. This pattern of relatively conservative choices could reflect perceptions of the importance of “core” curriculum subjects for future study. Or it could be that students simply keep following established pathways through these curriculum areas. Some students who might have made different types of choices could have left school. Town School E shows an interesting difference to the other schools. It offers more choices at Year 13 than at Year 12, and more of these are related to vocational pathways. This pattern is in keeping with the principal’s strong vision of multiple pathways both through and beyond school (see Section Four).

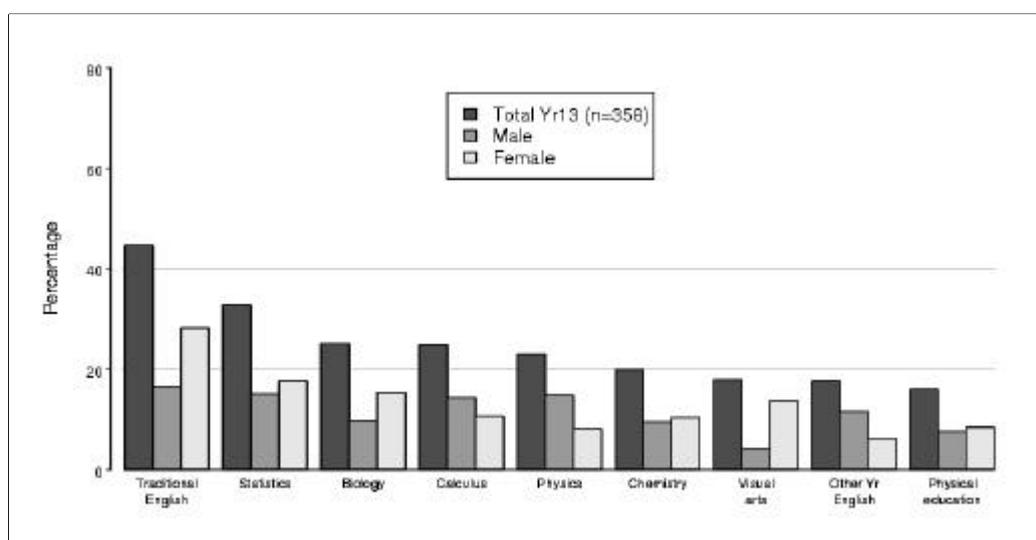
### *School effects*

Because fewer Year 13 students responded to the survey than at Years 11 or 12 it was not possible to determine as many differences in participation patterns in the schools. Traditional-discipline English continued to be a very strong subject at City School A (taken by 70 percent of that cohort), as were biology and visual arts. City School C, the lowest decile school in the sample, had higher than expected numbers of Year 13 students taking English at another (lower) year level. Fewer students than expected were taking visual arts at Town School E. This may well actually be a gender effect, since the subject is more popular with girls and this is the boys’ school.

### Gender effects

As at Year 12, boys were more likely to be taking physics (32 percent of boys, 15 percent of girls). They were also more likely to be taking calculus (31 percent of boys, 20 percent of girls), vocational pathways subjects, media studies<sup>10</sup>, and sports and computer studies. Subjects taken by more girls were traditional-discipline English<sup>11</sup>, visual arts (25 percent of girls, 9 percent of boys), history (19 percent of girls, 7 percent of boys), and geography (18 percent of girls, 8 percent of boys). Overall patterns of difference are shown in the next figure.

Figure 18 **Gender differences in subjects taken by 15 percent or more of Year 13 students**



Because of the small size of the responding cohort, gender and ethnicity effects could not be easily disentangled from school effects at Year 13.

## A comparison of our data with national participation data

Given that there are only six Learning Curves schools, how likely is it that the patterns of subject uptake reported above are illustrative of national trends? The next two tables compare Learning Curves and national participation data for those subjects being taken by 10 percent or more of the responding Year 12 and Year 13 students in 2004. Where the Learning Curves analysis aggregated subjects (for example all the variations of the visual arts or sports and recreation studies) we have been unable to use national data to make a direct comparison because we cannot account for students who took more than one of these variations. Nevertheless, the comparison shows clearly that for the core curriculum subjects of English, mathematics, and the sciences the patterns of participation in the Learning Curves schools are very similar to the overall national

<sup>10</sup> See Year 12 comment—this is probably a school effect.

<sup>11</sup> Also likely to be a school effect.

pattern. There is a little more variability for some other subjects, which is scarcely surprising given the differences we have found within our small sample of schools. Again, however, most differences are not large.

Table 16 **Most popular Year 12 subjects in New Zealand schools in 2004**

Subject	% of students taking	
	L Curves schools	Nationally
A version of English	91	92
A version of mathematics	79	80
Biology	29	28
Vocational pathways	26	-
Physical education	26	26
Chemistry	24	24
Physics	23	23
Sports studies	21	-
Computer studies	18	24
History	15	11
Information management	14	7
Visual arts	13	11
Graphics and design	13	9
Music	11	4
Geography	10	15
Drama	10	7

Table 17 **Most popular Year 13 subjects in New Zealand schools in 2004**

Subject	% of students taking	
	L Curves schools	Nationally
Traditional English	45	57
Statistics	33	37
Biology	25	25
Calculus	25	26
Physics	23	23
Chemistry	20	21
Visual arts	18	-
Other Year English	18	-
Physical education	16	20
Vocational pathways	15	-
Economics	14	17
History	13	15
Geography	13	19
Graphics	10	6
Classics/Latin	10	-

NB: The use of a dash indicates subjects that are collated differently in the national data set and so cannot be directly compared.

## The cluster analyses

We next report our findings on the ways students were most likely to be putting together combinations of subjects. The way this was done is outlined in Section Two and described more fully elsewhere (Ferral, 2005).

The cluster analysis of Year 11 students' subject combinations identified eight subject clusters. Each cluster is characterised by a distinct pattern of subjects. Students in any one cluster are more likely than students outside the cluster to be taking that combination of subjects. There was a narrowing to five clusters at Year 12 and, further still to the relatively more conservative mix of choices in the final year of school, with just four main clusters found at Year 13.

Subjects were chosen to characterise clusters when 20 percent or more students that expected were taking them. For example, 81 percent of the Year 11 students were taking a traditional-discipline version of English. As the next table shows, Clusters 1, 2, 3, 4, and 6 are distinct in that **all** students in these clusters are taking this type of English. Therefore these clusters are characterised by the subject traditional English. However when we continue to add other subjects the differences between these clusters begin to emerge. For example 61 percent of all responding Year 11 students were taking a version of traditional-discipline mathematics. The students in clusters 1, 3, 4, and 8 have very nearly all students taking traditional mathematics. This means that these clusters are characterised by traditional-discipline mathematics and three of them (1, 3, and 4) combine both traditional-discipline mathematics and English. Clusters 2, 5, 6, and 7 have no students taking traditional mathematics, but they are represented very strongly by students taking an alternative version mathematics—either a locally-redesigned or a contextually-focused course. The differentiating features of each cluster are briefly described in the table.

Table 18 **Ways subjects were likely to be combined by Year 11 students**

<b>Cluster One</b> (n=135)	Traditional English	Media studies	Traditional maths
	Accounting	Traditional science	Health & PE
	Health & life skills	Food & nutrition	Graphics & design
	Drama	Transition	
	<b>Comment:</b> These students combined traditional-discipline versions of core subjects with optional choices that had a vocational leaning. City School A was over-represented in this cluster, as were girls. This was one of the three largest clusters.		
<b>Cluster Two</b> (n=53)	Traditional English	Alternative maths	Traditional science
	Health & PE	Food & nutrition	Te reo Māori
	Computer studies	Music	Technology vocational
	<b>Comment:</b> In this cluster, taking an alternative version of mathematics was combined with a leaning towards more practical subjects. Māori students were over-represented in this cluster and it is one of just two characterised by taking te reo Māori.		
<b>Cluster Three</b> (n=139)	Traditional English	Traditional science	Traditional maths
	Accounting	Media studies	Recreation
	Geography	Economics & accounting	Music
	Practical technology	Graphics & design	Drama
	Visual arts	Information management	
	<b>Comment:</b> Here traditional-discipline versions of the three core subjects were combined with options in the arts and in other subjects with strong practical or vocational components. This was one of the larger clusters and was dominated by Pākehā students.		
<b>Cluster Four</b> (n=56)	Traditional English	Traditional maths	Traditional science
	Health /PE	Geography	History
	Economics	European languages	Te reo Māori
	Music		
	<b>Comment:</b> Here traditional-discipline versions of the three core subjects tended to be combined with options in social sciences and languages. City School A offered the widest range of languages. It dominated this cluster, as did girls and Pākehā students.		
<b>Cluster Five</b> (n=70)	Alternative English	ESOL	Alternative maths
	Alternative science	Agriculture/horticulture	Health & life skills
	Practical technology	Computer studies	Transition
	Technology vocational pathways		
	<b>Comment:</b> Here the predominance of subjects that lead into alternative pathways was most evident. City School C was over-represented in the cluster, as were Māori and Pacific students.		
<b>Cluster Six</b> (n=35)	Traditional English	Traditional maths (Yr.12)	Traditional science
	Economics	Economics & accounting	History
	European languages	Graphics & design	Computer studies
	Music		
	<b>Comment:</b> This smallest cluster was characterised by students taking mathematics at a higher year level. It was dominated by Town School E and these students were more likely to be male.		
<b>Cluster Seven</b> (n=98)	Alternative maths	Alternative science	Agriculture/horticulture
	Food & nutrition	Geography	Economics & Accounting
	Visual arts	Technology vocational pathways	
	<b>Comment:</b> English did not appear in this cluster, indicating students may have been taking a mixed bag of English options or English substitutes. There is something of a leaning to alternative pathways, although this is not as strong as in Cluster Five. This cluster was over-represented by Town School E, and by male and Pacific students.		
<b>Cluster Eight</b> (n=163)	Alternative English	ESOL	Traditional maths
	Accounting	Alternative science	Agriculture/horticulture
	Health & life skills	Information management	Visual arts
	<b>Comment:</b> This was the largest cluster. Dominated by Asian, Māori, and Pacific students, alternative versions of English and science were likely to be combined with traditional-discipline versions of maths and accounting.		

Chi-square tests supported the hypothesis of an association between school and cluster. At Year 11, each school tended to be more fully represented in two or three of the eight clusters, and each cluster was dominated by two or three schools. This reflects the school-specific differences that were briefly outlined above and are described more fully in Section Four.

As well as the school effects, clusters showed strong relationships with both ethnicity and gender. These effects are likely to be related to the clustering of Māori, Pacific, and Asian students in several of the schools, and to the patchy student response rate, especially at Year 13, in several of the schools. Needless to say there were gender differences in clusters dominated by students from either City School A (girls) or Town School E (boys). Disentangling these effects would have required a larger sample set. Nevertheless, the patterns that do emerge are food for thought, especially given the necessity in Year 11 to choose subject combinations that keep pathways open into Year 12 and beyond. While students were taking a more varied range of combinations at Year 11 than in Years 12 and 13, the differences between clusters pointed to an early direction into an “alternative” type of pathway for some groups of students. For these students, there may be a danger that the pathway will fizzle out, rather than lead on to further study or to the possibility of ongoing learning within employment.

The next two tables show the clusters we found at Year 12 and Year 13.

Table 19 **Ways subjects were likely to be combined by Year 12 students**

<b>Cluster One (n=165)</b>	Traditional English	Media studies	Alternative maths
	Agriculture/horticulture	Physical education	Health & life skills
	Sports	Geography	History
	Tourism & hospitality	Classics/Latin	Te reo Māori
	Information management	Drama	Visual arts
	Photography	Transition	Vocational
	<b>Comment:</b> This cluster combined traditional social sciences and English with a range of newer subject choices in the arts and in transition to work areas. The only science subject represented was agriculture/horticulture.		
<b>Cluster Two (n=91)</b>	Traditional English	Traditional mathematics	Physics
	Biology	Chemistry	European languages
	Geography	History	
	Computer studies		
	<b>Comment:</b> Here the three traditional science disciplines all appeared in a cluster with other “academic” subjects, drawing choices across a relatively narrow range. It has similarities to Clusters Three and Four at Year 11, but these students seemed to have set out on a science rather than an arts pathway.		
<b>Cluster Three (n=77)</b>	Alternative English	Alternative maths	Agriculture/horticulture
	Electronics	Physical education	Sports
	Tourism & hospitality	Te reo Māori	Practical technology
	Computer studies	Music	Transition
	Vocational		
	<b>Comment:</b> This cluster, with alternative versions of English, maths, and science, appeared to create the main pathway from Clusters Five and Seven at Year 11. The subjects have a noticeably practical orientation. As at Year 11, Pacific and Māori students were over-represented in this cluster.		
<b>Cluster Four (n=62)</b>	Alternative English	ESOL	Traditional mathematics
	Accounting	Chemistry	Electronics
	Physics	Health & life skills	Economics
	Computer studies		
	<b>Comment:</b> While these students may struggle with their English, the other choices reflected the appeal of more mathematically orientated subjects, including the physical sciences. Asian students were over-represented in this cluster. This has some similarities to Cluster Eight at Year 11, although physics and chemistry follow on from traditional-discipline science, rather than alternative versions.		
<b>Cluster Five (n=163)</b>	Traditional English	Media studies	Traditional mathematics
	Accounting	Chemistry	Physics
	History	Economics	Classics/Latin
	European languages	Practical technology	Graphics & Design
	Information management	Visual arts	
	<b>Comment:</b> This cluster has some similarities to Cluster Two, but represents a wider and more eclectic combination of other subjects with the physical sciences.		

Table 20 **Ways subjects were likely to be combined by Year 13 students**

<b>Cluster One (n=100)</b>	Alternative English	Media studies	Agriculture/horticulture
	Sports	Geography	Tourism & hospitality
<b>Cluster Two (n=80)</b>	Information management	Computer studies	Music
	Transition	Vocational	
<b>Cluster Three (n=66)</b>	<b>Comment:</b> Here alternative versions of English were clustered with a relatively small range of subjects with a more “alternative” feel. Māori and Pacific students are over-represented in this cluster, which seems to provide a pathway from Cluster Three at Year 12.		
	Traditional English	Accounting	Calculus
<b>Cluster Four (n=80)</b>	Statistics	Biology	Chemistry
	Physics	History	Economics
<b>Cluster One (n=100)</b>	<b>Comment:</b> As in Cluster Two at Year 12, three traditional science disciplines all appear in a cluster with other “academic” subjects, drawing choices across a relatively narrow range.		
	ESOL	Calculus	Statistics
<b>Cluster Two (n=80)</b>	Biology	Chemistry	Physics
	Economics	Computer studies	
<b>Cluster Three (n=66)</b>	<b>Comment:</b> This is very similar to Cluster Four at Year 12, except that biology appears alongside the physical sciences and English has been dropped. Again, Asian students were over-represented in this cluster.		
	Traditional English	Physical education	Geography
<b>Cluster Four (n=80)</b>	History	Classics/Latin	Graphics & design
	Music	Drama	Visual arts
<b>Cluster One (n=100)</b>	Photography	Art history	Correspondence subject
	Vocational		
<b>Cluster Two (n=80)</b>	<b>Comment:</b> In this cluster the arts are strongly represented, but no sciences, nor either of the mathematics subjects. Female students were over-represented in this cluster.		

The clusters described here raise questions about how subjects are actually combined within the wide range of subjects potentially available. While the responding cohort is not large, the reduction of combinations to just four main clusters at Year 13 suggests that the *potential* for wide choice may be just that. The reality seems to be that most students learn within a few broad groupings of subjects.

In its first year, the Learning Curves study described ways that school timetabling practices constrain the combinations that are actually possible (Hipkins & Vaughan, 2002a). In the second year we discussed advice from deans, based on their perceptions of students’ overall “ability”, as a conservative influence on students’ choices (Hipkins et al., 2004). School effects generated by

the specifics of these practices doubtless compounded other clustering effects. Some are related to demographic differences between the schools. Others may be related to geographic factors. For example the second report also commented on the popularity of the arts in Town School F, situated in a town with a flourishing arts community. These school-related differences are teased out on a school-by-school basis in the next section.

## 4. A school ethos for learning

### Introduction

In 2002, the first year of the Learning Curves study, we collated data to describe the ways subject choice and timetable issues were managed at each school (Hipkins & Vaughan, 2002a). This analysis highlighted similarities but also differences in the ways schools managed organisational constraints such as staffing issues and timetable lines. Although that report made very limited comments on school-specific differences in students' responses, we were aware that there was a different "feel" to patterns of responses in each school, and that school differences would need to be teased out at a later stage of the research.

In 2003, the research was expanded to focus on both Year 11 and Year 12. The expanded data we gathered provided opportunities to add Year 12 to the snapshots we had built of the diversity of ways schools provided subject choices that met a range of learning needs (Hipkins et al., 2004). In that report the main focus for the analysis of the student survey data was on students' reasons for making the choices they did, and on the patterns of subjects chosen. Again we were aware of school differences, but the volume of primary data meant that these did not get the attention they deserved.

As well as presenting collated patterns in the data from the 2004 fieldwork, this third report now addresses this question of school-specific differences. For the first time, we have analysed the ways in which the overall philosophy of the staff, the beliefs and actions of the students, and the organisational aspects of each school come together to create an institution that is unique in many respects. Although the range of differences is still relatively conservative, this section provides an interesting snapshot of the diversity of curriculum provision in medium-sized New Zealand secondary schools. As we shall see, both here and in Section Seven, the idea of creating differing "pathways" for students with different learning needs, through and beyond secondary school, provides an underpinning rationale for this diversity.

This section draws on data from the 2004 interviews with the principal and the five HODs of English, mathematics, science, technology, and the arts in each school, and reports patterns of school differences in some aspects of the student surveys. The interviews with the principals and teachers were revisited in light of the emergent focus in the student data on what is considered to be *worth learning*. This was not a question we put to the principals or HODs directly. Instead we looked for relevant ideas and themes that emerged in the cluster of interviews with adults in each school, and found interesting patterns of coherence and focus. The overarching "ethos" from the

interviews in each school is reflected in the title given to that school's summary. While one researcher completed this analysis, another collated all the statistically significant school-specific differences found in the three student surveys (one each at Years 11–13). Once both analyses had been completed we then interwove staff comments and student data to create illustrative snapshots of how each school, as an overall institution, appears to perceive, value, and meet students' learning needs.

## City School A: A broad and balanced curriculum

The analysis of school-specific differences in the student survey data highlighted some interesting similarities shared by City Schools A and B. These differences set them apart from the other schools in the sample. The differences may be related to their urban locations, close to universities and all the cultural amenities of a city. Most of the students who identified as Asian attended one or other of these schools, generating some of the interesting differences in response patterns. Similarly, many of the refugee students, or students of "other" ethnicity, attended one or other of these schools. Both schools show some differences to other schools in students' responses to aspects of the traditional curriculum subjects. However, City School A is a girls' school, while B is co-educational, and there are also differences between them that may be related to this difference of gender composition.

### Balancing curriculum pressures

The principal of City School A reflected on the issues that emerge when trying to provide a broad but balanced basis for all students' learning in the senior secondary school. She felt that the NCEA requirements had "sharpened awareness" of the importance of literacy and numeracy for all students, and she was strongly in favour of all students having access to quality learning experiences in the "central core" of the curriculum. As in the two previous years, she expressed a strong opposition to streaming of students for core subjects. Congruent with her views on this, she said it was important that students experience the "grunty bits" and the "rigour" of all their subjects, and not just focus on easy aspects of the learning.

Notwithstanding this focus on the traditional subjects of the curriculum core, the principal was concerned that there should not be perceptions of a "canon" of elite subjects. For her it was important that students were "well rounded" and not just "swotty". She felt it was important for all students to have access to subjects that could develop whatever talent they might have, and she wanted to see the development of "more sophisticated" assessments that could show what students can actually *do* as a result of their learning. She saw the *relevance* of students' learning as important and she was inclined to value teachers' professional judgement above evidence generated by assessment data. In her words "we don't need a piece of paper to tell us their abilities".

The five HODs shared the vision for a broad curriculum, with several saying it was important not to restrict choices too early, as well as describing the work they had done on opening up multiple pathways within subjects. The report of the second year of the project illustrated this for mathematics ( Hipkins et al., 2004, p. 109) and two other HODs described similar developments in their subjects. However these developments were discussed in terms that seemed to diverge from the principal’s view, with the HODs seeing it as important to provide differentiated courses that matched the differing abilities of groups of students. One specifically advocated “streaming”<sup>12</sup> at Year 11. Another HOD mentioned work they had been doing to open up possibilities for multilevel learning, and on introducing national certificates in addition to the NCEA (as in Town School E—see below). However, yet another HOD perceived there was a split in the staff between those who felt a balance of learning across the wider curriculum was important and those who just focused on their own subject.

In this school, with its high numbers of students from refugee families, the principal identified social justice as an important issue. She said the curriculum should include learning experiences that helped all students to reflect on “what it means to be a New Zealander”. Providing an interesting angle on curriculum breadth, she saw this as a question to be addressed in every subject. The HODs, while not taking as explicit a focus, also emphasised the importance of providing interesting and relevant learning experiences so that students enjoyed their subjects and were engaged with them. One reflected that teachers tend to value learning that is interesting for them as well.

### How this vision translated into subject options and choices

The spread of subjects across curriculum areas is shown in the next table. The last report noted that City School A offers more languages than the other schools, and a focus on the arts is also apparent.

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<sup>12</sup> This teacher meant within one subject, whereas in traditional practice of streaming, students were divided into streams that determined the overall learning package they were offered.

Table 21 **Number of subjects offered in each curriculum area at City School A**

Curriculum area	Year 11	Year 12	Year 13
English	3	3	3
Mathematics	4	4	4
Science	2	3	3
Health and PE	2	4	4
Social sciences	3	4	5
Languages	5	5	5
Technology/ICT	4	5	4
The arts	4	7	7
Vocational/transition	1	2	2
<b>TOTAL</b>	<b>28</b>	<b>37</b>	<b>37</b>

NB: Shaded cells indicate curriculum areas where there is a compulsory option students need to take.

In keeping with the imperative for a “broad but balanced” curriculum, City School A requires all students to study an English option right up to Year 13. Compared to the other schools, more students than expected from City School A were taking contextually-focused English in Year 11, but this pattern changed at Years 12 and 13 when more students than expected were taking traditional forms of English. Perhaps in keeping with the principal’s push to maintain “rigour” in subjects, more students than expected were taking:

- traditional-discipline mathematics in Years 11 and 12; and
- a traditional-discipline version of science in Year 11.

The former is particularly interesting, given that the mathematics teachers at City School A have been very proactive in designing a range of more flexible learning pathways through senior school mathematics (see Hipkins et al., 2004, p. 109). Part of the explanation may be that most of the Asian students at City School A were taking traditional mathematics at each of Years 11–13.

City School A has more compulsory subjects at Year 11 than any of the other Learning Curves schools. In addition to the conventional compulsory core of English, mathematics, and science, most students must study a combined PE/health course, although “extension” students may be excused this option and they are permitted to take seven subjects in total. (Most Year 11 students in the school are restricted to six.) A number of Year 11 students are directed to take a compulsory transition course. In the 2004 survey many of these students were from Pacific backgrounds, or from “other” ethnicity (Somali, African, and so on) backgrounds, or did not give an ethnic identity.

The next figure shows subjects being taken by 15 percent or more of Year 11 students. After the compulsory core subjects and transition, history was the most commonly chosen Year 11 option, and higher than expected numbers of students at City School A chose this, compared to the pattern in the other Learning Curves schools. Information management and economics were popular subjects with Asian students.

At Year 12, English remains compulsory. Compared to the other Learning Curves schools, more students than expected:

- continued to take English;
- continued to take traditional mathematics;
- took at least one of the three traditional sciences (biology, chemistry, physics); and
- chose computer studies, history (especially Pāheke students), or visual arts. Subjects being taken by 15 percent or more of Year 12 students are shown on the next page.

Figure 19 **Subjects commonly taken by Year 11 students at City School A**

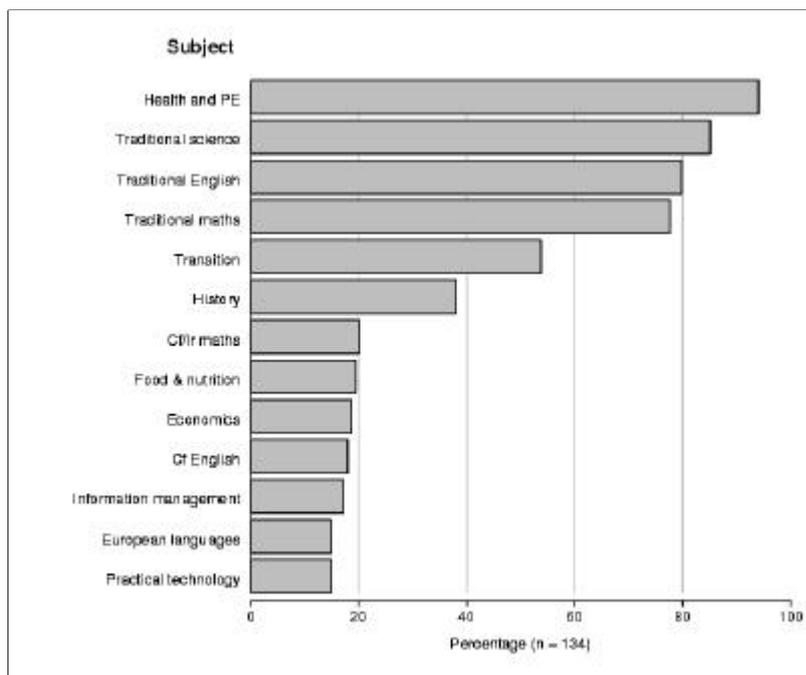
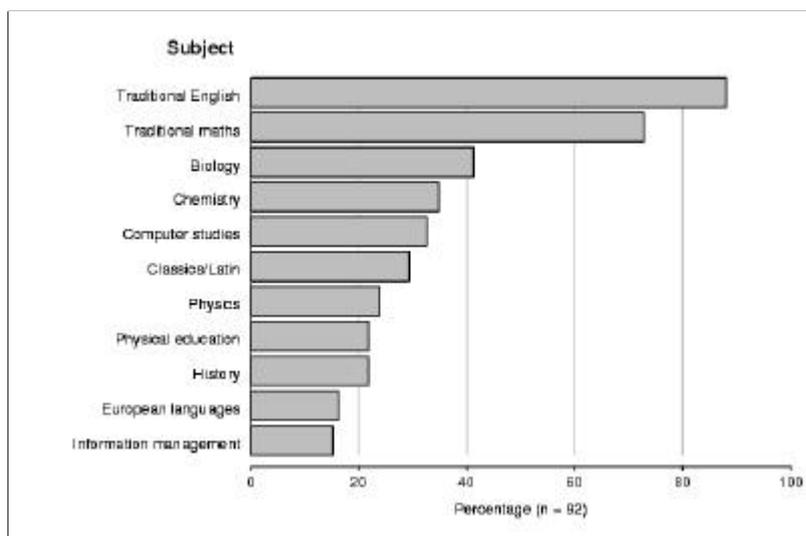
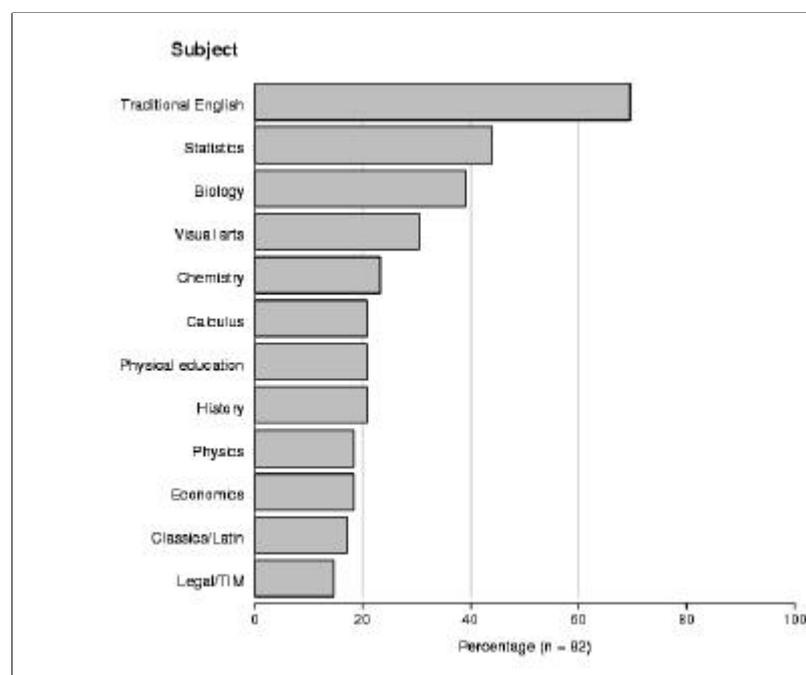


Figure 20 **Subjects commonly taken by Year 12 students at City School A**



The popularity of traditional mathematics and science subjects, history, and the visual arts continued through into Year 13. Students in City School A were also highly represented in the overall number of Year 13 students taking classics/Latin. These subjects are offered at Years 11–13 in City School A, whilst the other two city schools offer classics in Years 12 and 13 and two of the town schools offer classics in Year 13. The greater representation of City School A students in classics and Latin may be a case of catching students’ interest early and then holding it, in some cases with two subjects in this curriculum area across the three year levels. Reflecting the possibility of the same dynamic in a quite different type of subject, PE remained popular in this school at Year 13—a subject that is compulsory at Year 11. The Asian students in this school were highly represented amongst students taking physics, calculus, and/or statistics in Year 13.

Figure 21 **Subjects commonly taken by Year 13 students at City School A**



The scope of types of popular subjects illustrates the intention of staff in this school to keep a broad and balanced programme across all three years but, as in the other schools, the most popular Year 13 subjects do tend to be more traditional.

### Moving beyond perceptions of the “worth” of credits

The principal agreed that there was a perception in the wider community that achievement standards have more value than unit standards but she said her staff just ignored that and were getting on with designing and teaching and assessing courses that were important to them. For example, she said that the teachers in one learning area were only using internally assessed standards, and did not feel the need to “apologise, or explain” this choice. This view was reinforced by comments made by several of the HODs, including the HOD of the learning area concerned. Echoing comments made by the principal, another HOD said that differences between

achievement and units standards were “not an issue” because the whole staff worked hard to ensure that high assessment standards were maintained in all subjects. A third HOD said that people should “stop looking at unit standards as the poor relation because they are ‘just standards’—another way of assessing”. Several cited instances of unit standards that were more difficult, or more work, to achieve than the equivalent achievement standard in their subject.

The principal felt that the level of excellence in the achievement standards was generally still too high. Opinions amongst the HODs about whether students should strive for excellence were split. Two felt it was important that students did not “settle for achieved” while two others felt it was better for students to be realistic and to just aim for achieved if this would give them more chance of success. Most HODs mentioned that learning success builds confidence and so generates more success.

The principal disagreed with the 2004 NZQA policy of not reporting standards that students had failed to achieve. For her, coping with failure and persevering to overcome learning difficulties were important experiences for developing resiliency, and she also linked these issues to motivation and feelings of success: “students *know* when they’ve earned credits”. Notwithstanding these comments she also discussed the importance of taking into account the overall context in which individual students undertook their internal assessments. One HOD was opposed to the practice of allowing resubmission opportunities because these would allow “students who don’t deserve it” to pass. At the other end of the continuum of opinion, another HOD said that conferencing was a good way to determine student success, and that there was a need to get past the “pass/fail mentality” of the past. This seemed to be an area where staff views, and likely even individual views, were not as coherent as they were on the need for a broad and balanced overall curriculum.

Most HODs held similar views on the emergent issue of students choosing to skip assessments (Hipkins et al., 2004). This was not seen as being of particular concern, especially if it helped students manage heavy assessment loads, or better balance schoolwork with other commitments such as after-school employment. Here again we see the emphasis on balance and keeping a breadth of interests. Only one HOD said they would actively discourage students from skipping assessments.

## **City School B: Fostering student autonomy**

The principal of City School B is proud of the school’s tradition of “being different” and the school’s liberal ethos is evident in the decisions they have made about subject choice post-NCEA. Teachers at City School B want students to be fully involved in making good learning decisions and they aim to help all students experience success. The principal said she hoped the students would take a longer-term view of their course choices because “school is not the great determiner”. She wanted them to “walk out feeling tall about what they’ve achieved”. The school

also has a focus on improving overall assessment statistics. These different components of this school vision create some interesting tensions.

At the time of our 2004 visit the school was already planning for a move in 2006 to a semester structure, with half-year courses giving students even more flexibility and choice than was already provided. The principal envisaged that any student in Years 11–13 would be able to choose subjects and options from any of NQF/NCEA Levels 1 to 3, depending on their learning needs. The school was considering changing to multilevel form classes, with deans also advising students from across the year levels. In this way, school structures would better match the intention to provide flexibility of levels in the school curriculum offered. The principal envisaged that the semester structure would allow students to make mid-year changes if they found they were not doing well in a subject, or if they were not enjoying it. She suggested that, if students gained the literacy or numeracy credits needed for the NCEA in the first semester, they could move on in the second semester to choose subjects that really interested them. She wanted students to experience “the joy of learning” but also hoped they would achieve a “balance” between the “essential” and other (perhaps more enjoyable?) components of their chosen courses.

Several HODs also mentioned the vision of a semester structure that would allow more flexible course choices, and one noted that there was “less stigma now” for students working at a lower level than their chronological age, because flexible multilevel courses were becoming the norm. One teacher suggested that the more flexible structures the school is putting in place would allow students to negotiate their courses “cleverly”. While some students might take two years to get their Level 2 NCEA, others might choose to ignore Levels 1 and 2 altogether, to focus on quality learning for their Level 3 qualification. Another HOD noted with approval that “a wide range of kids can now achieve”. However, two HODs expressed reservations about the range of choices offered. One stressed that students did not always choose courses that “lead somewhere” while the other said that there were too many “trendy fun subjects”, again noting that these did not lead to pathways beyond school. This HOD was inclined to think that students would choose easier pathways, given that option.

### How this vision translated into subject options and choices

The spread of subjects across curriculum areas is shown in the next table. Note the high number of technology options offered at Years 11 and 12.

Table 22 **Number of subjects offered in each curriculum area at City School B**

Curriculum area	Year 11	Year 12	Year 13
English	4	4	4
Mathematics	3	4	3
Science	3	5	3
Health and PE	6	3	2
Social sciences	3	7	5
Languages	3	3	3
Technology/ICT	8	8	3
The arts	4	6	7
Vocational/transition	2	7	5
<b>TOTAL</b>	<b>36</b>	<b>47</b>	<b>35</b>

NB: Shaded cells indicate curriculum areas where there is a compulsory option students need to take in addition to their optional choices.

English is compulsory at Years 11 and 12, and the school offers a range of options in this curriculum area at all three year levels. Compared to other schools, students from City School B were more likely to be taking a traditional-discipline version of English in both these years. Students who said they were not doing English in Year 12<sup>13</sup> or Year 13 also tended to come from City School B. They tended to be Pākehā or Asian.

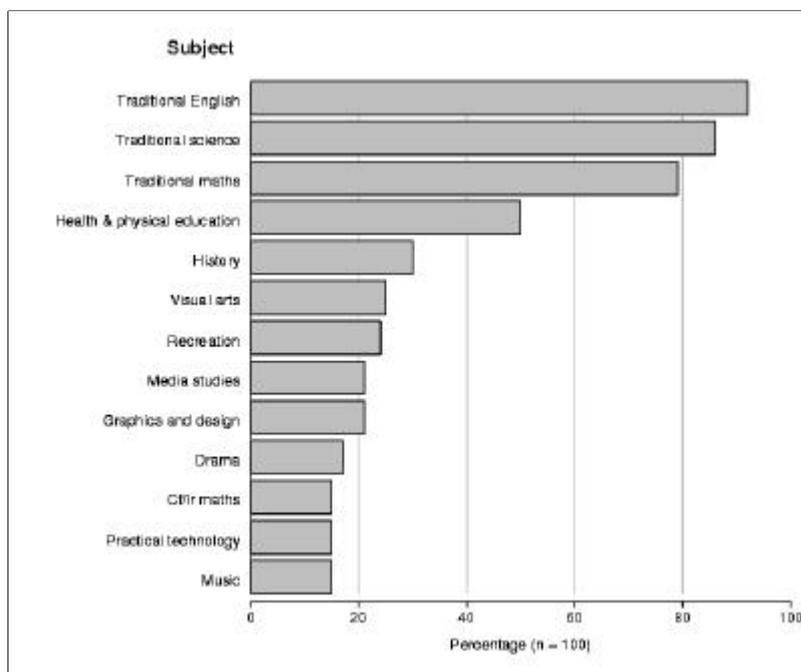
Mathematics and science are also compulsory at Year 11. Just as in English, students at City School B were more likely to be taking a traditional-discipline version of mathematics at both Years 11 and 12, and of science at Year 11. As we have noted above, this tendency to higher rates of participation in traditional versions of these subjects is shared with City School A. This may reflect the higher numbers of Asian students in these two schools—they are more likely to be taking traditional-discipline mathematics courses in Years 12 and 13. In Year 13, the boys from City School B were more likely to be studying calculus. Reflecting the school’s vision for offering multilevel courses, students who were taking mathematics at another year level tended to come from this school<sup>14</sup>.

Year 11 students in City School B tend to take six subjects. They have three optional choices and the most popular 2004 subjects are shown in the next figure. Again, as in City School A, history, which is an “academic” subject, tops the list after health/PE, and was taken by 30 percent of the responding Year 11 students. Visual arts was another very popular subject in both these schools but the next ranking subject, recreational studies, was only offered in City School B. Students in this school were also more likely to be taking drama and graphics and design, and less likely to be taking geography than in the other five schools.

<sup>13</sup> They could be taking an English substitute such as media studies

<sup>14</sup> Or from City School C or Town School D which for different reasons also had a focus on being flexible across year levels.

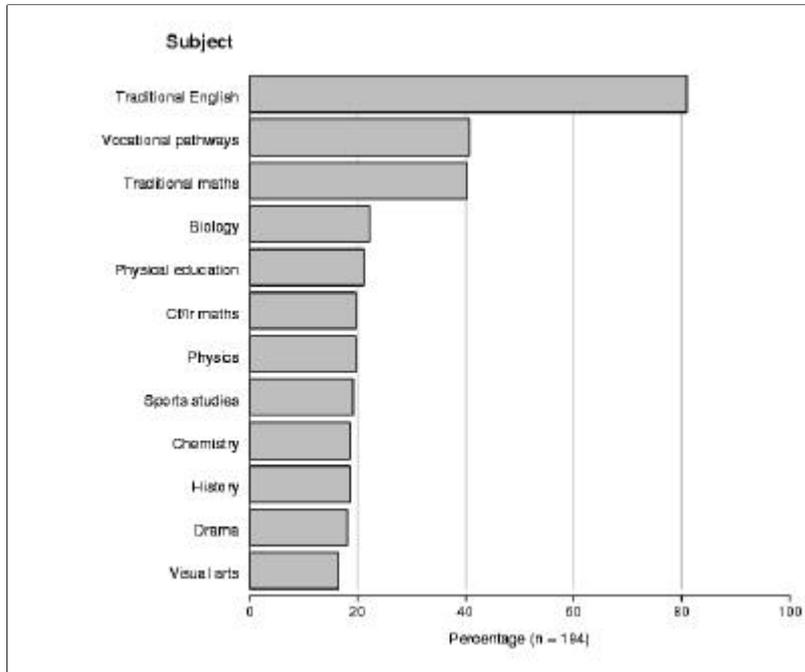
Figure 22 **Subjects commonly taken by Year 11 students at City School B**



As in four of the other five Learning Curves schools, mathematics and all three traditional-discipline sciences (biology, chemistry, and physics) featured in the top optional Year 12 subjects. Other popular subjects were the various vocational pathways subjects (being taken by 41 percent of respondents, particularly males), PE, and sport studies (again mainly taken by males). Compared to the other schools, Year 12 students from City School B were also more likely to be studying biology, drama (these students tended to be Pākehā), and visual arts<sup>15</sup> (these students tended to be female and Pākehā). Although it did not reach the 15 percent participation rate, practical technology was being taken by a greater proportion of students than in the other schools, and this was the only school with a Year 12 food technology option. Year 12 students from City School B were less likely to be doing TIM. As in City School A, ESOL and economics were especially popular with the Asian students.

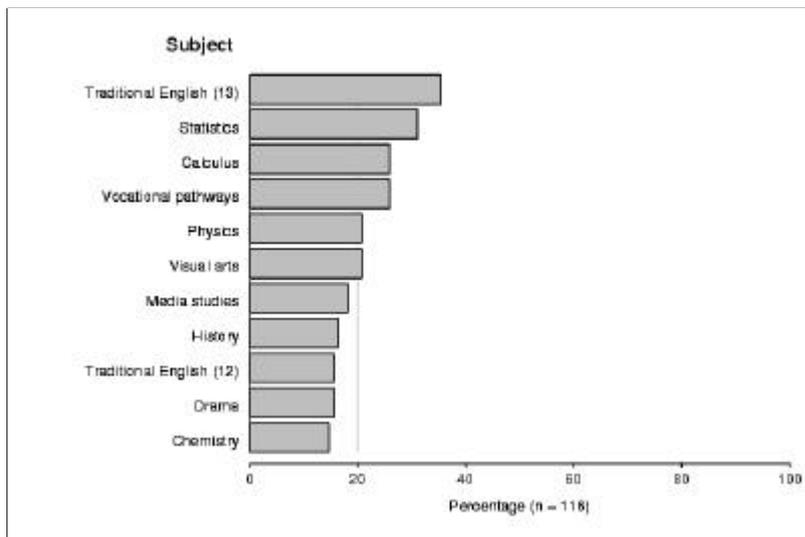
<sup>15</sup> Along with students from City School A and Town School D.

Figure 23 **Subjects commonly taken by Year 12 students at City School B**



The pattern of popularity of the traditional “core” curriculum subjects continued at Year 13, with English and the two traditional mathematics subjects (calculus and statistics) the three top-rating options. Physics and chemistry also featured but numbers of responding students who participated in biology dropped below 15 percent and students were less likely to be taking biology than in the other five schools. As at Year 12, vocational pathways subjects were popular at Year 13, as were visual arts and media studies. Reflecting the school’s plans for the provision of opportunities for senior students to study at more than one NCEA level, compared to the whole Year 13 cohort, the students in this school were more likely to be taking English at Year 12.

Figure 24 **Subjects commonly taken by Year 13 students at City School B**



## Balancing success and quality learning

The principal was determined the internal assessments should always be “rigorous” so that students felt they had gained their credits for learning that was worthwhile. However she also noted that students were “motivated by credits” and said that within-subject differentiation had helped many experience success “even if it is streaming”. One of the HODs similarly reflected on what she saw as the irony that, in a school that has “always been so anti-streaming” there was now a sorting of students into ability classes. However this HOD also noted that “the workforce is a sort of streaming too” and that the differentiation made teachers’ work easier.

The principal felt there was a perception amongst the staff that achievement standards were harder to get than unit standards, and that this was related to the strong academic background of most teachers, although the perception was diminishing as time went on. She said the school tried hard not to make the type of assessment used a “hierarchical determiner” of course worth, but that students who are motivated by merit and excellence passes do tend to choose courses that are assessed by achievement standards. All five HODs concurred with this, saying that the prospect of gaining merit and excellence was motivating for students who could achieve at his level. As one said, these different levels of achievement “encourage students to compete against themselves”.

HODs held mixed views on the relative value of achievement and unit standards. At one end of a continuum of opinion, one said there was no difference between them, notwithstanding her agreement about the value of merit and excellence passes. At the opposite end of the continuum another said that unit standards were much easier to get and so of lower value. Taking positions between these two extremes, another HOD spoke of introducing more unit standards to provide greater course flexibility, while yet another spoke of switching from unit to achievement standards to provide students with more opportunities to gain merit and excellence passes. The fifth HOD said that teachers held lower expectations of achievement for unit standards, and that teachers were better at assessing with achievement standards.

One teacher said that, after initially having concerns, he was now “relaxed” about students choosing to skip credits, so long as it was an “informed choice”. Another commented that choosing to skip some credits allowed students to work to their strengths: “it’s better to pass two standards with excellence than to fail three”. However a third teacher was more concerned about skipping, saying that it was problematic for “able students who should be doing their best in all subjects”.

## City School C: Learning takes time

Some of the school-specific differences at City School C are doubtless related to its demographic profile. Set in an area with predominantly low socioeconomic households, but with some much more affluent pockets as well, the school has the lowest decile rating of the six Learning Curves schools. It has a greater proportion of students from Māori and/or Pacific backgrounds on the roll than any of the other five schools.

## Making time for staff and student learning

The time needed to consolidate learning was a theme raised by a number of staff at City School C. The principal described several ways the school had tried to juggle the timetable to meet different types of student learning needs. Most HODs identified a need for more time and skills practice for students who lacked the necessary background or personal confidence to make speedy learning gains. The structural timetable changes were an attempt to create six periods per subject for those students who needed more time to make progress, and who were typically taking five subjects at Years 11 and 12. The challenge was to keep open the option of taking six subjects with five periods each for those students who could be expected to make faster learning progress. (Most of the students who were taking five rather than six subjects at Year 11 came from this school, or from City School B.)

Several HODs described plans to introduce two-year courses that provided the time some students needed to learn their core subjects at an appropriate pace. One noted that the wide range of unit standards available had helped with designing a varied programme spread over two years. Another HOD said that such courses should be given names related to their NCEA level rather than their year level, so that students did not feel they had “failed” when continuing the subject for a second year. This is a similar idea to the multilevel model being considered by City School B (see above).

The principal also reflected on the time issues associated with external assessment events. She hoped NZQA would find ways to become more “creative and flexible” in the organisation of the examination timetable, and suggested that Level One and Two assessments could be in July rather than at the end of the year. This would certainly solve one issue she raised. Traditionally the school had used the time after Sixth Form Certificate was completed to involve Year 12 students in special events such as peer support training. Whereas this had been seen in the former assessment regime as a “lovely thing to do”, students were now very reluctant to come back to school after their Year 12 external examinations were over.

The belief in allocating the necessary time for learning also extended to staff learning. The principal reflected that each year of NCEA implementation required three years of experience before staff could be really confident of their practice. She would like to see staff given time to “look outside their own learning area” to see how others were creating solutions to NCEA issues. In 2004 the school was continuing to support teachers by making one period each week a staff-only time for NCEA-related work. Nevertheless the principal felt staff were only just beginning to think through the possibilities the NCEA had created to open up more varied types of learning pathways in the school. Reflecting the principal’s sense that change was coming, one HOD described ideas she had for creating a cross-curricular course that would enrich student learning while reducing time pressures. However, she said she needed more “head space” to really think the ideas through and develop them.

On the other hand, one teacher who was about to retire expressed the view that the NCEA had been a retrograde move because there was “nothing broken” about the former qualifications

system. In 2004 this HOD had moved the students in his classes from assessment with achievement standards to assessment with unit standards, and was somewhat happier that this had returned the learning focus back to the more practical “hands-on” learning he felt students needed. He said students lacked the necessary background of experiences to make more choices for themselves and he preferred a traditional focus on structured step-wise skills practice.

### *A focus on literacy and numeracy credits*

The principal and several HODs discussed the importance of helping some students to gain the literacy and numeracy credits that would keep their learning pathways open beyond school. The literacy goal, in particular, was clearly a highly valued focus in this school and one HOD (of a subject other than English) said it should be the main learning goal for some students, whom the school could then “send on” to foundation courses at the local polytechnic. Both the mathematics and English HODs described differentiated programmes that could help students who needed to gain literacy and numeracy credits learn at their own pace, and according to their specific needs. Assessment for these students was typically internal because, as one HOD noted, they found external examinations threatening. The principal noted that gaining these credits could make some students feel “over the moon” with success.

### How this vision translated into subject options and choices

The next table shows the overall pattern of subject choices at City School C. Shaded cells indicate curriculum areas where there is a compulsory option. There are fewer of these than at any of the other schools.

Table 23 **Number of subjects offered in each curriculum area at City School C**

Curriculum area	Year 11	Year 12	Year 13
English	3	4	4
Mathematics	5	3	3
Science	3	3	3
Health and PE	3	4	2
Social sciences	4	5	5
Languages	4	4	4
Technology/ICT	5	6	3
The arts	2	3	5
Vocational/transition	1	1	4
<b>TOTAL</b>	<b>30</b>	<b>33</b>	<b>33</b>

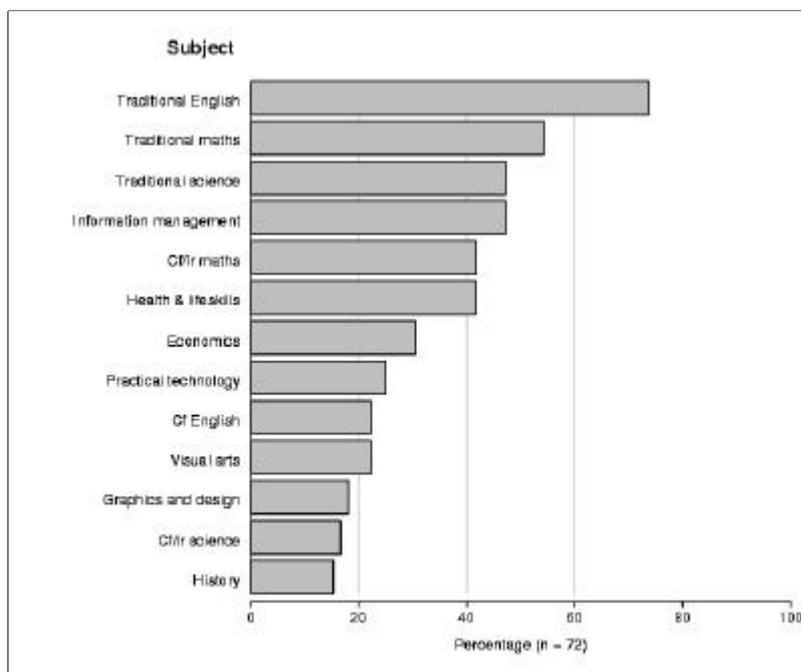
Issues with the timing of the fieldwork resulted in a very low student response rate to the survey in this school. We know we missed some groups of students. For example, in the focus groups we spoke to some Year 13 students who were studying mathematics with statistics, but none of them completed a survey. The small group of Year 13 students who did respond (n=30) seemed to

come from a group of students doing alternative types of courses. Although this undoubtedly skews the findings for this school, the picture these students provide is very different and because of its uniqueness (compared to the overall picture) provides a story of different possibilities. Fewer students in this school seemed to be focused on traditional academic pathways than in the other five schools.

Reflecting the emphasis placed on literacy credits by the teachers, more students than expected were taking alternative versions of English at Year 11 and Year 12. Congruent with this, fewer students than expected were taking traditional-discipline versions of English in Years 12 and 13, with male students from Year 13 more likely to be taking English at another year level. City School C was one of only two Learning Curves schools to offer a contextually-focused version of English at Year 13.

City School C is the only Learning Curves school to make science optional at Year 11. Not surprisingly, Year 11 students are less likely to be studying traditional-discipline science than those in the other five schools. The next figure shows the subjects being taken by 15 percent or more of responding Year 11 students at City School C. Information management—the top rating optional subject after science in this school—was popular with Pacific students, as was health and life skills. Both subjects were being taken by more students than expected.

Figure 25 **Subjects commonly taken by Year 11 students at City School C**



Perhaps because science is optional at Year 11, fewer students than expected were studying biology or chemistry at Year 12. This is the only Learning Curves school in which participation rates in Year 12 chemistry and biology slip under 15 percent. However, physics and mathematics were still amongst the top rating Year 12 subjects, as the next figure shows. Information management, and health and life skills continued as popular subjects in Year 12, and computer studies was also popular.

Note that the response patterns for Year 13 students, as shown in the next figure, are likely to be biased by the very low response rate. The responding Year 13 students in this school were likely to be studying mathematics courses at another year level (although, as noted, we seemed to miss sampling the mathematics with statistics class). The number in brackets after each subject in Figure 27 shows the year level. Compared to the other schools, students at City School C were more likely to be taking vocational subjects, with work experience, tourism and hospitality, and media studies all high rating choices for the students who responded. Compared with the whole responding Year 13 cohort, these students were less likely to be taking a traditional-discipline version of English and more likely to be taking English at another year level.

Figure 26 **Subjects commonly taken by Year 12 students at City School C**

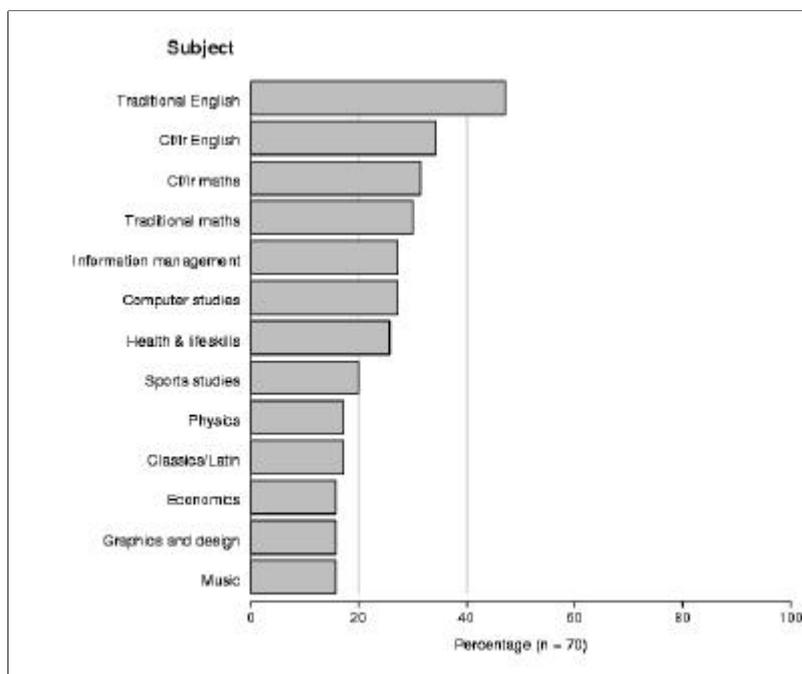
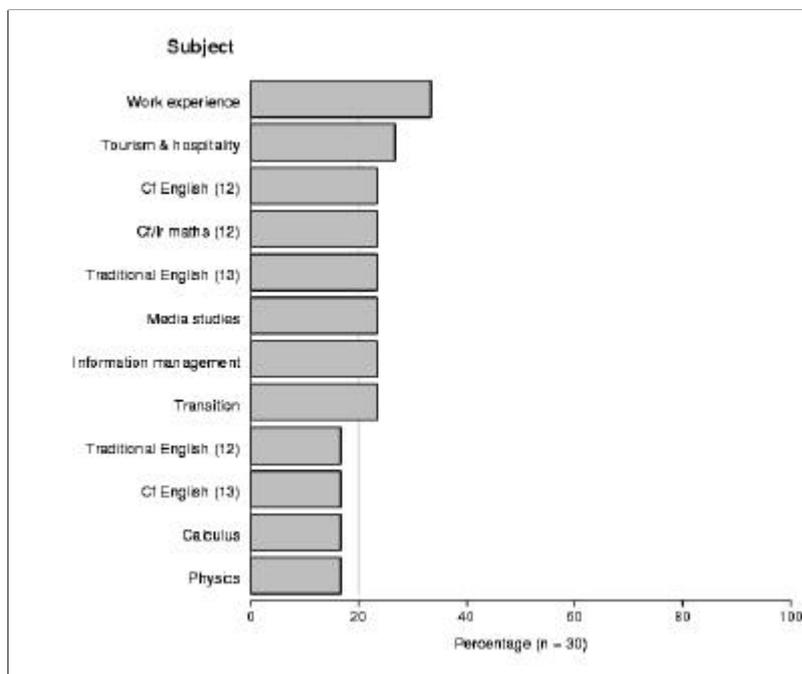


Figure 27 **Subjects commonly taken by Year 13 students at City School C**



### Credits and learning success

The principal felt that some Level 1 achievement standards were set at too high a level compared to the equivalent unit standards. She felt that teachers of “practical subjects” were less likely to perceive differences in the value of credits gained from unit standards than those who taught

subjects such as mathematics. Indeed one HOD noted that students don't even think about skipping internal assessments for unit standards because they are focused on the practical work they are doing, not the credits they might get.

In the principal's experience, some parents who were employers associated unit standards with industry training and worried that using them to assess their child's learning indicated the student was "not academic". Several of the HODs did not think students saw any difference in the value of credits gained from unit or achievement standards. As one said "they're all just assessment tasks". One HOD did think students were "astute enough" to see differences between credits gained from unit and achievement standards but he also said that gaining credits was a "validation of what they've done" and so, by implication, students did not let these differences concern them.

For the principal, internally and externally assessed achievement standards assessed "such different things" but she was aware of issues when members of the public compared them. The staff at this school seemed relatively less concerned about the issue of students skipping assessments than those at the other five schools. On the whole they felt that when students did this it reflected a lack of organisation rather than a deliberate intention not to attempt the assessment. As one HOD said, "it's a discipline thing". This view is congruent with the students' survey responses (see below).

As in other schools, HODs had mixed views on whether students should try for merit or excellence. One HOD hoped that students would do so, but felt they were more likely to think "achieved is good enough". Another said they should do so to "aspire to more" and a third noted that they "might surprise themselves". By contrast one HOD felt it was better for students to try for a "solid achieve" pass than to risk failing by aspiring to merit or excellence.

## **Town School D: Strategic decision making**

A recurring theme in the discussions with the principal and HODs of Town School D concerned finding ways to respond as flexibly as possible to the often competing demands on the school's resources. This town is sufficiently close to a provincial city that some potential students commute to the bigger schools there. Town School D needs to work hard to meet the needs of "able" students to retain them, whilst also catering to what several HODs called a "long tail" of low ability students. Reflecting this tension, one HOD described the low ability group as a "black hole" into which resources were poured for little evident return, whilst able students did very well when they got the attention they needed. Several HODs emphasised the need to cater to the "exceptional" students in the school, as well as to the lower ability students. As one said, the biggest challenge is to get "the best fit for the most students".

Making strategic decisions to balance students' competing needs took several forms. The principal described a policy of "plus one, minus one"—that is, if a new subject was added, an existing one had to be deleted. On this basis, the mix of subjects on the school timetable is juggled

each year, with several HODs describing course changes for the 2004 year. For example the mathematics HOD said her team had created a new combined course for Year 13 that had some elements of calculus and some elements of statistics. She thought this course would better meet the needs of the students in that Year 13 cohort than offering two separate courses. Similarly, the technology HOD said they had created a combined “materials technology” course at Year 12, with students able to choose from a range of technological areas, rather than running separate courses in these areas.

Similarly, HODs made strategic changes *within* existing courses to better meet the needs of the actual student cohort for any one course. For example the English HOD described the strategic inclusion of two English achievement standards in the Year 12 media studies course. These would allow students who did not want to take a full English course to still gain the NCEA literacy credits they would need for pathways into polytechnic or university. Several HODs spoke of within class differentiation, including having students working at more than one NCEA level.

Another noticeable trend in Town School D was the number of HODs who mentioned the provision of opportunities for a range of students to gain and “bank” NCEA credits during Year 10. The principal discussed the positive impact of this on the Year 10 “accelerate” class, explaining that individual students in this class could pick different combinations of NCEA assessments from several of their subjects, depending on their interests and strengths. Several HODs said these opportunities extended beyond this one class, and were open to other students who also had the necessary ability. For example Year 10 students who took part in Stage Challenge could use their learning to gain and bank dance and drama credits.

This strategic provision of a range of potentially quite different learning pathways means it is also important for students to be very strategic in making good choices. In Town School D staff go to considerable lengths to ensure this happens. All students must negotiate a “personal strategic plan” each year up to and including Year 11. At Years 12 and 13 this becomes a “personal career plan”. The process involves negotiations between form teachers, parents, and students, to get the best possible individual pathway for each learner. The principal was keen to see more resourcing allocated to such “pathways counselling”.

This focus on pathways tended to be the dominant theme of the conversations about students’ learning. Where HODs did raise issues about curriculum content, these tended to be about “coverage”. For example two HODs said it was important that students did the harder components of their courses as well as the bits that yielded credits more easily, with one saying that the “sampling approach” to the assessment of students’ learning in the NCEA had been taken too far.

## How this vision translated into subject options and choices

The spread of subjects across curriculum areas is shown in the next table. As will be evident in the analysis that follows, the school has a strategic focus on providing a wide range of options for less

academic students yet it also tries hard to provide a full range of traditional-discipline courses for the more able students.

Table 24 **Number of subjects offered in each curriculum area at Town School D**

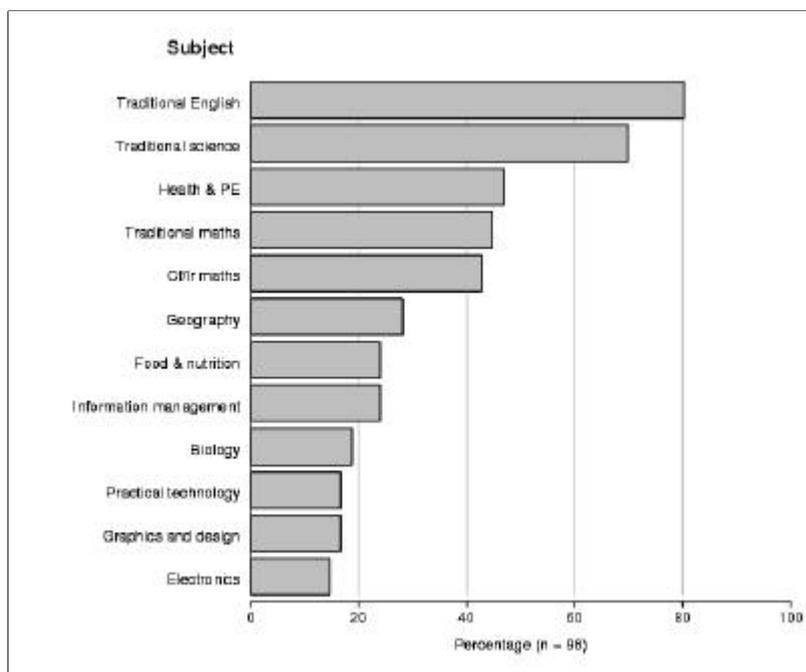
Curriculum area	Year 11	Year 12	Year 13
English	2	3	1
Mathematics	4	3	3
Science	5	7	4
Health and PE	2	3	2
Social sciences	3	4	4
Languages	3	3	3
Technology	5	6	3
The arts	3	3	3
Vocational	2	5	2
<b>TOTAL</b>	<b>29</b>	<b>37</b>	<b>25</b>

NB: Shaded cells indicate curriculum areas where there is a compulsory option students need to take in addition to their optional choices.

English is compulsory at both Year 11 and Year 12, while mathematics and a science subject are compulsory at Year 11. Compared with the whole six-school sample, more female students than expected were taking a traditional English course at all three year levels. As outlined above, Year 13 students wanting some literacy credits have the option to pick these up in media studies and the HOD noted that this could be appealing to the “technical boys”, which might help explain the gender effect at this level.

The next figure adds Year 11 students’ optional choices to the overall picture. Students choose three options at this level, giving them six subjects in total. The number of students taking other-than-traditional versions of the three compulsory subjects (biology or agriculture as a replacement for science, for example) reflects the school’s strategic focus on providing courses that reflect the wide ability range in the overall student cohort. In this school, more Year 11 students than expected were taking an alternative form of mathematics.

Figure 28 **Subjects commonly taken by Year 11 students at Town School D**



The top optional Year 11 subjects were Health/PE, geography, food and nutrition, and information management. Geography was more likely to be chosen by the students in this school than in the other five schools and the popularity of this subject continued at Year 12. Compared to the other schools, Year 11 students in Town School D were less likely to be taking history or the visual arts.

The next figure shows a similar pattern of a range of more vocationally-focused subjects at Year 12, although these students were no more nor less likely to be taking a traditional-discipline version of mathematics than students in the other five schools. More than 15 percent of Year 12 students chose the three traditional science disciplines. The top three optional Year 12 subjects, excluding mathematics and the sciences, were sport studies, geography, and information management. There was a more even gender balance in the sport studies option in this school—in the other co-educational schools more males chose this type of subject. As in City School A, more female students than expected were taking biology at Year 12.

Figure 29 **Subjects commonly taken by Year 12 students at Town School D**

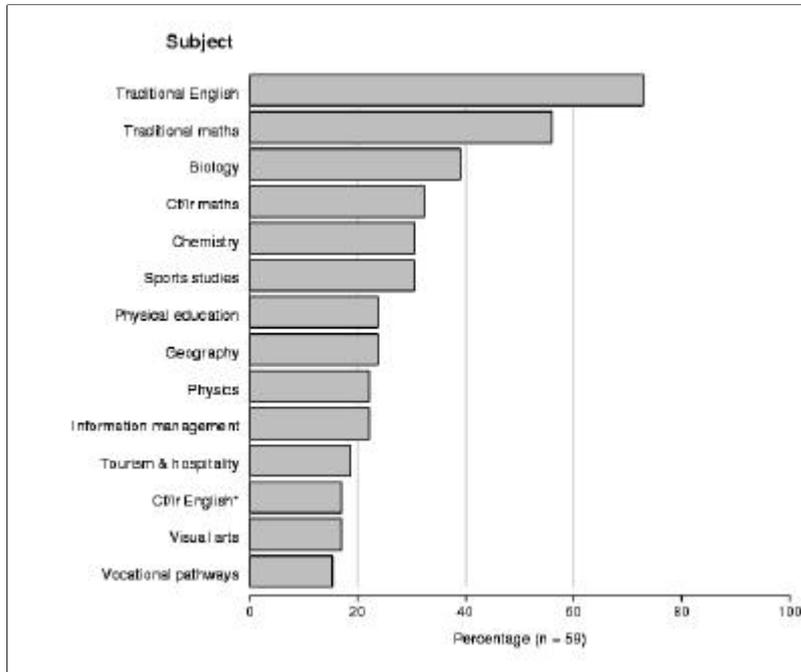
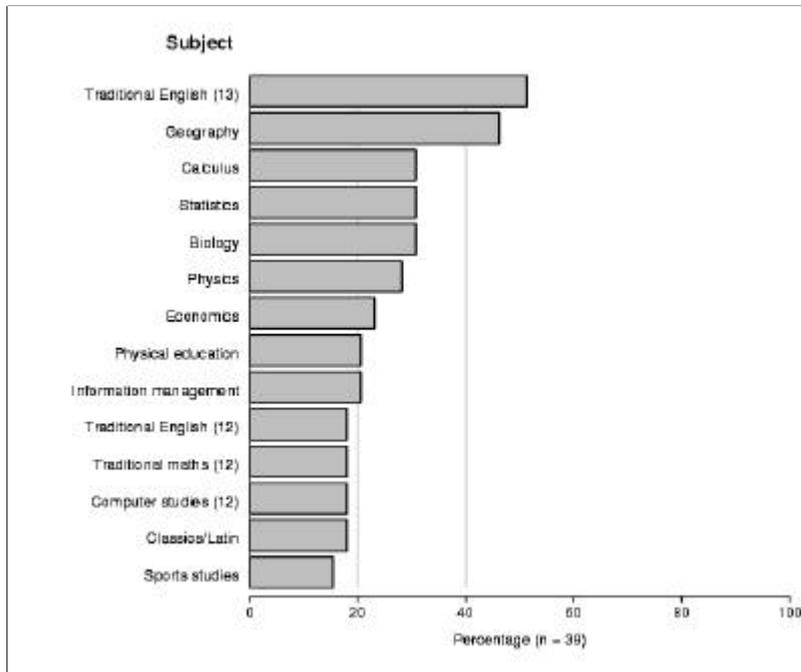


Figure 30 **Subjects commonly taken by Year 13 students at Town School D**



As in the other schools, traditional-discipline subjects tend to dominate the top-ranking list at Year 13, but note again the relatively low numbers who responded. However, congruent with the HOD’s description of flexible multilevelled senior courses, more than 15 percent of responding Year 13 students said they were taking mathematics at another year level, typically Year 12. Town School D was the only Learning Curves school to offer a general mathematics course in

Year 13 but none of the responding students were taking this option, indicating that the sample was not fully representative of this group<sup>16</sup>.

### Credits from different sources: “Horses for courses”

One HOD clearly placed less value on unit standards, saying that there was a “huge difference” in the amount of work required for a similar number of credits. The principal also felt that credits from achievement standards were harder to earn than credits from unit standards. Nevertheless he was pleased that unit standards were available because these were good for students who needed them. Another HOD expressed similar views, noting that “success builds success” and that unit standards provided an assessment tool that allowed her to meet a wider range of student learning needs, so it did not matter that they were easier to get. By contrast, another HOD felt that similar amounts of work were involved in gaining achievement and unit standards in her curriculum area. Two other HODs reflected on the way *perceptions* of differences come into being. One of them said that the way different courses within a curriculum area were structured reinforced the perception of status differences.

With some exceptions, the principal felt that credits from externally assessed achievement standards were harder to gain than credits from internally assessed achievement standards. He qualified this response by noting that they “measure different things”, a view also expressed by one HOD. Other HODs were similarly more equivocal about the perceptions of internal/external achievement standard status differences than they were about unit/achievement standard differences. Two HODs said that perceptions of differences had largely disappeared, with students valuing both types of achievement standards.

Views were mixed about whether students should aim for excellence. One HOD who did not agree said that some students would be “thrilled just to achieve”. Another agreed, saying “you can’t turn an achieve into an excellence”. Three other HODs said all students should try for merit or excellence if they were being assessed by achievement standards. As one said, students can “surprise themselves”.

## Town School E: Learning for life, not just for school

During interviews in each of the three years of the Learning Curves fieldwork, it was obvious that the principal of Town School E had given a great deal of thought to his vision of learning. Inspired in the early stages of the NQF reforms by David Hood’s ideas (see for example Hood, 1998), he valued learning that opens up pathways, is “portable”, and provides “building blocks” for each student’s future. He said students needed a “preparation for life” and the “knowledge to

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<sup>16</sup> Time pressures meant that the survey forms had to be left behind at this school for subsequent completion and low response rates reflected this.

survive in a relativist world” and he was comfortable with the idea that schools could potentially assess learning that had primarily taken place in other settings, as well as school course work. These ideas clearly align with the fostering of a “lifelong learning” perspective as an important outcome of schooling.

Town School E was an early adopter of unit standards and the principal continued to value these above achievement standards, in part because of their greater flexibility and potential to contribute credits for a range of national certificates. By contrast credits from achievement standards can only count for the NCEA. The conception of a “bottomless” standard for NQF Level 1, seen by some as evidence of a lack of rigour in the NQF, did not bother him because it is “only a starting point” on a learning journey.

Coherent with his vision of school learning as one step in an ongoing educational process, this principal reacted strongly to traditional ideas about the inherent superiority of an “academic” curriculum. He spoke of the continuing pressures on schools from the “monastic, medieval traditions of universities”—for example in the framing of knowledge into the discrete disciplines of the traditional “canon”, with the attendant timetable pressures associated with “separate slices” of a “boxed” curriculum. Some subjects in his school, taught by “front runner” teachers, were beginning to diversify across traditional curriculum boundaries, and unit standards provided a means of assessing course components linked to a much wider range of learning opportunities. Similarly, these innovative teachers were beginning to assess students when they were ready to demonstrate their learning, not when the timetable dictated that the assessment moment had arrived.

In 2004, the first year of NCEA implementation at Level 3, the universities’ influence on school curriculum decision making was being felt in pressures originating from entry requirements for university courses likely to attract the most able students. There was a concern that students at Town School E could be disadvantaged by any screening/rationing system that allocated additional points to achievement standards gained with merit or excellence, aligned with the assumption that any unit standard is only worth the same points as an “achieve” level pass. In this principal’s experience, university staff may not even be aware that NQF Level 4 unit standards represent a different type of achievement to Level 3 achievement standards, regardless of whether the latter are gained with excellence. He believed that it is the achievement standards that are problematic because they confuse “levels within a level” and that the interpretation of the meaning of excellence is particularly problematic because it requires “an overlay of quality judgement on a competency-based process”. By contrast, the NQF vision and structure is that learners move up the levels as learning deepens and new “cognitive skills” are developed. The principal felt that excellence levels of achievement standards had tended to be interpreted as “more of” whatever the standard specified, rather than representing higher levels of cognitive functioning.

## Was the vision shared?

In 2004, during our third visit to Town School E, we shared a lunch with the senior management team of the school. They were keen to make this opportunity to discuss aspects of the previous two years' Learning Curves reports, and to reiterate the school's vision for multiple learning pathways, leading to a range of possible qualifications. We were gently upbraided for referring to the "NCEA reforms" rather than the "NQF/NCEA reforms"—with the emphasis on the former. It was evident that this senior management group shared the principal's vision, and were committed to implementation of multiple seamless learning pathways to maximise students' options for learning, at school and beyond.

One person at this meeting reflected on the difficulty he had encountered when selecting student focus groups with a subject profile that matched what we had called "traditional-discipline" subjects. He found it hard to identify such a group because all students had mixes of subjects that met their own learning needs and interests. He saw this as evidence of the success of the school's policy to foster a broad, flexible curriculum with many learning pathways. These teachers also strongly disagreed with the implication that the clustering of students into groups of differentiated courses for all their core subjects at Year 11 represented a form of "streaming" because many pathways remained open to all students<sup>17</sup>.

## How this vision translated into subject options and choices

The next table shows the range of subjects offered in each curriculum area. English, mathematics, and science are all compulsory at Year 11 and physical education is compulsory for some students at this year level. English is compulsory at Year 12. In keeping with the vision for a range of seamless pathways, there are several different versions of English, mathematics, and science at each year level. Also in keeping with this vision, students at Town School E were less likely to be taking a combination of subjects and options with a strongly traditional flavour. So, for example, Years 11 and 12 students from Town School E were less likely to be taking traditional-discipline English compared to the overall cohort at these two levels. They were more likely to be doing an alternative form of mathematics or science in Year 11 or of English in Year 12. Most of the students studying agriculture/horticulture options came from Town School E (or City School B).

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<sup>17</sup> We had raised this possibility in the first project report (Hipkins & Vaughan, 2002a, p. 121). However, in the second year we found less association between different types of compulsory subjects than would have been predicted by full streaming practices (Hipkins et al., 2004, p. 164).

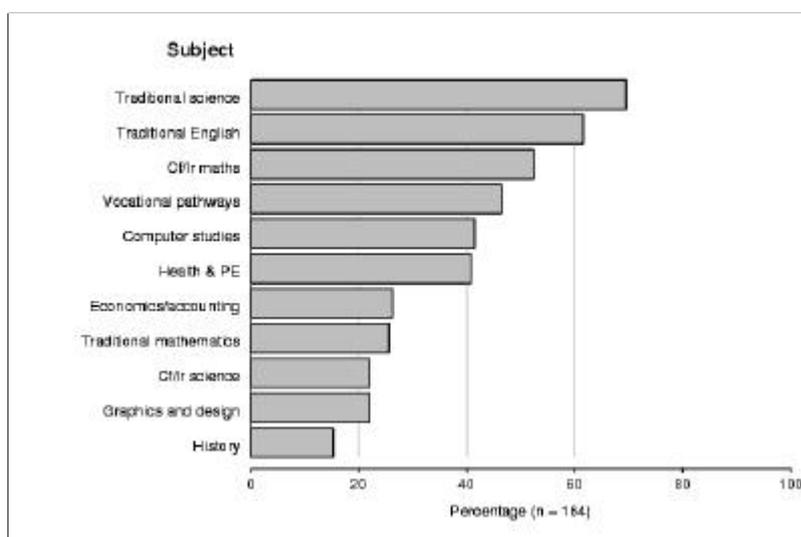
Table 25 Number of subjects offered in each curriculum area at Town School E

Curriculum area	Year 11	Year 12	Year 13
English	3	5	3
Mathematics	3	3	3
Science	4	6	4
Health and PE	2	4	3
Social sciences	3	4	5
Languages	3	1	1
Technology/ICT	3	2	3
The arts	2	2	6
Vocational/transition	2	4	7
<b>TOTAL</b>	<b>25</b>	<b>31</b>	<b>35</b>

NB: Shaded cells indicate curriculum areas where there is a compulsory option students need to take in addition to their optional choices.  
Some students could get exemptions from health and PE in Year 11 but it was compulsory for others.

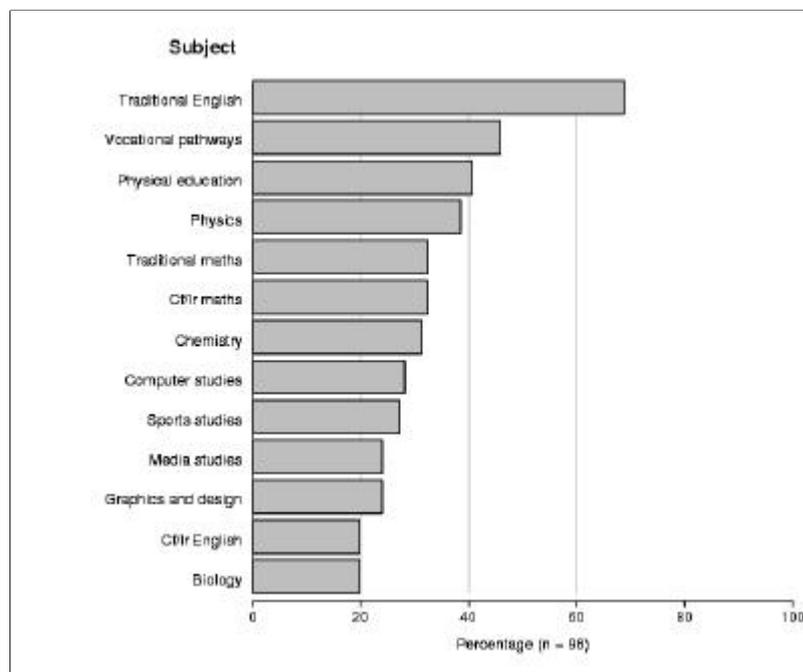
The next figure shows Year 11 subjects that were taken by 15 percent or more of the 2004 cohort. The relatively high numbers of students taking alternative versions of the mathematics and science is apparent. The top three optional subjects were vocational pathways subjects (especially in the technology curriculum area), computer studies (predominantly Pākehā students), and a combination of economics and accounting. Students were less likely to be taking geography than at the other schools. Fewer optional subjects were being taken by 15 percent or more of the students in this school than in any of the other five. However, unlike the other schools, the numbers of options offered increased at Year 13 as well as at Year 12. The pattern was thus one of continuing to diverge from a relatively narrower base.

Figure 31 Subjects commonly taken by Year 11 students at Town School E



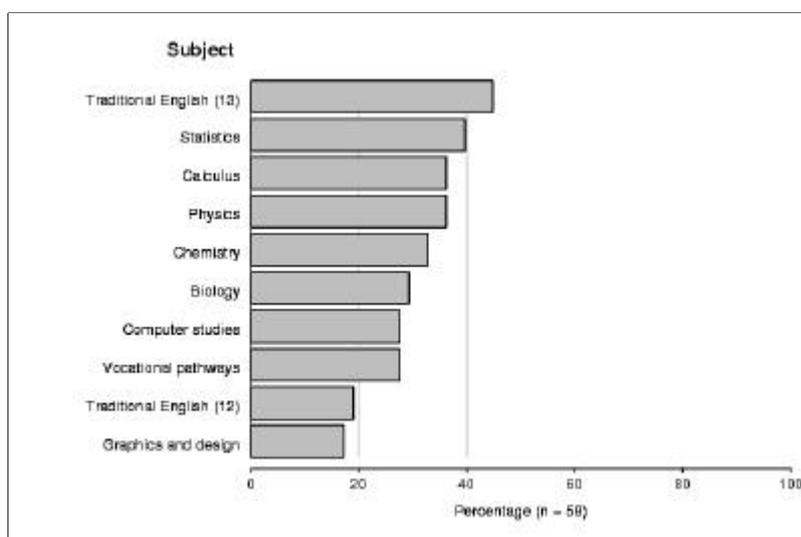
At Year 12 the top optional subjects were vocational pathways and computer studies. PE, sport studies, and graphics and design were popular. Physics was the highest ranking of the three traditional science disciplines. Students from Town School E were more likely (compared to other schools) to be taking any of these options.

Figure 32 **Subjects commonly taken by Year 12 students at Town School E**



Notwithstanding the school's vision of alternative pathways, and the number of Year 13 subjects offered, the picture once again is of a conservative range of top ranking choices at this year level. In keeping with its vision of multiple pathways, the school offered two vocational subjects in science and another two in technology at this level. They do not feature on the graph because they were either being taken by less than 15 percent of the students, or fewer of the students who did take them responded to the survey. Year 13 students at Town School E (along with those at Town School F) were less likely, compared to other schools, to say that their subject choices had been influenced by previous NCEA results.

Figure 33 Subjects commonly taken by Year 13 students at Town School E



### Credits from a seamless qualifications framework

Interviews with the five nominated HODs provided indications that key aspects of the principal’s vision were also shared by teachers of the middle management level. Unlike some of their peers in other Learning Curves schools, none of these HODs said achievement standards were superior to unit standards. The HODs of the less traditional curriculum areas (technology, the arts) expressed a preference for unit standards because these allowed more transparent assessment of a wider range of types of learning. Both discussed aspects of the quality, coherence, and sufficiency of evidence of learning that could be gathered when unit standards were used. For example portfolios could be compiled, or whole performances assessed. The availability of such assessment options contributed to the relevance and practical aspects of learning that they both valued in their subjects. The HODs of the traditional subjects saw no difference between the two types of standards. They all said they would choose the standard that best matched students’ learning needs. One would base this choice on the likelihood of students’ achievement success because “a credit is a credit”. Two of the five HODs described the possibility of creating “win/win” situations when both achievement and unit standards were used to assess aspects of the same topic.

Three of the HODs used metaphors of pathways or seamless learning—often on several occasions—when discussing the advantages of the NQF/NCEA qualifications system. Different types of pathways mentioned included polytechnic, ITO, and university courses, as well as “employment skills” for work or “skills for any job”. It was evident that all five shared the vision of providing successful learning experiences tailored to the various needs of the wide range of students.

## Town School F: Flexible pathways to learning success

As in Town School E, students' pathways were seen as important in Town School F. However, the main focus of conversations about these was on multiple pathways *within* the school, with less of an explicit focus on how these then led on to multiple pathways *beyond* the school. For example, when discussing the challenges of offering a wider range of subject selections in a comparatively small secondary school, the principal said that the NCEA had opened up many more pathways. While his vision was to give students a full and free choice of all the potential options, he had come to the realisation that this could lead to too many clashes and raise "false hopes". For this reason the school was considering offering more structured option lines in 2005. The principal's concerns about students' need for explanation and discussion of these choices (not just information) had seen the school adopt a subject-choice guidance process during school time when all the staff and students could be actively involved. Two HODs mentioned the intention to offer half-year courses as one way of maximising the potential for choice.

The principal and one of the longer-serving HODs both mentioned a small number of students who had left at the end of Year 11 without qualifications, but had subsequently returned to complete their Level 1 NCEA. The success of these students, who would have remained marginalised in the previous qualifications regime, was a particular point of pride. As this HOD said "success builds success". In this school, as in City School C, the ability of students to achieve qualifications "at their own pace" was seen as important by the principal and was also mentioned by another HOD, who said that the NCEA had provided the flexibility to better achieve this ideal.

Just as he valued student empowerment through their choice of subjects, the principal also valued the potential to redesign the assessments within subjects once the teacher had interacted with the students and could see "what they actually need". In the smallest of the Learning Curves schools, he was teaching a course himself in 2004, to cover a gap in the staffing, and was putting this practice into action in that class.

### How this vision translated into subject options and choices

As the next table shows, for a smaller school, Town School F succeeds in offering a range of choices. As in City School A, a number of the Year 11 students were taking seven subjects. This may account for the higher number of optional Year 11 subjects being taken by 15 percent or more of the student cohort (one more than at City School B—the next highest of the schools).

Table 26 Number of subjects offered in each curriculum area at Town School F

Curriculum area	Year 11	Year 12	Year 13
English	2	3	1
Mathematics	4	3	3
Science	3	5	4
Health and PE	4	4	4
Social sciences	3	3	3
Languages	2	1	1
Technology/ICT	8	6	6
The arts	3	4	7
Vocational/transition	0	6	3
<b>TOTAL</b>	<b>29</b>	<b>35</b>	<b>32</b>

NB: Shaded cells indicate curriculum areas where there is a compulsory option students need to take in addition to their optional choices.

Some students could get exemptions from health and PE options.

As in Town School E, English, mathematics, and science are all compulsory at Year 11 and physical education is compulsory for some students. English is compulsory at Year 12. In Year 11 female students<sup>18</sup> were more likely to be taking traditional-discipline English, compared with the overall cohort. Year 11 students of either gender were more likely to be taking traditional-discipline mathematics<sup>19</sup>, and they were less likely to be taking a contextually-focused science course<sup>20</sup>.

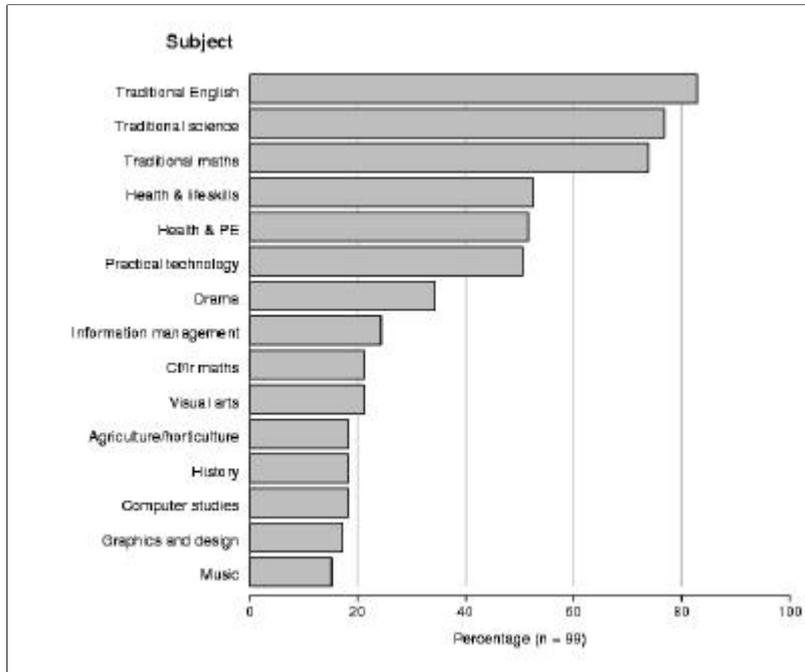
The next figure clearly shows this pattern of dominance of traditional-discipline versions of the core subjects. It is a very different picture to the one depicted above for Town School E. In 2004 the top optional Year 11 subjects were health and life skills, practical technology (with five options on offer), and drama. At all year levels, the latter was more likely to be taken by female students. Compared to the overall cohort, students from Town School F were more likely to be doing all these subjects.

<sup>18</sup> Along with those in Town School D.

<sup>19</sup> Along with those in City Schools A and B.

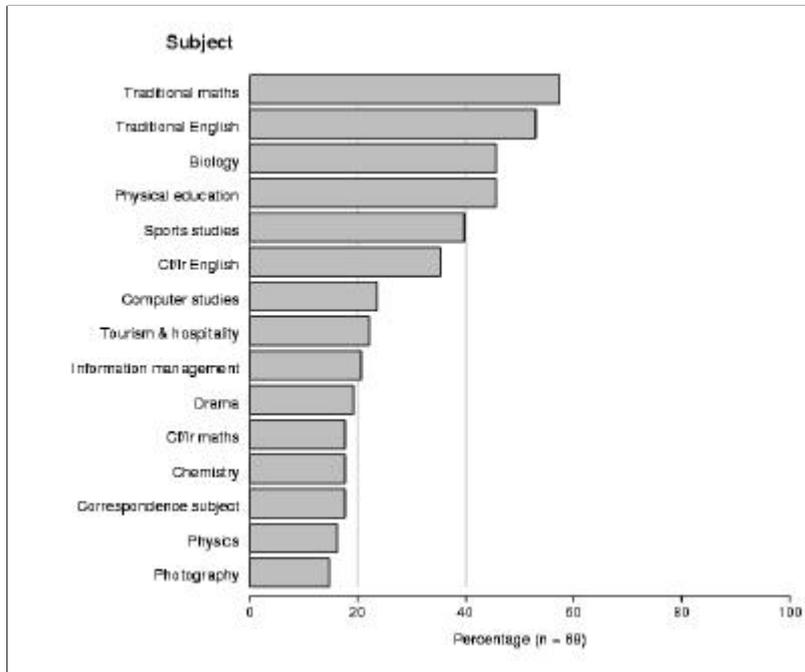
<sup>20</sup> Again, along with those in City School B.

Figure 34 **Subjects commonly taken by Year 11 students at Town School F**



The dominance of a traditional version of both mathematics and English continues at Year 12. PE, sport studies, and biology were all more likely to be taken by Town School F students than by students in the other schools.

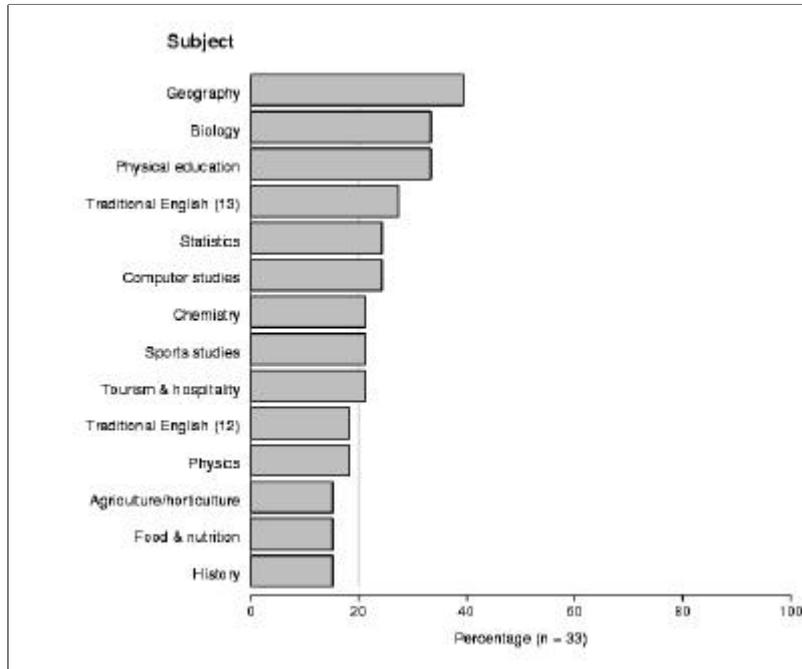
Figure 35 **Subjects commonly taken by Year 12 students at Town School F**



Note that the response rate at Year 13 was particularly low, as it was in some of the other schools. What we can say is that geography, biology, and PE were the subjects being taken by more of the

responding students and that, in common with Town School D, geography seemed to be more popular at this school.

Figure 36 **Subjects commonly taken by Year 13 students at Town School F**



Both Year 12 and Year 13 students from Town School F were less likely than other students at these year levels to agree that their subject choices had been influenced by their NCEA results.

### Divergent views on “standards” and ability levels

The principal of Town School F did not believe that achievement and unit standards were “at the same level” but this did not concern him because he saw them as meeting the assessment needs of different groups of students. Congruent with the view that achievement standards were more challenging, he felt that students who were capable of achieving merit or excellence should be “steered” towards courses assessed by these.

Four of the five HODs shared this view, at least to some degree. They described achievement standards as requiring “more thinking” and “more depth” of learning, whereas unit standards were “skills-based” and “easier”. One of these HODs said that this made no difference to the value she personally attached to the students’ learning success but it did concern her that this perception could disadvantage students in competitive selection situations. Like some HODs in other schools, the fifth HOD simply said “credits are credits”.

Views were also divided over students’ aspirations. The HOD who seemed to have the strongest opinion about the superior value of achievement standards (and in particular externally assessed standards) felt that only the “academic” students should be encouraged to strive for excellence, and that it “really suits the bright cookies”. Another HOD felt that the standard required for

excellence in his subject area was so high as to be demotivating for many students. The other three HODs all said they would encourage all students to strive for excellence, with one showing only merit and excellence examples to students to inspire them.

**Postscript:** In 2005 Town School F has offered a number of contextually-focused half-year modules for Years 12 and 13 students. These include food for flatting, media studies, and sports studies. The principal reports that they have “opened up choice” and have proved to be very popular.



## 5. Student perceptions of the NCEA

This section reports findings from those aspects of the student focus groups and student survey associated with students' perceptions of the NCEA. The section involves three types of data: survey frequency data, cluster group data, and focus group interview data (see Methodology section). The survey data and cluster group data are reported across all schools, year levels, and type of course. Where meaningful, focus group data are differentiated by year level, school, course type, gender, and ethnicity. We have also been able to use the clustering method, outlined in Section Two (Methodology), to examine some of the differences of perceptions between students taking different types of courses. Focus groups were also conducted along these lines, allowing us to check for patterns by year level, school, and type of course (traditional-discipline, contextually-focused, and locally-redesigned).

This last year of Learning Curves fieldwork allowed us to survey and talk to students across Years 11, 12, and 13 and showed up some of the differences in perspective attributable to differences in experience with the NCEA. The Year 13 students who left school at the end of 2004 knew no system of assessment for qualifications other than the NCEA (unless they had sat a School Certificate examination at the end of Year 10.) They were not in a position to make the same sorts of comparisons as many of their teachers. How did they perceive the NCEA qualifications system after being its "guinea pigs" in Years 11, 12, and 13? Did they share the reservations about the "value" of unit standards expressed by many of their teachers?

### **The perceived value of the NCEA: Survey findings**

In the survey we asked students whether they thought the NCEA was a valuable qualification. We were also interested in the way they perceived their parents' and teachers' perceptions of the value of the NCEA as a qualification.

As the next three figures show, there was high level of agreement amongst the students that NCEA was a valuable qualification. Eighty-eight percent of Year 11 students, 89 percent of Year 12 students, and 81 percent of Year 13 students agreed or strongly agreed that this was the case.

Figure 37 Year 11 perceptions of the value of NCEA

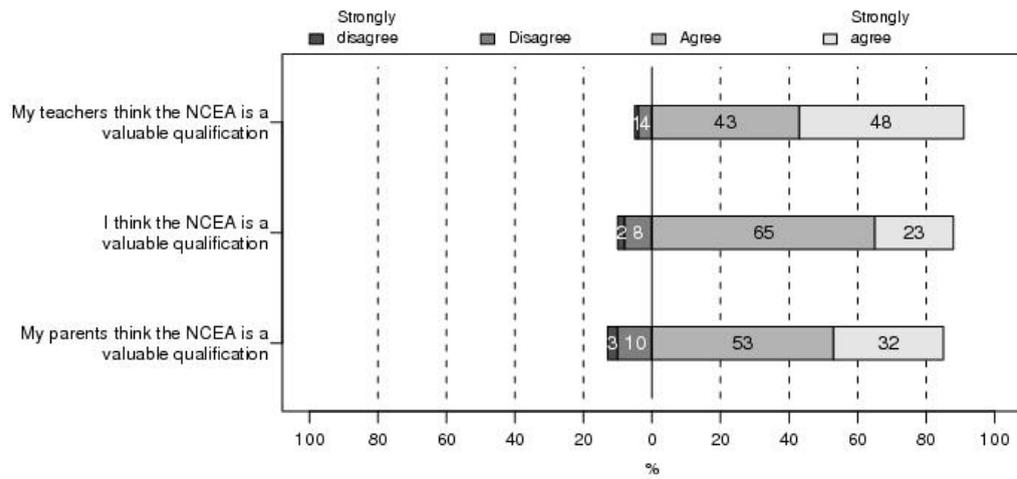


Figure 38 Year 12 perceptions of the value of NCEA

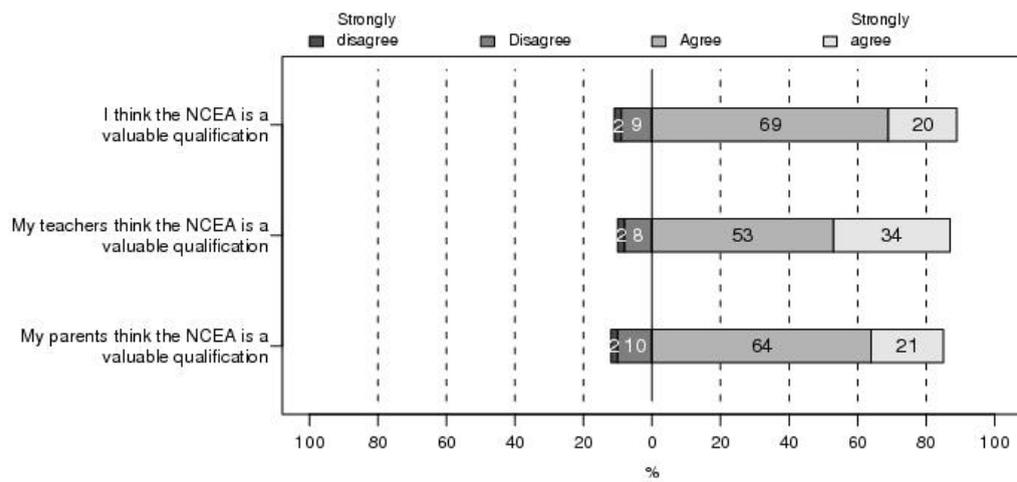
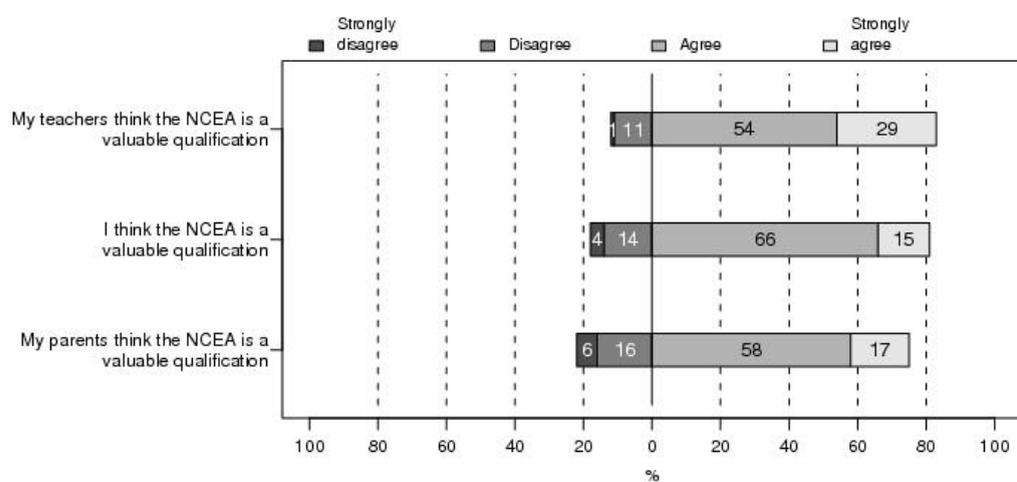


Figure 39 Year 13 perceptions of the value of NCEA



Year 11 boys and Year 11 students from City School B were more likely than students from other schools to disagree that NCEA is a valuable qualification.<sup>21</sup> In general Pacific students, especially those from City School C, were more likely to agree that NCEA is a valuable qualification. City School C has the highest proportion of Pacific students but we have no way of determining whether this is a school effect, an ethnicity effect, or involved some unknown variable.<sup>22</sup> There was slightly less support amongst the Year 13 students, perhaps reflecting their role as the first group involved in the implementation, or perhaps their experience of three years of NCEA assessment.

Most students also thought that the NCEA was perceived by their teachers as a valuable qualification. Teachers were seen to value the NCEA by 91 percent of Year 11 students, 87 percent of Year 12 students, and 83 percent of Year 13 students.

Pacific students were more likely to agree that their teachers valued NCEA, with all 35 Pacific students at City School A agreeing that this was the case. Compared to the overall group of respondents, Pākehā students in City Schools A, B, C, and Town School E were less likely to feel that their teachers valued the NCEA.

There were similarly high levels of agreement that parents valued NCEA, with 85 percent of Years 11 and 12 students, and 75 percent of Year 13 students either agreeing or strongly agreeing.

Of all the survey respondents, Year 13 boys were more likely to disagree that their teachers valued NCEA. This pattern was seen in all six schools, but was most evident at City School B. With the exception of City School B<sup>23</sup>, Year 11 students were more likely than Years 12 and 13 students to agree that teachers valued the NCEA.

One possible reason for Year 13 students' somewhat lower valuation of the NCEA and perception that their teachers shared a similar lower valuation, is that these Year 13 students were the first student cohort to experience the NCEA assessment and qualification system. Each year that another level of the NCEA has been implemented, this cohort has been the first to experience it at that level. Accordingly they were very familiar with the NCEA by the time of the 2004 fieldwork. They may also have been beginning to shift their focus to post-school qualifications and pathways beyond school since these were now a much closer possibility for them.

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<sup>21</sup> As outlined in Section Two, likelihood refers to instances where chi-square tests reveal significant differences between the responses of the entire group (in this case all students in the survey) and the responses of a particular group (in this case, students at year levels, or of gender).

<sup>22</sup> We note that parents of students in decile 1 and 2 schools in NZCER's 2003 National Survey were more likely to strongly agree that they were supportive of the NCEA. However they were also more likely to disagree that the school had kept them well informed about the NCEA (Hipkins with Hodgen, 2003).

<sup>23</sup> City School B is the Learning Curves school where students seem to have the most opportunities to express their point of view.

## Perceptions of the NCEA's value: Focus group findings

### Learning the important things

Student responses to some of the focus group questions provide an important context for “reading” the survey results reported in the previous subsection. The responses discussed in this subsection show how the NCEA's value is perceived through the lens of students' understanding of themselves as learners and in their aspirations for their future study and work beyond school. Students' perceptions are framed by their responses to focus group questions asking what main sorts of things they thought “it was important for all students to learn in school these days” and what they thought about the idea that “some people say students don't want to learn things unless they know they can get credits for them”.

Students' answers to the first question ranged from naming school subjects to listing off or discussing particular skills and dispositions. Students frequently named important things to be learned at school as particular subjects, particularly the compulsory ones. Some students suggested those subjects were important by virtue of being compulsory, as the following exchange between two Year 11 students in one focus group shows:

Student 1: Maths and science because they are essential things.

Student 2: Because we've always been told they are essential. (Town School D, Year 11 traditional-discipline course students)

Year 11 students commented more frequently than students in other year levels on the importance of learning particular subjects. However, students at all year levels named subjects indirectly related to careers through comments about needing specific subjects “to get into uni”. Traditional-discipline students commented more than others on needing specific skills and were able to list many different skills or pull out the skills from subjects. However, many simply listed off skills. Some of these seemed to relate directly to the demands of school work. Others fell under the general rubric of “life skills”. As traditional-discipline students commented:

Study habits, essay skills, writing. (City School B, Year 13 student)

Learning how to stick to a timetable and how to meet deadlines and stuff. Time management is a really important skill for people to learn. (City School A, Year 11 student)

To be able to get your point across. (Town School D, Year 11 student)

Social skills, how to interact with people. (City School B, Year 13 student)

Self-discipline. (City School C, Year 13 student)

Self-motivation. (City School B, Year 13 student)

Public speaking. (City School B, Year 13 student)

Business skills need to be taught in schools. (Town School F, Year 11 student)

Social responsibility. (City School A, Year 11 student)

Other students—and these tended to be Years 12 and 13 students—provided lengthy rationales for their specific subject suggestions, linking them to specific skill sets and dispositions. In the following focus group, two traditional-discipline course students explained the importance of English:

English because you learn language to express yourself. It is important to have a wide range of subjects to exercise creative and mathematical parts of brain so you think more efficiently/multidimensionally. Allows you to develop a broad and questioning mind. (City School B, Year 12 student)

English is important because communication skills are important. Drama is under-rated. A lot more people should take it so they have a lot more ease in expressing themselves. If they have less inhibitions they can be themselves more and it gives strength of character. I think philosophy should be compulsory...we teach people how to live, we don't teach them why to live. Maybe we should. We learn a lot more when we question everything. The Greek philosophers didn't specialise in one area they did everything so they learnt a lot more. You are seeing in the news stories of physicists they say, well this is great and then go about until in another few more years a chemist or biologist laughs and says, you couldn't do that. They are so highly specialised in one area they can't think outside of it. (City School B, Year 12 student)

Some students were not very articulate about explaining the skills they considered important as the following discussion from one focus group illustrates:

Student 1: Communication skills.

Student 2: Yeah, and leadership.

Interviewer: Why would you say those skills?

Student 1: Because you need them.

Student 2: For a job, in the real world. (Town School D, Year 12, traditional-discipline course students focus group)

However, discussions in other focus groups, particularly “traditional-discipline” student groups, produced interesting discussions on the way subjects and skills are organised within their school curriculum:

What we are learning is not actually what we should be in life skills...[we] should be going into depth on skills. Teachers who run it appear to be unsure why they are doing it. (City School C, Year 12 traditional-discipline course student)

One group of students saw a link between the relevance of curriculum content and the timeliness of curriculum delivery:

Student 1: Skills with drugs and alcohol, pregnancy and stuff...there are a lot of things that teenagers don't know.

Student 2: But they are compulsory nationwide for third and fourth formers...health subjects, that is a really good thing.

Student 3: But it needs to be in the older classes because you don't comprehend it at Year 9 and 10. You tend to [instead] know from what your friends are saying. (Town School F, Year 11 traditional-discipline course focus group).

Many skills or dispositions named by students were seen as directly relevant for entry into a particular job or for adult participation in society. For example, one student cited learning history in order to better get along with different people and create a better society. Other students cited health as providing valuable information about how to live a fit and healthy life and avoid potential ill health. For some students, the relevance of particular skills related to their own individual aspirations or needs. For example, one student explained needing to take mathematics to learn measurement in order to become a builder later in life. Several students underlined the school-to-work connection by commenting on the potential for school tests to become confused with useful learning if an outlook beyond school was not kept uppermost:

If you just concentrate on writing a good essay, it's not going to get you anywhere in life. You need to focus more on getting a job or on where you're heading rather than just passing the tests. (Town School E, Year 13 traditional-discipline course student)

## NCEA credits for learning

While students made some clear statements about their learning needs and the ways in which particular subjects or skills were relevant to them, their responses to a focus group question about learning and its "credit value" suggested a different attitude. Students were asked to respond to the statement: "Some people say students don't want to learn things unless they know they can get credits for them. Do you think this is true?" Many responses indicated a perception that learning was valuable *because* credits were on offer. Without the potential to gain credits, these students seemed reluctant to learn or work hard.

Who wants to put in all that effort if it's not worth anything? Especially if you have another assessment that does give you credits. (City School A, Year 13 student, course unknown)

It's so just learning for the assessment and after you've done it you just forget it completely. (City School A, Year 13 student, course unknown)

Why bother learning it if you are not going to get any credits? (Town School F, Year 12 locally-redesigned course student)

If it's not worth credits, it's not worth doing. (City School B, Year 12 contextually-focused course student)

There's no point in taking a subject if you can't get a qualification in it. (City School B, Year 13 locally-redesigned course student)

If we have an exam, people will ask if it's worth credits. If it's just practise they won't do it. (Town School D, Year 11 traditional-discipline course student)

At first glance this focus on credits as the currency of learning seems distinct from students' ideas that there are important things to learn for their specific value and relevance in their world. However, the distinction may indicate attempts to think through a classic bind in schooling where the relationship between learning and passing exams to gain qualifications can become a conflation of the two. Focus group students' responses can be understood in terms of a tactical balancing of learning the things they have to learn to get credits against learning the things they want to learn for value that may or may not be reflected by the credits on offer. In some cases the opportunity cost seems too high for some students so they give up and learn only what they can get credits for, knowing there is not the time or energy to do the other things (take other courses, study for other assessments, do extra learning). And of course in some cases, the other things students want to learn are not offered by their school:

You don't have time during the year to do things that don't have credit worth. [You] barely have enough time to complete the credit work. (City School C, Year 13 traditional-discipline course student)

I think that comes from the fact that we have so much work to get through and the teachers are kinda rushing us, though what's the point in doing stuff we're not going to use when we have so much else to be learning? (Town School D, Year 12 contextually-focused course student)

While it was an issue of workload for some, others problematised the credit system and their part in it:

I was away for part of a maths assessment but I got achieved in the other part and got the credits. My teacher asked if I wanted to do the merit or excellence questions and I said no, as I already had the credits...I lowered my standards because I was bogged down with work. (City School A, Year 11 traditional-discipline course student)

If you have a formative and a summative on one day and you have to choose which one you'll do it's obviously going to be the summative. (City School A, Year 12 traditional-discipline course student)

Incentive is based on passing achievement standards rather than educating you. (City School B, Year 11 traditional-discipline course student)

In one focus group discussion, students provided an example of the kind of trade-offs they feel they have to make:

Interviewer: Some people say students don't want to learn things unless they know they can get credits for them. Do you think this is true?

Student 1: It depends on what you want to get out of school. If you want to actually learn something to help you in life.

Student 2: I come to school to learn things, not to pass tests.

Student 3: That's what I would like to think but I do get trapped into that kind of thinking. Like if I have a research project I am thinking about what NCEA credits I will get for it. (City School B, Year 12 traditional-discipline course focus group)

However, other students suggested they focused on their interests *in combination* with a strategic balancing of workload and credit accumulation against their learning goals and future plans:

It is good to learn and it is good to get credits at the same time. (City School A, Year 13 contextually-focused course student)

If it's not interesting and you don't get credits for it there's not much point. (City School A, Year 11 locally-redesigned course student)

In one focus group, a student explained the interaction between their own interest or enjoyment and the reward of credits:

Interviewer: Have you chosen for credits or because it's fun?

Student 1: Fun, because you know you can get the credits.

Interviewer: So if it's fun you'll get the credits?

Student 1: Not quite, but if you know you'll put your best effort into it then you've got faith in yourself to get the credits. If you don't like it you won't try hard enough. (City School A, Year 11 contextually-focused course focus group)

Where interest was particularly high, students did talk about being willing to learn without needing to gain credits. However, while students from all courses talked about being interested in subjects or doing work regardless of the number of credits on offer, there were differences in the way they talked about it.

The locally-redesigned and contextually-focused course students tended to talk about being willing to do practical subjects like art, food technology, computer graphics, and PE, regardless of whether they would get credits or not:

Interviewer: Can you think of any things that you've learnt just because you really love to learn them?

Student 1: More like physical type subjects, if you're out there. In agriculture we're out on the farm and you are learning practical things.

Student 2: Most people do pass the practical stuff.

Interviewer: So then it's just a bonus that you get the credits?

Group of students: Yeah.

Interviewer: Any other subjects that are like that?

Student 1: Woodwork.

Student 2: The chef course. (Town School D, Year 13 contextually-focused course focus group)

In one focus group, students listed "building a dolls' house", "outdoors stuff", and "painting a room in a house". These tended to be subjects they felt they could succeed in and ones that had clear or known links to study, training, or employment pathways beyond school:

I suppose [I would do it] if it has real practical value than just having credits to show for it. If it's going to be a major career option and you really know what you're doing. (Town School E, Year 13 contextually-focused course student)

In some courses you do them to lead up or get basic skills. Like the foodtech course, it's only got about 7 credits but it's a first year City and Guilds course so it leads further (to Polytech). (Town School E, Year 12 locally-redesigned course student)

Traditional-discipline students tended to talk more about “exploration” in their discussions of doing subjects even if there were no credits on offer. This may reflect traditional discipline students' greater sense of security in their ability to learn by following their interests *and* achieve credits, and a confidence about the pathways beyond school open to them and their ability to make a successful entry to the workforce in an area that engages them:

Passing is definitely useful...but it's me wanting to know stuff. (City School B, Year 11 student)

A lot of it is just exploring what you're doing...learning how to do it. (City School B, Year 11 student)

Too much focus on assessment and grading people...should be like university where you go because you want to. (City School B, Year 11 student)

I know that I'm going to get 80 credits, so if I'm going by what they say I might as well just stop learning now. I think what I'm doing is going to be useful at uni. (City School B, Year 13 student)

No, because sometimes people do courses they want too, like music. I'm not interested in a career in it but I want to learn how to play an instrument. I think people might take subjects for the experience. (City School C, Year 13 student)

Good to be open minded about things. I'm taking science subjects but I also took history to increase my knowledge of what is happening around the world. (City School C, Year 13 student)

If it's in a great class and I choose this one because I want to learn about it. Then you'd learn if you didn't get credits. But if it was a class that you needed to do (compulsory) maybe you would [do it for the credits]. (Town School E, Year 12 student)

Traditional-discipline students were also the only ones to cite relationships with teachers or peers as a motivating factor in learning without credits:

If you've got a good one [teacher] you'll want to learn. If you don't then what's the point? Because they're not going to teach you anything anyway. (Town School F, Year 13 student).

If you've got a really nice teacher you want to do well for them, try to demonstrate how much they've taught you. (City School A, Year 12 student)

A lot of it does come down to the teachers. One of my teachers said to my mother that at this level she shouldn't have to motivate us. But she should be doing everything in her power to help motivate us. (City School A, Year 12 student)

Interacting with peers when studying is motivating and helps learning, especially for people who have trouble studying on their own. (City School A, Year 12 student)

This set of perspectives hints at possible opportunities to think about learning interests and gaining credits in ways that move beyond a focus on each individual student. The students quoted describe an engagement in the subject or topic that can be prompted or fostered through the relationship with teachers or peers. It suggests that interest in learning does not necessarily reside within the student in some fixed way but can be *generated through* interactions.

## Forms of credit and assessment: Survey findings

As Section Four showed, teachers expressed a range of views on the relative “worth” of credits gained from achievement and unit standards, and from internally and externally managed assessments. Typically, these were qualified views that took account of NCEA’s complexities and the teachers were more likely than not to think that problematic perceptions of value differences arose from sources *outside* the school rather than within the staff. For example, the principal of City School A said staff were ignoring these perceptions and just getting on with implementing their vision of NCEA’s possibilities. How, then, did the surveyed students address the same questions?

### Achievement standards and unit standards

There was strong agreement across the year groups that both achievement standards and unit standards were valuable. More than three-quarters of students at each year level reported agreeing or strongly agreeing that unit standards were valuable. Slightly more agreed or strongly agreed that achievement standards were valuable—between 85 and 92 percent of students across the year levels. Responses at the three year levels are shown in the next three figures.

Figure 40 Year 11 perceptions and experiences of unit and achievement standards

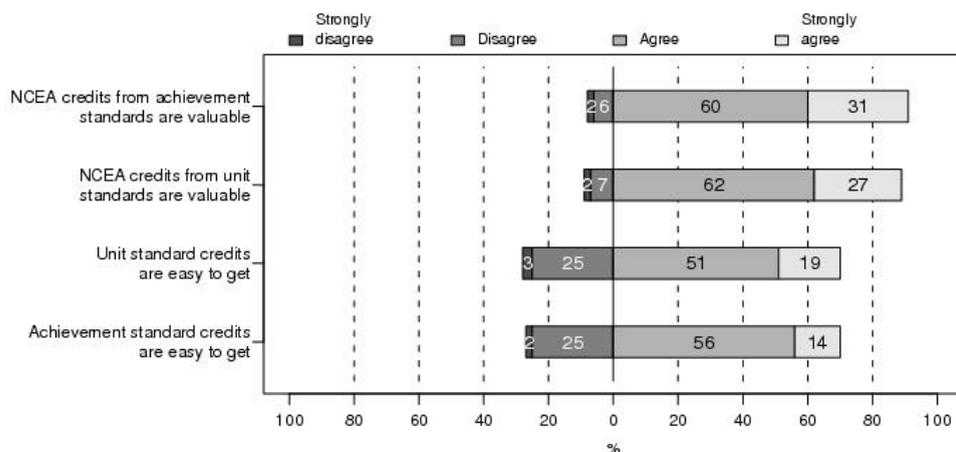


Figure 41 Year 12 perceptions and experiences of unit and achievement standards

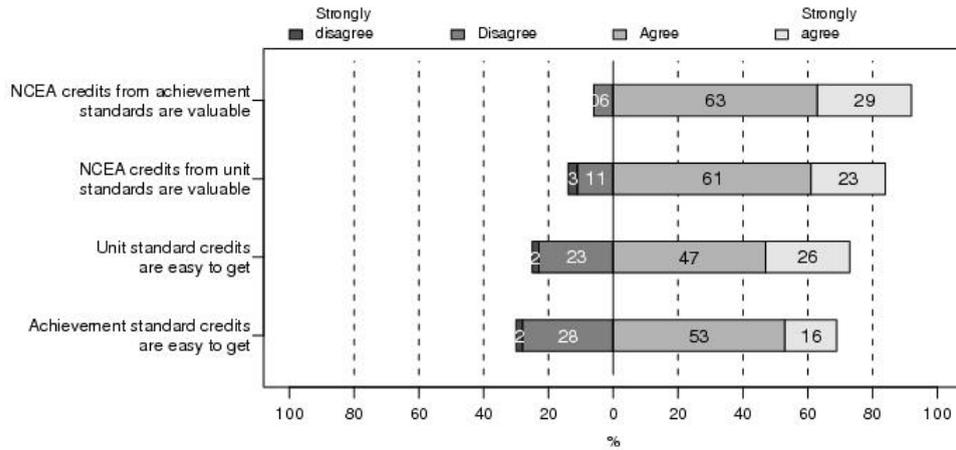
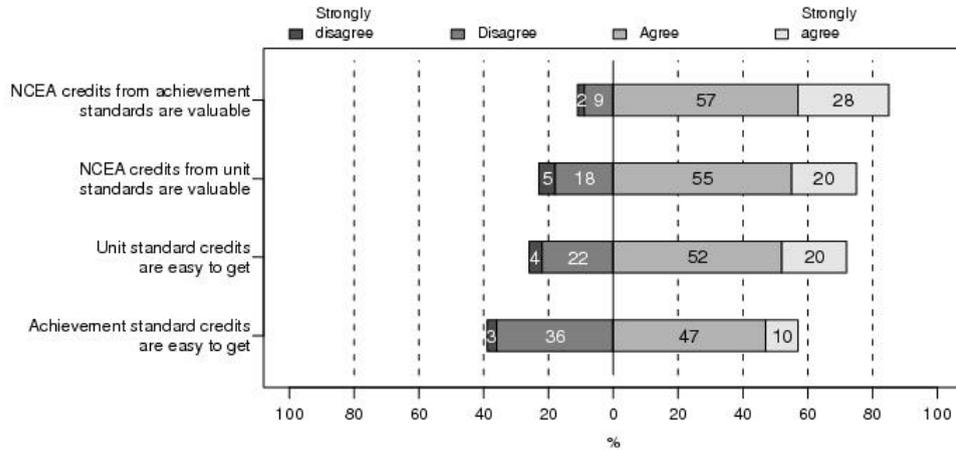


Figure 42 Year 13 perceptions and experiences of unit and achievement standards



Generally over half of the students at each year level agreed that unit standards and achievement standards were “easy to get”. Agreement was higher for Years 11 and 12 (between 70 and 73 percent agreed or strongly agreed) than Year 13 (between 57 and 62 percent agreed or strongly agreed).

Perceptions of the ease of getting achievement standards decreased over the year levels, from 70 percent of Year 11 students to 57 percent of Year 13 students. There was no similar decline in relation to unit standards. This trend may reflect Year 13 students’ greater familiarity with the overall assessment system. Or it may be that Year 13 students taking courses mainly assessed with achievement standards—shown by the cluster analysis in Section Three to be in the majority—are facing different types of learning and assessment challenges from those Year 13 students taking more practically focused courses.<sup>24</sup>

<sup>24</sup> Just 20 percent of the Year 13 students were in the more practically oriented Cluster Three.

Analysis by the version of core curriculum subjects taken supports the suggestion that perceptions of value differences are likely to be linked to different types of overall learning experiences. Both Year 11 and Year 12 students taking locally-redesigned maths courses were more likely to agree that unit standards were valuable and traditional-discipline students were less likely to agree. Year 12 students taking contextually-focused English courses were also more likely to agree that unit standards were valuable.<sup>25</sup> Year 13 traditional-discipline English students were less likely to perceive unit standards as valuable. Year 11 contextually-focused maths students were less likely to perceive achievement standards to be easy but, somewhat perversely, Year 12 contextually-focused English students were more likely to perceive them as easy.

Māori students were more likely to agree that credits from unit standards were valuable. Asian students (particularly at the City Schools) and students of “other ethnicities” in Town School E were less likely to agree that achievement standard credits were easy to get. Asian students at City School B and students of “other ethnicities” were less likely to agree that unit standard credits were easy to get. In contrast Pacific students (particularly at City School C and City School B) were more likely to agree that unit standard credits were easy to get.

Overall there was strong agreement by all students that credits gained from assessment by achievement standards were valuable. This was not affected by a perception of how easy achievement standard credits were to achieve, except at Year 13, where there was some indication of a relationship between the two perceptions. There was also an association between the perceived value of unit standards and the perceived value of internal assessment. Because unit standards are always internally assessed, students who agreed that unit standards were valuable were also more likely to also agree that internal assessments were valuable.

## Internal and external assessments

Section Four showed that teachers were less likely to perceive value differences between external and internal assessments than between achievement and unit standards. Those who valued external assessments more highly typically noted moderation issues that impacted on the consistency of judgements made internally. But, by and large, teachers saw internal and external assessments as addressing different types of skills and knowledge. They said these could not be directly compared, and they tended to value both.

We asked students to rate their agreement or disagreement with statements about their achievement in internal and external NCEA assessments, and the value of internal and external credits. The following three figures show that students generally agreed that they did well in internal and external assessments. The figures also show that while students generally agreed that credits from internal and external assessments were valuable, they placed slightly more value on

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<sup>25</sup> Section Three showed that 14 percent of Year 12 students in Cluster Three were taking alternative versions of both English and mathematics, so there will be some overlap in the responses reported here.

internal assessment credits over external assessment credits across all year levels. The figures also show a very slight decline in the value attributed to both internally and externally assessed credits across year levels. The strong general agreement from students that credits from internal assessments and external assessments were valuable was not markedly affected by perceptions of doing well in either.

Figure 43 Year 11 perceptions and experiences of internal and external assessments<sup>26</sup>

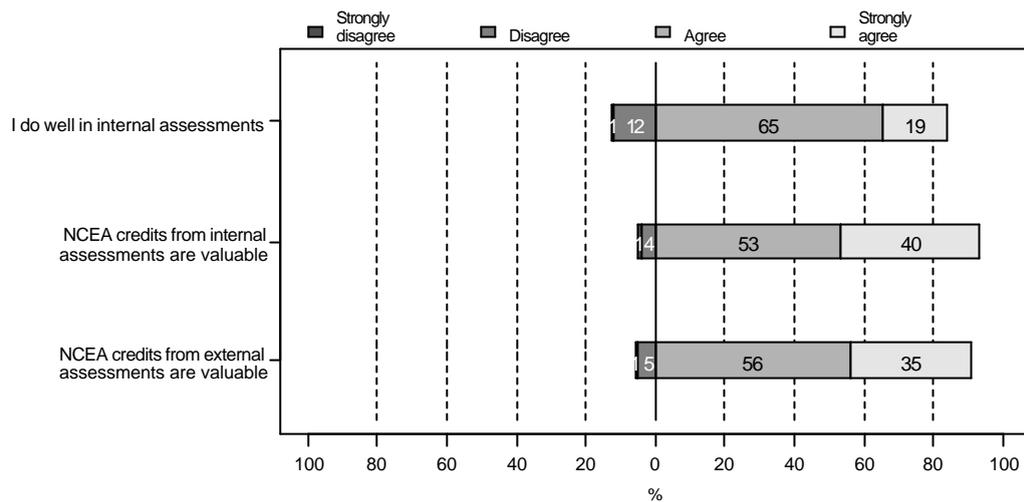
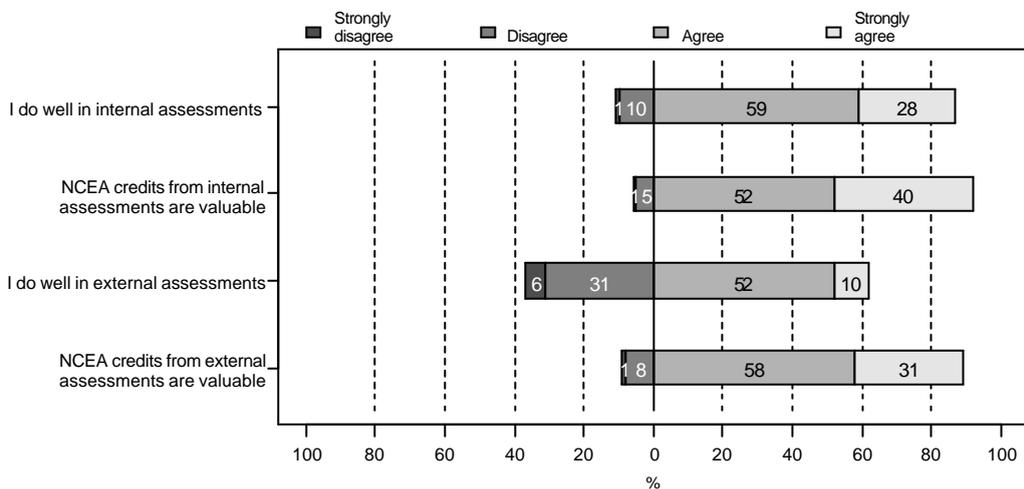
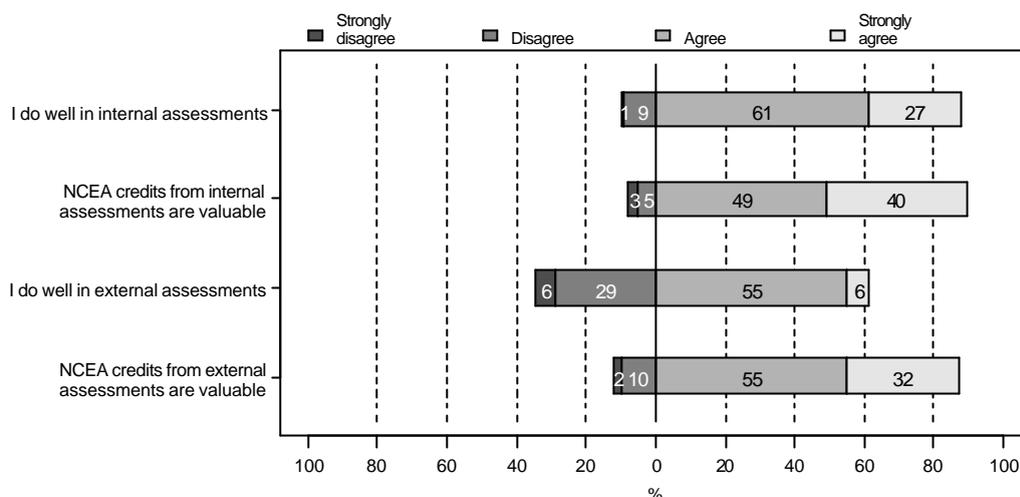


Figure 44 Year 12 perceptions and experiences of internal and external assessments



<sup>26</sup> At the time the survey was administered, Year 11 students had not yet done any external assessments (end-of-year exams) so they were not able to determine how well they did in them.

Figure 45 Year 13 perceptions and experiences of internal and external assessments



### Internal assessments

Students generally agreed that internal assessments were valuable. Only 3 to 8 percent of students disagreed that internal assessment credits were valuable.

We found some differences related to the version of English or mathematics being taken. Year 12 respondents taking traditional-discipline English courses were more likely than students taking other course types to agree that internally assessed standards were valuable. Year 11 students taking traditional-discipline English courses were more likely to report doing well in internal assessments. However, students taking contextually-focused English courses at Years 11 and 13 were less likely to perceive they did well in internal assessments.

Only a small number of students disagreed that they *did well* in internal assessments. However, Years 11 and 12 traditional-discipline mathematics course respondents were more likely to agree that they did well, whereas Year 11 contextually-focused mathematics students were less likely to agree that they did well.

With respect to *valuing* credits from internal assessments, students from City Schools A and C identifying as Asian were less likely to agree that these were valuable. However we have no other evidence to suggest any particular reasons for this.

### External assessments

Students generally agreed that credits from external assessments were valuable. However Year 13 students were less likely to value these. In general, Asian students were more likely to agree that external assessment credits are valuable except at Town School E. Year 13 boys from City School B and Town School E were more likely to disagree that external assessment credits were valuable. Town School E's students perhaps reflect their school's preference for unit standards that are internally assessed.

There was less general agreement about being able to do well in external assessments. Over half of students (60 percent) agreed that they did well in external assessments but there were some distinct school differences across the responses.

Years 12 and 13 students from Town School F were less likely to agree that they did well in external assessments but Years 12 and 13 students from Town School E were more likely to agree that they did well in external assessments. Year 13 students from Town School D and Year 11 students from City School C were also more likely to agree that they did well in external assessments.

## Cluster groupings

We cross-tabulated cluster patterns (see Section Three) of subjects at each year level with all the survey frequency data reported in this section. Cluster subject patterns appeared most meaningful in terms of student perceptions of the value of internal and external assessments.<sup>27</sup>

Responses to survey questions on internal and external assessments revealed a number of differences in perception between subject clusters of respondents which suggest that students taking mostly traditional-discipline courses are more confident of their ability in any assessments (internal or external).

This subsection begins with the clusters formed at Year 13 as they are fewer and more distinctive than those at Years 11 and 12.<sup>28</sup> In addition, Year 13 students have the most experience with NCEA and the different types of assessments and credits.

When Year 13 clusters were cross-tabulated against the survey questions about internal and external credits, students from the two most “academic” clusters<sup>29</sup> reported thinking they did well in external assessments. Students in one of these Year 13 academic clusters<sup>30</sup> were also the most likely to perceive achievement standards as easy.

Not only were students from Year 13 Cluster Two the most likely to think they did well in external assessments, but they were also the least likely to value internal assessments. Students from the most “vocational” cluster, on the other hand, were the most likely to value internal assessments. This bears out our earlier suggestion that differences in perceptions of value are likely to be related to differences in learning and assessment experiences. Students from the more academic cluster have more external assessments, for which achievement standards are always

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<sup>27</sup> As we have noted earlier (Section Three), it is important to keep in mind that the effects reported in this subsection may be attributable to school (school policy, culture, ethos, practices) rather than the subject clusters themselves.

<sup>28</sup> There are four clusters at Year 13, five at Year 12, and eight at Year 11.

<sup>29</sup> Year 13 Cluster Two (traditional-discipline science with other academic subjects) and Year 13 Cluster Three (traditional-discipline sciences and maths, with other academic subjects and ESOL).

<sup>30</sup> Year 13 Cluster Three.

used, and to which students tend to ascribe a higher status (this last point is reported in a following subsection on focus group perceptions of achievement and unit standards). Internal assessments, on the other hand, are likely to be valued by the more vocational cluster students because the subjects in that cluster tend to have internal assessments and unit standards; those students may not have much experience with external assessment. They may also value being able to “bank” internal assessments throughout the year to reduce any end-of-year external exam anxiety, as well as perceiving that internal assessments are more immediately linked to the work completed.

A similar pattern regarding student confidence with assessments generally emerged for the Year 12 students. The clusters where students were most likely to think they did well in internal assessments were the most academic ones.<sup>31</sup> Students from the most vocational subjects cluster were the least likely to think they did well in internal assessments.<sup>32</sup> This mirrors the external assessment findings at Year 13 and suggests overall that students taking more academic subject clusters are more confident with both internal and external assessments. It is also supported by the Year 11 findings where, again, students from the most academic clusters were the most likely to report doing well in internal assessments.<sup>33</sup>

Notwithstanding their increasing success in gaining credits, as discussed in the first two Learning Curves reports, it seems that for “less academic” students, assessment may still be seen as an anxiety-generating hurdle. This anxiety was both confirmed and illuminated by the focus group comments.

## **Currencies and conditions for pathways: Focus group perceptions**

Earlier in this section we examined focus group data to discuss what students responding to the survey were likely to have considered or meant when rating the value of the NCEA. Similarly, the strong general agreement about the value of achievement standards and unit standards, and external and internal assessment, can be illuminated through the focus group findings. As we have reported above, students’ perceptions of the value of the NCEA generally were heavily influenced by their experiences and perceptions of the assessment aspects of the NCEA.

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<sup>31</sup> Year 12 Cluster Two (traditional-discipline sciences, maths, and English with other academic subjects) and Year 12 Cluster Five (also traditional-discipline sciences, maths, and English but with a more eclectic combination of other subjects).

<sup>32</sup> Year 12 Cluster Three (alternative English, maths, and science with other practically oriented subjects).

<sup>33</sup> Year 11 Cluster Three (traditional English, maths, and science with arts and vocational or practical subjects); Year 11 Cluster Four (traditional English, maths, and science with languages and social sciences); and Year 11 Cluster Six (traditional English, science, and maths at Year 12 level with languages and a mix of other subjects).

In focus groups, students were asked whether they thought it mattered whether they got credits from internal assessments or from national exams (external assessments). They were also asked whether they thought it mattered whether they got credits from achievement standards or unit standards. Although their responses to each question are reported separately, there is considerable overlap which makes it also worth considering their responses together.

Firstly there is an overlap involved in the types of assessment—*all* unit standards are internally assessed and *many* achievement standards are externally assessed. So when students talk about a particular kind of standard, they are often talking about a particular assessment format as well.

Secondly there are some common themes emerging from each set of student responses. As with focus group discussions on what they thought was important to learn, and the idea of learning without credits being on offer, students were concerned with making decisions about their own learning and assessment in relation to several conditions. They took account of the constraints of their specific school systems and the NCEA system more generally. They also made decisions in view of their own post-school aspirations and plans.

Generally, students' perspectives tended to be more about the type of standard (achievement or unit) than the form of assessment (external or internal). Comments about the former focused on the currency of different credits with employers and tertiary institutions. Comments about the latter were mainly about time management, balancing workload, and strategic accumulation of credits.

## Internal and external assessment

Students generally perceived internally assessed standards to be easier than externally assessed standards. This is likely to be tied to the perception, discussed in the following subsection, that achievement standards are more difficult than unit standards—all of the latter being internally assessed. Students cited being able to resit internal assessments and a sense that having their own teacher mark the work (and therefore possibly understand it better) gave them a higher chance of passing than did external assessments.

Many students expressed a preference for internal assessments based on a distaste for exams and exam conditions. A number cited their own bad exam experiences, or fears they had about not being able to perform well in exams:

I don't like doing exams. I know the work but when I get into exams I feel like I let myself down. Because of all the internal work in NCEA, I don't feel as pressured. (City School A, Year 11 traditional-discipline course student)

You can't rely on external exams because some people get nervous and stuff in big exams. Internal ones might be easier to get because it's more of a normal environment. (Town School D, Year 11 locally-redesigned course student)

What if you freak out? What if you have done the work during the year and freak out? (City School B, Year 11 contextually-focused course student)

The environment of externals is pressured with people walking around to spot cheaters. (City School A, Year 12 student, course unknown)

However Year 13 students tended to be less concerned about exam conditions than Year 11 and Year 12 students. The comments they made about exams related to a preference for gaining some credits throughout the year rather than attempting all of them through end-of-year exams.

All year levels noted that the corollary of spreading assessments beyond the end-of-year exams was the spreading of pressure to perform throughout the year. Several students pointed out that the reduction in end-of-year exam pressure can be replaced by very specific pressure points where internal assessments are done in one designated week. Others pointed out that assessments can be spread throughout the year so that there is little time out from assessment:

My brother is getting to the point where internals and externals overlap. I think you need to balance yourself out and not get bogged down. It's constant work. (City School B, Year 13 traditional-discipline course student)

You have to be working and listening in class the whole time for there's always internals. (Town School F, Year 11 traditional discipline course student)

It's eliminated the cramming of School Certificate but [there's] pressure especially on internal assessments that are worth 2 percent. (City School B, Year 11 contextually-focused course student)

You're sweating about [internals] through the whole year. (City School B, Year 11 contextually-focused course student)

Students highlighted the growing importance of developing time management skills in order to cope with this. A number of Year 13 students in particular cited better time management as something they would like to be able to change about their own schooling experiences. Some advised Year 11 students to pay particular attention to time management when engaging with the NCEA.

A number of students pointed out that they relieved end-of-year exam pressure by gathering up credits through internal assessments throughout the year. Exam-based credits towards the NCEA were therefore repositioned away from being high stakes to being a "top up" to existing credits acquired through internal assessments. While students at all year levels spoke about strategising in relation to managing their external and internal assessments, Year 13 students appeared to be the most strategic, often linking this to the (higher) quality of work they could produce internally or "cost-benefit" of stocking up on internal credits earlier in the year. Many expressed their views as advice for younger students. Their perspectives are perhaps not surprising given their several years' experience with NCEA:

If you don't pass some of the internals you can try again in the externals. (City School C, Year 13 contextually-focused student)

Now you need a certain amount of credits to enter university. If you fail your internals it might all hinge on your externals. But at the same time you don't want to study something

that isn't going to get you into uni. (City School C, Year 13 traditional-discipline course student)

Don't think that because you've passed all the internals that you don't have to do the exams because you could get kicked in the ass if you end up needing the credits. (Town School F, Year 13 contextually-focused course student)

Another focus group described the advantages of internal assessment:

Student 1: Internals take stress off the end of the year.

Student 2: And everything you get at the end of the year is like a bonus.

Student 1: Cause if you've got half of your credits already.

Student 3: Some people last year had 80 credits at the end of the year. (Town School D, Year 13 contextually-focused course students)

## Achievement standards and unit standards

In focus groups, there was a general feeling among students that achievement standards are somehow superior to unit standards. However, many students were not able to articulate why they saw things the way they did.

Some students had a very good understanding of the difference between achievement and unit standards in terms of the assessment rules and requirements. However other students admitted they weren't sure about the difference. It seems likely that students who seemed most confused about the difference had only had experience with one type of standard. The following group of Year 11 students from a locally-redesigned course had little knowledge or experience with achievement standards:

Student 1: I don't know the difference.

Student 2: Aren't unit standards for credits?

Student 3: Aren't achievement standards higher?

Student 1: What are achievement standards?

Student 2: They are the same to me. (Town School D students)

Students from traditional-discipline courses showed a corresponding lack of knowledge about unit standards:

I don't really understand them [unit standards]. Like why have them? Are they for the people that don't pass the achievement standards or are they just extra easy credits to pick up on the way or are they like used for the internal subjects? (Town School F, Year 12 student)

Not many people understand the difference...I don't get it, but some people say that one is better than the other. I never had it explained what the difference is. (City School B, Year 12 student)

Not really sure what unit standards are. I've heard they're a bit easier. (City School C, Year 11 student)

The only students not to express any confusion about types of standards in any of the focus groups were from Town School E. This is perhaps not surprising given Town School E's position on the NCEA as one of many National Certificates. The school adopted unit standards comparatively early in the shift to a National Qualifications Framework, and the principal and HODs we interviewed see NQF qualifications at school as one early stage of lifelong learning in a "seamless" system. Town School E students were likely to have a good grasp of how the NCEA and forms of NQF assessment worked.

There were interesting discussions around the currency of credits from different types of standards. Some students argued that achievement standards gave them an opportunity to demonstrate higher quality achievement to employers and anticipated their value in a competitive employment interview situation:

Employers can't see how well students actually do. A student could pass all unit standards and another could get A in achievement standards and maybe an E. The employer would take the achievement standards student because you can see the levels. (City School A, Year 12 student, course unknown)

It's nice to have unit standards as a back up. But if your employer or the university sees an Achieved,<sup>34</sup> and they don't know that it's a unit standard, they'll think that you didn't work hard enough to get a Merit or Excellence. (City School A, Year 13 student, course unknown)

That's what counts when you go and get a job...if you achieved Level 1 and Level 2 they look to see how you have achieved it—unit standards or achievement standards. Some jobs and unis say that you have to have achievement standards at Level 1 and Level 2, else they send you to polytechnic. (City School C, Year 12 contextually-focused course student)

If you are going for a job and you have heaps of NCEA credits [from achievement standards] they [employers] think you'd be better to employ than someone with unit standards. (City School C, Year 12 locally-redesigned course student)

Last year in maths I turned down some extra unit standards because they look bad. What's the point? (Town School D, Year 12 contextually-focused course student)

At this careers evening last night every person I talked to said that once you go past 100 credits or so they [employers] start to look at merit/excellence for higher education. And you can only get them from achievement standards. (Town School E, Year 12 traditional-discipline course student)

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<sup>34</sup> It is not possible to gain other than an "achieved" award for unit standards.

While most students argued that achievement standards had more credibility with employers, a few students argued that unit standards were more useful for particular types of employment:

Unit standards are more useful. They show what you know. They are more practical. (Town School F, Year 13 contextually-focused course student)

Some students preferred the immediacy of unit standards—you do a piece of work, you get assessed on it, you get credits, and you move on. Some also pointed out that unit standards were suited to practical tasks because all you needed to know was whether you could do it or not. A number of students made the case for understanding that different types of assessment were geared towards different pathways through and beyond school:

Depends what you're planning to do after school.

Doesn't matter for factory-type jobs but universities expect achievement standards. (City School C, Year 13 locally-redesigned course students)

The students who most thought it did not matter what types of credits you got, so long as you got them, tended to be students in contextually-focused courses:

When you leave school they will probably care about how many credits you got, not where you got them from. (City School B, Year 12 contextually-focused course student)

Credits are just credits. (Town School F, Year 12 contextually-focused course student)

The students most concerned about having an opportunity to demonstrate achievements that could be ranked normatively tended to be from traditional-discipline classes, but also included students from other types of courses:

People would always like to know how well they are doing—a specific grade. (City School B, Year 11 traditional-discipline course student)

Well it matters because the achievement standards tell you how well you're going to do it while the unit standards tell you if you've done it. (City School B, Year 11 traditional-discipline course student)

Can see how well you did against the rest of the country. (City School B, Year 11 traditional-discipline course student)

With unit standards, no matter how hard you work or how well you do, it doesn't get shown. (City School B, Year 13 traditional-discipline course student)

Unit standards are worse than achievement standards as you can't tell how well you did (City School C, Year 12 student, course unknown)

People who put in the effort should get the credit and get a merit or excellence. (City School C, Year 12 student, course unknown)

[You] only get achieved for unit standards and it's like, why work when you can only get achieved? (Town School D, Year 12 contextually-focused course student)

For some students, achievement standards represented perceived prestige, particularly with employers or tertiary institutions. For others they provided the motivation to work hard. For still others, achievement standards gave them an inner sense of satisfaction and feeling that their work was highly valued. The opportunity for NCEA reporting with some norm referencing (i.e. comparisons between their achievement and the national average) gave them a sense of place within their national cohort:

I think achievement standards are better because you know how well you could have done. (Town School F, Year 11 traditional-discipline course student)

We just did a unit standard and a girl in my class got everything right and she just got achieved. It was good but if she was doing achievement standards she would have got excellence and it would have been more rewarding. (Town School F, Year 11 traditional-discipline course student)

Sometimes they put “Merit plus” and I really want to know: how far away was I? (Town School F, Year 11 traditional-discipline course student)

Gives you something to try and excel in instead of just passing. (Town School E, Year 11 traditional-discipline course student)

These comments about satisfaction can be linked to our 2003 survey findings on challenge and enjoyment for students. We found that relatively few students were choosing subjects based on any perception that achieving credits would be easy; rather “challenge” and “interest” were important influencing sub-factors within the highly ranked “enjoyment” influence for students choosing subjects. This may run counter to some ideas about students in school preferring the easy route. We have previously noted that the contextually-focused students are the most likely to favour “easy credits” but that this is likely to be a low-risk strategy for minimising possible failure for students who may not have achieved well at school, particularly in traditionally “academic” arenas (Hipkins et al., 2004).

Students did have clear views about the relative difficulty of the types of standards with most perceiving achievement standards to be more difficult:

It’s not fair, an achieved in achievement standards is probably way harder than an achieved in unit standards. (Town School D, Year 12 contextually-focused course student)

I had a friend who did full science. She failed with only 3 or 4 credits, whereas I passed applied science. (Town School F, Year 12 locally-redesigned course student)

Some unit standards are just too easy. Like using a microscope for biology just making a slide and looking at it and drawing a cell—that was 3 credits. (Town School F, Year 12 locally-redesigned course student)

However, a few students, particularly those from Town School E—the school most familiar with unit standards—suggested that credits from unit standards were more difficult to achieve because you had to get all of the assessment correct:

In economics, merit in achievement standards wouldn't have got achieved on unit standards. (Town School E, Year 13 traditional-discipline course student)

In unit standards the work is actually easier but you have to get it all right. (Town School E, Year 13 traditional-discipline course student)

With unit standards you know it's like 100 percent that you've got to get right so it kind of feels good if you pass a unit standard. (City School A, Year 12 traditional-discipline course student)

I'm a bit elitist because I have always thought that unit standards are dumbed down achievement standards...but then last year when I was taking geography I found the unit standards harder because you had to get everything to get an achieved. (City School B, Year 12 traditional-discipline course student)

In one focus group, students related the different levels of credit within achievement standards to learning goals, suggesting achievement standards gave them useful feedback:

Student 1: You know what you have done wrong. If you get excellence you know you've done well. But if they say you've failed or achieved you don't know what you've done wrong. It can make the person realise what they've done and then they can try harder next time.

Student 2: Allows you to set goals. (City School A, Year 11 contextually-focused course students)

One student found unit standards wanting in this regard:

Unit standards are harder. They are just pass or fail. They don't even give you the criteria you need. Then they tell you: you didn't do this and you failed. (City School B, Year 12 locally-redesigned course student)

This section reports students' perspectives on the value of the NCEA generally and the value of its "components"—the different forms of credit (unit and achievement standards) and types of assessment (internal and external). Survey results have given a broad sweep across the perspectives at each year level, and together with focus group findings, have allowed us to delve further into what students mean in their valuing of the NCEA and its assessment structure. It is clear that students' perspectives are closely related to the application of the NCEA as a qualification to the world beyond school.

Focus group students took a "horses for courses" view of the currency of different types of standards, reporting unit standards and achievement standards as useful and valuable, but for different purposes. Achievement standards seemed valuable in providing a competitive advantage in the employment and tertiary education marketplaces through their higher status. However unit standards were perceived as particularly useful and valuable for credibly demonstrating competence in practical, hands-on employment situations.

There were interesting perceptions about the degree of difficulty of each type of assessment standard. Some students argued that the work involved in achievement standards was more

difficult. Others pointed out that the 100 percent pass rate for unit standards made them particularly challenging since a small mistake that would result in being marked *down* with an achievement standard would constitute a *fail* grade with a unit standard.

However, despite some students' preferences, and the fine tuning of assessment choices where possible, the overriding concern for most of the students across all learning experience groupings lay with managing their workload in a way that led to achieving enough credits to pass the NCEA. In the next section we explore students' assessment management strategies, in particular their choices *not* to undertake some assessments in certain circumstances and their thoughts on the advantages and disadvantages of attempting assessments at higher levels of achievement (i.e. merit or excellence).

## 6. Student strategies for the NCEA

Even allowing for the limitations on student choices imposed by the school timetable structure, the subjects on offer at any one school, and school policies and prerequisites, our focus group data point to students making a number of strategic choices for dealing with the NCEA. These strategies are the topic of this section.

Students' strategies for engaging with the NCEA vary according to a number of things which were discussed in the previous section. Students evaluate opportunities at school such as which and how many credits are offered and which type of course is being taken. Choices also depended upon students' conceptions of themselves as learners, their aspirations for their school learning, and their aspirations and opportunities for the future beyond school. Students' perceptions of, and strategic responses to, the NCEA raise issues of relevance and engagement with learning. This takes the research focus beyond issues of whether or how students get NCEA credits to issues of whether and how they see school knowledge as relevant and valuable. We discuss these issues in more detail in the final section of the report.

### **Students choosing to skip assessments**

In the second Learning Curves report (Hipkins et al., 2004) we reported that teachers in the six schools were becoming quite concerned at a trend for students to pick and choose among specific standards for which they would be assessed, particularly at Year 12 level. Teachers saw this in terms of a lack of motivation, or workload pressure on students. They were concerned that, unless students were well informed, they could find themselves cut out of some school study pathways at Year 13 level with a possible impact for high-achieving students' Year 13 choices leading on to university. While the HODs interviewed agreed that they would like to "do less better", and some of them were reducing the assessable workload by reducing the number of credits available on courses, some were concerned about the possibility of removing credits that students could have achieved—particularly students who might not be able to achieve other (potentially remaining) credits. They were also concerned that students might perceive any reduction in the credits on offer as a reduction in the merit or significance of the subject course. When it came to students undertaking a "unilateral credit reduction" by skipping assessments, HODs were concerned that students would lose out in terms of their learning and getting a good foundation for later learning.

We asked about this issue again during the 2004 fieldwork, and also included questions in the student survey. We hoped to ascertain the extent of the concern (from the teachers) and the extent of the skipping taking place (from the students). The 2004 responses from the HODs were almost

evenly split in thirds between those who were concerned and annoyed at students skipping credits in their classes, those who were not concerned if the decision was for good reasons, and those who held a view somewhere between these two poles. On the whole the HODs thought that students were much more likely to skip internal assessments, and a number of them said there had not been a problem with students skipping external assessments that they were aware of.

HODs from several schools said it was school policy to contact parents when students missed internal assessments and said that it was unacceptable. Their concerns included the nuisance these students could create in class, their loss of an opportunity to gain “easy credits”, or that by skipping an assessment opportunity they might “sell themselves short”.

A number of the HODs who were less concerned said they had advised students to drop an assessment when they were under pressure of multiple assessments, or were not ready to be assessed and so unlikely to pass. However one of these HODs felt the teacher rather than the student should have the final say, and another noted that this needed to be an informed decision. One of these HODs noted that being able to skip gave students “more ownership” of their learning.

Some of the more nuanced views included that students have always skipped assessments and so the practice is not new to the NCEA, or that teachers have created the practice with their emphasis on assessment and so it is an issue for them rather than students to resolve. Two HODs who taught subjects where students took time to develop a product such as a portfolio said they had been able to flexibly shift final assessment points to avoid pressures. Several HODs empathised with the “terror” that students can feel in the face of assessments that require a performance of some sort.

## **Skipping assessments: Survey findings**

This subsection reports on the prevalence of skipping assessments among survey respondents, what assessments were skipped, and why. Twenty-five percent of Year 11 students surveyed, 41 percent of Year 12 students surveyed, and 48 percent of Year 13 students surveyed reported skipping at least one assessment at some point.

### **Skipping internal assessments**

Twenty-five percent of Year 11 students, 33 percent of Year 12 students, and 40 percent of Year 13 students reported skipping an *internal* assessment at some time. However the increase over year levels possibly relates to the nature of the question “have you ever...” and respondents from Years 12 and 13 may have been taking into account the previous year, or two (respectively), in their answers (e.g. Year 13 respondents may have answered in terms of assessments they skipped in Year 11 and/or 12.)

There was no relationship between a student’s *valuing* of internal assessments and the choice to skip an internal assessment. There was no relationship between skipping assessments and a perception of *doing well* in them for Year 11 students. However Year 12 students who thought they did well in assessments generally—internal and external—were less likely to skip *internal* assessments. At Year 13 level, students who *valued* the NCEA overall were less likely to skip an internal or external assessment.

There were some differences between schools. Generally, a greater proportion of respondents from the three town schools said they had missed internal assessments.

Table 27 **Students missing an internal assessment across the schools**

	City A		City B		City C		Town D		Town E		Town F	
	n	%	n	%	n	%	n	%	n	%	n	%
Year 11	24	18	13	12	7	9	35	36	54	33	35	34
Year 12	30	32	53	27	17	24	22	37	38	39	32	47
Year 13	35	43	44	38	8	27	19	49	19	33	17	52
Total	89	29	110	26	32	18	76	35	111	35	84	41

\* Percentage is based upon the number of students who responded at each individual school.

The following figures show the ratings students gave to the reasons for skipping internal assessments listed in the survey. The figures are based only on students who indicated they had missed some assessments.

Year 11 students were more concerned than Years 12 and 13 students with concentrating on external assessments at the expense of internal ones. Concentrating on external assessments might be a reflection of focus group findings on the higher status of external assessments. It may also reflect the subject choice options open to Year 11 students. The range of non-compulsory subject choices open to Year 11 students is comparatively smaller than those available to Years 12 and 13 students. As most Year 11 students take the traditional-discipline versions of those compulsory subjects and these are largely comprised of achievement standards, many of which are externally assessed, students may find that more of their important literacy and numeracy credits lie with external assessments. It is also possible that Year 11 students have skipped some internal assessments in favour of external ones because they may not be used to managing their time throughout the year—something that focus group students pointed out was crucial for internal assessments.

Several reasons for skipping internal assessments given by Years 11 and 12 students did not seem to be such an issue for Year 13 students. Comparable numbers of Years 11 and 12 students skipped internal assessments because they thought they would not pass but these numbers reduced by Year 13. A similar trend can be seen with the reasons, “The assessment wasn’t easy enough” and “The assessment didn’t seem to cover an important part of the subject”. Comparable numbers of Years 11 and 12 students cited these reasons for skipping but there was a reduction in numbers at Year 13 level.

These three reasons may together reflect an increased confidence for Year 13 students. In Section Three we reported that students were generally happier with their subject choices at Year 13 level, which is also the level at which there are no compulsory subjects (except for English options at City School A). As students reach Year 13 they are able to choose the subjects they find most engaging and these are perhaps also the subjects in which they do best. Students who have not been so academically successful may already have left school, thereby reducing the numbers of students who didn't think they "would pass the assessment" or who didn't find the assessment "easy enough". Additionally, Year 13 students are more likely to have a better sense of the subject and its assessments and consider the assessments to cover "an important part of the subject". Those assessments might be important to a number of possible ends for Year 13 students—for interest and enjoyment, for a critical part of the NCEA (e.g. literacy or numeracy credits), or for a pathway option beyond school such as a topic or credit relevant to a specific further study or employment option.

There were several skipping reasons that appeared to peak at Year 12 level. Higher numbers of Year 12 students than Year 11 or 13 students reported skipping internal assessments because they had "too many assessments on at the same time" and "had enough credits already". Year 12 students may be developing workload management strategies that include skipping assessments after having already experienced a year of the NCEA. They may feel more confident in their knowledge of the system and be more willing to exercise choice about which assessments they sit. They may also be trying to cope with spreading themselves across a wider range of subjects and assessments now that they have the opportunity to explore more subject options. As we reported in Section Three, Year 12 is the level at which the greatest number of subject options is offered.

Figure 46 Year 11 reasons for students missing internal assessments

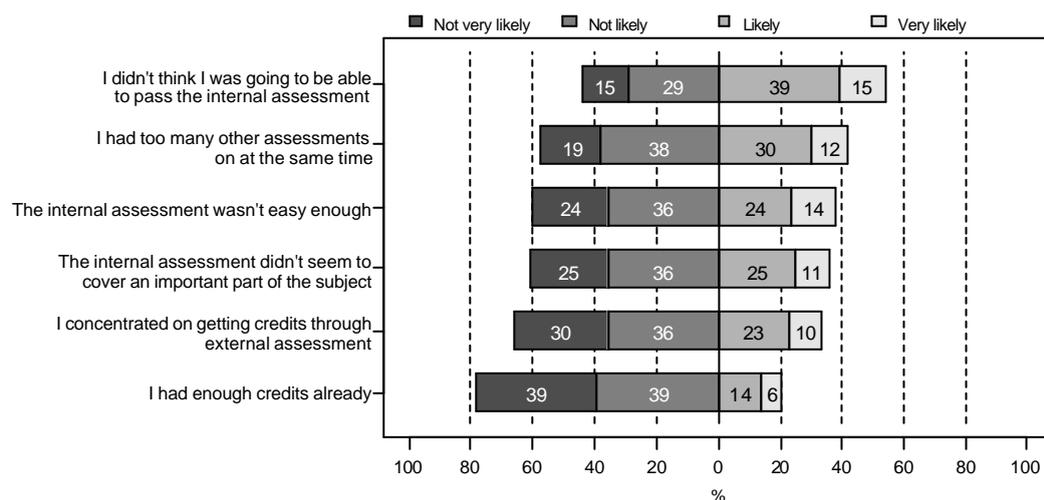


Figure 47 Year 12 reasons for students missing internal assessments

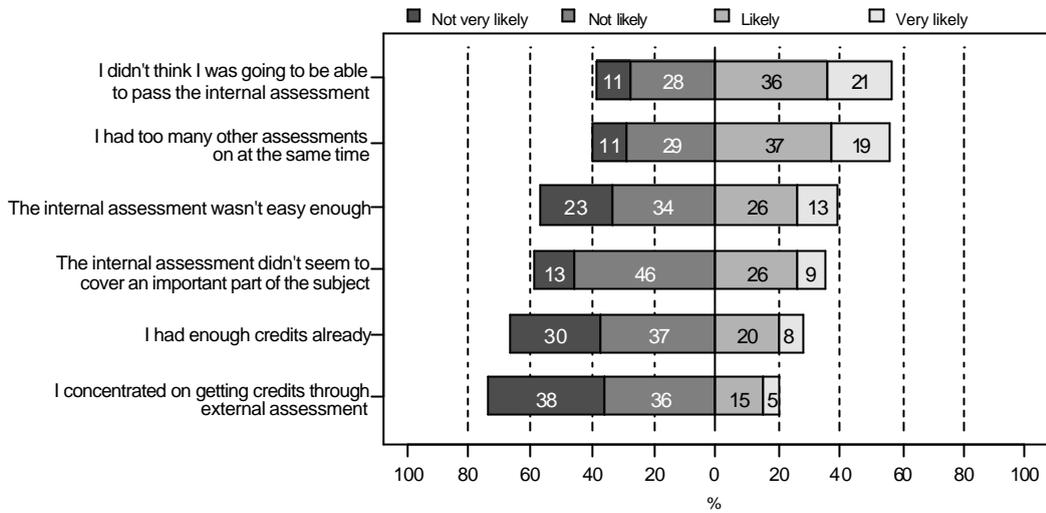
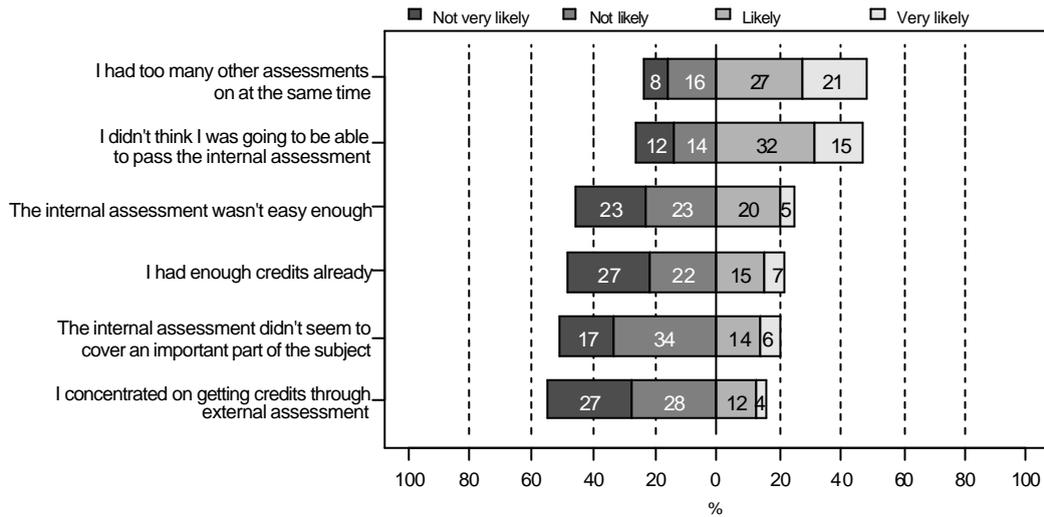


Figure 48 Year 13 reasons for students missing internal assessments



At all year levels, English was the subject in which students were most likely to skip an internal assessment. Of those who said they had skipped *any* internal assessment, 38 percent skipped an English one at Year 11, 47 percent at Year 12, and 51 percent at Year 13.<sup>35</sup> The following figure shows a breakdown of internal English assessments skipped by school. Noticeably fewer students skipped at City School C.

<sup>35</sup> To keep this in perspective, these students represent 10 percent, 19 percent, and 24 percent of the responding Years 11–13 cohorts, respectively.

Table 28 **Number of students skipping an internal assessment in English**

	City A		City B		City C		Town D		Town E		Town F	
	n	%	n	%	n	%	n	%	n	%	n	%
Year 11	6	10	8	13	2	3	18	30	4	7	22	37
Year 12	20	22	22	24	6	7	13	14	12	13	18	20
Year 13	22	30	25	34	1	1	11	15	6	8	8	11

\* Percentages are row percents.

### Skipping external assessments

Nineteen percent of Year 12 students and 26 percent of Year 13 students reported skipping an external assessment at some time. This is a smaller proportion of students than those who skipped an internal assessment at some time, possibly reflecting the association of internal assessments with unit standards, which tend to be perceived as of lesser value (see next subsections) although they do offer opportunities for re-assessment. Another possibility is that skipping internals reflects management of workload pressures throughout the year. Year 11 students were not asked about missing external assessments because the survey was completed mid-year—before any of the Year 11 students would have had a chance to do, or miss, external exams. Students from the town schools were not over-represented in the reporting of missing external assessments as they were for internal assessments. Instead the highest proportions of students who reported skipping external assessments at Year 13 came from Town School F and City Schools A and B.

Table 29 **Students missing an external assessment across the schools**

	City A		City B		City C		Town D		Town E		Town F	
	n	%	n	%	n	%	n	%	n	%	n	%
Year 12	18	20	39	20	6	9	15	25	13	14	20	29
Year 13	26	32	30	26	4	13	8	21	11	19	14	42
Total	44	25	69	22	10	10	23	23	24	16	34	34

\* Percentage is based upon the number of students who responded at each individual school.

The following figures show students' overall ratings of reasons for skipping one or more external assessments. Year 13 students skipping assessments may have done so for workload management reasons more often than Year 12 students. Higher numbers of Year 13 students cited being “under pressure because there were too many achievement standards in the exam” and having “too many assessments on at the same time”. This increase in pressures perceived at Year 13 level might be because those students tended to take a narrower range of subject options than those at Year 12, with a higher stakes aspect to them. As we reported in Section Three, Year 13 subject choice patterns indicate a comparatively more conservative approach that may be about following subject pathways already laid down, but also might be about consolidating specific numbers of credits, or credits at higher levels for future study options.

Similar numbers of Years 12 and 13 students reported concentrating on internal assessments and having enough credits already as reasons to skip external assessments. Following on from focus group findings, this suggests that by Year 12, and into Year 13, students are able to “bank” internal credits throughout the year as a way to relieve some of the pressure for end-of-year external exams.

Smaller numbers of Year 13 students reported skipping external assessments because “the assessment didn’t seem to cover an important part of the subject”. As we reported skipping internal assessments may relate to greater satisfaction with Year 13 subject choices and a better sense of the assessments and topics within those subjects chosen.

Figure 49 Year 12 reasons students missed external assessments

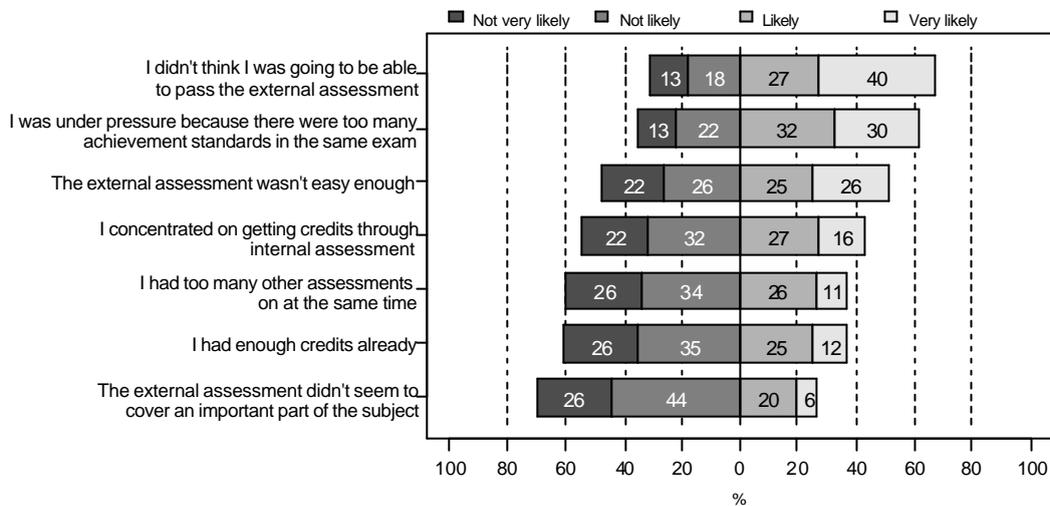
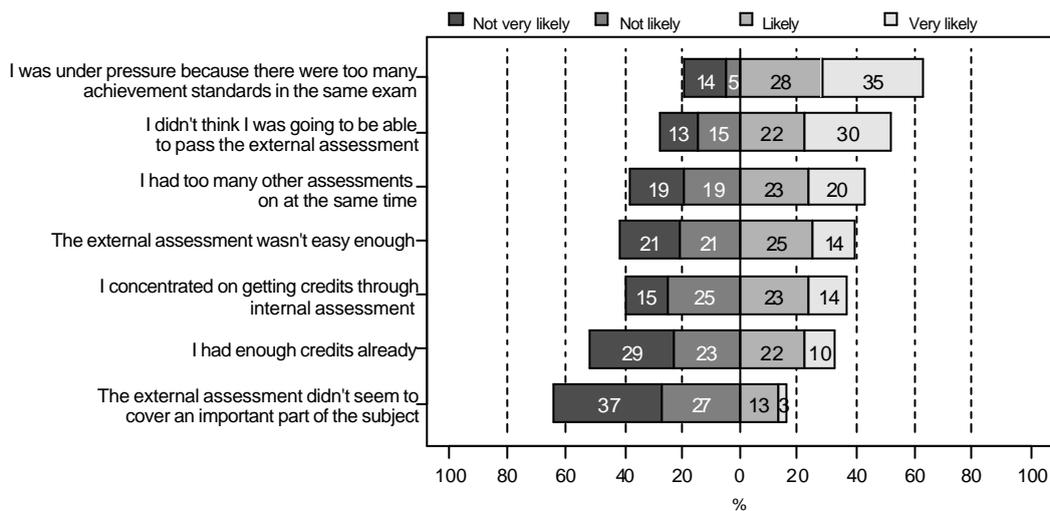


Figure 50 Year 13 reasons students missed an external assessment<sup>36</sup>



<sup>36</sup> Numbers may not add to 100 because of missing data.

Comparing the proportion of students reporting they missed one type of assessment (internal or external) because they wanted to concentrate on the other type (internal or external), it seems that Years 12 and 13 students were more likely to focus on internal assessments than external ones. Twenty percent of Year 12 and 16 percent of Year 13 students missing one or more assessments reported that concentrating on external assessments was a reason for missing an internal assessment. However, 43 percent of Year 12 and 44 percent of Year 13 students who missed one or more assessments reported the opposite—they missed an external assessment so they could concentrate on an internal one instead.

Having enough credits already was a stronger factor in missing an external assessment than an internal one. This is likely to be a reflection of the workload and timetabling situations we explored in earlier subsections where focus group students reported using a banking system for their internal credits to take the pressure off later in the year.

## Skipping assessments: Focus group findings

The thing about NCEA is that you know what they want and how much you need. (Town School F, Year 13 contextually-focused course student)

A number of students in focus groups indicated that they had formed strategies for gaining (or avoiding) credits when discussing the value of unit standards and achievement standards. Students had more to say about their strategies in response to our focus group question on what they thought about the advantages and disadvantages of choosing *not* to be assessed for some standards (i.e. the idea we have referred to elsewhere in the Learning Curves reports as “unilateral credit reduction” or “skipping credits”).

Students’ answers revealed some interesting clarifications of their strategies for accumulating credits, as well as patterns and distinctions between students at different year levels and types of courses (e.g. traditional-discipline, locally-redesigned, contextually-focused). There were also some differences between students from different schools, likely to be a reflection of the various school cultures and their different ways of organising courses and credits, and administering assessments.

We grouped students’ answers to our question about choosing not to be assessed into two categories, indicating the students’ level of knowledge of the NCEA credit system and/or their use of systems to monitor their credit accumulation (“strategic knowledge”). We then categorised motivation themes running across the strategies, noting that the same strategy could be produced from different motivations. For example, students who actively track their accumulated credits may do so only to see that they get enough credits to pass the NCEA, while others are interested in choosing between the different credit allocations of assessments and making sure they do not fail any attempted assessments.

Table 30 **Students' credit tracking knowledge and assessment choice motivations**

		<b>Strategic knowledge</b>	
<p>Students interested only in the number of credits on offer and whether these are a fair trade for the work involved in passing</p> <p>(generally the same students who saw no qualitative difference between unit standards and achievement standards)</p>		<p>Students who are only loosely aware of how many credits they have and have no particular strategy for choosing which assessments they will undertake</p>	<div style="text-align: center;">  </div> <p>Students who are aware of their own Record of Learning (ROL) and use the NQF/NCEA credits tracking system at their school and/or online through the NZQA website</p>
<p>Students who attempt to create a “point of difference” for their learning records, tertiary institution entry applications, or CVs by attempting higher levels of (recognised) achievement in achievement standards</p> <p>(generally the same students who are critical of a lack of acknowledgement of assessment standard type in ROLs (Records of Learning) or credit allocation for Merit and Excellence passes)</p>			<div style="text-align: center;">  </div>
<p>Students interested in learning challenges and/or satisfaction who attempt higher levels of (recognised) achievement through achievement standards</p> <p>(generally the same students who are critical of a lack of acknowledgement of assessment standard type in ROLs or credit allocation for Merit and Excellence passes)</p>			

In the previous section we discussed the way in which certain types of assessments (internal or external) and certain forms of credit (unit standards or achievement standards) could be more highly valued than others. Many students explained that these distinctions within the make-up of their NCEA qualification were important to them in creating competitive advantage in employment situations or tertiary education entry applications. When it came to the specific topic of skipping or accumulating credits, some students suggested that the *total number* of credits achieved was an important aspect of how they felt about their achievements as well as creating competitive advantage.

In the following discussion, one student (Student 3) even suggests that the total number of credits might be used as a proxy for the levels of achievement (achieved, merit, excellence) available for passing achievement standards. It also seemed that students in this focus group were not entirely clear about how numbers of credits work in relation to entry to tertiary institutions:

Interviewer: If you had enough credits by the end of the year would you still do your externals?

Student 1: Yeah, because the more credits you get, the better.

Student 2: Yeah, it's not if you got NCEA, it's 'How many credits did you get?' They used to say the percentage mark you got, but now you say how many credits you got.

Student 3: Yeah, under 80 credits you failed, if you got 80 you achieved, if you got close to 100 you did well and got the equivalent of a merit and if you got higher than that it's like an excellence.

Student 4: I don't know if everyone had it happen but my form teacher was trying to set an NCEA goal for the year, the number of credits you want to get.

Student 1: I just say go for all the credits you can.

Student 4: I want to get 150.

Student 3: There's always competition when you're doing credits to get excellence and stuff.

Interviewer: So there's competition to get excellence and to get credits.

Student 1: Is there something that tells you why it's good to get over 80 credits?

Student 4: You can take some to next year.

Student 1: Is it just self-pride?

Student 4: You can carry 20 to Level 2.

Interviewer: I'll turn the question back to you, do you think it's a self-pride issue?

Student 2: Yeah, but if I was employing someone I'd rather have someone who got 100 credits instead of 80.

Student 4: At this point it's more about self-pride. Later on it might be useful to have the extra ones to show you put in some effort.

Student 2: Would they look at NCEA or, if you went to uni, would they just look at that?

Student 1: The people that don't go to uni might not have as many credits but they'll be using that record to get a job.

Student 4: But then you probably need so many to get entrance to uni.

Student 1: But you hardly need any to get in.

Student 4: That's just for entrance, you need special things to get into certain subjects. (Town School D, Year 11 traditional-discipline course focus group)

The number of credits available for students to get varies between courses and schools, as does the form of assessment through which these credits can be achieved. For example, "alternative" mathematics courses at City School B and Town Schools E and F offer between them a range from 17 to 28 possible credits. In physical education, the range is between 5 and 24, depending on school. City School B's alternative English offers 9 achievement standard credits while Town School E's offers 17 credits, both unit and achievement standards.

Some focus group students found themselves confused by the credit total variations between courses within their school:

At the end you want to know if you have passed or failed. You have to sit there with a calculator and do it yourself. Also in the fifth form everyone was comparing credits, everyone was using 144 credits [24 credits each in six subjects] as a benchmark. I only did five subjects, but that was alright. In the sixth form the credits vary between classes. They are supposed to be around 24 but in one class the maximum was 18 credits. That lowered my total...that's why I want a percentage instead. (City School B, Year 13 contextually-focused course student)

Those who lacked sufficient guidance from teachers, or were not savvy enough to manage their own credit totals, found themselves unable to get credits where assessments overlapped between courses or having to scramble to get enough credits to pass NCEA. Without clear guidance for students and enough organisation from schools, it is possible that some students could end up without the opportunity to gain enough credits to pass NCEA within one year. We have seen that there are possibilities for students and schools to take a longer-term view of attaining credits. In 2003 City School A offered a locally-redesigned maths course which offered the same achievement standards as the traditional-discipline maths course but over two full years rather than one. However schools and students do generally still think in terms of students achieving one level of the NCEA per year level and this is particularly important for students who may leave school after achieving NCEA Level 1:

My friend last year, he was doing 3 NCEA subjects and automotive, a different system, as well as another subject. He could only get 70 credits in total. (City School B, Year 13 traditional-discipline course student)

People who are taking subjects that apply to the same unit standards [overlapping credits] can only get 30 credits between the two subjects instead of 48. Kinda like doing the same work twice. (City School B, Year 13 traditional-discipline course student)

I did a computer class that's only worth 6 credits. (Town School D, Year 11 traditional-discipline course student)

There are holes in some courses. I am doing Level 2 maths this year, and did Level 1 last year. And some of the unit standards have come through and we're doing them again this year. But the whole class has to do it so I'm wasting my time as I've already got the credits and can't get any more but I still have to do it. It's at least two or three unit standards too. (Town School E, Year 13 locally-redesigned course student)

## Students with no particular strategy and their motivations

Focus group students categorised as having no particular strategy were loosely aware of their own credit accumulation totals during the year. However some seemed only vaguely aware of the literacy and numeracy requirements for each level of the NCEA.

Of the students who had no particular strategy for tracking or skipping credits (regardless of whether they did skip any or not), students in all three learning experience groupings (traditional-discipline, locally-redesigned and contextually-focused) wanted to avoid failure. This is consistent with the survey findings where one of the most frequently reported reasons for skipping assessments was concern over not being able to pass the assessment.

However students in traditional-discipline courses indicated that skipping assessments was, for them, topic- and assessment task-specific. Consistent with the survey findings on English assessments being the most skipped, these students indicated that they felt very anxious about standing in front of peers and avoided assessments involving performance in front of the class:

Interviewer: So how many kids do you reckon didn't do it [make a speech]?

Student 1: Half.

Student 2: Yeah probably half or three-quarters of Year 11.

Interviewer: What don't they like about it?

Student 3: Just talking in front of your peers.

Student 4: It's too embarrassing. (Town School D, Year 11 traditional-discipline course focus group)

Speeches, a lot of people did drop that class because they were scared of standing in front of the class... Four people in my class didn't do speeches and about five didn't prepare for them. (City School B, Year 12 traditional-discipline course student)

People chose not to do monologues. But then they did a resit and it's not fair because the resit was a static image [assignment]. (City School A, Year 12 traditional-discipline course student)

I have had that experience in our English class where there is a certain group that never do anything to do with speeches or anything. When we sit there doing our work they are doing nothing. This is their own choice but they are distracting others. They should have been put in a unit standard course. Also they sit and watch speeches and laugh and put you off. Not all the people are confident. They should have a speech unit standard and make these people perform to teachers. (Town School F, Year 11 traditional-discipline course student)

For traditional-discipline students, skipping assessments was about a lack of confidence in a particular area and avoiding failure on their record. For non-strategic students taking contextually-focused courses, the relevance of the specific assessment and avoiding failure were cited as reasons for skipping assessments:

Student 1: If you don't know what the exam is about, there's no point in doing it because you're gonna fail anyway.

Student 2: It would be a waste of money if you enrolled and failed.

Student 3: Sometimes people skip the first assessment because they know there will be a reassessment. I did this. (City School C, Year 11 contextually-focused course focus group)

Students in locally-redesigned courses focused on concerns over their ability to do the assessments and cited short-term advantages involved in missing assessments such as sleeping in, having more free time, and avoiding the worry about assessments and the possibility of failure:

You can't do it [pass], so what's the point in doing it [trying]? (City School B, Year 12 locally-redesigned course student)

Within the grouping of students with no particular strategy, locally-redesigned course students were the ones who expressed the most uncertainty about getting enough credits to pass NCEA and who relied upon waiting until the end of the year to find out:

It's confusing. Credits are hard to keep track of. (City School B, Year 12 locally-redesigned course student)

They should inform us from time to time about the credits that we have. (City School B, Year 12 locally-redesigned course student)

Cause if you get 79 credits because you slacked off on an assignment and you need one more, you'll regret it. (Town School D, Year 13 locally-redesigned course student)

You'll regret it at the end of the year when you get your tally. (Town School D, Year 13 locally-redesigned course student)

Especially if it was like two credits and you would have passed if you'd got it. (Town School D, Year 13 locally-redesigned course student)

History project—I [skipped the assessment because I] couldn't be bothered and didn't feel informed enough about the project. (Town School E, Year 12 locally-redesigned course student)

## Student tactics and motivations

The survey showed that students who skipped credits did so mainly to manage workload and avoid the possibility of failing an assessment. Throughout the focus groups, students who tracked their credits and consciously strategised generally reported doing so for the same reasons.

### *Traditional-discipline course students*

Some of the traditional-discipline course students who were not particularly tactical about assessments focused on the workload involved in getting credits. Some elected not to pursue higher levels of achievement because the extra work involved would not be rewarded with extra numbers of credits. For them, the number of credits took precedence over the level of recorded achievement. These students also skipped assessments they did not feel confident of passing in order to achieve an efficient workload-to-achieved-credits ratio:

When you skip it won't show up on your record if you expect to fail. Or if you were having a bad time and felt you need to withdraw work. (City School A, Year 12 traditional-discipline course student)

You can get millions of credits and it's not worth anything because you only need 80. I've just about got double that. There needs to be an incentive to get more. There should be a

certificate with merit or excellence if you get an extra 20 or 30 credits. (City School C, Year 12 traditional-discipline course student)

The advantage [of skipping assessments] may be that you could choose [to miss] one because it's worth jack-all credits and focus on another subject and get twice as many credits for half the work. (Town School E, Year 13 traditional-discipline course student)

However, despite these credit-totals-focused students, most traditional-discipline students seemed to be motivated by the desire to secure a “point of difference” or competitive advantage for employment and tertiary education beyond school. Their decisions about which assessments to sit were informed and tactical and aimed at an efficient distribution of workload, not only for the immediate best payoff in credits but for maximised opportunity in pathways beyond school. For many of these students, reaching the required credit total to pass NCEA could be taken for granted; the issue was the quality of work completed and recognised or rewarded—through the NCEA pass and through success in employment or further study:

Some people might want to be a dentist or something. They would concentrate on science subjects and might skip parts of other subjects that don't affect their future work. (City School C, Year 13 traditional-discipline course student)

Now you need a certain amount of credits to enter university. If you fail your internals it might all hinge on your externals. But at the same time you don't want to study something that isn't going to get you into uni work. (City School C, Year 13 traditional-discipline course student)

These students also showed the most proficiency in managing their credits by using credit tracking systems and in their knowledge of how the NCEA system of standards types and assessment formats worked:

The credit system. You know how much you've got and how many you need to get. It gives you an aim, and if you get the whole 80 to pass Level 1 you know you haven't missed anything out. (City School C, Year 11 traditional-discipline course student)

The website is pretty helpful. Keeps you up to date. You can check your credits. (Town School E, Year 11 traditional-discipline course student)

There are five papers in the maths exam, which is quite a lot and there was also a sixth one (trigonometry). You have to make the decision whether to do trigonometry as an extra paper in the three-hour exam or not do that and do well in the other papers... I will probably go with the five. (City School B, Year 12 traditional-discipline course student)

If you did drop an internal you get more time to use for study for the externals. Everyone is doing internals at the same time so if one person doesn't do it you end up not taking part in the class. (City School B, Year 12 traditional-discipline course student)

If you think about it, with unit standards, even if you haven't learnt it there's a huge chance of doing the test, finding out what you got wrong, studying and doing the resit. If you don't want to try at all you're wasting a chance. (Town School E, Year 12 traditional-discipline course student)

Student 1: I didn't know what was better at the start—80 credits with excellence versus 130 credits with achieved. I'd go for 80 with excellence.

Student 2: But if you did that you'd get a really low grade average.

Student 3: If you only had 80 credits then you're not going to have enough across four subjects to have a high enough grade average.

Student 4: So really you need a mix of a decent amount of credits and passes. (City School B, Year 13 traditional-discipline course students)

The management tactics and familiarity with the system of these traditional-discipline students contrasted with responses from students in the other learning experience groupings:

Interviewer: What do you think your school could have done to make NCEA better for you?

Student 1: Tell us what is going on and how many credits we have got and need.

Student 2: Make the internet site easier to use. I can't get into it.

Student 3: Teach us better and explain things better, give us credit updates.

Student 1: They expect us to keep a record but sometimes they don't even tell us if we have passed. (City School B, Year 12 contextually-focused course students)

Interviewer: Do you keep a track of your credits? Someone showed me a table yesterday where they tracked their assessments and credits. Do any of you do that?

Students: Nah.

Student 1: Just wait till reports come.

Interviewer: How often do you get reports?

Student 2: Once a term. (Town School D, Year 12 locally-redesigned course students)

### *Contextually-focused course students*

Contextually-focused course students discussed the role that the total number of credits played in their motivations for subject selection and judgements about what was worth learning. Some commented on the inequities of the credit/workload balance in some subjects:

My problem with science and English and stuff, you are working towards credits and stuff but it is the amount of credits you are working towards. In history one assignment was worth eight credits but in science we are getting asked to do large assignments for two credits. (City School B, Year 11 contextually-focused course student)

People didn't choose sport and recreation because there were no credits involved. They put some credits in, but the class is really small. (Town School F, Year 12 contextually-focused course student)

Student 1: If I don't get credits, I don't go to class.

Interviewer: Why?

Student 1: It's a waste of time.

Student 2: They won't earn anything from learning.

Student 1: It [learning] just doesn't help you with anything so there is no point in knowing it anyway. (City School C, Year 12 contextually-focused course focus group)

Like many of the students taking traditional-discipline courses, some contextually-focused course students looked for competitive advantage by tactically skipping some assessments in order to organise workload and focus on their best opportunities for credit accumulation. This issue of balancing workload was particularly significant for these contextually-focused students who had to balance the demands of practical workshop or work-related subjects against those of more academic classroom-based subjects. This is because subjects tended to be mainly based around unit standards, which are internally assessed throughout the year. If any of their courses do involve achievement standards, often externally assessed at the end of the year, the "routine" of doing units of work which are immediately assessed may feel disrupted. As we have seen earlier in this section, the differences in forms of assessment create distinct advantages and tensions for students:

I had carpentry for a week block course and I needed to catch up on other classes. I had to flag some of them. I couldn't do them anyway. This was in biology. The advantages were catching up quicker and not stressing about it and not wasting my time. My mum expects me to sit all assessments but it is better to miss some. If I hadn't missed my assessment in biology I would have been another week behind. That assessment was a week long. (City School B, Year 12 contextually-focused course student)

The ones I skipped, there's a resit for them so it doesn't really matter. (City School B, Year 12 contextually-focused course student)

In some classes there are standards which continue on from each other so if you haven't done the first piece of work you can't continue on. (City School B, Year 13 contextually-focused course student)

Most people are able to judge their ability so they can figure out if they are likely to get the credits or not. (Town School F, Year 13 contextually-focused course student)

I know people who have skipped internals in art design. A couple of students have failed the first two assessments. The third one is a portfolio worth 14 credits and they feel they won't be able to pass the portfolio because it is externally marked. They would rather go back and definitely achieve the other standards. (City School B, Year 13 contextually-focused course student)

A few of the contextually-focused course students were studying towards other (non-NCEA) National Certificates so these students concentrated on getting enough credits to pass those. Most of these students came from City School E.

### *Locally-redesigned course students*

The most dominant theme for locally-redesigned course students was a focus on accumulating credits. This stance went hand-in-hand with the unit standards-based format of achieved/not achieved in many of these students' courses (and which dominated the contextually-focused courses). Where there was achievement standards-based assessment, many students felt no need to aim for anything higher than "achieved" since higher levels of achievement demand more work but are not recognised with higher numbers of credits. For some, the NCEA itself appeared to be the main aim, particularly since these students tend to be involved in courses that offer fewer credits towards NCEA than traditional-discipline courses:

There isn't much incentive to go for excellence because you get the same amount of credits for achieved or merit. (City School A, Year 11 locally-redesigned course student)

I don't do anything unless I get credits. (City School B, Year 11 locally-redesigned course student)

In maths we had to do a statistics project. I thought 'stuff that'. It was too much for two credits compared to other papers where there is less work for three or four credits. (City School B, Year 12 locally-redesigned course student)

In the exams if you have papers worth four and ones worth two, you sort of want to get the ones worth the most credits and leave one out. (City School B, Year 13 locally-redesigned course student)

In PE you don't get as many credits as other subjects—only 18—but in others you can get 24. But P E is really fun. As I am gonna do it in the future it'll give me good work experience. (City School C, Year 12 locally-redesigned course student)

They're here to pass NCEA as a whole. (Town School D, Year 13 locally-redesigned course student)

You want to get qualifications. (Town School D, Year 13 locally-redesigned course student)

Like some of the contextually-focused course students, locally-redesigned course students who were looking for competitive advantage or a "point of difference" often seemed to be making decisions with a smaller margin for failure (to achieve the Certificate) than those of the traditional-discipline course students. There are typically fewer credits on offer through locally-redesigned courses than in comparable traditional-discipline courses in the six Learning Curves schools so there are fewer credit accumulation opportunities for the students taking the locally-redesigned courses. Since some locally-redesigned courses have direct links to specific career pathways, gaining the NCEA itself was not always the sole focus of these courses for students. Instead they looked to gain an entry advantage to a particular industry or polytechnic course, or gain all or part of another National Certificate. Students taking traditional-discipline kinds of courses, on the other hand, may be intending to go to university and instead are likely to take courses that will give them opportunity to gain the required (higher) number of credits for the NCEA and entry to tertiary programmes. For these students, making decisions about skipping

assessments is about maximising opportunities for gaining numbers of credits and levels of distinction:

In my case I take the subjects that are harder to assess. I worked out the amount of NCEA credits. (City School B, Year 13 locally-redesigned course student)

I'm taking computer courses because they are needed for what I want to do. (City School B, Year 13 locally-redesigned course student)

In some courses you do them to lead up or get basic skills. Like the foodtech course—it's only got about seven credits but it's a first year City and Guilds course so it leads further [to polytech]. (Town School E, Year 12 locally-redesigned course student)

For externals it becomes a matter of time. If you only can do four things for the maths ones and you can get merits on them rather than doing five and getting achieved, then it works. (Town School F, Year 12 locally-redesigned course student)

Not sure about what I want to do. My goal is University Entrance and I understand what I have to do to get it. (Town School E, Year 13 locally-redesigned course student)

Because of my subjects I had to make it a full course, so I don't get any free periods. Otherwise I couldn't do it so I can get University Entrance because outdoor education is not recognised as a UE subject so I'm doing a full timetable. I do stats, English, PE, and geography. (Town School F, Year 13 locally-redesigned course student)

## Management options for students

There were clearly also differences in the kind of management or control of credits and skipping that students were allowed or encouraged to exercise. Several students indicated that their parents insisted they undertake all assessments. One thought that missing assessments would mean her “mother would kill me” (City School B, Year 12 traditional-discipline course student) and another imagined it would lead to getting “a hiding” from parents (City School C, Year 13 locally-redesigned course student). It seemed that different schools and teachers had different policies and practices around skipping assessments:

I tried to [skip an assessment] in [a named subject] but we have to make the decision as a class. We wouldn't learn it if everyone wanted to skip it but if one person wants to do the assessment we all have to do the work. (City School A, Year 11 traditional-discipline course student)

I tried to dodge an assessment because it didn't matter to me and I had other things to be doing. But my teacher went psycho and I'm going to do it. (City School A, Year 11 traditional-discipline course student)

You get a letter that goes home if you don't do the internal. (Town School D, Year 11 traditional-discipline course student)

Comes up on your school report if you haven't been doing tests. (Town School E, Year 13 contextually-focused course student)

Teachers get really mad at you. You have to be in class for weeks and you might not have anything specific to do. (City School A, Year 13 student, course unknown)

Student 1: They [teachers] will tell your parents.

All students: You get a letter sent home.

Student 2: You get an after school detention.

Interviewer: Sounds like your school encourages you to sit all the assessments you can.

All students: Yeah. (City School C, Year 11 locally-redesigned course students)

It is more about the school. The teacher advises you not to sit all of them because it makes the school look bad if you fail. It happened to me at my old school. I think it is very widespread. It happened here last year. It is bad not to encourage people to at least try. (Town School F, Year 12 contextually-focused course student)

Some teachers say these students here are capable of getting an excellence and these students aren't. So they'll teach the first group more. I've even had a teacher split the class in half and say 'I'll teach you separately because I want you lot to pass and the other lot to get a good mark.' [The teacher shows] how to get an achieved for one group and how to get merit or excellence for the others as they have already got the achieved part done. I think that it's quite good, it's extending. (Town School D, Year 12 contextually-focused course student)

## Decisions about higher levels of achievement

Student comments on achievement and unit standards in the previous section bear out recent recommendations from the State Services Commission that the NCEA should provide an achievement measure that distinguishes between achievement in test items of differing levels of difficulty (Review Team led by Doug Martin, 2004). Rationales and strategies around skipping assessments indicate that many students, from all course types, weigh up workload and credit worth (numbers of credits and types of standards). In this subsection we look at how this impacts upon the level of achievement that students attempt to demonstrate.

The PPTA's recent research reports that some teachers think some students may feel demotivated by a lack of recognition for their efforts in attempting tasks at higher levels of difficulty (Alison, 2005). We asked students in focus groups whether they thought it was important to try for merit or excellence. A number of students expressed a desire to feel satisfied with their work and to feel that they had truly earned their credits:

In university I think they recognise it [merit or excellence] but I reckon it's a personal thing. You are still going to get through school if you achieve. (City School B, Year 11 traditional-discipline course student)

It is good to aim high; if you aim high you are more likely to achieve. It doesn't show in credits but it is a personal thing. (City School B, Year 13 contextually-focused course student)

It's satisfying when you get it. (Town School D, Year 13 contextually-focused course student)

But it's more about self-confidence and self-esteem. (City School C, Year 13 locally-redesigned course student)

I think for personal goals I strive for excellence but not to have it written on the report. (Town School F, Year 12 locally-redesigned course student)

However, there were differences between the various learning experience groups, with some traditional-discipline students appearing quite conflicted. On the one hand they tended to be interested in undertaking challenging work and having their achievements in that type of work recognised, and on the other they felt resigned to managing their assessments in ways that maximised the return (credits) for input (work completed). Some felt resentful that working harder for higher levels of achievement did not result in more credits:

It is important but some people are going for achievement because you get the same amount of credits anyway. (City School C, Year 13 traditional-discipline course student)

You can get millions of credits and it's not worth anything because you only need 80. I just about got double that. There needs to be an incentive to get more. There should be a certificate with merit or excellence if you get an extra 20 or 30 credits. (City School C, Year 12 traditional-discipline course student)

It's kind of sad where people put in a couple of extra hours for an excellence project and then don't get anything for it. (Town School E, Year 11 traditional-discipline course student)

The trouble is people don't see the point in trying. They say 'Oh I've got credits anyway. I don't need to do so much.' (Town School F, Year 12 traditional-discipline course student)

That's why I don't like the system. I mean you can just see the credits and can say 'Oh I've got a hundred and something credits.' But they could all only be achieved ones or they could be all merits and excellence ones and because it's a bit more hidden—like how well you do in each thing—it's easy not to strive for the merit or excellence. (Town School F, Year 12 traditional-discipline course student)

Depends on where you're going. The way that uni entrance is set up it doesn't matter. It's just the amount of credits that you get. They don't seem to care what level the credits were at. (Town School F, Year 13 traditional-discipline course student)

In one traditional-discipline focus group the discussion turned to the difficulties of organising class teaching and learning around the different levels of assessment:

Student 1: I think we should stream from 6th Form onwards because you know there are students aiming for different things. Therefore the teachers could spend more time so that people can get what they are aiming for.

Student 2: If you've got a mixed class and they are teaching achieved one day, merit the next, and excellence after that, merit and excellence don't apply for some of the students in class. So what's the point for them?

Student 3: But sometimes the excellence standards get a very small amount of time because of the needs of the achieved students. And you know if you got taught the excellence stuff you could do heaps better. (City School A, Year 12 traditional-discipline course students)

The opinions of students taking predominantly contextually-focused and locally-redesigned courses tended to be focused more on passing the NCEA. These students generally had fewer opportunities to undertake achievement standards, with the differentiated levels of achievement, anyway. Many saw no point in working harder for the same number of credits you could get for an achieved grade:

No motivation because you don't get any more credits. (City School B, Year 12 contextually-focused course student)

I'm happy to achieve. You pass anyway. (City School C, Year 11 contextually-focused course student)

Credits are credits. (City School C, Year 12 locally-redesigned course student)

You get the same amount of credits in everything. (Town School D, Year 13 locally-redesigned course student)

Why try harder when you don't have to? You get the same thing. (Town School D, Year 13 locally-redesigned course student)

Don't really care as long as I pass. (Town School F, Year 12 contextually-focused course student)

Still get just as many credits if you get achieved, merit, or excellence. (City School B, Year 13 locally-redesigned course student)

Some of these students saw the availability of credits at merit and excellence level as something to aim for, and not necessarily achieve, but which will help secure an achieved grading and definite pass:

If you've got achieved and then you think okay I'm going to try for excellence it's a big step. Best to go for the one above you, like merit, unless you already have merit and want to go for excellence. (City School A, Year 11 contextually-focused course student)

As long as I get achieved, that's good. But then if you get an excellence you look good on the teacher's notes. (Town School D, Year 13 contextually-focused course student)

There's a higher chance of failing if you don't do much study or just try and do the minimum. (City School C, Year 12 locally-redesigned course student)

If you only aim for achieved and if you don't get it, you've failed it. (Town School D, Year 12 locally-redesigned course student)

Shoot high. You might end up getting achieved but if you aim for the top level you might get an achieved or an excellence. (Town School E, Year 13 contextually-focused course student)

In several focus groups the discussion turned to students' experiences of undertaking specific work or assessments whilst engaging with what could be uneven practice in standards-based assessment.<sup>37</sup>

Assessments are not quite fair because you have to get excellence on both parts to get an excellence. They take your lowest grade. I got an excellence on one section and an achieved on another and I only got achieved. Like in physics in an internal assessment. It happened to most of the people in the class. We got excellence on one section but achieved on another so then it was the mark we got. And there was a maths assessment last year as well that that happened in. (Year 12 locally-redesigned course student)

Student 1: If you get a couple of achieves and an excellence, but you miss out on all the merit questions, instead of just getting the achieved mark you can take the excellence mark and turn it into a merit. Because they say if you have the skills to get an excellence you are up to the merit standard and you get a merit overall. It's like taking back marks to replace them. It works the same if you get merits and miss the achieved.

Student 2: In science you can get all the merit and excellence part, miss the achieved, and fail.

Student 3: It varies in subjects. In maths you have achieved, merit, and excellence questions but in history you just have criteria you have to fulfil. You can get achieved, merit, or excellence for every part.

Student 4: Accounting and economics' marking is the worst.

Interviewer: What happens there?

Student 3: If you have two excellence and then you get a not achieved the overall mark is not achieved.

Student 4: And in School Certificate you would have got 75 percent cause you finished three-quarters of it and got the rest right. Excellence is meant to be 100 percent and merit is supposed to be 75 percent. But instead you got this fail mark—not achieved (Year 12 contextually-focused course students)

In another group students discussed the different workloads towards credits in different subjects or classes:

Student 2: Some of the credits you have to work three weeks towards.

Student 1: English, graphics, and art.

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<sup>37</sup> For the next four sets of quotes, the names of the schools have been removed. We think it is interesting that the subjects that are named by the students are of a similar type. But, especially in smaller schools, many of these subjects are taught by only one person who could be identified.

Student 2: In maths you work an hour and the assessment is an hour.

Student 1: In graphics we get three credits for a whole term's work and in the art IT one they get seven credits for a project that is less work.

Student 3: I am doing work experience and I get 38 credits for washing hair, and the way I talk and act [customer service]—this is for unit standards.

Student 4: In internal English they got 4 credits for reading a book out to the class.<sup>38</sup> In internal English they have set a project to do that you do in your own time. (Year 12 locally-redesigned course students)

In another, students seemed confused by what seemed to them to be rather vague criteria for different levels of achievement:

Student 1: Sometimes the only difference in a practical are the words 'has the x factor'.

Student 2: Like in history, 'showing initiative' can be the difference between merit and excellence. Or for example, by showing commitment to a 'hard' resource. (Year 13 traditional-discipline students)

Although some students appear to be confused and concerned about fairness, particularly where this may hinder their ability to work with the NCEA, the confusion may not be theirs alone. There is evidence that teachers are struggling with the idea of flexible and holistic marking of internally assessed standards, particularly achievement standards. Many teachers interviewed for the PPTA's recent research seemed comfortable with the idea of a holistic approach that looked at students' work (evidence of achievement) over a period of time or across an entire unit of work. However they raised many questions around "professional judgements that balance a number of the goals and principles which inform the new qualifications system, for example student motivation, fairness, inclusiveness, clarity, equity, and manageability" (Alison, 2005).

A number of teachers felt unsure about when to seek further (and a different kind of) evidence from a student or to allow a reassessment. They were also concerned about making judgements about differentiating between achieved, merit, and excellence where those distinctions rested upon a couple of words that were open to varying interpretation. Teachers used to a more "developmental" approach to knowledge, such as maths teachers, seemed to find this particularly difficult. Others claimed that some moderators seemed at odds with a holistic approach and gave advice that conflicted with other NCEA-related directives (Alison, 2005). Certainly, moderation of internal assessments has been hotly debated and is an ongoing concern (Hipkins, Conner, & Neill, in press; Nixon, 2005b). Lack of confidence in moderation procedures undermines the credibility of the qualification as a whole.

This is something students seem only too aware of. In their (unprompted) open and general comments at the end of the survey, the majority of comments from students at all year levels

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<sup>38</sup> This referred to "wide reading" and we note that there is more involved in meeting that standard than reading aloud to the class.

related to assessment and grading concerns. Fifteen percent of Year 11 students making comments expressed concerns over assessment and grading issues such as:

- the 100 percent pass rate needed in some unit standard assessment;
- the criteria for achieved, merit, and excellence in achievement standards;
- inconsistencies in internal assessment marking; and
- differences in NCEA difficulty across subjects.

Some also noted implementation problems such as the general clarity of the qualification, employers not understanding the NCEA, not being prepared for NCEA at earlier year levels, not having any “time out” from assessments, and differences in NCEA assessments between schools.

Eighteen percent of Year 12 students raised assessment and grading concerns too and the most common of these related to:

- the different perceived worth of unit and achievement standards;
- criteria for achieved, merit, and excellence;
- internal assessment deadline clashes; and
- the different levels of internal assessment difficulty between subjects.

At Year 13, 23 percent of students raised these issues, in particular:

- the different perceived worth of unit and achievement standards;
- differing levels of assessment difficulty between subjects;
- the 100 percent unit standard pass rate; and
- assessment inconsistencies that resulted in achieved grading despite passing merit or excellence level aspects of the assessment.

Students bring their knowledge (or not) of all these complexities to the assessment decisions they make and the tactics they employ. In Section Seven we explore the impact of the collective decisions a student may make on their developing “assessment career”.

## 7. Negotiating pathways and developing assessment careers: A critical review of the NCEA and “student learning needs”

### Introduction

The previous two sections reported student perceptions of the NCEA, students’ concerns and interests, and their strategies for engaging with NCEA structures and practices. Those sections, together with Sections 3 and 4 also highlighted the school and assessment regime contexts in which students form their perceptions and make decisions. The key topic of this final section of the report is the interaction of students’ perceptions, interests, and strategies with school ethos, the NQF/NCEA assessment system, and the broader sociopolitical context of schooling within a pathways-based framework and “knowledge society”.

### Producing a qualification

As part of a National Qualifications Framework (NQF) predicated on credentialling a wider range of learning, the NCEA affords a range of possibilities for students to engage in decision making about their learning. Such possibilities are not of course new, but they were more restricted in the past when the shape of the qualification was more closely prescribed and externally controlled.

Because students (and their teachers) can now make more decisions about the overall shape of the NQF/NCEA assessments undertaken, we might usefully think about students’ perceptions and strategies in terms of the *production* of qualifications. This capacity for production is arguably the most significant aspect of the NCEA initiative. While students had some limited determination in managing learning and assessment for School Certificate, Sixth Form Certificate, and University Entrance, the process is far more transparent and more flexible with the NQF/NCEA. Students choose which subjects to take (within the constraints of school policies), they may exercise some choice (again limited to a greater or lesser extent in different schools) over which versions of subjects to take (variously a traditional-discipline, locally-redesigned, or contextually-focused course). Students also exercise some choice over the number of assessments they will undertake for credits, the form of assessment favoured (internal or external), and type of credit (achievement standards or unit standards). In addition to the NCEA, they may work towards a range of other national certificates registered on the NQF.

We have seen that students are encouraged in varying degrees and ways to think about, and take an active role in, the assessment process—subject to school ethos, policy, and subject course practices as well as students’ own preferences, knowledge, and strategic interests that extend beyond school. In this way, they actively participate at two levels. They may take a more active role than in the past in making decisions about their participation in individual assessments (whether to participate, as well as the level of effort they will make). The combined result of making these decisions about assessment events is that, at another level, they are active in the production of their particular NQF/NCEA qualification.

## Students’ “production values”

Overall, students’ survey responses indicated a high valuing of the NCEA, its various forms of assessment, and its various means of gaining credits. Focus group discussions were very useful in fleshing out the meanings that students gave to different aspects of the NCEA and what in particular they thought was of value. Their responses indicated that the NCEA’s value as a qualification, or the currency of credits in a particular format (achievement or unit standards), was closely tied to ideas of “relevance” and “engagement”.

Students’ concerns and expectations included some very immediate ones such as gaining credits and passing the NCEA, and some longer-term ones about getting a job, establishing a career, or studying at tertiary level. In various ways these expectations contributed to notions of relevance. Meanings of relevance were interpreted in different ways that emerged in conjunction with students’ various identities and experiences, including learner identities, to form an engagement that appeared quite strategic in nature for many students. Examples of strategy appear below in response to the interviewer’s question “Some people say students don’t want to learn things unless they know they can get credits for them. Do you think this is true?”

I disagree entirely with that. People only don’t want to learn something if they don’t think it’s relevant. Like in maths, my teacher made me learn how many spheres sit inside a cuboid. I am never going to use that! And that is for credits. I am going to need to know that sort of thing for credits but I really couldn’t care less. (City School A, Year 11 traditional-discipline course student)

Student 1: It depends on what you want to get out of school. If you want to actually learn something to help you in life.

Student 2: I come to school to learn things, not to pass tests.

Student 3: That’s what I would like to think, but I do get trapped into that kind of thinking. Like if I have a research project I am thinking about what NCEA credits I will get for it. (City School B, Year 12 traditional-discipline course focus group)

As we have seen, certain courses provided different types of learning experiences. Traditional-discipline courses bore marked similarities to the conventional academic curriculum of the 20<sup>th</sup> century, and notions of relevance tended to be linked to future study plans or a flexible idea of

“learning to learn”. Contextually-focused courses provided more practical learning experiences and relevance here was more strongly tied to usefulness and applicability, both in everyday life and for employment beyond school. Locally-redesigned courses combined features of both these types in various ways. Relevance here could perhaps be strongly linked, in the first instance, to the vision of the teacher(s) who created the course as a deliberate departure from past subject traditions. How relevant it seems to students may depend on how well the teacher’s commitment “sells” them on the class. The value students attached to the NCEA qualification they produced, with its individualised credit structure, lay partially with their views of *relevance* to these different types of concerns and expectations.

*Engagement* with different types of learning opportunities and assessment options provided another perspective on students’ values in producing their NCEA. Although some students seemed unclear about what to learn or why, many others saw links between what they were learning (or what they wanted to learn) and their aspirations for adult life beyond school, tertiary study, career planning, and tangible occupations. They sought relevance in the correlation between the curriculum (“what sorts of things it is important to learn”) and their vision of their lives. The positive ratings of NCEA’s value in the survey reflects its status as a qualification, often *the* qualification, that students know or hope will move them towards their vision.

Students’ notions of relevance and engagement are notable here because they mark a reframing of the meaning of these terms (Vaughan, 2004). Relevance and engagement have always been central to progressive education’s concerns about the lack of congruence between traditional schooling and the lives and interests of students. However, earlier ideas about relevance and engagement in school were open to criticism because of a tendency to abandon the interests of working class children’s social mobility by meeting them “where they’re at” and “leaving them exactly there” (Green, cited in Avis, 1991, p. 117). Implicit in this criticism was the identification of relevance with a lack of academic rigour.

Notions of relevance and engagement are now rearticulated to a “pathways” vision of secondary and tertiary education which attunes schools to the needs of industry (e.g. in addressing skills shortages and producing highly skilled workers) and an emerging “knowledge society”, and forms the cornerstone of schooling policy and practice today (Vaughan, 2004). A pathways framework uses the notions of relevance and engagement to direct attention to school in terms of building individual human capital and economic prosperity through schools’ links to the labour market. There is an explicit emphasis on secondary-tertiary education links, flexible and clear routes to qualifications and careers, the establishment of parity of esteem between different qualifications, and career options. There is also implicit recognition of the increasing length and complexity of schooling participation and school-to-work transition, which casts labour market changes as demands to be met by the education system through an increased “responsibilisation” of young people (Vaughan & Boyd, 2005).

Within a pathways framework, what is relevant to students, and designed to engage them, is a vision of lifelong learning and various non-linear “careers”. These include school learning

careers, tertiary study careers, and paid work careers that are intended to merge in a seamless and continuous manner.

Throughout Learning Curves we have examined the ways in which parity of esteem and the notion of seamlessness have worked in practice in the six case study schools. The data from our final year of Learning Curves fieldwork show that students are “responsibilised” by the NCEA and that schools and students actively produce the NCEA through their continual involvement with it in terms of pathways through and beyond school. For many students this has meant making decisions and trade-offs that may have unintended, as well as intended, consequences for their learning, as well as for the assessment regime as a whole. One such consequence is the shape of what Ecclestone and Pryor (2003) call “assessment careers” which students develop in actively producing their NCEA qualification through a pathways framework.

## **Developing an “assessment career”**

In their study of tertiary students’ learning, Ecclestone and Pryor (2003) developed the metaphor of a “career” to describe how different individuals built a sense of self as a learner that changed over time and was mediated by the structures of the institutions in which they were learning. They defined an “assessment career” as a “specific shaping of habitus and identity within a learning career” (Ecclestone & Pryor, 2003, p. 478). Because the broader context of a pathways framework and the NQF, as well as the NCEA itself, tends to demand that students be highly involved in decisions about their learning and assessment, assessment can easily seem to be an “emotional event” where “one’s very sense of self might be invested for a possible risk of failure” and “an assessment career becomes a powerful strand in a learning career with its formation of learning habitus or identity” (Ecclestone & Pryor, 2003, p. 481).

Assessment careers unfold as a product of complex interactions between personal dispositions and interests and learning strategies within specific contexts. For example Ecclestone and Pryor describe how the assessment regime in one learning institution enabled students to determine in advance how difficult or easy assignments would be. These students combined their initial estimations of the difficulty of the assignment with their perceptions of their own abilities, and used this thinking to influence their tutor’s expectations about acceptable workloads and legitimate degrees of difficulty that could be demanded in the set assignment. In this way, the students put pressure on the teacher to lower their demands, or to provide feedback that would get students through.

The focus group discussions provided some insights in interactions between school assessment and subject choice policies, the structure of the NCEA itself, and students’ developing learning identities. Some students seemed to be developing assessment careers characterised by the use of low-risk strategies, with associated lower levels of engagement and motivation to learn:

Student 1: I don't know, ever since I heard about this NCEA I haven't seen the point in trying to get an excellence. I have got one or two before, but at the end of the day I'm more of an achieved student.

Student 2: It does help your grade point average at the end of the year.

Student 1: Yeah it does, but I don't look at that either.

Student 2: Do you think it's important though?

Student 1: For other people, yep, but anything over achieved for me is a bonus. A pass is a pass and that's just how it is with my family. (City School A, Year 12 traditional-discipline course focus group)

Using ideas of different forms of engagement (Fredricks, Blumenfeld, & Paris, 2004) we have seen some students engaged *behaviourally* by focusing mainly on gaining credits to pass the NCEA, while others showed an *emotional* engagement by attempting to balance their cost-benefit analyses of enjoyment and interest against credit value for work. We saw less evidence of students' *cognitive* engagement of the sort that would help them build a rich "learning career". It may be that the students felt "driven by the need to check off each task, each subgoal on the way to long-term accomplishments" and somehow lost "the idea that intellectual pursuits can be enthralling and that there is joy simply in learning something new" (Schallert, Reed, & Turner, 2004, p. 1725). The teachers' views on the excessive assessment loads borne by many students would support this interpretation.

Through their survey responses and in particular their focus group discussions, Learning Curves students have indicated that they have a vision of pathways through and beyond school and a sense of their own individual fit with those. Some students even argued for a more explicit pathways focus, including support for further "streaming" of courses or groups within classes, professing a highly individualised "horses for courses" understanding of how the NCEA could or should work for people. Students' responses in focus groups have exposed the NCEA's weakness here. For many, their professed strategies were not learning ones but assessment ones (although we asked most specifically about assessment ones). For these students, their internalising of the NQF/NCEA system has produced similar kinds of cynical forms of compliance, technical understandings of education, and low-risk strategies to those we have already seen under the previous assessment system. What is new and specific to the NCEA here is that these attitudes and dispositions are more transparent than under the previous system—largely because the NCEA as a qualification is also more transparent<sup>39</sup> and requires students to take a more active role in producing it.

The NCEA's association with notions of lifelong learning makes it important to point out that cynical and low-risk strategies have not (yet) disappeared as we might have hoped. However, we

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<sup>39</sup> We note here that there are arguments that the NCEA is not transparent. These arguments have tended to focus on NCEA moderation processes (Eadie, 2002; Nixon, 2005b) whereas our comments relate to the manner in which the qualification is "produced" as a cultural artefact.

note it has only been three years since Level 1 of the NCEA was implemented (and less for other levels). Perhaps what students' attitudes usefully reveal here is that summative assessment at every year level is not always conducive to (lifelong) learning. There have certainly been suggestions that schools are over-assessing students since the NCEA was first implemented in 2002 (see for example retrospective comment in English, 2004; Nixon, 2004) and some of the HODs we interviewed were moving to "do less better" by reducing the number of assessments in courses. The Minister of Education also recently prompted more public debate over possible NCEA restructuring by suggesting that schools might encourage "brighter" students to skip Level 1 of the NCEA if they are likely to leave school and have passed Level 2 or 3 (Nixon, 2005a). This idea had some support from the Secondary Principals' Association, whose president suggested the system should not mirror the old one with three years of external exams but could instead be more like a degree, with credits in particular areas accumulated over several years. The PPTA president pointed out that many people had noted that the NCEA Level 1 was rarely a school leaver's qualification, as School Certificate had been, as more students now stayed on for Year 12. Although these ideas are still exploratory, they suggest future-focused possibilities for the NCEA that might even include students learning from the process of producing their NCEA qualifications—particularly if they have more assistance with decision making over strategy and learning topic and assessment choices. In this context, it is interesting to note that in Wales, every senior secondary student is now allocated a "learning coach" to support this type of decision making (Bolstad, in press; National Assembly for Wales, 2004).

We argued elsewhere that Learning Curves students appeared to have quite narrow views of learning but that these may be related to teachers not articulating insightful reasons for taking particular subjects (Hipkins & Vaughan, 2002b). It may be that the NCEA has tended to produce assessment careers for students *and* teachers that are shaped by the interaction with political and institutional pressures, leading to "norms and networks of (largely implicit) expectations and agreements that are evolved between teachers and students" (Ecclestone & Pryor, 2003, p. 479, citing Black & William 1998, p. 56). We should point out again that this is not new. Assessment careers are built on learner identities. It seems that some learners begin to develop an identity that orients them to low-risk performance goals rather than challenging learning goals as early as their preschool years (Carr, 2001). What we have found is that the NCEA does not (yet) seem able to disrupt such patterns and may further consolidate them.

## **Assessment and lifelong learning**

Studies of different assessment systems show that their impact on learning identities and dispositions becomes doubly important when young adults return to education in a system of lifelong learning (Ecclestone & Pryor, 2003). Here is the crux of our work: cast in terms of pathways *through and beyond* school, how well does the NCEA meet student needs?

Learning Curves students, principals, and teachers all have perspectives on the relative merits of organising and managing the NCEA in various ways deemed most relevant to meeting students' needs. The problem is that "relevance" is not self-evidently progressive; its social constructedness involves a political balancing act (Page, 1998). Part of that political balancing act lies in shifting the qualification towards assessment practices that would better foster lifelong learning, while still retaining its credibility as a qualification (Hipkins, 2005a). That credibility as a qualification must extend from students and teachers to parents and the public generally, and to employers and tertiary institutions, as the Ministry of Education pointed out in its discussion of the National Qualifications Framework from which the NCEA developed (Ministry of Education, 1997, p. 6). Interviews with the Learning Curves HODs, along with other research (Alison, 2005), show that this balance and credibility has not yet been achieved. Interpretation and implementation issues have impacted on credibility, and as we saw in Section Seven, students, too, are aware of these tensions, and mystified by some apparently arbitrary or unfair aspects of their assessments. If, in the future, the NCEA is able to better balance credibility and lifelong learning issues, there may be more widely varied and different "assessment career" options signalled for students.

Our first report stressed the NCEA's potential, through its design and intentions (Peddie, 1998), for addressing the dualistic commonsense of academic and vocational school qualifications as sorting mechanisms. We emphasised this in the report title: *From Cabbages to Kings* (Hipkins & Vaughan, 2002a). Teachers reported the tensions between offering students a timetable with wide subject choice or one with a smaller, broad foundation for all students. We noted the persistence of the arrangement of core subjects surrounded by satellite "alternatives" in five of our six schools and the pressure to stream students into ability groupings, with varying degrees of compulsion for students in the different schools. Nonetheless we were optimistic about the signs that pathways for students may be broadening and could become less rigidly defined by an either/or way of thinking about learning and skills.

In our second report we created three new descriptions for subject courses (traditional-discipline, locally-redesigned, and contextually-focused) in our efforts to think beyond the persistently problematic language of the academic/vocational divide and to better capture the learning and assessment design of courses being offered by schools. We reported that while traditional subjects still formed a "core" in our schools, locally-redesigned courses were emerging and several HODs had ideas for future locally-redesigned courses that combined assessments from different subject areas. There was an expansion in optional courses being offered, particularly within technology and, to a lesser extent, the arts. However we found that despite an emerging parity of esteem for the NCEA and other national certificates being offered through schools, the assumptions about what certain "types" of students are capable of, at school and in their lives, remained largely unchallenged. The tensions involved in challenging these assumptions were particularly apparent through our analysis of the subject of technology's "intellectualisation" through achievement standards and the issues thrown up for teachers concerned with, and students attracted to, the craft aspects of technology courses. We argued that for students to "succeed in a pluralistic, uncertain

future world, 'academic' and 'vocational' students *all* need to be equipped with at least some of the skills that such assumptions would assign to the 'other' group (Hipkins et al., 2004, p. 215).

We still think this. However, from our initial observations in 2002, and from our latest data reported here, we see that many students appear to have difficulties understanding the NCEA in terms of the pathways opening up. Some students see themselves as successful learners but others see themselves as successful collectors of credits. Throughout the focus group discussions, most students consistently indicated a preoccupation with accumulating credits in order to pass the NCEA. Wanting to pass or to gain a qualification is nothing new. Students have always wanted to be successful and to "get" School Certificate or University Entrance. But our data have begun to reveal the extent to which students consciously implicate themselves in each individual assessment. They not only have "learner identities" wrapped up in the qualification as a whole but also develop "assessment careers" through which they try to balance out the demands of credit accumulation, workload, and pathway progress as they learn. As we saw in Sections 5 and 6, for some traditional-discipline students in particular, there can be disquieting or tricky workload/credits/learning interest trade-offs involved. For other students, being able to privilege credit accumulation may reinforce a limited view of themselves as learners even though they may be experiencing more success in terms of gaining a qualification. This is because the greater involvement demanded of students in *producing* their NCEA qualifications means that some of them will feel the constraints or trade-offs more keenly because they "chose" them.

Students' involvement in assessment decisions is a double-edged sword here. As research on the Scottish National Certificate has shown, modular and continuous assessment can foster better learning, but it can also produce a passive focus on passing modules without an overview of the learning and the qualification as a whole (Lee & Lee, 2000), much like the "credits are credits, no matter what kind or how you get them" attitude expressed by some students in the focus groups. The focus group discussions on learning without credits, the value of different kinds of standards, skipping assessments, and merit or excellence grading revealed high levels of motivation, participation, and engagement—the NCEA demands these—but not necessarily in ways that facilitate an investment in (lifelong) learning. More of the decisions about assessment have moved on to students, in varying degrees, depending on the school. But there is a worrying tendency for learning goals to become performance goals. Students' assessment careers may not develop them as lifelong learners.

Despite this tendency, focus group discussions on what was worth learning in schools showed that most students did have ideas about what they should be learning and many of those ideas related to issues and contexts that were "real" for students. Much of the knowledge and many of the skills they described as "important to learn" were *skills for* or *knowledge for* particular pathways or steps along pathways beyond school. The value they placed on the NCEA lay with its currency in terms of those pathways and their own aspirations. The challenge for schools is to engage students at multilevels, particularly more cognitively (Fredricks et al., 2004), and foster lifelong learning dispositions through an assessment system which will see many young adults returning to it

(Ecclestone & Pryor, 2003) via tertiary-level study and training with National Qualifications Framework accredited tertiary providers and employers.

The types of changes to curriculum, teaching, and assessment that have been recently advocated for fostering the development of lifelong learning dispositions are not without contention. The type of knowledge students should learn is a subject of debate. Future-focused theorists say that students need to learn not just the “big ideas” of a discipline—the “canon” of knowledge discussed by several of the Learning Curves principals—but also the “meta-level” ideas of the discipline. That is, students need to know how history, say, or science, function as a knowledge system, and how new knowledge is built according to the “rules of the game” of experts in that discipline area (Gilbert, 2005b). One way to help initiate students into such meta-knowing is to provide authentic experiences of research in a discipline area. In this respect the NCEA has the potential to open up new learning because most subjects have developed research standards. However our Learning Curves research has shown that teachers often drop these standards (Hipkins et al., 2004) and that their students may see research as merely a process of information retrieval and repackaging (Hipkins, 2005b). Unless this situation changes, the potential of the NCEA to better this aspect of fostering lifelong learning is likely to go unrealised.

## Where to next?

It has become almost a cliché to assess the overall import of the NCEA using one of its own criteria—“not yet achieved”. However, most critique that comes to this conclusion focuses on what we might call the mechanics of assessment, with issues such as validity, reliability, and manageability foremost. Such a focus draws both researchers’ and reporters’ attention to matters such as moderation procedures, consistency of standards within and between subjects, consistency of judgements within and across schools, and teacher workloads. These are, of course, important assessment matters and must be carefully scrutinised. While they have arisen in discussions with both teachers and students, they have not been the focus of the Learning Curves project. Rather, over the three years of the initial implementation, we have sought to address questions of whether and how the implementation of this new standards-based system of assessing for qualifications does already, or might yet, better meet the learning needs of our young people.

As we see it, a focus on the mechanics of assessment, important as that may be for issues of fairness and public acceptance of the qualification, can leave too many assumptions unchallenged. Vexed questions such as the purposes seen for schooling, and for assessment, need not necessarily hinder an analysis of marking or moderation procedures, for example. But such questions come sharply to the fore when there is a *critical* focus on students’ learning needs. How are these needs to be understood, especially in the face of future-focused critiques of the well-established mass schooling practices of the western world? Should we continue to focus on assessment processes that “fairly” sort students for different sorts of life chances and pathways, thereby acting as a rationing process for future education opportunities? Or does the call for “lifelong learning” for

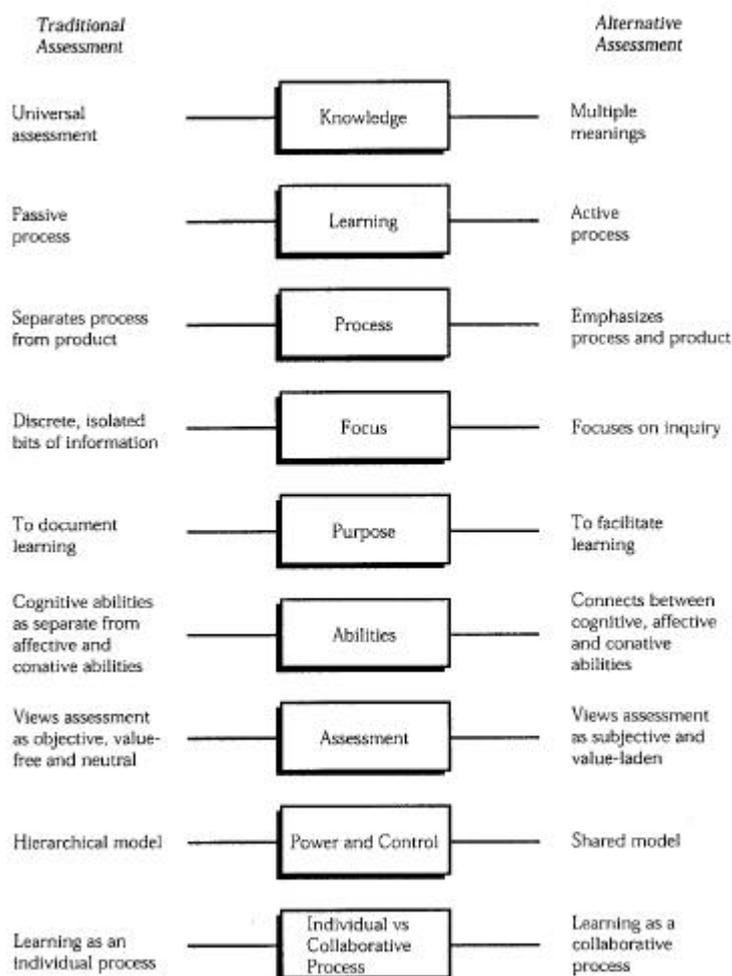
the “knowledge society” carry an imperative to look anew at what learning needs actually entail, with associated implications for the assessment system we use? Should we continue to teach and assess students by topping them up with knowledge of various subjects that have traditionally been seen as the foundation of an “educated” life? Or are there other types of outcomes—learning to learn, for example—that ought to be the focus of curriculum, teaching, and assessment?

It is perhaps unfair to assess the impact of the NCEA implementation to date against these future-focused questions, for they did not appear to be asked overtly when the qualification was initially built, or in its evolution through its early stages. Nevertheless, dissatisfaction with the former system did not arise from nowhere. Two governments of different political orientation would not have committed resources to NCEA’s development without having some sense of an imperative to initiate and sustain assessment change. Inchoate as the actual future-focused challenges may currently be, they must be on the policy makers’ radar screens, if not yet a focus for many teachers. Accordingly, it is in the spirit of this type of critical future-focused questioning that we draw together the threads of the Learning Curves project.

### Aligning the diverse elements of change

In a paper that reviews literature on the necessity for change in assessment practices, Anderson (1998) summarised the many aspects of education where current beliefs and assumptions are called into question. Her diagram summary is shown as Figure 51 below. The following brief “stocktake” of our overall Learning Curves findings considers which of the future-focused versions of the beliefs and assumptions she identifies here have been explicitly addressed by the NCEA reforms, with what degree of success. Which have yet to be examined, and so are likely to have remained unchanged?

Figure 51 **Comparison of philosophical beliefs and theoretical assumptions of traditional and alternative assessment**



Source: Anderson 1998, p. 9

### *Knowledge*

In the knowledge society literature there is a new focus on meta-knowing—that is, learning about the “rules of the game” of knowledge construction in different discipline areas (Gilbert, 2001), not just the products of that construction after the fact. The development of such meta-knowing implies a more active role for all learners as they experience new knowledge building within the constraints of different knowledge systems (Gilbert, 2005a). But we have found that achievement standards that assess research processes, for example, are likely to be amongst the first to be discarded when teachers seek to manage over-assessment (Hipkins, 2005b). We think these types of standards could be further developed to better reflect discipline-specific differences such as those outlined for history (Hipkins, in press). This is not to say that “knowledge” per se is no longer important. Rather we need to provide students with a twin focus on meta-knowing *and* on the really big ideas that are our heritage from each important knowledge system (science, history, the arts, and so on). At the same time this learning needs to be both academic and practical

(Hipkins, 2004), so a traditional curriculum that focuses mainly on settled, ready-made, academic knowledge begins to look increasingly problematic.

The NCEA implementation was not aligned with a curriculum restructuring.<sup>40</sup> Ideas about meta-knowledge and “multiple meanings of knowledge” (see diagram) cannot be easily reconciled with an *outcomes-based* model of education that:

...tends to focus on existing knowledge, skills and values. It lends itself to situations where accepted truths, specific competencies, particular methods and proven techniques are being taught and assessed. That is, the nature of what is being taught is able to be stated in advance in terms of prescriptive standards or criteria of performance (Hall, 2005, p. 244).

Seen in this light, it is not surprising that many NCEA standards, especially those we have called “traditional-discipline” achievement standards, continue to address the type of knowledge that was also assessed by the previous system. Clearly, for this to change, both the curriculum and the assessment standards would have to change. This is an issue that will need to be confronted as the qualification evolves, if we are to address these future-focused challenges.

Something our study has had less to say about is the issue of *coherence* of learning within a subject. This is an area where the NCEA shows both promise and weakness at the same time. We have noted that some teachers have lamented the “compartmentalisation” of learning in their discipline area. Others have taken up the opportunity to redesign courses, either of different duration (e.g. as semester or two-year packages), or with different combinations of content, both within and (less commonly) across discipline areas. Our Learning Curves research has shown that teachers have embraced this new freedom to design courses that can meet different groups of students’ learning needs, with parity of credentialing opportunities. The challenge here is to keep the flexibility offered by NCEA but also preserve the integrity of the disciplines—especially in view of the emphasis on meta-knowing sketched above. We shall return to this challenge shortly.

### *Learning*

While NCEA has supported some innovative changes in pedagogy in some classrooms (see for example Hipkins et al., in press) the students’ comments suggest that, for many of them, learning is still largely a passive process of absorbing the “right” answers to deliver in the right way in the relevant assessment event. As we have seen, instances of active cognitive engagement with learning were not often mentioned by the students in our study (although in fairness they were not the direct focus of our questions for discussion). We do believe that the NCEA could evolve in directions that challenge former and current deeply held assumptions and beliefs about teaching and learning. However, over-assessment creates a countering negative effect. Section Three also noted that tired, overworked teachers are less likely to be motivated to address such questions.

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<sup>40</sup> Although the Curriculum Marautanga Project has since been implemented and is nearing completion.

Hall (2005) suggests that the design of the NCEA as a whole needs to evolve because an outcomes-based model inhibits deep engagement when the parts of a course are taught and assessed in a fragmented manner. His solution, which he calls a “third way”, is to move to a different type of standards-based assessment that focuses on the *integration* of learning across the course as a whole, not on the separate components. The idea has merit but would need careful design so that the current flexibility can also be retained.

New directions in the Curriculum Marautanga Project, especially in relation to the introduction of key competencies into the curriculum, suggest one avenue by which an evolving assessment system could meet this “third way” challenge, whilst also addressing the need to develop meta-knowing, as outlined above. The key competencies are intended to be integrated into every curriculum area (Rutherford, 2005), and so they need to be interpreted in discipline-specific ways. New types of standards could be developed if these key competencies were to become the focus of integrative assessments, of the type suggested by Hall. Teachers would still be able to select “content” that matched their learners’ abilities and interests, so this aspect of design flexibility need not be lost. All this would need careful debate, and as much teacher involvement as possible (Hipkins, Boyd, & Joyce, in press) if it was to succeed and be understood.

### *Process/Focus*

These two aspects are discussed together because they raise closely related issues. The increased use of internal assessment within the NCEA potentially provides space for assessing process and product together. However our research has shown that students taking “alternative” types of courses are more likely to be the beneficiaries of this change and the continuing academic/vocational tension means that this type of change may not be as valued for students who take predominantly traditional-discipline courses. Non-NCEA courses such as those run in schools through Secondary-Tertiary Alignment Resource (STAR) funding and Gateway programmes also illustrate this irony. These courses share features of both contextually-focused and locally-redesigned courses, and are often run as alternative programmes alongside the “mainstream” school curriculum. However, despite having a character that is alternative, and often seen as peripheral, the combination of classroom and workplace learning in STAR and Gateway courses makes them the ones that are most likely to allow a pathways framework for education to flourish, with its emphasis on lifelong learning and relationships between industry and an emerging “knowledge society” (Vaughan, 2004).

Some standards do focus on inquiry processes, but there are issues to address. Technological inquiry, for example, is seen as too “intellectualised” for some students. Perversely, our second report (Hipkins et al., 2004) showed that more “able” students may be advised against taking such inquiry-based subjects because they are seen as insufficiently “academic” for them. Similar dilemmas exist for the arts, and as we have found elsewhere, for subjects such as home economics (Hipkins et al., in press). Again there is, in theory, no impediment to change, but as for learning, there is some rethinking of priorities and assumptions needed.

### *Purpose/Assessment/Power and control*

This is another grouping that we see as tightly inter-related. The primary purpose of the NCEA remains the same as that for the former assessment regime. It is for the documentation and certification of learning, with all the accountability responsibilities that entails. This purpose, which has traditionally relied on one-off, summative assessment events, currently exists in tension with future-focused calls for *all* assessment to better support learning. If assessment is really to foster and enhance lifelong learning, what are the implications for what and how we assess for qualifications? Our research has shown that, for some students, NCEA's twin promises of greater success in gaining a qualification and staying on a learning pathway can be seductive. However, it seems that these supposedly motivating changes may have simply supported the continuation of compliant or cynical assessment careers, rather than sparking the intended love of learning, and positive self-concept as a learner.

Theorists suggest a lifelong learning paradigm requires a quite different quality of learner involvement in the assessment decisions to be made. As we have seen, the NCEA involves students in making *tactical* decisions to produce an individualised qualification, but the strategies they employ are unlikely to draw them into genuine inquiry as to the *meaning* of their learning and achievements—both for themselves and for others (Delandshere, 2002). The development of a *sustainable* learner identity requires the development of an ability to judge the worth of one's own learning and this can only come with practice.

The processes used for making judgements against standards are supposedly holistic and could, in theory, open up a space where *meanings* of students' demonstrations of their learning are more openly debated and interpreted. Again, students' comments paint a picture that suggests, if anything, a hardening and narrowing of interpretations, at least in some subjects, so that the judgements made seem an unfair reflection of the work done. Teachers' experiences of moderation have made them more cautious in exercising their professional judgement, which reinforces these trends. This may be a teething problem that will ease when there are more exemplars to help set the meaning of each "standard", but this remains to be seen.

### *Abilities*

In her diagram, Anderson (1998) describes three type of abilities that are kept separate in traditional assessment but whose linkage should be an aim of assessment reform. The meaning of *cognitive* and *affective* abilities needs little explanation. *Conative* abilities concern "the degree to which knowledge and understanding can be practically useful and made applicable" (Alsop & Watts, 1997, p. 639). Alsop and Watts go on to say the conative dimension of learning is "concerned with questions such as: 'How can I use that knowledge? Does it empower me to act? Does it help me to solve a practical problem? Am I sufficiently confident of that understanding to put it to immediate use?'" (pp. 639–640).

Students who develop compliant or cynical assessment careers are no more likely, and probably less likely, to connect these various abilities in their learning than they were pre-NCEA,

especially the conative dimension. If the only purpose seen for learning is to pass an assessment and gain credits, as some students suggested in the focus groups, then questions such as those listed above would not even be asked. The telephone interviews we conducted in the first year of the project also suggested that students may not be developing ideas in the conative dimension for their learning. Asked to describe purposes for taking different subjects, very few students could talk in terms other than rather vague future plans and learning pathways, or self-evident applications such as needing good spoken English to talk on the telephone (Hipkins & Vaughan, 2002b). Over-assessment appears to be one barrier but this might also be about how learning is framed and “sold” to students by their teachers.

Again, assessment change would need to align with curriculum change for more progress to be made here. In this vein we note that the key competencies explicitly link knowledge, skills, attitudes, and values (Ministry of Education, 2005). The OECD project that first identified the overarching key competencies<sup>41</sup> made it plain that they should be assessed during the demonstration of actual performances of tasks situated in meaningful contexts (Rychen & Salganik, 2003). These OECD researchers emphasise that theirs is a functional approach to competence that places the “complex demands and challenges that individuals encounter in the context of work and in everyday life at the forefront of the concept” (p. 43). Thus there are evident links here to the conative dimension.

Interestingly, Alsop and Watts (1997) identified a fourth dimension in their study of informal science learning—learners’ self-esteem. They defined such self-esteem as encompassing self-confidence to persist in the face of obstacles (elsewhere called resilience), self-image as a learner, and autonomy. They defined the latter as the “individual’s capacity and motivation to pursue scientific issues, to find answers to questions” (p. 640). One of the key competencies (“managing self”) is defined as including the development of greater learning autonomy.<sup>42</sup> Again the question of drawing this aspect of curriculum reform into matching assessment reform seems worth at least exploring.

### *Individual vs. collaborative*

The final assumption from Anderson’s model will perhaps be the most difficult to address in assessment change because this is an area where deeply embedded ideas such as the mind/body binary remain largely unchallenged.

Gilbert (2005) contrasts the traditional view knowledge as something to be accumulated in individual minds with the knowledge society view of knowledge as more akin to a form of

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<sup>41</sup> The proposed New Zealand curriculum versions are somewhat modified from these, but their final shape is still being debated (Rutherford, 2005).

<sup>42</sup> Working definitions from the Curriculum Project that is still underway can be accessed at [www.cmp.ac.nz](http://www.cmp.ac.nz)

energy—something that is “created not in individual people but in the spaces between people” (p. 76). During the knowledge creation process individual minds become resources to be connected to other people and things (computers and so on) and the focus is on creativity and innovation. Because of this, assessment should take account of “all kinds of intelligence” with secondary students being asked “not if they are bright or intelligent, but *how* they are bright or clever (p. 82, emphasis in original) and how their abilities can *complement* those of others in a team. Her vision is a very long way from the subgrouping of students of like “ability” into courses of different levels of academic difficulty. And “collaboration” in summative assessment, which would be needed if such group complementarity was to be assessed for example, would still be seen as “cheating” in the current qualifications system.

There are profound issues for current practice embedded in this way of thinking about learning as something that happens in the spaces between people. Who and what are actually being assessed in conventional individual assessments? While we have always known that students with “good” teachers are advantaged in preparing to be assessed, the potential inequity is very sharply in focus here. As we have noted, some focus group students said they transcended the learning-for-credits bind because their teachers motivated them to enjoy their learning on other terms. But this was not common.

Preliminary work with secondary teachers (Brown, 2005, September) suggests another interesting dimension to this issue. Brown used his Conceptions of Assessment questionnaire in an exploratory study of nine secondary teachers’ conceptions of assessment and compared their results with a much larger study of New Zealand primary school teachers (Brown, 2004). He found that, whereas the primary school teachers are more likely to see assessment for accountability purposes in school/whole class terms, the secondary teachers were more inclined to view accountability in terms of students—that is, assessment makes students accountable for their learning, rather than making schools or teachers accountable. While one would expect students of this age to pick up the accountability challenge, the foregrounding of their professional accountability by primary teachers is a useful reminder that students do not learn in isolation from the learning environment structured for (and with) them. Again, this is an issue for ongoing exploration.

## New metaphors for changed times

Our expansion of Anderson’s analysis helps illuminate a very real dilemma. How can we get constructive change in assessment for qualifications when so many complex and contested dimensions are implicated in that change?

We propose new metaphors and models for thinking about the overall change dilemma. As the NCEA initiative has unfolded to date, it seems to rest on linear, developmental, one-step-at-a-time models of change. Within this traditional type of rational thinking model the NCEA has evolved as a *complicated* system where problems can be fixed by breaking the whole down into parts and then reassembling them (Crowl & Hall, 2005). The functioning of the whole is seriously impaired

if any one of the parts is not working well. This creates the stresses that have been all too obvious through our research. What if we substitute systems thinking and a *complex*, non-linear change model? Crowl and Hall suggest that the following could ensue if such a metaphor for change was adopted (p. 430):

- The reforms would be allowed to grow in more *organic* ways;
- Change would stem from ongoing *interactions* between the interested parties;
- Reforms could *shift direction* as needed;
- Initial goals would provide direction but would not be rigid endpoints;
- The *unexpected* should be seen as the norm;
- Success would be gauged in terms of how well the reforms *adapted* to ongoing changes in circumstances and understandings;
- Outcomes beyond those expected at the start of the initiative could be expected.

Reframed this way, ongoing change would need to address all the above issues together, working steadily if somewhat chaotically towards that point when all the elements came together in a new dynamic alignment. Change of this nature could not be imposed on teachers or the community, as the NCEA was. Everyone with an active interest in assessment for qualifications would need to be active participants in the evolving learning journey.

Framed by these future-focused themes, it seems naively optimistic to have carried expectations that the NCEA could achieve sweeping assessment and learning reform in three short years. Our research has documented the very beginnings of a challenging but exciting journey. We hope the reforms will continue to evolve, while bearing in mind the impact on teacher workloads, and also that for many of them the learning has been no less challenging than for their students. We also hope that we can continue our own learning journey in documenting and understanding the changes, and we are grateful to the principals, teachers, and students who have been our willing guides thus far.



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