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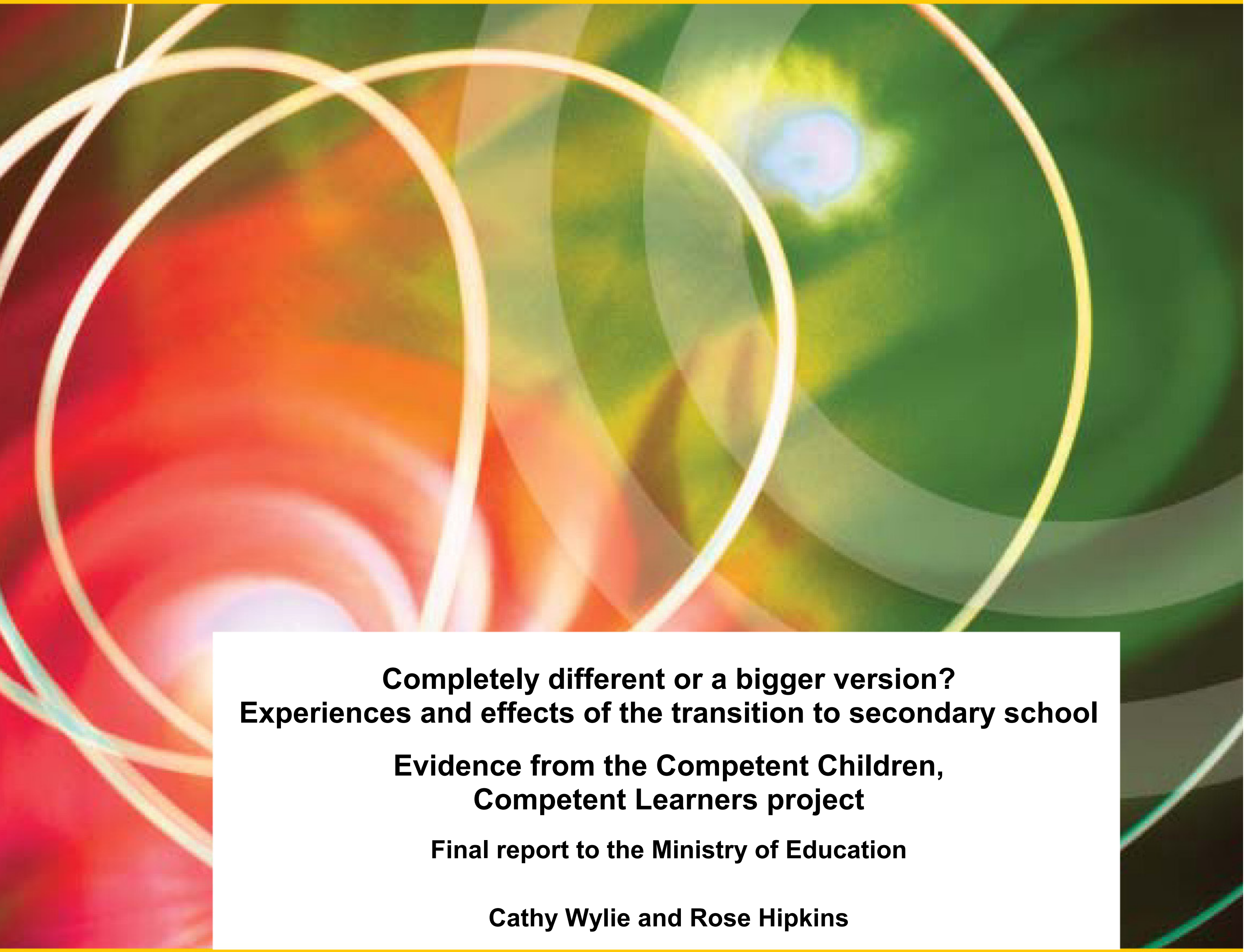

Completely different or a bigger version? Experiences and effects of the transition to secondary school

Evidence from the Competent Children, Competent Learners project

Final report to the Ministry of Education

Cathy Wylie and Rose Hipkins

RESEARCH DIVISION
Wāhanga Mahi Rangahau

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Cathy Wylie, Edith Hodgen, and Hilary Ferral

NEW ZEALAND COUNCIL FOR EDUCATIONAL RESEARCH

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Executive summary

KEY FINDINGS

Most of the Competent Children, Competent Learners study sample changed school when they went on to secondary level. This transition often involved some marked change in the characteristics of the school they attended—moving to a much larger school, or to a single-sex school. Friends were often lost in the process—but they were also gained. But secondary school offered students a wider range of experiences, rather than a totally new world.

Most settled into secondary school within two terms. The length of time it took to settle in reflected previous reactions to school as well as current. Prior feelings about going on to secondary school were not related; high performers were no more, or less likely to settle quickly than others. Those who did take two terms or more to settle had lower scores for the attitudinal competencies after taking into account prior performance and social characteristics.

Views of school remained mainly positive, though there were marked increases in boredom and restlessness. Students from low-income families, and in decile 1–2 schools showed less engagement with school. There were some similar trends for Māori and Pacific students in the study.

Contrary to fears that transition to secondary school negatively affects student performance, we found that change was just as likely to be up as down, and in fact that there was slightly greater stability of performance over the 2 years between age 12 and age 14, than there was for other 2-year periods when the sample was in primary school.

KINDS OF SCHOOL CHANGE IN THE TRANSITION TO SECONDARY LEVEL

Eighty-eight percent of this sample changed school in the transition to secondary level education. The most frequent kind of change was simply from an intermediate or full primary school to a secondary school. Just over a third moved from coeducational to single-sex schooling or changed their school socioeconomic decile, usually moving to a higher decile school. Just over a fifth went to a school that had a much larger roll (at least 3½ times) than their primary school.

We found little evidence of multiple “stacking up” of major change: sometimes one kind of change was “balanced” by another (e.g. moving from a coeducational to a single-sex school balanced by the new school being moderately larger rather than very much larger). While a list of the kinds of structural change that can occur for students in this transition can seem to add up, most students in this sample were not experiencing all of them simultaneously. Those who tended to experience more structural change than others also tended to be students from homes that were well resourced in terms of maternal qualification and family income.

VIEWS OF THE MOVE TO SECONDARY

The majority of students settled into their secondary school within two terms. Only 17 percent took longer. Parents and deans tend to see the settling in period as taking a little less time than students, on average.

At age 12, most of the students in this sample were positive or had fluctuating views about going on to secondary school. Reasons for looking forward to the change were anticipation of having interesting activities, more choice, and more independence. Reasons for being apprehensive were related to fears of negative social climates and work that would be too hard to do.

However, students who were apprehensive about going on to secondary level were just as likely as those who were positive to settle in within two terms.

On the whole, social characteristics were unrelated to student estimates of how long it had taken them to settle into secondary school. The one exception was low family income.

Students moving from a full primary school took longer to settle in on average than those moving to secondary from an intermediate. Shifting to a much larger school than the primary one led to a longer settling in time. It also led to more loss of friends—but more opportunity to make new ones. Shifting to a single-sex school from a coeducational also had a higher settling in period. Those whose new school was higher or lower decile than their primary one settled just as quickly as those whose new school was a similar decile to their old.

Friendships were important in settling in, as were teachers, family, and senior students.

Secondary school offered the students more—more subject choice, and more challenging work, as well as more teachers, students, work, and shifting between classes. On the whole, these things were seen either positively or neutrally. While most students thought that secondary level schoolwork was more demanding, around a third also thought they were repeating work they had done before. This suggests that repetition may be occurring in some subjects or some schools only.

Around a third felt they had less school responsibility than at primary or intermediate school; this and feeling they were treated more as a child were views more likely to be held by students and parents from less-advantaged homes.

Gender and ethnicity were largely not reflected in differences in student views of their new school. However, Māori and Pacific students were more likely to find it hard to get used to their new teachers.

SCHOOL CHOICE

Seventy-one percent of the students said their school was their first choice of school, and 73 percent would choose the same school again. Those who were less likely than others to be in their school of first choice were from low-income families, and they and Māori or Pacific students were most likely not to want to attend their current school if they could choose again. Students in low-decile schools were least likely to be at their school of first choice, or choose the same school again.

THE NEW SCHOOL ENVIRONMENT

Most of the schools attended by the students were organised in horizontal form classes, so that students would start secondary level with others of their own age. The common compulsory subjects of English, mathematics, science, and social studies provided continuity with primary school. This continuity was also evident with technology and the arts, which were compulsory at most of the schools. Six optional subjects were offered on average. Their content was related to school decile, with computer studies, the arts, or horticulture more likely to be offered at low-decile schools, and languages at high-decile schools.

Within-subject differentiation by student performance levels occurred to organise classes in compulsory subjects for between half to two-thirds of the schools, rather than streaming of groups for all classes. This within-subject differentiation is not dissimilar to the grouping practices that students would have been used to at primary school for reading and mathematics. Within-subject differentiation increased with school size, but occurred most in boys' schools, and also more in low-decile schools.

Cross-curricular or integrated courses occurred in just over a quarter of the schools, more commonly in coeducational schools than single-sex schools. Lunchtime activities for students were offered in all schools, though 42 percent of the students thought that only occasionally or never were there good things for them to do then. A wide range of extracurricular activities was offered, particularly sports, debating, kapa haka, music, and drama.

STUDENT AND PARENT VIEWS OF THEIR EARLY SECONDARY SCHOOL EXPERIENCES

Around two-thirds of the students continued to enjoy learning at age 14, and liked their teachers (even if there were more of them). Most seemed confident in their new school. They were slightly more likely to say they usually got all the help they needed—though the proportion of those who did not usually or always get the help they thought they needed (27 percent) remains of concern. But there were marked increases in boredom and restlessness, and in those who thought they could do better work if they tried.

There were signs that Māori and Pacific students were running up against the school rules more: they were less likely to think discipline rules were fair, and to feel they were treated as individuals. They were more likely to think they could do better work if they tried, but also more likely to think they got too much work to do.

Ethnic differences tended to overlap with family resources: thus we see the same trends in relation to family income and maternal qualification. However, in addition, there was a much greater likelihood that students from low-income homes or whose mothers had no qualification would report being bored, skipping classes, getting sick of trying, not liking their teachers, and wanting to leave school as soon as they could.

A marked change from when the students were aged 12 and in primary school was that students attending low-decile schools were now much less engaged, and less confident in their schools. They were, however, just as likely as others to like their teachers, feel they got all the help they needed, and that it was important to do their best.

Doing well at school mattered more for the sample at age 14 than it had at age 12—just over half chose this as one of the three things of most importance to them.

Subject choice was mentioned more by students at age 14 as something they enjoyed about school—otherwise there are no clear trends in what students enjoyed about school that are related to the transition to secondary school. Particular subjects were named, with more nominating health/physical education and the arts than the compulsory subjects. Sports were also enjoyed. Friends continued to top the list. Homework was not enjoyed by a quarter of the students, and mathematics, science, or poor or boring teachers by a fifth. Discipline was not enjoyed by 12 percent.

Homework was taking an hour longer each week, on average; but there was a growing gap between those who spent most time, and those who spent least time on it. Dislike of homework grew slightly. Parental help was slightly less than at age 12, and parents reported that they mostly gave it “when needed”. Forty-three percent of the parents said they had difficulty helping their child with mathematics homework. Parental help with homework was less likely in low-income homes, and for Māori and Pacific students.

Parent views

Sixty-five percent of the parents thought their child enjoyed school—less than the 75 percent at age 12, but comparable to age 6, after the transition between early childhood education and primary school. Family income levels remained associated with views of enjoyment of school—but not gender and maternal qualification. Low school decile was also more associated with lack of enjoyment of school.

Around a quarter of the students were thought by their parents to like only some of their teachers, or none of them. However, only 12 percent thought their child had little or no support for their learning from their teachers, and 19 percent thought their teachers gave their child little support for their emotional wellbeing.

Satisfaction with their child’s school progress was the same for parents with children in Year 9 as it had been at age 12, but there was a slight drop for those with children in Year 10. Māori and Pacific parents were less satisfied with their child’s progress. Parents from low-income homes thought that their children got less support from teachers than did others, and that their children enjoyed school less.

Parents of students in decile 1–2 schools reported less satisfaction with their child's school progress. They were more likely to have co-operated with someone at the school to sort out a problem, with a higher rate of social-emotional issues.

Parents were just as likely to work with their child's teachers to resolve issues at secondary school as they had been 2 years earlier. Most of these issues were resolved, but there was some increase in the (small) proportion of those that had not been.

The majority of parents felt welcome in their child's secondary school; patterns of involvement were much the same as they had been in their child's last primary school.

Parents' and students' views of the transition are not always in agreement—particularly around whether they had chosen the school alone, or as a joint decision, and about the levels of work and responsibility in secondary school.

FRIENDSHIPS

Most of the sample experienced changes in their friends over the transition to secondary school—friends were lost, but new friends were gained. Loss of friends was more likely with those who went to single-sex schools, or moved from full primary schools.

Friendships and independence from parents were becoming more important, particularly for students from low-income homes. Close friends were more likely to include both males and females, particularly for students at coeducational schools. All but a few students had some close friends.

Almost all the students said their school friends were good friends, and only a few wished they had different friends at their school. However, most students also have friends who do not go to their school, more so for students at single-sex schools.

Going out with friends to entertainment, or going out with them with no fixed agenda had increased. Entertainment carries costs; so it was not surprising that this was less likely to occur for students from low-income homes. Support or trust was a more important aspect of friendships.

SETTLING IN

Students could take longer to settle into secondary school if:

- the school was not their first choice;
- they thought the discipline was stricter than at their primary school;
- they found teacher expectations hard to get used to;
- they thought there was more work to do than at primary;
- they thought the work was more challenging than at primary;
- getting to school took longer;
- they did not find school enjoyable;
- they had regular paid work;
- their parents had concerns about them at school at age 12;
- they had not had friends to help their transition;
- they were not used to having more than one teacher at their primary school;
- they had little experience of changing schools; or
- they were in schools where it was less likely that information about them from Year 8 was used.

These aspects are not determinative—students who settled straight away could also have similar experiences.

The time it took to settle into secondary school did make some independent and additional contribution to the mean attitudinal composite score, with lower scores for students who took more than two terms to settle into secondary school. A similar trend was evident for Year 10 students in relation to their confidence in the school environment.

But the time it takes to settle into secondary school was the only factor specifically related to the transition itself that showed any negative associations.

There is no evidence from this sample that the transition to secondary school negatively affects student levels of performance—there is in fact a slightly greater stability of performance over this 2-year period than other 2-year periods during their primary school years. Change in performance was just as likely to be up as down over this time period.

We looked at factors that might be related to different patterns of change over the transition. Engagement in school and seeing achievement as something that occurs when absorbed in learning or working hard is related to improvements in cognitive areas. Feeling pressured by friends and having friends who display risky behaviour, are related to drops for the attitudinal composite.

IS TRANSITION TO SECONDARY SCHOOL A RED HERRING?

The value of a longitudinal study is that it can put this transition into perspective. Because we have material on students' prior performance and engagement in school, we can see that these carry more weight in early secondary performance and engagement than the transition itself.

However, there are three groups of students whose experiences and responses indicate possible emerging issues for the success of their secondary education. There are signs of a growing mismatch and discontent with schools among the low-income group, and, overlapping that to some extent, among those attending low-decile schools. We also see see some of these trends, but not to the same extent, among Māori and Pacific students. In our sample, Year 10 Māori and Pacific boys seemed more likely to experience decreases in performance.

This suggests that concerns over transition need to focus more on these groups, and the nature of learning and teaching in low-decile secondary schools. Given the importance of prior engagement and performance levels, we would also gain from ensuring that these are good *before* students come to secondary school: this should support positive and engaging teacher-student interactions for students from low-income homes and in low-decile schools.

1. Introduction

The transition from primary or intermediate school to secondary school is getting increased attention, in a context of concern about closing gaps in educational achievement, improving student engagement, and debates about the benefits of different school structures (intermediates versus middle schools versus Year 7–15 secondary schools versus composite (area) schools), and the needs of adolescents. The longitudinal Competent Children, Competent Learners project, which is being undertaken by the New Zealand Council for Educational Research and funded by the Ministry of Education, can provide useful insight into the nature of this experience, and its effects.

This project has followed a sample of around 500 from their final early childhood education in the Wellington region, with data gathered at 2-yearly intervals from age 6. In 2002–2003 we gathered information from and about the sample as they turned 14.[1] At that stage, a third were in Year 9, in 60 schools, and two-thirds in Year 10, in 63 schools. They had come from 129 different schools at age 12.

Table 1 describes the sample at age 14 in terms of the four social characteristics we analyse in the study. Our sample was not chosen to be representative of the New Zealand population. Because it was drawn from the Wellington region, it has more young people from high-income homes than the country as a whole, and more Pākehā/European. There are sufficient numbers of young people however to analyse differences in family income, maternal qualification, and gender; but for analysing ethnicity, we have had to group Māori and Pacific students, and Asian students with Pākehā/European.

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[1] Three other reports on the age-14 phase of this project are available through http://educationcounts.edcentre.govt.nz/research or www.nzcer.org.nz. Previous reports from the project are available on www.nzcer.org.nz.

Table 1 **Social characteristics of Competent Children, Competent Learners study sample at age 14**

	(*n* = 475)	%
Family income		
Low income (< $30,000)	58	12
Medium income ($30–60,000)	123	26
High income ($60–100,000)	150	32
Very high income ($100,000+)	123	26
Not known	21	4
Maternal qualification		
None	65	14
Trade/mid-school	235	49
Tertiary/senior secondary	86	18
University	85	18
Not known	4	1
Gender		
Male	248	48
Female	228	52
Ethnicity		
Pākehā/NZ European	376	79
Māori	50	11
Pacific	23	5
Asian	14	3
Other	12	3

In this report, we use the longitudinal data gathered in this project to compare experiences of secondary and primary school, as well as describe views of the transition itself. Our aim is to see what kinds of change occurred, and what the effects of this change might be. The rest of this introduction provides a brief outline of the main themes in research on transition to secondary school that we will return to in our descriptions and analysis.

- Chapter 2 describes the shifts made by the Competent Children, Competent Learners cohort in terms of school characteristics.
- Chapter 3 gives the Competent Children, Competent Learners project cohort and their parents' perspective of the change—how long it took them to settle, what helped them make the transition, and what was hard to get used to.
- Chapter 4 looks at the perspectives of Year 9 deans and form teachers on the transition to secondary, and then at the school environments of those who were in their first secondary level year (Year 9).
- The sample's engagement in school and views of learning are described in Chapter 5, comparing these with their perceptions of school and learning 2 years earlier, to see what changes have occurred.
- In Chapter 6, we focus on changes to friendships, since friendship is identified both in this study and in others as an important factor in helping students make the transition to secondary school.
- In Chapter 7, we use some of the material reported in earlier chapters to analyse factors that might underlie different rates of settling into secondary school.
- In Chapter 8, we analyse changes in performance on our competency measures over the transition, to see whether there is more change experienced than one might expect from students' previous performance patterns, and explore some of the factors associated with marked change.
- We then move on to model aspects of transition in relation to prior performance levels, and social characteristics, to see what role the transition to secondary school plays in relation to these, in Chapter 9.
- We conclude with a discussion of our findings.

To gain insight into the factors that might be associated with different experiences of transition and the initial years of secondary school, we have cross-tabulated responses from the sample in relation to four social characteristics: gender, ethnicity,[2] maternal qualification, and family income levels. We have also cross-tabulated their responses in relation to some school characteristics, particularly school socioeconomic decile, the gender mix of the school, and school type. Where appropriate, we have cross-tabulated responses in relation to the kind of transition made in terms of gender mix, decile, and school size. Parents' responses have also been cross-tabulated in relation to the four social characteristics. Year level school managers' responses have been cross-tabulated in relation to school characteristics. We report differences that are significant at the $p \leq 0.05$ level, with some differences that are marginally significant given the size of this sample but consistent with other material, with their p-value.

Analysis of covariance is used for the models in Chapter 9.

MAIN THEMES IN THE RESEARCH ON TRANSITION TO SECONDARY SCHOOL

McGee, Ward, Gibbons, and Harlow's recently published literature review (2004) refers to a wide range of different studies on the transition from primary to secondary level education, some focused on the actual experience of transition, and some on its immediate effects for students, including academic performance, self-image, relationships, and engagement in learning. This transition is often portrayed as at best challenging, and at worst, as undermining. Hawk and Hill (2004) conclude from their own work with mostly low socioeconomic decile New Zealand schools on the transition process that:

> *The evidence is that students experience difficulty regardless of the time and stage of the transition. Most New Zealand students experience two transitions because of our 2-year intermediate schools. Having schools on the same site, such as a campus or the Year 7 to 13 schools, does not necessarily guarantee a smooth transition. It is what the adults, and teachers in particular, do, that makes the difference rather than the physical proximity of buildings (p. 19).*

Both here and in England, there has been attention paid in recent years to making the transition process easier, and more productive, though school choice policy can make this more difficult since there are no defined "feeder" schools for each secondary school. As well as induction programmes, Hawk and Hill (2001) emphasise the value of holistic adult attention to students in secondary school, positive and constructive messages from primary teachers about secondary education, and the importance of students learning skills that will enable them to be self-regulated learners, well before they reach secondary school.

However, different studies with different populations have found different effects relating to the transition to secondary education. Grolnick, Kurowski, Dunlap, and Hevey (2000, p. 466) note that:

> *One point on which most researchers agree is that there is great variability in children's responses to the transition. Thus, the literature has turned from an emphasis on whether, in general, the transition is disruptive for children, to an examination of who is vulnerable and what factors protect children from experiencing declines in self-perceptions and academic performance.*

Effects related to transition to secondary level have been noted in systems with different schooling structures, and at different ages, making their interpretation difficult. Are they due to differences between primary and secondary pedagogy and organisation? To mismatches between levels of work? To losses of friends? To greater interest in extracurricular activities? To the concurrent onset of adolescence, and changes in relations with parents?

McGee et al. (2004) conclude that while there is some evidence of a decline in performance immediately after transition to secondary school, it is unclear whether this decline has long-term effects on engagement and achievement. There are suggestions that it is more likely to do so for some kinds of students than others. Grolnick et al. (2000) cite US studies finding greater vulnerability for already low-achieving students, those who had negative self-perceptions, and those with low peer support. Their own study found that students from middle- and low-socioeconomic homes declined more in self worth and reading grades, and that maternal involvement and support for children to be autonomous (and self-regulating) could act as a buffer in the transition to high school. They also note that one reason for the decline in reading and mathematics grades that they found is less a change in student performance, than "stricter grading practices of seventh- as opposed to sixth-grade teachers" (p. 482).[3] Nonetheless, a decline in grades can impact on student motivation, and increase the likelihood of dropping out of school (Anderson, Jacobs, Schramm, & Splittgerber, 2000). The latter cite other US studies finding that transition to secondary school was more likely to have a negative impact for students who had behavioural problems in elementary school, for students from low-socioeconomic homes, and (not unrelated), for African Americans and Hispanic Americans, and for girls (in relation to self-esteem). They note the importance of both preparedness (academic knowledge and skills, independence and industriousness, conformity to adult behaviour standards, and coping mechanisms), and support from others (informational, resources or services, emotional, and social (peers). The lower the levels of preparedness, the more support is needed.

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[2] We report only comparisons between Pākehā/European and Māori, since the numbers of Pacific and Asian students are too small (the respective numbers are 375, 50, 23, and 14).

Galton, Gray, and Ruddock (1999) conclude from their review of literature and study of effective practice in England on transfer between schools and transition from one year group to another (defined for their review as movement within a school), that while transfer had become less stressful, making a smoother path between schools did not always mean that "pupils' commitment to learning is sustained and their progress enhanced. …many pupils experience a 'hiatus' in progress after transfer." This is a particularly valuable study because it has comparable information for in-school transitions. What that shows is that there are similar dips in performance related to *in-school* transitions. Thus performance dips are not unique to the transition from primary to secondary level. Galton et al. suggest that there were particular times in schooling careers when some students could lose interest in learning, or motivation. In England, the performance dips they found were after transition to an 'in-between' year for national tests and public examinations, allowing students to focus more on social than academic interests.

McGee et al. (2004) noted the lack of New Zealand studies of the effect of transition to secondary school on achievement, and the need to know more about whether the experience differed in relation to factors such as individuals' social group, previous achievement levels, previous school experience, and out of school engagement, as well as aspects of schools, and differences between school levels in terms of size, pedagogy, and expectations of student role in learning. Currently the Ministry of Education is following a sample of around 100 students from their Year 8 schools into two urban secondary schools to gain greater understanding of these factors. Some initial findings from their transition into Year 9 classes were publicly released at the NZARE conference in November 2004, and comparisons will be made between material in that paper, and the findings from the Competent Children, Competent Learners sample in this report.

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[3] Most US studies appear to use teacher grades as their measure of student achievement or performance, rather than standardised tests, or similar tests or ratings used both before and after the transition. It is interesting to note that in a Finnish study of transition (Pietarinen, 2000), student grades did not drop markedly over the first year at secondary school, which is consistent with Grolnick et al.'s comment about achievement dips in the US being more related to changes in teacher practice than actual student performance.

2. The nature of the shift to secondary level for the Competent Children, Competent Learners sample

What kind of shift is actually entailed in moving from primary to secondary levels of education? For most of our sample, it did mean a change of school, but for 12 percent, it did not.

At age 14, 81 percent of the Competent Children, Competent Learners sample attended a Year 9–15 secondary school, 10 percent a Year 7–15 secondary school, and 8 percent, a composite school. Thirty-five percent ($n = 168$) were in Year 9, and the rest in Year 10 ($n = 306$) when we interviewed them.[4]

Two years earlier, when they were aged 12, 44 percent of the sample had been at an intermediate school, and 41 percent at a full primary school. Eight percent were already at a secondary school (Year 7–15), and 8 percent were in a composite school. Half of the students who did not change school remained in Year 7–15 secondary schools, and half in composite schools. Those who remained in the same school were likely to be attending either integrated (47 percent) or private schools (also 47 percent).

COEDUCATIONAL AND SINGLE-SEX

One of the big potential shifts between primary and secondary level is from coeducational provision, offered by most primary schools, to single-sex provision. Thirty-eight percent of the students who attended coeducational schools at age 12 shifted to single-sex schools at age 14. Thus at age 14, only 55 percent of the sample attended coeducational schools, when it had been 89 percent at age 12. This comparatively high proportion is likely to reflect the particular nature of Wellington secondary schooling.[5] The Wellington region's 49 schools include 19 single-sex schools, or 39 percent of the schools. Single-sex schools comprise 22 percent of the schools in other parts of New Zealand.

This shift was more likely to happen for girls (39 percent) than for boys (30 percent). Fifty-seven percent of those who attended coeducational schools were boys, a slight over-representation of the 52 percent in the sample who were boys.

Those who made the change to a single-sex school at this age were most likely to come from high-income homes (44 percent of those whose family income was very high,[6] decreasing to 21 percent of those whose family income was low). Children whose mothers had no qualification were less likely to change from a coeducational to a single-sex school (29 percent).

Most of the 52 students who had attended single-sex schools at age 12 remained in single-sex schools at age 14 (88 percent). Māori were less likely than others to attend a single-sex school (28 percent cf. 54 percent of others). Half the females in this sample attended a single-sex school, and 38 percent of the males. In this sample, attendance at single-sex schools increased with family income levels, from 24 percent of those from low-income homes, to 65 percent of those from very high-income homes, and from 34 percent of those whose mothers had no qualification, to 55 percent of those whose mothers had a university qualification.

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[4] In the Competent Children, Competent Learners project, individual interviews with the study sample have been conducted as near as possible to their actual birthday, but at age 14, we waited until the end of the first term so that students had sufficient experience of their secondary classes, and their subject teachers had sufficient experience of them to provide robust data. Most of the sample turned 14 between January and June 2003.

[5] Ninety-one percent of the sample were attending Wellington region schools at age 14.

[6] In this report, "very high" family income refers to levels above $100,000; "high" family income to between $60–100,000, "medium" to between $30–60,000, and "low" to below $30,000.

There is thus some potential confounding of gender mix with these aspects of social advantage.[7] Harker (2000) found that social advantage rather than school gender mix accounted for the better performance of students from single-sex schools.

Related to this, single-sex secondary schools tend to be of higher socioeconomic decile: nationwide 7 percent of single-sex secondary schools are decile 1–2, cf. 22 percent of the coeducational schools; and 31 percent are decile 9–10 schools, cf. 13 percent of coeducational schools. There are more single-sex schools with rolls between 500 and 999 (45 percent cf. 25 percent of coeducational schools), though there are more with rolls over 1000 also (28 percent cf. 20 percent of coeducational schools). State-integrated schools are less likely than others to be coeducational (47 percent cf. 84 percent of state schools, and 79 percent of private schools).

SCHOOL ROLL SIZE

School roll size was another characteristic that changed markedly with the transition to secondary school.[8] Of those who changed school, 26 percent went to a secondary school that had less than twice the number of students as at their primary school, 50 percent to a secondary school that had between 2 and 3½ times the number of students, and 21 percent to a secondary school that had more than 3½ times the number of students. Maternal qualification was the only social characteristic related to different patterns here, with students whose mothers had a tertiary or university qualification more likely to attend schools that were at least 3½ times as large as their former school (28 percent cf. 17 percent of those whose mothers had a trade or no qualification).

SOCIOECONOMIC DECILE

At age 12, 10 percent of the sample attended a low-socioeconomic decile school (deciles 1 and 2), 52 percent attended a mid-decile school (deciles 3–8), and 36 percent, a high-decile school (deciles 9 and 10).[9] The picture changes at secondary level. Eight percent now went to low-decile schools, 37 percent to mid-decile schools, and 52 percent to high-decile schools.[10] Table 2 shows that students at either end of the socioeconomic decile continuum were most likely to move or stay in schools that had the same decile. Movement to high-decile (9 or 10) schools was more likely for those coming from mid-decile (deciles 3–8) than from low-decile (1 or 2) schools.

Table 2 **Socioeconomic decile of schools attended by sample at age 12 and age 14**

Decile of school at age 12→ **Decile of school at age 14 ↓**	***Low-decile school age 12 (n = 48)*** %	***Mid-decile school age 12 (n = 244)*** %	***High-decile school age 12 (n = 167)*** %
Low-decile school	62	2	2
Mid-decile school	19	54	20
High-decile school	19	43	78

Students whose mother had no qualification, who were Māori or Pacific, or whose family income was low or medium were over-represented in the students who moved from low-decile primary to low-decile secondary schools, and conversely, students whose mothers had a university qualification, who were from very high-income homes, and who were Pākehā, were over-represented in the students who moved (or stayed) from high-decile primary to high-decile secondary school.

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[7] We use "social advantage" in this report to refer to resources available to students from high- or very high-income homes, whose mothers have university qualifications; and "social disadvantage" to refer to students from low-income homes, whose mothers have no qualification.

[8] The Wellington region has a similar proportion of secondary schools with rolls over 1000 as the rest of the country; but a higher proportion of schools with rolls of 500–999 (43 percent cf. 28 percent).

[9] We do not have a decile number for 2 percent of the students, since not all private schools have them.

[10] The Wellington region has more than twice the proportion of high-decile secondary schools than in the rest of the country: 39 percent cf. 14 percent. Conversely, it has half the proportion of low-decile secondary schools: 10 percent cf. 20 percent.

SCHOOL TYPE

Forty-one percent of the students had shifted from an intermediate to a Year 9–15 secondary school, and 36 percent to these schools from full primary schools. Eleven percent made other changes, such as shifting from a Year 7–15 secondary to a Year 9–15 secondary, or from a primary or intermediate into a composite school.

Of the students in Year 9–15 secondary schools, 51 percent had come from intermediates, and 44 percent from full primary schools. The Wellington region has slightly fewer full primary schools than the rest of the country (53 percent cf. 56 percent), but similar proportions of intermediates (7 percent cf. 6 percent for the rest of the country) and contributing schools (40 percent cf. 38 percent).

Family income and maternal qualification were related to different patterns of change in terms of school type. Students from low-income homes were most likely to shift from intermediates to secondary schools, and those from very high-income homes, least likely to make this kind of move (57 percent and 28 percent respectively). The latter were most likely to stay in the same school (17 percent decreasing to 7 percent of students from low-income homes). Fifty-two percent of the students whose mothers had no qualification shifted from intermediates to Year 9–15 secondary schools, decreasing to 35 percent of those whose mothers had a university qualification.

SCHOOL OWNERSHIP

Most students who attended state primary schools attended a state secondary school (87 percent). Continuity of schools with the same ownership was also high among those who had attended a state-integrated school (85 percent). There was more dispersal from private primary schools, with 60 percent having their secondary schooling at a private school, 34 percent at a state school, and 6 percent at a state-integrated school. Students were more likely to stay with private schools if their mothers had a university qualification, they were female, and the family income was very high. Staying in state-integrated schools was more likely if students were Pacific or Asian, with medium or higher family income. The Wellington region has a higher proportion of state-integrated schools offering secondary education than other parts of New Zealand (31 percent cf. 18 percent), and a slightly higher proportion of private schools offering secondary education (18 percent cf. 14 percent).

MULTIPLE KINDS OF CHANGE?

Eighty-eight percent of this sample changed school in the transition to secondary level education. The most frequent kind of change was simply from an intermediate or full primary school to a secondary school. Just over a third moved from coeducational to single-sex schooling or changed their school socioeconomic decile, usually moving to a higher decile school. Just over a fifth went to a school that had a much larger roll (at least 3½ times) than their primary school.

We found little evidence of multiple "stacking up" of major change. Students who shifted from low-decile schools to mid- or high-decile schools were more likely to also be shifting to schools that were 3½ times the size of their primary school, but the numbers were too small to show statistical significance (7 of the 18 students in this group, versus none of their peers who stayed in low-decile schools). Students who moved to single-sex schools were more likely to be shifting to schools that were only twice as big as their primary school (34 percent cf. 19 percent of those who stayed in coeducational schools): a case of one kind of change being balanced by less of a change in another school characteristic. Another example of this is students who shifted from an intermediate: they were less likely than those shifting from full primary schools to also be shifting to schools that had rolls 3½ times as big as their former school (9 percent cf. 36 percent).

Thus while a list of the kinds of structural change that can occur for students in this transition can seem to add up, most students in this sample were not experiencing all of them simultaneously. Those who tended to experience more structural change than others also tended to be students from homes that were well resourced in terms of maternal qualification and family income.

3. Settling into secondary school

In this chapter, we start by describing students' feelings about going on to secondary school at age 12, followed by the length of time it took them to settle in, comparing student and parent responses. We then report the perspectives of Year 9 deans on the time it took students to settle in their schools. Next, we focus on student views of the differences between their secondary and primary schools, followed by parents' and Year 9 deans' views.

DO STUDENTS LOOK FORWARD TO ATTENDING SECONDARY SCHOOL?

At age 12, 59 percent of the sample were looking forward to going to secondary school, and 26 percent fluctuated or were unsure. Only 15 percent were definitely not looking forward to moving on to secondary school.[11] A third of the girls were unsure if they were looking forward to secondary school, or had mixed feelings, cf. 19 percent of the boys. While there was no overall difference in the views of 12-year-olds who were in Year 7 and those who were in Year 8, girls in Year 8 were marginally more likely to express mixed feelings than those in Year 7 (40 percent cf. 27 percent, $p = 0.06$). There were no differences in student views about moving on to secondary school related to differences in family resources, or ethnicity.

The main reasons why students felt positive about going on to secondary school were that they felt ready for a change (32 percent), they thought they would learn interesting things or have more challenge (25 percent), and they looked forward to having more choice and being more independent (22 percent). Those who were not looking forward to secondary school, or who felt unsure about it, did so because they thought the work could be too hard (18 percent), or because they feared the social environment of secondary school (14 percent). Thirteen percent felt confused about moving on, and said they did not know what to expect.

The reasons students gave for their views about starting secondary school were similar across both Years 7 and 8. Girls were more likely to mention fears around the social environment of secondary school (17 percent cf. 10 percent of boys), or to say they did not know what to expect or felt confused (also 17 percent cf. 10 percent of boys). Boys were more likely to mention sport as an attraction (9 percent cf. 1 percent of girls).

The views we found for the Competent Children, Competent Learners sample are more confident than those found in the current Ministry of Education study. This may be because the latter study focused on Year 8 students, and gathered data toward the end of the school year, when the transition was imminent. The students in that study were asked to sum up their feelings about going to secondary school in one word. Thirty-five percent said they were excited or happy, 55 percent were nervous, scared, or sad, and 10 percent were both nervous and excited, or happy and sad at once (Cox, Kennedy, Bishop, & Porteners, 2004, p. 16).

A similar mix of excitement and apprehension was found in a Finnish study, using student essays (Pietarinen, 2000). Lucey and Reay (2000) make the point from their study of the thoughts and feelings of 90 9–11-year-olds in London about their move to secondary school, that fear, anxiety, and excitement are difficult to untwine:

> *All of these 10-year-old children, in their last year of primary schooling, were acutely aware that they were on the threshold of momentous changes in their lives occasioned and metaphorically represented by the transfer to secondary school. In particular, we want to emphasise that most children also communicated a sense of pleasurable anticipation and 'anxious readiness' (Giddens, 1991, p. 44) as they looked ahead to a time of significant personal development.*

Change in this context is not negative in itself: it signalled growth and gain, as well as possible loss.

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[11] The students were asked *Are you looking forward to secondary school?* And then *Why?*

HOW LONG DOES IT TAKE TO SETTLE INTO SECONDARY SCHOOL?

One of the underlying assumptions in discussions about the transition to secondary school from primary or intermediate is that it involves considerable change for students, and that takes time and energy for them to process—time and energy that may not be used for the content and skill knowledge of their learning. We therefore asked the students at age 14 and their parents how long it had taken them to settle into secondary school.

Student perspectives

Most students in the Competent Children sample felt they had settled into their secondary school within a term. Interestingly, Year 10 students were more likely to say that it had taken them longer.

Table 3 **Student estimates of the time taken to settle into secondary school**

Length of time to settle into secondary school	All age–14 sample (*n* = 475) %	Year 9 students (*n* = 169) %	Year 10 students (*n* = 306) %
Straight away	37	42	34
Less than 2 terms	46	52	45
2 terms or more	17	10	22

The difference between Year 9 and Year 10 students may reflect some differences in social characteristics. While the characteristics of each year level in the sample at age 14 were similar in terms of gender and family income levels, at Year 9 there were slightly lower proportions of Māori and Pacific students (11 percent cf. 15 percent overall), and those whose mothers had no qualification (11 percent cf. 14 percent overall).

In the Ministry of Education study, students were asked how settled they felt at secondary school towards the end of their first term in Year 9. Only 2 percent said they did not feel settled, and 71 percent felt settled within 2 weeks of starting secondary school. Cox et al. (2004) raise the question of what it means to be "settled", suggesting that their later end-of-year interviews with the same students indicate that the students were still learning about their new environment after this initial period.

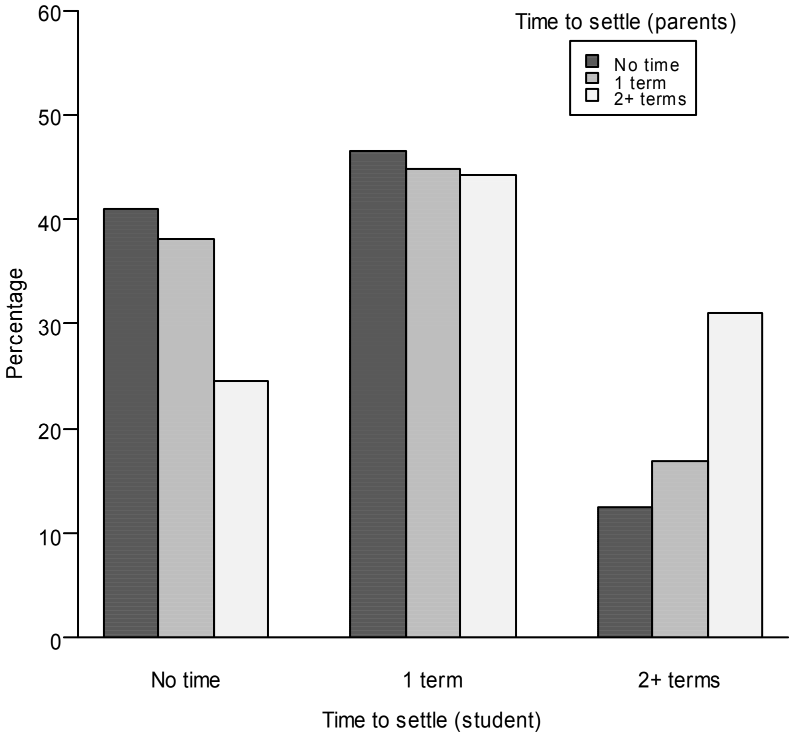
In the Competent Children, Competent Learners study, students who had been apprehensive about the move to secondary school were just as likely as those who had felt positive about it to report that they had settled into secondary school straight away or in less than a term. In other words, prior feelings about moving on to secondary school did not seem to affect the length of the initial settling-in period. This suggests that actual experiences of the new environment were more important. This finding is consistent with overseas studies (e.g. Graham & Hill, 2003).

Parent perceptions

Parent and student perceptions of how long it took them to settle into secondary school match better at the extremes than in the middle, as the figure below shows. In the figure, the bars with the same level of shading add to 100 percent, so that the dark bars, for example, represent all the students whose parents said they took no time to settle at school, and the white bars those whose parents said they took two or more terms to settle. Forty-one percent of the students whose parents said they took no time to settle gave the same response as their parents, and 13 percent of these students said they took two or more terms to settle. At the other extreme, a quarter of the students whose parents thought they took two or more terms to settle themselves reported taking no time to settle, and 31 percent reported taking two or more terms to settle (in agreement with their parents).

On the whole, parents were more likely to report a shorter settling-in period than students: 58 percent thought the students took no time, although 22 percent thought the students took two terms or longer.

Figure 1 **Student and parent reports of the time it took to settle into secondary school**



Are social characteristics related to how soon students settle into secondary school?

The time it takes to settle into school (as recollected by students and parents) appears to be related most to individual experiences and reactions. When we cross-tabulated parents' and young people's estimates of how soon they had settled into secondary school, with the four main social characteristics of gender, family income, maternal qualification, and ethnicity, we found only one association. Parents in low-income homes were less likely to say their child had settled into school straight away (47 percent, increasing to 69 percent of parents in very high-income homes).

Form deans' perspectives

Year 9 deans[12] were also more optimistic than students about the average time taken for students to settle in. They were asked for their estimate of how long it took their Year 9 students to settle, on average. Twenty-eight percent of the 60 deans[13] said it took less than a month on average, and a further 48 percent, less then a term. Eighteen percent thought it took their students two terms on average 2 percent, three terms, and 3 percent, four terms. There was no association between this average, and how long individual Competent Children, Competent Learners project students in these schools said it took them to settle into the school.

We also looked at these estimates in terms of school characteristics. Two school characteristics were related to faster average times to settle, according to the deans: socioeconomic decile, and school type. Interestingly, school size did not show clear patterns: and certainly Year 9 deans at smaller schools did not give a faster average time than their peers at the largest schools. This may be because the larger schools were more likely to be decile 9–10 (55 percent of those with 1000 or more students were decile 9–10 schools, cf. 5 percent decile 1–2 schools).

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[12] Included in this term are school-nominated managers who had overall responsibility for this year level. Sixty percent of these were termed deans; most of the others were school managers (including deputy and assistant principals). A few were termed form teachers, and some were heads of department.

[13] This is 13 percent of the 458 secondary and composite schools in New Zealand. In terms of how representative they are of the national school profile, the Competent Children, Competent Learners sample under-represents composite schools (10 percent cf. 28 percent overall), and thus over-represents Year 9–15 secondary schools (73 percent cf. 52 percent overall); and under-represents low-decile schools (13 percent cf. 19 percent overall) and over-represents decile 9–10 schools (40 percent cf. 17 percent overall). Eighty percent of the Year 9 deans were from main urban schools, cf. 59 percent of the national profile of schools.

Deans from decile 9–10 schools were more likely to think that their students settled in straight away on average: 46 percent cf. none of those in the decile 1–2 schools. None of the deans at girls' schools thought that the average time taken to settle in was straight away.

The small number of composite and Year 7–15 schools in the Year 9 deans sample makes it difficult for any differences to reach statistical significance, so we can really only report trends. But these are of interest in terms of extrapolating from our sample. Half the Year 9 deans at the six composite schools thought that their Year 9 students took less than a month to settle on average, cf. 30 percent of the 7–15 secondary school Year 9 deans, and 25 percent of the Year 9–15 secondary school Year 9 deans. In light of the debate about changes to secondary school structures, it is interesting that there was no difference between schools that started with Year 7, and those that started in Year 9.

STUDENT PERSPECTIVES ON STARTING SECONDARY SCHOOL

Finding their way around buildings and rooms was the hardest thing students reported that they had had to get used to in starting at their secondary school (54 percent). The other aspects that were hard to get used to were having a number of teachers (31 percent), the new mix of students at their school (25 percent), homework (17 percent), the size of the school roll (15 percent), not knowing anyone (15 percent), and discipline (14 percent). These items are largely concerned with acquiring knowledge of the new setting, rather than changes in approach between secondary and primary. Only 11 percent mentioned teacher expectations, 4 percent assignments, 3 percent taking notes, and only 1 percent each, using textbooks or sitting exams. However, carrying bags around (because students move between teachers, rather than staying in a home classroom) was a hard thing to get used to for 10 percent.

On the whole, the students did not seem overwhelmed by starting as the new group in another school. Six percent mentioned finding out about the student hierarchy—who was cool, or not cool—and two percent, engaging with senior students.

Most of the students were already used to having more than one teacher—only 11 percent had a single teacher for all their subjects when they were aged 12, though 33 percent were used to having just two or three teachers.

Not surprisingly, Year 9 students (who had been at secondary school for less time than the Year 10 students) were slightly more likely than Year 10 students to mention finding their way around the new school, getting used to a number of teachers, and the school roll size. Student views here were unrelated to their social characteristics.

Relationships with other people were the main ways in which students felt they were helped to settle into their new school and feel they belonged. Friendship was particularly important, whether with existing friends (63 percent) or through making new friends (16 percent).

A third of the students identified teachers as the thing that helped them most to settle in, and 15 percent, senior students. Fourteen percent identified their family or relatives, and 7 percent, help from other students. Orientation activities or sport were each identified by 5 percent of the students, and a welcoming assembly was mentioned by 2 percent.

A slightly higher proportion of Year 9 students were more likely to mention orientation days and welcoming assemblies; and Year 10 students, having family or relatives at the school.

STUDENT VIEWS ON THE DIFFERENCES BETWEEN PRIMARY AND SECONDARY SCHOOL

What were the big differences between their primary/intermediate school, and secondary school? "More" was a key word in what loomed largest for the students—more people, more choice, more work, and more challenge. There was little difference between the views of students who were in Year 9, and those who were in Year 10.[14]

Table 4 **Student views of differences between primary and secondary school**

Student views of the big differences between their Year 7 or 8 school and secondary school	**Year 9 students** ***(n = 169)*** **%**	**Year 10 students** ***(n = 306)*** **%**
More teachers	31	33
Shifting between classes	33	31
More students	32	27
More work to do	30	30
More subject choice	28	28
More challenging work	25	20
Bigger school (physical size)	24	20
Uniform	14	15
Stricter discipline	12	16
Treated more like an adult	12	13
Made friends	11	13
More specialist teachers	11	6
More extracurricular activities	8	10
School expectations for student achievement	8	9
No longer the oldest/biggest in school	8	8
Lost friends	6	8
School social mix	7	6

Only a few students mentioned that a big difference for them was that the work was less challenging or repetitive, or that they had less work to do.

Picking up on some of the overseas research that students could lose ground in the transition because they were in fact going over the same ground they had already mastered, we asked the study students to compare their experiences of academic work in the two environments, using the same rating scale. While most students thought that secondary level schoolwork was more demanding, around a third also thought they were repeating work they had done before. This suggests that repetition may be occurring in some subjects or some schools only. Around a third felt they had less school responsibility than at primary or intermediate school. There were few differences related to year level.[15]

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[14] The students were asked open-ended questions in an interview, unless otherwise noted; the teachers were largely given options to choose from in a written survey that they filled in. Thus the proportions are higher for teacher data.

[15] A higher proportion of this sample thought that secondary work was more demanding than the Ministry of Education sample (67 percent), and fewer thought they had more school responsibility at their former school (56 percent in the Ministry of Education study). This may reflect the fact that the Ministry of Education sample is likely to have a higher proportion of students from homes with low levels of maternal qualification (they were drawn from mostly decile 1–3 schools and went to two low-decile secondary schools), since there are some differences in student views related to maternal qualification.

Table 5 **Student comparisons of their Year 7/8 school and secondary school**

Students' comparisons of Year 7/8 school and secondary school[16]	Year 9 students (n = 169) %	Year 10 students (n = 306) %
Secondary work is more demanding	83	85
I am repeating work I've done before	37	35
I had more school responsibility in Year 8	35	33
I am treated more like a child	15	9
Secondary work is easier	10	7

Social characteristics and views of the changes

Gender

There were few gender differences in student views of the transition to secondary school. When we asked an open-ended question about what the big differences between primary and secondary school were, boys were more likely to mention being treated more like an adult, having more extracurricular activities, and being no longer the oldest or biggest in the school. Girls were more likely to mention a change in school mix or school type. When we asked them to rate the differences between primary and secondary school related to schoolwork and how they were treated, there were no differences. When asked what the hardest things to get used to in starting at the school were (another open-ended question), girls were more likely to mention not knowing anyone, a new mix of students, and getting up earlier. Girls were also more likely to mention making new friends and having the help of other students as things that helped them most to settle, in response to an open-ended question.

Ethnicity

Graham and Hill's (2003) study of inner-city students' transition to secondary school in Glasgow found that the transition to secondary school was more difficult for students from ethnic minority backgrounds. Because of the nature of our sample, we have small numbers of students who were from ethnic minorities. We therefore created two categories to look at ethnicity: Pākehā/European or Asian (n = 390), and Māori or Pacific (n = 73).[17] The main rationale for the content of these groupings is student performance on the project competency measures, with similarity between Pākehā/European and Asian average scores, and similarity between Māori and Pacific average scores.

Ethnicity as categorised thus was unrelated to perception of differences between secondary and primary/intermediate schools, or the things that helped students feel settled in and belonging, with one exception: Māori/Pacific students were more likely to say the work was easier at their secondary school (15 percent cf. 6 percent of Pākehā/European or Asian students). There were no ethnic differences in relation to changes in friendships since going to secondary school.

Māori and Pacific students were more likely to find the changing of teachers (between subjects) or getting to know teachers' names the hardest thing to get used to (47 percent cf. 28 percent of Pākehā/European and Asian students), and the new mix of students (40 percent cf. 22 percent). Thus the few differences that are evident are less about schoolwork than about personal knowledge of others in the school environment—and being known to them. This is consistent with research emphasising the importance of relationships for Māori students (e.g. Bishop, Berryman, Tiakiwai, & Richardson, 2003).

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[16] The students were asked to rate their agreement with a statement on a 5-point scale. The proportions given in this table are those agreeing with the statement ("totally agree" or "agree").

[17] All the students in the study attended English-medium schools.

Maternal qualification

Students of non-qualified mothers were slightly more likely to mention teachers as helpful in settling them in and making them feel they belonged (40 percent cf. 33 percent overall), but those whose mothers were university-qualified were more likely to mention specific school orientation activities.

Students whose mothers had a senior school, tertiary, or university qualification were more likely to say there was more work to do (39 percent cf. 26 percent of those whose mothers had a mid-school or trade qualification, and 17 percent of those whose mothers had no qualification), or mention school expectations for student achievement (14 percent cf. 6 percent). Getting used to teacher expectations was mentioned more by the group whose mothers had a university qualification: 19 percent cf. 10 percent overall.

Numbers were low, but there were some linear trends indicating an increase in the proportion of students who thought secondary school expectations for student achievement were one of the big differences from primary school, from 5 percent of those whose mothers had no qualification, to 15 percent of those whose mothers had a university qualification. When we asked students to specifically compare the standard of work required of them, 25 percent of those with non-qualified mothers thought they were repeating work done before, cf. 45 percent of those with university-qualified mothers. The latter also thought they had more school responsibility than they had had at primary level (38 percent cf. 20 percent of the group whose mothers had no qualification).

Some of the differences in the characteristics of schools attended emerge in some further differences related to differences in maternal qualification. Students whose mothers had no qualification were less likely to mention the size of their new school (6 percent, increasing to 22 percent of students whose mothers had a university qualification). However, the latter were least likely to mention a new mix of students (14 percent cf. 24 percent overall). Students whose mothers had no qualification were less likely to mention school activities designed to being helpful to them in settling into school (2 percent cf. 10 percent of others). Students whose mother had a university qualification were most likely to mention their familiarity with the school as something that helped them settle in and feel they belonged (14 percent cf. 7 percent overall). This may reflect the greater likelihood of this group staying in the same school across the transition to secondary level.

Family income

The higher the family income level, the more likely it was that students would mention homework as one of the hardest things to get used to in starting at the school (22 percent of students from very high-income homes, decreasing to 10 percent of students from low-income homes), or the school size (20 percent, decreasing to 10 percent). School activities that helped the transition were mentioned most by those in high- or very high-income families (13 percent cf. 3 percent of those in low- or medium-income families).

Students from high-income homes were less likely to mention finding their way around, more teachers, or not knowing anyone as things that were hardest to get used to in starting at their school.

Students from low-income homes were more likely to mention a new student mix (33 percent cf. 25 percent overall), but less likely to mention a student hierarchy (2 percent, increasing with family income levels to 9 percent of the high-income students).

Comparisons of primary and secondary work and student school position were unrelated to family income.

School characteristics in relation to perceptions of transition

In the next section, we look at how soon students felt settled in their secondary school, what they thought about the transition, and whether a change in structural characteristics of a school (changing a school, school size, gender mix, and decile) was evident in any differences. We also looked at whether there were differences in views about the nature of work and student place related to just the current school's structural characteristics of size, gender mix, and decile. We found little difference here. School gender mix was unrelated. Students in the smallest schools were less likely to think they were repeating work (25 percent cf. 43 percent), but otherwise their views were the same regarding work challenge and their place in the school. Students in decile 1–2 schools (which tend to be smaller) were also less likely to say they were repeating work (15 percent cf. 37 percent of others). This was the only difference related to school decile of the current school.

We found more differences in student views of their transition to secondary level related to the *kind* of transition they had made: the differences between their former and current school.

Changing school

Not surprisingly, those who stayed in the same school were more likely to say they had settled into secondary level straight away (60 percent cf. 39 percent of those who moved from intermediate, and 27 percent of those who moved from full primary). The fact that 100 percent of those who stayed in the same school did not settle into secondary level straight away suggests that experiences of settling in at this level also relate to changes in school organisation, such as subject choice and subject classes, as well as a physical change in schools. Possibly these changes in school organisation are more noticeable in the settling in for those who stay in the same school.

As one would expect, the things that those who stayed in the same school noticed were less likely to be having more students or teachers, shifting between classes, or the physical size of the school. But they did notice changes in subject choice, having more work to do, and having challenging work. Those who moved were no more likely than those whose school did not change to say they were repeating work. They were also no more likely than those who stayed in their school to mention getting to know teachers' names and changing teachers, homework, a new mix of students, and teacher expectations among the things that were hardest to get used to. Uniforms were most likely to be mentioned by those who shifted from full primary to secondary schools as something that was different about their new school (20 percent cf. 8 percent overall).

Good teachers were most likely to be mentioned as one of the main things they enjoyed about their school by those who did not change schools (25 percent cf. 14 percent overall); but those in this group were just as likely to mention poor or boring teachers as something they did not enjoy about their school as others.

Those who changed from a full primary to a secondary school (often a track taken by those who shifted to a single-sex school) were more likely to mention discipline and time spent travelling as something that was hard to get used to. This group was less likely to settle into secondary school straight away (27 percent), with 9 percent taking three terms or more to settle cf. 3 percent of those who went from an intermediate to a secondary school.

While familiarity with the school was more likely to help students who stayed in the same school settle in (16 percent cf. 7 percent overall), making new friends was more likely to be mentioned by those who moved from full primary to secondary schools (24 percent cf. 10 percent of those who shifted from intermediates), probably reflecting the smaller size of their full primary cf. intermediates, and the greater pool of potential friends in secondary school.

School size changes

Students whose secondary school was no more than twice as big in roll terms as their primary school were somewhat more likely to settle in more quickly (44 percent did so straight away cf. 32 percent of those whose secondary school was more than twice the roll size of their primary school). Twenty-three percent of those whose secondary school was more than 3½ times the roll size of their primary school took two or more terms to settle in, cf. 18 percent overall.

As one would expect, the larger the school in relation to their previous school, the more likely students were to mention having more teachers and more students to get used to. While those whose school was at least 3½ times as big as their former school were most likely to say they had lost friends, it was the students who had shifted to schools less than twice as big as their former school who were less likely to say they had made friends. Uniforms were mentioned most by those whose secondary school was at least 3½ times as big as their former school. However, differences in school size changes were unrelated to student views of whether the big differences between their new school and primary school were to do with shifting between classes, having more subject choice or specialist teachers, or more challenging work. There were also no differences related to the nature of work or their position within the school, or what they enjoyed, or didn't enjoy, at their new school.

Although the degree of school size change had some relationship to views of what was different, this did not translate into differences in views about what was hard to get used to in the new school, other than size itself. The things that helped students settle into secondary school were much the same for all students in the sample, though there was mention of deliberate school activities to help transition by those whose new school was more than 3½ times bigger than their primary school (16 percent, decreasing to 6 percent of those whose new school was less than twice the size of their primary school).

Change of school gender mix

Those who shifted from a coeducational to a single-sex school were less likely to say they had settled in straight away (23 percent cf. 41 percent of those moving to a coeducational school, and 64 percent of those staying in single-sex schools)—though most had settled in within a term. Students who went to single-sex secondary schools were more likely to mention senior students as helping them to settle and feel they belonged (22 percent cf. 11 percent of those who went to coeducational schools and 15 percent of those who stayed in single-sex schools), or making new friends (also 22 percent cf. 12 percent of those who went to coeducational schools, and 15 percent of those who stayed in single-sex schools).

Those who stayed in the same single-sex school had similar views of the differences between primary and secondary as those who shifted in many respects. They were less likely to comment on there being more students, or on having to shift between classes, and more likely to feel they were now being treated more as an adult. But in contrast to the perspective that it is change of school that might cause loss of momentum in learning, presumably through loss of continuity, it was among these students, and those who shifted to single-sex schools, that comments came on repetitive or less challenging work (and both at the low level of 4 percent).

Students who shifted into a single-sex school were more likely to comment on this change of school type, and school mix, than others; they were also more likely to note stricter discipline (26 percent cf. 9 percent of those whose secondary school was also coeducational), uniforms (20 percent cf. 12 percent), having more work to do (37 percent cf. 25 percent), and more extracurricular activities (13 percent cf. 7 percent). They were more likely to mention discipline, the new student mix, and teacher expectations as the hardest things they had had to get used to. However, their views on whether the work was more demanding, and their degree of responsibility, were similar to others. Sport was more likely to be mentioned by this group as one of the main things they enjoyed about school (42 percent cf. 34 percent overall).

Good teachers (23 percent) and subject choice (32 percent) were more likely to be mentioned by those continuing on in single-sex schools. There were no significant differences in the things that students did not enjoy.

Change of school decile

Students from low-decile schools who shifted to mid- or high-decile secondary schools were more likely than their peers to mention the new student mix as something that they had found hard to get used to in starting at the school (44 percent cf. 23 percent). However, settling into school straight away was just as likely to happen for students changing decile as those who shifted to the same decile school—and conversely, taking a long time to settle in, no more likely to happen for those who changed decile as those who did not. The things that helped students settle into their new school were also not related to change or stability in school decile.

Because the numbers of those changing decile in the transition to secondary school are not large in this sample,[18] some apparent differences did not turn out to be significant, though they are consistent with other patterns found in the study. One trend was that a somewhat higher proportion of low-decile students shifting to high-decile schools than their peers staying in low- decile schools or shifting to mid-decile schools found secondary work more challenging. A higher proportion of students shifting from high-decile primary to high-decile secondary found secondary work more challenging, cf. their peers shifting to mid- or low-decile schools.

However, these differences did not show in comparisons of primary and secondary work demands. The differences that emerged here were that the students who were most likely to say they were repeating work they had done before were more likely to be students in mid- or high-decile schools, with the highest rates among those who had shifted from a high- to a mid-decile school (65 percent cf. 36 percent of their peers who shifted to high-decile secondary schools, and 17 percent of those from low decile schools who shifted to low-decile secondary schools). The group who shifted from high decile to mid-decile secondary schools was also more likely to find the work easier than their last year, though the numbers remain low (18 percent cf. 5 percent of their peers who shifted to high-decile secondary schools).

Other differences between the students who shifted from high-decile primary to mid-decile secondary schools are those who shifted from a high-decile primary to a high-decile secondary school emerged in relation to sport (12 percent mentioned it as something they enjoyed cf. 32 percent of those who shifted from high-decile primary to high-decile secondary school), and subject choice—more likely to be mentioned by the former than the latter (42 percent cf. 22 percent). However, 39 percent of the group who shifted from high-decile primary to mid- or low-decile secondary schools mentioned poor or boring teachers as something they did not enjoy about their secondary school cf. 20 percent of those whose decile remained high.

Students who had shifted from a low- to a high-decile school were more likely to mention a particular subject as one of the things they did not enjoy (89 percent cf. 31 percent of their peers whose school decile did not change, or who shifted to a mid-decile school). Maths (44 percent) and science (56 percent) were most likely to be mentioned by this group (44 percent and 56 percent respectively cf. 21 percent overall).

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[18] National figures were not available for comparison.

SCHOOL CHOICE

Seventy-one percent of the students said their secondary school had been their first choice of school. Twenty-two percent said it had not been, and 7 percent were unsure or could not remember. Seventy-three percent of the students would choose the same school again if they could go back in time. Fifteen percent were unsure that they would, and 12 percent would not. Half of those who were not going to their school of first choice felt more positive about it with experience. Eighty-two percent of those who went to the school of their first choice would also choose it again. There was no relationship between students' views here, and their views of the level of work at the school, and their place in the school.

School capacity was related to whether students were in their first choice of school. The larger the school, the more likely it was that students were in their first choice of school (80 percent of those in schools with more than 1300 students, decreasing to 60 percent of those in schools with less than 600 students). Fifty-seven percent of those in the smallest schools would choose the same school again, increasing to 82 percent of those in the largest schools.

Those who shifted to schools that were no more than twice as big as their primary school were less likely to say that the school was their first choice (62 percent cf. 75 percent), but they were just as likely as others to say they would choose the school again if they could go back in time. Their view of how long it had taken them to settle into their new school was also the same as others'.

School gender mix was not related to whether students were in their first choice of school. When we looked at males and females separately, we found that males in coeducational and single-sex schools were just as likely to be in the school of their first choice, as were females. This was also true for those who would choose the same school again. However, 16 percent of girls in single-sex schools would not choose the same school again, cf. 4 percent of boys in single-sex schools.

Students in decile 1–2 schools were least likely to say they were in the school of their first choice (55 percent cf. 74 percent of others, and also least likely to say that they would choose the school again (55 percent cf. 82 percent of others).

However, while students who had moved from a low-decile primary school to a low-decile secondary school were least likely to say it was their first choice (50 percent), there was no significant difference here between them and their peers who moved to mid-decile or high-decile schools. The same pattern was not true for students in high-decile schools: those who shifted to mid- or low-decile schools were less likely to say their new school was their first choice (57 percent cf. 76 percent of those who shifted from one high-decile school to another). There was no difference between students from mid-decile primary schools, whether they shifted to a lower-, same, or higher-decile school.

Those who stayed in low-decile schools, moved from mid-decile to low-decile, or from high-decile to low-decile were most likely to want to have been able to choose another school (30 percent). Patterns of change of school gender mix and school type were unrelated to whether students were going to their first-choice school, or would choose the same school again.

While there were no ethnic differences in whether students went to their first choice school, Māori and Pacific students were less likely to choose the school again if they could go back in time (60 percent cf. 76 percent of Pākehā/European students).[19] Males were more likely to be in the school of their first choice (76 percent cf. 66 percent of females), and less likely not to choose the school again if they could (9 percent cf. 15 percent of females). Maternal qualification levels were unrelated to whether students got into their first-choice school, or would choose differently with hindsight.

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[19] Although Māori and Pacific students were more likely to be attending decile 1–2 schools (21 percent cf. 6 percent of Pākehā/European and Asian students, in this sample 40 percent were attending decile 9–10 schools (reflecting the higher proportion of these schools in the study area). Decile 1–2 school students were less likely to choose the same school again (55 percent). To some extent, the difference between ethnic categories here reflects this difference in distribution between school deciles. However, there was no difference between the ethnic categories when we looked at views of those attending the same decile schools: the trend is for Māori and Pacific students in this sample to be less positive about their schools than their Pākehā/European and Asian peers, and with larger numbers, this difference may have been statistically significant.

The resource of family income—which is related to where families live, and therefore the schools they can access through zoning based on residence, or affordability of school activity fees (and fees, though legally the latter are voluntary)—was related to school choice.

Seventeen percent of students from low- and medium-income families would not choose their school again if they could go back in time cf. 7 percent of those from high- or very high-income families. The proportion of students who said their secondary school was not their first choice was highest among those from low-income families (33 percent cf. 22 percent overall). It seemed as if these students were the ones most likely to access a reasonably close school: they had the lowest average time to get from home to school (0.39 of an hour (s.d.[20] 0.27), cf. 0.51 of an hour (s.d. 0.37) for those from the very high-income group): this may indicate difficulty in accessing schools further away.

Students from low-income families were similar to others in what they enjoyed and did not enjoy about school. The only salient difference that might relate to their view of their school as not being their first choice is that student behaviour or attitudes was cited as something they didn't enjoy by 21 percent of the low-income group cf. 12 percent overall. The low- and medium-income groups were also less likely to cite good teachers as one of the main things they enjoyed about school.

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[20] S.d. = standard deviation, which is used to indicate the spread of a measure around the mean. Two-thirds of the observed values of the measure can be found within the mean +/- a standard deviation. In this case, two-thirds of the students from low-income families took between 0.08 of an hour and 1.06 hours to get to school.

PARENT PERSPECTIVES ON THE TRANSITION

Friends, family, and liaison between schools were the main factors that parents identified as helping their child make the change to secondary school. Friendship and family tradition were also two of the four main reasons given by parents for the choice of secondary school (along with the school being the closest one, and having a good reputation: each of these four main reasons was mentioned by between a quarter to a third of the parents).

Table 6 **Parent views of the factors that helped transition to secondary school**

Factors helping transition	**Parents (*n* = 476) %**
Friends went to same school	51
Family connections	25
School liaison with primary school	25
Student's character	18
School occasions with peers or seniors	13
Teacher/s	6
Sports	5
New subjects	4

Year 9 parents were slightly more likely to be aware of school occasions focused on the transition at the new school (18 percent cf. 11 percent of Year 10 parents).

Ten percent of the parents said that their child coped with anything and did not need help; another 10 percent said nothing had helped their child in the transition.

Forty-one percent of the parents could identify nothing that made the transition to secondary school more difficult for their child. A lack of friends from the old school (15 percent), school size (14 percent), more demanding work (10 percent), the need to manage their own time (9 percent), and the student's own character (7 percent) loomed largest as things that had made it more difficult. Other things mentioned were student hierarchies or groups (5 percent), other students' behaviour, the number of teachers, and school discipline (4 percent each). A lack of friends from the old school was in fact mentioned more by some parents of Year 10 students (17 percent cf. 11 percent of Year 9 parents). Perhaps the effect of their absence becomes more noticeable over time—or perhaps this factor remains more memorable than others.

Parents were somewhat less likely than their children to judge secondary work as being more demanding than what was asked of them at primary level, but also less likely to think their children were repeating work they had already done. Otherwise, the picture they gave was not dissimilar. Year 9 and 10 parents also had similar perspectives on the differences between primary and secondary levels.

Table 7 **Parent comparisons of their child's Year 7/8 school and secondary school**

Parent comparisons of Year 7/8 school and secondary school	***Parent views (n = 476) %***
Secondary work is more demanding	75
Child had more school responsibility in Year 8	42
Child is repeating work done before	21
Secondary work is easier	13
Child is treated more like a child	12

Social characteristics and parents’ views on the transition

Gender

While the gender of their child made no difference to parents’ views of what had helped their child make the transition to secondary school, parents of girls were much more likely to mention a lack of friends going to the same school (22 percent cf. 9 percent of parents of boys), and parents of boys more likely to say that nothing had made the change more difficult for their child (46 percent cf. 35 percent of parents of girls).

Parents of boys were also more likely to think that the work at secondary school was no more demanding than at primary level: 23 percent cf. 9 percent of the parents of girls. However, they did not also think it was easier, or that their child was repeating work done before.

Ethnicity

The main things that helped or hindered students make the transition to secondary school were the same for parents of students from different ethnic backgrounds. However, parents of Pākehā/European and Asian students were more likely to mention the school liaison with a primary school (26 percent cf. 16 percent of Māori and Pacific parents), and school occasions (15 percent cf. 6 percent).

Māori and Pacific parents were somewhat more likely to think that their child was being treated more like a child at the secondary school than at the primary school they had left (18 percent cf. 11 percent of Pākehā/European and Asian parents).

Maternal qualification and family income

Maternal qualification and family income were unrelated to differences in parental comparisons of primary and secondary work demands. The lower the level of maternal qualification, the more likely it was for parents to think that the student was treated more like a child (18 percent of parents in families where the mother had no qualification, decreasing to 2 percent of those in families where the mother had a university qualification). The same pattern was evident in relation to family income: the lower the level, the more likely for parents to feel their child was treated like a child.

However, family income was unrelated to parent perceptions of the things that helped or hindered the transition to secondary school. There were only a few trends related to maternal qualification: only 14 percent of parents in homes where the mother had no qualification mentioned family connections cf. 27 percent of others; however, this group was more likely to say that nothing had made the change more difficult for their child (52 percent, decreasing to 32 percent of parents in families where the mother had a university qualification). The latter were more likely to identify timetables or the need for the student to manage their own time (15 percent cf. 7 percent of others).

School characteristics and parental views

We cross-tabulated parental responses on the transition to secondary school with school characteristics of decile and gender mix, and the kind of transition made in terms of gender mix, decile, type, and size to see if these were related to any differences in views of the transition their child had made.

Decile and decile-transition

There were few differences here. Teachers were mentioned more as something that helped a student make a transition to secondary school in decile 1–2 schools (18 percent cf. 5 percent for students in decile 3–10 schools). Student personality was more likely to be seen as making the change more difficult for students going to decile 1–2 schools (20 percent cf. 6 percent for students in decile 3–10 schools), as was other students’ behaviour (15 percent cf. 3 percent).

Parents of students in decile 1–4 schools were more likely to feel that their child was treated more like a child in the secondary than the primary school (22 percent cf. 10 percent of parents of students in decile 5–10 schools).

We compared parental responses for those who had stayed in the same decile across the transition to secondary level, and those who had changed decile. Those who had changed decile were somewhat less likely to be seen by their parents as settling in straight away (51 percent cf. 63 percent), but there was no difference in their current feelings about school. Parents of students who changed decile were more likely to say that not having friends going to the same school made the change more difficult (22 percent cf. 10 percent), and less likely to say that nothing had been difficult about the change (35 percent cf. 45 percent). There were no differences in relation to the work required at the new school, or the things that had helped students make the transition (including existing family connections).

School gender mix

Parents of students who went to coeducational schools were more likely to mention friends going to the same school as something that had helped their child make the change to secondary school (60 percent cf. 42 percent of those whose children went to single-sex schools). The latter were more likely to mention school occasions (20 percent cf. 9 percent). School size made the change more difficult for those going to coeducational schools (17 percent cf. 11 percent of those going to single-sex schools), as did other students' behaviour, though the numbers are small (6 percent cf. 2 percent of those going to single-sex schools).

Parents of girls going to single-sex schools were less likely to agree that they were repeating work they had done before (13 percent cf. 23 percent of those whose children went to coeducational or boys' single-sex schools), or that the work was easier (1 percent cf. 15 percent).

Parents of boys going to single-sex schools were more likely to mention sports as one of the main things their son enjoyed about school (48 percent cf. 36 percent of others). (They also mentioned sport more as a topic their son would talk to them about in relation to school, 22 percent cf. 11 percent of others.) Parents of girls going to single-sex schools were more likely to mention schoolwork or achievement in schoolwork (19 percent cf. 6 percent of others).

Bearing in mind that the social profile of those going to single-sex schools and coeducational schools is somewhat different, what differences were there specific to the transition? We found very similar patterns as we found when simply comparing school gender mix, so we do not repeat the details here, and only one difference between those children remained or continued on in single-sex schools, and those whose children were new to them. Parents of students starting at a same-sex school for the first time were more likely to find the work more demanding (85 percent cf. 57 percent of those whose children were continuing on in same-sex schools).

School type

We found little difference in parental perceptions related to whether students had come to a secondary school from an intermediate or full primary school. Hawk and Hill (2004) express concern about the fact that the 2-year coverage of intermediate means that many New Zealand students are making two changes of school within 2 years. In this sample, those who came from intermediates had attended a higher average number of schools (3.6, s.d. 1.0) than those who came from full primary schools (2.6, s.d. 0.9). Thirty-four percent of the group coming from intermediates had been to at least four schools (including their secondary) cf. 13 percent of those from full primary schools. However, both groups were just as likely to be reported by their parents as settling in straight away, and to currently enjoy school. Students coming from full primary schools were somewhat more likely to be seen as having had more responsibility at their former school (51 percent cf. 39 percent of those coming from intermediates), but not to be treated more as a child at the new school.

School size

The move to secondary school is also thought to have a negative effect because for most students it involves a move to a much larger school. However, those whom parents said had taken no time to settle into their secondary school were *more* likely to be students who moved to secondary schools that were at least twice as big as their primary school than those who moved to smaller secondary schools (58 percent cf. 46 percent). This may have been because those who shifted to the smaller secondary schools were less likely to be seen by parents as having friends who made the transition with them (43 percent cf. 58 percent of others). Not surprisingly, a lack of friends going to the same school was much more likely to be mentioned as a difficulty for this group (27 percent cf. 12 percent of others). Having more demanding work was also more likely to be mentioned by parents of students going to schools that were at least twice as large as their primary school (12 percent cf. 5 percent of those going to smaller secondary schools): this was the only other difference related to a change of school size. There were no differences related to views of the schoolwork itself, or roles within the new school. The new school size itself was no more of a problem for those going on to the largest schools than for those going on to small secondary schools. Current views of school were unrelated to the change in school size.

SUMMARY

The majority of students settled into their secondary school within two terms. Only 17 percent took longer. Parents and deans tend to see the settling in period as taking a little less time than students, on average.

At age 12, most of the students in this sample were positive or had fluctuating views about going on to secondary school. Reasons for looking forward to the change were anticipation of having interesting activities, more choice, and more independence. Reasons for being apprehensive were related to fears of negative social climates and work that would be too hard to do. However, students who were apprehensive about going on to secondary level were just as likely as those who were positive to settle in within two terms.

On the whole, social characteristics were unrelated to student estimates of how long it had taken them to settle into secondary school. The one exception was low family income—and consistent with this, deans in decile 1–2 schools thought it took this group longer to settle into secondary school.

Twelve percent of the students did not change schools between primary and secondary levels. They were more likely to say they had settled into secondary level straight away—but not all did so, indicating that this transition is not just an issue of getting used to another school. This group was as likely to mention changes in subject choice, having more work to do, and challenging work. Students moving from a full primary school took longer to settle in on average than those moving to secondary from an intermediate. Shifting to a much larger school than the primary one led to a longer settling-in time. It also led to more loss of friends—but more opportunity to make new ones. (But in using parental information, we found the converse pattern: students who went to much larger schools took a shorter time to settle in, and were more likely to have friends with them.) Shifting to a single-sex school from a coeducational also had a longer settling-in period. Those whose new school was higher- or lower-decile than their primary one settled just as quickly as those whose new school was a similar decile to their old.

Friendships were important in settling in, as were teachers, family, and senior students. Relationships were more likely to be mentioned by students than specific events organised by schools, probably because the relationships were ongoing. Parents also saw friends and family as main supports, as well as liaison between primary and secondary school.

Secondary school offered the students more—more subject choice, and more challenging work, as well as more teachers, students, work, and shifting between classes. On the whole, these things are either positive or neutral. Stricter discipline was noted by around 15 percent.

While most students thought that secondary level schoolwork was more demanding, around a third also thought they were repeating work they had done before. This suggests that repetition may be occurring in some subjects or some schools only. Repetition was also more likely to be mentioned by students from advantaged homes (high family income, or high maternal qualification levels) as was an increase in teacher expectations of them. Around a third felt they had less school responsibility than at primary or intermediate school; this and feeling they were treated more as a child were views more likely to be held by students and parents from less-advantaged homes.

Gender and ethnicity were largely not reflected in differences in student views of their new school. However, Māori and Pacific students were more likely to find it hard to get used to new teachers.

Seventy-one percent of the students said their school was their first choice of school, and 73 percent would choose the same school again. Family income is more decisive in school choice than maternal qualification because it is related to residence options, and thus, in a zoned system based on locality, access to particular schools. Higher activity fees and (voluntary) donation levels in higher-decile schools could also act as a barrier to low-income students accessing those schools. Students from low-income families were less likely than others to be in their school of first choice or choose the school. The same pattern was evident for Māori and Pacific students. Students in low-decile schools were also less likely to be at their school of first choice, or who would choose the same school again.

While school size is seen as something of concern in relation to transition, in fact students were more likely to have the school of their first choice if it was larger, and more likely to want to choose that school again. This may also be related to family income and school decile, since low-decile schools tend to be smaller.

Parents tend to be more positive than their children about the nature of work at secondary school, and to be more conscious of a lack of friends going to the same school, or the size of the new school.

4. The secondary school environment

We have described the kinds of transition to secondary level in terms of the structural characteristics of schools. In this chapter, we look at the kind of learning environment the students were coming into, and whether that differed in terms of school structural characteristics. We conclude by looking at Year 9 deans' views on the change to secondary school.

CLASS STRUCTURE AND SUBJECT CHOICE

Fifty-seven percent of the schools provided form classes, and another 20 percent with small Year 9 numbers, a year level class. Twelve percent provided vertical (cross-year) form classes, and 15 percent, houses. Three percent (2) used ability streams. Schools with rolls over 1000 were most likely to provide horizontal form classes, and least likely to provide vertical form classes.

Year 9 students at 17 percent of the schools (10) could share classes with other year levels, though this was usually limited to one class. Reasons for having classes that spanned several year levels were because of small numbers of students, student needs, or for accelerated learning.

Although there was more choice at secondary level, all schools had four compulsory subjects that provide continuity from primary school: English, mathematics, science, and health and physical education. Social studies was also compulsory at all but one of the schools. Technology was compulsory at 88 percent of the schools attended by the sample, and the arts at 80 percent. Information technology or text information management were compulsory for Year 9 students at 43 percent of the schools.

Languages other than English were options in two-thirds of the schools, arts in 60 percent, and around a third offered graphics or design, computer studies, technology, or economic studies. The average number of options offered by schools was six. These options were offered in all-year courses at 43 percent of the schools, but just under half offered half-year courses, and 22 percent, courses that ran for a single term. At just over half the schools, senior school management had the final decision on the options that an individual Year 9 student could take.

There were some decile-related trends in the options available to students. The lower the decile, the more likely it was that computer studies, the arts, or horticulture would be offered, and less likely that European and Asian languages would be available; and that the options would be offered as a full-year course.

Within-subject differentiation

Sixty-seven percent of the schools constructed Year 9 compulsory subject classes in relation to individual students' performance levels. In all but two schools, this was on the basis of individual subjects. In most of the schools, not all students were in differentiated classes, and they could move from one class to another. We therefore hesitate to apply the term "streaming" to this practice, since "streaming" implies a sorting of students into different channels that continue over time. For example, previous New Zealand generations were sorted at entry into secondary school into a stream defined by a common set of subjects that also defined their later possibilities for national examinations and entrance into tertiary education (e.g. an "academic" stream whose set of subjects would include Latin, and a "technology" group whose set of subjects would include typing or woodcraft, but no languages). The current practice in secondary schools has more in common with the primary school practice of differentiation by groups within home classes for reading and mathematics, providing some continuity between the levels rather than a disjuncture.

Within-subject differentiation was most common for mathematics (67 percent). Fifty-two percent of the schools had within-subject differentiation for English, and 50 percent for science. Forty-four percent had within-subject class differentiation for social studies, and 18 percent, for other subjects. Only a few schools differentiated all their classes. Among the schools that did use this practice, the average proportion of differentiated classes was between a third (for science and social studies) to 43 percent (for mathematics). Allocation of students to classes was mostly done on the basis of standardised tests (60 percent), followed by information from contributing schools (37 percent). We did not ask if the tests were done when students reached the secondary school, or were given beforehand. Hawk and Hill (2004) recommend the latter, so that students' initial secondary school experience is not one of being tested, or repeating ground already covered.

Differentiation within subjects increased with school size, from none within schools whose rolls were less than 100, to 75 percent of the schools with rolls over 1000. The highest decile schools appeared to differentiate less than others. Differentiation among English classes decreased from 75 percent of the decile 1–2 schools in the study, to 46 percent of the decile 9–10 schools, and among social studies, from 63 percent to 38 percent. Boys' schools appeared more likely to differentiate (91 percent).[21]

Integrated classes and cross-year classes

Twenty-seven percent (16) of the schools also grouped some Year 9 subjects to provide cross-curricular or integrated courses. Most of these cross-groupings included English; social studies was next most frequent. Mathematics and science were included in around a quarter of the cross-curricular courses. Integrated classes were equally likely to occur for all deciles and school sizes. They were more common in coeducational schools (37 percent cf. 12 percent of single-sex schools).

Year 9 students shared classes with students from other year levels in 17 percent of the schools. In low-decile schools, this was mainly because of low student numbers; in high-decile schools, to provide accelerated learning.

LUNCHTIME AND EXTRACURRICULAR ACTIVITIES

All the schools offered some lunchtime activities for Year 9 students, though most of this was informal and appeared to be left up to students to use, or make use of. Nineteen percent of the students overall said there were always lots of good things for them to do at lunchtime, and 38 percent said there usually were. But 34 percent thought this was only occasionally true, and 8 percent, rarely/never true.

Table 8 **Lunchtime activities available to Year 9 students**

Activity	Year 9 deans (n = 60) %
Library	98
Sports field	95
Computer room	72
Gym	72
Clubs	60
Organised sport	48
Music	12

Debating and drama were mentioned by two or three deans. Kapa haka, school (student) council-run activities, and a Christian fellowship were each mentioned by one dean.

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[21] Although 55 percent of the boys' schools were decile 9–10, so also were 50 percent of the girls' schools, thus this difference is not simply that they were very high-decile schools.

There were no decile- or school size-related differences in the lunchtime activities available. Year 7–15 secondary schools appeared less likely to offer a computer room or gym, and Year 9–15 schools, most likely to offer organised sports. Girls' schools were more likely to provide clubs.

Sports, debating, kapa haka, music, and drama were the extracurricular activities and clubs most likely to be offered to Year 9 students.

Table 9 **Extracurricular activities and clubs available to Year 9 students**

Extracurricular activity	**Year 9 deans *n* = 60) %**
Soccer	93
Hockey	92
Rugby	90
School choir	90
Debating	88
Kapa haka	82
Athletics	80
Netball	78
School band	73
Drama	73
School orchestra	62
Chess	60
Computer	53
Pacific cultural group	43
Barbershop quartet	38
Speech	32
Māori cultural group	30
Writing	25
Science	24
Art	22
Environmental	22
Other individual sports	20
Other team sports	18
Gymnastics	15
Trading company	13
Foreign language	13

Just a few schools offered hobby or service clubs. Three or four each mentioned Christian groups, or form or house competitions.

Composite schools offered fewer extracurricular activities than others; Year 9–15 secondary schools offered the widest range. Low-decile schools were somewhat more likely to offer Māori cultural groups, and less likely to offer debating or a school orchestra. Pacific cultural groups and school orchestras or bands were most likely to be offered in the schools with rolls over 1000. The very small schools (with rolls of less than 100), were least likely to offer extracurricular activities.

Boys' schools were unlikely to offer netball or gymnastics (but girls' schools were just as likely as boys' to offer rugby). Girls' schools were less likely to offer chess or Māori cultural groups, but more likely to offer school orchestras, trading companies, environmental groups, science, and writing. Foreign language clubs and speech clubs were more likely at single-sex schools.

FACTORS THAT COULD HINDER STUDENT LEARNING

We also asked the Year 9 deans to rate the extent to which a range of student and teacher behaviours hindered student learning at Year 9 in their school. They were more likely to see student factors hindering student learning at their school, particularly student disruption of classes or lack of respect for teachers. But they also noted some mismatches between student needs and teacher responses.

The following table gives the proportion of those who said that a given factor hindered Year 9 students' learning in their school *to some extent or a lot* (Year 9 deans were offered a four-point scale, with the other two options being *not at all, very little*). Few said that these factors affected student learning a lot.

Table 10 **Year 9 deans' views of hindrances to Year 9 students learning in their school**

Student factors	**Year 9 deans saying "to some extent or a lot" (*n* = 60) %**
Students disrupting classes	62
Students lacking respect for teachers	48
Student absenteeism	38
Students intimidating/bullying others	35
Students skipping class	22
Use of alcohol/illegal drugs	17
Transience	13

Teacher factors	**Year 9 deans saying 'to some extent or a lot' (*n* = 60) %**
Teachers not meeting individual student needs	33
Teachers have low expectations of students	25
Students not being encouraged to achieve full potential	18
Poor student-teacher relations	17
Teacher turnover	13
Teacher absenteeism	10
Approach to the curriculum	10
Subject range	8
Teachers being too strict	5

Deans in schools with rolls of less than 300 were less likely to see student factors as hindering learning, but more likely to mention the range of subjects available as a factor hindering learning. Otherwise, school roll size makes little difference to perceptions here.

Composite school deans were less likely to see student- or teacher-related factors as hindering learning than their peers in secondary schools, but they gave similar ratings to student bullying, teacher absenteeism or strictness, and curriculum provision.

Deans in Year 7–15 schools were in turn slightly less likely than their Year 9–15 peers to see hindrance related to absenteeism, skipping classes, or transience. Year 9–15 deans were most likely to see hindrances related to use of alcohol or drugs.

Views related to teacher factors that might disrupt learning were largely unrelated to decile. Teacher strictness had higher ratings by deans in decile 7–10 schools (but still at a low level), and decile 9–10 deans gave lower ratings to students not being encouraged to reach their full potential.

Teachers in high-decile schools were less likely to see absenteeism, skipping classes, transience, lack of respect for teachers, or use of alcohol or drugs as hindering student learning, and teachers in low-decile schools generally more likely to see these as disruptive factors. Bullying and student disruption of classes were unrelated to decile. Not surprisingly, given the marked association between decile and school gender mix, the trends related to decile were also evident in relation to coeducational cf. single-sex schools.

YEAR 9 DEANS' PERSPECTIVES ON THE CHANGE TO SECONDARY SCHOOL

We asked the Year 9 deans of the schools the students were attending to tick the things (among a set of seven items) that they thought their incoming students found most different from their primary and intermediate experience.

The next table shows the 60 Year 9 deans' perceptions of the things that their incoming students find most different from their primary or intermediate experience. Note that while there are high proportions seeing both structural and behavioural differences, structural differences—the number of teachers, physically moving between teachers' classes—are more prominent than behaviour and attitude. It is intriguing that differences in teacher expectations were thought to exist in three-quarters of the schools. We did not specify the nature of these differences, so they could be in learning methods, standards, or behaviour—but it does raise the question of the value of differences—should it all be uniform, consistent, or is this part of living in a complex world where flexibility is important, and of allowing for different students to have different strengths? When is it confusing, when not? It is interesting that the wider subject choice available at secondary school was least likely to be mentioned by the deans.

Table 11 **Year 9 deans' views of changes for students starting secondary school**

Change	**Year 9 deans (*n* = 60) %**
Number of different teachers	85
Moving between periods	82
Different teachers' different expectations	75
More independence required	73
School size	68
Different behavioural expectations	60
Subject choice	37

On the whole, composite and Year 7–15 secondary deans' emphases were closer to each other than to their Year 9–15 secondary peers, though composite school deans were most likely to mention different behavioural expectations, and least likely to mention the number of different teachers. The Year 9–15 secondary school deans were most likely to mention school size, moving between periods, and the need for more independence. Subject choice was mentioned at similar levels for all three school types.

Different behavioural expectations were mentioned more by deans at decile 7–10 schools (71 percent cf. 36 percent of deans at decile 1–6 schools).

When we asked Year 9 deans to identify particular kinds of students who found it hard to settle into Year 9 at their school,[22] or who lost their momentum or interest, the student-identified aspect that helped them most—friendship—was prominent, as was low achievement. But quite a range of types of students are given. Interestingly, when we compare this set with the set identified by Year 10 deans, we find a similar pattern, indicating that the aspects that can make it hard in the transition to secondary school continue to be the ones that make it hard for students in the following year.[23]

Table 12 **Deans' views of students who find it hard to settle or who lose momentum**

Aspect	Year 9 deans (*n* = 60) %	Year 10 deans (*n* = 63) %
Low achievers	53	46
Disruptive friends	45	56
Coming to school without friends	37	29
English as a second language	22	29
Gifted students	13	13
Family dynamics/out of school problems	12	13
Health problems/disability	10	16

Students with existing drug and alcohol problems, or who were coming from a small school, or who were coming from kura kaupapa Māori, or into boarding were also mentioned by two or three deans each.

There are some students in each school type who seem to have more difficulty than others, but they are not always the same. Year 9–15 secondary school Year 9 deans were more likely to mention disruptive friends, or students with health problems or disability. Year 7–15 secondary school Year 9 deans were less likely than their composite or Year 9–15 secondary school peers to mention low achievers, students coming without their friends, or those whose English was a second language, but more likely to mention gifted students. Composite school deans were more likely to mention disruptive students in the class.

The larger the school, the more likely it was for the Year 9 dean to mention that students who had more difficulty settling than others were those who came to the school without friends, or who had disruptive friends, health problems, or English as a second language.

There were no clear patterns related to socioeconomic decile, or school size. Having English as a second language was more likely to be mentioned by deans in single-sex schools (32 percent cf. 14 percent of those in coeducational schools).

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[22] Deans were asked these questions about their Year 9 students as a whole, not the students at their school who are part of the Competent Children, Competent Learners study.

[23] With hindsight, it would have been good to ask this question of the students' primary teachers, to see if this pattern also occurs before the transition to secondary school. Given our findings of the importance of prior performance in relation to age-14 performance (see Chapter 9), it seems likely that it does.

SUMMARY

On the whole, there was more commonality than dissimilarity across the 60 schools in this study. Most of the schools attended by the students were organised in form classes, so that students would start secondary level with others of their own age. The common compulsory subjects of English, mathematics, science, and social studies provided continuity with primary school. This continuity was also evident with technology and the arts, which were compulsory at most of the schools. Six optional subjects were offered on average. Their content was related to school decile, with computer studies, the arts, or horticulture more likely to be offered at low-decile schools, and languages at high-decile schools.

Within-subject differentiation by student performance levels occurred to organise classes in compulsory subjects for between half to two-thirds of the schools, rather than streaming of groups for all classes. This within-subject differentiation is not dissimilar to the grouping practices that students would have been used to at primary school for reading and mathematics. Within-subject differentiation increased with school size, but occurred most in boys' schools, and also more in low-decile schools (which tend to be smaller than others).

Cross-curricular or integrated courses occurred in just over a quarter of the schools, more commonly in coeducational schools than single-sex schools. Lunchtime activities for students were offered in all schools, though 42 percent of the students thought that only occasionally or never were there good things for them to do then. A wide range of extracurricular activities was offered, particularly sports, debating, kapa haka, music, and drama.

Year 9 deans put more weight on student than teacher factors as ones that could hinder student learning, particularly student disruption of classes, or lack of respect for teachers. Mismatches between student needs and teacher responses, and teachers having low expectations, were the teacher factors most mentioned.

The deans identified a wide range of students who found it hard to settle into Year 9, or who lost their momentum or interest. Friendship (both lack of, and disruptive peers) and low achievement were most prominent. A similar range was identified by Year 10 deans for students at their year level, indicating that these factors are not just related to school engagement over the transition to secondary school.

Differences in school characteristics, particularly whether schools were single-sex or coeducational, and school decile, showed some differences in subject and extracurricular opportunities, and in deans' views of student and teacher responses to each other.

5. Student and parent views of their early secondary school experiences

In this chapter we compare student views of their school experience at ages 14 and 12, to see what changes have occurred; and we also see what patterns there are related to social characteristics, school-change characteristics, and school characteristics. We then move to look at what homework means now, and how students communicate with their parents about school, before turning to parent views of their child's engagement in school, support from teachers, and parents' own interactions with teachers and the secondary school. Finally, we look at the level of agreement between parents and students on some aspects of their transition to secondary school.

DOES STUDENT ENGAGEMENT AND CONFIDENCE IN SCHOOL CHANGE BETWEEN AGES 12 AND 14?

Overall, the proportion of the sample who liked their teachers and enjoyed learning remained reasonably high between the ages of 12 to 14. Most seemed confident in the secondary environment. The big change is an increase in those who get bored.

There was only one significant difference in views between students in Years 9 and 10, so they are reported here as a whole. The one difference was that Year 10 students were more likely to say they were usually bored at school (29 percent cf. 17 percent of Year 9 students). However, they were no more likely to say that they did not enjoy learning, or that they wanted to leave school as soon as they could.

We formed factors using exploratory factor analysis, checking the internal consistency of the resulting factors using Cronbach's alpha coefficient. We report the items for each factor separately. There were four factors formed from the 25 questions.[24] The items where there is some change from age-12 views, when the same question was asked, are starred.[25]

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[24] Two items did not adhere to any of the four factors: "there are lots of good things to do at lunchtime", and "I use a computer".

[25] At age 12 we used a three-point scale, "usually", "occasionally", and "rarely/never". In making comparisons with age-14 answers, we have grouped the age-14 categories "almost always/always" and "usually" together.

Engagement in school

There were some changes between ages 12 and 14 in the overall patterns of views of school in relation to the items that formed the factor "**engaged in school**". However, the changes are relatively small. The proportion of those who liked their teachers and enjoyed learning remained reasonably high. Around a third did not usually enjoy school, like their teachers, or find the rules fair. Of the items we asked for the first time at age 14, around a third felt they had too much work to do. Eighteen percent had thoughts of leaving school as soon as they could. But skipping classes was uncommon.

Table 13 **Age-14 student views on items in the factor "Engaged in school" ($\alpha = 0.79$)**

Frequency → School is a place where:	Almost always/always %	Usually %	Occasionally %	Rarely/ never %
The discipline rules are fair*	20	50	23	7
I keep out of trouble*	29	50	17	3
I like my teachers*	13	52	30	5
I enjoy learning[26]	18	52	27	3
I get tired of trying (r)*	3	13	52	32
I get too much work to do (n, r)	6	24	57	13
I skip classes (n, r)	<1	2	9	88
I want to leave as soon as I can (n, r)	6	12	39	42

(n) = new item
* = notable difference from responses at age12
(r) = reverse scored in the factor

The differences between age-12 and age-14 views overall:

The discipline rules are fair: No shift in the proportion (70 percent) who thought they were usually fair, an increase from 2 to 7 percent in those who thought they were rarely or never fair, and a small decrease in those who thought they were occasionally fair, from 28 to 23 percent.

I keep out of trouble: A marked increase in the proportion who said they usually kept out of trouble, from 61 to 80 percent, and a corresponding decrease in those who said they occasionally kept out of trouble, from 36 to 17 percent. The proportion of those who said they rarely/never kept out of trouble remained the same.

I like my teachers: An increase in the proportion who usually liked their teachers, from 58 percent at age 12, to 65 percent at age 14. There was a corresponding drop in the proportion who occasionally liked their teachers, from 37 percent to 30 percent. The proportion who rarely/never liked their teachers was consistent across both ages.

I enjoy learning: A decrease in the proportion who said they usually enjoyed learning, from 76 to 70 percent, an increase in those who said they occasionally liked learning, from 27 to 22 percent, but much the same proportions (3 and 2 percent) of those who said they rarely/never enjoyed learning. (The wording change between age 12 and 14 could account for these changes.)

I get tired of trying: An increase in those who usually say they got tired of trying—from 9 percent at age 12, to 16 percent at age 14. There was a corresponding decrease in those who said they rarely/never got tired of trying, from 40 to 32 percent.

Did individual students also shift their views over the 2 years, as their school context changed? The short answer is yes, but not dramatically, and more so for some items than others. This indicates that many student views are not fixed, or unchangeable.

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[26] At age 12, this item was worded "I enjoy myself".

Looking at the five items where we saw some overall change, we see these patterns:

The discipline rules are fair: Thirty-eight percent of those who thought the rules were rarely or never fair at age 12 also thought so at age 14, as did 6 percent of those who at age 12 thought they had been usually or occasionally fair.

I keep out of trouble: Sixty-two percent of the small group who said they rarely/never kept out of trouble at age 12 (*n*=16) now said they usually or always kept out of trouble, as did 70 percent of those who had said they occasionally kept out of trouble, and 86 percent of those who had said they usually kept out of trouble.

I like my teachers: Twenty-six percent of those who had rarely/never liked their teachers at age 12 continued to feel the same about their teachers at age 14, as did 6 percent of those who had occasionally liked their teachers, and 3 percent of those who had usually liked their teachers. At the other end of the scale, 52 percent of those who had rarely/never liked their age-12 teachers now usually or always liked their age-14 teachers, as did 57 percent of those who had occasionally liked their age-12 teachers, and 70 percent of those who had usually liked their age-12 teachers.

I enjoy learning: Fifty-five percent of those who occasionally or rarely/never enjoyed learning at age 12 now usually enjoyed learning at age 14. Of those who had usually enjoyed learning at age 12, 22 percent said they always enjoyed learning, and 53 percent that they usually did; 23 percent now said they enjoyed learning (only) occasionally, and 2 percent rarely or never enjoyed their learning.

I get tired of trying: Thirty-three percent of those who had said they usually got tired of trying also felt that way at age 14 cf. 21 percent of those who had said they occasionally felt that way, or 6 percent of those who had said they never felt that way.

Confidence in school

Most of the students appeared to be **confident** in their secondary school: fewer than 10 percent did not think they belonged, or felt unsafe. Only 3 percent felt they did not have good friends at the school. However, 27 percent did not usually or always get the help they thought they needed. Forty-seven percent did not feel they were treated as adults (though we did not ask if this was important to them).

There were some shifts in the overall patterns for the three items common to both ages 12 and 14. At secondary level, the students were *more* likely to say they usually learnt most things pretty quickly (76 percent, up from 58 percent at age 12), and slightly more likely to say they usually got all the help they needed (73 percent, up from 68 percent at age 12), and to say they had good friends (98 percent, up from 93 percent at age 12).

Table 14 **Age-14 student views on items in the factor "Confident in school" (α = 0.73)**

Frequency → School is a place where:	Almost always/ always %	Usually %	Occasionally %	Rarely/ never %
I am treated as an individual (n)	33	54	9	4
I feel I belong (n)	42	49	7	2
I feel safe (n)	56	38	5	1
I get all the help I need	24	49	25	2
I learn most things pretty quickly*	22	55	20	3
It's important to do my best (n)	65	27	7	1
I am treated like an adult (n)	9	43	38	9
I have good friends	80	18	2	1

(n) = new item

* = notable difference from responses at age 12

(r) = reverse scored in the factor

When we look at changes in individual student views, we see similar degrees of shift as we saw for the items in the *Engaged in school* factor.

I learn most things pretty quickly: This continued to be true for 88 percent of those who said they usually learnt most things pretty quickly at age 12: but it was also now the view of 61 percent of those who had thought this was true only occasionally at age 12, and for 46 percent (of a small group of 13) who had thought they rarely/never learnt things pretty quickly at age 12.

I get all the help I need: Of those who thought that this was usually true at age 12, 80 percent thought this was usually or always the case at age 14, as did 59 percent of those who had thought it was occasionally true, or rarely true 2 years earlier.

I have good friends: Sixty-three percent of those who thought that they only occasionally or rarely had good friends at age 12 now said they always had good friends, as did 81 percent of those who said they usually had good friends at age 12.

Lack of engagement in school

This is the factor where we see the most marked shifts over the transition to secondary level in the overall picture. A third of the age-14 students usually felt bored, a marked increase from the 12 percent at age 12. Sixteen percent usually felt restless, twice as high as the 8 percent at age 12. At the other end of the scale, only 10 percent said they rarely/never got bored cf. 3 percent at age 12, and only 19 percent rarely/never felt restless cf. 41 percent at age 12. Just under half now thought they could do better work if they tried, up from 31 percent at age 12.

When we look at changes in the views of individual students, we see a reduction in engagement levels for those who had been engaged, and no large increase in engagement for those who had shown signs of disengagement in school at age 12.

I feel restless: Of those who rarely/never felt restless at age 12, only 28 percent felt the same way at age 14. Thirteen percent of those who occasionally felt restless were more engaged in school—feeling rarely/never restless, as were 8 percent of those who had usually felt restless. At the other end of the scale, 13 percent of those who had rarely/never felt restless at age 12 now did so at age 14, as did 17 percent of those who had occasionally felt restless, and 25 percent of those who had usually felt restless at age 12.

I get bored: Eighteen percent of those who rarely/never felt bored at age 12 still felt that at age 14 cf. 6 percent of those who were occasionally bored, and 4 percent of those who had usually been bored at school. Fifty-seven percent of the latter continued to be usually or always bored, as were 34 percent of those who had (only) occasionally been bored at school at age 12, and 27 percent of those who had rarely/never been bored.

I could do better work if I tried: Fifteen percent of those who had thought at age 12 they rarely/never could improve their work if they tried still thought that at age 14, as did 11 percent of those who had thought they occasionally could, and 6 percent of those who thought they usually could. Of the latter group, 66 percent continued to think they usually or always could do better work, as did 41 percent of those who had occasionally thought they could do better work, and 34 percent of those who had thought they rarely/never could do better work if they tried.

Table 15 **Age-14 student views on items in the factor "Not engaged in school" ($\alpha = 0.57$)**

Frequency → **School is a place where:**	**Almost always/ always %**	**Usually %**	**Occasionally %**	**Rarely/ never %**
I could do better work if I tried*	16	30	44	10
I get bored*	9	25	56	10
I feel restless*	4	12	64	19

(n) = new item

* = notable difference from responses at age 12

(r) = reverse scored in the factor

Getting a hard time at school

Around 1 in 20 of the students thought they usually got a hard time at school, or felt alone.

Table 16 **Age-14 student views on items in the factor "I get a hard time at school" (α = 0.61)**

Frequency → **School is a place where:**	**Almost always/ always** **%**	**Usually** **%**	**Occasionally** **%**	**Rarely/ never** **%**
I feel sad*	1	2	26	70
I feel lonely	1	2	22	76
I get teased about the things I believe (n)	1	4	18	77
I get a hard time	1	4	27	68

(n) = new item
* = notable difference from responses at age 12
(r) = reverse scored in the factor

The numbers are small, but in terms of proportions, there appeared to have been increases overall since age 12 for those who feel usually sad (3 percent (*n*=17), up from 1 percent at age 12), or that they got a hard time (5 percent, up from 3 percent). Interestingly, there was also a decrease in those who said they rarely/never felt sad at school, from 80 percent at age 12, to 70 percent at age 14. However, loneliness was not more marked at secondary level.

In terms of individual responses, three of the four students who had usually felt sad at age 12 now only occasionally felt sad. Occasional sadness was also felt by 24 percent of those who had rarely/never felt sad at age 12, and 31 percent of those who had occasionally felt sad at age 12.

There is no evidence from these student views that secondary level is a less supportive environment in terms of relationships and exchanges. For some in our study, the move to secondary level appears to have been positive. This is consistent with the Ministry of Education study, which found no difference between the end of Year 8 and the end of the first term of Year 9 in the proportion of students who mostly liked or enjoyed school.

What may be problematic for some is the nature of the work, and the way it is presented. We found more students were expressing boredom and restlessness at age 14 than they had at age 12. More analysis of the relationship between student views of school and their views of their classes, particularly in relation to the kind of learning situations and opportunities they encounter, is given in the companion age-14 report *Growing Independence*.

Social characteristics and engagement in the early years of secondary school

Next we see if there are any differences in student engagement related to the four social characteristics of gender, ethnicity, family income, and maternal qualification.

Gender

Gender differences were only apparent on 8 of the 25 items, and items that fell into three factors (all except the "engaged in school" factor). Girls were more polarised than boys on two of these items:

I feel I belong: Girls were more likely to say they felt they belonged in their school almost always/always (47 percent cf. 38 percent of boys), but 12 percent of girls said they only felt this occasionally or rarely/never cf. 6 percent of boys.

Six percent of girls felt *sad* at their school almost always/always, or usually cf. 1 percent of the boys. This difference did not exist at age 12.

Eight percent of girls felt *safe* only occasionally cf. 3 percent of the boys. Seven percent of the girls said they were almost always/always or usually *teased about the things they believed* cf. 3 percent of the boys.

A small group of boys did not feel they were *treated as an individual* (15 percent rated this as only occasional or rarely/never cf. 9 percent of girls), or *as an adult* (12 percent rated this as rarely/never cf. 7 percent of girls).

Boys were more likely to think they could *do better work if I tried* (20 percent rated this almost always/always cf. 11 percent of girls; 15 percent of girls rarely/never felt this cf. 6 percent of the boys). This difference was also apparent at age 12.

Boys were somewhat more likely to express boredom: 38 percent felt this almost always/always or usually cf. 31 percent of the girls). But, unlike at age 12, they were no more likely than girls to be restless.

Ethnicity

Māori and Pacific students were less likely to feel they were treated as individuals (70 percent cf. 90 percent of Pākehā/European and Asian students). They were less likely to feel treated as adults (42 percent cf. 55 percent, $p = 0.06$). Eighteen percent said they always kept out of trouble cf. 32 percent of Pākehā/European and Asian students. They were less likely to think their school's discipline rules were fair (52 percent cf. 73 percent).

Seventy-three percent of Māori and Pacific students thought they could do better work if they tried cf. 41 percent of Pākehā/European and Asian students. Forty-five percent of this group also thought they got too much work to do cf. 26 percent of Pākehā/European and Asian students.

Family income

Sixteen percent of students from low- or medium-income homes felt they were rarely/never treated like adults at their secondary school cf. 6 percent of those from high- and very high-income homes. Six percent of the students from low- or medium-income homes felt almost always or usually sad at school cf. 2 percent of those from high- and very high-income homes.

Keeping out of trouble at school was linearly related to family income: the lower the income, the less likely it was that the student had almost always/always or usually kept out of trouble (63 percent of students from low-income homes, increasing to 86 percent of those from high and very high-income homes). Students from low-income homes were most likely to think that their school's discipline rules were only occasionally or rarely/never fair (52 percent cf. 27 percent of others). Twenty-six percent of this group had skipped classes at least occasionally, decreasing to 8 percent of those from very high-income homes.

Boredom at school[27] was highest for those from low-income homes (46 percent), and lowest for those from very high-income homes (25 percent). Twenty-eight percent of those from low-income homes wanted to leave school as soon as they could, decreasing to 14 percent of those from very high-income homes. Enjoyment of learning was most common for the latter (76 percent, decreasing to 60 percent of students from low-income homes). Students from low-income homes were more likely to say they got tired of trying (24 percent, decreasing to 11 percent of those from very high-income homes.

Fifty-four percent of students from low- or medium-income homes said they only occasionally or rarely/never liked their teachers cf. 30 percent of students from high- or very high-income homes.

Maternal qualification

Students whose mothers had no qualification were also more likely to say they only occasionally or rarely/never liked their teachers (42 percent, decreasing to 26 percent of those whose mothers had a university qualification).

Students whose mothers had a university qualification were more likely to say they occasionally or more often felt lonely at school (34 percent cf. 22 percent of others). But sadness was more likely to be felt usually or always by students whose mothers had no qualification (8 percent, decreasing to none of the students whose mothers had a university qualification).

Students whose mothers had no qualification, or a mid-school or trades qualification were less likely to keep out of trouble[28] (55 percent cf. 87 percent of those whose mothers had a tertiary or university qualification). They were less likely to see their school's discipline rules as fair (57 percent, increasing to 84 percent of those whose mothers had a university qualification). Boredom was most likely for students whose mothers had no qualification (51 percent, decreasing to 25 percent of those whose mothers had a university qualification). They were also most likely to feel they got too much work to do (43 percent, decreasing to 20 percent of those whose mothers had a university qualification).

Nineteen percent of those whose mothers had a university qualification thought they could rarely/never do better work if they tried cf. 8 percent of others. This was the group least likely to want to leave school as soon as they could (11 percent cf. 20 percent of others), and least likely to say they got tired of trying (7 percent cf. 18 percent of others). Thirty-nine percent of this group felt they always learnt most things pretty quickly cf. 18 percent of others.

But maternal qualification was unrelated to whether students skipped classes, felt they got help, and felt it was important at their school to do their best.

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[27] In this paragraph, the statements refer to those who said they almost always/always or usually felt this.

[28] In this paragraph, the statements refer to those who said they almost always/always or usually felt this.

School characteristics and engagement in the initial secondary years

Here we look at whether student reactions to secondary school differ by the characteristics of their school, focusing on socioeconomic decile and gender mix.

School decile

The experiences of students and teachers in decile 1–2 secondary schools tend to show that the work of learning and teaching is in some key respects a different enterprise than for schools whose students may have had more of the experiences and developed some of the interests that align best with the current nature of schoolwork, reflecting higher levels of family resources of income and parents' own education (Hipkins with Hodgen, 2004; Thrupp, 1999). The 2003 PISA study found that while individual family income levels were strong contributors to student scores, including school social mix in models accounting for variability in student scores at age 15 showed that this was playing an additional part (OECD, 2004).

At age 12, students attending decile 1–2 schools were distinct from others on only one item: they were more likely to think they could do better work if they tried. But at age 14, we found this group tended to be much less engaged in school, and less confident than students in other decile schools, as evident in the following differences:

- 65 percent of the students in decile 1–2 schools said they almost always/always or usually got bored cf. 32 percent of others;
- 20 percent almost always/always wanted to leave school as soon as they could cf. 8 percent of others, yet their level of enjoying learning was no different from others, and they were just as likely to think they learnt most things pretty quickly;
- 33 percent were more likely to think that they almost always/always could do better work if they tried cf. 14 percent of others;
- half thought they almost always/always or usually had far too much work to do cf. 28 percent of others;
- 30 percent thought they almost always/always or usually got tired of trying (cf. 15 percent of others;
- 33 percent felt almost always/always or usually restless cf. 15 percent of others; and
- 18 percent usually skipped classes cf. 1 percent of others.

They were also more likely to feel that they were only occasionally or rarely/never:

- treated as an adult (63 percent cf. 46 percent of others;
- treated as an individual (33 percent cf. 12 percent of others; and
- belonged in their secondary school (20 percent cf. 7 percent of others.

They and students in decile 3–4 schools were more likely to say they only occasionally or rarely/never kept out of trouble (34 percent cf. 18 percent of others), and to feel that their school's discipline rules were fair only occasionally or rarely/never (44 percent cf. 28 percent of others).

However, decile 1–2 students were less likely to say that occasionally they felt lonely (8 percent cf. 23 percent of others).

Note that they were just as likely to like their teachers, and to feel they got all the help they needed. Their views that it was important to do their best were also similar to students in higher-decile schools.

These decile-related patterns of lack of confidence and lack of engagement with school show, as one would expect, similarities with the trends in relation to family income levels. Items that emerged in relation to school decile only, suggesting that the school environment itself was playing an independent role, were belonging in the school, and being treated as an individual. Boredom levels were also higher when we analysed by school decile.

School gender mix

Students at single-sex schools were somewhat more likely to like their teachers (75 percent of students at girls' schools and 70 percent of students at boys' schools cf. 58 percent of those in coeducational schools). Students at girls' schools were less likely to want to leave as soon as they could (11 percent cf. 20 percent of those in boys' schools, and 21 percent of those in coeducational schools). Students at coeducational schools were less likely to say they always enjoyed learning (14 percent cf. 24 percent of those in single-sex schools). This probably reflects to some extent the different social mix in single-sex and coeducational schools.

Views on doing well at school

Some US studies have found a decline in intrinsic motivation, or internally generated motivation to learn (which is generally more durable, and more likely to attribute achievement to effort) over adolescence, though Gottfried, Fleming, and Gottfried (2001) in their longitudinal study found that this decline was related to particular subjects. What we see for this New Zealand sample between the ages of 12 and 14 is less clearcut. On the one hand, there was no increase in using external comparisons (or extrinsic motivation, which is more dependent on particular contexts, and has been associated with attributing achievement to innate ability rather than effort) such as comparing others' test results or responses in class, as a sign for how one is doing in schoolwork. In fact, students were less likely to use these as signs—or else they were now in classes where they were encountering a larger number of others performing above their level. On the other, there was some decline in the use of internally referenced indicators, such as seeing learning in terms of making sense, and those related to effort. There appears to be less certainty about how to know one is doing well at school, but an awareness that effort has to be made. With these items, most of the shift in views between ages 12 and 14 was related to less use of the "agree" categories, and more to a greater use of the "neutral" category.

Table 17 **Student views on gauging their learning at ages 10, 12, and 14**[29]

		Agree[30] %	
I feel I am doing well at school when:	**At age 10 (*n* = 507)**	**At age 12 (*n* = 496)**	**At age 14 (*n* = 475)**
I do my very best	90	91	72
I solve a problem by working hard	90	89	75
I work really hard	85	88	80
What I learn makes sense	84	84	65
My friends and I help each other	88	83	71
I get a new idea about how things work	84	82	71
I learn something interesting	86	81	70
Something I learn makes me think about things	76	76	67
I have the highest test marks	64	66	41
I am the only one who can answer questions	44	49	32
I do not have anything hard to do	49	41	20
I know more than other people	37	38	29
I do not have to try hard	38	33	19
Others get things wrong and I do not	23	32	25
I catch on quickly (new item at 14)			64

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[29] These items were developed for the age-10 phase after a scan of the research literature on motivation and children's attributions, particularly whether they saw progress in terms of intrinsic motivation and effort, or in terms of extrinsic signs.

[30] At age 12, students were asked to say whether they agreed, disagreed, or were unsure/thought it depended; at age 12, they were asked to agree with a 5-point scale: totally agree, agree, neutral, disagree, and totally disagree.

These views fell into two factors that neatly reflect the research literature. One item was not included in either factor ("My friends and I help each other", which is arguably more about the learning environment rather than attribution of achievement).

Use of effort and internal pointers to gauge learning ($\alpha = 0.85$)

I solve a problem by working hard
I learn something interesting
I do my very best
I get a new idea about how things work
Something I learn makes me think about things
I work really hard
What I learn really makes sense
I catch on quickly

Use of external pointers to gauge learning ($\alpha = 0.86$)

I know more than other people
Others get things wrong and I don't
I have the highest test marks
I don't have anything hard to do
I'm the only one who can answer questions
I don't have to try hard

Year 10 students were more likely to see learning in terms of external comparison. Twenty-nine percent felt they were doing well at school when others got things wrong and they did not, cf. 19 percent of Year 9 students, and 36 percent if they were the only one who could answer the question cf. 25 percent of Year 9 students. Twenty-two percent felt they were doing well if they did not have to try hard cf. 14 percent of Year 9 students.

Social characteristics and views on learning

Family income and maternal qualification showed more differences related to views on learning than did gender or ethnicity. Students from low-income homes were least likely to feel that they knew they were doing well when what they learnt really made sense (45 percent, increasing to 80 percent of students from very high-income homes). They were also least likely to feel they were doing well at school when they worked really hard (71 percent, increasing to 85 percent of those from very high-income homes). Students from low- and medium-income homes were less likely to say they knew they were doing well by catching on quickly (55 percent cf. 70 percent of students from high- and very high-income homes).

Students whose mothers had a tertiary or university qualification were somewhat more likely to feel they were doing well at school when they were the only one who could answer questions (41 percent cf. 27 percent of others). Students whose mother had no qualification were least likely to feel they were doing well when they had the highest test marks (29 percent, increasing to 56 percent of those whose mothers had a university qualification). They were also least likely to use the experience of something they learnt really making sense to gauge how well they were doing at school (46 percent, increasing to 79 percent of those whose mothers had a university qualification), and least likely to say that catching on quickly was how they knew how well they were doing (16 percent said they almost always/always felt this, increasing to 31 percent of those whose mothers had a university qualification).

At age 12, boys were more likely to use external pointers to gauge how well they were doing; but at age 14, there was little gender difference on most of these items. There was no longer a gender difference on the item *I am the only one who can answer questions,* and girls were just as likely as boys to agree with the item *I* *know more than other people*, though girls were marginally more likely to disagree that this was how they knew they were doing well (41 percent cf. 33 percent of boys, $p = 0.06$).

Māori and Pacific students were more likely to disagree that having the highest test marks were (52 percent cf. 36 percent of Pākehā/European and Asian students), or doing their very best (12 percent cf. 6 percent) was how they knew they were doing well at school. They were less likely to say that they knew they were doing well at school because others got things wrong that they did not (14 percent cf. 27 percent). These were the only differences related to ethnicity.

School characteristics and views on learning

School gender mix and decile showed a few differences related to views on learning.

Students at girls' schools were somewhat more likely to feel they were doing well at school when they:

- worked really hard (88 percent cf. 79 percent of those at boys' schools, and 79 percent of those in coeducational schools); and
- did their very best (83 percent cf. 67 percent of those in boys' schools, and 68 percent of those in coeducational schools);

and somewhat less likely to feel this if they didn't have anything hard to do (12 percent cf. 29 percent of those at boys' schools, and 21 percent of those in coeducational schools).

Students at single-sex schools were more likely to feel they were doing well at school when something they learnt really made sense (75 percent cf. 57 percent of those in coeducational schools).

As we have seen, decile 1–2 students indicated that they were less engaged in learning than others, yet they were just as likely to say they enjoyed learning. When it comes to views on learning, they were no more likely than others to use external pointers to gauge how well they were doing. However, they were somewhat less likely to say that they knew how well they were doing when something they learnt made them think about things (50 percent cf. 68 percent of others) or, as with decile 3–4 students, that they got a new idea about how things worked (54 percent cf. 69 percent of decile 5–10 students).

Is education less valued after the transition to secondary school?

Responses to items in two questions we asked about values give some global indications of whether the transition to secondary has affected student motivation toward education or learning. A slightly higher proportion of the students chose *doing well at school* as one of the three things that were most important to them (51 percent cf. 42 percent at age 12). This was the only item on the list that showed an increase. It may indicate increased awareness of the importance of qualifications. There were no differences between year levels. Two items showed slight decreases: 29 percent of the sample chose doing well at sport at age 14 cf. 37 percent at age 12; and 23 percent chose being helpful or kind cf. 28 percent at age 12.

Of more importance to students from the low-income group than others were having lots of friends (45 percent), and wearing the right clothes/looking cool (21 percent). There were linear patterns of association with three other values, with the proportions of students who chose them rising with family income levels: enjoying the things I do (increasing from 38 percent of low-income students to 54 percent of very high-income students); doing well at school (increasing from 41 percent of low-income students to 57 percent of very high-income students); and doing well at sport (increasing from 17 percent of low-income students to 37 percent of very high-income students).

Enjoying the things they did was most important to those whose mothers had a university qualification (61 percent, decreasing to 39 percent of those whose mothers had no qualification).

Wearing the right clothes/looking cool was more important for students whose mothers had no qualification or a mid-school/trade qualification (16 percent cf. 8 percent of others).

Males were more likely to choose doing well at sport and having money to spend; females, being helpful or kind, and being with family. Being with whānau or fanau (family) mattered more to Māori and Pacific students (43 percent cf. 29 percent of Pākehā/European and Asian students).

Answers to another question *Is there anything you would like to change in your life right now?* showed more interest in some change at age 14 than at age 12 (56 percent cf. 40 percent). There was a notable increase in those who would like more money (22 percent cf. 7 percent at age 12), and those who would like to improve a skill (21 percent cf. 4 percent). There was also more interest related to peers and self-image. The proportions of those who would like more or better friendship (9 percent), more confidence (10 percent), or to change their appearance (11 percent) all occurred at twice the proportion at age 12—but these are still low proportions overall. For most of these desires, there was little difference between year levels, though slightly more Year 9 students would like to be more confident (13 percent cf. 9 percent of Year 10 students).

However, there was more interest expressed now in changing a teacher, especially by Year 9 students, 9 percent cf. 4 percent of Year 10 students, and less than 2 percent at age 12. Again, the proportions overall are low, indicating that this is not a general issue, but one that particularly affects individuals. Girls were more interested in changing a teacher (8 percent cf. 4 percent of boys), or changing school (6 percent cf. only one boy). Fifteen percent would not choose their existing school again if they could go back in time cf. 9 percent of boys.

More girls did express a desire to change something in their life, particularly an increase in confidence (15 percent cf. 6 percent of boys), appearance (15 percent cf. 7 percent of boys), and friendship quality or quantity (12 percent cf. 5 percent). Twenty-three percent of Pākehā/European and Asian students wanted to improve a skill cf. 11 percent of Māori and Pacific students. There were no associations between any changes desired and family income or maternal qualification levels.

WHAT STUDENTS ENJOYED ABOUT SCHOOL

When we asked the students to tell us the main things they enjoyed, or did not enjoy, about school currently, there are no clear patterns that point to changes between primary and secondary school as key in factors related to Year 9 and 10 student enjoyment of school, though 22 percent mentioned subject choice. Two-thirds mentioned a particular subject: health/physical education and the arts were most mentioned. Just over a third mentioned sport, and 11 percent, extracurricular activities. Just under half named a particular subject they did not enjoy, with mathematics and science each named by 20 percent of the students. Twenty-three percent mentioned homework, 12 percent their uniform, and 12 percent, discipline. When it comes to teachers, 14 percent mentioned good teachers as the main thing they enjoyed about their school—and 19 percent poor or boring teachers as the main thing they did *not* enjoy about their secondary experience. Forty-four percent mentioned friends as the main thing they enjoyed.

Year 10 students were slightly more likely to mention a particular subject or sport as things they enjoyed; and homework and school starting time as things they did not enjoy. A slightly higher proportion of Year 9 students nominated English as something they did not enjoy, but the numbers are small at both year levels.

Boys were more likely to mention sport (43 percent), or facilities (13 percent) as things they enjoyed about their secondary school, and girls, their friends (54 percent). Girls were more likely to mention poor or boring teachers as something they did not enjoy about secondary school (23 percent), or a particular subject, mainly mathematics or science. The only difference related to ethnicity was that Māori and Pacific students were more likely to mention sports as something they enjoyed (47 percent cf. 32 percent of Pākehā/European and Asian students), and marginally more likely to mention science as something they did not enjoy about secondary school (29 percent cf. 19 percent, $p = 0.06$).

HOMEWORK

Student estimates of the average time spent on homework increased from 3.31 (s.d. 2.28) hours a week at age 12 to 4.8 hours a week (s.d. 3.5) for Year 9 students, and 4.7 hours a week (s.d. 3.5) for Year 10 students. The range (indicated by the size of the s.d., or standard deviation) also increased, with greater gaps between those giving more time than the average, and those giving less. Student answers to how often they did homework showed an increase in those who only did it occasionally (14 percent cf. 7 percent at age 12, with no differences between Years 9 and 10).

At age 12, we found that the more important students thought homework was, the more time they spent on it. We found the same trend at age 14 (from an average of 6.31 hours a week (s.d. 3.88) for those who thought homework was very important, to an average of 2.79 (s.d. 2.14) for those who thought homework was not important).

Liking the homework given was also likely to mean an increase in time spent doing it, though the differences were not so pronounced as they were in relation to views of the importance of homework. Those who did not like doing homework reported an average of 4.09 hours a week (s.d. 3.48) on homework, cf. an average of 5.68 hours a week (s.d. 3.49) for those who did like doing all or most of their homework.

At age 14, fewer students thought doing homework was very important (31 percent cf. 49 percent at age 12). However, at age 12, we found no relationship between views on the value of homework and children's performance on the study competency measures. (We did not analyse the relationship between them at age 14.)

Slightly more students disliked homework at age 14 (40 percent cf. 32 percent at age 12), and slightly fewer enjoyed doing all or most of their homework (15 percent cf. 24 percent). Views on homework were unrelated to year level.

However, views on whether it was hard to do homework were much the same at both ages 14 and 12. The reasons why homework could be hard to do had changed a little. At age 14, television was more likely to be given as a reason (19 percent cf. 10 percent at age 12), as were friendships (18 percent cf. 10 percent), and computer use (12 percent cf. 3 percent). Year 9 students were half as likely as Year 10 students to cite television or computers as reasons why they found their homework hard to do.

While the proportion of those who said their homework was difficult dropped from 15 to 10 percent, and the proportion who said they didn't want to do their homework was somewhat increased (from 12 to 16 percent), 9 percent now said it was boring, a reason that had been given by only a few students at 12.

Gender and ethnicity were largely unrelated to average hours spent on homework, or views about it. Females were more likely to say[31] that friends got in the way of getting their homework done (23 percent cf. 14 percent of males), and males to mention sports (26 percent cf. 18 percent), television (24 percent cf. 13 percent), or computers/playstations (18 percent cf. 6 percent).

Females spent more time on average on homework, 4.86 hours (s.d. 3.42), than males, whose average time was 4.63 hours (s.d. 3.61).

Family income was related to views on homework and time spent on it—but maternal qualification was not. Average time spent on homework increased from 3.69 hours a week (s.d. 2.56) for students from low-income homes, to 5.35 hours a week for those from very high-income homes (s.d. 3.5). Twenty-one percent of the former thought it was not important to do homework cf. 11 percent of the latter. There were no differences related to levels of family income in relation to whether students liked doing homework, or whether they found it hard to get their homework done. Of the activities that could get in the way of doing homework, sport was the only one where there were different responses reflecting family income levels (16 percent of students from low-income homes, increasing to 29 percent of students from very high-income homes).

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[31] In response to an open-ended question.

Parental support for homework

Eighty-four percent of the 14-year-olds said their family had expectations or rules about homework, the same proportion as 2 years earlier. However, parental help with homework was a little less at age 14: 86 percent of the parents of the Year 9 students said they helped their child with homework, as did 81 percent of the parents of the Year 10 students cf. 94 percent at age 12. Most of this help was "when needed" (53 percent). Twenty-eight percent mentioned providing resources, and 16 percent, providing feedback. Mathematics was the subject most likely to be specifically mentioned as one where parents helped with homework (18 percent). Fewer parents mentioned supervision (9 percent cf. 29 percent at age 12).

A new question for parents asked whether there was any homework they were having difficulty helping their child with. Fifty-four percent said there was: and mathematics dominated (43 percent). Nine percent mentioned science, 6 percent a language other than English, and 4 percent English.

While girls and boys were equally likely to get some parental help with homework, parents of girls were much more likely to mention that they helped with their mathematics homework (23 percent cf. 13 percent of boys' parents), and general feedback (20 percent cf. 12 percent of boys' parents). Boys were somewhat more likely to get help with projects (10 percent cf. 4 percent of girls' parents). Child gender was unrelated to any difficulties parents had with helping their child with their homework.

Māori and Pacific parents were somewhat less likely to help their child with homework (74 percent cf. 85 percent of Pākehā/European and Asian parents). The latter were more likely to provide resources (29 percent cf. 19 percent of Māori and Pacific parents), or feedback (17 percent cf. 8 percent of Māori and Pacific parents). Ethnicity was unrelated to any difficulties parents had with helping their child with their homework.

Parental help with homework was less likely in low-income homes (72 percent cf. 85 percent of others). Parental help with mathematics homework increased from 5 percent of the low-income group, to 25 percent of the very high-income group. However, the proportion of those who said they had difficulty helping their child with mathematics homework was similar across all income levels.

While one would expect a similar pattern in relation to maternal qualification levels, parents in families where the mother had no qualification were just as likely to help with homework as others. However, the same trend was evident in relation to mathematics (increasing from 9 percent of parents in families where the mother had no qualification helping their 14-year-old with their mathematics homework to 24 percent of those where the mother had a university qualification); and the latter group was least likely to say they had difficulty helping their child with mathematics homework (26 percent cf. 47 percent of others).

STUDENT-PARENT TALK ABOUT SCHOOL

There are some changes in the people the study participants now talk to about school. At age 12, only 10 percent mentioned a friend as the person they talked to most about what happened to them at school. At age 14, a friend was mentioned by 28 percent. This large increase seems to account for the somewhat lower proportions mentioning their mother (62 percent, down from 77 percent at age 12), or father (22 percent, down from 28 percent at age 12). Fifteen percent mentioned a sibling, up from 11 percent at age 12. Year 9 and 10 students' responses were similar. Only 6 percent said they talked to no-one about what happened to them at school cf. 4 percent at age 12.[32]

Males were much more likely to mention their father as someone they talked to most about what happened to them at school (29 percent cf. 14 percent of females). Females were more likely to mention friends (35 percent cf. 22 percent of males), or siblings (19 percent cf. 10 percent of males).

Students whose mothers had no qualification were most likely to talk to friends about what happened to them at school (37 percent cf. 28 percent overall).

The topics that age-14 students talked about with their family or friends were much the same as at age 12 with regards to work (58 percent), social activity (36 percent), fighting/bullying/social problems (18 percent), and sport (21 percent). Two new items were teachers (24 percent), and homework (21 percent). Age-14 students were less likely to mention interesting or unusual events (25 percent cf. 34 percent at age 12).

Schoolwork and achievement were more likely to be mentioned as topics by students who said they talked about school with their mother or father (over 70 percent), and less likely to be mentioned by those who talked about school with a sibling or friend (between 45–50 percent). Social activity was more likely to be discussed with friends (54 percent cf. around a third for those who mentioned parents or siblings as people they talked with about school). Those who talked with their fathers were more likely to discuss homework (36 percent cf. 23 percent of those who talked with their mothers or friends, and 17 percent of those who talked with their siblings).

Boys were more likely to tell these people about sport (26 percent cf. 11 percent of girls), and girls to talk about social activity (44 percent cf. 30 percent of boys).

Māori and Pacific students were somewhat more likely to mention a relative, other than an immediate parent, as someone they spoke to about school (8 percent cf. 2 percent of Pākehā/European and Asian students). Topics students spoke about were much the same, whatever their ethnic background.

Family income levels appeared to have some bearing on what the students talked about to family or friends. The proportion of those who talked about schoolwork and achievement increased from 45 percent of those whose family incomes were low, to 66 percent of those whose family incomes were very high. Similar linear trends, with lowest proportions among those with low family incomes, and highest proportions among those with very high family incomes were evident in relation to talking about interesting or unusual things, sport, and teachers.

There was an increase in the proportion of students who talked about their teachers as maternal qualification increased, from 8 percent of those whose mothers had no qualification, to 35 percent of those whose mothers had a university qualification.

There was a similar pattern of increase in the proportion of students who talked about interesting or unusual things as maternal qualification increased, from 15 percent of those whose mothers had no qualification, to 35 percent of those whose mothers had a university qualification. Talking about homework was also most likely to happen with those whose mothers had a university qualification (29 percent cf. 21 percent overall).

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[32] The difference was statistically significant.

Parental reports of their talking with their children about school

Eighty-five percent of the parents interviewed said they talked to their child about school, and 13 percent said they did sometimes. Only 2 percent said they never did. These are much the same proportions as at age 12. Parents of boys were somewhat more likely to say they talked to their child about school only sometimes (16 percent cf. 10 percent) or never (2 percent cf. 1 percent). Parental reports that they talked with their child about school increased with family income, from 78 percent of parents in low-income families, to 91 percent of parents in very high-income families.

There were some changes in the topics parents said their child told them about school between age 12 and age 14, with more emphasis now on schoolwork and achievement, teachers, and homework, and less on interesting or unusual topics, and social problems.

Table 18 **Parent reports of the aspects of school their child tells them about, ages 12 and 14**

Aspect of school	**Age 12 (*n* = 496) %**	**Age 14 (*n* = 476) %**
Work and achievement	36	56
Social activity/friends	44	41
Teachers	6	31
Interesting/unusual things	33	23
Only if I ask	11	15
Everything	23	14
Fighting/bullying/social problems	20	14
Sport	13	14
Homework	-	13

When we compared parent and student views on what students told their parents about, we found more agreement on talk related to schoolwork (35 percent) than about other aspects of school.

In the parents' view, girls seemed to give their parents more information about what was happening at school, particularly around schoolwork (62 percent cf. 50 percent of boys), social activity (47 percent cf. 35 percent of boys), and homework (18 percent cf. 10 percent of boys). However, the first two gender differences were also apparent at age 12, and have not emerged at secondary level; homework was not mentioned for either gender at age 12.

Parents of students whose mothers had no qualification were just as likely to say they talked about schoolwork and achievement, but this group was least likely to talk about teachers (19 percent, increasing to 42 percent of those whose mothers had a university qualification), or interesting or unusual things (11 percent, increasing to 33 percent of those whose mothers had a university qualification). Family income levels showed one association. Parents from the highest income group were most likely to say that their children talked to them about work and achievement (68 percent, decreasing to 43 percent of those from low-income homes). There were no ethnic differences in parents' reports of their children's talk with them about school.

PARENTAL PERSPECTIVES ON THEIR CHILD'S ENJOYMENT OF SCHOOL AND PROGRESS

The overall picture from parents is positive. It also identifies a sizeable minority of students whose schooling experience could be enhanced. Our data from earlier phases of the study indicate that while there has been some increase in this latter group, this secondary transition point is not the only schooling stage at which this is true.

Sixty-five percent of the parents thought their 14-year-old child enjoyed school. On the one hand, this compares less favourably with the 75 percent who thought so when they were in primary school; on the other, this is much the same proportion as after the children's first year at school, when they were 6, which one could also see as a transition period. The next table compares parental reports of their child's current feelings about school with their reports when the study sample was 12. Year 9 and 10 parents' views were similar. There is somewhat more dampening of enthusiasm than loss of it altogether.

Table 19 **Parental reports of their child's feelings about school, age 14 and age 12 compared**

Feelings	***Parents, age 14*** ***(n = 476)*** ***%***	***Parents, when child age 12*** ***(n = 496)*** ***%***
Enjoyment	65	75
Matter of fact/accepts as part of daily routine	16	11
Mixed feelings (up and down)	10	6
Unhappy	6	4
Took a while to settle, ok now	2	3
Bored	2	1

Enjoyment of school was reported by parents to be highest for students from very high-income homes, 77 percent, decreasing to 51 percent of students from low-income homes. This difference was also evident when the students were aged 12. Gender and maternal qualification were also related then to parental views of student feelings about school, but not at this age. Ethnicity was unrelated at both ages.

Parents of Year 9 students were somewhat more likely to express unqualified satisfaction with their child's progress at school (69 percent cf. 60 percent of parents of Year 10 students), though rates of unqualified dissatisfaction were similar for both year levels. The Year 9 level is the same as at age 12. Sixteen percent of the boys' parents were not satisfied with their progress cf. 6 percent of the girls' parents. These gender differences are comparable with the patterns found at age 12. Family income levels were unrelated to parental satisfaction with their child's progress. However, parents in low- or medium-income families were more likely to say their child was unconfident or unhappy about school (12 percent cf. 1 percent of parents in high- or very high-income families). Parents who were not happy with their child's progress were no more likely than others to help with their child's homework, or if they did, to find difficulty with any aspect of it.

Fifty-six percent of the parents would like to change an aspect of what happened at their child's school. The question we asked at age 12 related to their child's classroom, so the proportions are not directly comparable. The themes, however, are. While themes remained wide-ranging, they now showed somewhat more emphasis on relations with teachers, and somewhat less concern with class composition. Between 10–17 percent would like changes in teacher-parent relations, teacher-student relations, the school's disciplinary climate, programme content, or resources. Three to 5 percent mentioned class size, teacher quality, more curriculum choice, and school facilities.

Views of student-teacher relations

When they were 12, 77 percent of the study children were thought by their parents to like their teacher/s. This general picture did not change now that the young people had more teachers. At Year 9, 25 percent were thought by their parents to like all their current teachers, and 52 percent, to like most of them. Twenty percent liked only some of their teachers, and 1 percent, no teachers. Two percent of parents did not know how their child felt about their current teachers. Year 10 parents gave a slightly less positive picture: only 17 percent of the young people were thought to like all of their teachers, and 29 percent liked only some of them.

We asked the parents to rate the support their child had from their current teachers in relation to both learning and emotional wellbeing, on a scale of 1=none at all, to 5=fantastic. Year 9 and Year 10 parents' views were similar. Few parents thought that their child had little or no support for their learning (12 percent), though somewhat more thought this was true in relation to their emotional wellbeing (19 percent). Just over half gave the support their child received from current teachers for their learning a rating of 4 or 5, and 36 percent for their emotional wellbeing. We did not ask these questions at age 12, so we do not know how these views compare with views of late primary school.

Parents and the school

We asked parents whether they and anyone at the school had ever co-operated to sort out problems their child was having. Forty-five percent of the parents said their child had not experienced any problems, much the same proportion as at age 12. Parents appeared to be just as likely to work with teachers at secondary level to resolve student issues as they had in their final primary years.

Year 10 parents were more likely to say they had worked together with someone from their child's school (59 percent cf. 38 percent of Year 9 parents), probably because the question covered the period since starting secondary school, and not just the current year. As before, social-emotional problems (22 percent) are as likely to be raised as academic issues (19 percent). Specific issues worked on by parents and teachers together also included student health (6 percent), rudeness or aggression (5 percent), the student breaking school rules, or the teacher being unfair to the student (4 percent each), homework completion (2 percent), and substance abuse (1 percent).

Most of these issues were resolved through this joint adult action, but the rate of issues that had not been able to be resolved, though low, was double what it had been in the final primary years (6 percent cf. 3 percent).

The majority of parents felt welcome in their child's secondary school (83 percent). Seven percent said their sense of being welcome varied, and another 7 percent did not feel welcome. Three percent had never been to their child's secondary school, mostly because they saw no need to go there. The main reasons for not feeling welcome were that teachers seemed distant or inaccessible (6 percent), or that the school seemed impersonal and formal (5 percent). Three percent each mentioned unpleasant encounters with teachers or school administrative staff. Two percent found the physical layout of their child's school unwelcoming.

While parent contact or involvement with their child's school is not high by secondary level, it is not so very different from patterns of age-12 patterns of involvement, with the exception of voluntary work at the school. Voluntary classroom work was at its highest in the early years of school, and the drop between ages 12 and 14 is not dissimilar from the drop between ages 10 and 12.

Table 20 **Parental involvement at their child's school ages 8, 10, 12, and 14**

Parental involvement	At age 8 (*n* = 521) %	At age 10 (*n* = 505) %	At age 12 (*n* = 496) %	At age 14 (*n* = 476) %
Parent-teacher interviews	-	-	65	69
Attendance at school meetings and functions	8	21	26	31
Regular talks with teacher	11	46	23	29
Irregular contact/very little	23	14	19	23
Voluntary work at school other than classroom	29	46	34	17
No involvement	9	7	10	4
Board of Trustees'/Parents' Association member	13	13	8	4
Paid work at school	4	5	3	3
Voluntary work at school—classroom	42	17	8	2

Year 9 and Year 10 parental patterns were similar, with the suggestion of a slight increase in attendance at parent-teacher interviews (from 65 to 70 percent).

Social characteristics and parental views

Gender

Twenty-four percent of boys' parents reported that their child liked all their current teachers, somewhat higher than the 15 percent of girls' parents who thought so. Yet views on teacher support for their child's learning and emotional wellbeing were similar. Child's gender was unrelated to whether parents felt welcome in their child's school, and made little difference to their involvement in the school, apart from the attendance of school meetings and functions: 36 percent of parents of boys attended these cf. 25 percent of parents of girls. This may reflect the higher proportion of parents attending school meetings in boys' schools (52 percent cf. 30 percent of parents attending them in girls' schools).

Ethnicity

Teacher support for their children's learning was more likely to be given a high rating (4 or 5 on a scale of 5) by Pākehā/European and Asian parents (53 percent cf. 37 percent of Māori and Pacific parents). Associated with this, there was also a higher proportion of Māori and Pacific parents who were either dissatisfied or had mixed feelings about their child's progress (42 percent cf. 31 percent of Pākehā/European and Asian parents). Student boredom was marginally more of a reason for their feelings (19 percent cf. 11 percent of Pākehā/European and Asian parents, $p = 0.06$).

However, teacher support for their children's emotional wellbeing was rated as highly by both groups. Ethnicity was unrelated to parental feelings of being welcome in the school, their involvement in the school, or what their child told them about school.

Family income

As noted earlier, parental perceptions that their child enjoyed school were most likely for those in very high-income families, and least likely for those in low-income families. While there are similar proportions of parents in all income groups who said their child liked most of their teachers, low-income parents were less likely to say their child liked all their teachers (12 percent cf. 21 percent of others). Twenty-four percent of the low-income parents gave low ratings (1 or 2 on a scale of 5) for the support their child's teachers gave them for learning cf. 10 percent of others, and 31 percent gave these low ratings for their teachers' support for their emotional wellbeing (cf. 16 percent of others). However, their satisfaction with their child's progress was similar to others', and their desire to change something about their child's school.

Discussing school with their child increased from 78 percent of parents in low-income families to 91 percent of those in very high-income families. Discussing schoolwork was also related to family income, increasing from 43 percent of parents in low-income families to 68 percent of those in very high-income families. However, low-income parents felt just as welcome in their child's school as others, and were just as likely to have talked with their child's teachers more than once or twice a year and attended parent-teacher interviews. They were less likely to be involved in voluntary work at the school (9 percent, increasing to 25 percent of the very high-income parents), and 14 percent said they had no involvement with their child's school, decreasing to 2 percent of the very high-income parents.

Maternal qualification

Satisfaction with their child's school progress rose from 55 percent of the parents in families where the mother had no qualification, to 71 percent of those in families where the mother had a university qualification ($p = 0.08$); the desire to change something in the school was highest among those in families where the mother had a tertiary or university qualification (62 percent), decreasing to 43 percent of those in families where the mother had no qualification. Maternal qualification showed no associations with parental views of whether their child liked their current teachers, the support they had from teachers for learning, or for their emotional wellbeing. It also showed no relation with whether parents felt welcome in the school. However, 17 percent of the parents from families where the mother had no qualification had had no contact with their child's school cf. 2 percent of others. Attendance at parent-teacher interviews was also less likely for this group (55 percent cf. 71 percent of others). Attendance at school meetings and functions increased from 22 percent of parents in families where the mother had no qualification to 47 percent of those where the mother had a university qualification.

School characteristics and parental views

We cross-tabulated parental responses about their child's current feelings about school, and their own engagement with the school with school characteristics of decile and gender mix, and the kind of transition made in terms of gender mix, decile, type, and size to see if these were related to any differences.

Decile and decile-transition

The pattern we saw with student engagement in school is reflected in their parents' views. Thirty percent of the parents of decile 1–2 school students said their child was either unhappy or had mixed feelings about school cf. 14 percent of those in decile 3–10 schools. Seventy-five percent of the parents of decile 1–2 students had co-operated with someone at their child's school to sort out a problem their child was having cf. 48 percent of parents of decile 3–10 students. Of those who had done this, they were more likely to discuss social-emotional problems (67 percent cf. 38 percent of those from decile 3–10 schools who had done so). The proportion discussing academic progress was similar for all deciles.

More parents whose children went to decile 1–2 schools were not satisfied with their progress: 23 percent cf. 10 percent of parents whose children attended decile 3–10 schools). A quarter would like to improve teacher-student relations cf. 8 percent of others.

School gender mix

Parents of boys going to single-sex schools were more likely to mention sports as one of the main things their son enjoyed about school (48 percent cf. 36 percent of parents of students going to girls' schools or coeducational schools. (They also mentioned sport more as a topic their son would talk to them about in relation to school, 22 percent cf. 11 percent of parents of students going to girls' schools or coeducational schools.) Parents of girls going to single-sex schools were more likely to mention schoolwork or achievement in schoolwork (19 percent cf. 6 percent of parents whose children went to coeducational or boys' schools). Poor or boring teachers were mentioned less by parents of boys going to single-sex schools as something their child did not enjoy about school (10 percent cf. 22 percent of parents whose children went to coeducational or boys' schools).

From their parents' perspective, girls at single-sex schools were less likely to like all their current teachers (11 percent cf. 23 percent of parents whose children went to coeducational or boys' schools), and 23 percent had disliked all or most of their previous teachers cf. 9 percent of parents whose children went to coeducational or boys' schools. However, parents of students at coeducational schools were less likely to give high ratings (4 or 5 out of 5) to the support they received from their teachers for learning (43 percent cf. 60 percent of those whose children attended single-sex schools).

Parents of girls at single-sex schools were most likely to discuss academic issues their daughter was experiencing (26 percent cf. 18 percent of parents of students in coeducational schools, and 13 percent of parents of boys in single-sex schools). However, this group of parents was less likely to express dissatisfaction with their child's progress at the school (4 percent cf. 10 percent of parents whose child went to a boys' school, and 15 percent of those whose child attended a coeducational school). And they were also less likely to want to change something at the school (45 percent cf. 59 percent of parents whose children went to coeducational or boys' schools).

Eleven percent of the parents whose children went to coeducational schools did not feel welcome in their child's school cf. 3 percent of those whose children went to single-sex schools. Attendance at school meetings and functions was highest for parents whose boys went to single-sex schools (52 percent cf. 25 percent of those whose children went to girls' schools or coeducational schools).

LEVEL OF AGREEMENT BETWEEN PARENTS AND STUDENTS

Do parents and students see things the same way when it comes to the shift to secondary school? We compared the responses of each student and their parent on these questions:

- Who chose the secondary school? (1 question)
- Was it your/the first choice? (1 question)
- How long did it take to settle in? (1 question)
- What things are different at secondary school from primary/intermediate school? (5 items)
- What are the main things the student enjoys at secondary school? (8 items)
- What are the main things the student does not enjoy at secondary school? (12 items)

When we looked at these as a set, on which the highest score (agreement between both student and parent) was 28, counting all items, we found that the highest level of agreement between a student and their parent was 27/28, and the lowest, 13. The average level of agreement was reasonably high, at 21.36 (s.d. 2.23).

However, there are some differences of interest. Of the 156 students who believed they had chosen the school alone, 38 percent of their parents agreed with this perception, 37 percent thought that it had been a joint decision, and 24 percent considered that it had been their choice alone. Of the 135 students who said it had been solely their parents' choice, most of their parents either agreed with this perception (66 percent) or perceived it as a joint decision (27 percent). Half the parents whose children thought it had been a joint decision (158) were either in agreement with them, but the parents of 35 percent considered it had been solely a parental choice.

Seventy-seven percent of the students whose parents thought the work at secondary school was not more demanding thought in fact that it was more demanding, and 32 percent whose parents thought they were not repeating work, said they were. A quarter of the students whose parents thought they did not have more responsibility at their primary school thought that in fact they had had.

Parents were more likely to mention that what their child enjoyed about their secondary school was sport, extracurricular activities, friends, and being treated as an individual; students were more likely to mention subject choice. When it came to things that were not enjoyed, students were more likely to mention homework and school uniform.

SUMMARY

Around two-thirds of the students continued to enjoy learning at age 14, and liked their teachers (even if there were more of them). Most seemed confident in their new school. They were slightly more likely to say they usually got all the help they needed—though the proportion of those who did not usually or always get the help they thought they needed (27 percent) remains of concern. But there were marked increases in boredom and restlessness, and in those who thought they could do better work if they tried.

There were some gender differences, though they generally affect small proportions. Males were more likely to be bored, to think they could do better work if they tried, and not to feel they were treated as an individual or as an adult. Females could feel more sad, less safe, and more teased about their beliefs; and there were higher proportions of both those who felt they belonged in their school, and those who felt they did not belong.

There were signs that Māori and Pacific students were running up against the school rules more: they were less likely to think discipline rules were fair, and to feel they were treated as individuals. They were more likely to think they could do better work if they tried, but also more likely to think they got too much work to do.

Ethnic differences tended to overlap with family resources: thus we see the same trends in relation to family income and maternal qualification. However, in addition, there was a much greater likelihood that students from low-income homes or whose mothers had no qualification would report being bored, skipping classes, getting sick of trying, not liking their teachers, and wanting to leave school as soon as they could.

A marked change from when the students were aged 12 and in primary school was that students attending low-decile schools were now much less engaged, and less confident in their schools. They were, however, just as likely as others to like their teachers, feel they got all the help they needed, and that it was important to do their best.

Contrary to some US research, there was no increase in the use of extrinsic comparisons to gauge learning progress in this sample of New Zealand students over the transition to secondary school. However, there was also a slight decline in the proportion who mentioned intrinsic signs, though these continued to be mentioned by more than two-thirds of the students. Perhaps this indicates less certainty than at age 12 about how to know one was doing well at school, but a continued awareness that to learn, effort was needed. Students from disadvantaged homes were less likely to feel they were doing well when what they learnt made sense (learning as understanding)—this was also evident for students in low-decile schools.

Doing well at school mattered more for the sample at age 14 than it had at age 12—just over half chose this as one of the three things of most importance to them. This was more important for students from advantaged homes, as was enjoying the things they did, and doing well at sport. Having lots of friends was most important for students in the low-income group. Being with whānau or fanau (family) mattered more for Māori or Pacific students.

More students wanted to change something in their life at age 14, with large increases from age 12 in those who would like to improve a skill and have more money. While only 9 percent of the Year 9 students wanted to change a teacher, this is four times the proportion who wanted to do so at age 12—possibly reflecting the greater number of teachers at secondary level, or the students’ growing independence.

Subject choice was mentioned more by students at age 14 as something they enjoyed about school—otherwise there are no clear trends in what students enjoyed about school that are related to the transition to secondary school. Particular subjects were named, with more nominating health/physical education and the arts than the compulsory subjects. Sports were also enjoyed. Friends continued to top the list. Homework was not enjoyed by a quarter of the students, and mathematics, science, or poor or boring teachers by a fifth. Discipline was not enjoyed by 12 percent.

Homework was taking an hour longer each week, on average; but there was a growing gap between those who spent most time, and those who spent least time on it. Dislike of homework grew slightly. Parental help was slightly less than at age 12, and parents reported that they mostly gave it "when needed". Forty-three percent of the parents said they had difficulty helping their child with mathematics homework. Parental help with homework was less likely in low-income homes, and for Māori and Pacific students.

More students mentioned friends as the main people they talked to about school (particularly students from low-income homes, and females), with some decrease in those who mentioned their mother or father. Schoolwork was more likely to be talked about with parents, and social activities with friends; females talked more about social activity, and males, sport. Males also talked more with their father than did females. Talking about schoolwork and teachers increased with family income and maternal qualification levels. Parents' reports of their talking with their children about school show an increased emphasis from age 12 on schoolwork, teachers, and homework. Girls seemed to give them more information on these topics than boys—but this trend was also evident at age 12.

Parents' views

Sixty-five percent of the parents thought their child enjoyed school—less than the 75 percent at age 12, but comparable to age-6, after the transition between early childhood education and primary school. Family income levels remained associated with views of enjoyment of school—but not gender and maternal qualification. Low school decile was also more associated with lack of enjoyment of school.

Around a quarter of the students were thought by their parents to like only some of their teachers, or none of them. However, only 12 percent thought their child had little or no support for their learning from their teachers, and 19 percent thought their teachers gave their child little support for their emotional wellbeing.

Satisfaction with their child's school progress was the same for parents with children in Year 9 as it had been at age 12, but there was a slight drop for those with children in Year 10. Although boys' parents expressed slightly less satisfaction with their progress than did girls', this pattern was also evident at age 12; and boys' parents reported somewhat higher levels of their son liking their teachers than did girls' parents. Māori and Pacific parents were less satisfied with their child's progress. Parents from low-income homes thought that their children got less support from teachers than did others, and that their children enjoyed school less.

Parents of students in decile 1–2 schools reported less satisfaction, and were more likely to have co-operated with someone at the school to sort out a problem, with a higher rate of social-emotional issues. Parents of these students also identified teacher-student relations as something they would like to change. Overall, 56 percent of parents would like to change an aspect of their child's school.

Parents were just as likely to work with their child's teachers to resolve issues at secondary school as they had been 2 years earlier. Most of these issues were resolved, but there was some increase in the (small) proportion of those that had not been.

The majority of parents felt welcome in their child's secondary school; patterns of involvement were much the same as they had been in their child's last primary school, with the exception of voluntary classroom work, which dropped from its low 8 percent at age 12 to 2 percent at age 14.

One has a sense that parents of boys at boys' schools see their son involved in school, enjoying sports, and feeling positive about teachers; that parents of girls at girls' schools may hear more criticism of individual teachers, but also that there is more of an emphasis on academic learning, and teachers are seen to provide high levels of support for this.

Parents' and students' views of the transition are not always in agreement—particularly around whether they had chosen the school alone, or as a joint decision, and about the levels of work and responsibility in secondary school.

6. Friendships

Friends are one of the factors that students, parents, and Year 9 deans cite as helping a smooth transition from primary to secondary school. In this chapter, we look at whether friendships changed over the transition, and compare current experiences of friendship with the patterns we found when the sample was age 12.

DO FRIENDSHIPS STAND STILL OVER THE TRANSITION TO SECONDARY?

Only 31 percent of the Year 9 students and 20 percent of the Year 10 students said their friendships had not changed since they went to secondary school.[33] Just over a third had made new friends as well as keeping old friends. Around a quarter had either made new or different sorts of friends since going to secondary school, or had lost contact with their former friends. Fourteen percent of the Year 10 students and 6 percent of the Year 9 students said they had grown apart from their old friends, due to changes in interests or individuals. Six percent spoke of becoming closer to their friends in a positive sense, but another 5 percent spoke of more intense friendships or peer pressure.

Fifty-eight percent of the students had lost one or more friends over the past year. But only 1 percent of the students had not made a new friend over the past year. There was no difference between year levels, indicating that friendships do change *within* secondary levels as well as during the transition to secondary school, and that some changes are to be expected.[34] Girls were somewhat more likely to lose friends than boys (63 percent cf. 53 percent of boys), and to lose more than one (24 percent cf. 15 percent of boys). There were no differences related to school socioeconomic decile or gender mix, or students' ethnicity, or maternal qualification. Students from low-income homes were more likely to have lost a friend over the past year (69 percent cf. 54 percent of others), but were just as likely to make new friends as others.

Students who moved from a coeducational to a single-sex school were most likely to say their friendships had changed since they went to secondary school (85 percent cf. 72 percent of those whose new school was also coeducational, and 70 percent of those whose new school was also single-sex. They were more likely to have lost friends—but also more likely to have made new friends.

There was also more likely to be change in friendships for those who went from a full primary to a secondary school (82 percent cf. 72 percent of those who went from an intermediate): this makes sense, given that intermediates tend to be larger than full primary schools. Sixty-five percent of those who stayed in the same school also experienced change in their friendships.

Students coming from low- and mid-decile schools, whether or not they shifted to a different decile school, had higher rates of retention of friendships over the 2 years than those coming from high-decile schools (whether or not they remained in the same decile), 33 percent and 29 percent respectively cf. 16 percent. However, there were no clear patterns related to the kinds of shift made in relation to the kinds of change they reported.

Change in school size was unrelated to student reports of any changes in their friendships over the transition to secondary school other than one: those who had gone to secondary schools that were at least 3½ times the size of their primary school were more likely to say they had grown apart from some of their former friends (19 percent cf. 10 percent of those who went to smaller schools).

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[33] The questions on friendship were not asked of the three students who said they had no friends.

[34] In hindsight, it would have been useful to ask this question in earlier phases of the project, to see whether similar changes in friendships occurred over 2-year periods while students were in the same primary level school, or had moved from contributing primary to intermediate schools. This would give us some additional insight into the changes associated with the particular transition to secondary level, and middle childhood cf. early adolescence.

THE GROWING ROLE OF FRIENDSHIPS

Friendships, and independence from parents, were becoming more important. When we asked the 14-year-olds *What would you do if your parents told you not to do something and your friends really wanted you to do it?*, 19 percent would do it anyway, a sharp increase from the 6 percent at age 12. A quarter said it would depend, double the 11 percent at age 12. Year 9 and 10 responses were similar. Males and females gave similar answers. Pākehā/European and Asian students were more likely to try to persuade their parents to let them do the activity with their friends (21 percent cf. 10 percent of Māori and Pacific students).

While the proportion of those who would not do the activity was similar across all family income levels, the proportion of those who said it would depend was highest among those from very high-income families (36 percent, decreasing to 10 percent of those from low-income families), as was the proportion of those who would try to persuade their parents to let them do it (25 percent, decreasing to 14 percent of those from low-income families). Students from low-income families were most likely to think they would do what their friends wanted (35 percent).

Maternal qualification was the social characteristic that was most associated with differences in student responses here. Students whose mothers had no qualification were most likely to say they would not do an activity their friends wanted them to do, but their parents did not (66 percent, decreasing to 44 percent of those whose mothers had a university qualification). They were least likely to say it depended (14 percent, rising to 38 percent of those whose mother had a university qualification).

Current friendships, changes to friendships, and the role of school

We cross-tabulated answers on whether there had been changes to their friendships since going to secondary school with student answers in relation to how they would describe their current friendships, separately for each year level. Students' views on whether they had a lot or a few friends were unrelated to whether their friendships had changed in the transition to secondary level. Year 9 students' numbers of close friends were also unrelated to whether their friendships had changed in the transition to secondary level. At Year 10, students whose friendships had remained unchanged over the transition were less likely to say they had five or more close friends (39 percent cf. 56 percent for those whose friendships had changed, and 59 percent of those for whom some friendships had changed).

Seventeen percent of the students said they had few friends. However, most of these had one or two close friends. One percent of the students said they had no close friends. Eleven percent had one or two, and 37 percent, three or four close friends. Fifty-three percent had five or more close friends. Year 9 students were slightly more likely to have just one or two close friends (15 percent cf. 9 percent of Year 10 students). Close friends were more likely now to be both genders: 49 percent cf. 35 percent at age 12, with boys more likely than girls to say they had both male and female friends (56 percent cf. 41 percent). Students who stayed in coeducational schools were more likely to have close friends of both gender: 55 percent cf. 43 percent of those who shifted to single-sex schools, and 34 percent of those who stayed in single-sex schools.

Twenty-eight percent of those who said they had few friends had one or two close friends cf. 7 percent of those who said they had lots of friends. However, those who felt they had few friends included 21 percent who had five or more friends.

Ninety-three percent of the students said their school friends were good friends; only 1 percent said they were not. Only 4 percent wished they had different friends at their school. Social characteristics, or the school decile or gender mix did not make a difference here.

While it is important to have friends in one's own school, only 31 percent agreed that all their friends went to their school. This pattern was apparent for both boys and girls, and did not differ in relation to school socioeconomic decile, ethnicity, family income, or maternal qualification. It was most likely to hold for students at coeducational schools (35 percent of students at coeducational schools said all their friends went to that school, 28 percent of those who went to single-sex boys' schools, and 24 percent of those who went to single-sex girls' schools).

There will be more about patterns of friendship and their relation to competencies and young people's perceptions of school and home in the final report from this phase of the Competent Children, Competent Learners project.

Growing independence

At 14, the young people were showing more independence. They were much more likely to be going out with their friends for entertainment (this may explain the greater interest in having more money, to pay for e.g. movies and meals), but also to be going out with no fixed aim in mind. That may have supplanted some informal physical activity. Few mentioned homework as one of the main things they did with their friends.

Table 21 **Changes in friendship activities between age 12 and age 14**

Friendship activity	**Age 12 (*n* = 496) %**	**Age 14 (*n* = 475) %**
Going out to entertainment	37	61
Hanging out at own/friend's house	53	60
Talking	47	43
Going out—no fixed agenda	22	37
Physical activity—informal	52	33
Organised sport	20	27
Shopping	17	24
Playing games (e.g. card, computer)	30	21
Parties/holidays	10	15
Watch tv/video/DVD	-	14
Homework	-	6

Having fun continued to be one of the good points of friendship for around half the sample. Support or trust was more important at age 14, with 61 percent mentioning it as a good point of their friendships, an increase from 49 percent at age 12. Sharing interests seemed a little less important—30 percent cf. 43 percent at age 12. Having someone to talk to was much the same as at age 12. Thirty percent of the sample now mentioned having someone to do things with as a good point of their friendship. This fits with the change to activities that took the 14-year-olds out into the wider (public) world.

At age 12, girls had put more emphasis on support and having someone to talk to, and boys, on sharing interests. These differences remained at age 14. Having someone to do things with was somewhat more important for males (34 percent cf. 25 percent).

The things that were not-so-good about friendships tended to be the same at age 14 as at age 12, with two interesting differences: arguments were mentioned less (15 percent cf. 27 percent at age 12), but gossip, cattiness, or backstabbing more (14 percent cf. less than 1 percent at age 12). Girls were more likely to mention gossip etc. (22 percent cf. 7 percent of boys).

Students from very high-income homes were most likely to value having someone they could talk to (57 percent cf. 46 percent overall). Students whose mothers had no qualification were less likely to mention the sharing of interests (20 percent cf. 32 percent of others), or having someone to talk to (26 percent cf. 50 percent of others). They were least likely to say there was nothing that was not-so-good about their friendships (54 percent, decreasing to 33 percent of those whose mothers had a university qualification), perhaps indicating that the higher the maternal qualification level, the greater are the expectations about friendships. Certainly, feelings that their friends could be selfish or uncaring increased from 5 percent of those whose mothers had no qualification, to 20 percent of those whose mothers had a university qualification; and was more likely among students from very high-income homes (17 percent cf. 11 percent overall).

Gender

Sixty-six percent of the girls said their friendships had changed since they went to secondary school cf. 51 percent of the boys. They had made some new friends to add to existing ones (40 percent cf. 29 percent of the boys), or made new and different friends (30 percent cf. 18 percent of the boys). Some had grown apart from former friends, as interests changed (17 percent cf. 7 percent of boys).

The next table shows some clear gender differences in what friends do together.

Table 22 **Gender and friendship activities at age 14**

Friendship activity	***Female* *(n = 228)* *%***	***Male* *(n = 247)* *%***
Going out to entertainment	67	55
Hanging out at own/friend's house	68	53
Talking	58	32
Going out—no fixed agenda	40	34
Physical activity—informal	24	41
Organised sport	16	37
Shopping	43	7
Playing games (e.g. card, computer)	5	36
Parties/holidays	14	15
Watch tv/video/DVD	10	17
Homework	8	5

Most of these gender differences already existed at age 12. Gender gaps grew however in relation to games, organised sport, and shopping, and closed for sharing parties and holidays.

Ethnicity

Māori and Pacific students were marginally more likely to say they had five or more friends (62 percent cf. 49 percent of Pākehā/European and Asian students, $p = 0.06$). They were also somewhat more likely to talk of more intense friendships or peer pressure (11 percent cf. 4 percent of Pākehā/European and Asian students). Otherwise, there were no ethnic differences in experiences of friendship over the transition to secondary school, or current patterns of friendship, and good and bad points about these friendships.

Family income

Family income levels were unrelated to students' numbers of close friends, or whether friendships had changed since the students went to secondary school. Family income levels made a difference to whether students could go out together with their friends to entertainment—the proportion who did this rose from 43 percent of the students from low-income homes, to 74 percent of those from very high-income homes. However, this was the only difference.

Maternal qualification

Friendships appeared to be least stable across the transition to secondary school for students whose mothers had a university qualification (14 percent said they remained unchanged cf. 32 percent of those whose mothers had no qualification). Since these students had not experienced a longer or more difficult transition than others, and did not mention a lack of friends as one of the hardest things they had had to adjust to, this raised the question of whether stability in friendships *per se* is necessary for a good transition, and whether it would also be pertinent to look at the nature of friendships. For example, we found that age-14 students whose mothers had no qualification were less likely to say they shared interests with their friends (20 percent cf. 30 percent overall), or that a good point about their friendship was that they had someone to talk to (26 percent cf. 46 percent overall). Given the overlap between family income and maternal qualification levels, it is not surprising that students whose mothers had no qualification were less likely to go out for entertainment with their friends (34 percent), though there was no linear increase as maternal qualification levels increased.

We also found that the higher the level of maternal qualification, the more likely it was that students had made new friends as well as keeping some of their old ones (45 percent of those whose mothers had a university qualification cf. 32 percent of those whose mothers had no qualification).

Students whose mothers had a university qualification were less likely to have close friends of both sexes (34 percent), probably reflecting the higher proportion of this group who were attending single-sex secondary schools.

Parental perspectives on changes to friendships over the transition to secondary school

Parent views on whether their child's friends changed over the transition to secondary school are similar to their children's. Twenty-four percent of the Year 9 parents thought their friends had not changed, as did 19 percent of the Year 10 parents. The main change they noticed was that their child now had a wider circle of friends (62 percent of Year 9 parents, and 55 percent of Year 10 parents). Twenty-four percent of the Year 10 and 15 percent of the Year 9 parents noted a loss of friends from primary school. Four percent thought their child's friends were more cliquey than at primary school. However, 8 percent of the Year 10 and 2 percent of the Year 9 parents thought their child's friendships were becoming more mature.

Parents of girls were more likely to notice some change in their child's friends (83 percent cf. 73 percent of boys' parents). Otherwise, parental perspectives on change in friendships were unrelated to the other three social characteristics explored here (family income, maternal qualification, and ethnicity).

A growth in cliques was more likely for some girls (7 percent cf. 1 percent of boys' parents), but 8 percent of girls' parents thought the friendships had become more mature (cf. 4 percent of boys' parents). Fourteen-year-olds from very high-income families, or whose mothers had a university qualification were somewhat more likely to be seen by their parents as widening their circle of friends (66 percent and 71 percent respectively).

SUMMARY

Most of the sample experienced changes in their friends over the transition to secondary school—friends were lost, but new friends were gained. Loss of friends was more likely with those who went to single-sex schools, or moved from full primary schools.

Friendships and independence from parents were becoming more important, particularly for students from low-income homes. Close friends were more likely to include both males and females, particularly for students at coeducational schools. All but a few students had some close friends.

Almost all the students said their school friends were good friends, and only a few wished they had different friends at their school. However, most students also have friends who do not go to their school, more so for students at single-sex schools.

Going out with friends to entertainment, or going out with them with no fixed agenda had increased. Entertainment carries costs; so it was not surprising that this was less likely to occur for students from low-income homes. Support or trust was a more important aspect of friendships. There was an increase in gossip or cattiness, particularly for girls. There were signs that students from advantaged homes may expect more of their friendships—valuing someone they could talk to, sharing interests, and making more mention of difficulties with friends being selfish or uncaring. Girls' friendships had changed more than boys', particularly in making new friends.

While social characteristics show some relationship with experiences of friendship, particularly in relation to gender and maternal qualification, they do not produce distinctively separate experiences of transition. Comparing patterns of both change over the 2 years, and what is valued in current friendships does raise the question of how much weight we should put on friendship stability as a key component of a successful transition, and how much on the nature of friendships, and environments that support students to make new friends and have friendships that will support school engagement.

7. What affects the time it takes students to settle?

In this chapter, we draw together some of the aspects of the transition to secondary school that we have described in earlier chapters, and some other factors that will be described in the final report of this phase, that might affect the length of time that students said it took them to settle into secondary school.

PRIOR EXPECTATIONS

We start with whether the students felt positive about going on to secondary school. Students who had not been looking forward to secondary school were just as likely as other students to settle straight away, and were no more likely to take two terms or more.

We did find that some students can take longer to settle into a school they did not chose themselves, or that was not their first choice. Students who settled in straight away or in less than a term were more likely to include those who said they chose the school themselves (36 percent cf. 23 percent of those who took two terms or more to settle into school)—but interestingly, there were no patterns in relation to whether the school was chosen by parents. The number of those in the sample who felt they had no choice about which secondary school they attended, and went to the only school available to them was only 11, so it was hard to see any patterns there.

Thirty-five percent of those who took more than two terms to settle into school said this school was not their first choice cf. 19 percent of those who took less time.

CHANGES IN LEVEL OF WORK AND HOW STUDENTS ARE TREATED

Those who settled in straight away were less likely than others to feel that they had more work to do, or that the work was more challenging (22 percent cf. 34 percent of others, and 14 percent cf. 26 percent of others).

Those who took longest to settle into secondary school were most likely to say that by comparison with their primary or intermediate school, the discipline was stricter (27 percent cf. 11 percent of those who settled in straight away).

Students who settled in straight away did not have higher average scores, either at age 12 or currently, on our competency measures than those who took longer. This is consistent with the Year 9 deans pointing to a wider range of students than the low-achieving who could have problems with transition.

THE THINGS THAT WERE HARDEST TO GET USED TO, AND THE THINGS THAT HELPED

Those who took two terms or more to settle in were more likely to nominate teacher expectations as the things that were the hardest to get used to about their new school (24 percent cf. 8 percent of those who took less than two terms to settle in). Getting up earlier to get to school was one of the hardest things for those who took three terms or more (19 percent cf. 7 percent overall). These students did have a slightly higher average longer time travelling from home to school than others: 0.54 hours cf. 0.5 for those who settled in less than a term or in two terms, and 0.41 for those who settled in straight away.

Those who took three terms or more to settle into school were less likely to mention finding their physical way around the new school (35 percent cf. 54 percent overall) as difficult. They were also less likely to mention existing friends as helping them to settle into school (42 percent cf. 63 percent overall): otherwise there were no differences.

This is consistent with parents' views about what had helped their child make the change to secondary school: the only difference was in relation to friends who went to the same school, which was mentioned by only 23 percent of the parents of students who took three terms or more to settle cf. 51 percent overall. Twenty-seven percent of the parents of the students who took longest to settle into secondary school said nothing had helped their child settle cf. 16 percent of those who took two terms, and 8 percent of those who took up to a term.

There was a linear relationship between the number of things that parents identified as making the change more difficult for their child and the time it took for the child to settle into secondary school: 81 percent of the parents whose child said they took to secondary school straight away identified only one factor cf. 70 percent of the parents whose children took one or two terms, but 54 percent of those whose child took three terms or more, suggesting that the time to settle is not reflective of a single kind of change (e.g. lack of stability in friendships) or a single concurrent experience in and out of school.

CURRENT FEELINGS ABOUT SCHOOL AND TEACHERS

There were no clear relationships between student estimates of how long it had taken them to settle into school, and parental views of the support they were getting from their teachers for both learning and emotional wellbeing. However, students whom parents thought were currently either enthusiastic, matter of fact about school—or bored—were more likely than those seen as not enjoying school or having mixed feelings about it to have settled into secondary school straight away (65 percent cf. 35 percent). Twenty-seven percent of the latter groups were said by their parents to have taken more than a year to settle into secondary school, or were still not settled, a much higher proportion than the 1 percent of the other groups.

The group that took longest to settle were just as committed to staying at secondary school until the end of Year 13 as others, and their immediate post-school goals were no different.

VIEWS OF SCHOOLWORK, FRIENDSHIPS, AND PAID WORK

Do student views about school and schoolwork, and patterns of friendship at age 12 have a bearing on how long they felt it took them to settle into secondary school? The short answer is, no. Students who took longer to settle in did not identify different aspects of school that they enjoyed, or did not enjoy, than their peers who took a shorter time. Their parents were somewhat more likely to identify a lack of friends going to the same school as something their child had not enjoyed in the transition (35 percent cf. 13 percent of those whose children had settled in less than a term).

But those who were employed in paid work for 1–2 days a week or more were half as likely to settle into secondary school straight away (20 percent cf. 40 percent of those who were not in paid work, or only occasionally. Thirty-two percent of those who worked for 1–2 days a week or more took two terms or more to settle into school (cf. 18 percent overall).

PARENTAL CONCERNS AND PUBERTY

Are the students whose parents had concerns about them at age 12 the ones who took longer to settle into secondary school? Yes, if those concerns were about school, but not if they were about friends or interests (31 percent of the group whose parents had concerns about their schooling at age 12 took 2 terms or more to settle into secondary school cf. 17 percent overall).

Experiences of puberty, and reactions to it (on parental reports) were unrelated to the time it took individual students to settle into secondary school.

WHAT ROLE DOES THE SCHOOL CONTEXT PLAY?

Students who were used to more than one teacher did find it quicker to settle into secondary school: 39 percent did so straight away cf. 17 percent of those who were used to only one teacher. Twenty-eight percent of the latter took at least two terms to settle cf. 16 percent of those used to more than one teacher.

And those who had experienced at least one other transition between schools also found it easier to make this particular one: the proportion of those who settled in straight away increased from 31 percent of those who had attended two schools (including their secondary school) in their school career, to 43 percent of those who had attended five or more schools. Twenty-five percent of those who had known two schools only took two terms or more to settle into secondary school cf. 18 percent overall.

Students who had settled in straight away were somewhat less likely to be in schools where moving between periods occurred (75 percent cf. 89 percent of others). A more surprising association was that students who took two terms or more to settle in were *less* likely to be in schools where there were different expectations between teachers (47 percent cf. 71 percent of those who settled straight away).

Students who took two terms or more to settle in were a little more likely to be in schools where information about them from their Year 8 school was less likely to be used (18 percent cf. 4 percent overall), mainly because it was not passed on in time (12 percent cf. 2 percent overall). The use of primary/intermediate level information about students was unrelated to school type.

SUMMARY

Students could take longer to settle into secondary school if:

- the school was not their first choice;
- they thought the discipline was stricter than at their primary school;
- they found teacher expectations hard to get used to;
- they thought there was more work to do than at primary;
- they thought the work was more challenging than at primary;
- getting to school took longer;
- they did not find school enjoyable;
- they had regular paid work;
- their parents had concerns about them at school at age 12;
- they had not had friends to help their transition;
- they were not used to having more than one teacher at their primary school;
- they had little experience of changing schools; or
- they were in schools where it was less likely that information about them from Year 8 was used.

These aspects are not determinative—students who settled straight away could also have similar experiences. It does seem as if the length of time taken to settle is influenced by the co-occurrence of a number of these factors (and presumably others that we did not include in our data collection). More of these factors are related to previous experience and habits than to the transition itself.

It is worth noting that previously high performing students were no more, or less likely to settle straight away as others; and prior feelings about going on to secondary school were also unrelated to how long it actually took to settle.

8. Is there a "dip" in achievement related to transition to secondary school?

In this chapter, we report patterns of change in performance between the ages of 12 and 14, first using quartiles, and then ranks. We analyse rank changes in relationship to a number of factors that could contribute, including prior engagement with school, and then look at the relationship between rank and quartile changes and views on the changing nature of schoolwork between primary and secondary school. We finish with an analysis of changes between 12 and 14 for students whose trajectory of performance between the ages of 8 to 12 had been steady, since if we see changes in performance levels for this group of stable performers over the ages of 12 and 14, then it is likely that the transition to secondary school has had a role in the changes.

CHANGE IN QUARTILE BETWEEN THE AGES OF 12 AND 14

We used quartile groups for the analysis, rather than actual scores, because the tests we used were not identical at both ages.[35] The table below shows quartile stability (the proportion of students who remained in the same quartile group) between the ages of 12 to 14, for mathematics, PAT reading comprehension test, the cognitive composite,[36] and the attitudinal composite.[37] As in previous phases, there is greater stability of performance for the top and bottom quartile groups, and more stability for the cognitive composite.[38] Mathematics shows less stability for those who were in the top quartile group for mathematics at age 12 than the PAT reading comprehension test, or the cognitive composite.

Table 23 **Quartile stability between ages 12 and 14**

Measure	Stability lowest quartile %	Stability 2nd quartile %	Stability 3rd quartile %	Stability top quartile %
Cognitive composite	74	57	59	75
PAT reading comprehension test	70	54	50	79
Mathematics	74	48	49	64
Social and attitudinal composite	56	33	37	50

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[35] We used the appropriate age-level PAT reading comprehension tests at both ages, and shorter versions of the age-appropriate PAT mathematics tests at both ages.

[36] The mean combined cognitive competency score (including scores for mathematics, writing, reading comprehension, and logical problem solving).

[37] The mean combined attitudinal competency scores for perseverance, communication, curiosity, self-management, social skills, and self-efficacy.

[38] Patterns of progress between the ages of 12 to 14 were described in more detail in the first report from this phase, *Competencies at age 14 and competency development for the Competent Children, Competent Learners study sample*.

Changes in teachers' judgements of overall performance and mathematics performance

Changes in overall performance

At both ages, we asked teachers to describe individual students' overall level of achievement relative to other students of the same age. At age 12, this could be done by their classroom teacher, who was likely to take them for more than one subject. At age 14, we sought the views of their core subject teachers (English, mathematics, and science) and the subject they nominated as their favourite. We have used the average of their core subject teachers' views in analysis. We found similar patterns for both Year 9 and Year 10 students; the table below compares age-12 and age-14 teacher judgements of overall performance for Year 9 students.

Again, student performance appears most stable for the very high and very low performers. Note that students in the middle two categories are just as likely to be rated *more* positively overall than negatively. There is no clear evidence here of an overall decline or dip.

Table 24 **Comparison of age-12 and age-14 teacher ratings of Year 9 students' overall performance**

Age-12 teacher view of overall performance ➔ **Age-14 teacher view of overall performance ↓**	***Below average*** ***(n = 29)*** ***%***	***Average/ medium*** ***(n = 44)*** ***%***	***Average, but very good in some areas*** ***(n = 52)*** ***%***	***Very good/ excellent*** ***(n = 44)*** ***%***
Below average	52	25	4	
Average/medium	45	34	31	7
Average, very good some areas		32	29	20
Very good/excellent	3	9	37	70

Changes in mathematics performance

We also compared teacher views of the students' mathematics performance relative to others at their level. Again, there is greatest consistency over time for those who were rated highest at age 12. We also see just under half the students whose performance was seen as below average at age 12 being rated more highly at age 14; and a slightly higher proportion of improved ratings than decreased ratings for average students.

Table 25 **Comparison of age-12 and age-14 teacher ratings of Year 9 students' mathematics performance**

Age-12 teacher view of mathematics performance ➔ **Age-14 teacher view of mathematics performance ↓**	**Below average (*n*=77) %**	**Average (*n*=172) %**	**Above average (*n*=222) %**
Below average	55	26	7
Average	27	37	16
Above average	18	37	77

When we used an average of teachers' overall judgements for how the students were doing in their three core subjects (English, mathematics, and science) in relation to other students at their year level, we did not find that those who took longer to settle in were judged to be performing lower than others. This is consistent with the Year 9 deans identifying a range of students who could have difficulty making the transition to secondary school. But simply looking at whether the time it takes to settle is related to current levels of performance does not tell us whether the transition has been affected by students' prior performance levels.

CHANGE IN RANK

The correlation of rank (performance relative to other students in the sample) between ages 12–14 was $r = 0.90$ for our cognitive composite measure, and 0.55 for our attitudinal competencies composite measure. Thus there is little change in relation to "academic" performance over the transition to secondary school. There is more change in the attitudinal performance, but performance on this measure has also varied when the sample was younger.

If the transition to secondary school or secondary level had a marked effect on students' performance, one would expect to see lower correlations between ages 12–14 rankings than between rankings at younger ages. We compared the correlations between age 8–10, and 10–12 rankings: the age 12–14 rankings have in fact the highest correlation, indicating that this transition is not destabilising performance. Movement of rank in student performance is not limited to the transition to secondary school.[39]

We grouped the age-12 scores into six groups, so that we could have a picture of the size of rank changes, and the number of students who had made large changes in rank between ages 12 to 14, changing by more than one group. Only 17 students had dropped down more than one group in rank between ages 12 to 14 for their cognitive composite score; another 14 had improved their ranking by two or more groups over the same period. There was more movement for the attitudinal composite: 80 students had dropped their attitudinal composite ranking by two or more groups, but 79 had increased theirs by two or more groups.

Movement *up* two or more groups was almost as likely to occur as the same degree of movement *down*, indicating that transition *per se* does not simply have negative consequences.

We analysed movement between the six rank groups in relation to a wide range of factors that might affect transition, particularly previous school engagement, maternal qualification, choice of the school, current closeness to parents, and whether the student currently engaged in risk behaviours, or had friends who did. The only factors that showed a significant association (tested using Pearson's chi-squared test) were individual ones, that nonetheless may be shaped or supported by school practices.

Engagement in school[40] and seeing their progress as something that occurred when they were absorbed in learning or working hard[41] was positively related to changing rank on the cognitive composite competency.[42] Students who scored highly on these factors improved their rank more often, and had fewer declines in rank than expected, and vice versa for those who had low or middle scores on these factors. This association makes sense.

A high score on two negative factors, "feeling pressured"[43] and "friends display risky behaviour"[44] (but not for "high risk behaviour" for the student themselves) was associated with a drop in rank on the social and attitudinal competency, and low scores on these two factors, with an upwards movement in rank. These associations also make sense.

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[39] For the cognitive composite, age 8–10 correlations for the whole sample were 0.83, and age 10–12 correlations, 0.87. For the attitudinal composite, age 8–10 correlations for the whole sample were 0.50, and age 10–12, 0.49.

[40] The average score (on a scale of 5) of agreement with these items: school is a place where: I like my teachers, I keep out of trouble, I enjoy learning, the discipline rules are fair, and reverse scored: I get tired of trying, I get too much work to do, I skip classes, and I want to leave as soon as I can.

[41] The average score (on a scale of 5) of agreement with these items: I know I'm doing well when… I solve a problem by working hard, I learn something interesting, I get a new idea about how things work, something I learn makes me think about things, what I learn really makes sense, I do my very best, I work really hard, and I catch on quickly.

[42] This comprises a composite of scores on the PAT reading comprehension test, the mathematics test (a shorter version of the PAT mathematics test), logical problem solving (Standard Progressive Matrices), and writing task.

[43] The average score (on a scale of 5) of occurrences over the past year over these items: feeling left out, losing control of temper, not having enough freedom, being pressured to do something you don't want to do, fighting with others at home, not having enough money, having nothing to do/being bored, being bullied/hassled at school, being hassled about your body shape or size, trying to fit everything into your time, getting into trouble at school, falling behind with your schoolwork, having to lie about something someone else did, and getting into a physical fight.

[44] The average score (on a scale of 5) of agreement with these items: my friends: smoke cigarettes, think it is ok to have sex before you're 16, like to party and drink alcohol, wag school, smoke marijuana, and get into trouble at school.

There was one more significant association between change in rank on the composite attitudinal competency,[45] that does not make quite such sense. This was with the factor "engagement in school". In contrast to the relation of this factor to the composite cognitive competency, more of those than expected who scored low on this factor experienced an increase in rank on the composite attitudinal competency in relation to their numbers, and more of those than expected who scored high on this factor experienced a drop in rank.

In the Competent Children, Competent Learners project, we do not use the same tests to measure competencies at each age. When we looked at whether student performance had changed between ages 12 to 14, we therefore compared their percentile score on the competency measures for both ages, and their rank order (1=top level of performance) in relation to the other students in the project. This is a different approach from some of the overseas studies reporting a dip in student achievement as students move between schools, or between levels within the same school (e.g. Galton, Gray, & Ruddock, 2003). These studies have used the same tests to provide a "before" and "after" picture.[46] It could be very illuminating to use both approaches in the same study, not just in relation to our understanding of transition, but also to deepen our understanding of the nature of learning, and of performance over time.

Views of schoolwork and rank changes

We cross-tabulated three rank change groups (up by more than 50 ranks, down by more than 50 ranks, otherwise "the same") for the cognitive competency with student comparisons of their primary and secondary experiences in terms of whether their secondary work was more demanding than primary, whether they were repeating work, and whether the work was easier. Students whose rank rose were less likely than others to think that the work was more demanding (72 percent cf. 86 percent of those whose rank group stayed the same, and 90 percent of those whose rank went down). There were no differences between the three rank groups in relation to repetition of work, or whether the work was easier than at primary school.

The same set of cross-tabulations for the three rank change groups on the social and attitudinal composite showed no differences in views on the nature of secondary level work.

Views of work and quartile changes

We also cross-tabulated the quartile groups at both ages 12 and 14 and views on work, to see if there were any differences. There were some different patterns for Year 9 and 10 students, so we report these separately. However, there were also some overall trends. The higher the level of student mathematics performance at age 12, the more likely it was that at age 14 students would feel they were repeating work. The lower the level of student performance on the cognitive competencies, the more likely it was that at age 14 students would feel the work at secondary school was easier, though the proportions are not high. Both these patterns point to some mismatch between what some students can already do when they come to secondary school, and the challenges they receive there.

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[45] This is a composite of scores on our teacher-rated measures for communication, perseverance, social skills (with adults, and with peers), self-management, and curiosity.

[46] Many US studies have relied on teacher grades, rather than tests.

Year 9

Age-12 quartile groups

- There were no differences between quartile groups on the cognitive composite competency in relation to finding the work more demanding at secondary school, or repetitive of primary work; but the lowest quartile group was three times as likely to say they found the work easier (18 percent cf. 6 percent of the others).
- There were no differences in relation to the attitudinal composite competency.
- For mathematics, there were trends showing an increase in the proportion of those finding they were repeating work47 (from 29 percent of the lowest quartile group to 52 percent of the top quartile group).
- There was a similar trend in reading comprehension, increasing from 34 percent of the lowest quartile group finding they were repeating work, to 49 percent of those in the top quartile, and decreasing from 16 percent of the lowest quartile finding the work easier, to 3 percent of those in the top quartile.

Age-14 quartile groups

- There were no differences between quartile groups on the cognitive composite competency in relation to students finding the work more demanding at secondary school, or repetitive of primary work; but the lowest quartile group was three times as likely to find the work easier (18 percent cf. 6 percent of the others).
- There were no differences in relation to the attitudinal composite competency.
- For mathematics, there was a similar trend as for the age-12 quartile group: an increase in the proportion of those finding they were repeating work (from 32 percent of the lowest quartile group to 50 percent of the top quartile group), but also a decrease in those finding the work easier, from 19 percent of those in the lowest quartile, to 4 percent of those in the top quartile.
- Age-14 reading comprehension quartile groups were unrelated to views of work.

Year 10

Age-12 quartile groups

- There were no differences between quartile groups on the cognitive composite competency in relation to students finding the work more demanding at secondary school; the lowest and second lowest quartile groups were less likely to say they were repeating work (27 percent cf. 42 percent of the third and highest quartile groups), and the lowest quartile group was three times as likely to find the work easier (15 percent cf. 4 percent of the others).
- There were no differences in relation to the attitudinal composite competency.
- For mathematics, there was an increase in the proportion of those finding they were repeating work (from 24 percent of the lowest quartile group to 45 percent of the top quartile group).
- There were no differences in relation to reading comprehension.

Age-14 quartile groups

- There were no differences between quartile groups on the cognitive composite competency.
- There were no differences in relation to the attitudinal composite competency.
- For mathematics, there was a similar trend as for the age-12 quartile group: an increase in the proportion of those finding they were repeating work (from 24 percent of the lowest quartile group to 46 percent of the top quartile group).
- For reading comprehension, the top quartile group was more likely to say they were repeating work (46 percent cf. 30 percent for others).

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[47] Note: we asked about repetition of work in general, rather than subject by subject.

Very large and uncharacteristic rank changes

We undertook a further analysis to see whether the rank changes that were occurring were a continuation of trajectories established further back in student careers, or whether there was something new occurring, that would indicate a possible effect from the transition to secondary school. We looked at the variance of the trajectories in the cognitive composite, and divided them into two groups for the purposes of this analysis: those whose trajectory was relatively stable (40 percent of the sample, 184 of the 460 students for whom we had full data for all phases), and those whose trajectory was less stable (n = 276). Of the 184 "stable" students, only 10 percent (n = 19) did not continue along their stable trajectory. Nine had steep increases in their rank (a change of 80 or more ranks), and 10 had steep decreases.

There was less stability for the attitudinal composite. Only 77 of the 460 students (17 percent) had stable trajectories over this period. There was more volatility between the ages of 12 to 14 on the attitudinal composite than on the cognitive composite: 17 (30 percent) of this previously stable group showed marked changes over the transition to secondary school: ten increased their rank steeply (more than 100 ranks), and 13 decreased their rank steeply.

There was a general positive shift between ages 8 to 12 on the cognitive composite for those whose attitudinal composite took a sudden upwards jump between 12 and 14. This is in line with the pattern found in structural equation models for the sample as a whole, where cognitive competency scores from the previous phase make a contribution to attitudinal composite at the next phase (Wylie & Ferral, 2006).

Students whose attitudinal composite scores went down by large and uncharacteristic amounts had moderately stable trajectories on the cognitive composite between 8 and 12. There was just as much tendency for those with higher cognitive composite scores to decrease their rank as for those with lower cognitive composite scores.

We also looked at whether student views and experiences (using factor groups) were different for the students whose scores showed such a marked change between ages 12 to 14. We did this by examining the number in the groups above or below the median, looking for large deviations that would suggest a significant association (a test using a binomial distribution that allows us to see if these exist, even with the small numbers involved).

Students who made large gains on the cognitive composite were more likely than expected to score above the median for engaging in risky behaviour. This may reflect students who had become more confident and ready to try things out both in and out of school.

Those whose ranks dropped markedly on the cognitive composite were less likely than expected to feel supported by their family, and more likely to experience internal pressures.

Students whose attitudinal composite rank rose markedly were more likely than expected to be scoring above the median in relation to being engaged in school, and less likely than expected to be scoring above the median for not being engaged in school, and having friends who had risky behaviour. The converse pattern was evident for those students whose attitudinal composite rank fell markedly. This group was more likely than expected to score below the median in relation to being confident in school, and more likely than expected to score above the median for feeling pressured, engaging in risky behaviour, and having friends who engaged in risky behaviour.

It is difficult to compare the steep increase and steep decrease groups in terms of transition experiences and social characteristics, since their numbers are low. However, there was one notable difference between those whose rank went up and those whose rank went down markedly on the attitudinal composite. Over half the group whose attitudinal composite rank went down markedly were Māori or Pacific, a large over-representation. On the one hand, this could be due to a distortion in the lens through which teachers were viewing them (as discussed by Bishop et al., 2003); on the other, it is also consistent with reports from this group of greater disengagement with school (in which teacher-student relations play a part).

SUMMARY

There is no evidence from this sample that the transition to secondary school negatively affects student levels of performance—there is in fact a slightly greater stability of performance over this 2-year period than other 2-year periods during their primary school years. Student levels of performance do change over this period—they are not fixed by their age-12 level, though there is more stability for the highest and lowest performers over time. However, change in performance was just as likely to be up as down over this time period.

To further test whether the transition to secondary school has especial effects on student performance, we also analysed changes between age 12 and age 14 for students whose trajectory (or pattern) of performance between ages 8 to 12 had been stable. We found 19 of the 184 students whose trajectory on the cognitive composite had been stable, and 23 of the 77 who had stable trajectories for the attitudinal composite, whose performance at age 14 can be seen to be uncharacteristic in relation to their previous pattern: and half of these went up, and half down. These small numbers made further analysis difficult, so the patterns we found need to be treated with caution. We found that both those whose performance changed markedly up for the cognitive composite had higher than expected scores for getting engaging in risky behaviour (which may indicate a rapid growth in confidence and readiness to try new things). The group whose scores dipped markedly on the cognitive competency composite was less likely than expected (predicted) statistically to feel supported by their family, and more likely to experience internal pressure. Students whose attitudinal composite scores increased uncharacteristically were more likely than expected (statistically) to be engaged in school. Uncharacteristic decreases in attitudinal scores were associated with greater likelihood than expected of feeling pressured, engaging in risky behaviour, having friends who engaged in risky behaviour, and less likelihood than expected (statistically) of feeling confident in school. It is interesting that there are different patterns associated with uncharacteristic changes for the two kinds of competency.

We looked at factors that might be related to different patterns of change over the transition. Engagement in school and seeing progress as something that occurs when absorbed in learning or working hard are related to improvements in cognitive areas. Feeling pressured by friends and having friends who display risky behaviour, is related to drops for the attitudinal composite. However, we also found that some students who scored low for school engagement improved their scores on the attitudinal composite more than one would expect statistically.

Those whose rank in the cognitive composite rose over the 2 years were more likely to think that secondary work was more demanding than primary work (but just as likely to say they were repeating work or that the work was easier). Repeating work was most likely to occur for students whose age-12 performance was in the top quartile for mathematics and (slightly less so) for reading comprehension. Those in the lowest quartile were more likely to find secondary work easier than primary, though the proportions were low. This suggests some mismatches in the nature of work for both groups, and for the latter group, a possible mismatch also between some students' perception of the nature of the work and the work itself.

9. Effects of transition in relation to prior achievement, social characteristics, and student engagement levels

Prior performance levels and social characteristics (standing as shorthand for differences in individual experiences) often account for much of the variance in educational performance. What role does transition to secondary school play when analysed alongside these?

Before specifying a model we needed to define what we mean by a "successful transition to secondary school". We approached this by thinking that one would want the transition to have no negative effects on either student performance (both the cognitive and social-attitudinal), or on engagement in school (using the four factors outlined earlier). We looked at both these aspects in relation to five aspects of transition:

(a) the length of time it took for students to feel settled in the new school (student report);

(b) a change of school *per se*;

(c) the size of the new school relative to the primary or intermediate;

(d) the school gender mix (whether the school was single-sex or coeducational) at secondary level cf. the school gender mix at primary level; and

(e) the decile of the secondary school cf. the decile of the primary school (was it the same, higher, or lower).

We investigated the effect of transition on the cognitive composite, the mathematics score on its own, and the PAT reading comprehension score on its own, the attitudinal composite, and engagement in school.[48]

The models we used were analysis of covariance models. These models included:

- an equivalent age-12 score (the covariate);
- an age-14 competency score from the opposite type of competency (attitudinal for a model for a cognitive score and vice versa);
- an aspect of transition;
- year level; and
- four social characteristics (gender, ethnicity, maternal qualification, and family income).

These models allowed us to distinguish the contribution of the five different aspects of transition experience from the other factors in the model, and to see whether any of these on their own were accounting for the variance in age-14 scores.

Much of the variance in age-14 scores was accounted for by age-12 scores. When we plotted the age-14 score against the age-12 score for the measures of achievement and engagement, the scatter of points followed an approximately straight line (there was a linear relationship). This relationship was quite strong for the cognitive scores, especially the mean cognitive score (see the top left plot in Figure 2), and was weak (showing less consistency between the two ages) for the attitudinal and school engagement scores, especially between *lack of engagement* at age 14 and *being positive about school* at age 12, and between *getting a hard time at school* at age 14 and *being negative about school* at age 12 (see the top right and bottom left plots in Figure 2).

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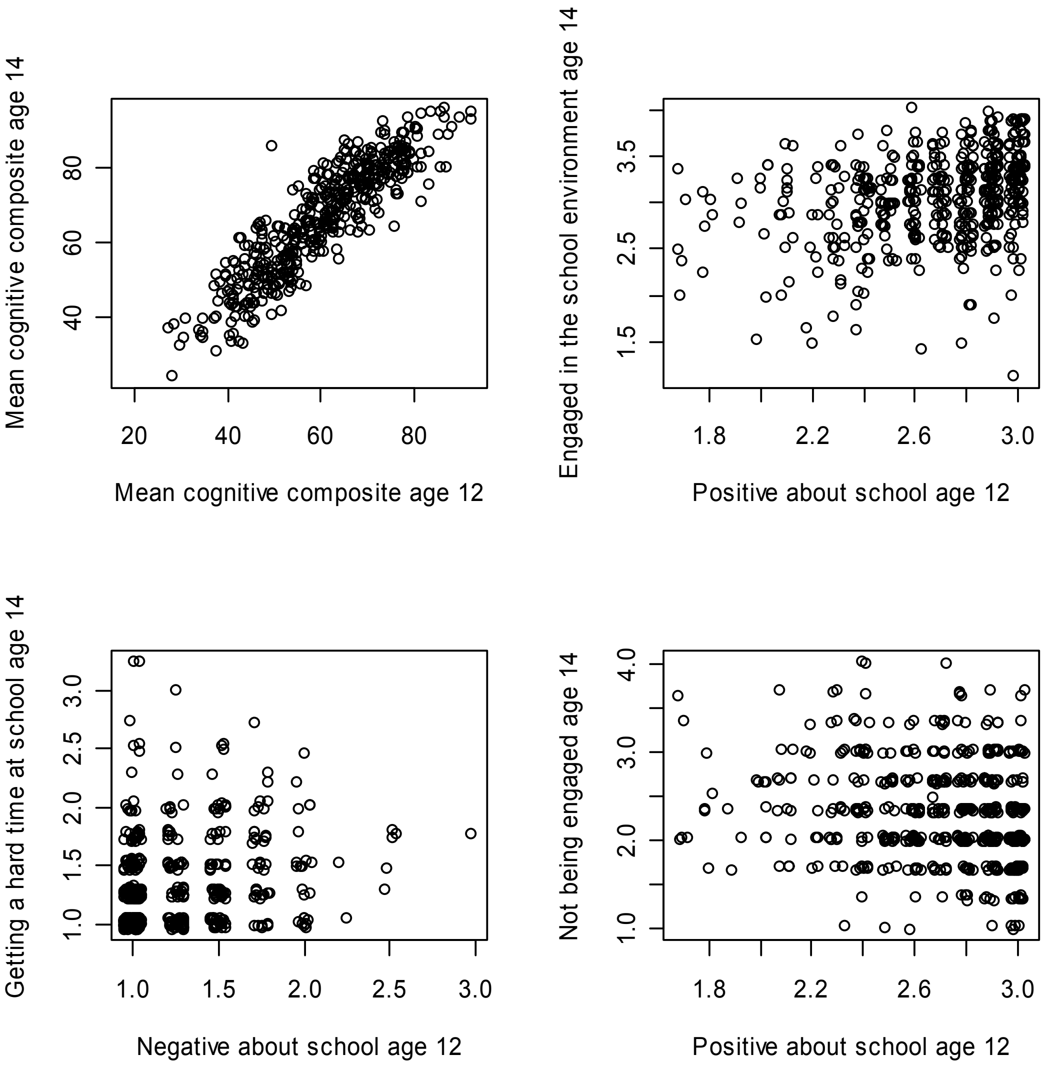
[48] The factors: *engaged in the school environment, confident in the school environment, not engaged in the school environment,* and *"getting a hard time" at school*. The items in these factors were described in Chapter 5.

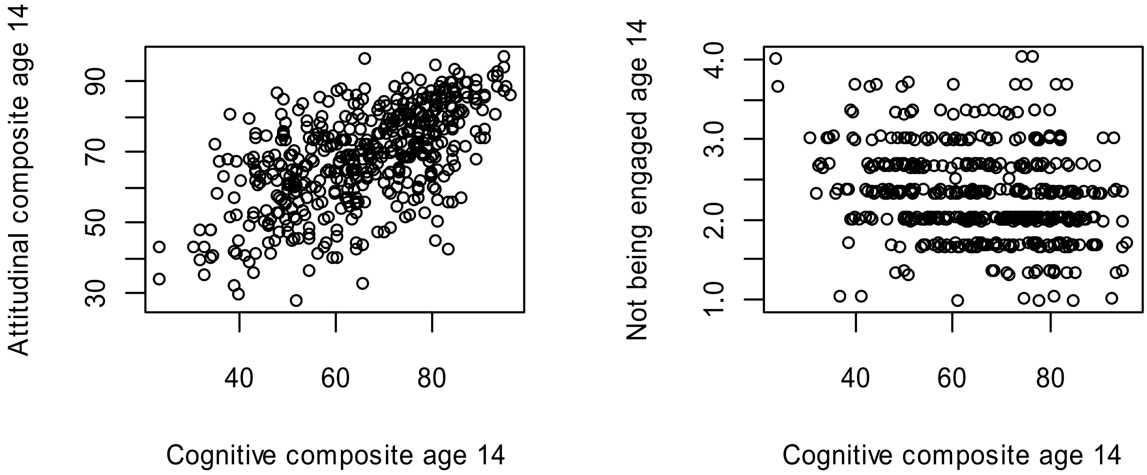
Figure 2 **Relationship between selected age-12 and age-14 competencies**



These relationships were all positive (as the one score increased, so did the other), except for the relationship between *being positive about school* at age 12 and *not engaged with school* at age 14 (see bottom right plot in Figure 2), where those who were least positive at age 12, with the lowest score, tended to have higher scores for *not being engaged* at age 14.

When we looked at the relationship between the mean cognitive score at age 14 and each of the attitudinal and school engagement scores at age 14, and between the mean attitudinal score at age 14 and each of the cognitive scores at age 14, we found that there was a moderate relationship (weak in the case of the *not engaged with school* and *getting a hard time at school* scores) (see left-hand plot in Figure 3).

Figure 3 **Relationships between selected age-14 attitudinal scores and age-14 cognitive composite score**



These relationships were all positive, except for the relationships between the mean cognitive competency score and the *not engaged with school* score (see right-hand plot in Figure 3) and *getting a hard time at school* score (the students with low mean cognitive competency scores tended to have higher scores for *not being engaged* and *getting a hard time*). This relationship was stronger for the *not engaged* score than for the *getting a hard time* score.

The models are described in detail in the appendix.

When other factors that have a bearing on age-14 competency scores are included, the transition factors appear to have little influence. We found only two instances where an aspect of transition was making a separate contribution to student scores. Students who took two terms or more to settle had lower average scores on the attitudinal composite. Among Year 10 students, there were indications that students who took two terms or more to settle had slightly lower scores for their confidence in the school environment.

Thus this more complex modelling that looks at transition experiences alongside other relevant factors is consistent with the analysis in the previous chapter. Transition to secondary school *per se* appears not to have a marked influence on student performance in the cognitive areas. Taking longer to settle into secondary school however is an indication of potential risk (as it would be at any schooling stage).

10. Conclusion

A PERIOD OF CHALLENGE

Hawk and Hill (2004) raised the possibility that the particular nature of the New Zealand system, with a 2-year intermediate school between primary and secondary, might pose particular issues for students because it gave them two transitions to make in a short time frame. However, the material in this report shows that students who moved from intermediates to secondary schools did not seem to have a harder time making the second move than those who were making only one move, from a full primary school. Indeed, students who are used to changing schools can take a shorter time to settle than others.

When one adds up all the changes that can be involved in moving from primary to secondary level, they can look challenging or negative on paper. But what we have found is that most students do not experience all these changes at once, and that this transition does not have universal dampening effects for students. It is a time when friends may be lost, but it is also a time when new friends are made. It is a time when work often becomes more challenging, and there is more of it, but it can be taken in most students' stride. There can be some repetition of work, but this does not mean that overall work is less challenging. Those who express boredom and restlessness are not doing so because of repetition.

The value of a longitudinal study is that it can put this transition to secondary school into perspective. Because we have material on students' prior performance and engagement in school, we can see that these carry more weight in early secondary performance and engagement than the transition itself. The only exception is that a longer time taken to settle can negatively affect students' confidence in their new school—feeling they belong, get all the help they need, and that it is important to do their best. Students who took two terms or more to settle also had lower average attitudinal scores.

SIGNS OF STRAIN

However, there are three groups of students whose experiences and responses indicate possible emerging issues for the success of their secondary education. There are signs of a growing mismatch and discontent with schools among the low-income group, and, overlapping that to some extent, among attending low-decile schools. Why should this be more apparent in the early years of secondary than at primary level? Perhaps the decile ranking of schools in a numerical order, 1–10, and the sense that low-decile schools are "at the bottom" both in terms of this numerical order as well as socioeconomic advantage, makes it harder for students—a substantial proportion of whom would have preferred another school. One would suspect the kinds of interactions between teachers and students, with both bringing any different expectations and cultural capital into the classroom and school, the growing independence of students, within that environment, creating more issues around engagement and behaviour, which in turn can lead to a greater focus on discipline than learning; and signs that though parents see difficulties, they are not sure how to resolve them. It is not that students dislike their teachers, but that they may not be engaged by them or the work they offer. There were indications that students in these groups were aware that they may not be doing as well as they would like, but had mixed feelings about the effort required. They also thought the work was easier than it may have been—or should be. Peer culture was also a factor.

We see some of these trends, but not to the same extent, among Māori and Pacific students. In our sample, Year 10 Māori and Pacific boys seemed more likely to experience decreases in performance.

This suggests that concerns over transition need to focus more on these groups, and the nature of learning and teaching in low-decile secondary schools. Given the importance of prior engagement and performance levels, we would gain from also ensuring that these are good *before* students come to secondary school: this should support positive and engaging teacher-student interactions and learning opportunities for students from low-income homes and in low-decile schools.

NATURE OF "PROGRESS" IN LEARNING

In this study, we found consistent evidence on the existence of some between-year variability of individual student performance, and the fact that the transition to secondary school is not unique in showing such variability, from two different sources: their own performance on cognitive tasks, and teacher judgements. This variability poses some issues for analysis of student progress that assumes constant trends. Galton et al.'s (1999) conclusion that that both *within*-school transitions and *between*-school transitions could be associated with "a decline in progress and in commitment to learning" was based on extrapolations of rates of (statistically) expected progress over the transition period, from individuals' prior performance

In more recent research they have found, as we have in the Competent Children, Competent Learners project, that it is not just in the transition to secondary level that dips (whether temporary or permanent) in learning can occur, but also in earlier stages of schooling. This variability between years leads them to raise questions about some of the assumptions that learning progress is linear and steady, that lie behind such projections of expected rates of progress. Steady progress might be the ideal, since they found that steady progress through the middle years of school gives more solid ground for continued progress than trajectories that vary. We have also found this pattern in the Competent Children, Competent Learners project, particularly for students who improve initially poor performance (Wylie, Ferral, Hodgen, & Thompson, 2006). But currently, students who arrive at the same level of performance at one age, can have got there through a range of different trajectories.

A study of the performance and confidence of US students between Year 8 (initial high school year) and Year 10 found that over half of the students whose Year 8 performance was grade C or less had improved their grade levels at Year 10, and most had moved from being unconfident that they would graduate from high school to being confident that they would (Catterall, 1998). Factors that appeared relevant to this change were engagement in school and extracurricular activities, higher levels of teacher responsiveness to students, fair discipline systems, and supportive family behaviours. Catterall concludes from this level of "mobility" in terms of individual performance, and the fact that upward mobility was higher for minority students than for white students, that:

> *These observations suggest that significant errors accompany fixed ideas about how students will do academically or about how committed or alienated students will prove to be.*
>
> *With mobility comes hope. There is evidence in these patterns that might cause teachers to think more optimistically about the chances for struggling learners, and for struggling learners themselves to think more positively about what they might achieve in their immediate futures (p. 326).*

Earlier, we quoted Hawk and Hill's emphasis on the importance of the role of adults, and their interaction with and framing for students, as key to the ease of their transition experience, regardless of the school structures involved. In the Competent Children, Competent Learners project, the data we gather cannot tell us in detail about such roles, or individual responses to challenging situations, but we do know from our data that children and young people are more resilient, with adult nurturing and support, than is often assumed if we look simply at a list of changes in their lives.

The transition to secondary school or secondary level is in some senses a socially defined challenge. Some of the variability within individual trajectories over time may well owe itself to transition points in individuals' personal lives, rather than changes in their school structure.

The other issue that arises when we have the opportunity afforded by longitudinal data on the same individuals to see different trajectories, is to what extent we should think of learning progress in linear terms, or be concerned about "dips" (or rejoice in "leaps"), if they do not last. Galton et al. (1999) noted that it was unclear whether the dips they found were cumulative. We know that students can suddenly "get" things that surprise their teachers; that gaining of knowledge and understanding can occur at different rates at different times, depending on a range of factors, sometimes leaping ahead rapidly, sometimes showing a flatness because of consolidation, sometimes showing a dip that may simply indicate attention and growth elsewhere (e.g. an area of new discovery or interest), or a querying of previously held assumptions that makes it hard to respond in the former way that allowed them to “succeed”.

As New Zealand moves toward both a greater use of student assessment to support student learning, and a greater use of assessment data to set individual and school targets as levers toward improving performance levels, the questions of what learning progress we can expect in given lengths of time, and what we are basing this expectation on, are increasingly important. Not prejudging students’ likely progress, and approaching their teaching with optimism, is crucial to the chances of students flourishing.

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Appendix A: Parameter estimates for the models for the competency scores

The analysis of covariance models fitted included the variables:

- an equivalent age-12 score (the covariate);
- an age-14 competency score from the opposite type of competency (attitudinal for a model for a cognitive score and vice versa);
- an aspect of transition;
- year level; and
- four social characteristics (gender, ethnicity, maternal qualification, and family income).

The models allow us to add clarification to the linear relationship between competencies at ages 12 and 14 described above, by including other variables to account for the outcome (at age 14), simultaneously with the original explanatory variable (the age-12 score). There are two possibilities to consider:

- We have interactions between the variables in the model. Interactions can occur between the covariate and a factor, or between two factors. Our models here include only the latter case. Cell sizes were too small for three-way and higher order interactions to be tested.

  Where there is an interaction between two factors, we consider a pattern of group means (of the outcome variable) across one factor with reference to the other factor groupings. For example, for the composite cognitive scores at age 14 there is a significant interaction between year level and ethnic group. This means that the pattern of composite cognitive scores at age 14 across ethnic groups is different for Year 9 and Year 10 students. What we found was that at the Year 9 level Māori/Pacific students had a slightly lower mean than other students, but amongst the Year 10 students, this difference was greater, as the Māori/Pacific Year 10 students achieved a slightly lower mean score than their peers in Year 9, but the other students' Year 10 score was higher than that of the other Year 9 students. This is discussed further in the next subsection.

- There are no interactions between the factors in the model. In this case we come back to a main effects model where the effects are all independent of one another. If students whose mothers had no qualification achieved lower mathematics scores, on average, at age 14 than those whose mothers had university qualifications, then this could be graphed using two parallel lines, the higher representing the relationship between age-12 and age-14 mathematics scores for students with university-qualified mothers, and the lower, the same for students with mothers with no qualifications.

Our final models were arrived at by a process of eliminating, one at a time, non-significant interactions and main effects (factors not included in an interaction).

We fitted the models in the sequence:

- **Model 1**: Age-14 score with corresponding age-12 score, year level, and social variables (gender, maternal qualifications, family income, and ethnicity).
- **Model 2**: Age-14 score with corresponding age-12 score, each "opposite" age-14 competency score in turn (attitudinal composite for age-14 cognitive competency and vice versa), year level, and social variables. We tested using age-12 and age-14 opposite competency scores and found the latter to be preferable (amongst other things, they accounted for more of the variability in the age-14 score of interest). Where the age-14 opposite competency score made a significant contribution to the age-14 competency of interest, so too did the corresponding age-12 opposite competency score. We did not use

the two factors *not engaged in school* and *getting a hard time in school*, as they were weakly correlated with the cognitive competencies.

- **Model 3**: Age-14 score with corresponding age-12 score, each secondary transition variable in turn, year level and social variables.
- **Model 4**: Age-14 score with corresponding age-12 score, all the significant secondary transition variables, the opposite age-14 composite competency score, year level, social variables, and any interactions that had been significant in Models 1, 2, or 3.

To keep the results as comparable as possible across the models for each age-14 score, we used the same subset of scores in each of the models 1 to 4. This subset was formed of all cases for which we had complete data for the variables that were used in the models. Where family income at age 5 was used, this subset of cases was smaller than any of the others, as we do not have complete data for this variable.

When fitting models we used both family income at age 5 and family income at age 14 (in separate models), and where one or both were significant, kept the one that explained most variation. We found that typically the age-5 family income explained more of the variation in the cognitive competency scores, and the age-14 family income explained more of the variation in the attitudinal competency scores. This may mean that the factors in the child's environment (probably both at home and in early childhood education) at age 5 that are associated with the family income at that time have a long-term effect on the child's cognitive competency. However, the young person's attitudinal competency scores are determined to a greater extent by factors in their current environment (at home, in school, and out of school) that are associated with the family income at age 14.

The reference group for this analysis was chosen on the whole so that this group typically obtained the lowest scores. The exception to this was gender, where females were used as the reference group, as there was no indication that either gender achieved more highly in all competencies.

The reference categories are:

- Year 9;
- female;
- Māori or Pacific;
- family income less than $30,000 when the students were near age 5 or age 14 (depending on which accounted for most variance); and
- mother with no qualification.

We fitted the models with a corner-point parameterisation, which means that all the estimates produced by the model can be compared to the reference group. In the tables that follow, we give the amount added to, or subtracted from, the reference group mean for each of the statistically significant factors to show the effect of each level of the factors.

We report the results of fitting Model 1 in detail as the parameter estimates for a model with one covariate are easier to understand than those for a model with two covariates. The changes from Model 1 in Models 2 and 3 are summarised in terms of the variables no longer significant in the model, and the percentage of variability accounted for by the model. Last, we give the parameter estimates for the final combined model.

Year 10 Māori/Pacific boys

In our sample, Māori/Pacific boys are slightly over-represented among the Year 10 students. Overall, 16 percent of the students were Māori/Pacific, 64 percent were in Year 10, and 52 percent were male. However, of the Year 10 students, 19 percent were Māori/Pacific, and of the male Māori/Pacific students, 81 percent were in Year 10 cf. 59 percent of other male students. Forty-nine percent of the Māori/Pacific students were male.

Not only were there *more* Year 10 Māori/Pacific males than expected, they also behaved slightly differently (compared to their female peers, and to Pākehā/European or Asian students of both genders), in a way which may be an anomaly (there were in total 36 Māori/Pacific males, 29 of them in Year 10), or which may be representative of what tends to happen with such boys at this age.

Table 26 shows the mean composite cognitive competency scores for male and female students at age 12 and age 14, by ethnic group and year level. The age-12 scores show that the (now) Year 10 students tended to score on average about 2 to 4 percent higher than the (now) Year 9 students. However, the scores at age 14 are far less consistent. The male Māori/Pacific Year 10 students scored about 3 percent *lower* than their Year 9 peers, but all the other Year 10 students scored on average 5 or 6 percent *higher* than their Year 9 peers.

Table 26 **Age-12 and age-14 composite cognitive competency means for male and female students, by ethnicity and year level**

		Age 12		Age 14	
	Subgroup	**Year 9**	**Year 10**	**Year 9**	**Year 10**
Male	Māori/Pacific	49	51	57	54
	Pākehā/European and Asian	58	62	63	68
Female	Māori/Pacific	53	56	55	60
	Pākehā/European and Asian	60	64	65	72

Table 27 shows similar information for the composite attitudinal competency scores. There is less consistency with the pattern shown in this table. The male Māori/Pacific Year 10 students scored about 6 to 8 percent *lower* than their Year 9 peers both at age 12 and age 14. The female Pākehā/European and Asian students in Year 9 scored on average the same score at age 12, and slightly higher scores at age 14 than their Year 10 peers. The male Pākehā/European and Asian students in Year 9 scored on average slightly lower scores at age 12 than their Year 10 peers, and the same score at age 14. The female Māori/Pacific students in Year 10 on average scored 4 to 6 percent higher than their peers in Year 9.

Table 27 **Age-12 and age-14 composite attitudinal competency means for male and female students, by ethnicity and year level**

		Age 12		Age 14	
	Subgroup	**Year 9**	**Year 10**	**Year 9**	**Year 10**
Male	Māori/Pacific	72	66	66	58
	Pākehā/European and Asian	66	69	66	66
Female	Māori/Pacific	71	75	59	65
	Pākehā/European and Asian	75	75	74	72

The pattern that may be of interest, and that may or may not be generalised outside our sample, is that while typically there is not much difference between attitudinal scores between Year 9 and Year 10 students, for the male Māori/Pacific students there was a difference apparent at age 12, which widened slightly at age 14. For the cognitive scores, while there was in general a slight advantage for Year 10 students both at age 12 and age 14, the opposite was true for the male Māori/Pacific students: the Year 10 students showed a slight advantage at age 12, but a distinct disadvantage at age 14. This corresponded with their disadvantage on the attitudinal scores.

We do not get similar anomalies with maternal qualifications and family income, as four male and five female Māori/Pacific students had mothers with more than mid-secondary school or trade qualifications, and similar numbers of these students came from homes with very high family incomes at 14 (or age 5).

This pattern shows up in several of the models that follow, where there are one or more significant two-way interactions between year level, gender, and ethnicity.

Mean cognitive composite

Model 1: the basic model

The main predictor of this score (from those included in the model, as outlined above) was the mean cognitive composite score at age 12. Maternal qualification levels also made a contribution, as did family income at age 5. There were two interaction effects, showing that scores were relatively higher if the students were Pākehā/European or Asian, and in Year 10, than those for Māori/Pacific students and Year 9 students, and that the difference between ethnic groups tended to decrease with increasing family income. (Note that estimates for the higher income groups were based on small numbers of Māori/Pacific students.)

The model accounted for 81 percent of the variability in cognitive composite scores at age 14 ($p < 0.0001$).

The coefficients in the model are given in Table 28. There are two groups of coefficients: the first from the part of the model about the covariate (age-12 score) and the second, about the other factors that were significant.

- **Covariance part of the model**: The 3.23 is the intercept of this part of the model, and 0.99 is the slope.[49] This means that a student who scored 0 at age 12 (not that anyone did) would be estimated to get 3.23 + (0.99 × 0) = 3.23, and a student who scored 80 at age 12 would be estimated to get 3.23 + (0.99 × 80) = 82.43. These estimates would be modified by the other characteristics (year level, ethnicity, and maternal qualification) of the student. To make the estimates easier to interpret, we have given the base-line prediction for an average student with reference group characteristics. The average age-12 score was 60.24, and for a student with this score, the base-line prediction would be 3.23 + (0.99 × 60.24) = 62.87.
- **Other factors**: There were significant interactions in the model (between year level and ethnicity and between family income at age 5 and ethnicity), so the *p*-values for the "main effects" of year, ethnicity, and family income at age 5 do not have meaning and are not included in the table. The *p*-value for the interaction terms do have meaning, and are included. The estimates given in the table can be used to calculate scores for students with different characteristics.

Factors not in interaction

- The estimated score for a young person with the average score at age 12, and mother with mid-secondary school/trade-level qualifications is 62.87 + 1.96 = 64.83.

Factors involved in interactions

- The estimated score for a young person with the average score at age 12, in Year 9 and Māori or Pacific is 62.87 (reference group).
- Had they been in Year 10 it would be 62.87 – 2.82 = 60.05 (the reference group did slightly better than those in Year 10).
- Had they been in Year 9 and Pākehā/European or Asian, it would be 62.87 + 0.25 = 63.12 (the Pākehā/European or Asian students did slightly better than those in the reference group).
- Had they been in Year 10 and Pākehā/European or Asian, it would be 62.87 – 2.82 + 0.25 + 4.57 = 62.87 + 2.00 = 64.87 (the Pākehā/European or Asian students did better than those in the reference group, and the difference between the ethnic groups was more marked amongst the Year 10 students than amongst the Year 9 students).
- To make interactions easier to interpret, we have given the individual parameter estimates together with their standard error and p-values in the body of the table, and then have combined them in a subtable

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[49] Note that in this model, the slope is almost 1, meaning that for the reference group the age-14 score was almost equal to the age-12 score. (This does not indicate lack of progress in the intervening years, it just means that the scales used to measure the mean composite cognitive scores had similar values in the two years.) This is not true in all of the models. Moreover, when the slope is almost 1, the line through a plot of the age-12 score against the age-14 score would be close to the 45 degree line through the origin (the intercept would be 0). The intercept, 3.23, is not significantly different from 0 ($p = 0.17$).

below that, so that the values of the combined parameter estimates at each of the possible levels of the factors in the interaction can be read off.

Table 28 **Parameter estimates for age-14 composite cognitive score (n = 436)**

Parameter	Estimate	Standard error	*p*-value[a]
Covariance part of model:			
Intercept[50]	3.23	2.35	0.17
Mean composite cognitive score age 12	0.99	0.03	< 0.0001
Average age-14 estimate[51]	62.87	2.01	
Main effect only factors:			
Maternal qualification			
– Mid-school/trade	1.96	1.00	0.052
– Senior secondary school/tertiary	3.549	1.19	0.004
– University	2.63	1.28	0.040
Main effects in interactions:			
Year 10	-2.82	1.86	
Family income at 5			
– $30–60K	5.09	1.73	
– $60–80K	3.71	2.92	
– $80K+	-2.54	3.91	
Pākehā/European or Asian	0.25	2.03	
Interaction:			
Pākehā/European or Asian & family income at 5			
– $30–60K	-5.357	1.93	0.006
– $60–80K	-3.352	3.09[b]	0.25
– $80K+	2.82	4.06[c]	0.49
Year 10 & Pākehā/European or Asian	4.57	1.98	0.02

[a] *p*-values are shown for main effects not in interactions, and interactions only.

[b] Large standard error as there were only six Māori/Pacific students in this category.

[c] Large standard error as there were only three Māori/Pacific students in this category.

Table 29 **Parameter estimates for age-14 mean composite cognitive scores: effects for factors in interactions**

Year ↓ Ethnicity →	Māori/Pacific	Pākehā/European/Asian
9	0	0.25
10	-2.82	2.00

Family income at age 5 ↓ Ethnicity →	Māori/Pacific	Pākehā/European/Asian
Family income at 5		
– Under $30K	0	0.25
– $30–60K	5.09	-0.01
– $60–80K	3.71	0.44
– $80K+	-2.354	0.53

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[50] This is the modelled age-14 score for an age-12 score of 0.

[51] This is the score for a student achieving at the mean score at age 12 and whose other characteristics are those of the reference group.

Model 2

We added, in turn, the "opposite competency" scores: the mean composite attitudinal score, *being engaged in the school environment*, and *being confident in the school environment*. Each added significantly to the model, giving final R^2 values of 83, 82, and 82 percent, respectively. The pattern shown here was repeated for the other competencies where the mean attitudinal competency score accounted for more of the variability than either of the other attitudinal competencies alone.

All the factors in Model 1 remained statistically significant in Model 2.

Model 3

The only transition variable that added significantly to the model was decile change, which was involved in a statistically significant interaction ($p = 0.025$) with gender. The R^2 value was unchanged from that of Model 1 at 81 percent. If this interaction is dropped from the model, neither gender nor decile change are statistically significant.

The effect of changing to a school in a different decile group on the mean composite cognitive score does not appear to be strong.

Model 4

When both the mean attitudinal competency score and the decile change variable are added to Model 1, only the mean attitudinal competency score is statistically significant (decile change was not significant), so that Model 4 and Model 2 are the same.

Table 30 **Parameter estimates for age-14 composite cognitive score**

Parameter	Estimate	Standard error	*p*-value[a]
Covariance part of model:			
Intercept[52]	-2.61	2.45	0.29
Mean composite cognitive score age 12	0.91	0.03	< 0.0001
Mean composite attitudinal score age 14	0.16	0.03	< 0.0001
Average age-14 estimate[53]	62.77	1.93	
Main effect only factors:			
Maternal qualification			
– Mid-school/trade	2.31	0.97	0.017
– Senior secondary school/tertiary	3.31	1.14	0.004
– University	2.65	1.23	0.031
Main effects in interactions:			
Year 10	-2.16	1.79	
Family income at 5			
– $30–60K	4.51	1.66	
– $60–80K	3.93	2.80	
– $80K+	-1.16	3.77	
Pākehā/European or Asian	0.06	1.95	
Interaction:			
Pākehā/European or Asian & family income at 5			
– $30–60K	-4.97	1.85	0.008
– $60–80K	-4.29	2.97[b]	0.15
– $80K+	1.43	3.91[c]	0.72
Year 10 &Pākehā/European or Asian	4.34	1.90	0.02

[a] *p*-values are shown for main effects not in interactions, and interactions only.

[b] Large standard error as there were only six Māori/Pacific students in this category.

[c] Large standard error as there were only three Māori/Pacific students in this category.

Table 31 **Parameter estimates for age-14 mean composite cognitive score: effects for factors in interactions**

Year ↓ Ethnicity →	Māori/Pacific	Pākehā/European/Asian
9	0	0.06
10	-2.16	2.24

Family income at age 5 ↓ Ethnicity →	Māori/Pacific	Pākehā/European/Asian
Family income at 5		
– Under $30K	0	0.06
– $30–60K	4.51	-0.39
– $60–80K	3.93	-0.29
– $80K+	-1.16	0.33

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[52] This is the modelled age-14 score for an age-12 score of 0.

[53] This is the score for a student achieving at the mean score at age 12, having a mean age-14 composite attitudinal competency score, and whose other characteristics are those of the reference group.

Mathematics score at age 14

Mathematics scores were likely to be higher if the student had a mother with a relatively high qualification (more than middle secondary school or trade). The scores were strongly associated with the students' age-12 mathematics scores, and less strongly associated with their age-14 mean combined attitudinal competency score. The interaction between ethnicity and year level was significant, as it was for the mean composite cognitive score.

Model 1

This model accounted for 69 percent of the variability in mathematics scores at age 14 ($p < 0.0001$).

Table 32 **Parameter estimates for age-14 mathematics scores (n = 444)**

Parameter	Estimate	Standard error	*p*-value
Covariance part of model:			
Intercept	27.37	3.71	< 0.0001
Mathematics score age 12	0.77	0.03	< 0.0001
Average age-14 estimate	67.53	3.77	
Main effects not in interactions:			
Maternal qualification			
– Mid-school level/trade	4.69	2.01	0.02
– Senior school/tertiary	8.32	2.36	0.0005
– University	7.71	2.50	0.002
Main effects in interactions:			
Year 10	-10.41	3.77	
Pākehā/European or Asian	-5.91	3.47	
Interactions:			
Year 10 & Pākehā/European or Asian	12.02	4.02	0.003

Table 33 **Parameter estimates for age-14 mathematics scores: effects for factors in interactions**

Year ↓ Ethnicity →	Māori/Pacific	Pākehā/European/Asian
9	0	-5.91
10	-10.41	-4.30

Model 2

The three attitudinal competency and school engagement scores all added significantly to the model, with the mean attitudinal competency score making the largest contribution. The R^2 value increased to 70 percent using the composite score, but remained at 69 percent for the other scores (*engaged with school* and *confident in the school environment*). All variables in Model 1 were statistically significant in Model 2.

Model 3

None of the transition variables proved to be statistically significant when added to Model 1.

Model 4

Model 4 and Model 2 are the same.

Table 34 **Parameter estimates for age-14 mathematics scores**

Parameter	Estimate	Standard error	*p*-value
Covariance part of model:			
Intercept	13.65	4.55	0.003
Mathematics score age 12	0.71	0.03	< 0.0001
Mean attitudinal composite score	0.25	0.05	< 0.0001
Average age 14 estimate	67.80	3.67	
Main effects not in interactions:			
Maternal qualification			
– Mid-school level/trade	4.86	1.95	0.01
– Senior school/tertiary	7.08	2.31	0.001
– University	7.71	2.44	0.004
Main effects in interactions:			
Year 10	-9.70	3.67	
Pākehā/European or Asian	-6.41	3.38	
Interactions:			
Year 10 & Pākehā/European or Asian	11.76	3.91	0.003

Table 35 **Parameter estimates for age-14 mathematics scores: effects for factors in interactions**

Year ↓ Ethnicity →	Māori/Pacific	Pākehā/European/Asian
9	0	-6.41
10	-9.70	-4.35

Reading comprehension scores at age 14

Reading scores at age 14 were likely to be higher if the student was in Year 10, female, Pākehā/European or Asian, and if their current family income was not low.

Model 1

The model accounted for 71 percent of the variability in reading comprehension scores at age 14, and included no interaction terms.

Table 36 **Parameter estimates for age-14 reading comprehension scores (n = 437)**

Parameter	Estimate	Standard error	*p*-value
Covariance part of model:			
Intercept	-0.07	2.57	0.98
Reading comprehension score age 12	0.82	0.03	< 0.0001
Average age-14 estimate	44.94	2.31	
Main effects factors:			
Family income at 14			
– $30–60K	3.91	2.02	0.05
– $60–100K	5.88	1.96	0.003
– $100K+	9.23	2.04	< 0.0001
– Unknown income	1.34	3.55	0.70
Year 10	5.58	1.23	< 0.0001
Pākehā/European or Asian	3.45	1.70	0.04
Male	-2.92	1.18	0.01

Model 2

The three attitudinal competency and school engagement scores all added significantly to the model, with the mean attitudinal competency score making the largest contribution. Gender and ethnicity were no longer significant once the mean composite attitudinal competency score was added to the model, but remained significant at the 5 percent level in models where either one of the school engagement scores was added. The R^2 value increased to 72 percent using the composite score, but remained at 71 percent for the other scores.

Model 3

None of the transition variables proved to be statistically significant when added to the model.

Model 4

Model 4 and Model 2 are the same.

Table 37 **Parameter estimates for age-14 reading comprehension scores**

Parameter	Estimate	Standard error	*p*-value
Covariance part of model:			
Intercept	-13.89	3.22	< 0.0001
Reading comprehension score age 12	0.75	0.03	< 0.0001
Mean attitudinal composite score	0.28	0.05	< 0.0001
Average age-14 estimate	46.55	1.76	
Main effects factors:			
Family income at 14			
– $30–60K	3.66	1.95	0.06
– $60–100K	5.18	1.90	0.007
– $100K+	8.37	1.95	< 0.0001
– Unknown income	1.25	3.44	0.72
Year 10	6.09	1.19	< 0.0001

Mean attitudinal composite score at 14

Composite attitudinal scores at age 14 were likely to be higher if the student was female, Pākehā/European or Asian, and if their mother had a tertiary or university qualification.

Model 1

The model accounted for 36 percent of the variability in mean attitudinal composite scores at age 14, and included no interaction terms.

Table 38 **Parameter estimates for age-14 mean attitudinal composite scores (n = 439)**

Parameter	Estimate	Standard error	*p*-value
Covariance part of model:			
Intercept	30.14	3.29	< 0.0001
Mean attitudinal composite score age 12	0.46	0.04	< 0.0001
Average age-14 estimate	63.18	1.87	
Main effects factors:			
Maternal qualification			
– Mid-school level/trade	-0.63	1.65	0.70
– Senior school/tertiary	3.90	1.93	0.04
– University	3.19	2.00	0.11
Pākehā/European or Asian	6.99	1.50	< 0.0001
Male	-3.49	1.09	0.002

Model 2

The three cognitive competency scores all added significantly to the model, with the mean cognitive competency score making the largest contribution. Maternal qualification was no longer significant once the mean composite cognitive competency score was added to the model, but remained significant at the 5 percent level in models where an individual cognitive competency score (mathematics and PAT reading comprehension at age 14) was added. The R^2 value increased to 46 percent using the composite score, and 43 and 45 percent for the mathematics and reading comprehension scores, respectively.

Model 3

There was a significant interaction between decile change and gender ($p = 0.016$), as while on the whole female students' scores showed a tendency to be relatively high if they moved to a higher-decile school and to be relatively low if they moved to a lower-decile school, the male students' scores showed the opposite tendency. This model accounted for 37 percent of the variability in mean attitudinal competency score.

Time to settle also added significantly to the model, with a longer time taken to settle being associated with a lower mean composite attitudinal competency score. This model accounted for 38 percent of the variability in mean attitudinal competency score.

Maternal qualification was still significant in these two models ($p < 0.01$).

Model 4

When mean cognitive competency, decile change, and time to settle were all included in the model, the mean cognitive score and time to settle were statistically significant (the decile change interaction with gender was not significant), and maternal qualification and decile change were not. This combined model accounted for 47 percent of the variability in mean attitudinal competency score.

Table 39 **Parameter estimates for age-14 mean attitudinal composite scores**

Parameter	Estimate	Standard error	*p*-value
Covariance part of model:			
Intercept	20.77	3.03	< 0.0001
Mean attitudinal composite score age 12	0.32	0.04	< 0.0001
Mean cognitive composite score age 14	0.35	0.04	< 0.0001
Average age-14 estimate	66.95	1.49	
Main effects factors:			
Time to settle			
– Under 1 term	-0.35	1.06	0.75
– 1–2 terms	-1.56	1.60	0.33
– 2 terms or more	-8.49	2.39	0.0004
Pākehā/European or Asian	4.44	1.40	0.002
Male	-3.32	1.00	0.001

The scores discussed above are all reported on a percentage scale. They can vary between 0 and 100. The next sets of scores are reported as a mean on the Likert scales used for the items making up the scales. They can vary between 1 and 4.

Engagement with the school environment at 14

Engagement with the school environment at age 14 was likely to be higher if the student's current family income was not low.

Model 1

The model accounted for 14 percent of the variability in engagement scores at age 14, and included no interaction terms.

Table 40 **Parameter estimates for age-14 engagement with the school environment scores (n = 468)**

Parameter	Estimate	Standard error	*p*-value
Covariance part of model:			
Intercept	1.50	0.19	< 0.0001
Positive about school age 12	0.51	0.07	< 0.0001
Average age-14 estimate	2.83	0.06	
Main effects factors:			
Family income at 14			
– $30–60K	0.18	0.07	0.01
– $60–100K	0.29	0.07	< 0.0001
– $100K+	0.30	0.07	< 0.0001
– Unknown income	0.11	0.11	0.32

Model 2

The three cognitive competency scores all added significantly to the model, with the mean cognitive competency score making the largest contribution. The R^2 value increased to 20 percent using the composite score, and 18 and 19 percent for the mathematics and reading comprehension scores, respectively. Family income at age 14 was still significant.

Model 3

None of the transition variables added significantly to the model.

Model 4

Model 4 is the same as Model 2, using the mean composite cognitive score.

Table 41 **Parameter estimates for age-14 engagement with the school environment scores**

Parameter	Estimate	Standard error	*p*-value
Covariance part of model:			
Intercept	1.19	0.19	< 0.0001
Positive about school age 12	0.43	0.07	< 0.0001
Mean composite cognitive score age 14	0.0082[a]	0.0014	< 0.0001
Average age-14 estimate	2.88	0.06	
Main effects factors:			
Family income at 14			
– $30–60K	0.17	0.07	0.01
– $60–100K	0.23	0.07	< 0.0001
– $100K+	0.20	0.07	0.004
– Unknown income	0.09	0.11	0.38

[a] The mean cognitive score is expressed as a percentage, but the engagement with the school environment score is on a 1–4 scale. For every percentage point increase in the cognitive score, the engagement in school score increases by 0.0082.

Confidence in the school environment at 14

Confidence in the school environment at age 14 was likely to be higher if the student's age-14 family income was not low, and if they were in Year 10 and female.

Model 1

The model accounted for 12 percent of the variability in confidence in the school environment scores at age 14.

Table 42 **Parameter estimates for age-14 confidence in the school environment scores (n = 468)**

Parameter	**Estimate**	**Standard error**	***p*-value**
Covariance part of model:			
Intercept	2.06	0.16	< 0.0001
Positive about school age 12	0.40	0.06	< 0.0001
Average age-14 estimate	3.015	0.05	
Main effects only factors:			
Family income at 14			
– $30–60K	0.03	0.06	0.65
– $60–100K	0.14	0.06	0.02
– $100K+	0.12	0.06	0.05
– Not specified	-0.08	0.10	0.39

Model 2

The three cognitive competency scores all added significantly to the model, with the mean cognitive competency score making the largest contribution. The R^2 value increased to 15 percent using the composite score, and 13 and 15 percent for the mathematics and reading comprehension scores, respectively.

Family income at 14 was no longer significant in any of these models.

Model 3

Time taken to settle was the only transition variable that contributed significantly to the model. The model included family income at 14, and an interaction between year level and time to settle. This model accounted for 18 percent of the variability in confidence in the school environment score.

Model 4

The interaction between year level and time taken to settle, the mean cognitive composite score and family income at age 14 were included in this model (time to settle was not statistically significant). Family income at 14 was just significant at the 5 percent level ($p = 0.04$). This model accounted for 21 percent of the variability in confidence in the school environment score.

Table 43 **Parameter estimates for age-14 confidence in the school environment scores**

Parameter	Estimate	Standard error	*p*-value
Covariance part of model:			
Intercept	1.92	0.17	< 0.0001
Positive about school age 12	0.34	0.06	< 0.0001
Mean composite cognitive score age 14	0.0052	0.0012	< 0.0001
Average age-14 estimate	3.19	0.06	
Main effects only factors:			
Family income at 14			
– $30–60K	0.04	0.06	0.43
– $60–100K	0.11	0.06	0.04
– $100K+	0.07	0.06	0.23
– Not specified	-0.12	0.09	0.20
Main effects in interactions:			
Year 10	0.11	0.06	
Time to settle	-0.06	0.06	
– Under 1 term			
– 1–2 terms	-0.09	0.10	
– 2 terms or more	0.28	0.22	
Interactions			
Year 10 & time to settle			
– Under 1 term	-0.6	0.08	0.44
– 1–2 terms	-0.21	0.12	0.09
– 2 terms or more	-0.68	0.23	0.004

Table 44 **Parameter estimates for age-14 confidence in the school environment scores: effects for factors in interactions**

Year → Time to settle ↓	9	10
No time at all	0	0.11
Under 1 term	-0.06	-0.01
1–2 terms	-0.09	-0.19
2 terms or more	0.28	-0.29

The rather large differences in confidence scores of Year 9 and Year 10 students who took two or more terms to settle (Table 44) are most likely due to the very small number of Year 9 students. There were 4 Year 9 students and 23 Year 10 students who took more than two terms to settle. The pattern shown above for the Year 10 students is what might be expected: those who were less confident took longer to settle.

The models were re-run using three categories for time to settle (no time, under one term, and one or more terms). Eighteen Year 9 and 66 Year 10 students took at least a term to settle. The differences in confidence in the school environment scores were less marked, but the difference between Year 9 and Year 10 students who took longer (at least a term) to settle was still statistically significant ($p = 0.02$). Mean confidence in the school environment scores were almost constant for Year 9 students, no matter how long they took to settle into secondary school. However, for the Year 10 students in the sample, there was an association between time to settle and confidence scores, with the scores decreasing as reported time to settle increased.

Lack of engagement with the school environment at 14

Lack of engagement with the school environment at age 14 was likely to be greater if the student was male or Māori/Pacific.

Model 1

The model accounted for 6 percent of the variability in lack of engagement scores at age 14, and included no interaction terms.

Table 45 **Parameter estimates for age-14 lack of engagement with the school environment scores (n = 456)**

Parameter	Estimate	Standard error	*p*-value
Covariance part of model:			
Intercept	3.32	0.24	< 0.0001
Positive about school age 12	-0.35	0.09	< 0.0001
Average age-14 estimate	2.38	0.07	
Main effects factors:			
Male	0.13	0.05	0.02
Pākehā/European/Asian	-0.19	0.07	0.007

Model 2

The three cognitive competencies all added significantly to the model. In the models using the mean composite cognitive competency and the PAT reading comprehension score, gender and ethnicity were no longer statistically significant. In the model using the mathematics score, gender was significant ($p = 0.02$). The models accounted for 9 percent (the mean composite cognitive score and mathematics score) and 8 percent (PAT reading comprehension score) of the variability in the not engaged in school score.

Model 3

None of the transition variables added significantly to the model.

Model 4

Model 4 was the same as Model 2, using the mean cognitive composite score.

Table 46 **Parameter estimates for age-14 lack of engagement with the school environment scores**

Parameter	Estimate	Standard error	*p*-value
Covariance part of model:			
Intercept	3.64	0.24	< 0.0001
Positive about school age 12	-0.29	0.09	< 0.0001
Mean cognitive composite score age 14	-0.009	0.0017	< 0.0001
Average age-14 estimate	2.28	0.03	
Main effects factors:	*None*		

Getting a "hard time" in the school environment at 14

Students were more likely to report this if they had indicated a negative experience of school at age 12. The majority of the students had scores indicating that they did not get a hard time at school. The score was poorly correlated with the other competency scores, and was not associated with any of the variables of interest in this investigation.

Model 1

The model accounted for 6 percent of the variability in getting a hard time in the school environment scores at age 14.

Table 47 **Parameter estimates for age-14 getting a hard time in the school environment scores (n = 468)**

Parameter	Estimate	Standard error	*p*-value
Covariance part of model:			
Intercept	0.96	0.06	< 0.0001
Negative about school age 12	0.28	0.05	< 0.0001
Average age-14 estimate	1.32	0.017	

Model 2

None of the cognitive competency scores added significantly to the model.

Model 3

None of the transition variables added significantly to the model.