

5. Overview of the relationships between factor and cluster variables

This chapter gives an overview as to how the factor variables differ across the subgroups defined by the cluster and other discrete variables, and how the discrete variables are interrelated. These differences are explored more comprehensively in the next chapters as the larger models start to be built.

Some of the differences found in this chapter, like those in the previous chapter, may be due to real differences by subgroup, and some may actually be attributable to some other variable, with which both the factor variable and discrete variable are associated.

The relationship between the demographic variables and the discrete engagement variables (typically, those derived as a result of a cluster analysis) was investigated using a simple cross-tabulation and the associated chi-square test statistic; associations with continuous variables (typically, those derived as a result of a factor analysis) were investigated using 1-way analysis of variance (ANOVA).

The results are reported by type of analysis and within that derivation (whether from teacher comments, parent comments, or young person's comments), so that similar analyses can be discussed together.

Discrete variables

The variables considered here are the same as those in the previous chapter; a combination of age-16 variables and some that were used at age 14. The age-16 variables are:

- subject cluster
- number of Level 1 NCEA credits (using Level 1 credits only means that Year 11 and Year 12 students can be meaningfully compared), split into quartile groups
- attendance (rating of attendance/absence at school)
- student values.

The age-14 variables that were used are:

- motivation
- student interests
- history of TV watching (age 8–14)
- history of enjoyment of reading (age 8–14)
- history of involvement in bullying (age 10–14)
- history of feelings about school (age 8–12)
- history of parents and teachers working on concerns (age 8–14).

Interrelationships

There are 12 discrete variables, which means that there are 66 pairs of them, taken two at a time. The relationships were explored using a cross-tabulation and chi-square test of independence, and the results are presented only for those where the test had a p -value of under 0.05. The results are presented in increasingly short tables, so that each pair of variables appears once, in a single table. To give an idea of the strength and direction of the relationship, some representative percentages are given. These are "conditional percentages" in that they are within the categories of the "main" variable in the table.

For instance, in Table 12, the "main" variable is *subject cluster*, and the percentages are the percent in each of the clusters. The first two rows of the table are showing the relationship with the *number of Level 1 credits* obtained by students in each subject cluster: 59 percent of those in the vocational cluster achieved under 80 L1 credits, and only 8 percent achieved between 120 (exclusive) and 160 (inclusive) credits. This can be contrasted with the traditional arts cluster, in which the corresponding percentages were 5 and 56. There is a single *p*-value for the two lines in the table, as that value applied to the whole cross-tabulation, from which the two lines were extracted.

The differences in *attendance* across the groups can be well captured by looking only at the percentage with poor attendance, so this cross-tabulation is covered by a single line in the table (but the *p*-value again applies to the whole table).

Number of L1 credits and *attendance* each have their own tables (Table 13 and Table 14, respectively), that do not have an entry for *subject cluster*, as that relationship is covered in Table 12. However, the percentages in their own tables cannot be directly compared with those in Table 12 as they have a different conditioning variable: the respective "main" variables of the tables (but meaningful comparisons are possible within each of the tables). However, the story told, of a varying pattern of behaviour across the groups defined by the cross-tabulation, is similar.

Subject cluster

There were statistically significant associations for all the variables, except TV watching age 8–14. An indication of the strength of the relationships, and the magnitude of the differences is given in Table 12.

Table 12: Relationships between subject cluster and other discrete variables

Other variable	Subject cluster				<i>p</i> -value
	Vocational % (<i>n</i> = 79)	Contextual % (<i>n</i> = 56)	Traditional academic: Arts % (<i>n</i> = 87)	Traditional academic: Science % (<i>n</i> = 200)	
Number of L1 credits — under 80	59	44	5	9	< 0.0001
—120–160	8	13	56	47	
Attendance—poor	30	20	1	7	< 0.0001
Student values 16—standing out	38	43	20	37	0.003
Involvement in bullying 8–14—involved at least twice	52	41	36	28	0.0004
Student interests 14—computer games/ none	25	39	13	18	0.014
Enjoyment of reading 8–14—always enjoyed	30	23	48	46	0.0006
— mainly did not enjoy	13	14	2	3	
Feelings about school 8–14—always enthusiastic	29	41	45	43	0.003
Motivation 14—low	49	46	14	26	< 0.0001
Parents & teachers working on problems 8–14—never	11	14	23	50	0.044

Number of level 1 credits

There were statistically significant associations for all variables except feelings about school 8–14, and parents and teachers working together on problems 8–14.

Table 13: Relationships between number of L1 credits and other discrete variables

Other variable	Number of L1 credits				p-value
	< 80	80–120	120–160	> 160	
	% (n = 71)	% (n = 137)	% (n = 149)	% (n = 20)	
Attendance—poor	30	13	1	5	< 0.0001
Student values 16—standing out	51	36	26	10	< 0.0001
Involvement in bullying 8–14—involved at least twice	60	37	24	15	< 0.0001
Student interests 14—computer games/none	35	20	13	20	0.034
Enjoyment of reading 8–14—always enjoyed	23	35	51	80	< 0.0001
—mainly did not enjoy	18	3	2	0	
TV watching 8–14—mainly low	49	50	73	80	0.0001
—mainly high	21	27	11	5	
Motivation 14—low	56	31	17	10	< 0.0001

Attendance

There were statistically significant associations for all variables except enjoyment of reading 8–14, feelings about school 9–14, and TV watching 8–14.

Table 14: Relationships between attendance and other discrete variables

Other variable	Attendance				p-value
	Good–excellent	Fair	Poor	Poor health	
	% (n = 276)	% (n = 58)	% (n = 44)	% (n = 11)	
Student values 16—standing out	33	29	36	46	0.029
Involvement in bullying 8–14—involved at least twice	32	48	46	–	0.037
Student interests 14—computer games/none	18	21	34	0	0.017
Motivation 14—low	26	33	55	36	0.005
Parents and teachers working on problems—once or never	35	29	30	–	0.0008

Student values at 16

There were statistically significant associations for all variables except student interests, feelings about school 9–14, and parents and teachers working on problems 8–14.

Table 15: Relationships between student values at 16 and other discrete variables

Other variable	Student values			<i>p</i> -value
	Satisfying life % (<i>n</i> = 183)	Standing out % (<i>n</i> = 163)	Aspirational % (<i>n</i> = 101)	
Involvement in bullying 8–14—involved at least twice	26	42	44	< 0.0001
Enjoyment of reading 8–14—always enjoyed	50	23	43	< 0.0001
—mainly did not enjoy	4	13	3	
TV watching 8–14—mainly low	69	53	53	0.020
—mainly high	12	23	24	
Motivation 14—low	26	39	33	0.043

Involvement in bullying 8–14

There were statistically significant associations for all variables except student interests, feelings about school 8–14, and motivation at age 14.

Table 16: Relationships between student values at 16 and other discrete variables

Other variable	Student values			<i>p</i> -value
	No involvement % (<i>n</i> = 123)	Involved once % (<i>n</i> = 163)	Involved at least twice % (<i>n</i> = 161)	
Enjoyment of reading 8–14—always enjoyed	55	35	30	0.004
—mainly did not enjoy	5	6	10	
TV watching 8–14—mainly low	69	56	55	< 0.0001
—mainly high	13	20	22	
Parents and teachers working on problems —once or never	35	42	23	0.002

Student interests at 14

There were statistically significant associations for all variables except feelings about school 8–14, and parents and teachers working on problems 8–14.

Table 17: Relationships between student interests at 14 and other discrete variables

Other variable	Student interests				<i>p</i> -value
	Sports player % (<i>n</i> = 154)	Computer games/none % (<i>n</i> = 100)	Reading, arts, sports % (<i>n</i> = 131)	Creative interests % (<i>n</i> = 63)	
Enjoyment of reading 8–14— always enjoyed	31	28	47	54	0.001
—mainly did not enjoy	7	11	2	19	
TV watching 8–14—mainly low	58	44	65	73	0.012
—mainly high	21	27	15	8	
Motivation 14—low	34	48	21	30	< 0.0001

Enjoyment of reading 8–14

Apart from associations mentioned above, there was an association between enjoyment of reading and feelings about school ($p = 0.004$), with 47 percent of those who always enjoyed reading also being enthusiastic about school, while 9 percent were unhappy at school at least once, and, conversely, 16 percent of those who tended to report not enjoying reading were enthusiastic about school and 26 were unhappy at school at least once.

There was also an association between enjoyment of reading and watching TV ($p < 0.0001$): 73 percent of those who enjoyed reading had mainly low rates of TV watching, compared with 29 percent of those who did not enjoy reading. Enjoying reading was also associated with motivation ($p < 0.0001$): 42 percent of those who always enjoyed reading placed a high value on education, compared with 13 percent of those who did not enjoy reading.

Feelings about school 8–14

Apart from the associations above, feelings about school was associated with parents and teachers working on problems at the same age ($p = 0.0001$): the parents of 52 percent of those who were enthusiastic about school had never worked with teachers about problems, compared with 2 percent of those who had been unhappy at school at least once.

Continuous variables

The scale variables, also the same as were used in the previous chapter, were derived from a series of factor analyses of parent, teacher, and student responses, all of which measure some aspect of the young person's attitude to or engagement with life in general or school in particular, or measures the extent to which their attitude or engagement may have been affected by the environment in which they live or some events in their lives. These scale variables, and the items used to construct them, are discussed in detail in the chapter "Scale variables, cluster variables, and history variables". In particular, we are looking at subsets of scale variables that describe the young person's home life:

- the student's view that:
 - the *family communicates well*
 - there is *family pressure*
 - the *family is inclusive, or supportive;*
- the student's information about the extent to which they:
 - were involved in *risky behaviour*
 - expressed *rejection*
 - had experienced *adverse events*
 - had *friends involved in risky behaviour*
 - had *solid friendships*
 - had *extending friendships*
 - had *praise and achievement* in any sphere of their life;
- the parent's view that the young person was:
 - *self-confident*
 - showed *self-efficacy*
 - or *responsibility;*

Variables that describe their school life:

- teacher views on:
 - the student and *NCEA assessment*
 - *overall ability*
 - and the attitudinal competencies of *thinking and learning, focused and responsible, social skills, and social difficulties;*
- the student views of the extent to which they are:
 - *engaged in school*
 - *affirmed at school*
 - *satisfied with their subject mix*
 - using *internal markers* of achievement
 - in a *positive learning environment*
 - *absorbed in learning*
 - *not disengaged in learning*
 - *not in a disrupted learning environment*
 - showing a positive *attitude to all work*
 - able to make *relevant learning opportunities*
 - in a *comparative learning environment.*

We have used 1-way ANOVAs where the discrete variables (cluster or other) are used as explanatory variables.

The results are reported for all 31 outcome variables, whether the differences were statistically significant or not. Variables where there were differences that were significant at the 1 percent level, or were almost significant at that level and the demographic variable accounted for over 2 percent of the variability, are in **bold** face.

Subject cluster

There are marked differences between subject cluster groupings, mainly across a divide between the vocational/contextual clusters and the traditional academic clusters. More young people from families with pressure have ended up in the vocational and contextual clusters, and more people from families that are less inclusive have ended in the vocational cluster. Young people in the traditional academic clusters are less likely to experience adverse events, to show risky behaviour, or to have friends that do. Their parents and teachers were likely to rate their attitudinal competencies more highly, and their teachers were more likely to rate their overall ability more highly—which was matched by higher cognitive competency scores. The young people themselves reported higher levels of engagement in all the measures used, except for *relevant learning opportunities*, where the scores were higher for those in the vocational and contextual clusters.

Table 18: Associations between engagement, attitude, and experience variables and subject cluster ($n = 425$)

Scale variable	Vocational	Contextual	Traditional academic: Arts	Traditional academic: Science	p -value	R^2 (%)
Cognitive competency	5.20	5.37	7.07	6.38	< 0.0001	25.2
Student view of family life						
Family communicates well	6.26	6.48	6.69	6.76	0.115	1.8
Family pressure	4.93	4.87	4.42	4.19	0.004	3.7
Family is inclusive	7.47	7.74	7.70	8.07	0.006	3.3
Family is supportive	7.76	7.79	8.05	8.08	0.365	1.0
Student views of friends and experiences						
Adverse events	2.20	2.05	1.69	1.78	0.001	4.2
Rejection	2.29	2.41	2.17	2.08	0.099	1.9
Praise and achievement	5.60	5.53	5.45	5.62	0.878	0.3
Risky behaviour	3.83	4.16	3.00	3.45	< 0.0001	6.6
Friends with risky behaviour	4.72	4.88	3.37	3.84	< 0.0001	9.1
Extending friendships	7.23	6.93	7.32	7.36	0.046	2.3
Solid friendships	8.37	8.12	8.39	8.55	0.173	1.5
Parent view of student						
Self-confidence	6.71	6.84	7.43	7.10	0.003	3.8
Self-efficacy	6.79	6.82	7.64	7.30	< 0.0001	7.2
Responsibility	6.82	6.94	7.89	7.51	< 0.0001	9.0
Teachers' view of student						
Focused and responsible	5.84	5.88	7.86	7.04	< 0.0001	21.1
NCEA assessment	5.38	5.59	7.48	6.64	< 0.0001	24.8
Overall ability	4.93	5.14	7.73	6.79	< 0.0001	25.7
Social difficulties	5.58	5.70	3.85	4.64	< 0.0001	9.7
Social skills	5.72	5.71	6.91	6.38	< 0.0001	10.1
Thinking and learning	5.35	5.57	7.16	6.53	< 0.0001	19.4
Student views on school and classes						
Absorbed in learning	5.93	5.84	6.04	5.87	0.752	0.5
Affirmed at school	4.89	4.75	5.49	5.24	< 0.0001	6.9
Attitude to all work	6.29	6.31	7.04	6.51	< 0.0001	6.3
Comparative learning environment	4.14	4.35	3.79	3.57	0.0006	4.6

Scale variable	Vocational	Contextual	Traditional academic: Arts	Traditional academic: Science	<i>p</i> -value	<i>R</i> ² (%)
<i>Student views on school and classes - continued</i>						
Engaged in school	5.18	5.05	6.22	5.62	< 0.0001	12.8
Internal markers of achievement	7.11	7.20	7.93	7.79	< 0.0001	6.4
Disengaged in learning	4.81	4.85	4.28	4.24	0.0008	4.5
Disrupted learning environment	5.39	5.70	5.19	5.05	0.002	4.0
Positive about class	6.58	6.52	6.73	6.71	0.037	2.4
Positive about teachers	6.77	6.72	7.07	6.93	0.002	3.9
Satisfied with subject mix	7.37	7.41	8.03	7.70	0.018	2.8
Relevant learning opportunities	5.32	5.06	4.63	4.80	0.0001	5.3

Bold face indicates that the differences were significant at the 1 percent level.

Number of Level 1 NCEA credits

Students from inclusive and supportive families tended to achieve more credits, as did those who were positively engaged at school, by any of the measures. Those who tended to achieve fewer credits included those who experienced adverse events (which could include poor health), and those who, along with their friends, showed risky behaviour. The teacher perceptions were strongly associated with the number of credits achieved.

Table 19: Associations between engagement, attitude, and experience variables and number of Level 1 NCEA credits (*n* = 425)

Scale variable	Up to 80	80–120	120–160	Over 160	<i>p</i> -value	<i>R</i> ² (%)
Cognitive competency	5.07	5.99	6.78	7.87	< 0.0001	31.6
Student view of family life						
Family communicates well	6.24	6.57	6.81	7.46	0.002	3.7
Family pressure	4.83	4.58	4.27	3.74	0.013	2.7
Family is inclusive	7.61	7.75	7.97	8.60	0.009	2.8
Family is supportive	7.72	7.81	8.19	8.76	0.008	2.9
Student views of friends and experiences						
Adverse events	2.09	2.06	1.60	1.81	< 0.0001	6.0
Rejection	2.29	2.24	2.11	1.96	0.444	0.7
Praise and achievement	5.53	5.89	5.93	6.19	0.133	1.4
Risky behaviour	4.19	3.76	3.10	2.54	< 0.0001	11.7
Friends with risky behaviour	4.93	4.21	3.59	2.91	< 0.0001	9.6
Extending friendships	6.94	7.35	7.34	7.30	0.037	2.1
Solid friendships	8.29	8.52	8.49	8.18	0.377	0.8
Parent view of student						
Self-confidence	6.62	7.16	7.15	7.48	0.002	3.6
Self-efficacy	6.65	7.29	7.36	7.93	< 0.0001	7.7
Responsibility	6.64	7.41	7.62	8.38	< 0.0001	11.7
Teachers' view of student						
Focused and responsible	5.42	6.49	7.73	8.72	< 0.0001	36.3
NCEA assessment	5.20	6.15	7.24	8.36	< 0.0001	36.0
Overall ability	4.45	6.17	7.46	8.95	< 0.0001	37.5
Social difficulties	6.17	5.12	3.91	2.98	< 0.0001	19.4
Social skills	5.25	6.25	6.73	7.42	< 0.0001	18.7
Thinking and learning	4.98	6.17	7.01	7.81	< 0.0001	31.0
Student views on school and classes						
Absorbed in learning	5.79	5.77	6.04	6.33	0.052	1.9
Affirmed at school	4.65	5.03	5.48	5.64	< 0.0001	11.2
Attitude to all work	6.18	6.38	6.77	7.37	< 0.0001	7.7
Comparative learning environment	4.23	3.89	6.62	3.25	0.013	2.7
Engaged in school	4.99	5.39	5.99	6.42	< 0.0001	15.2
Internal markers of achievement	7.01	7.59	7.84	8.64	< 0.0001	7.7
Disengaged in learning	4.91	4.67	4.04	3.89	< 0.0001	9.0
Disrupted learning environment	5.70	5.24	5.01	5.29	0.0001	5.1
Positive about class	6.57	6.53	6.80	6.91	0.032	2.2

Scale variable	Up to 80	80–120	120–160	Over 160	<i>p</i> -value	<i>R</i> ² (%)
<i>Student views on school and classes - continued</i>						
Positive about teachers	6.63	6.76	7.08	7.52	0.0003	4.7
Satisfied with subject mix	7.32	7.50	7.96	8.01	0.002	3.8
Relevant learning opportunities	5.12	4.85	4.81	4.45	0.031	2.2

Bold face indicates that the differences were significant at the 1 percent level.

Attendance

Experiencing *adverse events* and *attendance* were associated, with those with general poor attendance and poor attendance because of poor health reporting a greater incidence of adverse events. *Risky behaviour* and *friends with risky behaviour* were reported at higher levels among those whose attendance was poor, and the same students had lower average scores for parent perceptions of responsibility. Teacher perceptions were strongly linked with attendance, as students with poor attendance were rated low on all scales other than *social difficulty*, where they were rated high. The students who were rated as attending poorly themselves reported low levels of engagement, affirmation, and a poor attitude to work (and correspondingly a high rate of disengagement) and also a low level of satisfaction with their subject mix.

Typically, the measures for excellent, very good, and good attendance are similar (and may or may not show an increasing or decreasing gradient between excellent and good); those for fair attendance are slightly lower for a positive attribute such as engagement, or slightly higher for a negative attribute such as risky behaviour, and those for poor attendance drop (or rise) more markedly. The measures for the students with poor health and other reasons for absence vary, forming different patterns for different measures.

Table 20: Associations between engagement, attitude, and experience variables and attendance at school (n = 393)

Scale variable	Excellent	Very good	Good	Fair	Poor	Unwell	Other	p-value	R ² (%)
Cognitive competency	6.27	6.26	6.40	6.05	5.39	6.39	6.60	0.004	4.8
Student view of family life									
Family communicates well	6.79	6.16	6.66	6.40	6.67	6.46	6.87	0.812	0
Family pressure	4.35	4.35	4.50	4.56	4.44	4.36	5.88	0.683	1.0
Family is inclusive	7.94	7.82	7.94	7.73	7.96	7.63	7.51	0.92	0.6
Family is supportive	8.14	7.90	8.19	7.91	7.93	8.26	8.03	0.845	0.7
Student views of friends and experiences									
Adverse events	1.56	1.72	1.82	1.88	2.52	2.53	1.75	< 0.0001	11.4
Rejection	3.70	3.65	3.61	3.81	3.78	4.02	3.81	0.910	0.5
Praise and achievement	5.78	5.91	5.86	5.89	5.78	5.53	7.59	0.377	1.7
Risky behaviour	3.11	3.35	3.39	3.74	4.37	3.66	3.69	< 0.0001	7.2
Friends with risky behaviour	3.22	3.21	3.24	4.02	4.32	4.07	3.53	0.0002	6.5
Extending friendships	7.48	7.35	7.18	6.90	7.48	7.11	7.99	0.085	2.8
Solid friendships	8.43	8.54	8.45	8.20	8.53	8.67	8.99	0.565	1.2
Parent view of student									
Self-confidence	7.14	6.91	6.97	7.11	7.10	7.63	7.25	0.641	1.1
Self-efficacy	7.47	7.24	7.12	7.09	7.01	7.75	7.54	0.122	2.6
Responsibility	7.77	7.40	7.26	7.23	6.83	7.78	7.33	0.002	5.3
Teachers' view of student									
Focused and responsible	7.43	7.28	7.15	6.30	5.31	6.08	7.45	< 0.0001	18.8
NCEA assessment	7.00	6.88	6.79	6.00	5.01	5.61	6.50	< 0.0001	19.6
Overall ability	6.91	6.98	6.84	5.84	4.75	5.64	7.19	< 0.0001	13.4
Social difficulties	4.42	4.45	4.18	5.56	8.82	4.83	4.82	< 0.0001	7.7
Social skills	6.53	6.53	6.48	5.90	5.48	6.59	6.85	< 0.0001	7.4

Scale variable	Excellent	Very good	Good	Fair	Poor	Unwell	Other	p-value	R ² (%)
Teachers' view of student - <i>continued</i>									
Thinking and learning	6.75	6.60	6.57	5.89	5.19	5.81	7.25	< 0.0001	12.3
Student views on school and classes									
Absorbed in learning	6.07	5.94	5.98	5.79	5.58	5.65	5.96	0.310	1.8
Affirmed at school	5.37	5.33	5.28	4.89	4.71	4.33	5.49	< 0.0001	7.5
Attitude to all work	6.57	6.71	6.78	6.42	6.02	6.31	6.63	0.007	4.5
Comparative learning environment	3.57	3.79	3.94	3.97	4.07	4.13	2.88	0.411	1.6
Engaged in school	5.87	5.84	5.70	5.32	4.83	4.86	5.99	< 0.0001	10.9
Internal markers of achievement	7.74	7.65	7.76	7.68	7.31	7.39	7.68	0.439	1.5
Disengaged in learning	4.05	4.41	4.47	4.53	4.95	4.61	4.94	0.006	4.6
Disrupted learning environment	5.14	5.25	5.19	5.23	5.44	4.84	4.34	0.407	1.6
Positive about class	6.84	6.59	6.72	6.52	6.52	6.51	7.21	0.175	2.3
Positive about teacher	7.18	6.85	6.85	6.59	6.65	6.87	7.86	0.017	3.9
Satisfied with subject mix	7.89	7.93	7.72	7.39	6.95	7.75	7.75	0.003	4.9
Relevant learning opportunities	4.81	5.01	4.72	4.71	5.19	4.69	5.66	0.053	3.2

Bold face indicates that the differences were significant at the 1 percent level.

Student values at 16

Student values at 16 showed stronger associations with the engagement and family variables than with the equivalent age-14 grouping.

There is a strong or indicative association between all the parent and family variables, with the group with standing out values having less positive experiences in their family, and having parents that rated them lower in terms of *self-confidence*, *self-efficacy*, and *responsibility*. Their teacher ratings were also all lower (apart from *social difficulties*), as were their own ratings of general engagement (with *disengaged* having a higher rating). The satisfying life group had lower rates of *adverse events*, *rejection*, *risky behaviour*, and *friends with risky behaviour*. The aspirational group had the highest scores for *extending friendships*.

Table 21: Associations between engagement, attitude, and experience variables and student values at 16 (n up to 420 for school data, 447 for family and friend data)

Scale variable	Standing out	Satisfying life	Aspirational	p-value	R ² (%)
Cognitive competency 16	5.64	6.56	5.94	< 0.0001	8.7
Student view of family life					
Family communicates well	6.26	6.79	6.84	0.0006	3.3
Family pressure	4.73	4.27	4.33	0.024	1.7
Family is inclusive	7.55	8.00	7.96	0.003	2.5
Family is supportive	7.69	8.10	8.19	0.018	1.8
Student views of friends and experiences					
Adverse events	2.03	1.76	2.08	0.006	2.3
Rejection	2.17	2.06	2.51	0.006	2.3
Praise and achievement	5.71	5.79	5.06	0.163	0.8
Risky behaviour	4.05	3.24	3.51	< 0.0001	6.2
Friends with risky behaviour	4.55	3.83	4.03	0.001	3.0
Extending friendships	7.03	7.35	7.42	0.009	2.1
Solid friendships	8.22	8.50	8.50	0.073	1.2
Parent view of student					
Self-confidence	6.72	7.21	7.21	0.0004	3.5
Self-efficacy	6.84	7.33	7.28	0.0005	3.4
Responsibility	6.93	7.67	7.30	< 0.0001	6.2
Teachers' view of student					
Focused and responsible	6.21	7.35	6.85	< 0.0001	9.5
NCEA assessment	5.87	6.87	6.51	< 0.0001	8.6
Overall ability	5.77	7.00	6.28	< 0.0001	7.0
Social difficulties	2.66	2.14	2.23	< 0.0001	4.6
Social skills	5.81	6.52	6.54	< 0.0001	6.2
Thinking and learning	5.80	6.69	6.41	< 0.0001	6.9
Student views on school and classes					
Absorbed in learning	5.56	6.05	6.17	< 0.0001	5.0
Affirmed at school	4.86	5.32	5.30	< 0.0001	4.8
Attitude to all work	6.38	6.70	6.53	0.028	1.7

Scale variable	Standing out	Satisfying life	Aspirational	<i>p</i> -value	R ² (%)
<i>Student views on school and classes - continued</i>					
Comparative learning environment	4.09	3.71	3.57	0.024	1.8
Engaged in school	5.30	5.74	5.72	0.0005	3.6
Internal markers of achievement	7.27	7.75	7.85	0.001	3.1
Disengaged in learning	4.76	4.25	4.26	0.0004	3.7
Disrupted learning environment	5.31	5.08	5.33	0.101	1.1
Positive about classes	6.54	6.70	6.75	0.164	0.9
Positive about teachers	6.78	6.93	6.97	0.338	0.5
Satisfied with subject mix	7.51	7.76	7.70	0.264	0.6
Relevant learning opportunities	4.96	4.85	4.88	0.632	0.2

Bold face indicates that the differences were significant at the 1 percent level.

Motivation

The value students placed on education when aged 14 showed associations with *adverse events*, *risky behaviour*, and having *friends with risky behaviour*: young people who placed a high value on education had a lower risk profile for all these variables, and those who placed a low value had a higher risk profile. There was a matching association between the parent perceptions of the young people, the teachers, and the young people's own rating of their engagement and the value placed on education.

Table 22: Associations between engagement, attitude, and experience variables and motivation (*n* up to 420 for school data, 447 for family and friend data)

Scale variable	High	Unsure	Low	<i>p</i> -value	<i>R</i> ² (%)
Cognitive competency	6.63	6.26	5.37	< 0.0001	13.7
Student view of family life					
Family communicates well	6.86	6.68	6.31	0.006	2.3
Family pressure	4.49	4.36	4.50	0.703	0.2
Family is inclusive	7.93	7.92	7.64	0.108	1.0
Family is supportive	8.11	8.02	7.76	0.161	0.8
Student views of friends and experiences					
Adverse events	1.78	1.88	2.12	0.007	2.2
Rejection	2.13	2.22	2.23	0.694	0.2
Praise and achievement	5.94	5.91	5.60	0.098	1.0
Risky behaviour	3.18	3.61	3.95	< 0.0001	4.4
Friends with risky behaviour	3.53	4.34	4.45	< 0.0001	4.5
Extending friendships	7.49	7.21	7.09	0.015	1.9
Solid friendships	8.53	8.43	8.24	0.0009	3.1
Parent view of student					
Self-confidence	7.27	7.07	6.78	0.005	2.4
Self-efficacy	7.39	7.27	6.78	< 0.0001	4.5
Responsibility	7.61	7.41	6.97	0.0001	4.0
Teachers' view of student					
Focused and responsible	7.67	6.96	6.16	< 0.0001	9.0
NCEA assessment	7.03	6.46	5.84	< 0.0001	9.9
Overall ability	7.10	6.53	5.56	< 0.0001	8.8
Social difficulties	4.46	4.49	5.48	< 0.0001	4.5
Social skills	6.70	6.40	5.71	< 0.0001	8.4
Thinking and learning	6.88	6.40	5.65	< 0.0001	10.7
Student views on school and classes					
Absorbed in learning	6.23	5.72	5.83	0.0006	3.5
Affirmed at school	5.39	5.24	4.81	< 0.0001	11.2
Attitude to all work	6.76	6.53	6.36	0.011	2.1
Comparative learning environment	3.65	3.84	3.93	0.370	0.5
Engaged in school	5.96	5.58	5.22	< 0.0001	7.0
Internal markers of achievement	8.02	7.56	7.26	< 0.0001	4.6
Disengaged in learning	4.20	4.47	4.61	0.026	1.7

Scale variable	High	Unsure	Low	<i>p</i> -value	<i>R</i> ² (%)
<i>Student views on school and classes - continued</i>					
Disrupted learning environment	5.18	5.15	5.35	0.260	0.6
Positive learning environment	6.93	6.79	6.68	0.110	1.1
Satisfied with subject mix	7.83	7.60	7.57	0.259	0.6
Relevant learning opportunities	4.90	4.83	4.98	0.456	0.4

Bold face indicates that the differences were significant at the 1 percent level.

Student interests at age 14

The age-14 clusters formed from the interests expressed proved to distinguish more clearly between cognitive and attitudinal competencies than equivalent age-16 clusters.

Young people who reported few interests beyond computer games at age 14 were likely to have lower than average scores on both *family communicates well* and *family is supportive*. The group with the highest scores in both is the one with the widest interest. For most of the discrete variables discussed in this section there is one group that almost always had the most positive scores, and another that almost always had the most negative scores. The young people with computer games or no real interests scored the lowest on *praise and achievement*, *extending friendships*, parent perceptions of their *self-confidence*, *self-efficacy*, and *responsibility*, in all the teacher perceptions, and themselves reported the lowest levels of being *absorbed in learning* and *attitude to all work*, and other positive engagement variables. There were, however, no statistically significant differences for *disengagement in learning* or *disrupted learning environment*. The sports players, whether they had wider interests or not, tended to have higher scores on *supportive family* and *praise and achievement*. However, the sports players without wider interests also reported higher rates of *risky behaviour* and *friends with risky behaviour*. The young people with the widest interests (reading, arts, and sports) were the most likely to report *extending friendships*, and had the highest average scores from their parents for *self-confidence* and *self-efficacy*. It was the group with creative interests that had the highest average scores for all the teacher variables (other than *social difficulties*), for *responsibility* as judged by parents, and by their own report for the various positive engagement variables.

Despite the teachers perceiving differences in ability and likelihood of success in NCEA that were statistically significant, there were no such differences in our measures of cognitive competency.

Table 23: Associations between engagement, attitude, and experience variables and student interests (n = 420 for school variables, 447 for others)

Scale variable	Sports player	Computer games/ none	Reading, arts, sports	Creative	p-value	R ² (%)
Cognitive competency	6.02	5.94	6.15	6.30	0.348	0.7
Student view of family life						
Family communicates well	6.55	6.15	6.94	6.81	0.0004	4.0
Family pressure	4.54	4.49	4.34	4.38	0.763	0.3
Family is inclusive	7.70	7.63	8.08	7.96	0.029	2.0
Family is supportive	8.04	7.43	8.31	7.91	< 0.0001	7.8
Student views of friends and experiences						
Adverse events	1.88	1.95	2.08	1.70	0.054	1.7
Rejection	2.11	2.28	2.19	2.32	0.522	0.5
Praise and achievement	5.97	5.10	6.23	5.75	< 0.0001	8.1
Risky behaviour	3.78	3.73	3.58	2.98	0.002	3.3
Friends with risky behaviour	4.44	4.29	3.98	3.50	0.004	3.0
Extending friendships	7.16	6.97	7.55	7.30	0.001	3.5
Solid friendships	8.33	8.28	8.58	8.37	0.246	0.9
Parent view of student						
Self-confidence	6.90	6.74	7.39	7.08	0.0005	4.0
Self-efficacy	7.12	6.77	7.41	7.27	0.0009	3.7
Responsibility	7.24	6.98	7.48	7.73	0.002	3.4

Scale variable	Sports player	Computer games/ none	Reading, arts, sports	Creative	p-value	R ² (%)
Teachers' view of student						
Focused and responsible	6.63	6.63	6.98	7.39	0.006	3.0
NCEA assessment	6.30	6.09	6.65	6.94	0.001	3.9
Overall ability	6.11	6.11	6.65	7.09	0.004	3.2
Social difficulties	4.96	4.88	4.80	4.25	0.183	1.2
Social skills	6.11	6.01	6.51	6.64	0.004	3.2
Thinking and learning	6.14	5.94	6.58	6.74	0.0008	4.0
Student views on school and classes						
Absorbed in learning	5.76	5.67	6.08	6.29	0.001	3.7
Affirmed at school	5.10	4.94	5.31	5.30	0.032	2.1
Attitude to all work	6.50	6.26	6.70	6.80	0.005	3.0
Comparative learning environment	3.89	3.88	3.63	3.88	0.540	0.5
Engaged in school	5.49	5.40	5.71	5.83	0.036	2.1
Internal markers of achievement	7.51	7.32	7.85	7.75	0.032	2.1
Disengaged in learning	4.49	4.61	4.33	4.23	0.209	1.1
Disrupted learning environment	5.27	5.25	5.09	5.34	0.209	1.1
Positive about class	6.60	6.50	6.74	6.87	0.067	1.7
Positive about teachers	6.89	6.69	6.94	7.09	0.149	1.3
Satisfied with subject mix	7.85	7.48	7.56	7.67	0.184	1.2
Relevant learning opportunities	4.98	4.87	4.86	4.80	0.637	0.4

Bold face indicates that the differences were significant at the 1 percent level.

TV watching 8–14

Patterns of low TV watching were associated with student reports of lower rates of *adverse events*, and *risky behaviour*, negative engagement in school, and higher rates of positive engagement, parent reports of greater *responsibility*, and positive teacher reports, although the cognitive and attitudinal differences were more marked than those for the social competencies. The teacher perception of greater cognitive and attitudinal strengths was confirmed by the associated higher scores on our cognitive competency.

Table 24: Associations between engagement, attitude, and experience variables and TV watching 8–14 (n up to 420 for school data, 447 for family and friend data)

Scale variable	Mainly low	Mixed	Mainly high	p-value	R ² (%)
Cognitive competency	6.25	6.04	5.61	0.0008	3.7
Student view of family life					
Family communicates well	6.74	6.50	6.29	0.051	1.7
Family pressure	4.44	4.43	4.52	0.508	0.5
Family is inclusive	7.90	7.77	7.69	0.598	0.4
Family is supportive	8.04	7.94	7.73	0.398	0.7
Student views of friends and experiences					
Adverse events	1.85	2.03	2.03	0.002	3.3
Rejection	2.13	2.18	2.45	0.127	1.3
Praise and achievement	5.91	5.73	5.62	0.282	0.6
Risky behaviour	3.46	3.61	4.02	0.021	2.2
Friends with risky behaviour	3.95	4.24	4.61	0.035	1.9
Extending friendships	7.32	7.22	7.08	0.371	0.7
Solid friendships	8.48	8.69	8.13	0.143	1.2
Parent view of student					
Self-confidence	7.13	7.00	6.80	0.150	1.2
Self-efficacy	7.26	7.12	6.83	0.013	2.4
Responsibility	7.47	7.22	6.99	0.003	3.1
Teachers' view of student					
Focused and responsible	7.14	6.55	6.23	< 0.0001	5.6
NCEA assessment	6.69	6.23	5.92	< 0.0001	4.5
Overall ability	6.68	6.30	5.69	0.0006	3.5
Social difficulties	4.58	4.90	5.32	0.024	1.8
Social skills	6.45	6.09	5.99	0.012	2.1
Thinking and learning	6.54	6.08	5.91	0.0009	3.4
Student views on school and classes					
Absorbed in learning	6.06	5.81	5.57	0.002	2.8
Affirmed at school	5.27	5.08	4.90	0.011	2.2
Attitude to all work	6.67	6.50	6.21	0.002	3.3
Comparative learning environment	3.69	4.02	3.94	0.187	0.8
Engaged in school	5.74	5.43	5.28	0.002	3.0
Internal markers of achievement	7.77	7.52	7.21	0.007	2.4
Disengaged in learning	4.21	4.67	4.85	< 0.0001	4.9

Scale variable	Mainly low	Mixed	Mainly high	<i>p</i> -value	<i>R</i> ² (%)
<i>Student views on school and classes - continued</i>					
Disrupted learning environment	5.08	5.53	5.32	0.003	2.7
Positive about class	6.72	6.59	6.53	0.190	0.8
Positive about teachers	7.02	6.68	6.72	0.011	2.1
Satisfied with subject mix	7.80	7.43	7.49	0.043	1.5
Relevant learning opportunities	4.81	5.04	4.99	0.121	1.0

Bold face indicates that the differences were significant at the 1 percent level.

Enjoyment of reading 8–14

The young people who enjoyed reading when they were younger tended to come from families that communicated well, did not have pressure, neither they nor their friends tended to be involved in risktaking, and they enjoyed *extending friendships*. They were rated relatively highly by their parents for *self-efficacy* and *responsibility*, and were given high ratings by their teachers for all the social, attitudinal, and cognitive measures—supported by high scores in the *cognitive composite*. They themselves reported above-average responses on all the positive engagement variables (and below-average responses on the negative ones).

Enjoyment of reading accounted for substantial percentages of variability in the attitudinal and cognitive competency variables (10–23 percent).

Table 25: Associations between engagement, attitude, and experience variables and enjoyment of reading 8–14 (*n* up to 420 for school data, 447 for family and friend data)

Scale variable	Yes, always	Yes, mainly	Mixed	Often no	<i>p</i> -value	<i>R</i> ² (%)
Cognitive competency	6.74	6.15	5.43	4.56	< 0.0001	23.0
Student view of family life						
Family communicates well	6.85	6.46	6.67	5.63	0.0002	4.5
Family pressure	4.26	4.72	4.24	5.02	0.003	3.1
Family is inclusive	7.95	7.69	7.92	7.41	0.080	1.5
Family is supportive	8.10	7.75	8.11	7.53	0.086	1.5
Student views of friends and experiences						
Adverse events	1.81	1.96	2.04	2.01	0.200	1.0
Rejection	2.18	2.18	2.32	2.22	0.978	0
Praise and achievement	6.06	5.72	5.67	5.43	0.033	2.0
Risky behaviour	3.21	3.78	3.76	4.34	< 0.0001	5.4
Friends with risky behaviour	3.57	4.44	4.40	5.09	< 0.0001	6.7
Extending friendships	7.48	7.22	7.07	6.82	0.003	3.1
Solid friendships	8.56	8.29	8.38	7.92	0.036	1.9
Parent view of student						
Self-confidence	7.16	7.10	6.95	6.40	0.014	2.4
Self-efficacy	7.41	7.18	6.94	6.37	< 0.0001	5.4
Responsibility	6.66	7.50	6.88	6.46	< 0.0001	9.2
Teachers' view of student						
Focused and responsible	7.53	6.72	6.21	5.48	< 0.0001	16.0
NCEA assessment	7.04	6.31	5.89	5.41	< 0.0001	13.4
Overall ability	7.28	6.31	5.56	4.72	< 0.0001	16.0
Social difficulties	4.09	4.87	5.41	6.46	< 0.0001	10.1
Social skills	6.81	6.24	5.76	5.18	< 0.0001	13.7
Thinking and learning	6.89	6.20	5.82	5.18	< 0.0001	12.7
Student views on school and classes						
Absorbed in learning	6.14	5.68	5.83	5.83	0.008	2.8
Affirmed at school	5.49	4.92	4.96	4.90	< 0.0001	7.5
Attitude to all work	6.86	6.30	6.42	6.23	< 0.0001	5.7
Comparative learning environment	3.54	3.95	3.88	4.61	0.006	2.9
Engaged in school	5.95	5.30	5.48	4.96	< 0.0001	8.6
Internal markers of achievement	7.94	7.45	7.39	7.07	0.0004	4.3
Disengaged in learning	4.12	4.60	4.78	5.09	< 0.0001	5.1
Disrupted learning environment	5.09	5.26	5.29	5.59	0.122	1.4
Positive about class	6.81	6.45	6.64	6.62	0.012	2.6
Positive about teachers	7.10	6.65	6.82	6.86	0.007	2.9
Satisfied with subject mix	7.89	7.41	7.55	7.81	0.028	2.2
Relevant learning opportunities	4.81	4.83	4.99	5.32	0.072	1.7

Bold face indicates that the differences were significant at the 1 percent level.

Involvement in bullying 8–14

Those who had been involved in bullying in more than two of our rounds of data collection were more likely to come from families with pressure, and less likely to come from families that were supportive. Their parents on average gave them relatively low scores for self-efficacy and responsibility. Their teachers tended to give them lower than average ratings for the cognitive and attitudinal competencies (and they had relatively low scores for the cognitive competency), and high scores for *social difficulties* (which included involvement in bullying at age 16). The students themselves reported more *adverse events* and *rejection* (which included bullying), more involvement in *risky behaviour*, less *extending* or *solid friendships*, and less engagement at school, in particular lower *affirmation* and *engagement*.

Table 26: Associations between engagement, attitude, and experience variables and involvement in bullying 8–14 (*n* up to 420 for school data, 447 for family and friend data)

Scale variable	No involvement	Single instance	Involved at least twice	<i>p</i> -value	<i>R</i> ² (%)
Cognitive competency	6.48	6.07	5.80	0.0002	4.4
Student view of family life					
Family communicates well	6.79	6.58	6.49	0.246	0.9
Family pressure	3.93	4.59	4.71	0.0002	4.3
Family is inclusive	8.09	7.75	7.71	0.080	1.5
Family is supportive	8.36	7.93	7.69	0.006	2.8
Student views of friends and experiences					
Adverse events	1.71	1.91	2.10	< 0.0001	5.1
Rejection	1.86	2.26	2.40	0.0006	3.9
Praise and achievement	5.92	5.66	5.90	0.370	0.7
Risky behaviour	3.15	3.69	3.84	0.0006	3.9
Friends with risky behaviour	3.74	4.12	4.46	0.012	2.4
Extending friendships	7.50	7.29	7.03	0.007	2.7
Solid friendships	8.81	8.23	8.24	0.0002	4.3
Parent view of student					
Self-confidence	7.12	7.04	6.98	0.587	0.4
Self-efficacy	7.47	7.09	6.96	0.002	3.5
Responsibility	7.58	7.32	7.15	0.008	2.7
Teachers' view of student					
Focused and responsible	7.31	6.57	6.74	0.0005	3.6
NCEA assessment	6.79	6.44	6.17	0.003	2.8
Overall ability	6.88	6.43	6.02	0.002	2.9
Social difficulties	4.38	4.72	5.19	0.008	2.3
Social skills	6.49	6.27	6.12	0.089	1.2
Thinking and learning	6.57	6.26	6.18	0.079	1.2
Student views on school and classes					
Absorbed in learning	5.90	5.79	6.03	0.194	0.8
Affirmed at school	5.39	5.14	4.98	< 0.0001	5.6
Attitude to all work	6.73	6.47	6.49	0.096	1.1
Comparative learning environment	3.64	3.96	3.80	0.257	0.7
Engaged in school	5.78	5.47	5.54	0.0003	3.6
Internal markers of achievement	7.90	7.45	7.53	0.023	1.8
Disengaged in learning	4.30	4.53	4.44	0.300	0.6
Disrupted learning environment	5.03	5.29	5.31	0.087	1.2
Positive about class	6.70	6.58	6.70	0.450	0.4
Positive about teachers	7.06	6.71	6.93	0.032	1.6
Satisfied with subject mix	7.67	7.69	7.63	0.935	0
Relevant learning opportunities	4.84	4.89	4.92	0.686	0.2

Bold face indicates that the differences were significant at the 1 percent level.

Feelings about school 8–14

There were few strong associations between how the young people felt at school up to the age of 14 and their family, nonschool, and school lives at age 16. Those who had tended to be enthusiastic about school were more likely to report *extending friendships* and to be given higher ratings for *self-efficacy* and *responsibility* by their parents. There were no real associations with their levels of engagement, but they were more likely to report being *affirmed* at school.

Table 27: Associations between engagement, attitude, and experience variables and feelings about school 8–14 (*n* up to 420 for school data, 447 for family and friend data)

Scale variable	Enthusiastic	Fairly enthusiastic	Mixed	Unhappy once or more	<i>p</i> -value	<i>R</i> ² (%)
Cognitive competency	6.20	6.17	5.95	5.64	0.064	1.6
Student view of family life						
Family communicates well	6.65	6.82	6.48	6.22	0.081	1.5
Family pressure	4.35	4.22	4.71	4.81	0.054	1.7
Family is inclusive	7.94	7.97	7.63	7.52	0.055	1.7
Family is supportive	8.07	8.19	7.70	7.56	0.030	2.0
Student views of friends and experiences						
Adverse events	1.95	1.81	1.94	2.10	0.331	0.8
Rejection	2.16	2.06	2.36	2.34	0.190	1.1
Praise and achievement	5.99	5.48	5.96	5.69	0.019	2.2
Risky behaviour	3.61	6.42	6.68	3.80	0.399	0.7
Friends with risky behaviour	4.14	3.99	4.10	4.59	0.297	0.8
Extending friendships	7.34	7.35	7.26	6.62	0.001	3.6
Solid friendships	8.52	8.48	8.26	8.00	0.042	1.8
Parent view of student						
Self-confidence	7.22	6.93	6.98	6.70	0.038	1.9
Self-efficacy	7.33	7.21	6.97	6.67	0.003	3.2
Responsibility	7.47	7.48	7.00	7.06	0.007	2.7
Teachers' view of student						
Focused and responsible	6.89	7.03	6.61	6.64	0.241	1.0
NCEA assessment	6.49	6.60	6.26	6.21	0.278	0.9
Overall ability	6.63	6.45	6.21	5.85	0.100	1.5
Social difficulties	4.82	4.71	4.62	5.25	0.436	0.7
Social skills	6.49	6.20	6.10	6.06	0.078	1.6
Thinking and learning	6.50	6.29	6.13	6.06	0.155	1.3
Student views on school and classes						
Absorbed in learning	5.90	6.02	5.92	5.66	0.366	0.8
Affirmed at school	5.33	5.19	5.04	4.67	0.0008	4.0
Attitude to all work	6.57	6.61	6.56	6.29	0.400	0.7
Comparative learning environment	3.69	3.87	3.71	4.33	0.104	1.5
Engaged in school	5.64	5.69	5.49	5.27	0.117	1.4
Internal markers of achievement	7.70	7.65	7.42	7.53	0.469	0.6
Disengaged in learning	4.35	4.27	4.69	4.59	0.065	1.7
Disrupted learning environment	5.15	5.21	5.24	5.50	0.318	0.8
Positive about class	6.65	6.78	6.61	6.46	0.239	1.0
Positive about teachers	6.97	6.97	6.77	6.64	0.188	1.1
Satisfied with subject mix	7.71	7.56	7.73	7.63	0.806	0.2
Relevant learning opportunities	4.83	4.92	4.99	4.89	0.676	0.4

Bold face indicates that the differences were significant at the 1 percent level.

Parents and teachers working on issues 8–14

There were few strong associations between parents and teachers working on issues up to the age of 14 and their family, nonschool, and school lives at age 16. There were indications that those whose parents had often worked with their teachers were more likely to come from a home with pressure, and to show risky behaviour at 16. Their parents gave them slightly lower ratings on *self-efficacy* and *responsibility*, and their teachers gave them slightly lower ratings on the attitudinal competencies and rated them slightly more highly for *social difficulties*. They gave them lower ratings for their cognitive abilities, which agreed with the findings for our cognitive competency score. The young people themselves did not indicate that they had particularly much lower levels of engagement than their peers.

Table 28: Associations between engagement, attitude, and experience variables and parents and teachers working on issues 8–14 (*n* up to 420 for school data, 447 for family and friend data)

Scale variable	Never	Once	Twice	3 or 4 times	Each time	<i>p</i> -value	<i>R</i> ² (%)
Cognitive competency	6.35	6.33	6.16	5.89	5.72	0.032	2.4
Student view of family life							
Family communicates well	6.54	6.61	6.67	6.51	6.63	0.953	0.2
Family pressure	4.40	4.02	4.51	4.79	4.62	0.026	2.5
Family is inclusive	7.81	7.98	7.79	7.69	7.89	0.655	0.6
Family is supportive	7.94	8.09	7.96	7.76	8.05	0.743	0.4
Student views of friends and experiences							
Adverse events	1.62	1.89	1.92	2.00	2.16	0.064	2.0
Rejection	2.14	2.01	2.28	2.18	2.37	0.257	1.2
Praise and achievement	5.53	5.89	5.83	5.80	5.92	0.678	0.5
Risky behaviour	3.27	3.51	3.48	3.76	4.11	0.013	2.8
Friends with risky behaviour	3.99	4.11	4.00	4.36	4.39	0.489	0.8
Extending friendships	7.55	7.36	7.21	6.94	7.32	0.049	2.1
Solid friendships	8.48	8.61	8.40	8.11	8.30	0.116	1.7
Parent view of student							
Self-confidence	7.09	7.15	6.97	7.08	6.92	0.756	0.4
Self-efficacy	7.33	7.25	7.23	7.03	6.77	0.012	2.1
Responsibility	7.46	7.55	7.34	7.26	6.88	0.026	2.5
Teachers' view of student							
Focused and responsible	7.25	7.04	6.92	6.51	6.35	0.012	3.1
NCEA assessment	6.84	6.65	6.51	6.07	6.04	0.009	3.2
Overall ability	6.95	6.87	6.36	6.02	5.79	0.003	3.7
Social difficulties	4.76	4.30	4.70	5.24	5.39	0.013	3.1
Social skills	6.49	6.37	6.41	5.97	6.02	0.085	2.0
Thinking and learning	6.69	6.48	6.41	5.96	5.92	0.015	3.0
Student views on school and classes							
Absorbed in learning	5.95	5.74	6.03	5.92	5.84	0.419	0.9
Affirmed at school	5.34	5.29	5.17	4.94	5.00	0.103	1.9
Attitude to all work	6.75	6.60	6.53	6.47	6.44	0.633	0.6
Comparative learning environment	3.70	3.75	3.80	3.82	4.08	0.726	0.5
Engaged in school	5.51	5.59	5.72	5.41	5.49	0.346	1.1
Internal markers of achievement	7.76	7.54	7.69	7.61	7.37	0.582	0.7
Disengaged in learning	4.37	4.30	4.38	4.63	4.61	0.374	1.0
Disrupted learning environment	5.11	5.06	5.19	5.53	5.29	0.091	1.9
Positive about class	6.66	6.66	6.72	6.47	6.69	0.456	0.9
Positive about teachers	7.05	6.88	6.99	6.63	6.81	0.165	1.5
Satisfied with subject mix	7.49	7.66	7.77	7.76	7.38	0.392	1.0
Relevant learning opportunities	5.058	4.81	4.83	4.90	5.10	0.280	1.2

Bold face indicates that the differences were significant at the 1 percent level.

