Students' experiences of their first two years at Albany Senior High

Rosemary Hipkins, with Edith Hodgen and Rachel Dingle

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Table of Contents

Tables

Figures

1. Introduction to the surveys

This report documents findings from comprehensive end-of-year student surveys conducted by Albany Senior High School (ASHS) at the end of 2009 and 2010, its first two years of existence as a newly built senior secondary high school.

The New Zealand Council for Educational Research (NZCER) was given access to the collated survey data for our own research purposes. In return we provided more detailed statistical analysis than the school had themselves undertaken at the time.

A context for the surveys

ASHS opened at the beginning of 2009 with one cohort of Year 11 students. This foundation year was spent in temporary premises while the school buildings were being completed.

In 2010 the school moved onto its permanent site. By this time there were two cohorts of students—Years 11 and 12. This meant there were roughly twice as many students and staff as in the first year. In 2011 the school has expanded again to reach its full size of three cohorts of students—in Years 11–13. No doubt the survey data series will be continued at the end of 2011.

From the outset, ASHS has sought to be a school that operates in ways that educate students for life in the 21st century. Learning time is organised in ways intended to foster greater student engagement and autonomy, as highlighted by *The New Zealand Curriculum* (*NZC*) (Ministry of Education, 2007). *NZC* is a framework curriculum. It provides broad guidelines for schools as they design a local curriculum specific to their own students' needs. Three key timetable structures and their accompanying processes form the framework on which teachers construct the school curriculum:

- On one day of the week the regular timetable is suspended and students conduct "impact studies" of their own choosing and design.
- During the other four days, learning time is organised into extended blocks of 100 minutes duration (60 minutes is more usual in New Zealand high schools).
- Two of these 100-minute blocks are allocated as tutorial time when students can access guidance from their tutor/mentor and practise the skill of working independently.

In addition to these timetable structures, another key enabler is the development of a "pedagogy for young adults" which pervades school life and is again congruent with key *NZC* messages about fostering students' growing autonomy and dispositions to be/become lifelong learners.

As a senior high school, students and their families can be expected to pay close attention to success in gaining exit qualifications. Like the curriculum, New Zealand's National Qualifications Framework (NQF) and National Certificates of Educational Achievement (NCEA) are framework structures. It is up to schools to build courses and accompanying assessment plans that meet the ends of their students. ASHS teachers use this flexibility to plan and offer assessment opportunities that are appropriate to the innovative learning opportunities their structures allow, and that their teachers value.

The survey results documented in this report discuss the students' responses to these innovative curriculum features in the first two years of the school's operation. Greater detail about the innovations per se can be found in a report about the school to be published in the first instance on NZCER's website (Hipkins, 2011).

The survey analysis

ASHS staff collated the data and sent this to NZCER as Excel files. They had already compiled and discussed a report of the basic frequency data. Those details are not repeated here. NZCER's focus was on adding value to the overall picture the school had already built.

NZCER's statisticians carried out a factor analysis to search for associations between items. Four factors were found, as described in the following sections. NZCER researchers determined names for these factors, based on the items that comprised each one. These four factors broadly mirrored "themes" within the actual survey, but there were some differences in the way items clustered. The few items that did not comprise part of any factor are not discussed in this report.

Both factors and individual items were cross-tabulated to check for differences between: responses made in 2009 and 2010; Year 11 and Year 12 students' responses in 2010; gender differences; and combinations of these variables. All responses significant at $p < 0.05$ are reported, as are some trends that do not quite reach significance but nevertheless signal interesting differences in responses of different student groups.

2. Students' views of their learning opportunities

In 2009 and again in 2010 a number of survey items asked students about their learning opportunities at this school. The table below lists all the survey items that contributed to the *Learning Opportunities* factor we found in the data. The high Cronbach's alpha measure (α = .91) for this factor indicates that students responded to these items in internally consistent ways.

Because all the 2009 items were repeated in 2010 we can directly compare overall responses. (One new item was added in 2010.) The table shows very similar overall response levels to the individual items in both years. With a few minor discrepancies, the top-rating items in 2009 remained so in 2010. Most students appear to experience the learning climate of the school as open and accessible.

Table 1 **Student responses to the *Learning Opportunities* factor (α = .91)**

Items that make up this factor	Agree/strongly agree %	
	2010 (*n* = 276)	2009 (*n* = 162)
I can talk to my teachers about my learning	86	84
I get the same opportunity to learn as other students	85	83
I am given choices about my learning	83	79
Teachers help me when I have difficulty with learning	82	83
My teachers are passionate about teaching and learning	79	78
I enjoy learning in my specialist subjects	78	80
Teachers give me useful feedback	77	79
I am confident discussing my learning with others	71	66
Teachers take an interest in my learning	65	NA
I am given work that suits my ability	65	66
Teachers build on what I already know	64	60
Teachers make changes to help me learn better	61	54
Teachers know my strengths and interests	51	54
Teachers connect my learning to real life	49	47

NA = not asked in 2009

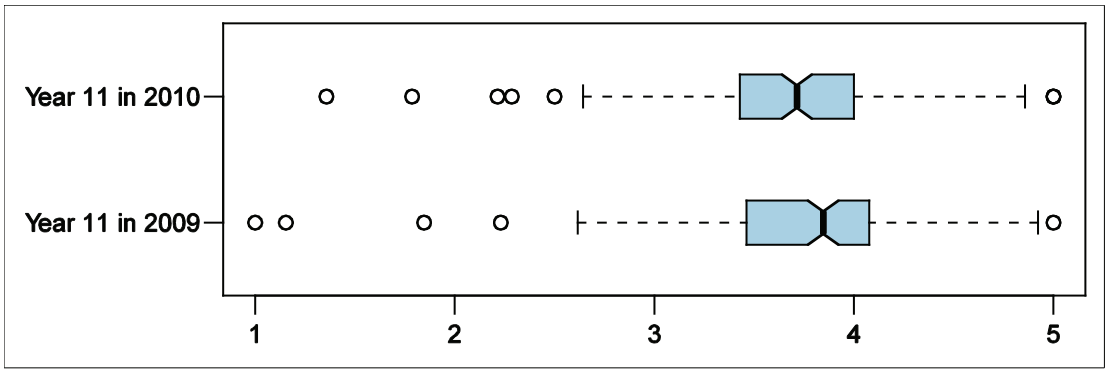
Making links to students' prior learning and to their lives outside school, and generally adjusting learning to accommodate individual learning needs would appear to be somewhat more challenging than maintaining an open, accessible learning environment in general. Although the school documentation exhorts teachers to personalise students' learning, and together the teachers have worked very hard at these aspects of their planning and pedagogy (Hipkins, 2011), somewhere between a third and half the students do not appear to recognise these efforts as having been successful.

Differences in student responses

We looked to see if there were any differences between the response patterns for the incoming Year 11 cohorts of 2009 and 2010. The similar length of the boxes in Figure 1 shows that the overall spread of responses was very similar. Note that each dot represents one student "outlier" and the whiskers show the overall spread, minus the outliers. The solid boxes show the extent of bunching of responses in the middle and the notch is the median response.

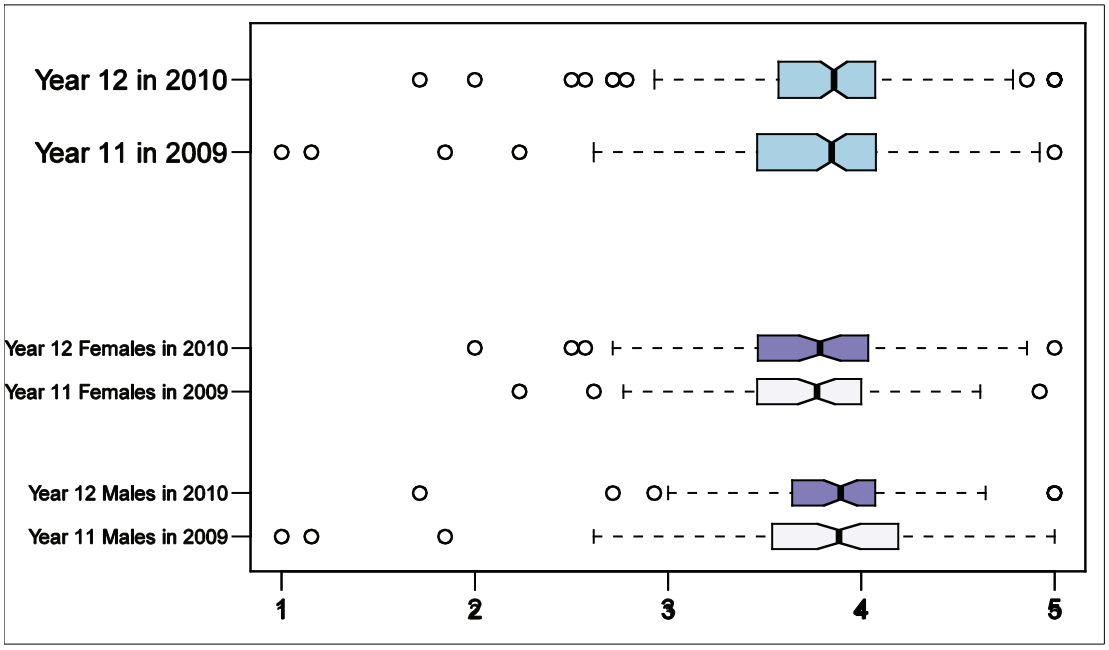
Notice the skew of the bars to the right, relative to the midpoint of the response scale. This skew indicates a positive pattern of responses (3 is the neutral position). The further small skew in the position of the notch for Year 11 in 2009 indicates that this cohort was slightly more positive at the end of their first year than were the next year's cohort. This difference is not significant because the notches on both bars still overlap. Notice that there are more outliers at the negative end of the continuum than at the positive one. By the end of their first year, a small number of students in both cohorts appeared to be either disenchanted or to feel that their learning aspirations were not being supported.

Figure 1 ***Learning Opportunities*: do we see cohort differences?**



The top two bars in Ffigure 2 compare responses of the foundation cohort, allowing for some inevitable student turnover, through their first two years at the school. By the end of Yyear 12, responses of the foundation cohort were somewhat skewed to the more positive end of the continuum compared to the end of Yyear 11. Notice also the slight contraction of the overall views of this cohort between the end of 2009 and the end of 2010.

Figure 2 **Tracking shifts in one cohort's responses to the *Learning Opportunities* factor**



Interestingly, this consolidation toward somewhat more positive views is more apparent for males than for female students. It may be that several outlier males in 2009 left the school, but even the bunched responses of the majority show a small skew to the right. By the end of Year 12, the males held a somewhat more unified positive view of their learning opportunities than they had in 2009, whereas the views of the females became somewhat more diverse as time went on. Data in the qualitative report (Hipkins, 2011) suggest that females were more likely to have taken to heart interpersonal challenges when group learning activities went awry, especially when working on impact projects.

Learning "stretch"

The school values reflective aspects of pedagogy, including leveraging the learning-to-learn potential of assessment. Considerable emphasis is placed on the practices summarised by the items in Table 2 below. This curriculum emphasis emerged from the analysis as a distinct factor. The title chosen for this factor reflects the ASHS aim that learning should be personally challenging for every student ("no student falls through the cracks"). Note that one new item was added in 2010.

The alpha for this factor is still strong, but compared to the *Learning Opportunities* factor, there are indications here of a little more variability in each student's responses.

Table 2 **Student responses to the *Learning Stretch* factor (α = .79)**

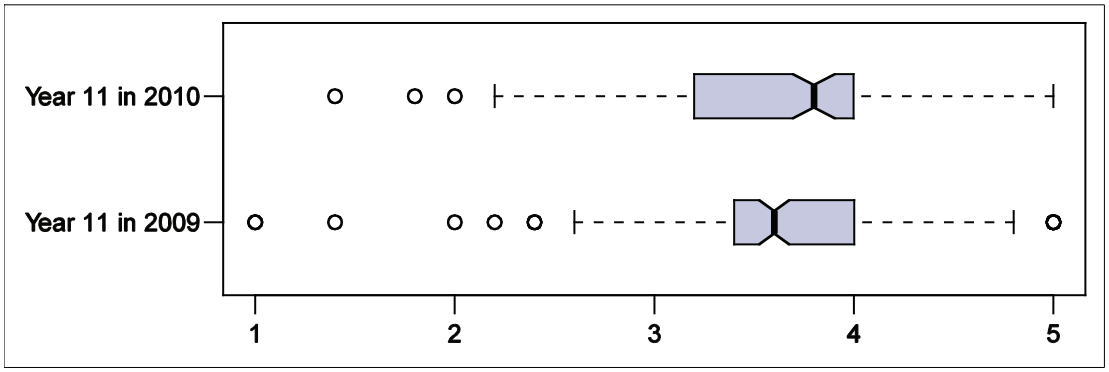
Items that make up this factor	Agree/strongly agree %	
	2010 (*n* = 276)	2009 (*n* = 162)
I am appropriately challenged in my learning	76	67
I have enough opportunities to practise new things	71	61
Teachers provide opportunities to reflect on my learning	64	67
Teachers provide clear learning goals	62	NA
I am encouraged to set challenging goals	58	60

NA = not asked in 2009

In contrast to the very similar responses for the *Learning Opportunities* factor in both years, the table shows overall shifts between 2009 and 2010 in the top-rating two items for the *Learning Stretch* factor. We looked for differences between the students that might help explain this shift.

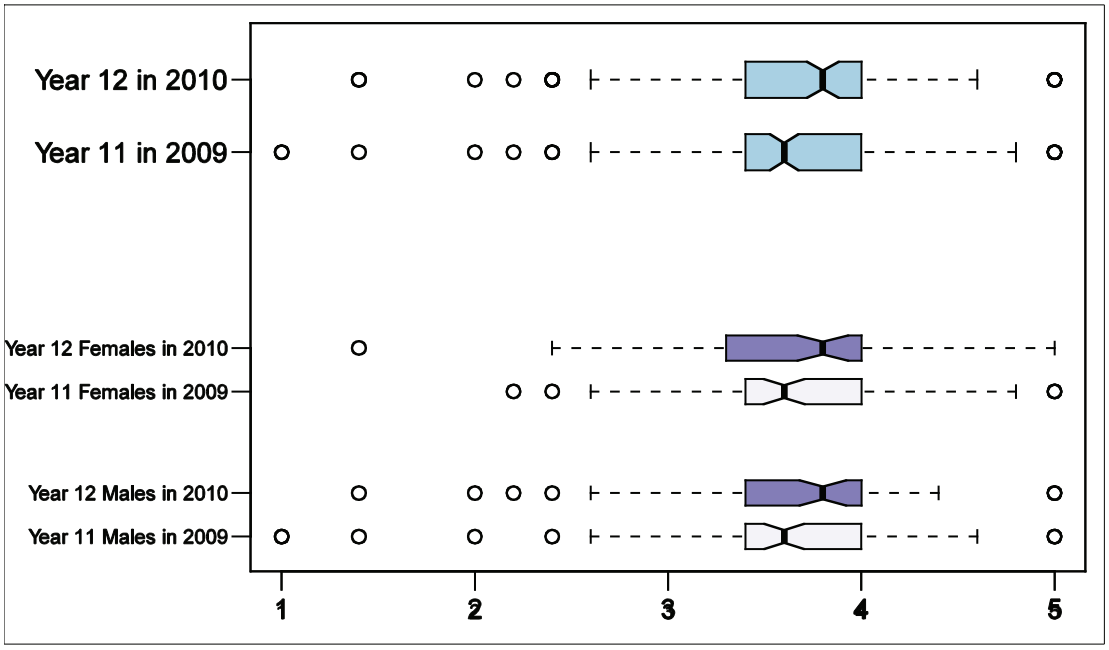
Figure 3 shows that the views of the 2010 Year 11 cohort were somewhat more spread, but were, overall, also somewhat more positive than those of the 2009 Year 11 cohort (notch skewed to right).

Figure 3 ***Learning Stretch*: do we see cohort differences?**



There are two possible explanations for this pattern. Either the 2010 Year 11 cohort arrived at the school inclined to be more positive about the reflective aspects of learning or the teachers got better at sharing these aspects of practice with students, which meant that the 2010 cohort had more positive experiences of these aspects of pedagogy across the course of their first year at the school. If the latter is the case, we would also expect to see this shift for the foundation cohort across the two years. The top two bars of the next figure show that the views of the foundation cohort did indeed shift to become more positive in 2010. Figure 4 also shows that this positive shift applied to both males and females, although the views of the females became somewhat more spread on 2010, as we also saw for the *Learning Opportunities* factor.

Figure 4 **Tracking shifts in one cohort's responses to the *Learning Stretch* factor**



The shift could reflect increasing teacher skill and confidence at implementing the reflective learning-to-learn aspects of pedagogy. There could also be an element of increasing student maturity, or increasing familiarity and comfort with the metacognitive aspects of their learning, or both. It will be interesting to track these items into these students' third and final year at the school.

In conclusion

Overall, we can say that the majority of students coming in to the school do recognise and seem to value the various opportunities to learn that are being offered to them. Given their considerable efforts to work on their pedagogy (Hipkins, 2011), this should be encouraging for the school's teachers.

3. Impact studies

On Wednesdays the timetable is suspended and students undertake impact studies of their own choosing. Working individually or in groups they plan and carry out an extended project that links to some specified aspect of the curriculum but typically extends well beyond what could be offered in any one class. Each student liaises with a specified adult, chosen for their ability to support the intended learning. For example, an IT project would likely be supported by one of the IT teachers. Parents or mentors from the school's wider community are invited to support impact projects where they are willing and have the relevant expertise.

The student survey conducted at the end of 2010 included a section on the impact projects for the first time. A factor analysis showed a very strong internal coherence in the manner in which students answered these questions. The alpha value is very high at .95, especially considering the factor is made up of 15 items. These questions were not asked in 2009 so the detail presented for the *Learning Opportunities* and *Learning Stretch* factors cannot be reported for this factor.

Responses to the items that make up the factor are shown in Table 3, ranked from the item for which there was the highest level of agree/strongly agree responses to that for which there was the lowest.

At the end of 2010, a majority of the students saw their impact projects as providing challenges, and believed that they had been successful overcoming these.

Notice that almost all the top-ranking items concern the various roles played by the mentor in helping students keep their learning on track. These items directly reflect the proactive manner in which the challenges outlined above have been addressed by the school. The high level of agreement from the students for these items provides evidence these strategies are working for the majority.

Table 3 ***Impact Project* factor (α = .95)**

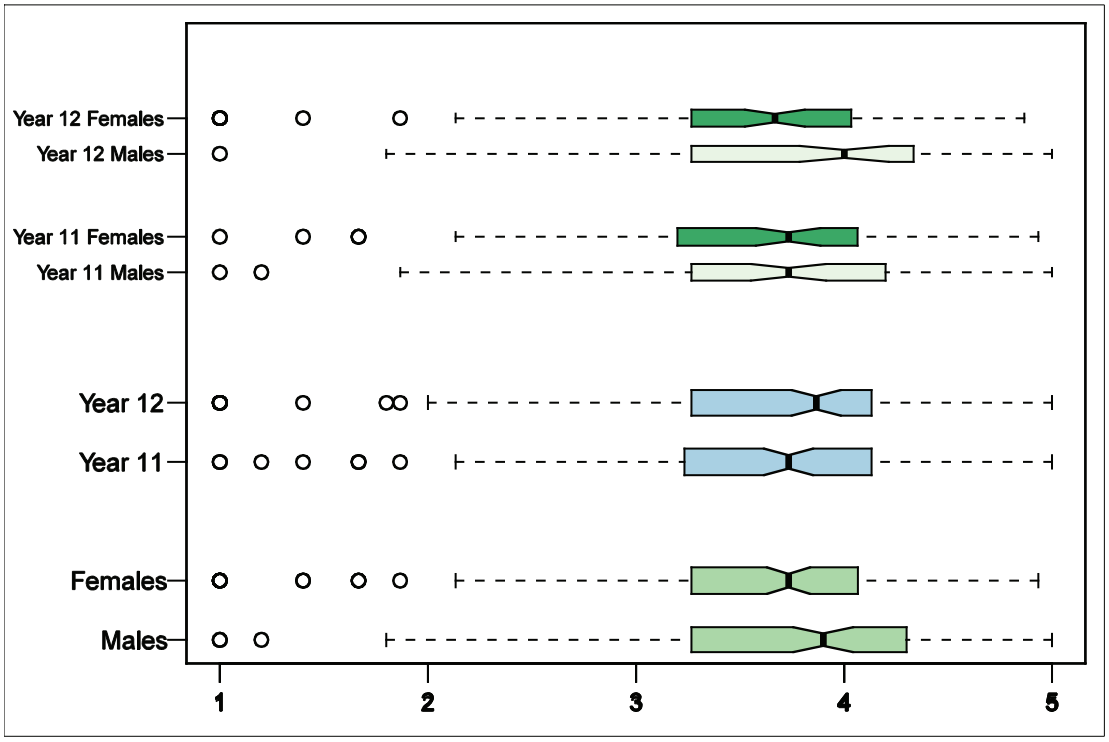
Items that make up this factor	Agree/strongly agree % 2010 (*n* = 276)
I was able to overcome challenges during my project	76
My mentor supported me to follow my passions	71
My mentor was passionate about teaching and learning in impact projects	71
My mentor regularly met me to provide useful feedback so I could keep progressing my work	71
My mentor helped me/my group overcome problems and find solutions to reach our goals	71
My project offered me a good level of challenge	69
I knew what was expected of me and felt confident how to go about carrying out a project	69
I cared about my project and it was worthwhile for me	68
I learned skills that will help me be successful when I leave school	67
My presentation skills and confidence presenting have improved	63
I looked forward to my impact project	62
I worked on my project in my own time	62
I was supported to identify opportunities in my project to deepen my specialist subject understanding	59
My project has helped me get a better idea of what pathways or careers I am interested in	56
The success of my project depended on me working with my community	55

Differences in student views

Just under half the students responding at the end of 2010 had by then experienced two years of impact projects, including taking part in the early trial and error adjustments outlined in the qualitative report (Hipkins, 2011). The younger student group had come into the school one year on and thus begun with the refined impact pedagogy right from the start.

The similar length of the thicker blue boxes in the middle of the next figure shows that the overall spread of responses for the *Impact Project* factor is very similar. The skew to the right indicates the overall positive pattern of responses and the further skew in the position of the notch for Year 12 indicates the somewhat higher median response from these students. Thus, notwithstanding the ups and downs of the first year, we can conclude that the Year 12 students were slightly more positive than the Year 11 group at the end of 2010.

Figure 5 **Student responses to *Impact Factor* items**

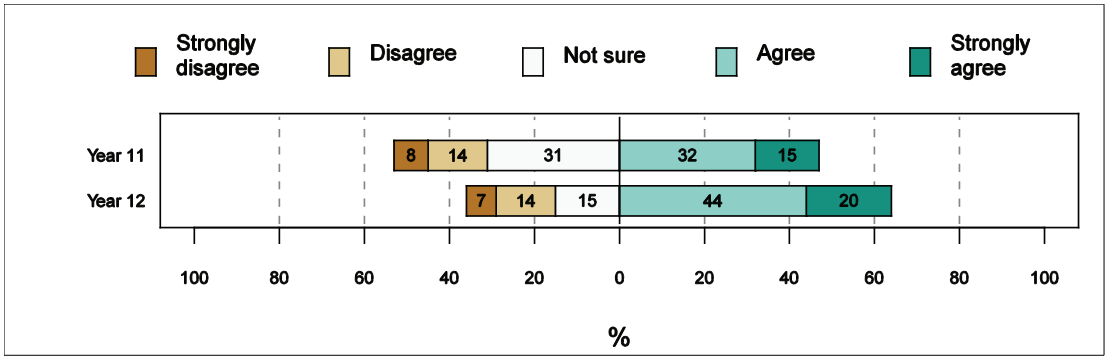


A trend is also visually apparent, if not statistically significant, when we consider gender. The bottom two bars in Figure 5 show only a small amount of overlap between the notches, indicating a clear trend that male students are more likely to be strongly positive. Finally, the top four bars compare gender by year level. Here we see a clear trend for Year 12 males to be the most likely of all four groups to be strongly positive about impact projects.

Figures 6–8 show the overall response patterns for those individual items where we found statistically significant differences using the Chi Square test ($p < 0.05$). These figures add new insights the overall picture.

First up, Figure 6 shows clear Year 11/12 differences for the item "my project helped me get a better idea of what pathways or careers I am interested in". The shift from greater uncertainty (Year 11) to agreement (Year 12) is very clear. It could be that, with two years of impact projects now behind them, the Year 12 students could see the potential for making these links so much more clearly. Additionally, they are now one year closer to leaving school—it may simply be that decisions about their futures were a more cogent focus for their attention.

Figure 6 **Year-level differences for perceptions of links between impact projects and careers**



From Figure 5 we already know that males were somewhat more likely to be positive. Now in Figure 7 we can also see that, compared to the females, those males who were not positive were more likely to be uncertain than to be negative. Figure 7 also shows that the pattern is different for the item on the role played by the mentor in helping students overcome problems: for this one item females were more likely than males to respond positively.

Figure 7 **Items that showed significant differences by gender**

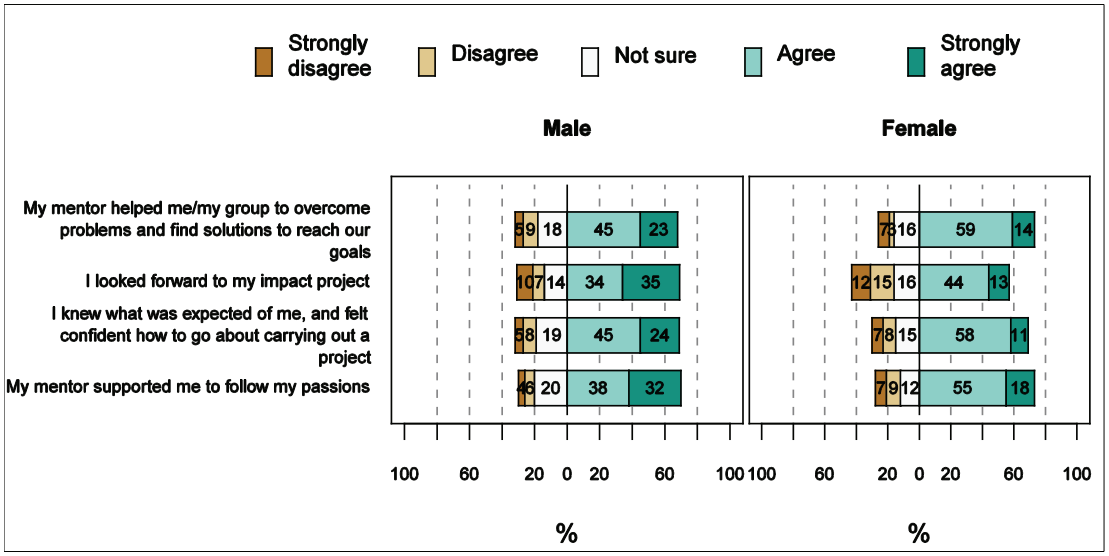
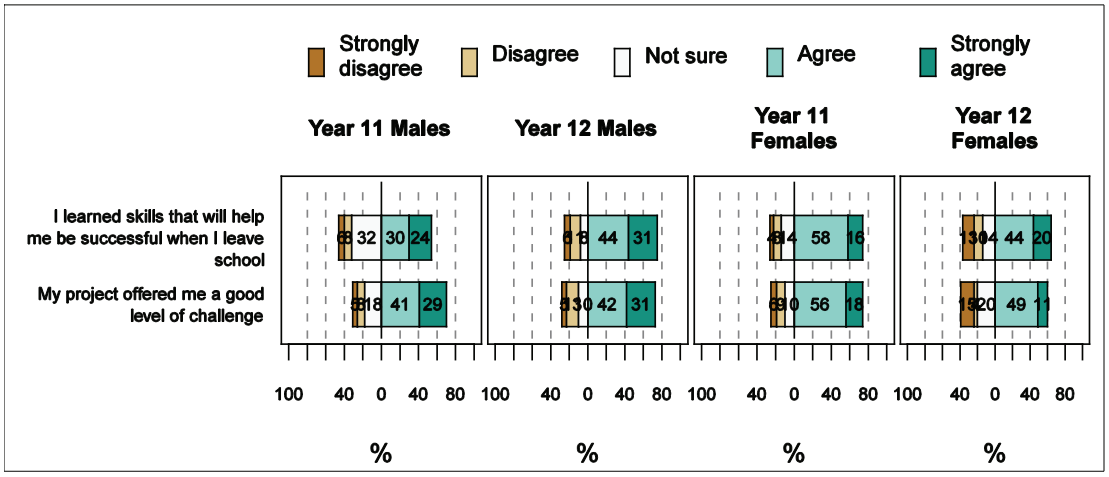


Figure 8 adds two more items to the picture of gender differences. For these two items we found differences by gender *and* year level and the trends run in opposite directions. Whereas male students were less likely to be uncertain and more positive in Year 12, females were more likely to be positive in Year 11 and at least for the second of the two items, more of them were uncertain in Year 12.

Figure 8 **Items that showed significant differences by gender and year level**



What do the differences mean?

The overall picture that emerges from this analysis runs counter to some claims that have been made about boys' learning. For example: that they prefer tight structure with rapid changes of activities; that short bursts of work suit them better than extended episodes of learning where they need to be more self-motivated; and that setting up competitive elements to their learning will help them find purpose where otherwise they might be inclined to disengage. There are some indicators here of the opposite of these arguments:

- Impact projects are extended episodes of learning yet the males were, overall, somewhat more positive than the females.
- The male students were more likely to look forward to their projects, and despite the self-directed nature of these, were also more likely to say they knew what was expected of them.
- The Year 12 males were, overall, more likely to see connections between impact projects and learning for life beyond school, a sense of purpose that arguably had little to do with direct competition with other students.

It would be interesting to follow up on these indications of differences, perhaps with some student interviews that add more detailed insights to the overall trends.

4. Using tutorial time to build connections

The student surveys in both 2009 and 2010 included a number of items that probed students' perceptions of their experiences in tutorial time. Some of these items specifically addressed the quality of the relationships students had been able to build and others probed the relative success of tutorial time in meeting the various goals outlined in the accompanying report (Hipkins, 2011).

These items formed a factor with an alpha value of .88. Table 4 lists the items in ranked order of agreement. Grey shaded items show statistically significant shifts between 2009 and 2010. In every case, the level of overall agreement is higher in 2010 than in 2009 and this trend is also apparent for most other items in the factor. Some of these other items appear to show bigger shifts, but the measure of significance also takes account of overall spread (for example, differences in distribution of responses between agree/strongly agree and numbers who are uncertain) which this table does not show. Exceptions to the overall pattern of increased support in 2010 are accessing advice about career pathways and building a better understanding of NCEA.

Table 4 ***Tutorial Support*** **factor (α = .88)**

Items that make up this factor	Agree/strongly agree %	
	2010 (*n* = 276)	2009 (*n* = 162)
I feel I have a good relationship with my tutor	82	72
I feel that my tutor understands my learning needs	75	66
Tutorials help me understand NCEA better	67	69
Tutorials give me an opportunity to reflect on my learning	65	60
I feel that I am a valued member of my tutor group	63	57
Tutorials help me set learning goals and work towards achieving them	63	56
Tutorials help me to achieve in my specialist subjects	59	53
Tutorials help me build my skills as a learner	57	44
Tutorials (and learning dialogues) help keep my family involved in my learning	47	40
Tutorials help me learn about careers and pathways	47	60
Teachers connect my learning to real life	49	47

The top-ranking items in Table 4 are those that relate to the success of using tutorial time to build a relationship with one adult (the tutor). This is clearly a highly valued and successful role

for tutorials in the school. Use of the time to build what might be loosely grouped as *learning-to-learn capabilities* (goal setting and reflection on progress, strategic and proactive assessment planning, active contribution to group learning) was seen as a successful outcome of tutorial time by around two-thirds of the students. Those outcomes related to *making connections* across the various components of an overall curriculum were the lowest ranked, although around half the students agreed that the tutorials did these things.

Figure 9 shows that for the three items where there was a significant difference between 2009 and 2010, Year 12 students were more likely than Year 11 students to *strongly* agree and fewer of them were unsure. Their opinions about their relationship with their tutor appeared to have consolidated at a strongly positive position.

Figure 9 **Distribution of responses to individual items with significant differences**

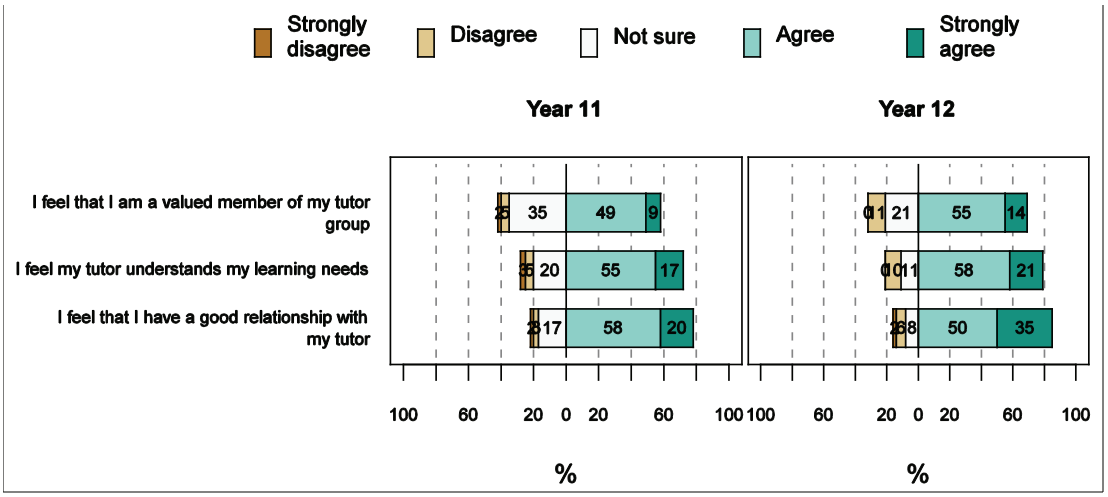


Figure 10 shows that this difference is not likely to be cohort related—that is, to be the result of the Year 12 students in 2010 actually having already been more positive in Year 11 in 2009. If anything, it points to the opposite argument. There is a very slight positive skew for the 2010 Year 11 cohort compared to their counterparts in 2009. It thus seems that Year 11 students in both 2009 and 2010 had in fact formed very similar views about the use of tutorial time by the end of their first year at the school.

Figure 10 ***Tutorial Support*: do we see cohort differences?**

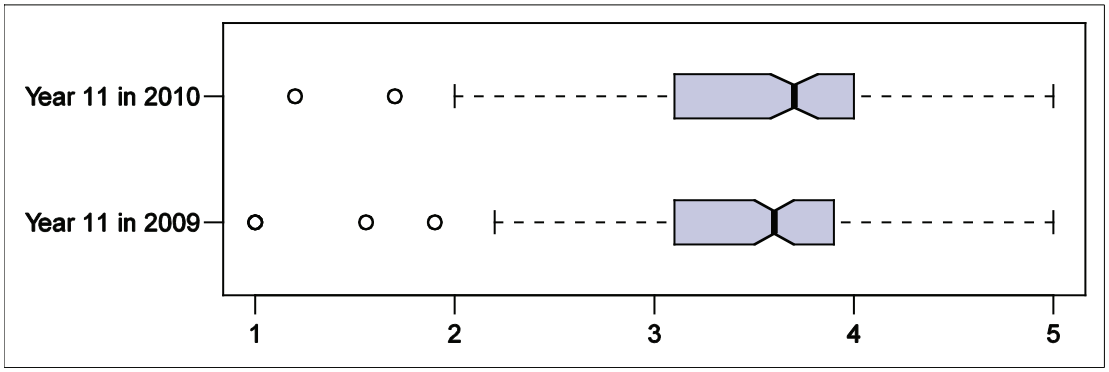
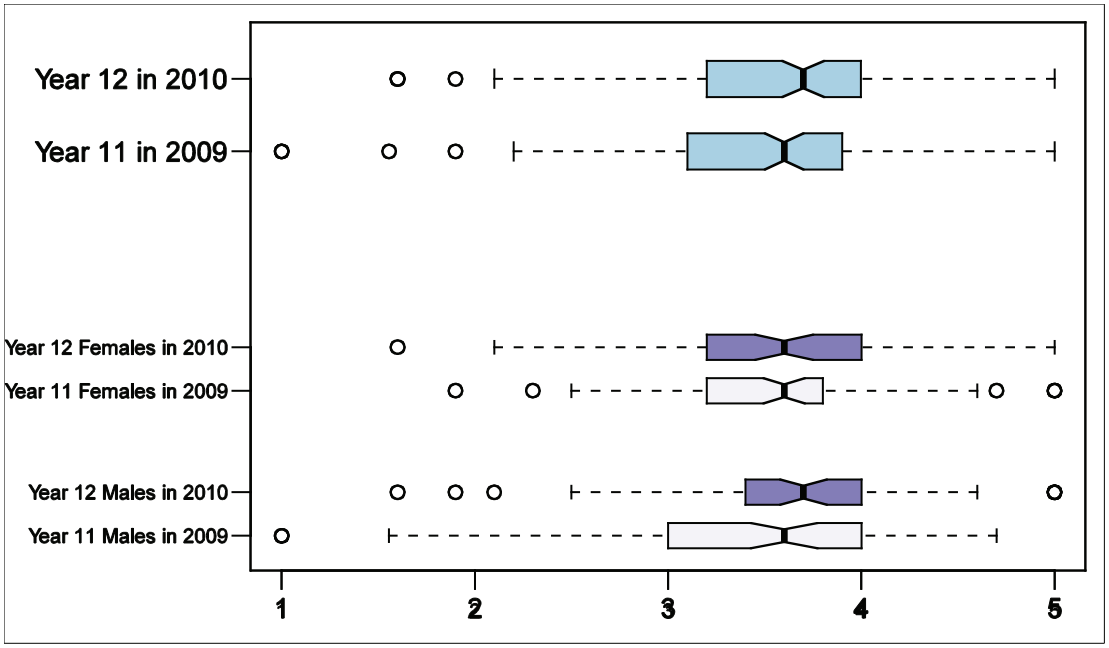


Figure 11 below confirms that students' views of the support they received in tutorials did undergo a positive shift in Year 12, compared to when these students were in Year 11.

Figure 11 ***Tutorial Support* responses of foundation cohort**



It is particularly interesting that the views of the male students became less diverse. Their 2010 responses are bunched more towards the positive end of the continuum compared to their 2009 responses. By contrast, the views of the female students became somewhat more spread in 2010, although again we see a shift towards the positive end of the continuum of possible responses.

The focus group conversations with the students in 2009 gave some indications that these gender differences were related to some girls being more willing to talk about learning issues and also to

get more worked up about these, especially the issue of problems in working with friends. They also agreed that "the guys don't talk much—they just get on with the work" (Hipkins, 2011).

It is possible that greater trust between members of a tutorial group would be built up over the course of the two years and that this is one influence on the positive shift in 2010. We cannot tell from the survey data.

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