NZCER evaluation of the Regional Education for Enterprise (E4E) Clusters:

Report on student survey data from Term 4, 2007

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Introduction

In term 4 2007, NZCER sent out survey packs to schools involved in the four E4E regional clusters. Each pack included up to forty surveys for students who have been involved in a class or extra-curricular project or unit of work which has involved an Education for Enterprise approach. This report provides a summary of the responses we received from students. For further information about the evaluation of the Regional E4E clusters initiative, please refer to the interim report available at: www.nzcer.org.nz/pdfs/16246.pdf.

Please note that this student survey data does not appear in the interim report, as the report was produced before the surveys were returned and analysed. This summary of student data provides an additional stage of feedback for schools and clusters involved in E4E. Further reporting will occur during 2008, and a final report will be available in 2009.

Survey returns

Table 1 below shows the number of student surveys received from schools in each of the four clusters. Altogether 506 student surveys were received from across 22 schools. The number of student surveys returned per school ranged from 1 to 56.

Table 1: Total number of student surveys returned at the end of 2007

Cluster	Number of students	Number of schools
Auckland Cluster	82	3
Nelson Cluster	137	5
Northland Cluster	134	7
West Coast Cluster	153	7
Total	506	22

Interpreting the graphs in this report

The information is based on two types of responses from students. They were asked to give their opinions as ratings of sets of items on Likert-type scales (such as "strongly agree" to "strongly disagree", or "got worse" to "got a lot better") and they were also asked to write comments about what had helped them to improve and about E4E in general. These comments have been coded (grouped into broad categories) and the percentage of students giving each response is presented in tables.

Which students responded to the E4E survey?

Almost three quarters of the overall student sample were at the junior secondary level, either in Year 9 (35 percent) or Year 10 (38 percent). The youngest students were in Year 6, and the oldest in Year 13. The predominance of secondary students in the survey is consistent with the nature of the schools involved in the clusters; most are secondary schools, although there are a few area schools and intermediate schools. The large number

of junior secondary students in the sample may reflect the timing of the survey; late in term 4, it is possible that senior secondary students are less available to complete surveys due to their senior assessment demands. On the other hand, it may be an indication that more E4E activities are occurring for students in these year levels in the four regional clusters.

Table 2: Year level of students

Year level	Number of students (all schools)
6	3
7	24
8	22
9	196
10	185
11	17
12	38
13	21
Total	506

The context for students' E4E experiences

More than three-quarters of the students (77 percent) said their E4E project was part of one of their normal classes. Fewer students (13 percent) said it was part of an extra-curricular activity or special extension class, or some kind of "other" context (9 percent).

About a third of students did not specify which kind of class their E4E activities occurred in. However, from those students who did specify, we can see that E4E activities were being experienced in a wide range of subject areas and class contexts (Table 3). The most frequent category of class in which the E4E was occurring was design or technology (13 percent of responses) — this category included a variety of different classes including multimedia design, food technology, design technology, and textile design. Other class contexts for E4E included enterprise studies, business-related studies, and a variety of other subjects from across the curriculum including English, science, art, mathematics, and social studies. Some primary and intermediate students experienced E4E as part of their general class learning. A few students named more than one context, so the percentages in Table 3 sum to more than 100%.

Table 3: Class contexts for students' E4E experiences

Context specified	% students (all schools)
Drama	3
English	5
Science	3
Business studies, economic or accounting	7
Design or technology (including multimedia design, textile design, food technology)	13
Social studies	6
Information management	5
Enterprise	7
Homeroom or form class	6
Did not specify, or extracurricular or extension activity	36
Other	13

The nature of the E4E projects

We asked students to describe in their own words what their E4E project involved. Naturally, the specific details of each E4E project varied considerably; however it was possible to categorise the most common types of projects as shown in Table 4 (bearing in mind that there was a degree of overlap and blurring between some of these categories).

Table 4: Students' descriptions of what the E4E project involved

What the E4E project involved	% students (all schools)
Designing a product, planning an event, or delivering a service for a client or purpose outside the school	25
Designing a product, planning an event, or delivering a service for clients within the school, or as a service to the school	24
Making and/or selling a product not for a specific client	21
Researching and solving a school or community or local problem	18
Authentic learning linked to the "real world"	6
Making a movie/documentary/short film	5
Making or performing a play	4
Other	8

Approximately half of the students' E4E experiences involved designing a product, planning or promoting an event, or delivering a service for a specific client or purpose. In about half of these cases the client or purpose for the students' activities appeared to be within the school itself, for example:

- Designing promotional materials, a menu, and a schedule for the school's 50 year reunion

- Designing strategies and materials to promote healthy eating in the school

- Creating signage and painting the school wharenui as a response to a need identified by the students.

In other cases, the client or beneficiary of students' E4E activities appeared to be a person or group from outside the school, for example:

- Designing Christmas cards for the regional economic development agency (EDA)

- Creating a picture book to help children in an Early Learning Centre to learn about Māori vowels

- Teaching older people technology skills — for example, how to send text messages

- Researching information about local towns and sites to develop content for a district council's website.

Just over 20 percent of the students described an E4E activity in which they designed and sold a product or delivered a service without a clearly specified client or purpose at the outset. For example:

- Designing, making, and selling a product at a school "market day"

- Making biofuel out of chip oil, and using this to run the school tractor

- Creating a product or event to raise money for school activity (a school camp, or a pet day).

Another significant type of E4E activity (around 18 percent) involved researching and developing solutions for a school, or local community problem. For example:

- Investigating ways to reduce traffic speeds on the roads outside the school

- Organising rubbish clean-up programmes

- Researching and presenting a submission to the local council to fence off and replant native trees around a stream of degraded water quality

- Researching public views and opinions about the local town centre and ways it could be improved for the community

Other student descriptions of E4E activities included:

- "Learning linked to the real world"

- Making or performing a play, or researching and producing a documentary.

How students worked on their E4E projects

Three quarters of students reported working on their E4E activities in groups. Many students (69 percent) also said that people took on different roles and responsibilities or did different jobs within their groups, and that they had extended time periods to work on their projects in-depth (68 percent). It was less common for students to work outside the school, or with students from other year levels in their school (although one quarter of students did report doing this). Table 5 shows students' responses. The E4E student data can also be compared to students' responses from the 2007 "general" student survey[1], in which students were asked to indicate how often some of these ways of working happened across all their classes. The most striking difference we can see relates to students having quite a long period of time to work on one project in depth. Sixty-eight percent of the E4E students indicated that this happened in their E4E project, compared with only 38% of students who said this happened often or very often in their classes in general.

Table 5: How the students worked on their E4E projects

	% E4E students (all schools)	% in Term 2 (all schools)
We worked in groups with other students	75	60
People took different roles/did different jobs	69	61
We had quite a long period of time to work on one project in depth	68	38
We got to decide how we used our time when we were working on the project	64	–
We worked in different spaces in the school	64	–
We used skills from more than one curriculum area	61	54
We did work on the project outside class time/after school hours	44	–
We spent some of our time working outside the school	42	–
We worked with students from other year levels in our school	25	–

Table 6 shows which people were involved with the students' E4E activities, and how they were involved. Perhaps not surprisingly, teachers were the most common source of advice and feedback for students. Teachers were also the most frequent person to whom students presented their ideas. Over half the students also got help or advice, or presented their ideas to other students in the class or project. It was less common for students to get advice or feedback from, or present their ideas to people in business/community; however,

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[1]The general Teaching and Learning survey was completed by 1682 students from 26 schools in the E4E clusters mid-way through 2007. This survey was designed to explore what students thought about school and the ways they learn at an early stage in the evaluation. The survey was about "whole-school" practices, i.e., learning opportunities aligned with key competencies, 21st century learning ideas, E4E principles, etc., not just E4E activities and/or enterprising learning experiences. This wide focus was designed to suit schools at the start of an E4E journey (that may not have had E4E learning opportunities in place) through to schools that could have embedded E4E across the curriculum (and may not use "enterprise" language or have had marked E4E classes).

people in the business or community were the most common recipients or beneficiaries of the students' work, with 46 percent of students saying they produced a product that would be used for a real purpose by people in the business or community.

Table 6: Who was involved in the students' E4E activities (% students, all schools)

	Our teacher	Other students in our class	People in community/ business	Other staff in our school	Other students in our school
We got help/advice info from...	78	55	40	37	16
We presented our ideas to...	62	52	45	34	25
We got feedback on our work from...	75	42	33	31	21
We produced a product for a real purpose to be used by...	30	30	46	24	22

Ownership and decision-making

Whose idea was it?

We asked students who they thought first came up with the idea for their E4E project. Just under half said it was their teacher (48 percent), while twenty two percent said it was someone from the community or a business. Only 12 percent of students said that they first came up with the idea for their E4E project themselves — and over half of these were students whose E4E activity had involved designing and manufacturing a product or service to sell at a school "market day" or to raise money for a camp or other school activity (see Table 7).

Table 7: Who first came up with the idea for your project?

	% students (all schools)
My teacher	48
People from business/community/another school	21
School leader or another staff member in the school	12
Students	11
Other	6

How decisions were made during the project

In order to gauge students' opportunities to make decisions about their E4E work we provided them with a five-step "ladder" where the bottom step described a class in which all decisions about student learning were made by the teacher, and the top step in which decisions were made by students with a small amount of help from their teacher. To give an indication of how E4E practice compared with students' other learning experiences at school, the same question was given to students in the early 2007 "general" student survey.

As Table 8 shows, there was a clear difference. In the end of 2007 E4E student surveys, almost three-quarters of students (72%) placed themselves on the upper two rungs of the ladder, compared with only 18 percent of students in the general survey. This suggests that students perceived themselves to have a great deal of involvement and direction in decision-making in the context of their E4E activities (see Table 8).

Table 8: Who first came up with the idea for your project?

| Most of the time ...	% students (all schools)	% students Term 2 (all schools)
. . . we decided how we should do our project with a small amount of help from a teacher	43	5
. . . we worked together with a teacher to decide how we should do our project	29	13
. . . a teacher asked for our ideas when he/she made decisions about how we should do our project	12	21
. . . a teacher told us how we should do our project, but he/she seemed to think about our ideas and interests first	8	30
. . . a teacher told us how to do our project, without taking our ideas and interests into account	3	23

Impacts of the project—what students learned

Students were asked to indicate how much they thought they improved on a list of "enterprising attributes" as a result of their project. Figures 1 and 2 show students' responses. Attributes most often rated as those in which students "got better" or "got a lot better" appear at the top, and those less often rated as such appear at the bottom. It is worth noting that for every single attribute, over 50 percent of students in the overall sample felt they had made some improvement as a result of their E4E activities. The most common attributes in which students felt they had improved were: listening to ideas and information from others; coming up with creative ideas; and seeing and using opportunities. At least a quarter of students felt that they had "got a lot better" at the following:

- Coming up with creative ideas

- Being confident talking to adults

- Listening to ideas and information from others

- Working with others and in teams

- Developing business knowledge; and

- Planning and organizing a project.

When asked which of the above attributes they thought they most improved in, students' answers varied considerably. The most frequently cited "most improved" attribute was

Figure 1: Improvements in students' enterprising attributes (part a)
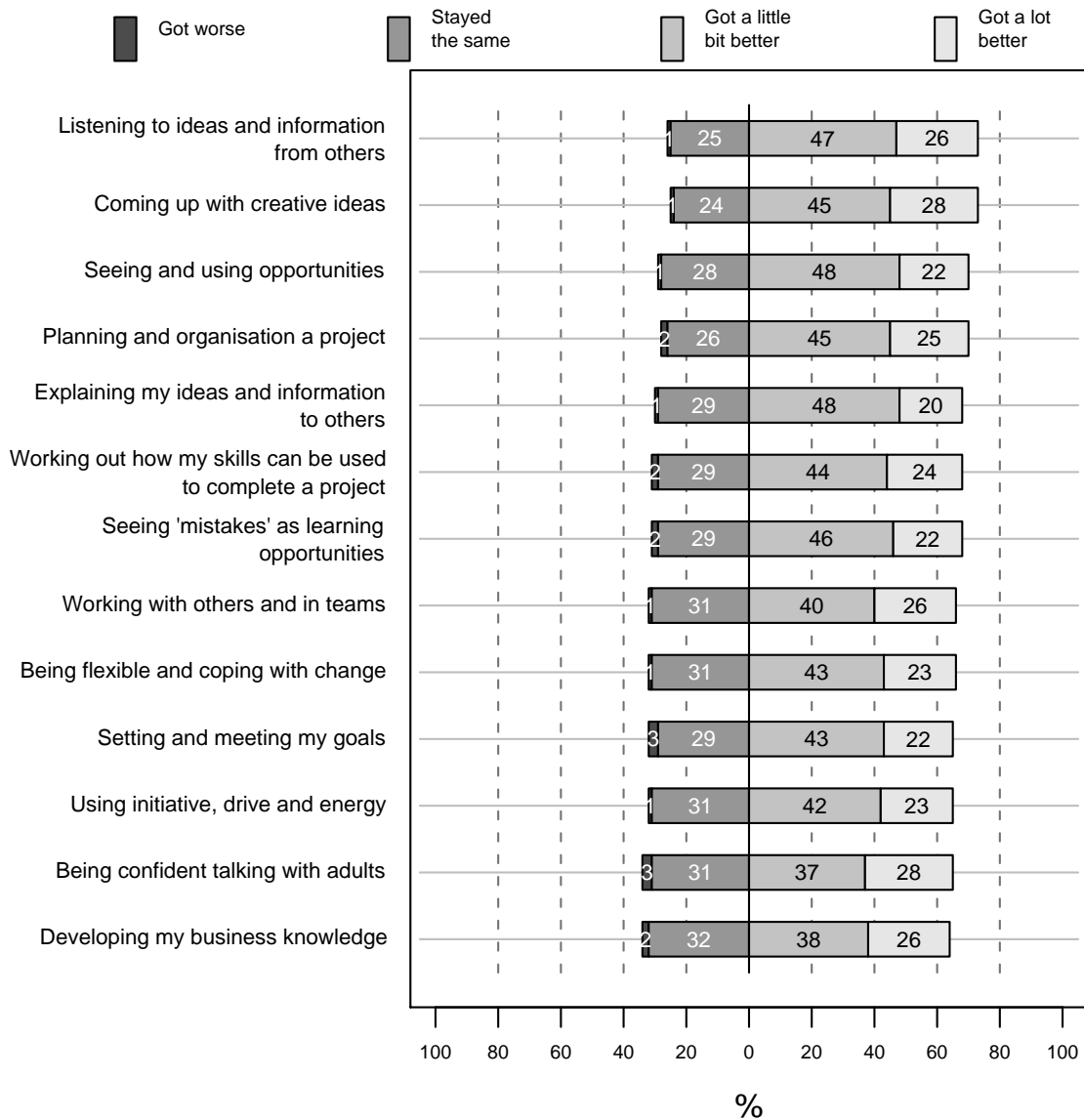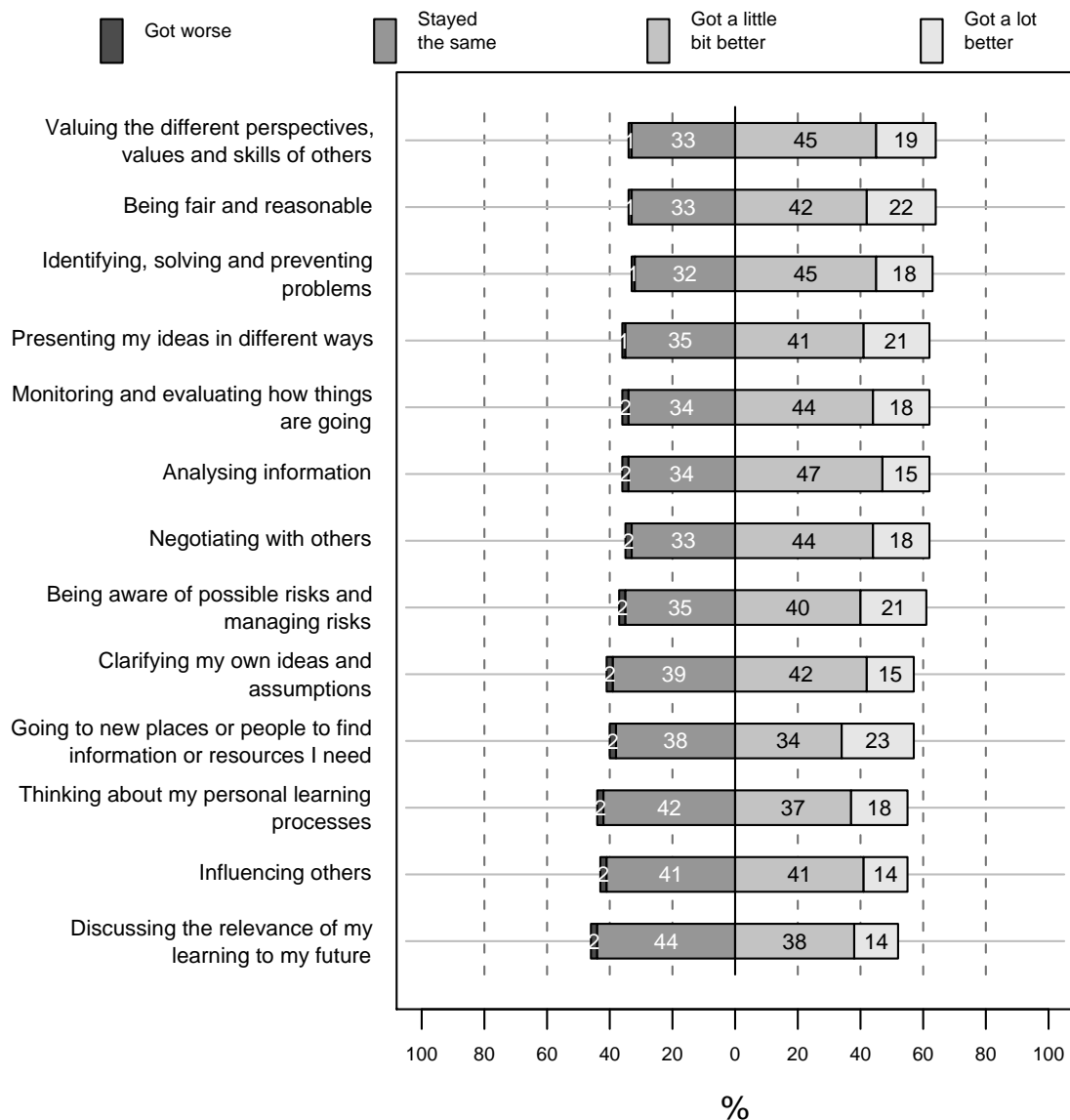
working with others and in teams (15 percent), followed by: developing my business knowledge (9 percent), coming up with creative ideas (7 percent), being confident talking to adults (7 percent), explaining my ideas and information to others or listening to others' ideas (6 percent), planning and organising a project (5 percent), setting and meeting my goals, and being flexible and coping with change (just under 5 percent each), and seeing "mistakes" as learning opportunities (4 percent).

In an open question inviting students to explain what had helped them to improve on whichever attribute they had nominated as their "most improved", the most common kind of comment (17 percent) discussed the value of exchanging ideas with other people, or seeking to understand or relate to the people they were working with. For example:

When people have ideas I wouldn't listen to them but now we listen to all the ideas and put them together as one BIG idea (student comment)

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Figure 2: Improvements in students' enterprising attributes (part b)

	Got worse	Stayed the same	Got a little bit better	Got a lot better
Valuing the different perspectives, values and skills of others	1	33	45	19
Being fair and reasonable	1	33	42	22
Identifying, solving and preventing problems	1	32	45	18
Presenting my ideas in different ways	1	35	41	21
Monitoring and evaluating how things are going	2	34	44	18
Analysing information	2	34	47	15
Negotiating with others	2	33	44	18
Being aware of possible risks and managing risks	2	35	40	21
Clarifying my own ideas and assumptions	2	39	42	15
Going to new places or people to find information or resources I need	2	38	34	23
Thinking about my personal learning processes	2	42	37	18
Influencing others	2	41	41	14
Discussing the relevance of my learning to my future	2	44	38	14

%

When all four of us sat down one period and described how we were performing. It helped us to value each other and work together. (student comment)

You had to understand them [the senior citizens students were teaching] and not get impatient because their fingers don't work fast. (student comment)

Another frequent type of comment (13 percent) described specific instances in which students had to adapt to cope with the unexpected or solve problems "along the way". For example:

At the start of the filming! Couldn't stop making mistakes so I got really angry at myself, but then my Dad said that mistakes are learning opportunities ie, to get better so now that's my motto. (student comment)

> Every product we made was better than the last. We slowly eliminated mistakes. (student comment)

> We did not recognise a budget when we first started so towards the end we counted our sales and how much we spent, we had spent more than we had earned opening the risk of losing money. (student comment)

Some students suggested that their improved skills had resulted from having to manage their own time and make their own plans, leading to a significant level of self-motivation (8 percent).

> We had to manage our time so not to get left behind so any opportunities to carry on or finish work were taken. (student comment)

Other students remarked on the confidence they gained from presenting their ideas to groups or to adults (7 percent), and learning to adapt their work in view of feedback from their client (5 percent).

> Our enterprise group had an interview with the Vodafone manager in one of their stores. I grew confidence in talking as I felt I was seeing things the same way he did and I was also a little inspired. (Student comment)

> Each time I met with my client I was always given good feedback this made me believe in my work and I knew I could do it. It gave me the motivation to do well planning and organising my project. (Student comment)

Figure 3: Doing this project made me think about
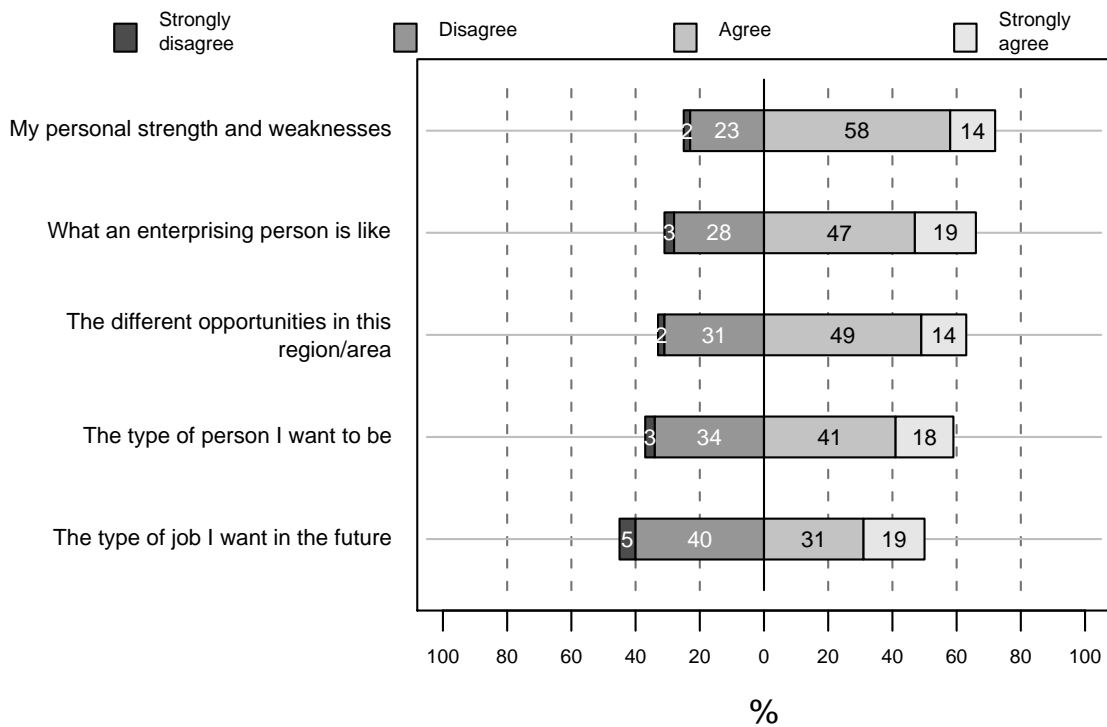
Reflection and connections

Seventy-two percent of students agreed or strongly agreed that the project led them to reflect on their own personal strengths and weaknesses. Sixty-six percent said it led them to think about what an enterprising person is like. The project was less likely to lead students to think about what kind of job they want in the future, although half of the students indicated that it had (see Figure 3).

The E4E activities appeared to have had a big impact on students' relationships and connections within the classroom. Seventy-seven percent agreed that doing the project had made them feel more connected to other students, and 65 percent felt more connected with their teacher(s). Half the students felt more connected to people in community/business, although it is worth remembering that not all student E4E projects involved students engaging with people or groups outside school (see Figure 4).

The E4E project compared with other teaching and learning experiences

Eighty-one percent of students said they found the work more interesting than their work in other classes. Overall, students rated their E4E learning experiences very positively compared with their work in other classes. For example, even the lowest-ranked comments (that the work was more relevant to my life and interests, and that I have more opportunities to think and talk about what is important to me) were agreed to by over half the students (see Figure 5).

Figure 4: Doing this project made me feel more connected to
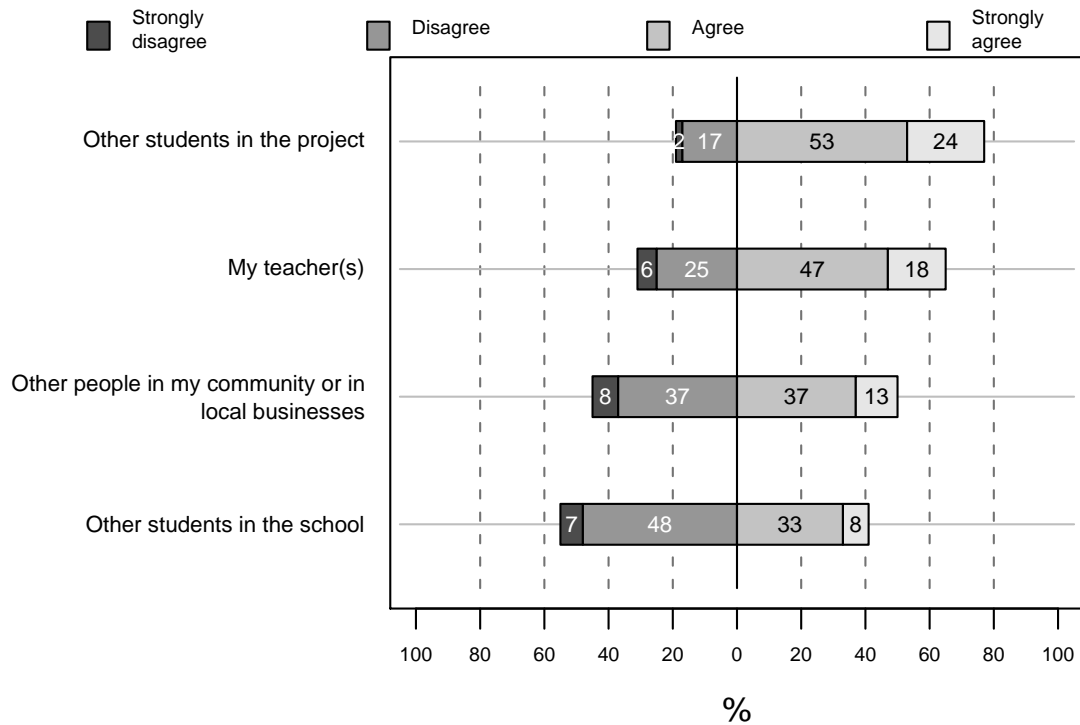
Many students indicated that their teacher's role in their E4E project was different from their other classes. Sixty-eight percent agreed that their teacher was more like a guide than a teacher, and that their teacher was more enthusiastic. Over half the students said their teacher talked less and listened more (see Figure 6).

Student's general comments about E4E

Students were invited to comment on their E4E projects and how it helped them to learn. Just under a quarter of students wrote a response, almost all of these were positive. Most commonly, students wrote something about specific skills or knowledge they'd developed through doing their E4E project, or made a general comment about the personal challenge or personal growth they felt they'd achieved. For example:

> I learned how to make a healthy snack using a limited amount of money. (Student comment)

> This project really taught me about home management and about getting everything done on time. (student comment)

> Social skills. Communicating with adults and students. Setting goals and achieving them to the best of my abilities. (student comment).

Other students said that E4E was more fun or exciting, or a better way of learning, or that it was better linked to students's interests and/or futures.
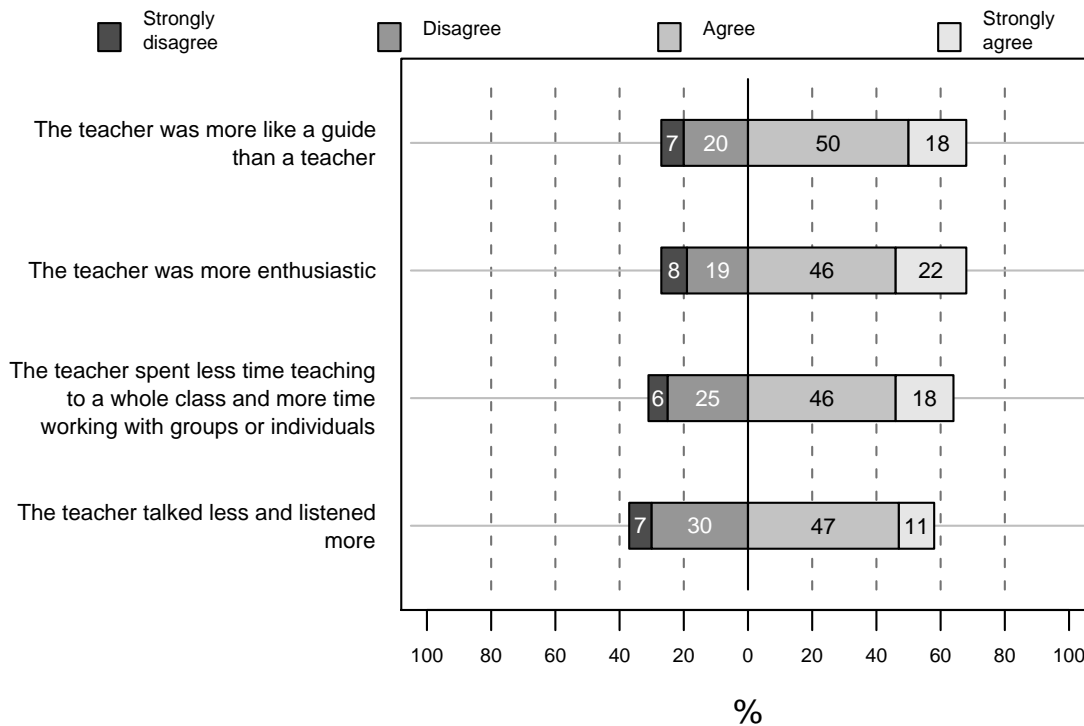
Figure 5: Comparing the E4E learning experience with other classes
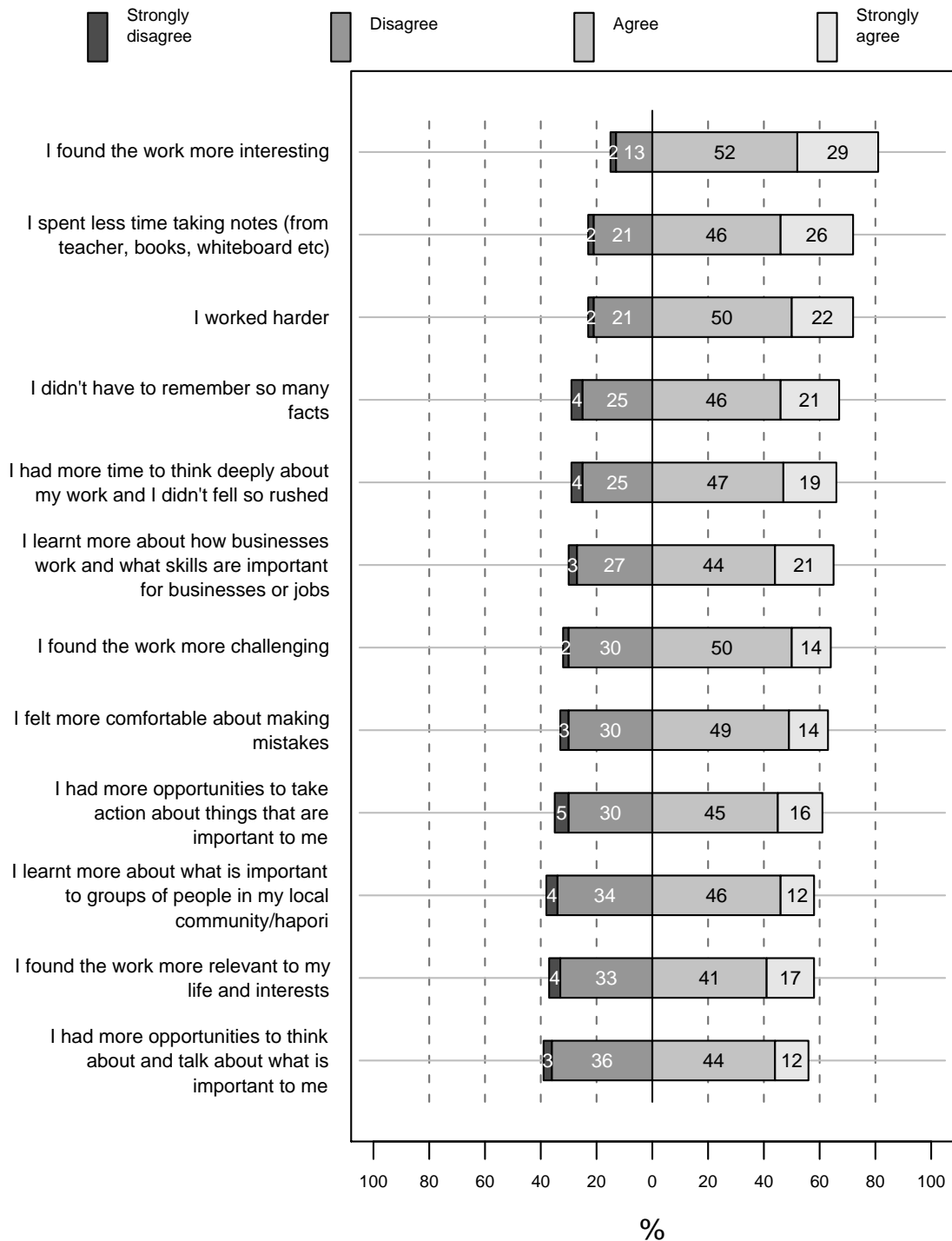
For example I enjoyed this project, it was a real life experience. It was fun. (student comment)

It wasn't something we did before unlike the treaty of Waitangi which is what we usually do every year. (student comment)

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Figure 6: Teacher's role during project (compared to other classes)

It was a good opportunity to do real life clients work and design to an industry standard. (student comment)

Only seven students out of 506—just over 1 percent of all those who returned a survey—wrote a negative or critical comment about being involved in E4E.