Evaluation of the Northland Enterprising Teachers (NET) initiative

Final report

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Executive summary

Northland Enterprising Teachers (NET) is a professional development programme designed to help secondary teachers and school leaders develop an "enterprising" approach to teaching and learning in their subjects, and across their school curriculum. The pilot period for the project was 1 April 2004–30 September 2005, and to date, at least 24 Northland schools have had some involvement with the initiative.

The NET programme is based on the concept of "education for enterprise" (E4E), which can be defined as teaching and learning which is directed towards developing in young people those skills and competencies, understandings, and attributes which will equip them to be innovative; and to identify, initiate, create, and successfully manage personal, community, business, and work opportunities, including working for themselves. Currently there are plans to adapt and expand the NET concept into other regions. Education for enterprise has been highlighted as having the potential to present integrated opportunities for students to develop the key competencies proposed in the new draft curriculum (Hipkins, 2006). It is therefore important to evaluate the impacts of NET for participating Northland schools, and to gather further evidence to identify whether education for enterprise, as practised in Northland schools, does indeed align with the directions of the new draft curriculum.

As requested by the Ministry of Education, NZCER's evaluation of the NET initiative focused on the following two key research questions. In schools that have been involved in NET:

1. What evidence is there for changes in pedagogy related to the schools' involvement in NET?
2. What evidence is there that E4E has been integrated into school planning and infrastructure?

The evaluation methodology also enabled us to investigate: the context for education for enterprise in the NET schools; staff perceptions of the impacts and effectiveness of the NET model; the views and experiences of students involved in education for enterprise in the NET schools; and staff views about the sustainability and future direction of education for enterprise in their schools. The two main data-gathering strategies were: case studies and surveys within four NET schools; and postal surveys returned by NET teachers and school leaders in nine other NET schools.

Overall, the evaluation suggests NET has been very successful in stimulating and supporting change at the school planning level in its first two years. There has been a high receptivity to the initiative amongst Northland secondary schools, and most of those involved seem to feel a strong connection between the goals and aims of education for enterprise, and their school's own values, culture, or philosophy. Most of the schools are now including education for enterprise in their policy and curriculum documents, and it is gaining a profile amongst students and the school

community. However, the schools are at various stages of development along the path towards becoming "enterprising" schools. Education for enterprise in the surveyed schools shows signs of a pattern typical to most school innovations in curriculum and pedagogy, namely: it is flourishing in some classes and subjects under the direction of enthusiastic teachers and heads of departments, but it is not yet embedded across the whole school curriculum and culture.

Although the evaluation identified only small changes in teaching practices before and after NET, some staff said that they were "already converts" to the kinds of teaching and curriculum approaches that align with education for enterprise enterprising education prior to their involvement in NET. Relative to their practice before NET, the most notable overall increases for enterprise co-ordinators were: supporting the development of students' business knowledge and skills; and students using their knowledge to create "new" ideas, products, services, or relationships within their community as part of their learning. For other teachers, two practices that showed an increase related to involving students in making decisions about learning and assessment. According to teachers, both these practices moved from occurring "sometimes" to occurring "often".

Focus group students from four NET schools were able to explain clearly both what they had learned from being involved in education for enterprise, and which aspects of the teaching and learning experience contributed to these learning outcomes. Among the things that students felt they had learned were: how to manage their time effectively; what their own personal skills, strengths, and weaknesses were; how they learned; how to work with other people, including how to work with other people's strengths and weaknesses and manage conflict when it arose; how to plan their time and use of resources; how to communicate with a wide range of different people, including businesspeople and community members; how to deal with underperforming team members; and how things work in the "real world". Students also talked about getting to know their teachers in a different way, learning to respect different people, and how to gain the respect of other people for their knowledge and ideas. The features of education for enterprise most valued by students were: that they were leading their own projects (and their own learning); that they were doing "practical hands-on" activities with a relationship to the "real world"; and that they were able to, and had reasons to, interact with a range of people from outside the school, including businesspeople and community members. Students also felt that this kind of learning took a significant amount of time, and that having sustained time on a project was important.

The case study examples suggest that there is willingness in the NET schools to generate learning opportunities for students that do align with the principles of education for enterprise and are "authentic" opportunities for students to develop the key competencies. However, almost half the staff we surveyed agreed that education for enterprise was harder to plan for than "conventional" teaching and learning approaches, and enterprise co-ordinators and principals identified the time required to plan for education for enterprise approaches, and the demands of assessment, as two significant challenges for education for enterprise at their schools.

Many survey and interview respondents believed that the next step for their schools was to further embed education for enterprise by cultivating greater involvement of teachers across the whole curriculum. To achieve this, it will be necessary for staff to develop a "shared vision" for education for enterprise in their school. There is also a need for coherent messages to be given at the national level to ensure that attempts to transform the ecology of schooling towards practices and systems that promote a lifelong learning orientation—for example, education for enterprise—are deliberate and planned for in schools.

1. Introduction

About Northland Enterprising Teachers

Northland Enterprising Teachers (NET) is a professional development programme designed to upskill teachers and help them develop an "enterprising" approach to teaching and learning in their subjects, and across their school. Currently, the NET initiative is aimed at Northland secondary schools. NET builds on the success of programmes such as the Young Enterprise Scheme (YES), available nationwide, and the Young Entrepreneur Programme (YEP), which is specific to the Northland region. These programmes encourage students to develop enterprising skills, attributes, and relevant business knowledge and experience. Like YEP, NET is administered by Enterprise Northland and co-funded by New Zealand Trade and Enterprise (NZTE) (via a grant from the Enterprise Cultural and Skills Activity Fund), and Northland companies Top Energy and Northpower.

Enterprise Northland employs a regional NET co-ordinator who liaises with schools, community groups/businesses, the Ministry of Education, NZTE, and other groups, and helps provide a cohesive regional approach to education for enterprise. The pilot period for the project was 1 April 2004–30 September 2005, and to date, at least 24 Northland schools have had some involvement with the initiative.

NET aims to involve teachers and students from across the school curriculum, not just those in economics, commerce, and business subjects. This is a significant feature of the programme, and reflects the educational values and concepts that underpinned the inception of NET. Among these is a strong emphasis on schools' role in helping to develop enterprising individuals and communities. The NET programme is based on the concept of "education for enterprise" (E4E), which can be defined as teaching and learning which is directed towards developing in young people those skills and competencies, understandings, and attributes which will equip them to be innovative; and to identify, initiate, create, and successfully manage personal, community, business, and work opportunities, including working for themselves. Education for enterprise foregrounds the development of *people*, rather than focusing on specific curriculum and assessment systems and structures. It provides students with role models and practical applications of their learning, realistic concepts and contexts for learning, and is fundamentally about engaging students at all levels and in all curriculum areas (Leadley, 2005a).

Key goals of NET

Key goals of the NET project are to:

- provide an enterprising approach to what schools are already doing, and aim to embed enterprise into the vision and culture of the school;
- encourage all teachers to deliver their curriculum content in ways that enable their students to become enterprising people; and
- empower schools to accept and develop the opportunities to make the school curriculum relevant to the social and business community of which the school is an integral part.

This involves an approach to learning and management of the school; and the development of school/community partnerships and projects that promote relevancy of the learning experience. The E4E "learning approach" involves:

- focusing on the "end product", i.e. the development of students with the skills and attributes of enterprising people, *before* considering the programmes, activities, and structures within the school;
- encouraging teaching processes that assist students to develop the skills and attributes of enterprising people;
- involving students in an holistic approach to learning—at all levels and in all components of the total curriculum;
- building the capacity of students to take responsibility for their own actions to the benefit of themselves and the community; and
- embedding enterprise in the vision and culture of the school, and displaying it actively in the management, vision, and activities of all areas of school life.

The community partnership approach involves:

- developing students' awareness of how their local community, businesses, and industry work, and how they can be involved in enriching their community;
- using enterprise projects to deliver the curriculum, not as an "add-on";
- providing students with realistic and practical applications of their learning;
- strengthening community support and understanding for the school; and
- developing relationships that result in ongoing mentoring, and opportunities for further involvement in community activities and work opportunities.

Practical strategies of NET

Schools seeking to put NET into practice are advised to take the following steps:

- ensure the support of senior management (a requirement from NET);
- establish an "enterprise co-ordinator" within the school;

- establish an "enterprise cell" comprising the principal/senior management person, the enterprise co-ordinator, enthusiastic teachers, and others;
- clarify the NET vision;
- develop a plan;
- determine assessment procedures; and
- celebrate all successes and achievements.

Management units for the enterprise co-ordinator are funded by sponsors Top Energy and Northpower.

Timeline of significant events

The first NET conference was held on 5–6 August 2004. This conference, subtitled *Casting the NET*, was designed to give a strong start to the project, and to build understanding and enthusiasm for the principles of, and possibilities for, "enterprising" the school curriculum. The conference was attended by 14 principals and 65 teachers and featured a variety of presenters including school staff, staff from Enterprise Northland, New Zealand Trade and Enterprise, Ministry of Education staff leading the Curriculum Project, and business leaders.

Three months later, on 12 November 2004, the first of two NET workshops was held. Sixty-four teachers and principals attended the workshop, subtitled *Pulling in the NET*. The workshop focused on strategies for cultivating leadership within schools to develop an enterprising culture.

By mid-2005, the NET project had helped Northland to gain considerable reputation as a leading New Zealand region in regards to the development of education for enterprise. As a result, the NET director had been asked to be involved in promoting the concepts in a range of other New Zealand regions. It was felt that this growing national profile provided additional impetus to enterprise education in Northland, and was a significant factor in the continuation of corporate sponsorship in this region and the increasing willingness of schools to carry some of the financial load to ensure sustainability (Leadley, 2005b). At this stage, Enterprise Northland proposed developing a partnership with the Ministry of Education in which the NET project would become a significant factor in the professional development and training of teachers, initially in Northland, but for the practices and concepts of the NET to then become nationally available. To this end, a national strategic planning workshop was held on 18 August 2005 and was attended by staff from the Ministry of Education and New Zealand Trade and Enterprise, among others. The key result of the workshop was to form a task force to carry through recommendations from the various workshops, including the instigation of a review of the NET programme (Kirkley, 2005). The second and final NET workshop, *Going forward*, was held the next day (19 August 2005) and was attended by principals and staff from NET schools, as well as a range of other interested people.

In addition to the conferences and workshops, the regional NET co-ordinator and the NET director have been available to schools to provide support and advice as requested. In May 2006,

a series of after-school "cluster" meetings was organised for groups of schools in three different parts of Northland.

The regional significance of NET

NET is a home-grown Northland initiative. Its development has built on the good relationships that Enterprise Northland has developed with Northland schools through the YES and YEP programmes, as well as the reputations and enthusiasm of NET leaders. The NET director was formerly principal of a Northland secondary school for many years and a foundation President of the Secondary Principals' Association of New Zealand (SPANZ). The NET regional co-ordinator had an existing relationship with schools as regional co-ordinator of YES and YEP. Thus, as well as aligning with broader economic development goals for the region, the NET programme has also been developed by people with an understanding of the educational structures, people, and culture in Northland.

The Northland region's major industries include pastoral farming, horticulture, forestry and wood processing, and tourism. Other key sectors are floriculture, organics, and the arts.[1] Currently, the region is in an economic growth phase, attracting new investment and industry development, in part due to the attractive lifestyle choices that it presents. Northland is well known for its mild climate, culture, and history, and the beauty of its natural environment. However, it also has a recognised history of economic and social development issues, including unemployment rates higher than the national average.

Enterprise Northland is the economic development agency for the Northland region. Its mission is to promote and encourage sustainable economic development for the benefit of the people of Northland, aiming to become the country's top-performing economy of its type by 2007. Enterprise Northland works in partnership with business and industry sectors, the economic development agencies and councils of Northland's three districts, iwi, the Northland Regional Council, central government agencies and departments, and other key stakeholders in the Northland economy. Innovation, entrepreneurship, and community partnerships are thus important cornerstones for Northland's ongoing economic and social development.

The national significance of NET

In addition to its regional significance, NET also has significant potential in relation to current trends and developments in New Zealand's national curriculum. For example, there seems to be close alignment between the principles of education for enterprise, and the key competencies proposed in the draft of New Zealand's revised national curriculum. The key competencies have

[1] See www.enterprisenorthland.co.nz/northland/index.htm

been defined as the things all people need to know and be able to do in order to live meaningfully in, and contribute to, a well-functioning society (Rychen & Salganik, 2003). They are intended to replace the "essential skills" of the current curriculum framework, integrating knowledge, skills, attitudes, and values (Hipkins, 2006). The key competencies in the draft New Zealand Curriculum are:

- thinking;
- using language, symbols, and texts;
- managing self;
- relating to others; and
- participating and contributing.

It has been argued that students need opportunities to *actively* develop these competencies, and that the most meaningful and integrated way for this to occur is through students' engagement in *authentic* tasks. Education for enterprise has been highlighted as one example of a teaching and learning approach which could provide an integrated approach to the development of the key competencies (Hipkins, 2006). Currently there are plans to adapt, trial, and expand the NET concept, taking it into other regions. It is therefore important to gather further evidence to identify whether education for enterprise, as practised in Northland schools, does indeed align with the directions of the new draft curriculum.

Structure of this report

Section 2 explains the evaluation methodology. The six sections that follow discuss the research findings. Section 3 describes the context for education for enterprise in the NET schools, including prior involvement in education for enterprise, the perceived relevance of education for enterprise to the schools' values, cultures, and philosophies, and the organisational structures which support education for enterprise in these schools. Section 4 outlines the schools' current education for enterprise activities, including which students and which areas of the school curriculum are involved. Section 5 investigates the profile of education for enterprise in the schools, including: how well it is understood and supported by staff, students, and the community; how visible it is in everyday school life; and how it features in school documentation and curriculum planning. Section 6 evaluates the impacts of NET according to staff: how effective they felt the NET model has been, and in particular, how staff perceive it to have impacted on their own curriculum and pedagogical practices. Section 7 looks at *students'* experiences of education for enterprise in four case study schools. It considers what students felt they have learned from being involved in education for enterprise, and which aspects of the learning experience they thought were the most important in supporting these learning outcomes. Section 8 identifies challenges and sustainability issues for education for enterprise in the NET schools, visions for its future development, and suggested changes or improvements to NET. Section 9 discusses and draws conclusions from the evaluation.

2. The evaluation methodology

As requested by the Ministry of Education, NZCER's evaluation of the NET initiative focused on the following two key research questions.

In schools that have been involved in NET:

1. What evidence is there for changes in pedagogy related to the schools' involvement in NET?
2. What evidence is there that E4E has been integrated into school planning and infrastructure?

In addition, our methodology enabled us to investigate other relevant areas, including: the context for education for enterprise in the NET schools; staff perceptions of the impacts and effectiveness of the NET model; the views and experiences of students involved in education for enterprise at the NET schools; and staff views about the sustainability and future direction of education for enterprise in their schools. We employed a mixed-method research design to collect a combination of qualitative and quantitative data from a range of schools that have been involved in NET. Enterprise Northland supplied a database of the names and contact details of 24 NET schools. Of these, 18 schools were directly involved in NET. The remaining six schools had had preliminary discussions with Enterprise Northland, but were not yet fully involved in the initiative. For this reason, we did not include the latter six schools in the data collection.

The two main data-gathering strategies were: case studies and surveys within four NET schools; and postal surveys sent to NET teachers/school leaders in the remaining 14 NET schools. All the data for the evaluation were collected during April/May 2006.

Case studies

During the week of 15–19 May, I visited four NET schools for one day each. The following data-gathering methods were used during each case study visit:

- a structured interview with the principal;
- a structured interview with the enterprise co-ordinator;
- collection of any school documentation which might include reference to E4E (school policy documents, planning and reporting frameworks, curriculum plans, etc.);
- (where possible) a structured interview with another teacher involved in E4E; and
- focus group interviews with a sample of students involved in E4E.

The principal, enterprise co-ordinator, and other teachers involved in education for enterprise were also asked to complete survey forms identical to those used to collect data from schools involved in the postal survey (see below).[2]

Selection of the case study schools

The case studies aimed to provide a contextualised picture of how education for enterprise is operating in a selection of schools, including how education for enterprise fits into school planning and infrastructure, and how NET has impacted on pedagogy (in the eyes of teachers and students). We wanted to case study a range of different kinds of school, including a spread of deciles, locations (urban and rural), and demographic profiles. Practical issues of distance and travel cost were also taken into account when selecting the case study sample.

After consulting Ministry of Education school profile data[3], we identified six potential case study schools from the list of NET schools, and consulted the regional NET co-ordinator for any additional background information that would indicate whether these schools would be suitable for case study. This was done with the agreement that all background information provided by the NET co-ordinator would be treated as confidential. The NET co-ordinator felt that the suggested schools would provide a range of experiences and degrees of success in developing education for enterprise within the school.

The principals of these six schools were contacted by phone or email and then sent a letter explaining the research, and asking for written permission to involve their school in the case study aspect of the research. Two schools declined the invitation, explaining that their schools were undergoing transitional periods in terms of their education for enterprise, and did not feel ready to have a researcher visiting at that particular time. However, both schools agreed to contribute to the research via the postal surveys (see below). The remaining four schools agreed to be case studied. Table 1 provides a brief profile of the four case study schools.

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[2] We also developed a student survey form to use in the case study schools. However, the student surveys proved to be a somewhat troublesome aspect of the data collection methodology. Our initial intention was to clarify with the enterprise co-ordinators which students at their school were involved in education for enterprise *prior* to the case study visits, so that an appropriate number of student surveys could be sent to the school in advance. This proved to be more difficult than expected, and in our conversations with enterprise co-ordinators prior to the visits it was more important to focus on planning the case study interviews and teacher surveys. Bundles of student surveys were left at three case study schools for the enterprise co-ordinator to distribute to students if this was manageable. In one school, surveys were completed but were mislaid within the school and did not reach NZCER in time for the research report. Surveys were not completed in two other schools due to a lack of time, and in the third school, only two students were involved in education for enterprise in the secondary school. These students were interviewed rather than surveyed.

[3] This information includes school location and contact details, school type, decile rating, total roll size, numbers of students per age cohort, and student ethnicities.

Table 1 **Profile of the four case study schools**

School type	Location	Decile	Total roll	% Māori students
Secondary (Years 9–15)	Main urban area	5	<1200	32
Secondary (Years 7–15)	Rural area	5	> 500	38
Secondary (Years 7–15)	Minor urban area	8	<1200	22
Composite (Years 1–15)	Rural area	2	> 300	87

Once permission was received, the school's enterprise co-ordinator was contacted, and either they or the principal assisted with further arrangements in preparation for the case study visit. We asked this person to help us identify teachers and students in the school who could be interviewed or surveyed as part of the research.

The postal survey

Principals of the remaining NET schools were contacted by email and letter and invited to participate in the postal survey component of the research. Individual surveys were sent to the principal, enterprise co-ordinator, and teachers whom the school enterprise co-ordinator or the principal identified as being involved in education for enterprise. Each survey package included an information sheet and a consent form for the individual to complete along with their survey.

Three principals declined the invitation for their school to participate in the postal survey, citing a range of other external pressures on staff time during that term. Two principals explained that staff at their school had already contributed a great deal of time and goodwill to research in this area, and felt they could not continue to do so unless there was a direct benefit to them and their school. As one principal put it: "I must be careful that staff do not get overloaded, or to the point where they are so pressured by side issues to the real purpose of what we are doing, that they are reluctant to be involved in further initiatives." A fourth principal could not be contacted during the recruitment phase, and after leaving many email and telephone messages, too much time had elapsed to include this school in the data collection. A fifth principal agreed to take part in the survey, but despite repeated follow-up messages, no surveys were ever received from this school.

Survey returns

In total, survey data were received from 13 of the 18 schools that were invited to participate in the NET evaluation (including the four case study schools). We consider this to be a very good response rate, especially given the short overall time frame for the research, and the various pressures on staff time and energy during Term 2. While it often took many emails and telephone calls to reach principals and teachers to follow up on the progress of the surveys, most of the staff we contacted were very positive and generous in giving their time to contribute to the research. We also noted the time and thought that went into completing the surveys, with many respondents taking the opportunity to write extensive and detailed comments in response to the open-ended

questions. Some respondents even wrote additional comments on the cover or margins of their survey forms.

Table 2 shows the total number of surveys received from each school. We received a total of 36 surveys from school staff, including 12 principals and 11 enterprise co-ordinators. The relatively low number of responses from other teachers (13 in total[4]) was slightly disappointing. However, some schools indicated that only one or two other teachers (and in some cases, no other teachers) besides the enterprise co-ordinator were "involved" in education for enterprise to the degree that they could be asked to complete a survey. Two or three schools provided the names of 5–10 teachers involved in education for enterprise, but even in these cases, the number of responses per school was low. We attribute the low number of teacher survey returns to the competing pressures on these teachers' time. Comments from staff in the case study schools, as well as telephone and email conversations with other principals and enterprise co-ordinators, also suggested this was probably the case.

Table 2 **Total number of survey returns per school**

	Principal	Enterprise co-ordinator	Teachers
School 1 *	√	√	1
School 2 *	√	√	1
School 3 *	√	√	3
School 4 *	√	√	2
School 5	√		
School 6		√	
School 7	√	√	
School 8	√	√	
School 9	√	√	1
School 10	√	√	
School 11	√	√	3
School 12	√	√	2
School 13	√		
Totals	**12**	**11**	**13**

(asterisk* indicates a case study school)

Survey themes

The principal, enterprise co-ordinator, and teacher surveys each differed slightly, although many questions were identical across all three survey types. A copy of the principal survey is given in

[4] A 14th teacher survey was returned just before this report was finalised, too late to be included in the data analysis.

Appendix A. The enterprise co-ordinator survey was almost identical. The teacher survey was an abridged version of the principal and enterprise co-ordinator surveys. In addition, teachers and enterprise co-ordinators were asked to fill in a self-reflection sheet to indicate what impact they felt their involvement in NET has had on their teaching practice. A copy of this is given in Appendix B.

Data analysis

The analysis of the principal, enterprise co-ordinator, and teacher survey data involved two main approaches. For survey questions that sought factual information (for example, questions about whether the school had an enterprise cell, which education for enterprise subjects/programmes were present in the school, and which school documents incorporated education for enterprise), we analysed the data to acquire "per school" information. In the 10 schools which returned both principal and enterprise co-ordinator surveys, we checked to see whether their answers to these questions were consistent. Where there were differences, these have been noted in the report. In three schools, only one survey was returned (either a principal or an enterprise co-ordinator) and the data from these surveys were taken as representing their school's information.

For all questions that canvassed the respondents' personal experience, perceptions, and opinions, we tended to pool all the respondents' data together. This gave total samples (depending on the questions and who was asked) of 23 (all the principals and enterprise co-ordinators), 24 (all enterprise co-ordinators and teachers), and 36 (all respondents).

The interview data from the case study schools was reviewed and analysed for significant themes, both within each school, across case study schools, and in relation to the survey data. In the report we have chosen to integrate the survey and interview data according to themes, rather than separating the two kinds of data. Nevertheless, we have tried to retain a sense of the individual contexts of each case study school by noting particular themes, issues, and contextual circumstances that were evident in these schools.

3. The context for education for enterprise in the schools

There are 30 schools in the Northland region that teach secondary students.[5] Eighteen of these schools are already involved in NET, and six more are in discussions with Enterprise Northland. Why have Northland secondary and composite schools been so receptive to being involved in NET? Did these schools have particular characteristics that pre-disposed them towards an interest in education for enterprise? Were they already engaging in "enterprising" education, or was it a new concept for these schools? This section looks at the schools' involvement in education for enterprise prior to NET, and the perceived relevance of education for enterprise to the values, culture, or philosophy of each school. It provides a brief profile of the enterprise co-ordinators, and discusses the structure and nature of the enterprise cells in some of these schools.

Prior involvement in education for enterprise

Ten of the 13 schools, including all four case study schools, said they were involved in education for enterprise prior to becoming involved in NET. This was generally explained in terms of the schools having run YES, YEP, the Primary Enterprise Programme (PrEP), Financial Literacy Programmes (FLP), Community Problem Solving, or other similar courses or programmes for a number of years. At least one principal remarked that "we were also doing a number of enterprising activities across the curriculum [before NET] but didn't recognise them as such and there was no coordinated approach".

As well as running specific enterprise programmes, at least three of the four case study schools had begun to develop a culture and school structures that supported student enterprise prior to NET. For example, School 1 had initiated a review of its whole school curriculum some years prior. The school's self-review paralleled broader changes occurring in the New Zealand Curriculum Stocktake project, and reflected the forward-thinking attitude of the school's leaders about the need to develop a "21st century" curriculum and learning environment:

> I believe very much in the way that the new curriculum is designed, in that students in the 21st century are going to need skills and competencies, attitudes, and values. Knowledge is still important, but the emphasis has shifted the other way. When our students leave school,

[5] Fifteen of these are secondary schools, and 15 are composite schools teaching both primary and secondary students.

> we want them to have all of those attributes so whatever area they go into, those skills are transferable, and they have all the choices in the world. (Principal, School 1)

Eight staff members who'd been involved with the school's curriculum review attended the first NET conference. They quickly recognised the parallels between education for enterprise and what they were already trying to achieve:

> To be really honest, what I thought enterprise was [before the NET conference], and what I thought it was at the end of that conference, were a long way apart, which was really exciting. And as we sat through the NET conference we were thinking 'this is everything we're doing in our curriculum review. This is just absolutely perfect for where we're wanting to go and what we're wanting to do.' (Principal, School 1)

Similarly, School 2's principal talked about the school's "long history of enterprise". The school had won four national prizes in the BP Community Enterprise Challenges, and students had engaged in a wide range of other enterprising activities, for example, running a school shop at the nearby shopping centre (though this was no longer operating). Underpinning these activities was the school's longstanding philosophy of "school at the centre of the community". This philosophy promotes the idea that students should be participating in "anything that's part of the community, and building the community" (Principal, School 2). This philosophy was seen as mutually beneficial, both to students and to the community, and provided a means for the school to interact directly with, and be a resource for, the community. At the first NET conference, the principal and other staff at School 2 realised that they were already well ahead of many other schools in terms of education for enterprise:

> Other people were talking as if [what we were already doing] was a 5- or 6-year down-the-track goal [for them], so we looked at what we wanted [from the conference] and realised we just needed to focus on 'authentic learning', along with what we've already got. (Principal, School 2)

After the NET conference, the enterprise co-ordinator was given additional non-contact time to spend working with subject HoDs "to look at getting authentic learning opportunities into all their subjects, at all levels".

School 3 also had a history of being enterprising, although to some extent the school's most enterprising activities have been extra-curricular. For example, for several years groups of students have participated in programmes like Community Problem Solving and Future Problem Solving.[6] These students' projects have had enormous positive impacts for both the school and its local community, and they (or the students) have been recognised both nationally and internationally for what they have achieved. In addition, over time the school has initiated a range of other enterprising activities in various parts of the school curriculum, which may have previously been thought of as being on the "fringe" of regular school practice. The principal felt

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[6] These are international programmes, operated in New Zealand by Future Problem Solving New Zealand (see http://www.fpsnz.co.nz/index.htm).

that since the creation of the position of enterprise co-ordinator, the profile of these activities has been raised, and demonstrated to teachers how all of these activities could be united under the banner of education for enterprise.

School 4's principal felt that, at present, education for enterprise was "badly underdeveloped" within the school. However, he and the two teachers most involved in education for enterprise (one in the primary school, one in the secondary school) saw education for enterprise as having huge potential to become part of the school's "special character":

> I believe schools need to develop special characters, and I believe enterprise should be part of our special character, because the kids are so isolated here. (Principal, School 4)

The teachers in charge of education for enterprise in the primary and secondary syndicates agreed:

> People choose to be here and live here [in this area]. You need to be able to sustain your lifestyle…this is an area where you do need to be entrepreneurial. (Enterprise co-ordinator and teacher, School 4)

All three of these staff had enormous enthusiasm for cultivating education for enterprise in the school and a few projects were "in the pipeline". To date, however, School 4 had yet to realise the education for enterprise aspirations of these staff members.

Relevance of education for enterprise to the school's values, philosophy, or culture

Most of the surveyed principals and enterprise co-ordinators (19 out of 23) felt education for enterprise had a special relevance or relationship to the values, philosophy, or culture of their school. This seems significant, given that the aim of NET is to support schools to see education for enterprise not as a self-contained "add-on" to the curriculum, but as an overarching curriculum philosophy. Respondents tended to explain education for enterprise's special relevance in terms of their schools' goals to:

- promote students' enterprising qualities, independence, ability to self-manage, and access to opportunities;
- challenge students to think for themselves, and to recognise and celebrate success;
- contribute tangibly to students' future success in business and enterprise; and
- cultivate students' learning and achievement in the context of their current and future contributions to their community and/or local area.

Some respondents specifically mentioned the opportunity for education for enterprise to raise the achievement and/or broaden the opportunities available to low-decile students or Māori students, and the wider community of which they were a part. Several mentioned specific phrases or aims in their school's strategic plans, school mottos. Some identified enterprising extra-curricular activities that were strongly supported and promoted with their school. Several of the people we

interviewed commented that one of the main attractions of NET was that it was a *Northland* initiative, designed with a focus on revitalising the economic and social environment in the Northland region. All the principals' and enterprise co-ordinators' written responses to this question are given in Table 3.

Table 3 **Relevance of education for enterprise to school's values, culture, or philosophy**

School no.	Principal's comment	Enterprise co-ordinator's comment
1 *	It fits perfectly with the culture we want to promote in our school. Our strategic plan states that "the school will provide and maintain an enterprising and innovative learning environment". The objectives are: high expectations will be placed on students; programmes will be developed to enable students to realise the importance of seizing opportunities, taking risks and learning from experiences, knowing that failure can happen and is part of the learning experience, making their ideas happen and working effectively in teams. The culture we have defined for [this school] includes resilience, celebration and recognition of success, personal responsibility for self, learning, actions, and environment etc.	School culture prizes enterprising qualities; these are incorporated into the strategic plan. School values also dovetail with enterprising qualities. Philosophy is about empowering students so they are encouraged to take initiative and drive activities, they develop resilience and focus on working in effective teams and leadership.
2 *	We educate our students so that when they leave they can go to the course of their choice, job of their choice, or they are able to start and run their own business.	We aim to develop enterprising students.
3 *	As a school we promote innovation and value the skills and competencies E4E develops. We look for ways to develop enterprising community partnerships and to set learning in an authentic context where possible. Some of our enterprising activities could be described as flagship activities for our school.	Founding culture of the school includes service and leadership; both are fundamental principles of E4E.
4 *	Not as much as I'd like but (we) I are *very* keen to develop it.	To realise students' potential and enhance the social, cultural aspects of [this local area].
5	We offer a bicultural education that is *challenging*. Enterprise challenges students to think and act for themselves. Teachers' values of working successfully together—value of money and promotes innovation. Gateways programme of careers and Top Energy scholarship helps students to think in an enterprising manner.	-
7	-	The school is trying to develop personal skills in students—time and money management skills and problem solving, independence.
8	-	Our school encourages students to "be the best they can be". Opportunities in fields other than academic, e.g. Wearable Arts, Stage Challenge.
9	Ethics in business dealings; co-operative initiative; excellence in community, leadership, education.	-

School no.	Principal's comment	Enterprise co-ordinator's comment
10	Our mission statement talks about "our empowering belief system" and "an awareness of responsible citizenship". Enterprise relates to both of these.	Our strong motto is about "personal growth"—this has a strong co-relation with education for enterprise as both are aligned with the development of skills and attributes which prepare them for their future adult lives.
11	Yes, as the school is decile 2, exposure to enterprise programmes is an important aspect of broadening the horizons of our students.	-
12	Only in terms of goal setting, team work, leadership and organisation skills. Most of our students come from low-income families and have little understanding of business. However building a "business/enterprise" culture in Māori students is certainly linked to our goal of raising Māori achievement across the school.	Our students being decile 1, and having backgrounds of very few role models that work, enterprise gives the students the opportunity to see another path that is possible for them. It gives them vital skills needed to make sensible money choices as well as career options.
13	Secondary education is critical in preparing students for life beyond school. It is paramount we give them as many opportunities to see enterprise in action—and that we "walk the talk"—from bold marketing and fundraising initiatives, to enterprising curriculum, to enterprising vocation and courses and opportunities to enterprising marketing—from DVDs to bumper stickers, to fridge magnets, to fireside chats; to enterprising leadership opportunities for our students.	For a few of us it does, but in the main most do not have any idea what it truly means including some of those in the "enterprise cell". However, over this year, it is clearly changing as I have a clear focus on this. Part of the problem has been that those leading the NET project are themselves only just coming to grips with it.

Organisational structures to support Education for Enterprise

According to NET, having "commitment from the top" is a key characteristic of an enterprising school. This entails having a clear organisational and management structure, a vision, and a culture to foster and actively support education for enterprise. Support from the principal and senior management is essential, as are the position of enterprise co-ordinator and the existence of an enterprise group or enterprise cell.

The profile of the enterprise co-ordinators

Seven of the 11 enterprise co-ordinators held middle management positions within their schools. The teachers ranged from fairly new teachers (3–5 years) to some who had been teaching for over 20 years. At least one enterprise co-ordinator was new to the role.

All 11 of the enterprise co-ordinators taught at least one of the following subjects: economics, accounting, business, or enterprise. Six enterprise co-ordinators taught commerce subjects (economics, accounting, or business) as well as teaching enterprise, while three enterprise co-

ordinators taught one or more commerce subjects, but did not mention teaching enterprise.[7] Other subjects taught by enterprise co-ordinators with commerce backgrounds included mathematics, computing/ICT, history and social studies, and special needs. Only two enterprise co-ordinators appeared to come from non-commerce teaching backgrounds. One taught enterprise, French, and tourism, while the other taught the core curriculum at Year 7, along with Year 9 enterprise studies.

Table 4 **Subject areas taught by enterprise co-ordinators**

Subjects taught	No. respondents (n=11)
Commerce (economics, accounting, or business) and enterprise	6
Commerce (economics, accounting, or business), NOT enterprise	3
Other curriculum areas and enterprise	2

Enterprise Northland has commented that, ideally, the role of enterprise co-ordinator would include more teachers with backgrounds in curriculum areas other than commerce[8]. However, it is understandable why teachers from commerce areas might be obvious candidates for this role, particularly in the early years of the NET programme. For example, many of these teachers were already teaching Young Enterprise courses, and thus had contact with Enterprise Northland. Among the case study schools, the enterprise co-ordinators stood out as particularly innovative and dedicated teachers, with a good understanding of (and passion for) the principles of education for enterprise, a strong commitment to fostering student learning, and a belief in the benefits of an enterprising approach to education.

Interestingly, the amount of non-contact time available to the enterprise co-ordinators varied. Nine enterprise co-ordinators had at least four non-contact hours per week, with four co-ordinators saying they had six or more hours. However, two enterprise co-ordinators reported having zero non-contact time. This implies that their enterprise co-ordinator work is done during lunch hours, after or before school, or in their own time. This is concerning, and it is reasonable to question how sustainable this would be for the teachers concerned.

Table 5 **Non-contact periods per week available to enterprise co-ordinators**

Number of non-contacts	0	1	2	3	4	5	6 or more
Number of enterprise co-ordinators	2	-	-	-	2	3	4

[7] However, YES or ESP was available at all three of these schools, suggesting that it was either taught by a different teacher, or that the enterprise co-ordinator simply forgot to list this as a subject they taught.

[8] David Templeton and Frank Leadley, personal communications.

The enterprise cells

Nine or 10 schools reported having "enterprise cells" or an "enterprise group" within the school.[9] The enterprise co-ordinator at one school without an enterprise cell wrote that "it could be about to change". Seven of the 11 teachers who completed a survey were members of their school's enterprise cell.

The teachers who completed a survey taught in a variety of subject areas. As shown in Table 6, only two were from commerce backgrounds.

Table 6 **Subjects taught by surveyed teachers**

Subjects taught	No. respondents (n=13)
All curriculum areas (primary teachers)	4
Mathematics and/or science	3
Commerce (plus computing/ICT or law)	2
Home economics, food and soft materials technology, hospitality, etc.	2
History	1
English	1

While there are no specific guidelines as to the composition of the enterprise cell, it is thought that having a mixture of curriculum areas represented is important in fostering the infusion of education for enterprise across the school curriculum. According to NET, members of an enterprise cell should be engaging in the following type of activities:

- sharing experiences and engaging colleagues in professional dialogue;
- applying enterprise teaching and learning approaches in their own classrooms;
- developing innovative projects and demonstrating renewed engagement with students; and
- engaging other staff to grow the cell to achieve "critical mass", thereby achieving cultural change.

The nature and structure of the enterprise cell/enterprise group varied across the four case study schools, and in some cases grew out of an existing group. In School 1, for example, the "enterprise cell" comprised a cross-curricular group of teachers who had been involved in the school's curriculum redevelopment. These staff attended the first NET conference together, and continued to operate as a group (with some staff changes), the name of which reflected their focus on curriculum change and innovation.

At School 2, the principal felt they didn't need "a high-end group in the school" to foster education for enterprise, as it was already "just the way we do things". The four staff who

[9] One of the schools had a mixed response: the principal said no but the enterprise co-ordinator said yes.

attended the first NET conference could meet on an informal basis as needed, and the enterprise co-ordinator had release time to work one-on-one with other HoDs.

At School 3, the four or five staff who attended the NET conference were selected to give cross-curricular representation. These staff subsequently formed an enterprise committee, but staff turnover in the last couple of years meant that currently the school was in a "rebuilding phase" in terms of its curricular education for enterprise development. The enterprise co-ordinator planned to "shoulder-tap" some staff who might be able to step into these roles.

School 4's enterprise cell comprised the enterprise co-ordinator, principal, and one other staff member. However, this group had not yet done much "as a cell".

Summary: the context for education for enterprise in the schools

- There has been a fairly high uptake of NET in Northland secondary schools, with 60 percent currently involved, and a further 20 percent in discussion with Enterprise Northland.
- Many schools were involved in education for enterprise prior to NET; for example, running YES, YEP, PrEP, or other enterprise courses. However, prior to NET most schools did not have a coordinated approach to education for enterprise across the curriculum.
- Most principals and enterprise co-ordinators identified education for enterprise as having special relevance to their school's values, culture, or philosophy. This may help to explain why Northland schools have been so receptive to NET. The data indicate that the regionally-specific "Northland-focused" nature of NET was a key factor in schools finding a "fit" between NET and their own specific educational goals and values.
- Most enterprise co-ordinators were commerce teachers. In case study schools, these staff stood out as particularly innovative and dedicated teachers, with a good understanding of (and passion for) the principles of education for enterprise, a strong commitment to fostering student learning, and a belief in the benefits of an enterprising approach to education.
- The amount of non-contact time for enterprise co-ordinators varied, and in some cases a lack of non-contact time may be a concern for the sustainability of this position.
- Other staff who completed a survey taught in a range of subject areas, from the whole curriculum (primary school) to mathematics, English, and home economics/food and soft materials technology. Seven were members of their school's enterprise cell.
- Most schools had an enterprise cell or similar group. However, these may not always be functionally active. Staff turnover and shortages of time to plan together appear to be challenges for some enterprise cells. In some schools, it was not seen as necessary to have an enterprise cell, as education for enterprise was already functionally embedded in school practice.

4. Current involvement in education for enterprise

This section looks at how the schools are currently involved in education for enterprise. Which enterprising programmes and activities are available to students? How many students are involved in education for enterprise, and at what year levels? Finally, how does education for enterprise relate to the different subjects and curriculum areas in each school?

Education for enterprise programmes and activities

One school was not offering any education for enterprise activities in 2006, due to unexpected staffing changes. The other 13 schools ran at least one education for enterprise curriculum course, programme, or subject, with many listing several. These are shown in Table 7.

Table 7 **Education for enterprise programmes/activities in the schools**

Programme/activity	No. schools
Young Enterprise Scheme (YES)	11
Enterprise Studies Programme (ESP)	9
BP Community Enterprise Projects	5
NZIM Certificate in Management	5
Primary Enterprise Programme (PrEP)	4
Financial Literacy Programme (FLP) Years 11–13 (ENZT programme)	-
Other enterprise-oriented activities	9

"Other" enterprise-oriented activities listed by staff included some curriculum-specific initiatives; for example, graphics students doing landscape designs for areas in the school and signage and advertising for local businesses, art students exhibiting and selling their work, or hospitality students running their own model restaurant. One principal mentioned the introduction of a new mathematics curriculum as part of the school's "enterprising" activities.[10] One school mentioned a school-industry partnership called Apprenticeships Work. A range of extra-curricular activities was also mentioned, including Stage Challenge, Community Problem Solving, and Future Problem Solving.

[10] We have no additional information about this school's mathematics curriculum and why it was considered "enterprising".

Across all the schools, the Young Enterprise Scheme (YES) and various Enterprise Studies programmes were the most commonly available E4E programmes. Five schools ran the BP Community Enterprise Programme, and five offered the NZIM Certificate in Management. No schools were currently offering the Financial Literacy Programme (FLP), although one principal said this was offered "when we have the numbers".

Ten of the schools were either composite schools or secondary schools beginning at Year 7, meaning some of their students were primary-aged. However, only four schools were running PrEP (an enterprise programme designed for primary-aged students), although two other schools indicated that PrEP would be running in 2007.[11]

Which students are involved in education for enterprise?

The table below shows which students, at which year levels, were involved in education for enterprise. The most common form of education for enterprise was for Year 11, 12, or 13 students; for example, as optional YES or Enterprise Studies courses. These were likely to be taken by "some" students, although a few schools said "most" students at these age levels were involved. In the few schools where "all" students of a particular year level participated in education for enterprise, this applied to students in Years 7, 8, 9, and 10. Only one school said students in Years 1–6 took part in education for enterprise.

Table 8 **Student involvement in education for enterprise across year levels**

	Number of schools		
	All students	**Most students**	**Some students**
Years 1–6			1
Years 7 and 8	3		2
Year 9	4	1	1
Year 10	3	1	5
Year 11		1	8
Year 12		2	10
Year 13		2	8

The relationship of education for enterprise to the curriculum areas

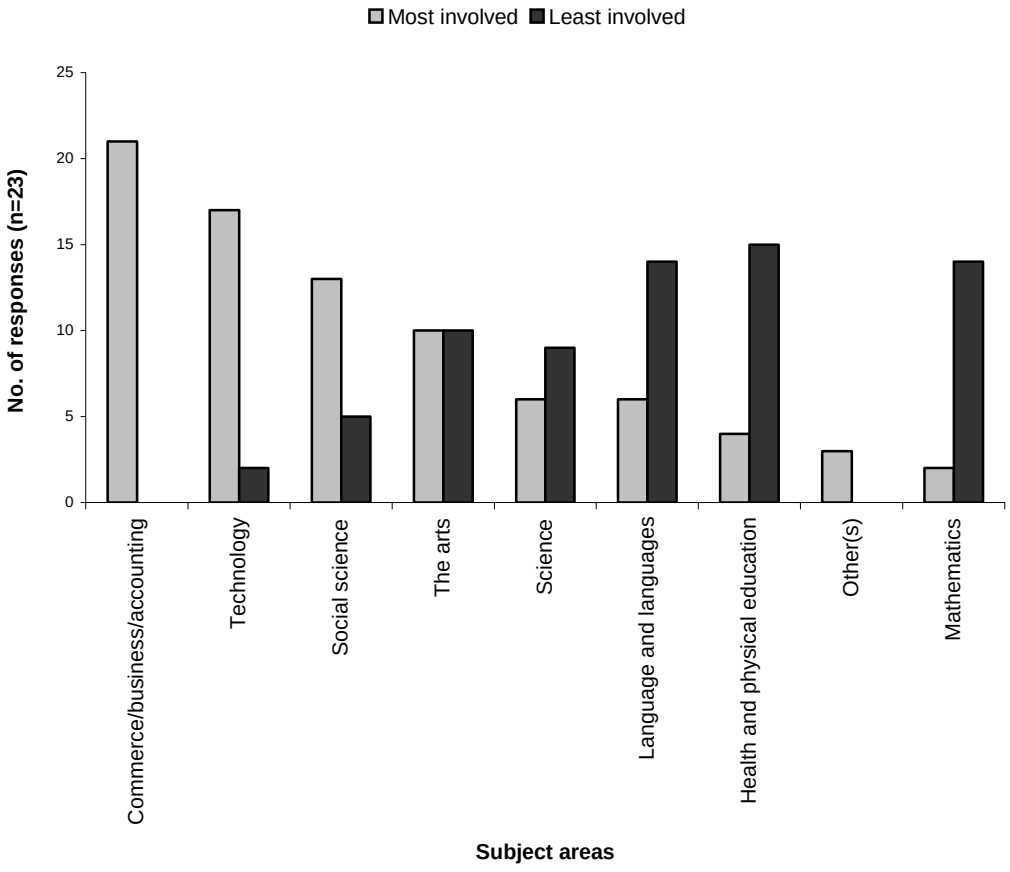
Of the 23 principals and enterprise co-ordinators who responded to the survey, 14 (60 percent) said that education for enterprise at their school mainly involves one or two curriculum areas. Six (26 percent) said it involved many, but not all curriculum areas. Only two respondents said

[11] In both these cases it appeared that staff changes were the reason PrEP was not running in 2006.

education for enterprise was completely cross-curricular, integrating across all the subjects or learning areas.

Figure 1 shows some interesting patterns in the subjects/curriculum areas that were the most and the least involved in education for enterprise. At the most involved end were the commerce and business subjects, technology, and social science, and at the least involved end, language and languages, health and physical education, and mathematics (although a few schools classified these latter subjects as "most involved"). Science and the arts were divided between being among the most involved in some schools, and least involved in others.

Figure 1 **The subjects/learning areas "most involved" and "least involved" in education for enterprise (according to principals and enterprise co-ordinators)**



We asked the principals and enterprise co-ordinators to explain any differences in the representation of education for enterprise in different subjects and curriculum areas. Twenty people answered this question, and 15 of these (75 percent) specifically mentioned teachers' enthusiasm for education for enterprise, their recognition of the educational value of education for enterprise, or their willingness to try new things, as key factors. Other reasons given included: some subjects lending themselves more readily to the development of a "product", or simply

being a better "fit" to the philosophies of education for enterprise. Some illustrative comments are given below:

> Including education for enterprise across some subject areas is a difficult task, e.g. some staff are part-time and do not have the opportunity/time available for all of the extra work involved. Enterprise is more likely to occur in those subjects where it can be practically applied and the teacher is enthusiastic to do so. (Enterprise co-ordinator)

> There has not been any integrated curriculum planning, so therefore only the teachers who take PrEP or YES are including E4E in their classes. (Enterprise co-ordinator)

> Yes, depends on the teacher driver, how content crowded the curriculum appears, and how assessment driven the dept is. Areas with slower uptake are those [that appear more content- and assessment-driven]. Those using education for enterprise tend to have more flexible, student-centred teaching, more innovative teachers, focus on learning process rather than content and formalised assessment. (Enterprise co-ordinator)

> Some teachers have seen the value for their students in interacting in an enterprising way with the community. It is not 'embedded' [in the school curriculum] and therefore can be staff dependent. (Principal)

> We are in the infancy of this and it hasn't had the attention it needs. It has been recognised as a priority but development is only beginning. At the moment the enthusiastic teachers have it. (Principal)

Leaders in the case study schools often considered that further development and integration of education for enterprise would occur best when it was linked into the school's own ongoing curriculum review and development processes. To engage more staff in education for enterprise, enterprise co-ordinators often used the strategy of highlighting *existing* "enterprising" practices across the curriculum, and working with teachers and HoDs in these areas to align these practices even more closely to the schools' overall education for enterprise goals. As one teacher commented in their survey:

> I have been involved in NET by accident. I have run a model restaurant with my hospitality students for many years without any thought for E4E—it was others who pointed out I was involved in 'Enterprise'. (Teacher)

Case study principals and enterprise co-ordinators often mentioned difficulties they had encountered in dislodging the view, amongst some staff, that "enterprise" belonged only to the commerce subjects. One enterprise co-ordinator said that some teachers "start nodding off" when he tries to speak to them about education for enterprise. Another said that her commerce department was seen by some departments as "empire building". Several staff suggested that there was a lingering suspicion amongst some staff about schools getting involved with businesses, with some expressing discomfort at the notion of students' learning being driven by "profit motive". A teacher in another school felt that:

> ...some teachers have a cloistered view of their own subjects, and might see E4E as contrary to the aims of academic education. (Teacher)

An enterprise co-ordinator suggested that teachers in some subjects tended to be more "structured" in their teaching, preferring a teacher-led approach to the "noise and chaos" that might seem to result from a student-led E4E approach. In subjects like mathematics and science, she thought there was a perception that "we don't have time for creativity" because the students needed to "cover the curriculum" in order to achieve their NCEA standards.

Education for enterprise across the curriculum: an example

Schools 1 and 2 seemed to be the most advanced of the case study schools in terms of the degree to which education for enterprise featured in their school curriculum. At School 1, in order to broaden the focus of education for enterprise beyond the commerce department and tie it into the school's wider vision for the curriculum, the focus was on the development of students' "enterprising attributes". The enterprise group was called the CREATE team—Curriculum Reinforcing Enterprising Attributes Through Experience. The principal and enterprise co-ordinator mentioned a wide range of existing "enterprising" school activities. These included: hospitality classes doing commercial catering; drama, dance, and music assessments turned into performance evenings with paying public; textile students entering the Bernina fashion awards; students exhibiting and selling their artwork; health and physical education students running a "kinder Olympics" for local early childhood education centres; and te reo Māori classes creating books for local kōhanga reo. The principal felt the school had an overall culture "where students know they can make initiatives happen". Student-led activities included a recycling scheme, student council fundraisers, and sports days. Both the principal and enterprise co-ordinator said that student initiative was supported to the extent that even if things "fell over", this was viewed in positive terms because "even when things don't go so well [students] can learn from it". In addition, the school initiated a large CREATE project at the end of 2005, which involved all Year 9 students working in teams to develop and market a product, service, or concept. This occurred late in Term 4 after the senior students had finished. The normal school timetable was abandoned, and student teams were able to book in the time and support of teachers and working spaces across all departments of the school. This initiative had been very successful, and the principal felt it had demonstrated to many staff how ideas could be taken from many different subjects areas and combined into authentic student-led projects. The enterprise co-ordinator noted that the only negative comments about the initiative related to the "business planning" model that underpinned the CREATE projects. To counteract this, a non-profit model was developed wherein students could engage in a project to help the community or perform some kind of public good. The initiative was so successful that the school intended to run it again in 2006 for the new cohort of Year 9s, while the Year 10 students would build on their previous year's experience by engaging in a project based around "community needs".

Summary: current involvement in education for enterprise

- Across the surveyed schools, education for enterprise was most often available as optional subjects taken by some senior (Years 11–13) students. Where education for enterprise involved "all" students, this was generally at Years 7–10.
- In addition to the standard enterprise subjects in the curriculum, schools identified a range of other education for enterprise activities their students were involved with. These included subject-specific activities, extra-curricular programmes and activities, and school-industry apprenticeship partnerships.
- Most schools identified education for enterprise as involving one or two or a few subject/curriculum areas. The most commonly involved areas were commerce, technology, and social science. The least commonly involved were languages, health and physical education, and mathematics. Other subjects were more variable in their involvement between schools.
- Participants consistently explained the differences in representation of education for enterprise across the school curriculum in terms of: the passion and enthusiasm of some teachers for education for enterprise; and a more obvious "fit" between education for enterprise and particular curriculum/subject areas (for example, those in which students' learning normally involved the development of a "product").
- It was also suggested that differences in the representation of education for enterprise across the curriculum related to teachers' educational values. According to respondents, education for enterprise was more readily adopted by teachers who valued "the learning process". It was less likely to be adopted by teachers who placed more value on "content and formalised assessment".
- Respondents suggested that education for enterprise could be integrated more widely, but this would require more time, planning, and opportunities for other staff to become familiar with the intentions of education for enterprise.

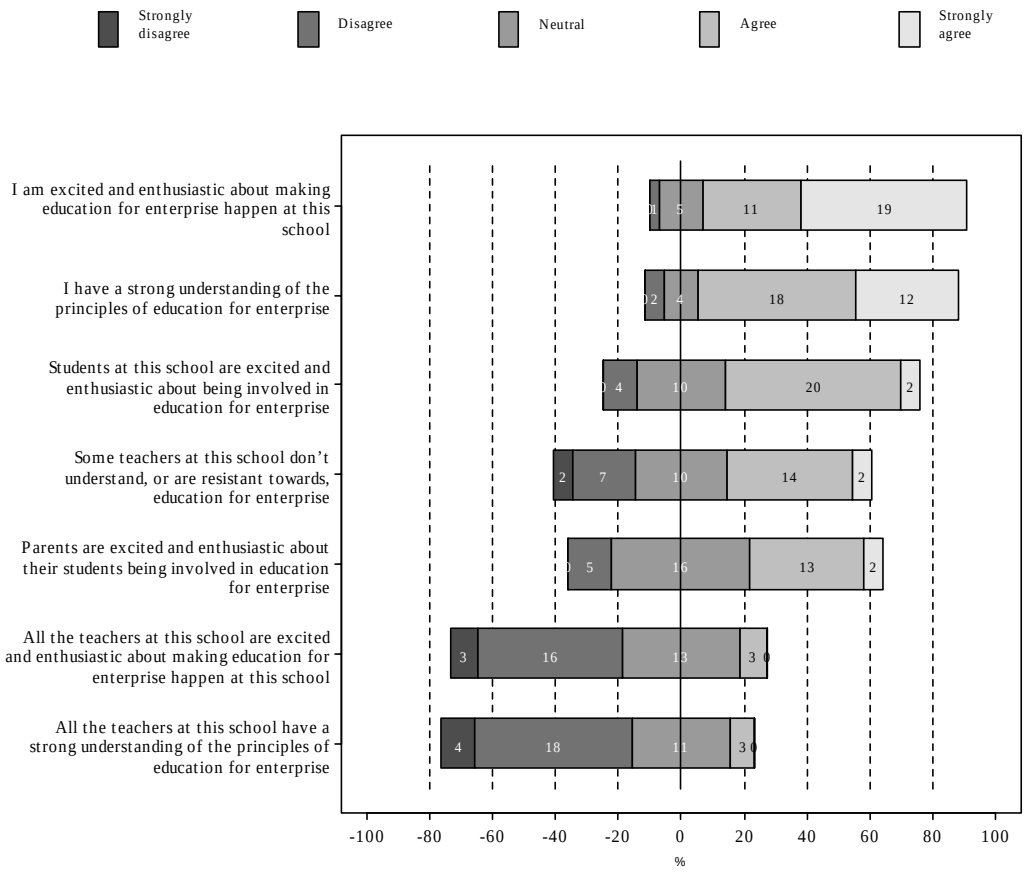
5. The profile of education for enterprise in schools

This section explores the profile and visibility of education for enterprise within the schools and their communities. For example, how is education for enterprise seen by teachers, students, and parents? How "visible" is it in the everyday life of the schools, and how does it feature in school planning?

Understanding and enthusiasm for education for enterprise

Figure 2 shows respondents' views about enthusiasm for, and understanding of, education for enterprise within their school and community.

Figure 2 **Enthusiasm for, and understanding of, education for enterprise (n=36)**



Encouragingly, most respondents (83 percent) agreed that they were enthusiastic about, and understood, the principles of education for enterprise. However, they were less confident that all teachers in their school shared this level of understanding and enthusiasm. In fact, half or more *disagreed* that all teachers were enthusiastic and understood education for enterprise. It should be noted that several people who strongly disagreed with this statement circled the word "all" to indicate that this was the part of the statement which they were disagreeing with.

About 45 percent agreed that some teachers at their school didn't understand, or were resistant towards, education for enterprise. Again, when answering this question, a few respondents circled the words "some" or "don't understand" on their survey form, indicating that they didn't mean to imply that there was a high level of antipathy towards education for enterprise within their school staff.

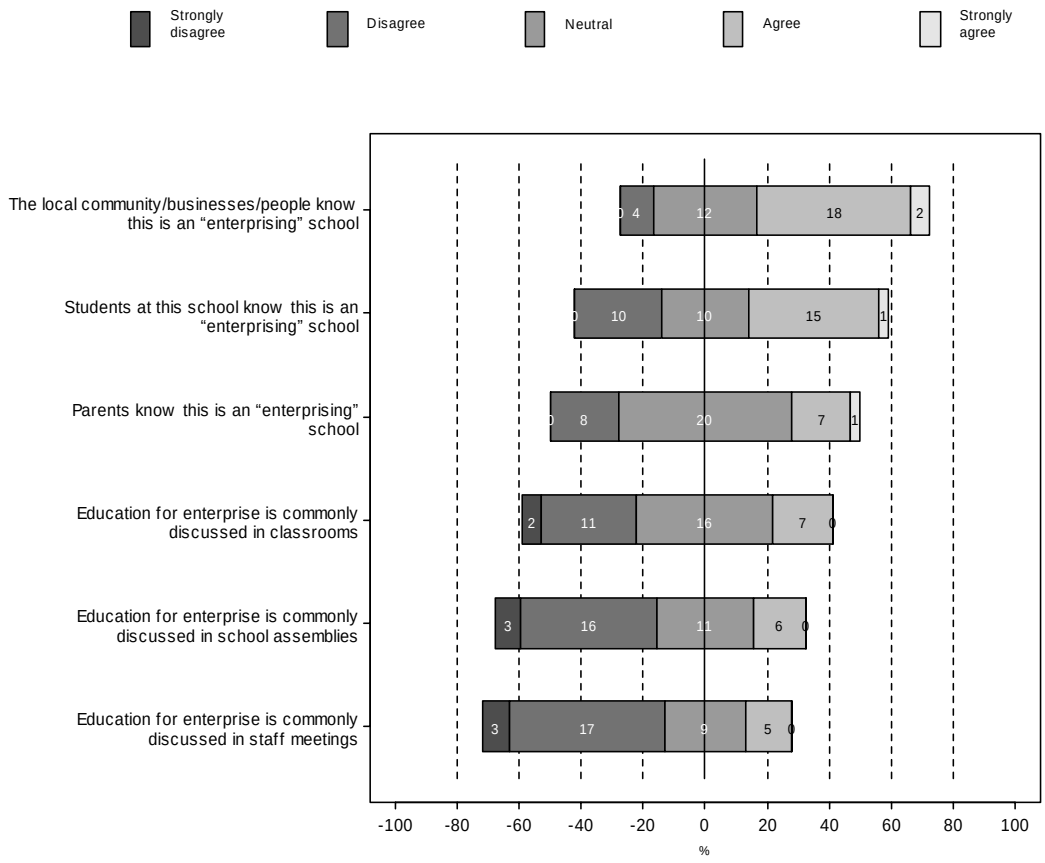
Just over 60 percent of respondents said students were excited and enthusiastic about being involved in education for enterprise (with some adding that this applied to "those who are involved"). Fewer (41 percent) felt parents were enthusiastic about their students being involved in education for enterprise, and respondents were more likely to give a neutral response to this question. Comments written on the surveys, as well as some of the case study interviews, suggest that parents as a whole may have been less aware about education for enterprise and what it meant for students. In some cases, low levels of parent involvement in school life were noted as a general issue, and could explain some of the responses to this question.

The visibility of education for enterprise in school life

Figure 3 shows respondents' perspectives on the visibility of education for enterprise in various aspects of school life. Interestingly, more respondents felt that the local community, businesses, and people knew theirs was an enterprising school (56 percent agree), than did students (44 percent agree) or parents (22 percent agree).

As a loose indicator of how visible education for enterprise was in these schools, a third to a half of respondents disagreed that education for enterprise was commonly talked about in classrooms, school assemblies, or staff meetings in their school. However, some respondents indicated that they were disagreeing with the word "commonly", noting that education for enterprise was "sometimes" discussed in these three different contexts. These responses suggest a pattern common to many types of innovative school practice. Namely, innovative practices tend to happen in pockets within a school, rather than being spread uniformly throughout the school. Given the information about the structure of education for enterprise in the schools (see section 4), it seems that in most schools, education for enterprise is concentrated in a few classes, subjects, or departments, affecting some but not all students and staff. Hence, the visibility of education for enterprise may be less apparent in other parts of the school. Schools 1 and 2 appeared to be exceptions to this.

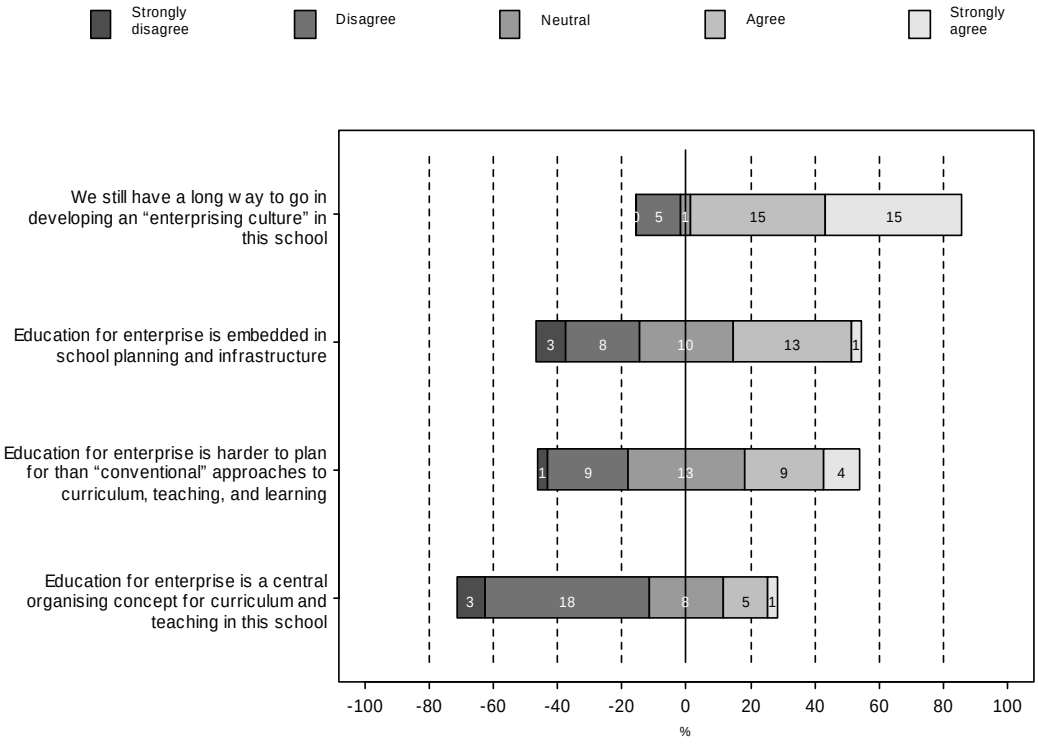
Figure 3 **Visibility of education for enterprise in the school and community (n=36)**



The place of education for enterprise in curriculum planning

Figure 4 shows the extent to which schools organise their school curriculum and culture around education for enterprise. Over 80 percent of respondents agreed that their school has "a long way to go" in terms of developing an enterprising culture, with 40 percent strongly agreeing. Only 16 percent thought education for enterprise was a central organising concept for curriculum and teaching in their school, although over a third felt it was "embedded" in school planning and infrastructure. Overall, respondents were equally divided as to whether education for enterprise approaches are harder to plan for than "conventional" approaches to curriculum.

Figure 4 **The place of education for enterprise in curriculum planning (n=36)**



Representation in school documentation

The surveys asked principals and enterprise co-ordinators which (if any) school documents included or mentioned education for enterprise. The counts in Table 9 are based on the principals' responses.[12] Where both a principal and enterprise co-ordinator survey was available, we cross-referenced their responses. Interestingly, there were a few instances where the enterprise co-ordinator said education for enterprise *was* mentioned in a particular document, while their principal said it was not. These are shown in the bracketed numbers in Table 4. Although it is unclear why there were differences, one possible explanation is that the principals and enterprise co-ordinators interpreted the questions slightly differently. For example, principals might have interpreted questions about teachers' curriculum, teaching, and assessment plans as referring to *all* departments or syndicates, whereas enterprise co-ordinators may have interpreted it in terms of their own departments or syndicates.

[12] Or the enterprise co-ordinator's responses if no principal survey was returned from that school.

Table 9 **School documents in which education for enterprise is included or mentioned**

Includes or mentions education for enterprise	No. schools
School newsletters	13
Policy documents (e.g. school charter, strategic plan, annual report)	11
Teachers' own curriculum, teaching, and assessment plans	9 (+1)
Reports of student learning/achievement to parents	8 (+1)
School-level, department-level, or syndicate-level curriculum plans	6 (+3)
In prospectuses/information for new students	6 (+3)
On the school website	7
Teacher appraisal processes	5

In all but one school, education for enterprise was mentioned in school newsletters (although some participants wrote that this only occurred "sometimes"). Most schools featured education for enterprise in policy documents, for example the annual or strategic plan. Slightly fewer schools claimed to include education for enterprise in curriculum plans and student reports, although this was still relatively common. Only five schools included education for enterprise in teacher appraisal processes, and at least one enterprise co-ordinator explained that this was only relevant to their own appraisal, not to any other teachers.

Documentation in the case study schools

School 1's principal believed it was important to embed education for enterprise in school documentation, but only if these were treated as "living documents" which would actually be monitored and utilised in practice. School 3's principal expressed a similar sentiment:

> We have it in there [the strategic plan], but I think there's a step between writing it and doing it. It's in our plan, we do live it, but just writing it doesn't make it happen. (Principal, School 3)

An enterprise co-ordinator at one of these schools suggested that part of the importance of embedding education for enterprise into school documents was that it showed there was "buy-in from the top". He felt this was essential because:

> The practicalities of education for enterprise require different structures [within the school] to happen. (Enterprise co-ordinator)

School 2's principal felt that enterprise was already well-embedded in the school without having to be written into school documents. However, to reflect the school's enterprise culture a few recent additions had been made to the school's strategic plan. For example, an extra clause (underlined below) was added to the following objective for the school's curriculum:

> To provide students with the knowledge and skills so that when they leave, they leave to the job of their choice, the course of their choice or able to start and run their own business. (School 2 strategic plan, p. 7)

This carried the governance and management implication that:

> Authentic learning needs to be a part of all curriculum areas. (School 2 strategic plan, p. 8)

There were also plans to change school 2's signage from "school at the centre of the community" to "enterprise school at the centre of the community".

The principal of School 4 was very keen to see education for enterprise written into the school's curriculum plans from the junior school right through to senior secondary classes to provide a "seamless progression" throughout students' school experience. However, for this to occur the school first needed to review its existing curriculum and look at how well or poorly the curriculum offerings at each year level meshed with those above and below it. A curriculum review to achieve this was currently in progress.

Summary: the profile of education for enterprise in schools

- Most survey respondents were enthusiastic about education for enterprise and felt they had a strong understanding of its principles. However, they were likely to say that this was not true for all other staff in their schools.
- The schools' involvement in education for enterprise was felt to have a reasonable visibility and profile among the local community and businesses, but was perhaps less visible within the school beyond those subjects, classes, or departments in which it most often occurred.
- Many schools mentioned education for enterprise in policy documents, and it was reasonably common in curriculum planning. However, it was unclear how widespread this was across different departments/syndicates/individual teachers within each school.
- Staff in case study schools believed that embedding education for enterprise in school documentation, particularly at the policy and curriculum planning level, showed a top-level commitment to education for enterprise. However, this was only meaningful insofar as these were "living documents", with their goals and aims expressed in the schools' everyday curriculum and teaching practices.

6. The impacts of NET

This section investigates the perceived impacts of the NET project. The first part of the section looks at the perceived effectiveness of the NET model, and which aspects of the model staff think have been particularly important. The second part of the section looks more closely at how NET is felt to have made a difference, with an emphasis on staff enthusiasm and understanding of education for enterprise, impacts on pedagogy, and the impacts for students, the school, and its community.

Effectiveness of the NET project

As Table 10 shows, just over half (58 percent) of all the respondents felt that NET project has been "effective" or "very effective" in supporting their school to develop an enterprising culture, with a further 31 percent saying it has been "somewhat effective".

Table 10 **Perceived effectiveness of NET in supporting school to develop an "enterprising culture"**

	Total (n= 36)
Not at all effective	2
Somewhat effective	11
Effective	15
Very effective	6
No response	2

Interestingly, the enterprise co-ordinators were slightly more equivocal in their views than the principals or other teachers. Five enterprise co-ordinators said NET was "effective" or very effective", and five said it was only "somewhat effective". One enterprise co-ordinator didn't rate the effectiveness of NET, explaining "I can't answer this yet as I am too new to the position."

Only 2 of the 36 respondents (a principal and one teacher, each from different schools) said NET was "not at all effective" in supporting their schools to develop an enterprising culture. The principal who said this felt that the major problem was "the lack of support visits" from the NET regional co-ordinator. This, it was felt, made it difficult to get education for enterprise "off the ground and keep kids motivated to pick it up as a subject". The teacher who felt NET was not at

all effective objected to the "theoretical model" of YES which, s/he felt, was "driven by $100,000 business plans as being important". Their school offered YES to students "so even though they have 5 hrs a week focus on this—the 'reality' of a business is 24/7, therefore the reality of [students developing] $100,000 companies is slim". This teacher suggested that instead, a few schools be funded to develop their own model for developing student businesses that would succeed and be sustainable for school-leaving students, "rather than the current 90 percent failure rate [of businesses]".

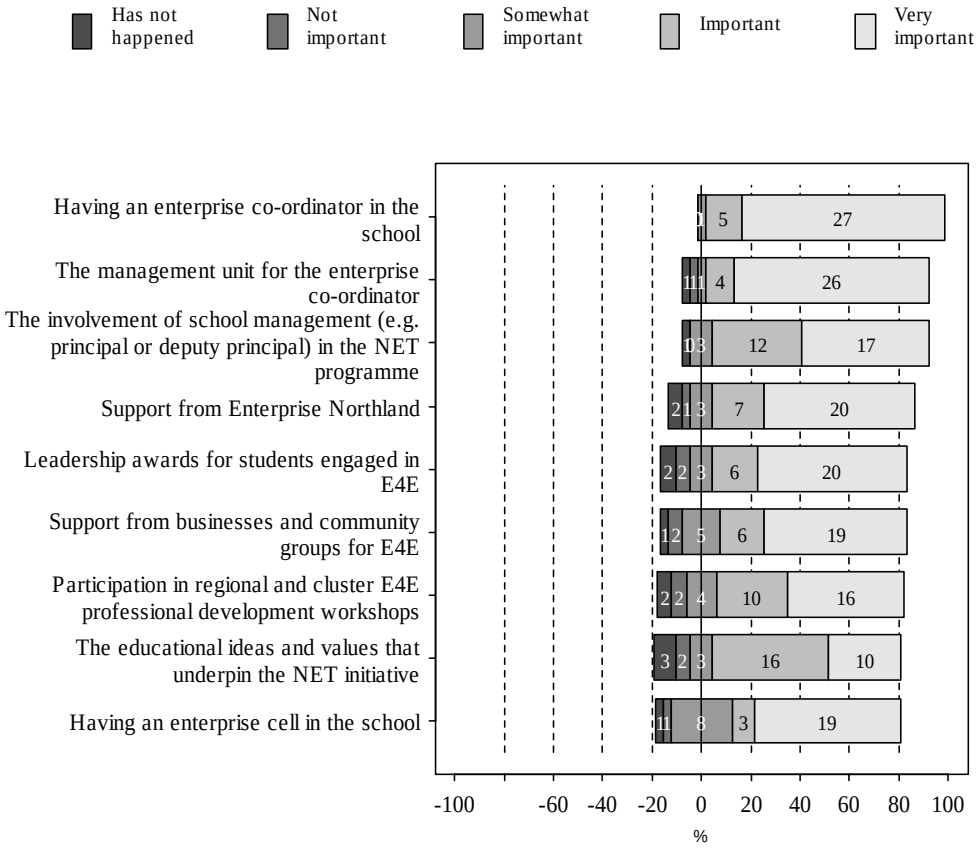
The most important aspects of the NET model

Survey respondents gave a range of opinions about which aspects of the NET model have been particularly good, effective, or important. For example:

> Ensuring that Enterprise is understood (by all staff) not to be the sole domain of the Commerce Dept. (Principal)
>
> Getting a clear understanding of the underlying principles of E4E and how this can and should positively impact on teaching practice, engagement and relevancy. (Enterprise co-ordinator)
>
> The support given by [the NET staff from Enterprise Northland] is OUTSTANDING. (Principal)
>
> As always, it is hard to accomplish within the constraints of existing resourcing and the NET project made the hugest difference here—TIME is the most valuable thing they could give us but the inspirational speakers and framework put the icing on the cake—and were luxuries seldom seen in education. We would not be as far ahead as we are without NET. They are visionary, practical, supportive, flexible and FABULOUS. (Principal)

Figure 5 shows how respondents rated the importance of aspects of the model. The two features most often rated as "very important" were: having an enterprise co-ordinator in the school, and having the management unit for the enterprise co-ordinator. Three-quarters said support from Enterprise Northland was important or very important, although one respondent said this was not important, and two said it had not happened. Overall, respondents tended to rate most of the aspects of NET listed in Figure 5 as being important or very important.

Figure 5 **Important aspects of the NET model (n= 36)**



Where has NET had an impact in schools?

The next two figures show aspects of school life in which NET is perceived to have had an impact. Figure 6 shows impacts in terms of staff attitudes and understanding, approaches to curriculum planning, and teachers' workload. Most respondents felt that NET has had a minor or major positive impact on their own understanding or enthusiasm for education for enterprise. As in Figure 2 (see Section 5), respondents rated their own enthusiasm and understanding of education for enterprise more highly than that of other teachers. There was a less marked impact on curriculum planning and classroom pedagogy, although there were some individuals who felt these aspects had been positively impacted by NET. Eight respondents felt NET has negatively impacted on teacher workloads, although half said there has been no impact.

Figure 6 **Impacts of NET on staff attitudes, curriculum planning, and workload (n=36)**

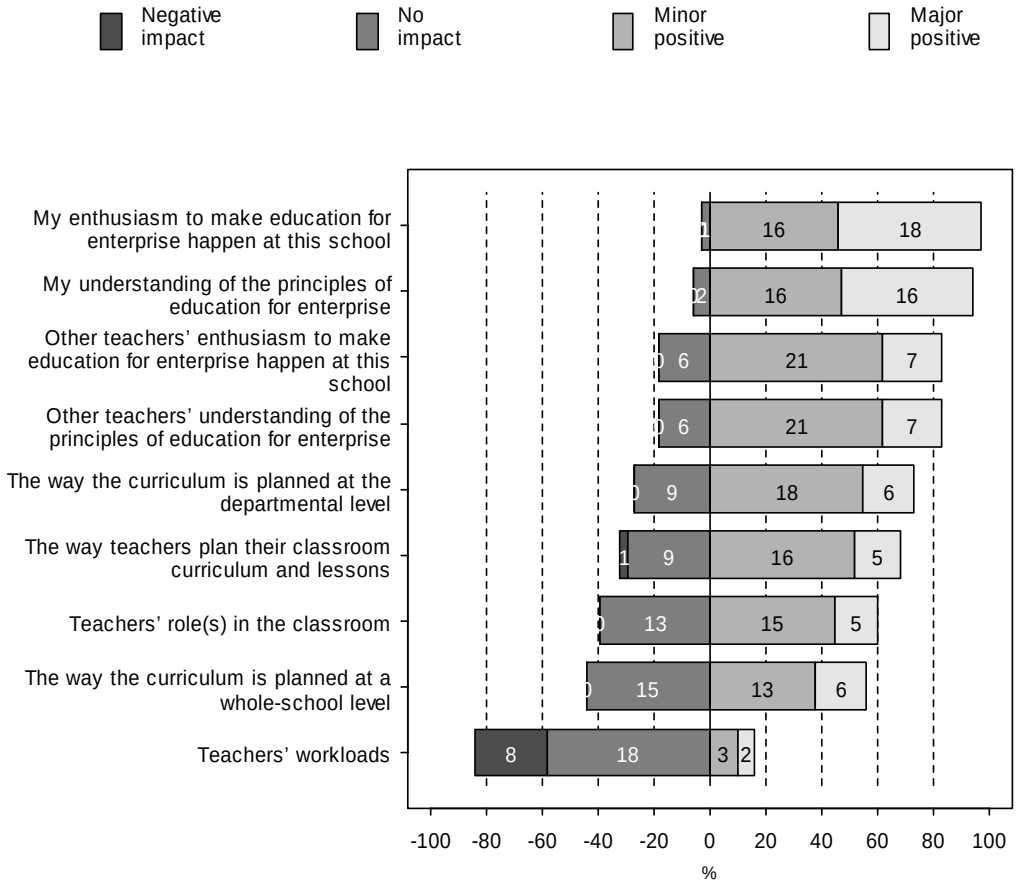
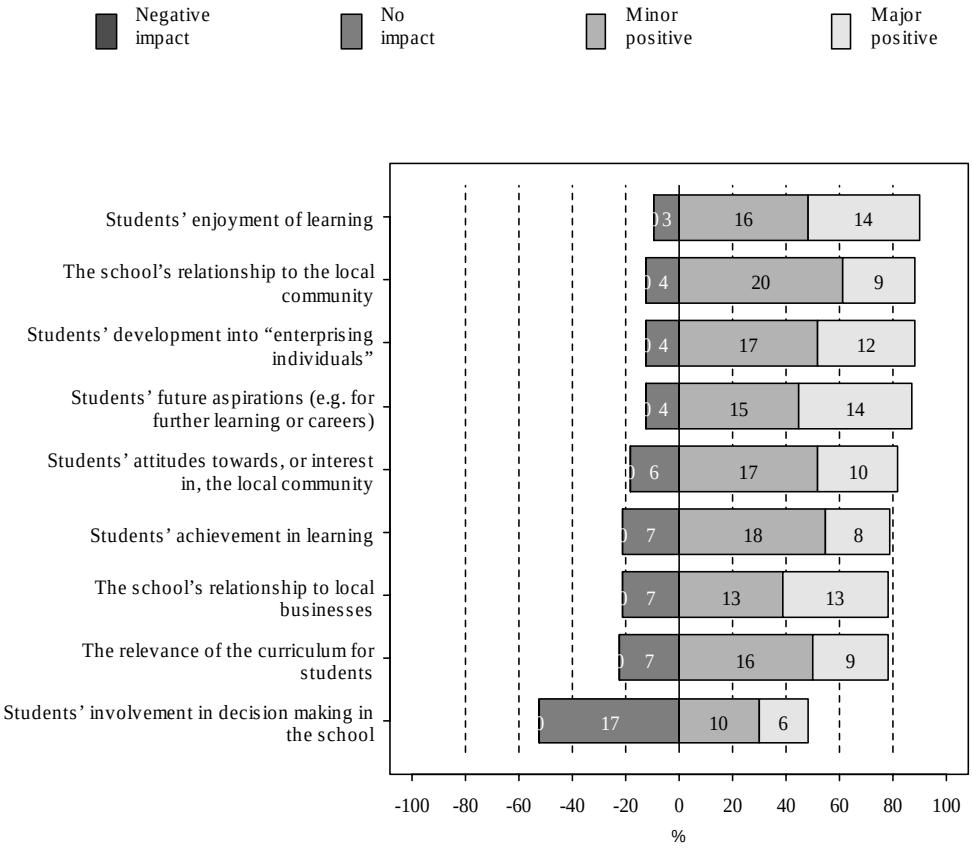


Figure 7 shows how staff perceived the impacts of NET for students and the school community. On the whole, respondents were fairly positive about the impacts of NET for students' enjoyment of learning, development into enterprising individuals, future aspirations, achievement, and attitude to their local community. NET was also felt to have positively impacted the school's relationship towards the local community and local businesses.

Interestingly, one area stands out from the others in the high number of respondents who rated it as having "no impact". That area is in students' involvement in decision making in the school. This theme is echoed in the questions about the impacts of NET on pedagogy, discussed later in this section.

Figure 7 **Impacts of NET for students and the school community**



Impacts on pedagogy

The last section of the teacher and enterprise co-ordinator surveys asked participants to reflect on the impact of the NET project on their teaching practices in the class(es) in which they thought they took an "education for enterprise" approach. Drawing from a technique used in NZCER's *Shifting Balances* research[13] (Hipkins, Conner, & Neill, forthcoming), we designed a sheet which presented teachers with 22 descriptions of curriculum and pedagogical practices that might align with a truly "enterprising" approach to school teaching and learning (Table 11).

For analysis purposes, we have clustered the 22 statements into four categories which we have named as follows:

- **Curriculum relevance** (CR): this category includes statements about making the curriculum and learning "relevant" to students' current or future lives and interests, and/or the "real world".

[13] This research investigated the impacts of the NCEA on teaching practice in four curriculum areas: mathematics, science, home economics, and geography.

- **Student skills and attributes** (SSA): this category includes statements about developing students' abilities to think critically, gather information from many sources, work with different kinds of people, take risks, and be innovative. It also includes the development of business skills and knowledge.
- **Student involvement and leadership** (SIL): this category includes statements about involving students in decision making about curriculum and assessment, incorporating students' interests and experiences into the learning activities, and supporting students to lead learning activities.
- **Teaching and learning strategies** (TLS): this category includes statements about the kinds of teaching and learning strategies and approaches that might be used in an education for enterprise classroom.

Table 11 **Statements about curriculum and pedagogical practices**

	Statement about practice	Code
A.	Students learning the curriculum through community-based or "real-life" projects	(CR)
B.	Making connections with other curriculum areas	(CR)
C.	Putting less emphasis on curriculum content "coverage", to allow time for deeper understanding or more relevant learning to occur	(CR)
D.	Involving students in making decisions about what should be learned and how this learning could happen.	(SIL)
E.	Encouraging students to work in groups or teams	(SIL)
F.	Encouraging students to recognise and value the different perspectives, values, skills, and knowledge of their peers when working in teams	(SSA)
G.	Encouraging students to actively clarify their own ideas, values, and assumptions, and to think about their learning processes, during a sequence of work	(SSA)
H.	Students using their knowledge to create "new" ideas, products, services, or relationships within their community as part of their learning	(TLS)
I.	Involving students in making decisions about what should be assessed, how assessment should be carried out, and what the next steps are	(SIL)
J.	Finding out about students' personal interests, social/ethical concerns, experiences, and cultural identities	(SIL)
K.	Planning curriculum and teaching in response to students' personal interests, social/ethical concerns, experiences, and cultural identities	(SIL)
L.	Students using learning technologies to support quality learning behaviours such as exploration, conjecture, or collaboration (e.g. spreadsheets, Internet, data loggers, databases, digital learning resources)	(TLS)
M.	Discussing with students the relevance of their learning to their futures	(CR)
N.	Students having opportunities to practise communicating their learning in a range of different modes (writing, speaking, multimedia, etc.)	(TLS)
O.	Students presenting the results of their learning/activities to an audience other than their teachers and classmates	(TLS)
P.	Students having the opportunity to try out new and innovative ideas and take risks	(SSA)
Q.	Encouraging students to see "mistakes" as learning opportunities	(SSA)
R.	Encouraging students to recognise that different people in their community have different perspectives on different issues	(SSA)
S.	Encouraging students to gather information from a wide range of sources	(TLS)
T.	Encouraging students to think critically about where their information comes from	(SSA)
U.	Students initiating and leading learning activities in the classroom/outside the classroom	(SIL)
V.	Supporting the development of students' business knowledge and skills	(SSA)

For each statement in Table 11, we asked respondents to indicate what priority they thought should be given to each of these practices, using a 5-point scale: very high; high; moderate; low; and very low. We also asked them to indicate how *often* these practices occurred in their classes before their school got involved in NET, and how often these practices happen in their classrooms

now. In both cases we offered a 4-point frequency scale: hardly ever/never; occasionally; often; and all/most of the time.

As the number of respondents was very small, statistical findings such as average scores and variances can be affected by the responses of just one or two individuals. For this reason, the analysis that follows is done using *ranked* scores. To achieve rankings, the responses given for each practice were averaged. The average scores were then ranked from 1 (the practice rated as the highest average priority) to 22 (the practice rated as the lowest average priority). The same process was followed to rank perceptions of the frequency of each practice before and after the schools' involvement in NET. The analysis using ranked scores does not indicate the *magnitude* of those scores. In other words, it does not tell us the actual average values of the practices ranked number 1 and number 22. This data is given in Appendix C and referred to as appropriate in the text below.

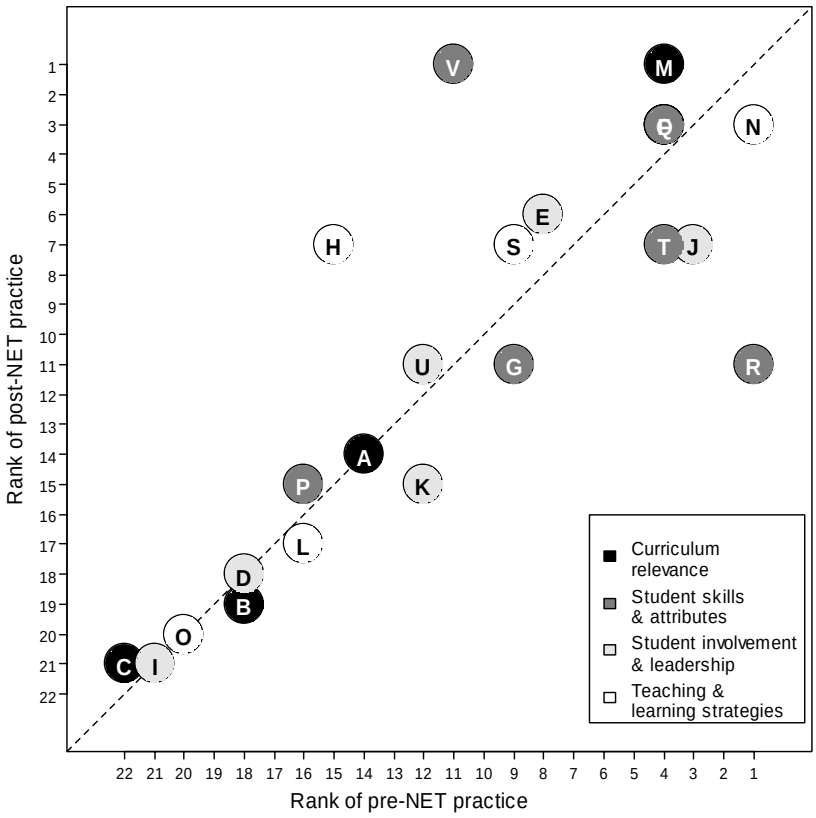
The impacts of NET on enterprise co-ordinators' practice

Overall, most practices listed in Table 11 showed a small average increase in terms of how often they occurred after NET, compared with how often they occurred before NET. These average values are shown in Appendix C.

Figure 8 shows the impact of NET on enterprise co-ordinators' practice using ranked scores. The x-axis shows the ranking of the each practice before NET, and the y-axis shows the ranking after NET. Points that lie above the diagonal line show practices that achieved a relative increase in ranked score after NET, and those below the line show practices that decreased in relative rank after NET.

The most notable shifts in frequency relative to other practices were: supporting the development of students' business knowledge and skills (V) and students using their knowledge to create "new" ideas, products, services, or relationships within their community as part of their learning (H) which both increased quite a bit. A few other practices moved slightly up (E, S, M, U) or slightly down (G, T, J, K, N) in frequency relative to other practices. Oddly, the practice of encouraging students to recognise that different people in their community have different perspectives on different issues (R) showed quite a visible decrease in relative frequency. However, this occurred because the average frequency of this particular practice actually did not change at all before and after NET. Since all other practices increased slightly in frequency, R's relative ranking decreased post-NET.

Figure 8 **Comparison of enterprise co-ordinators' practice before and after NET**



Enterprise co-ordinators' teaching priorities in relation to current practice

Figure 9 shows how enterprise co-ordinators' current practice (post-NET) compares with the priority rating that they assigned to different kinds of practices. The rank of priority given to each practice is shown on the x-axis. The further to the right on the x-axis, the higher priority the teacher gave to that practice. The y-axis indicates how often these practices were said to occur (relative to other practices). The higher on the y-axis, the more often that practice was said to occur (relative to other practices).

Figure 9 **Enterprise co-ordinators' teaching priorities in relation to current practice**

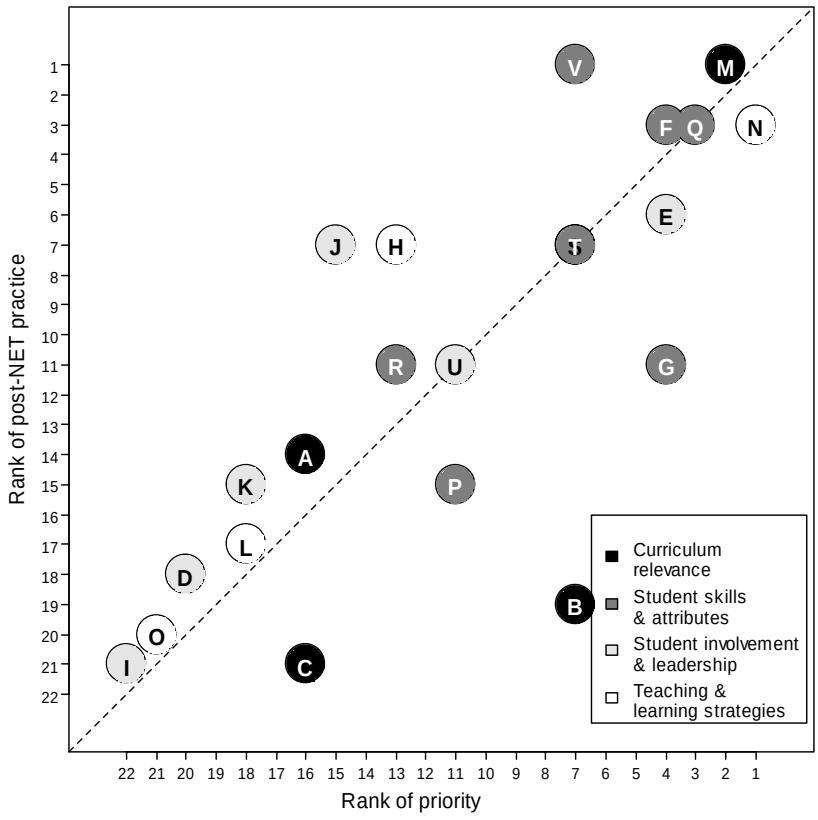


Figure 9 reveals some interesting information, particularly when we look at the data in relation to the four (colour-coded) categories described on p. 398. For example, of the four statements relating to "curriculum relevance", only one—discussing with students the relevance of their learning to their futures (M)—was rated as both high priority, and occurring often in classrooms. The remaining three "curriculum relevance" practices were ranked as occurring relatively infrequently: students learning the curriculum through community-based or "real-life" projects (A); making connections with other curriculum areas (B); and putting less emphasis on curriculum content "coverage", to allow time for deeper understanding or more relevant learning to occur (C). Interestingly, the second of these three statements (B) was rated as quite a high priority by the enterprise co-ordinators. It may be that they have found this difficult to do as yet.

Practices in the "student skills and attributes" group tended to be rated highly in terms of both priority and practice. These statements suggested that teachers encouraged students to think and act in particular kinds of ways—in other words, encouraging the development of particular kinds of skills and attributes within students. Interestingly, encouraging students to actively clarify their own ideas, values, and assumptions, and to think about their learning processes, during a sequence of work (G) was rated as high priority, but relatively lower in frequency of practice.

Relatively speaking, statements in the "student involvement and leadership" category tended to be rated lower in terms of both practice and priority. Three practices were given a particularly low ranking in comparison with other practices: planning curriculum and teaching in response to students' personal interests, social/ethical concerns, experiences, and cultural identities (K); involving students in making decisions about what should be learned and how this learning could happen (D); and involving students in making decisions about what should be assessed, how assessment should be carried out, and what the next steps are (I). In contrast, the less challenging practice of encouraging students to work in groups or teams (E) was ranked highly in priority and practice. Finding out about students' personal interests, social/ethical concerns, experiences, and cultural identities (J) was said to occur fairly often but was of middling priority, while students initiating and leading learning activities in the classroom/outside the classroom (U) happened slightly less often but was seen as more important.

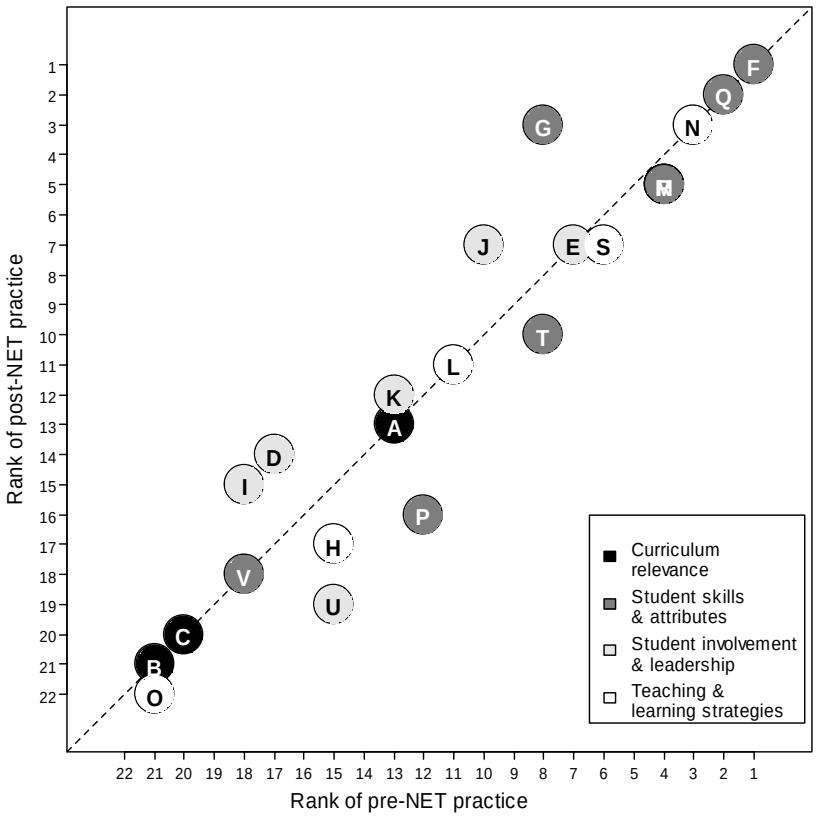
Practices in the final category, "teaching and learning strategies", were very spread. Students having opportunities to practise communicating their learning in a range of different modes (N), and encouraging students to gather information from a wide range of sources (S) were rated as a high priority and said to occur often. However, using learning technologies to support quality learning behaviours such as exploration, conjecture, or collaboration (L) and presenting the results of their learning/activities to an audience other than their teachers and classmates (O) were both rated relatively low in terms of priority and practice. Students using their knowledge to create "new" ideas, products, services, or relationships within their community as part of their learning (H) was of middling priority and practice, although as previously noted, this is one of the few practices which showed a significant increase in frequency post-NET, meaning that it happened relatively infrequently before NET.

The impacts of NET on other teachers' practice

The patterns for other teachers' practice before and after NET show some similarities to the enterprise co-ordinators' responses. Once again, most practices showed a very small increase in frequency after NET. Interestingly, the largest absolute shifts in frequency were practices D and I, both of which related to involving students in making decisions about learning and assessment. These practices both moved from being more of a "sometimes" to an "often" practice (see Appendix C).

Figure 10 shows the relative rankings for practice among these teachers. The most visible increase relative to other practices was: encouraging students to actively clarify their own ideas, values, and assumptions, and to think about their learning processes, during a sequence of work (G). Interestingly, students initiating and leading learning activities in the classroom/outside the classroom (U) and students having the opportunity to try out new and innovative ideas and take risks (P) both moved down a bit—mainly because their frequency increased less than most other practices. Practices J, D, and I moved slightly up, while H, S, and T moved very slightly down in relative ranking.

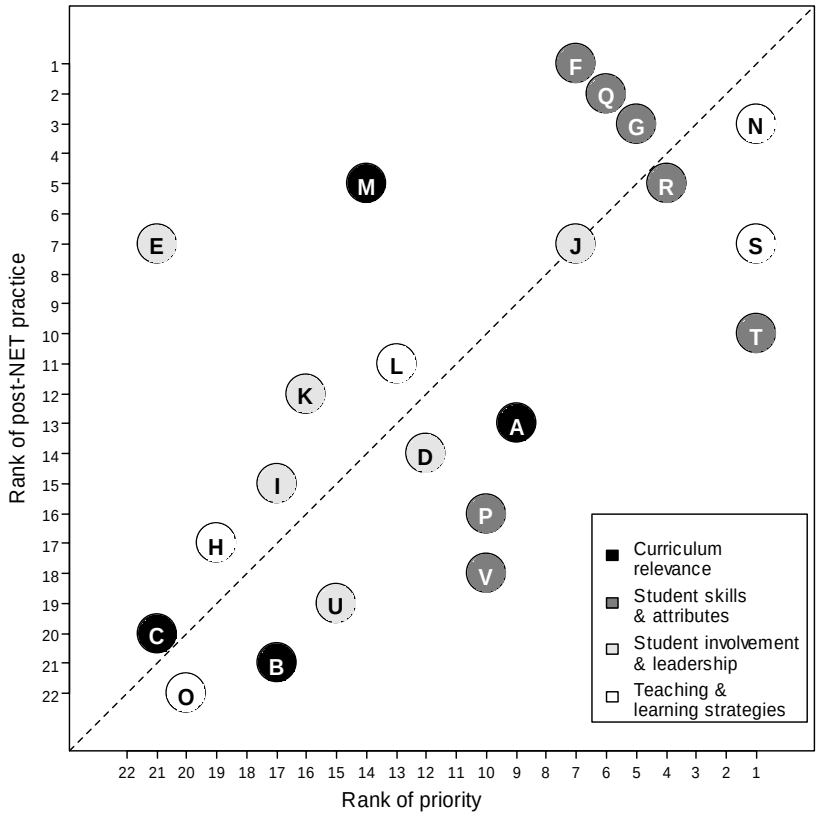
Figure 10 **Comparison of other teachers' practice before and after NET**



Other teachers' priorities in relation to current practice

Figure 11 shows how other teachers' current (post-NET) practice compares with the priority ranking that they assigned to different kinds of practices. Again, it is interesting to look at which practices were given the highest priority and practised most often by the other teachers. Some differences to the enterprise co-ordinators are evident. For example, in the "curriculum relevance" category, other teachers gave higher priority to students using learning technologies to support quality learning behaviours such as exploration, conjecture, or collaboration (L), and much lower priority to students using their knowledge to create "new" ideas, products, services, or relationships within their community as part of their learning (H), than did enterprise co-ordinators. The frequency of these two practices among other teachers correlated closely to their priority rating. Furthermore, other teachers prioritised encouraging students to gather information from a wide range of sources (S) more highly than enterprise co-ordinators.

Figure 11 **Other teachers' teaching priorities in relation to current practice**



Practices in the "students skills and attitudes" category were once again clustered among the highest in terms of priority and practice. Interestingly, encouraging students to think critically about where their information comes from (T) was rated as one of the most important priorities, but was middling in terms of its occurrence in practice. The most notable difference between enterprise co-ordinators and other teachers was in the statement about supporting the development of students' business knowledge and skills (V), which occurred relatively infrequently before and after NET. This difference is likely to reflect the different curriculum areas taught by the enterprise co-ordinators (mostly commerce teachers), versus the other teachers who came from a range of subject areas.

As with enterprise co-ordinators, the "student involvement and leadership" practices tended to rate somewhat lower in priority and practice. Once again there were some interesting differences between enterprise co-ordinators and other teachers. For example, while enterprise co-ordinators rated the practice of encouraging students to work in groups or teams (E) as a high priority, other teachers ranked it as one of the *lowest* priority practices relative to the other practices listed in Table 11. This is especially interesting as both rated it as occurring fairly frequently. However, other teachers placed more priority on finding out about students' personal interests, social/ethical concerns, experiences, and cultural identities (J) than did enterprise co-ordinators. Compared to enterprise co-ordinators, other teachers gave more importance to involving students in making

decisions about what should be learned and how this learning could happen (D) and involving students in making decisions about what should be assessed, how assessment should be carried out, and what the next steps are (I), although these were still relatively low and less frequent. Other teachers were much less likely to prioritise or practise students initiating and leading learning activities in the classroom/outside the classroom (U) than enterprise co-ordinators.

Like enterprise co-ordinators, other teachers thought it was important for students to have opportunities to practise communicating their learning in a range of different modes (N), and even more than enterprise co-ordinators they encouraged students to gather information from a wide range of sources (S) and use learning technologies to support quality learning behaviours such as exploration, conjecture, or collaboration (L). Like enterprise co-ordinators, other teachers rated students presenting the results of their learning/activities to an audience other than their teachers and classmates (O) very low in terms of priority and practice. Compared to enterprise co-ordinators, other teachers gave much lower priority and practice to students using their knowledge to create "new" ideas, products, services or relationships within their community as part of their learning (H).

Summary: the impacts of NET

- Just over half the respondents thought NET has been "effective" or "very effective" at supporting their school to develop an enterprising culture. A further 31 percent said it was "somewhat effective".
- Most aspects of the NET model were seen as important, particularly having an enterprise co-ordinator in the school, and having a management unit associated with this role.
- NET was judged as having a positive impact on the respondents' own enthusiasm and understanding of education for enterprise, with a lesser impact on the enthusiasm and understanding of other teachers. There was a less marked impact on curriculum and pedagogy, and a neutral or negative impact on teachers' workloads.
- NET was judged as having a positive impact for students, and for the school and its relationship to the community.
- Overall, teachers did not perceive their curriculum and pedagogical practices to have shifted extensively as a direct result of NET. However, enterprise co-ordinators said that since NET, students were more frequently developing business and knowledge skills, and using their knowledge to create "new" ideas, products, services, or relationships within their communities.
- There were some interesting differences in the priority that enterprise co-ordinators and other teachers placed on different kinds of practices.
- Overall, most staff tended to prioritise the development of students' skills, knowledge, and attitudes highly. This was often given higher priority than development of "relevant" curriculum and learning experiences. The lowest priority practices appeared to be those which involved students in decision making about their curriculum and learning experiences and

assessment of their learning. This finding will be contrasted with students' perspectives in the next section.

7. Students' education for enterprise experiences

This section provides a summary of the views and experiences of some students involved in education for enterprise in the case study schools. What kinds of education for enterprise were the students involved in? What did they think they learned from participating in education for enterprise? Finally, which aspects of the education for enterprise experience did they pinpoint as being the most important for their learning?

Students' experiences in education for enterprise

In total, 32 students from the four case study schools took part in focus group interviews. The youngest students were in Year 7, and the oldest were in Year 13. Table 12 provides a summary of the involvement of each focus group in education for enterprise.

Table 12 **Description of the student interview groups**

	Description of students	Involvement in E4E
School 1	Year 10 (7 students)	Year 9 CREATE in 2005, some take enterprise studies in 2006
	Year 11 (5 students)	Year 10 enterprise studies in 2005
School 2	Years 12 and 13 (7 students)	YES, BP Community Enterprise, YEP
School 3	Years 10 and 12 (6 students)	Community Problem Solving and Future Problem Solving
School 4	Year 7 (5 students)	PrEP
	Year 13 (2 students)	YES

The first group at School 1 had all participated in a project called CREATE in 2005, when they were in Year 9 (described on p. 25). Working in small teams, the students had to develop products to sell at a "market day" at the school. Among the products they created and sold were: chocolate truffles, jewellery, and cellphone dangles. The students contributed a small amount of money ($10) to seed their projects. They were allowed to keep whatever profits they made, and at least one group decided to use their profit to buy toys for children at the local hospital. Some of the students were taking the (optional) Year 10 enterprise studies course in 2006. The second group at School 1 had all taken Year 10 enterprise studies in 2005. In this half-year course, students spent a term learning how to make business plans, and a term developing and marketing their own products or services. Examples of products developed among the focus group included: printed

singlets, purse-packs, and hand-knitted custom scarves. One team put on a "talent quest" at their school, and approached a variety of local businesses to gain significant sponsorship for prizes for contestants (for example, $350 Internet vouchers). They also organised free soundgear and advertising from a local radio station.

The students at School 2 had all been involved in enterprise studies (some only at Year 10, some in Years 10 and 12). Some were involved in the BP Community Enterprise Project or the Young Entrepreneur Programme. Two projects developed by these students had won $1,000 implementation funding from BP Community Enterprise. In both cases, the students engaged with local surf-lifesaving clubs to identify and address specific needs of those organisations. One team designed and built a tower for surf lifesavers, and another designed and built signage for a particular beach.

The students at School 3 participated in one of two extra-curricular programmes: either Future Problem Solving (FPS), or Community Problem Solving (CPS). The CPS students had been part of the programme for several years, and their project centred around their school's relationship to a neighbouring retirement village. In the past, there had been poor relationships between the students at the school and residents of the retirement village. The CPS students spent time researching the root causes of this problem and concluded that it was a symptom of the lack of interpersonal connections between the students and the elderly people. They developed an extensive set of solutions to the problem, which have led to much greater engagement between students and the retirement village, much improved relationships, and joint endeavours such as planting a shared garden, and students interviewing residents for oral history projects.

The two groups of students at School 4 represented the two E4E initiatives present in that school: PrEP in the primary school, and YES in the senior secondary school. The Year 7 PrEP students had run small model businesses in their class, working in interconnected "teams" such as an entertainment group, a bank, a catering group, and so on. The Year 13 students were two of three students enrolled in YES in 2006. These students were planning to develop a CD of stories and information about their local region that could be marketed to tourists to listen to in their cars as they visited various places. The students were planning to interview different local people, including kaumātua, to research this local knowledge.

What did students think they learned, and why?

One particularly interesting point to make about the focus groups was that all the students were extremely articulate and forthcoming when talking about how education for enterprise had helped their learning. This is significant because, as we have often discovered in other research, school students do not always find it easy to talk about their own learning processes or the purposes for different learning activities they engage in at school. Whether this is because students often lack the conceptual framework, experiences, or vocabulary to explain their own learning is an open question. However, we have noticed that in schools and classrooms where students experience

pedagogy and approaches to curriculum that align with a "21st century" learning approach, they are often able to talk very insightfully about themselves as learners, and about the things that are most important to learn to succeed in the "real world" (see, for example, Boyd et al., 2005). This contrasts with students who experience the more "conventional" chalk-and-talk approach still common in many secondary schools sometimes, who often have little to say about the purposes and processes of their own learning.

When we interviewed them about their education for enterprise experience, focus group students across all four schools tended to say the same kinds of things about their learning. The most common themes are grouped together under illustrative student comments.

"Time management—that's a big one"

Time management was often the first thing students mentioned when talking about what they'd learned through education for enterprise. Students talked about the steep learning curves they'd experienced in seeking to manage their own time, particularly when working on short or extended team-based projects. For example, at School 1, students in the Year 9 CREATE and Year 10 enterprise studies projects were given limited amounts of school time to go into town to buy materials and meet with people in the business community for their projects. They quickly learned that they needed to plan their time in advance with almost military precision in order to achieve everything they needed in the allocated time. Students in several schools talked about learning how to manage their time in order to finish their education for enterprise projects as well as meeting the demands of assessment in other classes—often a tricky balancing act.

"You find out what you're good at. You find out a lot about yourself. You also learn a lot about other people, their attitudes towards things, and what makes them snap"

Working in teams with their peers had been an eye-opening experience for many of the students. As well as learning more about themselves and their own capabilities and weaknesses, students quickly learned about their team members and what was necessary for them to work together successfully, even when conflicts arose. One Year 7 student candidly spoke about learning that she could be "too bossy" in her role in PrEP, and said she modified her behaviour accordingly. Students in senior enterprise studies programmes talked about managing conflicts with their team members and learning to recognise when particular people should not be pushed "too far".

"We are all so different, but we are a team that can work really well together. And we can help each other with our weaknesses"

Students often pointed out how extreme the differences were in their team in terms of personality differences, learning styles, skills, and knowledge. However, learning to work together also meant that students learned how to see their differences as resources for one another. In one group, for example, one team member had advanced skills in ICT, and these were used to the advantage of the whole group. Meanwhile, the more confident public speakers in the group supported the less confident speakers to increase their abilities and confidence in this area.

"You learn to stick to your job. When you're in a small team, and one person doesn't pull their weight, the whole thing can fall apart"

In the same vein as the previous comments, the students learned how pivotal each person's contribution to a team endeavour could be. Some students had seen their own or other groups failing because some members had "slacked off". In some cases, it was decided that the students would share out their profits unevenly, by group consensus, so that those who contributed less time or effort received less than those who had carried more of the load.

"You remember things much better when you've learned them this way, because you can relate them to real experiences"

This type of comment was made in every focus group. The students were unequivocal in their view that an authentic experience leads to more meaningful and enduring learning than simply being told—or in the students' least favourite scenario, copying information off a whiteboard. When they learned by doing real things, they "actually remembered".

"Problem solving takes you to a whole different level of thinking"

Students felt that, compared to many other classes, education for enterprise required them to "actually think". One group of students involved in FPS or CPS felt that they now subconsciously employed the problem-solving process in everything they did. Some students felt that their involvement in education for enterprise helped them with NCEA insofar as they were now adept at "evaluating and discussing" ideas, because to do so meant you have to "completely understand something", and "[unlike education for enterprise], in a normal class you're never asked to say what you think or give your own opinion on things".

"It gets us ready for the real world. In a real job, you might know things 'by the book', but in a real situation you might not know what to do"

Many students talked about education for enterprise as arming them with skills for life. The Year 7 students thought PrEP gave them a little glance into what a future in business might be like. Students involved in CREATE felt that the team projects prepared them for working with other people in the future—recognising that sometimes you have to work with people you don't necessarily like or have much in common with. Students in one group felt that education for enterprise was "the most beneficial thing you'll ever do at school", because it taught them how to identify and address real problems in the real world. They noted that identifying a genuine community issue takes a very long time, and they had to do "heaps of research" before they figured out what their community project could be, "because it has to be a *real* problem, otherwise you're not really helping anyone".

"We've learned how to communicate with 'real' people, and have the confidence to talk to people in the community and businesses"

Over and over again, students talked about how their communication skills had improved, and how they *had* to improve, in order for students to achieve their goals. As one student put it: "You

can't go and talk to someone in a business the same way you'd talk to teachers or your mates." Students learned how to compose formal emails, write letters, and telephone businesses to explain their projects and seek support, advice, or sponsorship. Students also learned about the importance of following up on their communications—for example "if you make an appointment time to call someone, you *have* to follow through on it". The range of people with whom students interacted was, in some cases, extremely broad. For example, students in the School 3 CPS team talked about a community garden-planting day that included people aged from 11 to 92, "and we knew every single one of them". They felt that interacting with so many people outside the school was "definitely one of the best parts" of their involvement in education for enterprise.

"You get to know your teachers heaps better, and relate to them as 'people', not just as 'teachers' "

Students felt that the role of the teacher in an "education for enterprise" mode was significantly different to that of a "normal" classroom. Rather than teachers telling students what to do, teachers adopted the role of mentors, supporting students with advice and practical assistance when the students needed it. As one student put it: "Instead of saying to you, write this, write this, write this, it was 'Oh, do you need help with this? Do you want me to talk to this person? Would you like help making your product?' " This helped the students develop more personal, friendly, and trusting relationships with their teachers, and in students' opinions, greater respect for these teachers. Students involved in the Year 9 CREATE project at School 1 recognised that this was a completely new approach for some teachers, and they acknowledged that "for teachers to trust us [to be able to do things ourselves] was a big thing". Students in another group felt it was significant that teachers also saw students in a different light—that is, not just as students, but as "people with ideas".

"You learn that adults aren't always right"

One group felt that engaging with such a diverse mixture of people from their community had taught them to "respect every single person". Unfortunately, they had also learned that "people don't always respect young peoples' views". Learning how to put forward a strong and well-grounded case for themselves was thus another important learning outcome.

"It teaches you to take risks. If you have an idea you're more likely to think you could actually do something with it"

Students who had worked in teams to design and create something, or to solve a problem in their community, felt that the experience did help them to become more "enterprising" people. They recognised that their learning on this small scale would help them in the future if they got into a "real" business environment—or, if they were called upon to help solve future community problems.

"Enterprise education was so much harder than we thought it would be"

The students were clear that education for enterprise was "not for the faint-hearted". Although they counted it amongst their most enjoyable and rewarding school experiences, they had discovered that it was by no means easy. The amount of planning and self-management required was a surprise to many students, as were the levels of stress associated with bringing a project to fruition. Nevertheless, almost all students said they would prefer more of their school learning to happen in this way.

Which aspects of the education for enterprise learning experience were the most important?

The students had firm opinions about which aspects of education for enterprise contributed most significantly to their learning. These were:

- that they were involved in practical "hands-on" learning;
- engaging with "real" problems in their own communities;
- that students were responsible for themselves, including their own mistakes;
- being given the tools to think for themselves, rather than being told what to think;
- being trusted by their teachers to lead their own projects (and learning);
- having time to research and identify genuine community issues that they could engage with;
- having time to make connections with people and resources outside school;
- having time to learn deeply and through experience;
- being prepared to challenge themselves; and
- having opportunities and *reasons* to interact with people from outside their schools.

We think it is significant and extremely interesting that the aspects of their education for enterprise learning which students felt were the *most* important were, by and large, among the areas that teachers ranked as being of lower priority and relatively less frequent occurrence in their teaching. Namely: involving students in leading and making decisions about learning, curriculum, and assessment; reducing the focus on "coverage" of curriculum to allow more time for deeper or more relevant learning to occur; students learning the curriculum through community-based or "real-life" projects; and students communicating their learning to audiences other than their teachers or classmates. Possible reasons for, and implications of, this inverse relationship between what students and teachers appear to value is discussed further in the final section of this report.

Summary: students' education for enterprise experiences

- The 32 students in the focus groups were involved in a variety of education for enterprise activities, from PrEP, to Years 10 and 12 YES, to Future Problem Solving and Community Problem Solving.
- The students were, in general, highly articulate and reflective when it came to discussing their learning. They were able to explain clearly both what they had learned from being involved in education for enterprise, and which aspects of the teaching and learning experience contributed to these learning outcomes.
- Among the things that students felt they had learned were: how to manage their time effectively; what their own personal skills, strengths, and weaknesses were; how they learned; how to work with other people, including how to work with other people's strengths and weaknesses and manage conflict when it arose; how to plan their time and use of resources; how to communicate with a wide range of different people, including businesspeople and community members; how to deal with underperforming team members; and how things work in the "real world". Students also talked about getting to know their teachers in a different way, learning to respect different people, and how to gain the respect of other people for their knowledge and ideas.
- The features of education for enterprise most valued by students were: that they were leading their own projects (and their own learning); that they were doing "practical hands-on" activities with a relationship to the "real world"; and that they were able to, and had reasons to, interact with a range of people from outside the school, including businesspeople and community members. Students also felt that this kind of learning took a significant amount of time, and having sustained time on a project was important.
- It is interesting that the practices which students felt were more important for their learning tended to be rated as lower in priority and frequency by teachers (see Section 7).

8. Challenges, visions for the future, and suggested improvements to NET

This first part of this section looks at the challenges and sustainability issues schools were facing (or had faced in the past) with respect to education for enterprise. The second part discusses the visions for future development of education for enterprise in the schools. Finally, we identify ways in which participants thought NET could be improved.

Challenges and sustainability issues

Table 13 shows the most common challenges for schools engaging in education for enterprise (according to principals and enterprise co-ordinators). Foremost of these was the amount of time required to plan for education for enterprise approaches, and the demands of assessment.

Table 13 **Challenges for education for enterprise at the school**

Challenges	No. respondents (n=23)
The time required to plan for education for enterprise approaches	17
The demands of assessment	12
Staff changes	10
Staff resistance to education for enterprise approaches	9
Finding a suitable person to be the enterprise co-ordinator	7
Lack of suitable teaching spaces (e.g. not ICT-equipped, or large enough, or flexible enough spaces)	7
Liaising with people and groups outside the school	6
Lack of resources in the community	4
Lack of resources in the school	2
Other	7

As one enterprise co-ordinator noted, education for enterprise is fundamentally about engagement with the community. However:

> Who goes out there and finds those projects? It takes a lot of time to create those links. It's a big task, and it needs more support in order to push it into the mainstream [of the school curriculum]. (Enterprise co-ordinator)

Another teacher thought that the "real-world" focus of education for enterprise was important, and the concept of local business involvement with schools was great in theory, "but opens many problem issues for schools in reality, e.g. OSH, safety, egress".

Staff changes also created some difficulties, as did staff resistance or lack of understanding of education for enterprise. A challenge for at least two of the case study schools was that education for enterprise was still largely on the "fringe" of the school curriculum, and the principals of both these schools felt that energy would need to go into engaging more teachers. However, one principal questioned how this could be done when "it looks to some teachers like more work in an already busy schedule". This principal wondered:

> Is intrinsic motivation enough to encourage teachers to do [education for enterprise]? This will be one of the keys. In a commercial environment, you'd have to pay people more [to take on additional responsibilities in their job]. Education for enterprise will demand more from teachers—[in terms of] planning, willingness to try new things, etc. (Principal)

Several case study staff also felt that NCEA needed "trimming down" in order to allow students to engage in more enterprising learning activities. The tendency to escalate assessment activities during the first few years of NCEA implementation was a finding of NZCER's Learning Curves project. However, that research also suggested that these higher levels of assessment are not a *necessary* feature of the NCEA, but rather a consequence of ways it has been interpreted in practice in schools (Hipkins, Vaughan, with Beals, Ferral, & Gardiner, 2005).

Among the "other" challenges listed by survey respondents were: competition with other school priorities; lack of time for staff to plan together; a "lack of understanding from the top" about what education for enterprise is; a small, remote business community to draw from; and problems in the compatibility of the school computers and the Enterprise New Zealand website. One teacher in a low-decile school suggested:

> There should be a separate fund that comes with doing these sorts of programmes [e.g.] PrEP. We have minimal input from our parents financially, or support, and our budgets aren't very big. In my class we do the beg steal, or borrow, or I just pay out of my own pocket. (Teacher)

The statement above suggests that education for enterprise may require students and teachers to have access to materials other than the "traditional" learning resources available in schools. For low-decile schools, being unable to afford these resources could thus be a significant barrier to the development of students' education for enterprise activities.

Visions for future development

We asked principals and enterprise co-ordinators to describe how they saw education for enterprise developing in their schools over the next five years. Most respondents saw education

for enterprise as becoming a more integrated and embedded part of the school curriculum. At the most ambitious end of the spectrum, participants hoped for:

> A far greater involvement of all staff—via the E4E "cell" concept. (Principal)

At least one enterprise co-ordinator felt that:

> With proper planning, the opportunities and potential for E4E to be a driving force for the school and community, will be an exciting reality. (Enterprise co-ordinator)

At a less ambitious level, another enterprise co-ordinator wrote:

> I see it developing slowly as teachers become more willing to give it a go, I can't see it becoming a dominant force but I can see it being widespread and cross-curricular. (Enterprise co-ordinator)

Other respondents visualised either maintaining or rebuilding specific education for enterprise programmes which have been struggling, such as PrEP and YES. Several respondents felt it was important to develop clearer pathways for students in education for enterprise as they moved through the school:

> As the school grows—especially as the Years 7–8 students come through—they will lift the level of involvement and achievement in this area. (Principal)
>
> Broadening to include Years 0–6. Consolidation of what is already happening. (Principal)
>
> New course option for Year 10 in 2007. Building through 2008 in Year 11. Inclusion of E4E in maths and social studies in Year 11 2007 to build to Year 12–13 YES programme. At the moment [Years] 12–13 students are doing the YES course 'cold'—no prior business/economic learning to build on. (Enterprise co-ordinator)

One principal's vision for the future was of:

> More students leaving [school] able to start and run their own businesses. (Principal)

At School 4, there was still a great deal to be done to cultivate the school's education for enterprise culture, but two of the key staff had a clear vision of the kinds of enterprising activities they wanted their school to get involved in. These were very much community-based endeavours. For example, the rugby field at the bottom of the school's playground was currently a cross between a desert and a swamp. The enterprise co-ordinator and the other teacher wanted the school to work with the community to redevelop the field to their mutual benefit, with learning opportunities for students in science, business, and environmental education amongst other things. They felt it was critical for students' education for enterprise learning to engage them in activities that were visible to, and had a clear impact for, the community. Of course, making connections to people in the community takes time!

Suggested changes or improvements to NET

Ten of the 23 principals and enterprise co-ordinators wrote comments to suggest how NET could be changed or improved. Of these, six suggested NET needed to actively support the involvement of more people, across more curriculum areas. In this respect, it was felt that time and money were essential; particularly time for staff to work *within their own school* to cultivate education for enterprise:

> Being able to continue to have PD time back at school—another couple of half days would have made a great difference. We didn't budget for it as we didn't know about it when we set our budget in October the preceding year and there is no 'slack' in it to provide for something on this scale without careful planning. (Principal)

> It is a slow process to have other teachers see the benefits—the extra workload (or fear of it) frightens them off at times. (Enterprise co-ordinator)

One respondent felt that NET needed to ensure that principals and enterprise co-ordinators truly understood what education for enterprise is, while another pointed to difficulties getting community involvement and business partnerships in rural areas.

Some case study staff felt that, at the NET conferences, they had not seen examples that were any more advanced than what their own school was already achieving. These staff said they would prefer to hear more businesspeople and entrepreneurs speak at conferences, or else have the development time available to work with colleagues at their own schools.

At least three participants specifically commented on the need for NET to be (more) responsive to the needs, experiences, and cultural values of Māori. For example:

> We have a bicultural school 98% Maori. We are committed to our STUDENTS. The school is set in a traditional RURAL EUROPEAN settlement—some DO NOT respect our commitment to our students—Would rather have the school Europeanised and students oppressed! This MUST not happen!! (Principal)

> In Northland, especially, it is noticeable that many of the students involved in YES and YEP lack much Māori representation and that the programmes do not encompass Māori tikanga at all. (Enterprise co-ordinator)

An enterprise co-ordinator and teacher in one case study school felt that while NET was extremely supportive of Māori initiatives, the underlying model for NET was a Pākehā business model which didn't necessarily feel comfortable for all Māori students. These staff suggested that NET could think about running some of its programmes differently, for example: showcasing Māori approaches to enterprise at NET workshops; having some of the YES student cluster meetings on a marae; or promoting models that incorporated economic values which might be more appropriate or comfortable for Māori communities such as koha and bartering. As one teacher described it, for education for enterprise to succeed in her school's community, it was important to be "respectful of the human [resource] base" because "the community are providers" for the school. Requests for NET to be more responsive to the needs and values of Māori were

also evident in feedback from the 2005 NET workshops (Enterprise Northland, 2005), suggesting that this is definitely an area for further attention.

Finally, it should be noted that most case study participants and many survey respondents indicated a high level of appreciation and respect for the leaders of the NET project, and the involvement of the case study schools in NET could be attributed in part to the enthusiasm, reputations, and track records of the initial NET director and current regional NET co-ordinator.

Summary: challenges, future visions, and areas for improvement

- The most common challenges identified by schools were: the time required to plan for education for enterprise approaches, and the demands of assessment. A lack of understanding or enthusiasm for education for enterprise amongst other staff was also a problem for some schools.
- Future visions for education for enterprise ranged from it becoming a whole-school focus, to maintaining current programmes and slowly building clearer pathways for students as they moved through the years of schooling.
- Three central suggestions were made for improving the NET model. First, a continued (or increased) focus on bringing more staff on board; support for more planning time within schools; and the need to consider how NET can best meet the needs and cultural values of Māori students and communities.

9. Discussion and conclusion

Impacts of NET in Northland schools

Overall, NET appears to have been very successful in stimulating and supporting change at the school planning level in its first two years. There has been a high receptivity to the initiative amongst Northland secondary schools, and most of those involved seem to feel a strong connection between the goals and aims of education for enterprise, and their school's own values, culture, or philosophy. Most of the schools are now including education for enterprise in their policy and curriculum documents, and it is gaining a profile amongst students and the school community. However, as noted by Kirkley (2005), the schools are at various stages of development along the path towards becoming "enterprising" schools. Education for enterprise in the surveyed schools shows signs of a pattern typical to most school innovations in curriculum and pedagogy, namely: it is flourishing in some classes and subjects under the direction of enthusiastic teachers and heads of departments, but it is not yet embedded across the whole school curriculum and culture. Similar patterns have been found in other New Zealand research on school-based innovations, particularly those geared towards the development of a "21st century" learning culture (Bolstad & Gilbert, in press; Boyd et al., 2005). Schools 1 and 2 may be exceptions to this pattern, and Schools 3 and 4 appear to be moving in this direction (albeit from different starting points).

Impacts on pedagogy

On average, this evaluation identified only small changes in teaching practices before and after NET. However, this finding requires some qualification. For example, some staff, particularly those in the case study schools, said that they were "already converts" to the kinds of teaching and curriculum approaches that align with education for enterprise enterprising education prior to their involvement in NET. Relative to their practice before NET, the most notable overall increases for enterprise co-ordinators were: supporting the development of students' business knowledge and skills; and students using their knowledge to create "new" ideas, products, services, or relationships within their community as part of their learning. For other teachers, the largest absolute shifts in frequency were in two practices that related to involving students in making decisions about learning and assessment. These practices both moved from being something that happened "sometimes" to something that happened "often". This is encouraging, as will be discussed further below.

Teachers' pedagogical priorities

Perhaps the most interesting finding regarding the impact of NET on pedagogy was the analysis of the relative priorities teachers and enterprise co-ordinators assigned to different kinds of practice. For example, it is very encouraging that staff tended to place a very high priority on practices that developed students' abilities to:

- think critically;
- gather and make use of information from different sources;
- work in teams;
- take risks in their learning, and see mistakes as learning opportunities;
- be innovative; and
- recognise the different perspectives and values that surround issues.

All of the above suggest characteristics of individuals who are willing and able to try out new ideas, to innovate, and to take account of different values and perspectives in their thinking and actions, and who can operate very successfully in any kind of team-based environment, whether in a business, or within the community. However, it is interesting that teaching staff tended to assign a relatively lower priority to a range of practices that arguably provide the most meaningful contexts for the development of these abilities. For example:

- involving students in making decisions about curriculum and assessment;
- students learning the curriculum through community or "real-life" projects;
- students presenting the results of their learning to audiences other than their peers or teachers;
- planning curriculum in response to students' personal interests, social/ethical concerns, experiences, and cultural identities;
- making connections with other curriculum areas; and
- reducing the emphasis on content "coverage" on order to allow time for deeper understanding or more relevant learning to occur.

Interestingly, this second set of practices (particularly the first four) are among those that students felt were the *most important* aspects of their education for enterprise learning. The apparent mismatch between student views and teachers' priorities on these matters, we think, would be worth further investigation in any subsequent research.

The above findings are also interesting when viewed in relation to the proposed key competencies. The practices that tended to be ranked lowest in priority by teachers (but were valued highly by students) seem to align most closely to the key competency of "participating and contributing". Hipkins (2006) puts forward a strong case that this key competency provides a particularly strong focus for planning for meaningful student action that brings together all the other key competencies. This is because students need opportunities to *actively* develop the key competencies in authentic contexts. Hipkins notes that there are at least three ways to think about the "authenticity" of a student learning activity. First, is it authentic to the discipline area(s) in which students are learning? Second, is it authentic—meaning is it relevant or personally meaningful—to the students? Third, is it authentic in terms of being significant and meaningful to

society? Many of the student E4E activities described in this report appear to have been authentic in the first two senses (for example, student groups working to develop and sell products and services for student market days, or primary students operating a model business community in PrEP programmes). However, a few of the student education for enterprise activities appear to have been authentic in the third sense also. Instances where students were engaged in activities that were authentic and meaningful to students *and* to the community/society included: students at School 1 working with local early childhood education centres to develop and run sports programmes as part of their health and physical education learning, or te reo Māori students writing books for local kōhanga reo; students at School 2 working with local surf-lifesaving clubs to design and build signage and observation towers; students at School 3 researching a problem within their own school community and developing strategies to resolve this problem; and students at School 4 drawing on the natural and human resources in their community to produce a product (a CD guide) to support tourism in the area.

Why education for enterprise is still challenging

The examples above suggest that there is willingness in the NET schools to generate learning opportunities for students that do align with the principles of education for enterprise and are "authentic" opportunities for students to develop the key competencies. However, almost half the staff we surveyed agreed that education for enterprise was harder to plan for than "conventional" teaching and learning approaches, and enterprise co-ordinators and principals identified the time required to plan for education for enterprise approaches, and the demands of assessment, as two significant challenges for education for enterprise at their schools. As one enterprise co-ordinator stated, for education for enterprise to happen, structures and systems must be in place in the school to support this—and these are not necessarily the same structures and systems with which schools have operated in the past.

Many survey and interview respondents believed that the next step for their schools was to further embed education for enterprise by cultivating greater involvement of teachers across the whole curriculum. To achieve this, it will be necessary for staff to develop a "shared vision" for education for enterprise in their school. As one respondent put it:

> Each school will need to develop its own model. It is the journey that is important. (Principal)

The question of how to go about developing a shared vision in schools is the subject of a fast-growing area of educational research. To take one example: in a recent evaluation of the Curriculum Innovation Projects (CIPs) in five New Zealand secondary schools, Boyd et al. (2005) suggest that a key ingredient for supporting and sustaining pedagogical and curriculum change in the secondary school environment is "shared ownership of the vision"—that is, a set of shared beliefs, understandings, and clear goals (Russell, 2003; Stoll & Fink, 1996). The development of an initial vision, for both students and teachers, which could then be adopted or adapted by a

team, was crucial to the success of the CIPs. However, those who developed the initial vision were not necessarily the same people as those who enacted it, and some teachers who were not involved in the conceptualisation of the projects were not clear about what "the vision" was, were unsure whether the vision was practicable, and were uneasy about their involvement. Most of the schools found they needed to develop systems that allowed teachers to debate the beliefs and practices underpinning the vision and have input into the form of the projects. Staff needed time to contribute their experiences, debate their beliefs about learning, discuss their concerns, and adapt the vision if necessary to reflect their reality (Boyd, 2005).

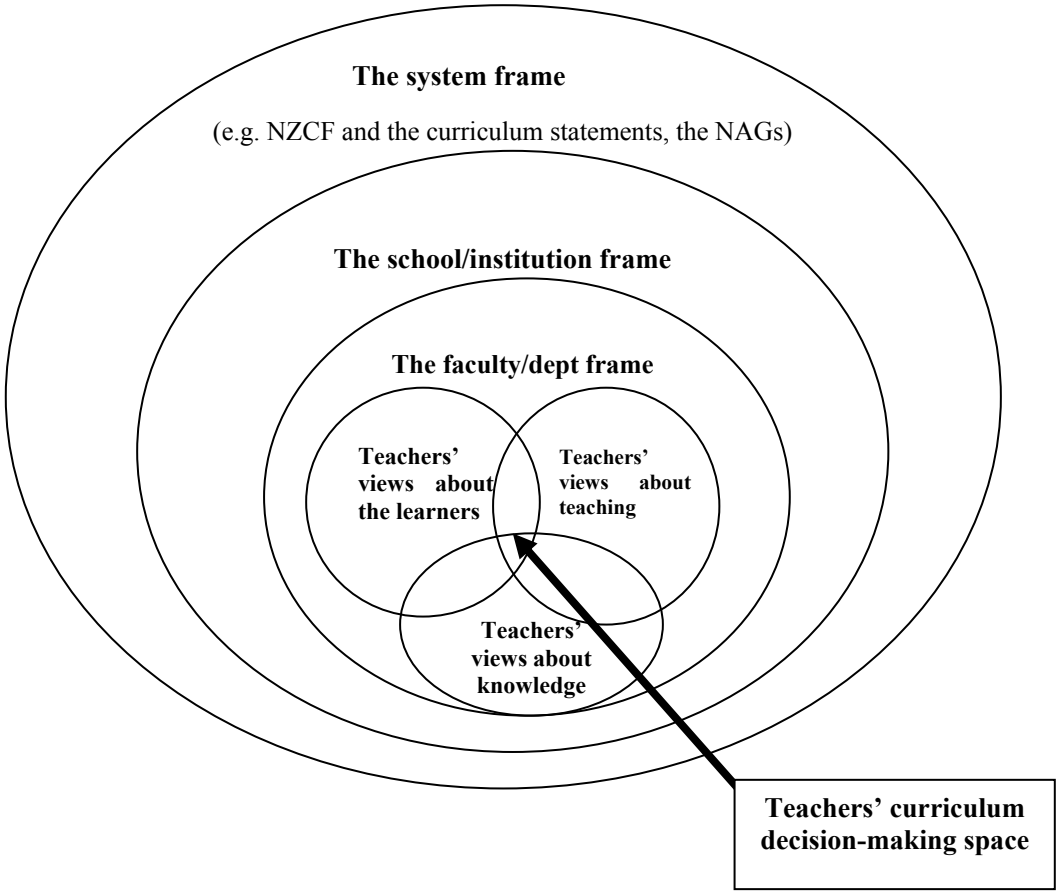
In NET case study schools, reluctant teachers and departments were often more receptive to education for enterprise once they'd seen it successfully in action. At least two enterprise co-ordinators described staff who had once been wary of E4E coming back after an ambitious education for enterprise activity in their school to say that they now saw why it was of value to students to learn in this way. However, simply recognising the value of "enterprising" approaches does not mean that all teachers know how to manage learning in this way in their classrooms, nor does it mean that curriculum, assessment, or even timetabling structures are geared towards supporting this. The CIP research cited above also suggests that an explicit awareness of the interplay between pedagogy, curriculum, and assessment, and how these interact with other school structures to support or inhibit change, is important at the school level. To this end, it is significant that leaders in the NET case study schools viewed the development of education for enterprise (or "authentic learning") as something that should occur in conjunction with reviews and redevelopments of the whole school curriculum.

There is also a need for coherent messages to be given at the national level to ensure that attempts to transform the ecology of schooling towards practices and systems that promote a lifelong learning orientation are deliberate and planned for. The introduction of the NCEA, and the current redevelopment of the New Zealand Curriculum, can both be seen as significant national attempts to move in this direction. However, this does not mean that national decisions about secondary curriculum and assessment issues are always made with a consistent emphasis on supporting 21st century learning, nor does it mean that teachers and school leaders can see how these changes might support meaningful changes in school practice that support a 21st century learning culture. Smith and Lovat's notion of teachers' "curriculum decision-making space" is a useful conceptual aid for thinking about this (Smith & Lovatt, 1990, cited in Brady, 1995). Smith and Lovat contend the curriculum decision options that are available to teachers are determined by five overlapping frames: the system frame; the school/institution frame; the faculty frame; the learners' frame; and the teacher self-frame (represented in Figure 12). The *system frame* is made up of all the decisions that teachers perceive have already been made by policy statements, curriculum documents, or other system directives (for example, national assessment requirements). The system frame may restrict teachers' decisions about content selection, sequencing of content, methods to impart content, and so forth. The *school/institution frame* comprises the restrictions the teacher perceives to have been placed on them within the school, including timetabling, access to resources, and class organisation. The *faculty frame* is made up of the decisions teachers perceive to have been

made by leaders in their department or faculty. These could include departmental coordination of topics to be taught from one year to another to avoid repetition and ensure development, and department/faculty policies about student assessment, resource allocation, etc. The *learners' frame* describes teachers' expectations regarding students; for example, about students' abilities, interests, likely behaviour, and educational needs. The *teacher's views about teaching frame* relates to teachers' professional self-concept and educational ideals. The final frame represents teachers' views about *knowledge*, particularly about the bodies of knowledge around which curricula are usually structured (mathematics, language, social science, etc.).

For curriculum development and innovation to happen in schools, space needs to be opened up within each of these frames. This suggests a need for ongoing support and learning conversations at the systems level, as well as support for school-level and department-level discussion and innovation.

Figure 12 **Teachers' curriculum decision-making space (reproduced from Bolstad, 2005)**



At present, the NET initiative is funded by, and underpinned by goals established at, the *system* level, and NET supports change and development at the *school* level. However, the degree to which the philosophies and practices of education for enterprise penetrate at the *faculty/department* level depends very much on how things happen within each school. At this level, the enterprise co-ordinator's ability to work with heads of department and other staff across the school is important, as is the support provided to the enterprise co-ordinator by the school leadership. The composition of the school's enterprise cell or enterprise group also has implications for the degree to which enterprising education is adopted across subject and curriculum areas. NET can act *indirectly* to support the growth of education for enterprise at this level, by encouraging the involvement of a wide range of staff in conferences and workshops and providing the resources to enable this to happen. As some case study staff suggested, further support from NET or other systems-level agencies could be channelled towards providing time and support for in-school professional development, enabling more staff to deliberate and plan their own school-based enterprising curriculum. Such professional development should be designed, in collaboration with school staff, to address the three inner circles in Figure 12: that is, teachers' views about the learners, teachers' views about teaching, and teachers' views about knowledge. It is suggested that staff professional development also includes elements of "student voice"—that is, giving staff opportunities to hear students describe the powerful learning that they have experienced through involvement in education for enterprise.

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Appendix A: Principal survey

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Principal survey

The evaluation of NET

The New Zealand Council for Educational Research (NZCER) is undertaking an evaluation of the Northland Enterprising Teachers (NET) initiative.

As part of the research we want to collect data from teachers, principals, enterprise coordinators, and students from the Northland schools who have been involved in NET.

The research findings will be used to prepare a report for the Ministry of Education, which will be published in hard copy and/or on the Internet. The research may be published in a variety of other forms, including conference presentations, and articles. However, we will not be naming the schools or individuals that took part, so you will not be identified. The research study is funded by the Ministry of Education

There are some questions that ask you to write your answer and some that ask you to choose from a list. Please give your responses by ticking the bubbles or circling the numbers where appropriate.

This survey will take approximately 20 minutes to complete.

Information about you

1. What is the name of your school? (*please tick ONE)*

○ (1) Bay of Islands College	○ (2) Bream Bay College	○ (3) Broadwood Area School
○ (4) Dargaville High School	○ (5) Kamo High School	○ (6) Kerikeri High School
○ (7) Northland College	○ (8) Okaihau College	○ (9) Opononi Area School
○ (10) Otamatea High School	○ (11) Pompallier Catholic College	○ (12) Ruawai College
○ (13) Springbank School	○ (14) Taipa Area School	○ (15) Tikipunga High School
○ (16) Whangarei Boys' High School	○ (17) Whangarei Girls' High School	○ (18) Whangaroa College
○ (19) Other School (name)_____		

2. What is your position/level of responsibility in the school?

○ (1) Principal or co-principal ○ (2) DP or AP

Your school's involvement in E4E

3. Was your school involved in education for enterprise (E4E) *before* you got involved in NET?

○ (1) Yes ○ (2) No ○ (3) Not sure

If yes, please describe your school's prior involvement in education for enterprise in the box below.

4. Does your school have a staff member(s) who are designated as "enterprise coordinator"?

○ (1) Yes ○ (2) No ○ (3) Not sure

5. Does your school have an "enterprise cell" or an "enterprise group" consisting of a small group of staff (and possibly students) who are responsible for planning and coordinating enterprise education within your school?

○ (1) Yes ○ (2) No ○ (3) Not sure

6. Which (if any) of the following enterprise-oriented activities are happening in your school at the moment? *(tick all that apply)*

- ○ (a) Young Enterprise Scheme (YES)
- ○ (b) Enterprise Studies Programme (ESP)
- ○ (c) Financial Literacy Programme (FLP) Years 11-13 (ENZT programme)
- ○ (d) BP Community Enterprise Projects
- ○ (e) NZIM Certificate in Management
- ○ (f) Primary Enterprise Programme (PrEP)
- ○ (g) Financial studies in Year 13 (ENZT programme)
- ○ (h) Other enterprise-oriented activities *(please describe in the box below)*

7. Please indicate which year level(s) of students you consider to be involved in education for enterprise at your school, and whether this includes *all, most*, or *some* students at these year levels. (*Circle the appropriate numbers on the grid)*

	INVOLVEMENT IN E4E				
	N/A	**All students**	**Most students**	**Some students**	**None**
(a) Years 1 - 6	1	2	3	4	5
(b) Years 7 and 8	1	2	3	4	5
(c) Year 9		2	3	4	5
(d) Year 10		2	3	4	5
(e) Year 11		2	3	4	5
(f) Year 12		2	3	4	5
(g) Year 13		2	3	4	5

8. In your view, does education for enterprise have any **special relevance or relationship** to the **values, philosophy**, or **culture** of your school?

○ (1) Yes ○ (2) No ○ (3) Not sure

If yes, please describe this in the box below.

Education for Enterprise at your school

9. Please indicate how strongly you *agree* or *disagree* with the following statements about education for enterprise at your school, by circling a number on the grid below. *(1 = Strongly disagree, 3=neutral, 5=Strongly agree)*

	Strongly disagree	Disagree	Neutral	Agree	Strongly agree
(a) I have a strong understanding of the principles of education for enterprise	1	2	3	4	5
(b) I am excited and enthusiastic about making education for enterprise happen at this school	1	2	3	4	5
(c) All the teachers at this school have a strong understanding of the principles of "education for enterprise"	1	2	3	4	5
(d) All the teachers at this school are excited and enthusiastic about making education for enterprise happen at this school	1	2	3	4	5
(e) Some teachers at this school don't understand, or are resistant towards, education for enterprise	1	2	3	4	5
(f) Students at this school know this is an "enterprising" school	1	2	3	4	5
(g) Students at this school are excited and enthusiastic about being involved in education for enterprise	1	2	3	4	5
(h) Parents know this is an "enterprising" school	1	2	3	4	5
(i) Parents are excited and enthusiastic about their students being involved in education for enterprise	1	2	3	4	5
(j) The local community/businesses/people know this is an "enterprising" school	1	2	3	4	5
(k) Education for enterprise is a central organising concept for curriculum and teaching in this school	1	2	3	4	5
(l) Education for enterprise is commonly discussed in staff meetings	1	2	3	4	5
(m) Education for enterprise is commonly discussed in school assemblies	1	2	3	4	5
(n) Education for enterprise is commonly discussed in classrooms	1	2	3	4	5
(o) Education for enterprise is embedded in school planning and infrastructure	1	2	3	4	5
(p) Education for enterprise is harder to plan for than "conventional" approaches to curriculum, teaching, and learning	1	2	3	4	5
(q) Education for enterprise is more rewarding for students than "conventional" approaches to curriculum, teaching, and learning	1	2	3	4	5
(r) We still have a long way to go in developing an "enterprising culture" in this school	1	2	3	4	5

10. Is "education for enterprise" included or mentioned in the following kinds of **school documents**? *(Show by circling a number on the grid)*

	Yes	No	Not sure
(a) Policy documents (e.g. school charter, strategic plan, annual report)	1	2	3
(b) School-level, department-level, or syndicate-level curriculum plans	1	2	3
(c) Teachers' own curriculum, teaching, and assessment plans	1	2	3
(d) Teacher appraisal processes	1	2	3
(e) School newsletters	1	2	3
(f) Reports of student learning/achievement to parents	1	2	3
(g) On the school website	1	2	3
(h) In prospectuses/information for new students	1	2	3
(i) Other (please specify)			

The place of education for enterprise in the curriculum

11. To what extent is education for enterprise *cross-curricular* or integrated across learning areas/subjects/departments in your school? *(please choose one)*

○ (1) E4E is completely cross-curricular: it integrates across all the subjects/learning areas.

○ (2) E4E occurs in many several subjects/learning areas, but not all of them

○ (3) Education for enterprise mainly involves one or two subjects/learning areas.

12. Which learning areas/subjects/departments are currently the *most* involved in your school's education for enterprise activities? *(tick all that apply)*

○ (a) Commerce/business/accounting
○ (b) Mathematics
○ (c) Science
○ (d) Technology
○ (e) Social science
○ (f) Language and languages
○ (g) The arts
○ (h) Health and physical education
○ (i) Other(s) (name)

13. Which learning areas/subjects/departments are currently the *least* involved in your school's education for enterprise activities? *(shade all that apply)*

○ (a) Commerce/business/accounting
○ (b) Mathematics
○ (c) Science
○ (d) Technology
○ (e) Social science
○ (f) Language and languages
○ (g) The arts
○ (h) Health and physical education
○ (i) Other(s) (name)

14. Does education for enterprise occur more in some subjects/learning areas at your school than in others? If so, can you explain why?

Impacts of the NET project

15. How would you rate the impact of your school's involvement in the NET project on the following:

	Negative impact	No impact	Minor positive	Major positive
a) Your understanding of the principles of education for enterprise	1	2	3	4
b) Teachers' understanding of the principles of education for enterprise	1	2	3	4
c) Your enthusiasm to make education for enterprise happen at this school	1	2	3	4
d) Teachers' enthusiasm to make education for enterprise happen at this school	1	2	3	4
e) The way the curriculum is planned at a whole-school level	1	2	3	4
f) The way the curriculum is planned at the departmental level	1	2	3	4
g) The way teachers plan their classroom curriculum and lessons	1	2	3	4
h) Teachers' role(s) in the classroom	1	2	3	4
i) Teachers' workloads	1	2	3	4
j) Students' enjoyment of learning	1	2	3	4
k) Students' achievement in learning	1	2	3	4
l) Students' attitudes towards, or interest in, the local community	1	2	3	4
m) Students' future aspirations (e.g. for further learning or careers)	1	2	3	4
n) Students' involvement in decision-making in the school	1	2	3	4
o) Students' development into "enterprising individuals"	1	2	3	4
p) The relevance of the curriculum for students	1	2	3	4
q) The school's relationship to local businesses	1	2	3	4
r) Your school's relationship to the local community	1	2	3	4

Your opinion of the NET project

16. Overall, how effective do you think the NET project has been in supporting your school to develop an "enterprising culture"?

○ (1) Not at all effective ○ (2) Somewhat effective ○ (3) Effective ○ (4) Very effective

17. How important do you think the following aspects of the NET "model" have been for supporting E4E in your school?

	Very important	Important	Somewhat important	Not important	Has not happened
(a) The educational ideas and values that underpin the NET initiative	5	4	3	2	1
(b) Support from Enterprise Northland	5	4	3	2	1
(c) The involvement of school management (e.g. principal or deputy principal) in the NET programme	5	4	3	2	1
(d) Having an Enterprise Coordinator in the school	5	4	3	2	1
(e) The management unit for the Enterprise Coordinator	5	4	3	2	1
(f) Having an enterprise cell in the school	5	4	3	2	1
(g) Participation in regional and cluster E4E professional development workshops	5	4	3	2	1
(h) Leadership awards for students engaged in E4E	5	4	3	2	1
(i) Support from businesses and community groups for E4E	5	4	3	2	1

18. What (if any) other aspects of the NET model do you think have been particularly good, effective, or important for your school?

19. What (if any) aspects of the NET model do you think could be changed or improved?

Challenges and sustainability issues

20. Which of the following are, or have been, challenges for education for enterprise at your school? *(tick all that apply)*

- ○ (a) Finding a suitable person to be the enterprise coordinator
- ○ (b) The time required to plan for education for enterprise approaches
- ○ (c) Staff changes
- ○ (d) Staff resistance to education for enterprise approaches
- ○ (e) Lack of resources in the school
- ○ (f) Lack of resources in the community
- ○ (g) Lack of suitable teaching spaces (e.g. not ICT-equipped, or large enough, or flexible enough spaces)
- ○ (h) Liaising with people and groups outside the school
- ○ (i) The demands of assessment
- ○ (j) Other (please describe)_____

21. How do you see education for enterprise developing in your school over the next 5 years?

22. Is there anything else you would like to say about your school's involvement in NET?

Thank you for your participation :)

Appendix B: Priority ratings for different teaching practices (average)

Teacher self-reflection: Impact of NET on your teaching

In this final section, we are asking you to reflect on the impact of the NET project on your teaching practices **in the class(es) in which you think <u>you</u> take an "education for enterprise" approach to teaching.**

The next few pages present a range of statements about different kinds of teaching, learning, and assessment practices which might reflect an "enterprising" education approach.

Please look carefully at each statement, and indicate

a) what **<u>priority</u>** you think should be given to each of these practices;
b) how often these practices occurred in your classes *<u>before</u>* your school got involved in NET, and;
c) how often these practices happen in your classrooms **NOW**.

Remember, there are no right or wrong answers!

We are interested in <u>your</u> views and experiences.

This information will help us to understand the impact of NET project.

The impact of NET on your teaching practices

Statements about teaching, learning and assessment	What <u>priority</u> do you think should be given to each of these practices?					How often did these practices happen in your classes before your school got involved in NET?				How often do these practices happen in your classes NOW?			
	Very Low	Low	Moderate	High	Very High	Hardly ever/ never	Some-times	Often	All/ most of the time	Hardly ever/ never	Some-times	Often	All/ most of the time
(a) Students learning the curriculum through community-based or "real-life" projects	1	2	3	4	5	1	2	3	4	1	2	3	4
(b) Making connections with other curriculum areas	1	2	3	4	5	1	2	3	4	1	2	3	4
(c) Putting less emphasis on curriculum content 'coverage', to allow time for deeper understanding or more relevant learning to occur	1	2	3	4	5	1	2	3	4	1	2	3	4
(d) Involving students in making decisions about what should be learned and how this learning could happen.	1	2	3	4	5	1	2	3	4	1	2	3	4
(e) Encouraging students to work in groups or teams	1	2	3	4	5	1	2	3	4	1	2	3	4
(f) Encouraging students to recognise and value the different perspectives, values, skills, and knowledge of their peers when working in teams	1	2	3	4	5	1	2	3	4	1	2	3	4
(g) Encouraging students to actively clarify their own ideas, values, and assumptions, and to think about their learning processes, during a sequence of work	1	2	3	4	5	1	2	3	4	1	2	3	4
(h) Students using their knowledge to create "new" ideas, products, services or relationships within their community as part of their learning	1	2	3	4	5	1	2	3	4	1	2	3	4
(i) Involving students in making decisions about what should be assessed, how assessment should be carried out and what the next steps are	1	2	3	4	5	1	2	3	4	1	2	3	4
(j) Finding out about students' personal interests, social/ethical concerns, experiences, and cultural identities	1	2	3	4	5	1	2	3	4	1	2	3	4
(k) Planning curriculum and teaching in response to students' personal interests, social/ethical concerns, experiences, and cultural identities	1	2	3	4	5	1	2	3	4	1	2	3	4

Statements about teaching, learning and assessment	What priority do you think should be given to each of these practices?					How often did these practices happen in your classes before your school got involved in NET?				How often do these practices happen in your classes NOW?			
	Very Low	Low	Moderate	High	Very High	Hardly ever/ never	Some-times	Often	All/ most of the time	Hardly ever/ never	Some-times	Often	All/ most of the time
(l) Students using learning technologies to support quality learning behaviours such as exploration, conjecture, or collaboration (e.g spreadsheets, Internet, data loggers, data bases, digital learning resources)	1	2	3	4	5	1	2	3	4	1	2	3	4
(m) Discussing with students the relevance of their learning to their futures	1	2	3	4	5	1	2	3	4	1	2	3	4
(n) Students having opportunities to practice communicating their learning in a range of different modes (writing, speaking, multimedia, etc.)	1	2	3	4	5	1	2	3	4	1	2	3	4
(o) Students presenting the results of their learning/activities to an audience other than their teachers and classmates.	1	2	3	4	5	1	2	3	4	1	2	3	4
(p) Students having the opportunity to try out new and innovative ideas and take risks	1	2	3	4	5	1	2	3	4	1	2	3	4
(q) Encouraging students to see "mistakes" as learning opportunities	1	2	3	4	5	1	2	3	4	1	2	3	4
(r) Encouraging students to recognise that different people in their community have different perspectives on different issues	1	2	3	4	5	1	2	3	4	1	2	3	4
(s) Encouraging students to gather information from a wide range of sources	1	2	3	4	5	1	2	3	4	1	2	3	4
(t) Encouraging students to think critically about where their information comes from	1	2	3	4	5	1	2	3	4	1	2	3	4
(u) Students initiating and leading learning activities in the classroom/outside the classroom	1	2	3	4	5	1	2	3	4	1	2	3	4
(v) Supporting the development of students' business knowledge and skills	1	2	3	4	5	1	2	3	4	1	2	3	4

Thank you for your participation :)

Appendix C: Practices before and after NET

Enterprise co-ordinators

NB: (1= Hardly ever/Never, 2= Sometimes, 3=Often, 4=All/most of the time)

	Statements about practice	Pre-NET average	Post-NET average	Difference
A.	Students learning the curriculum through community-based or "real-life" projects	2.13	2.75	0.62
B.	Making connections with other curriculum areas	1.89	2.33	0.44
C.	Putting less emphasis on curriculum content 'coverage', to allow time for deeper understanding or more relevant learning to occur	1.63	2.13	0.50
D.	Involving students in making decisions about what should be learned and how this learning could happen.	1.89	2.44	0.55
E.	Encouraging students to work in groups or teams	2.67	3.11	0.44
F.	Encouraging students to recognise and value the different perspectives, values, skills, and knowledge of their peers when working in teams	2.78	3.22	0.44
G.	Encouraging students to actively clarify their own ideas, values, and assumptions, and to think about their learning processes, during a sequence of work	2.56	2.89	0.33
H.	Students using their knowledge to create "new" ideas, products, services or relationships within their community as part of their learning	2.11	3.00	0.89
I.	Involving students in making decisions about what should be assessed, how assessment should be carried out and what the next steps are	1.75	2.13	0.38
J.	Finding out about students' personal interests, social/ethical concerns, experiences, and cultural identities	2.88	3.00	0.12
K.	Planning curriculum and teaching in response to students' personal interests, social/ethical concerns, experiences, and cultural identities	2.33	2.67	0.34
L.	Students using learning technologies to support quality learning behaviours such as exploration, conjecture, or collaboration (e.g. spreadsheets, Internet, data loggers, data bases, digital learning resources)	2.00	2.56	0.56
M.	Discussing with students the relevance of their learning to their futures	2.78	3.33	0.55
N.	Students having opportunities to practice communicating their learning in a range of different modes (writing, speaking, multimedia, etc.)	2.89	3.22	0.33
O.	Students presenting the results of their learning/activities to an audience other than their teachers and classmates.	1.78	2.22	0.44
P.	Students having the opportunity to try out new and innovative ideas and take risks	2.00	2.67	0.67
Q.	Encouraging students to see "mistakes" as learning opportunities	2.78	3.22	0.44
R.	Encouraging students to recognise that different people in their community have different perspectives on different issues	2.89	2.89	0.00
S.	Encouraging students to gather information from a wide range of sources	2.56	3.00	0.44
T.	Encouraging students to think critically about where their information comes from	2.78	3.00	0.22
U.	Students initiating and leading learning activities in the classroom/outside the classroom	2.33	2.89	0.56
V.	Supporting the development of students' business knowledge and skills	2.44	3.33	0.89

Other teachers

NB: (1= Hardly ever/Never, 2= Sometimes, 3=Often, 4=All/most of the time)

Statements about practice		Pre-NET average	Post-NET average	Difference
A.	Students learning the curriculum through community-based or "real-life" projects	2.50	2.90	0.40
B.	Making connections with other curriculum areas	2.00	2.36	0.36
C.	Putting less emphasis on curriculum content 'coverage', to allow time for deeper understanding or more relevant learning to occur	2.11	2.40	0.29
D.	Involving students in making decisions about what should be learned and how this learning could happen.	2.30	2.82	0.52
E.	Encouraging students to work in groups or teams	3.11	3.27	0.16
F.	Encouraging students to recognise and value the different perspectives, values, skills, and knowledge of their peers when working in teams	3.44	3.55	0.11
G.	Encouraging students to actively clarify their own ideas, values, and assumptions, and to think about their learning processes, during a sequence of work	3.00	3.36	0.36
H.	Students using their knowledge to create "new" ideas, products, services or relationships within their community as part of their learning	2.33	2.64	0.31
I.	Involving students in making decisions about what should be assessed, how assessment should be carried out and what the next steps are	2.22	2.73	0.51
J.	Finding out about students' personal interests, social/ethical concerns, experiences, and cultural identities	2.89	3.27	0.38
K.	Planning curriculum and teaching in response to students' personal interests, social/ethical concerns, experiences, and cultural identities	2.50	2.91	0.41
L.	Students using learning technologies to support quality learning behaviours such as exploration, conjecture, or collaboration (e.g. spreadsheets, Internet, data loggers, data bases, digital learning resources)	2.67	3.00	0.33
M.	Discussing with students the relevance of their learning to their futures	3.22	3.33	0.11
N.	Students having opportunities to practice communicating their learning in a range of different modes (writing, speaking, multimedia, etc.)	3.29	3.36	0.07
O.	Students presenting the results of their learning/activities to an audience other than their teachers and classmates.	2.00	2.08	0.08
P.	Students having the opportunity to try out new and innovative ideas and take risks	2.56	2.67	0.11
Q.	Encouraging students to see "mistakes" as learning opportunities	3.33	3.50	0.17
R.	Encouraging students to recognise that different people in their community have different perspectives on different issues	3.22	3.33	0.11
S.	Encouraging students to gather information from a wide range of sources	3.13	3.27	0.14
T.	Encouraging students to think critically about where their information comes from	3.00	3.09	0.09
U.	Students initiating and leading learning activities in the classroom/outside the classroom	2.33	2.42	0.09
V.	Supporting the development of students' business knowledge and skills	2.22	2.50	0.28

Appendix D: Priority ratings for different teaching practices (average)

N.B. 5 = Very high, 3 = Moderate, 1 = Very low.

Statements about practice		Enterprise Co-ordinators	Teachers
A.	Students learning the curriculum through community-based or "real-life" projects	3.75	4.33
B.	Making connections with other curriculum areas	4.22	3.91
C.	Putting less emphasis on curriculum content 'coverage', to allow time for deeper understanding or more relevant learning to occur	3.75	3.73
D.	Involving students in making decisions about what should be learned and how this learning could happen.	3.56	4.18
E.	Encouraging students to work in groups or teams	4.33	3.73
F.	Encouraging students to recognise and value the different perspectives, values, skills, and knowledge of their peers when working in teams	4.33	4.36
G.	Encouraging students to actively clarify their own ideas, values, and assumptions, and to think about their learning processes, during a sequence of work	4.33	4.45
H.	Students using their knowledge to create "new" ideas, products, services or relationships within their community as part of their learning	4.00	3.82
I.	Involving students in making decisions about what should be assessed, how assessment should be carried out and what the next steps are	3.11	3.91
J.	Finding out about students' personal interests, social/ethical concerns, experiences, and cultural identities	3.89	4.36
K.	Planning curriculum and teaching in response to students' personal interests, social/ethical concerns, experiences, and cultural identities	3.67	4.00
L.	Students using learning technologies to support quality learning behaviours such as exploration, conjecture, or collaboration (e.g. spreadsheets, Internet, data loggers, data bases, digital learning resources)	3.67	4.17
M.	Discussing with students the relevance of their learning to their futures	4.56	4.15
N.	Students having opportunities to practice communicating their learning in a range of different modes (writing, speaking, multimedia, etc.)	4.67	4.50
O.	Students presenting the results of their learning/activities to an audience other than their teachers and classmates.	3.44	3.77
P.	Students having the opportunity to try out new and innovative ideas and take risks	4.11	4.23
Q.	Encouraging students to see "mistakes" as learning opportunities	4.44	4.38
R.	Encouraging students to recognise that different people in their community have different perspectives on different issues	4.00	4.46
S.	Encouraging students to gather information from a wide range of sources	4.22	4.50
T.	Encouraging students to think critically about where their information comes from	4.22	4.50
U.	Students initiating and leading learning activities in the classroom/outside the classroom	4.11	4.08
V.	Supporting the development of students' business knowledge and skills	4.22	4.23