Education and enterprise: Learning at the interface

Final report from the Regional Education for Enterprise Clusters Evaluation

Report prepared for the Ministry of Education, New Zealand Trade and Enterprise and the Tindall Foundation

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Table of contents

Tables

Figures

Appendices

Executive summary

About the Regional E4E Clusters Initiative

The Regional Education for Enterprise (E4E) Clusters Initiative was a New Zealand Trade and Enterprise (NZTE) and Ministry of Education (MOE) partnership, supported by the Tindall Foundation. Beginning in 2007, four regional clusters of schools in West Coast, Nelson, Manukau and Northland participated in the initiative through the Enterprise Culture and Skills Activities (ECSA) Fund administered by NZTE.

The Regional E4E Clusters Initiative sits within a wider context of several years of national E4E development. For the past three to five years, schools in a number of different regions of New Zealand have been developing E4E and/or related enterprise education initiatives and programmes, sometimes as part of small clusters supported by regional economic development agencies, local businesses and community groups. The Regional E4E Clusters Initiative was intended to build on and extend these localised approaches, stepping beyond existing initiatives in enterprise education with the goal of encouraging whole-school changes to develop an enterprising approach to all teaching and learning.

Funding and support for the regional clusters initiative

Between 2007 and 2009, funding for the Regional Clusters Initiative was provided through NZTE's ECSA Fund, the MOE and the Tindall Foundation, and this funding enabled each cluster to appoint a regional E4E co-ordinator. The regional co-ordinators were each based in a regional economic agency or educational organisation, and their role was to work with schools, businesses and community groups to enhance E4E understanding and develop E4E partnerships between schools and communities/businesses. In 2007 the MOE appointed a national E4E co-ordinator whose role included support for the regional clusters and development of resources for national use. In 2008 NZTE also funded additional professional development provision within the clusters.

Theory and context for E4E

New Zealand's E4E approach has developed organically, and its theory base is still developing, in large part through the practice in the Regional E4E Clusters Initiative and other E4E projects.

Internationally, enterprise education is seen in many different ways by people within the field of education. In practice, it can encompass a variety of different educational emphases, ranging from simply understanding how businesses works, to learning entrepreneurial skills to enable people to

start and manage businesses, to learning how to become a person who is enterprising in all aspects of their life. The concept of enterprise is often linked with the concept of entrepreneurship, and many people in education associate this idea with the field of business and economics education. However, others argue that there are many versions of entrepreneurship, and while it is often constructed as an elitist and economic phenomenon, it *could* be understood as an everyday and collective social phenomenon that brings about civic engagement, ecological sustainability and social transformation.

New Zealand's E4E emphasis on authentic learning in dynamic relationships with community partnerships gives it the potential to align with contemporary ideas about 21st century learning. There are compelling arguments that the opportunities and challenges of the 21st century—social, environmental, economic and political—are so different from those of the past that they require us to seriously rethink the way we support young people to meet them. There is a growing interest in how schooling might change to better match the changes that have taken place in society, how economies work and how employment is structured in the 21st century. E4E provides one possible context in which these ways of teaching and learning *could* be put into practice. This evaluation uses contemporary "21st century learning" ideas as one lens for examining the nature of E4E practice that emerged in the Regional E4E Clusters Initiative.

The evaluation

The New Zealand Council for Educational Research (NZCER) was contracted by NZTE, the MOE and the Tindall Foundation to conduct an evaluation of the Regional E4E Clusters Initiative through 2007 and 2008.[1]

The evaluation design involved elements of formative, process and summative evaluation. It was designed to support the ongoing development of E4E by examining the processes by which the clusters established and pursued their E4E objectives/practices, and by investigating the outcomes that they achieved within the evaluation time frame.

ECSA background material, the draft E4E strategy and a subset of specific evaluation questions from the funders pointed to some of the outcomes that the MOE and NZTE hoped might be achieved over the three years. However, the Regional E4E Cluster Initiative was specifically set up as an innovative space for schools and regions to work collaboratively to set their own goals and test out different approaches to E4E in order to create the kind of outcomes most suited to each unique environment. In such an evaluation it is not possible to anticipate all possible outcomes at the outset. Therefore the evaluation looked across three focuses—cluster focus, national strategy focus and 21st century learning focus—to understand the aims and development of practice according to a range of stakeholders. These findings were used to develop an overall

[1] Other national-level E4E developments such as the Building Enterprising Students Today (BEST) and Enterprising Technologies projects were not part of this evaluation.

picture of change (see page 26) which provided a structure for evaluating the regional clusters initiative against six broad aims. Each aim contained a subset of intended outcomes and/or "necessary conditions" for E4E development. The six broad aims were:

Aim 1: A regional cluster model is set up and fostered
Aim 2: Mutually beneficial partnerships are created and maintained
Aim 3: Enterprising learning opportunities are provided
Aim 4: Students become educated lifelong learners with enterprising competencies
Aim 5: There is whole-school change towards E4E integration and an enterprising culture
Aim 6: E4E is responsive to different communities and contexts, including Māori and Pacific communities.

Key evaluation findings in relation to these six broad aims are presented below.

The regional cluster model as a support for regional E4E development (Aim 1)

- Structures were in place at the national, regional and schools levels to support E4E developments and networking in the regional clusters.
- Regional co-ordinators were central connectors in these networks, having three main roles: brokering partnerships; supporting teachers and schools to develop their understandings of E4E; and developing E4E leadership across regions. They were most successful in the first of these roles, but also made progress in the other two areas.
- The national co-ordinator role took shape over the course of the Regional E4E Clusters Initiative, and appeared to respond to schools' calls for more resources and national leadership for E4E. Some participants suggested that the national co-ordinator role should continue to involve mentoring for regional co-ordinators and possibly principals, and continue to ensure there is national level coherence across all levels of E4E development, including (but not limited to) that occurring within the regional clusters.
- Professional development was not initially built into the model for the Regional E4E Clusters Initiative model (although it was part of one cluster's approach from the outset), but emerged as a need. Arrangements were made for professional development providers to work with the clusters, but in some clusters this had slow beginnings.
- Not all of the clusters appeared to operate as *strong* professional learning communities at a regional level, particularly in terms of school-to-school collaboration. However, a few schools started to develop their own E4E learning communities, and at least one region had developed regular networking opportunities for sharing between lead teachers.

Mutually beneficial partnerships (Aim 2)

- E4E, like other cross-curricular and future-focused education approaches, presents an opportunity to change the status quo regarding relationships between schools, businesses and communities. The evaluation showed that collaboration between different sectors presented a number of challenges, such as working around the differences in operational styles and values. However, there was evidence that E4E activities had been developed to satisfy educational goals while also satisfying the needs of business and community partners. The teachers' role was often important in achieving a balance between these needs.
- In addition to the short-term benefits of receiving students' work, partners often saw their involvement in E4E as helping to meet longer term outcomes including: supporting education to shift to become more relevant to the 21st century world and workplace; supporting students to develop confidence and learning capabilities; supporting businesses and community organisations to deliver on their commitments to corporate and social responsibilities; and showing young people that they are a valuable resource for the community.
- Survey data suggest perceptions of "schools", "businesses", and "communities" were being enhanced, particularly with respect to business and community sectors seeing schools and students in a more positive light. However, some partners felt schools were still not moving far or fast enough in reshaping education to better fit the demands of the 21st century.
- Regional co-ordinators were important in setting up a lot of partnerships, although some projects were initiated by teachers, partners, even students. Once partnerships were established, partners and schools suggested that it was easier to find other opportunities to work together. However, it still takes time and commitment to reach a new level of partnership where the partners can plan new ideas together. There is also a risk to long-term partnerships when these depend on individuals rather than organisational relationships, and regional co-ordinators in all regions were working to establish long-term E4E partnership commitments from business and community groups in their areas.

Enterprising learning opportunities (Aim 3)

- A diverse array of activities were occurring in the schools under the banner of "enterprising learning opportunities". Some involved some partnerships with businesses or community organisation. Many projects involved students doing something "real" for a real purpose—such as producing a product, designing an idea, solving a problem or providing a service for a business or community partner (or for someone within the school, or as a service to the school). Other students were doing more traditional enterprise education approaches, such as forming mini-enterprises to learn about how to run a small business.
- Enterprising approaches were described across a range of curriculum areas and student year levels. Technology and enterprise were the most common subject areas, but many other curriculum areas were also represented, and some E4E activities were said to involve multiple disciplinary areas.

- E4E learning experiences did seem to provide more opportunities for students to be learning in different ways compared to "regular" teaching and learning, including more time to work on something in-depth, more opportunities for students to work collaboratively, using different spaces inside and outside the school and doing something useful or meaningful to someone other than themselves.
- Students tended to believe they were making more of the decisions about their learning and activities in E4E compared with their regular teaching and learning in other classes. Many students felt their teacher acted more as a guide or mentor, and teachers also often reported this, too.
- About three-quarters thought it was a better way to get an understanding of the ideas and knowledge related to the subject areas in their project or activity. Their open comments signalled a range of reasons, including finding the learning more practical and in-depth, to seeing how the ideas related to local and global issues.
- Many students found their E4E experience helped them to reflect on their own strengths and weaknesses, some felt more connected to their peers, teacher and people from the business and community, and some had gained ideas about their future potential pathways.
- Many students thought they had learnt more about business or community "realities" through their involvement in E4E. However, case study data suggested that it was less common for these "realities" to be explicitly used as an entry point into reflective meta-level systems thinking. Teachers also suggested that sometimes having multiple projects and activities occurring at once presented classroom management challenges that may have precluded opportunities to delve into deeper systems-level issues.

Students becoming educated lifelong learners with enterprising competencies (Aim 4)

- Stakeholders and participants in the Regional E4E Clusters Initiative saw E4E as having the potential to support several different outcomes for learning. These fell into two categories: outcomes that are high priorities in education generally (such as increasing student engagement, achievement, accumulation of qualifications and aspirations); and objectives for achieving outcomes that are seen as necessary for the development of lifelong learners and enterprising people in the 21st century. While these two kinds of outcomes are not mutually exclusive, they are underpinned by quite different ideas of what counts as "success" in learning.
- While the evaluation could not collect direct data on student achievement or qualification outcomes (or postschool destinations), teachers and principals tended to think E4E in their school had had a positive impact on "big-picture" goals such as: increasing students' engagement and motivation in school; raising their confidence and aspirations; teaching them the value of work and contributing to society; increasing their awareness of how things happen in their local communities; and raising their enterprising attributes and attitudes. Just under 80 percent felt there had been some impact on increasing student achievement.

- In terms of achieving the second set of educational goals—developing the attributes of lifelong learners and enterprising people—students tended to think their enterprising attributes had improved as a result of their E4E experiences. Different students took different things out of their learning experiences, thus for some, learning to work collaboratively with others was the most significant thing they had learnt, while for others it was learning how to confidently share ideas with a wide range of people, or learning how to cope with the unexpected and adapt to change. Teachers also provided anecdotes about how certain E4E opportunities had enabled particular students to "shine", displaying or developing particular talents or interests that had not been witnessed previously.

Whole-school change towards E4E integration and an enterprising culture (Aim 5)

- E4E aims to build a whole-school enterprising culture, which entails extending enterprising approaches across all aspects of school organisation, such as planning, visioning, documenting etc. An enterprising approach also calls for structural shifts that might alter, for example, the ways that schools tend to divide up their timetables, learning areas, teaching staff or student year levels. These kinds of structures, which have been in place since the Industrial Age, are not easy to change.
- The evaluation data suggest that schools are developing "more" E4E projects involving "more" teachers and "more" students, and this expansion sometimes spurs small shifts in school organisation and structures. Schools, to varying degrees, have begun to make incremental changes to systems and documents that reach across the whole school and may well set the stage for more fundamental structural shifts in the future.
- Many of the shifts we saw in the case study schools were also spurred by the revised *New Zealand Curriculum* (Ministry of Education, 2007c). It appears that E4E has the potential to develop some of the transformational aspects of the national curriculum, but it is not yet clear what else needs to happen to support this.

E4E responsive to local contexts and communities including Māori and Pacific communities (Aim 6)

- Most school staff considered E4E was designed and tailored to meet local needs. Interpretations of what this means, and the extent to which this was happening, varied within and between schools.
- Some schools were investigating how they could help meet the self-defined needs of the local community, but overall this practice was still not very widespread, a situation which would be true of most New Zealand schools. Traditionally, students and communities have not played a major role in determining curriculum. This is a challenge, not just for schools involved in E4E, but for New Zealand schools more generally, especially in the light of the emphasis in *The*

New Zealand Curriculum (Ministry of Education, 2007c) on shaping curriculum according to the needs, interests and aspirations of students and their communities.

- In some predominantly Māori or Pacific schools and communities E4E was being interpreted in ways that made sense to those involved, and in ways that were different from interpretations of E4E in predominantly Pākehā schools. Some E4E-type activities did appear to provide Māori and Pacific students with authentic opportunities to draw on community knowledge and experiences in meaningful ways.
- These interpretations could be drawn on to further develop E4E. This would involve expanding the enterprise concepts to be more inclusive of the values and aspirations of Māori and Pacific communities, and ensuring that notions of partnership are informed by the Treaty of Waitangi.

What can the evaluation tell us about long-term objectives and potential outcomes of E4E for New Zealand society?

The long-term goals and potential outcomes of E4E are contested because people have very different ideas/visions of how society should grow and develop, and different points of view on education's role in (re)producing society. These views span a continuum from "improvement" agendas at one end, to "transformative" agendas at the other.

For example, some people think current models of economic development can continue indefinitely, although some improvements and adjustments may be necessary to keep the system sustainable. Others contest this view, arguing that current thinking about the relationship between the economy, society and the environment is in need of major change, and that economic growth should be viewed as a subset—rather than a driver—of other forms of development. Similarly, some people think that our current schooling systems are simply in need of "improvement" (for example, requiring better teaching, the teaching of more relevant or advanced knowledge and/or better performance against standardised measures etc.), whereas others think schooling needs major change if it is to meet 21st century needs. Finally, some people see the proper role of enterprise education as preparing young people to *participate* in economic activities, while others think it should prepare young people to critique, challenge and transform current economic paradigms. These debates have a long history in education, and can lead to entrenched viewpoints, impasses and either/or thinking.

This evaluation shows that E4E means different things to different people, and what is actually enacted as E4E in the schools encompasses a broad spectrum of activities. While some examples have strong community-building and community-service dimensions (such as building a computer for a local primary school, or designing recipes for meals on wheels) and/or environmental sustainability dimensions (such as seeking solutions to local environmental issues, or engaging with a regional conference about eco-tourism), others are much more explicitly focused on helping students learn about business processes and ways of working, or how to produce ideas, services or products for the benefit of a business or community partner.

Currently, the most frequently shared meanings for E4E are: its role in providing more "authentic" "real-world" learning opportunities for students; cultivating students' understanding of themselves as innovative, creative, problem-solving people; and developing stronger connections between schools, communities and businesses. These are all aspects of 21st century learning. However, another key aspect of 21st century learning is helping students to see relationships *between* ideas, to *synthesise* ideas, to see the "big picture" and to see ways to build *new* "big pictures". We suggest that a next step for E4E development could be to explicitly focus on some of these "big-picture" ideas in the context of E4E.

For example, the recently revised *New Zealand Curriculum* (Ministry of Education, 2007c) signals *future focus* as one of eight key principles. At present, the positioning of enterprise, alongside sustainability, citizenship and globalisation, in such a prominent part of the curriculum is largely unexamined in New Zealand schools. We think that further exploration and unpacking of the *Curriculum's future focus* principle—including explicit discussion of the tensions between enterprise, sustainability, citizenship and globalisation—is needed within and beyond schools.

Increasingly complex and networked cross-sector (and cross-cultural) relationships are a feature of knowledge society developments. The tensions inherent in these kinds of relationships are important because it is in the spaces between different ways of knowing and doing that *new knowledge(s)* (and new solutions to old problems) are developed. The knowledge society literature suggests that, if they are to make the most of these tensions and spaces, people working in them need a good understanding of the different lenses they—and their partners—bring to the relationship. E4E provides some tools for beginning this process of "thinking together" in these spaces.

1. Introduction

The Regional Education for Enterprise (E4E) Clusters Initiative is a Ministry of Education (MOE) and New Zealand Trade and Enterprise (NZTE) partnership, supported by the Tindall Foundation. Since 2007, four regional clusters of schools in West Coast, Nelson, Manukau and Northland have been participating in the initiative. The Regional Clusters Initiative aims to:

- support schools in embedding enterprising attributes across the curriculum, and
- engage resources from the schools' communities in this process (Te Kete Ipurangi, 2009).

The New Zealand Council for Educational Research (NZCER) was contracted to conduct an evaluation to track progress and support developments in these regional clusters through 2007 and 2008. An interim report presented findings from the first year of data collection, with a focus on process and formative evaluation (Roberts, McDowall, & Cooper, 2008). In this final report we present overall findings from the two-year evaluation, paying particular attention to impacts and outcomes.

In this chapter we outline key developments in E4E in New Zealand during the past few years, including the launch of the Regional E4E Clusters Initiative. We discuss features of New Zealand's E4E approach in the context of two areas of New Zealand and international literature: literature about enterprise education; and literature about "21st century" learning.

What is E4E?

E4E in New Zealand is defined in relatively broad terms by its key stakeholders as:

> … a teaching and learning process directed towards developing in young people those skills, competencies, understandings, and attributes which equip them to be innovative, and to identify, create, initiate, and successfully manage personal, community, business, and work opportunities, including working for themselves … It is about how we teach across the curriculum and how we get our students to take ownership of their learning. Education for Enterprise is not a discrete subject but provides learning experiences that encourage young people to be active participants in their learning. (Te Kete Ipurangi, 2009)

One key feature of E4E is the emphasis it places on schools developing meaningful partnerships with individuals, businesses and community groups outside schools to enable the development of rich and authentic contexts for student learning.[2] However, E4E is not a prescriptive programme, in the sense that it does not provide direct instructions for exactly how schools should engage

[2] The focus of E4E is not about careers or career pathways specifically.

business or community groups, nor does it prescribe particular activities or learning programmes for students. Instead, it is a concept aimed at bringing about a more "enterprising culture" in schools and regions by encouraging members of schools, businesses and communities to collaborate and develop enterprising learning opportunities across the curriculum. E4E is intended to enable schools and clusters to take account of the needs and aspirations of their particular students and communities, while at the same time also adhering to the high-level intentions of *The New Zealand Curriculum* (Ministry of Education, 2007c). In the sections below we discuss key developments in New Zealand E4E during the past few years.

E4E development in New Zealand

For the past three to five years, schools in a number of different regions of New Zealand have been developing E4E and/or related enterprise education initiatives and programmes, sometimes as part of small clusters supported by regional economic development agencies, local businesses and community groups. Before 2004 these developments were not centrally co-ordinated by the MOE, and there were few E4E-specific resources available to guide such developments. The development of national-level support for E4E through the MOE/NZTE/Tindall Foundation partnership was designed to build on and extend these localised approaches, and investigate the potential opportunities beyond existing initiatives in enterprise education—such as the Young Enterprise Scheme (YES), Primary Enterprise Programme (PrEP) and the Enterprise Studies Programme (ESP) all of which are initiatives of the Young Enterprise Trust (formerly Enterprise New Zealand Trust)[3]—with the goal of encouraging whole-school changes designed to develop an enterprising approach to all teaching and learning. Four significant national E4E developments achieved through the collaborative partnership to date have included:

- the drafting of a national strategy document for E4E (MOE)
- the Enterprise Culture Skills and Activities (ECSA) Fund administered by NZTE
- the Regional E4E Clusters Initiative (Funded by ECSA, MOE and The Tindall Foundation)
- the development of an E4E website on Te Kete Ipurangi, the MOE's online learning portal (Te Kete Ipurangi, 2009).

These and other nationally-supported E4E developments are explained further below.

A draft national strategy

This NZCER evaluation coincided with the beginning of a draft national strategy for a centrally co-ordinated regional approach to E4E. The MOE drafted an in-house *E4E Strategy: Draft Version 4.0* (Ministry of Education, 2007a) which has a focus on partnerships between key stakeholders, including government agencies, businesses, communities and E4E providers (namely schools). The *E4E Strategy: Draft Version 4.0* (Ministry of Education, 2007a) outlines

[3] Many schools began their enterprise journey with these initiatives. See www.enzt.co.nz

draft intended outcomes, deliverables, actions and funding that could be allocated to support a national E4E programme. A significant aspect of this programme is an initiative known as the Regional E4E Clusters Initiative, funded nationally by the MOE, the Ministry of Economic Development's ECSA Fund administered by NZTE, and the Tindall Foundation.

The ECSA Fund

The ECSA Fund was a key component of the NZTE strategy to build a culture of business and enterprise in New Zealand between 2002 and 2009.[4] The ECSA Fund was an annual contestable fund with a budget of $1.51 million aimed at projects that developed enterprising skills and attitudes amongst New Zealanders, including employers, employees, young people and groups in the community and in education (New Zealand Trade and Enterprise, 2008). The focus for ECSA projects was the formation of sustainable partnerships to create enterprise culture change in education, business and the community. At a national level, NZTE adopted a partnership-based approach to the development of E4E by forming a wide network of stakeholders from business, education, community and government. The stakeholder partnership of most significance to this evaluation was the one which NZTE formed with the MOE. From 2007 onwards, this partnership provided the foundation for support and promotion of E4E developments in the Regional E4E Clusters Initiative, as well as other E4E projects not discussed in this evaluation.

The Regional E4E Clusters Initiative

Regional E4E Cluster Funding was part of the contestable ECSA Fund to which school clusters could apply. The Criteria and Guidelines for the Regional E4E Clusters stated that the project:

> … aims to embed an enterprise culture into clusters of schools based on characteristics of their individual communities. (New Zealand Trade and Enterprise, 2007, p. 7)

Four school clusters were selected for funding in 2007, in Northland, Manukau, West Coast and Nelson. Regional E4E Cluster Funding was only available to groups that had already been operating some form of enterprise education. Prior to 2007, Northland had run E4E as Northland Enterprising Teachers (NET)[5] and the West Coast cluster operated as a locally-developed initiative called Education to Business (E2B). Manukau and Nelson were considered "newer" clusters, although some schools within each cluster had been active in some form of E4E-style network. They were the Enterprise Triangle Project and the Nelson Bays Education Business Partnership, respectively.

School principals in the regional clusters were expected to signal formal commitment to the development of E4E in their school, and each school was also expected to appoint a staff member to a leadership role (which was variously referred to as enterprise co-ordinator, E4E co-ordinator

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[4] The Fund closed on 30 June 2009. See: http://www.nzte.govt.nz/find-funding-assistance/Pages/Enterprise-Culture-and-Skills-Activities-Fund.aspx

[5] In 2006, NZCER undertook an evaluation of NET (Bolstad, 2006).

or E4E lead teacher). Schools were also encouraged to form a small group, committee or "cell" of teachers who would generate and share ideas for E4E developments within and across the school curriculum and teaching.

Each cluster applied annually to the ECSA contestable fund, and each was funded by ECSA, MOE and the Tindall Foundation until the end of 2009. The clusters were expected to use the bulk of this funding to employ the contracted services of a regional E4E co-ordinator. The regional co-ordinators are each based in a regional economic agency or educational organisation, and their role is to work with schools, businesses and community groups to enhance E4E understanding and develop E4E partnerships between schools and communities/businesses. The Northland and West Coast already had their E4E cluster and regional co-ordinator in place, whereas Manukau and Nelson employed an E4E regional co-ordinator in May 2007. A national co-ordinator position was also established by the MOE in early 2007 to support these four clusters alongside national E4E developments.

NZTE had key responsibility for management and contractual arrangements with the four clusters, and both the MOE and NZTE were in regular contact with each other and the clusters from 2007 to 2009. As discussed in Chapter 3, contractual and support arrangements between the stakeholders and the clusters developed and evolved throughout the course of this evaluation, in response to feedback and emerging needs within and across the clusters.

Enterprise in the curriculum

New Zealand's E4E development has overlapped with the development and implementation of a newly revised national curriculum. *The New Zealand Curriculum*, released in November 2007, provides various levers and opportunities for schools to develop E4E. It gives schools flexibility to design and develop school curriculum to meet the needs, interests and aspirations of their students and communities, and states that "Our vision is for young people who will be creative, energetic and enterprising;…" (amongst other traits) (Ministry of Education, 2007c, p. 8). The new curriculum includes "enterprise", defined as "exploring what it is to be innovative and entrepreneurial", as one of four[6] future-focused issues that can connect or integrate different learning areas (p. 39).

E4E website

An E4E area on the Te Kete Ipurangi (TKI) website[7] developed over approximately the same time period as the Regional E4E Clusters Initiative and this NZCER evaluation. At the time of writing the E4E website provided descriptions and definitions of E4E, discussions of how E4E links to *The New Zealand Curriculum* (Ministry of Education, 2007c), information and resources

[6] The others are: sustainability, citizenship and globalisation.

[7] See: http://education-for-enterprise.tki.org.nz. TKI is a bilingual portal and Web community that provides quality-assured educational material for New Zealand teachers, school managers and the wider education community. It is an initiative of the MOE.

for school leaders, teachers and people from business and community organisations who may be potential E4E partners, an overview of current E4E developments and "latest news" in E4E across New Zealand and information about key people to contact about national and regional E4E development.

Two other nationally-supported E4E developments mentioned on the E4E website (not part of this evaluation) are:

- Building Enterprising Students Today (BEST), an E4E initiative developed by the MOE for students in Years 1–8. Over the past two and a half years, the project involved: developing supporting classroom materials, trialling these in classrooms using the E4E teaching and learning approach; and conducting research to grow the evidence-base supporting E4E.
- Enterprising Technologies, a trial project that combines the senior technology curriculum with the Lion Foundation Young Enterprise Scheme (YES). The trial has been funded by the MOE and NZTE, and in 2008 involved schools in Hawke's Bay and Wellington.

Characterising the New Zealand approach to E4E

New Zealand's E4E approach has developed organically, and its theory base is still developing, in large part through the practice in the Regional E4E Clusters Initiative and other E4E projects. However, it does share similarities with various other educational approaches, including: place-based learning; entrepreneurship education; service learning,[8] and school–business partnership programmes. In the subsections that follow we discuss how E4E has been positioned in New Zealand, and contextualise this against the international literature in related areas.

According to the E4E website (Te Kete Ipurangi, 2009), E4E:

> - enhances what, and how, young people learn, to enable them to participate and contribute locally and globally and meet the demands of a rapidly changing world environment.
> - is an approach as well as a context for teaching and learning. It involves acquiring knowledge across the eight curriculum learning areas and key competencies of the New Zealand Curriculum, and promotes effective teaching practice.
> - can play a central role in achieving the direction set out in the New Zealand Curriculum and prepare our students to meet future challenges by utilising 21st century-focused learning approaches.

The website further set E4E in the context of broader changes within New Zealand (and global) society:

> - New Zealand is part of a rapidly changing world where new and emerging technologies are reshaping the way we work and interact.

[8] For a discussion of the relationship between E4E and Service Learning see Bolstad and Roberts (2009).

- Our school leavers are likely to have a number of different jobs and roles over their lifetime, and with the emergence of more flexible working patterns, how they work is changing too.
- Increasing importance is being placed on communication and interpersonal skills, with all young people requiring the abilities to be flexible and to change.
- This demands different and innovative approaches to learning that may vary from successful approaches used in the past.

We should acknowledge that some of these ideas, particularly the second list above, have been informed by theoretical framings that NZCER has constructed for E4E in our previous reports (Bolstad, 2006; Roberts et al., 2008), which have in turn drawn on the work of Gilbert (2005) and other educationists writing in the areas of both enterprise education, and "21st century learning". In the subsections below we review international literature in each of these areas to provide a context for understanding New Zealand's emerging E4E approach.

E4E in the context of literature about enterprise education

Enterprise education is seen in many different ways by people within the field of education. Finnish researcher Ulla Hytti (2002, p. 13) suggests that enterprise education is a "fragmented field" with "considerable conceptual confusion". She attributes this to the variety of definitions that exist, as well as the way enterprise education blurs with other concepts, such as work-related learning, action learning, experiential learning and entrepreneurial learning. Table 1 compares three authors' representations of enterprise education.

Table 1 **Schemas of objectives for enterprise education**

Objectives of enterprise education programmes according to three sources		
Gibb (1999)	**Western Australia Department of Education, 2002, in Broz (2003)**	**Hytti and O'Gorman (2004)**
Learning to understand entrepreneurship	Education about business: to learn about economics and how businesses and other enterprises work	Creates a better understanding of businesses and entrepreneurship to prepare people for the world of work
Learning to become an entrepreneur	Education through enterprise: by using enterprise activities to achieve learning outcomes	Creates skills and improves the information necessary for a person willing to start up or manage a business
Learning to become entrepreneurial	Education for enterprise: to develop enterprising attributes	Helps people to become more enterprising in their overall lives due to the changing nature of society

Source: Adapted from Hytti and O'Gorman (2004) and Broz (2003).

The three rows in this table show that enterprise education encompasses a variety of different educational emphases, ranging from simply understanding how businesses work, to learning entrepreneurial skills to enable people to start and manage businesses, to learning how to become

a person who is enterprising in all aspects of their life. While E4E in New Zealand incorporates some aspects of all three rows, between 2005 and 2008 there was a particular emphasis on the third, with its focus on the development of students' (and teachers') "enterprising attributes" (Table 2). The E4E website suggests the ultimate goal for students to experience E4E is so that they will:

> … leave school equipped with enterprising attributes that empower them to stand tall as New Zealanders, seize opportunities, overcome obstacles, and make a positive contribution to their community. (Te Kete Ipurangi, 2009)

Table 2 **Attributes of enterprising students (Te Kete Ipurangi, 2009)**

- generating, identifying and assessing opportunities
- identifying, assessing and managing risks
- collecting, organising and analysing information
- generating and using creative ideas and processes
- identifying solving and preventing problems
- identifying, recruiting and managing resources
- matching personal goals and capabilities to an undertaking
- working with others and in teams
- being flexible and dealing with change
- negotiating and influencing
- using initiative and drive
- monitoring and evaluating
- communicating and receiving ideas and information
- planning and organising
- being fair and responsible

The concept of enterprise is often linked with the concept of entrepreneurship (Ministry of Education, 2007c; Peterman & Kennedy, 2003), and many people in education associate this idea with the field of business and economics education. However, Berglund and Johansson (2007) argue that there are many versions of entrepreneurship, and Steyaert and Katz (2001) suggest that while it is often constructed as an elitist and economic phenomenon, it *could* be understood as an everyday and collective social phenomenon that brings about civic engagement, ecological sustainability and social transformation. One manifestation of entrepreneurship that fits the latter definition is the idea of the "social entrepreneur". Social entrepreneurs are characterised as people who identify and creatively find solutions to fill social needs that can't be or aren't already being met through market and/or public service provision (Leadbeater, 1997; Yujuico, 2008). Unlike traditional entrepreneurs, social entrepreneurs are said to chiefly measure their success in terms of enhancing social wellbeing rather than producing economic returns (Yujuico, 2008). This implies, as Anderson and Smith (2007) contend, that "while a narrow view of entrepreneurship may be

amoral, a fuller, socially constructed perspective of the meaning of entrepreneurship has a strong moral dimension" (p. 480).

While different discursive threads exist around enterprise and entrepreneurship, as a whole, the idea of "the creating human" is fundamental to these discourses (Berglund & Johansson, 2007). Entrepreneurs are described as "change agents" (Anderson & Smith, 2007), they are "innovative" and "transformatory" (Leadbeater, 1997) and "engage in creative search for unfulfilled opportunities" (Yujuico, 2008, p. 493). The education world seems to have picked up particularly strongly on the "creativity" and "problem-solving" dimensions of entrepreneurship and enterprise, and this presents opportunities for concepts of enterprise to be integrated with other concepts such as citizenship education. For example, Deuchar (2004, 2008) describes Scotland's emerging citizenship education agenda as "dovetailing citizenship and enterprise education", underpinned by the view that students' "capacity to think and act creatively and be enterprising in their approach to solving a problem or resolving an issue may allow expression of citizenship capability" (Deuchar, 2008, p. 20):

> Thus the word 'enterprise' has taken on a different meaning in education, and is perhaps best seen in terms of promoting pupil creativity and innovation in a range of contexts. Through combining this focus on pupil innovation with the wider citizenship agenda, an eclectic view of 'enterprising citizenship' will emerge. (Deuchar, 2008, p. 21)

Although "citizenship" and "enterprise" are both contested notions (Davies, Fūlōp, Hutchings, Ross, & Berkics, 2004), the interpretation of the meaning of "enterprise" cited by Deuchar in the quote above seems to fit well with the New Zealand discourse around E4E—although compared with Scotland and other countries such as Hungary and England which emphasise both enterprise and citizenship education (Davies et al., 2004) discourse around the concept of "citizenship" education in New Zealand may be relatively underdeveloped at present, both within E4E and in general (Bolstad & Roberts, 2009). Furthermore, the E4E umbrella in New Zealand does also encompass existing business-oriented approaches (such as YES and PrEP). However, enterprise education in New Zealand is not without its critics. For example, Clark (2004) expresses concern that enterprise education could lead towards "indoctrination into enterprise", encouraging students to uncritically adopt the values of business. His contribution reminds us that if education about enterprise is to be truly "educational" it should enable students to develop critical knowledge about prevalent and alternative economic systems (not just business strategies, the workings of individual organisations or profit-making strategies).

E4E from a "21st century learning" perspective

As we have argued elsewhere (Bolstad and Roberts, 2009; Roberts et al., 2008) New Zealand's E4E emphasis on authentic learning in dynamic relationships with community partnerships gives it the potential to align with a 21st century learning agenda. In this subsection we summarise our understanding of the key ideas in this area.

There are compelling arguments that the opportunities and challenges of the 21st century—social, environmental, economic and political—are so different from those of the past that they require us to seriously rethink the way we support young people to meet them. There is a growing interest in how schooling might change to better match the changes that have taken place in society, how economies work and how employment is structured in the 21st century (see, for example, Bolstad and Gilbert 2008; Gilbert, 2005; OECD, 2005; Vaughan, Roberts, and Gardiner, 2006). It is argued that educators need to pay urgent attention to the task of engaging and preparing the "transitional generations" (Kress, 2008) which straddle the shift from a world once perceived in terms of stability, uniformity and homogeneity, to one which is increasingly viewed in terms of instability, multiplicity and diversity (Kress, 2008), giving rise to an unknowable future (Brady 2008).

Gilbert (2005) argues that the 21st century has presented us with an entirely new way to think about "knowledge", and that this has profound implications for the way we organise schooling. In the past, knowledge was conceived of as something developed and known by experts, something that could be passed on from teacher to student, or manager to worker. In the educational world, different forms of knowledge have traditionally been valued quite differently. For example, "academic" knowledge was seen as both more valuable, and harder to learn than "practical" knowledge. The schooling system that developed during the Industrial Age (particularly at secondary level) was therefore designed to sort students into the pathways for which it was believed they were most suited—vocational, or academic (Bolstad & Gilbert, 2008). Students on academic pathways concentrated on absorbing high-value academic knowledge. Demonstrating that they could do this enabled them to go on to further education, and they eventually moved into the "managerial", "professional" or "white collar" classes, where they were charged with making decisions. Here they finally did something with all the knowledge they had stored up in their minds through their education, and passed their decisions down to the people working under them to implement. Meanwhile, students who were not successful in learning academic knowledge at school were directed into vocational pathways directed towards the "working" or "blue collar" classes. In Industrial Age enterprises, workers had clearly defined, specialised roles involving often repetitive tasks. They did not need to understand the whole system: however, they did need to be able to follow rules and systems, to respect authority and to carry out their role responsibly, reliably and punctually. These Industrial Age economic, social and education structures all rested on the view that knowledge was something stable, and that curriculum development was a simple matter of experts deciding what forms of knowledge were the most important to learn. Schools' job was to transmit this knowledge to students, and students' job (if they were capable) was to absorb this knowledge in preparation for their lives after school. These structures also assumed a certain degree of stability and predictability in the kinds of jobs and social roles that people could move into once they left school.

However in the 21st century, new knowledge is rapidly created every day. It is described by some authors as being more like a verb than a noun, as something that *does* things, rather than being a thing in itself (Gilbert, 2005). Knowledge is the *process* of creating new knowledge. It is a

product of "networks and flows" (Castells, 2000): it comes into being through interactions and intersections on a "just-in-time" basis to solve specific problems as they emerge. In 21st century society people who are able to do these things are seen as a key resource for economic—and social—development. In the 21st century new *ideas* have as much (if not more) currency as physical goods, and new ideas are created in the spaces between people and their particular "old" knowledge sets. It is thus no longer possible to accurately predict exactly which knowledge people will need to draw on as they move through life in the 21st century, particularly given the rapid pace at which new knowledge is developing.

The future-focused literature suggests that, due to the increasingly complex, changeable and culturally diverse nature of 21st century society, students need, among other things, opportunities to build their sense of identity, become self-reliant, critical and creative thinkers, be able to use initiative, be team players, be able to manage the metacognitive and affective aspects of their learning and be able to engage in ongoing learning throughout their lives. Since knowledge is something that is created, rather than just passed down (Gilbert, 2005), people are arguing that 21st century learning should focus on generating new knowledge (as opposed to reproducing old knowledge—although this is still important). The 21st century learning idea involves encouraging students to carry out authentic tasks in real-world contexts, as opposed to carrying out contrived exercises to accumulate facts or to practise skills that educators expect them to need to repeat in the future. There is a focus on the *process* of learning as much as the products of learning. Twenty-first century learning foregrounds core intellectual skills, such as creative and critical thinking, analysing, synthesising and problem solving, rather than assuming that these skills will be learnt through exposure to the traditional disciplines, as is the case in the traditional model.

Relationships *between* ideas are also important. Twenty-first century learning is often talked about in terms of a holistic and integrated approach to learning. The ability to synthesise, to see the "big picture" and to consider the broader context, are important—in contrast to the 20th century practice of breaking things down into component parts, studying these as separate entities and focusing on the detailed facts of a discipline. Twenty-first century learning involves drawing from a range of disciplines. This encourages curriculum integration, but does not preclude—in fact it depends upon—a knowledge of different disciplines, their origins and how these have evolved. It involves "big-picture" framings of how different knowledge systems work and interact. It involves thinking about paradigms and systems, and how people frame the world. Twenty-first century learning focuses on developing relationships between people (because this is where new knowledge will be created). It emphasises the social context of students' lives and learning experiences (as opposed to the 20th century notion of the "independent scholar"), as knowledge is seen as a process of solving problems or generating ideas in collaboration with others as the need arises.

Because students are considered to have something to contribute to society in the here-and-now, (rather than as "empty vessels" which need to be filled for their futures), they, in partnership with their teachers, need to be able to make the important decisions about their learning and knowledge production. This necessitates students becoming self-motivated, efficacious and authoritative,

rather than being docile, rule-following and deferring to external authority. It also necessitates students and educators working together to create multiple pathways and possibilities for learning through education and work.

Educationists argue that these ideas have not yet, however, been very influential in our education system. Our current schooling system is still structured around the 20th century, one-size-fits-all, production-line models that fit better with an "Industrial Age" society than a "Knowledge Society".[9] For some time OECD researchers have been considering how schooling needs to change to ensure students have learning opportunities that are better suited to the demands of the 21st century (Bentley & Miller, 2006; Miller & Bentley, 2003).

Gilbert (2005) argues that the 20th–21st century paradigm shift does not necessitate rejecting everything that schools already do, or the development of completely new ideas. Rather, what is required involves adapting the many good ideas already available in the research literature and looking at many of the positive aspects of our current teaching practices through new lenses. She suggests some starting points for teachers to help close the gap between current school practices and 21st century learning ideas, some very early steps in the long journey towards 21st century learning. These suggestions are as follows:

- setting up cross-disciplinary teams for planning cross-disciplinary, problem-focused projects for their students
- providing students with opportunities for real research in which students manipulate and reconfigure old knowledge to create new knowledge
- thinking of new ways to timetable student activities so cross-disciplinary teams of teachers can work together with one large group of students
- setting up systems for allowing students to work offsite
- developing skills for helping students work in small groups and for teaching and assessing group skills
- foregrounding real-world research projects so that knowledge production activities are available for all students, and not just as extra-curricular activities or those which target particular groups
- developing a database of community contacts so that students can be part of and serve the local community so both the school and the community can benefit
- focusing on developing systems-level understanding of their subject. This involves emphasising not the subject matter of science, history or art, but how a scientist, historian or artist might see or think about things so students can learn "the rules of the game" for different subject areas.

E4E provides one possible context in which the ways of teaching and learning discussed above *could* be put into practice. In this evaluation we have used the "21st century learning" ideas as one

[9] For a more detailed discussion of the shift from an Industrial society to a Knowledge society, see Gilbert (2005).

lens for examining the nature of E4E practice that emerged in the Regional E4E Clusters Initiative. We discuss this further in Chapter 2, the methodology chapter.

2. Methodology

This chapter describes this evaluation's aims, methodology, methods of data collection and methods of analysis. The final section of the chapter sets out a framework for organising the evaluation's findings.

Evaluation aims

This evaluation involved elements of formative, process and summative evaluation. It was designed to support the ongoing development of E4E (within individual schools, regional clusters and nationally) by examining the processes by which the clusters established and pursued their E4E objectives/practices, and by investigating the outcomes that they achieved within the evaluation time frame. We also explicitly drew on NZCER's expertise in related education developments, particularly future-focused trends in education, to gain insights for the E4E evaluation and provide useful ongoing critique. Our role was to be *part of* the E4E development process, hopefully as a critical change agent.[10]

The overall aims of the evaluation were to:

- investigate the processes and assess the impacts associated with schools (and regional school clusters) adopting an E4E approach.
- provide formative feedback throughout the evaluation to support ongoing growth, development and sustainability of E4E practice in the four clusters, and the national strategy/programme
- evaluate progress in the E4E clusters towards a sustainable model for E4E (for example, using the Critical Change indicators and Measures of Change identified in the Education for Enterprise Strategy), and to assess the viability of the strategy's conceptual model for E4E cluster development
- provide a critical analysis of evidence (from students, teachers, school leaders and community and business partners) about the degree to which E4E in the clusters aligns with the kinds of curriculum and pedagogical practices that have been advocated as appropriate for 21st century education.

[10] This was a unifying theme in the Aotearoa New Zealand National Evaluation Conference, *Evaluation and social change—what are the links?* Tauhara Centre, Taupo, 31 July–2 August 2006.

As E4E was in a developmental stage at the time we began the evaluation, we designed a flexible methodology to enable us to track development processes and evidence E4E outcomes as they emerged at a local and national level over the evaluation period.

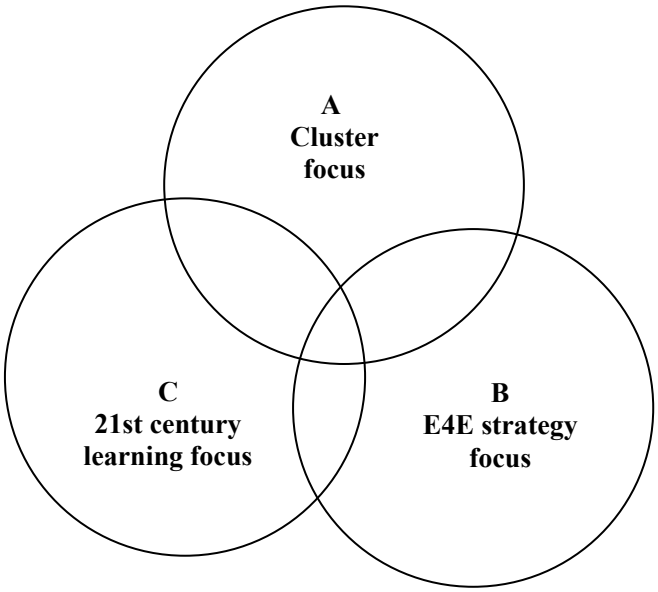
The funders provided us with a number of evaluation questions (see pages 16–17 below) to be addressed within the evaluation. These questions, along with the ECSA material and the draft E4E strategy, pointed to some of the outcomes that the MOE and NZTE hoped might be achieved over the three years. However, the Regional E4E Clusters Initiative was specifically set up as an innovative space for schools and regions to work collaboratively to set their own goals and test out different approaches to E4E in order to create the kind of outcomes most suited to each unique environment. In such an evaluation it is not possible to anticipate all possible outcomes at the outset. In addition to addressing the funders' evaluation questions, the evaluation looked across three focuses—cluster focus, national strategy focus and 21st century learning focus—to understand the aims and development of practice according to a range of stakeholders. These findings were used to develop an overall picture of change that guides the structure of this report (see page 26).

Methodology

In 2007 we developed a diagram to represent three overlapping focuses for our evaluation: the "cluster focus"; "E4E strategy focus"; and "21st century learning focus" (Figure 1). The purpose for including these three focuses in the evaluation design was to acknowledge that there would be a range of goals and objectives with regards to E4E amongst different stakeholders in the Regional E4E Clusters Initiative. As Figure 1 below shows, these goals and objectives are not mutually exclusive—in fact the extent to which they overlap, as well as the practices and priorities that emerge when they do (or do not), are considered within this evaluation. The three-focus approach also enabled NZCER to provide evaluation feedback to meet the needs of different audiences.[11] At each stage of data collection we considered what kinds of research questions, data collection and analysis and modes of formative feedback could provide information relevant to each of these three focuses. The three focuses, including some of the questions that guided our evaluative activity in relation to them, are discussed briefly below.

[11] The interim report for this evaluation (produced in early 2008, at the mid-point of the evaluation) was structured around the three overlapping focuses represented in Figure 1.

Figure 1 **Three overlapping focuses for the evaluation of the Regional E4E Clusters**



Cluster-specific focus

The cluster-specific focus was designed to help schools refine their cluster's region-specific E4E objectives in relation to the draft E4E strategy, and evaluate progress over time. Early evaluation questions associated with the cluster-specific focus included:

- What were important components of the regional cluster model, and how did they support E4E developments?
- What were schools' and/or clusters' development priorities for E4E? (For example: What were they hoping to achieve? How did they feel they were progressing? What did they think would support their development?)
- How did business and community partners in the regions perceive E4E, and what were the reasons for their involvement?
- How was E4E starting to be conceptualised, developed or adapted to suit different communities (be they in relation to student communities, school communities, local communities, business communities or regional communities)?
- In Northland in particular (and other clusters), was E4E developing in particular ways to meet the interests of Māori students and communities?

In support of the cluster-specific focus, NZCER provided an individualised school feedback "mini-report" to schools that completed student surveys in mid-2007, late 2007 and late 2008. These mini-reports showed schools the data from their own students in relation to the data gathered in the overall sample across schools and clusters. We also provided regional co-ordinators with mini-reports showing data from students in their cluster in relation to the overall data. We also visited each region at least once in 2007 and/or 2008 to give presentations to the clusters on the emerging findings of the evaluation.

E4E strategy focus

There was interest in identifying how the experiences of and evidence from these four Regional E4E Clusters can inform the next phases of the MOE/NZTE Regional Clusters Initiative—the further conceptual development, growth and expansion of the E4E programme at the national level. Our evaluation was therefore set up to examine how well schools and clusters achieved the intended outcomes of the national E4E programme; and to evaluate the viability of the national strategy's conceptual model for E4E cluster development.[12] Obviously, this is a bit of a "chicken or egg" dilemma—how do we use the strategy's draft expectations about E4E to measure how well schools in the regional clusters are doing, at the same time as we use data from the regional clusters' experiences and results to critique whether the expectations are appropriate?[13]

Evaluation questions initially associated with the E4E strategy focus included:

- How do schools and/or clusters define and start to build a sustainable E4E culture (including, where appropriate, how do schools move E4E beyond one or two curriculum areas)?
- What supports teachers' learning and innovation in E4E (including different roles and networks)?
- How does the national E4E strategy match with cluster-level intentions, their emerging short-term outcomes and 21st century learning goals?

Funders' evaluation questions

The MOE and NZTE indicated specific interest in the following evaluation questions:

1. To what extent have the enterprising programmes of learning been shaped to suit the needs of students and the local community?
2. To what extent have outcomes demonstrated teachers as responsive learners? For example, what evidence is there of teachers:
    a. working collaboratively with colleagues in new ways, adapting resources to fit the enterprise framework, and adapting NCEA achievement standards to meet the local community?
    b. demonstrating enterprising skills and attributes as teachers/learners (e.g., taking risks)?
3. To what extent do the outcomes show students developing enterprising skills and attitudes (within and beyond their core learning areas), and to what extent have student motivation for achievement and career aspirations been enhanced by involvement in E4E?
4. To what extent have school management/leadership structures been organised to allow opportunities for E4E growth and development (e.g., organisation of middle management

[12] That is, to consider whether the visions, expectations and requirements set out in the *E4E Strategy: Draft Version 4.0* (Ministry of Education, 2007a) provide an effective framework to understand E4E and to support clusters of schools to develop E4E approaches.

[13] In early 2008 we provided an in-house supplementary report to the MOE and NZTE specifically considering the second question, based on findings from the 2007 data collection.

roles and responsibilities, changes to timetabling, creation of new/different subject options, development of cross-curricular/cross-departmental education for enterprise etc.)?

5. To what extent have schools', business and community perceptions of one another been enhanced and changed by E4E clusters? (For example: To what extent have the community and businesses learnt new things about schools, and to what extent have schools learnt new things about business and communities, etc.?)
6. To what extent has E4E enhanced opportunities for students to engage in "authentic learning", and opportunities for schools to "personalise learning" for their students, through relationships with people/groups/businesses in the community, and what have been the impacts of this for students, schools and communities?
7. To what extent can E4E enhance or extend current understandings of "effective teaching"?

We draw across the evaluation's findings to answer each of these questions in the concluding chapter (Chapter 9).

21st century learning focus

The final area of interest centres around exploring the extent to which E4E in the Regional E4E Clusters aligns with, provide contexts for or otherwise relates to the idea of reshaping curriculum, teaching and learning towards an education system designed for "21st century learning" (see Chapter 1). This layer of the evaluation seeks to critically analyse evidence from the E4E clusters and draft E4E strategy against recent policy and curriculum initiatives in New Zealand (e.g., *The New Zealand Curriculum* (Ministry of Education, 2007c)), and key ideas, literature, research, and theories in contemporary educational research regarding future directions for the New Zealand education system. The kinds of questions addressed in this layer of the evaluation under the areas of learning communities, lifelong learning for the 21st century and the key competencies include:

- Does E4E support school clusters to develop "learning communities"? What does it mean for a school to become a "learning community"—and for school students to learn by engaging with people and groups in their community? What kinds of relationships, resources and processes are needed to allow this to happen? What are the educational benefits for students, the school and the community? How can it happen sustainably?
- How does E4E practice in the clusters compare with the kinds of teaching and learning approaches that have been advocated as necessary to prepare students as capable lifelong learners, and people who are well prepared to play an active role in shaping a 21st century social, cultural and economic environment?
- What opportunities does E4E provide for students to develop the key competencies? How does this compare with students' opportunities to develop the key competencies in more "conventional" classrooms?

Consultation and recruitment of participants

Consultation/facilitation 2007

Between March and August 2007 NZCER researchers visited each of the four regional clusters to meet with regional and national co-ordinators, and attend cluster meetings usually involving principals and/or E4E lead teachers from the schools in the cluster. We presented PowerPoint summaries of our evaluation proposal, discussed how schools might be involved and asked for any feedback on what principals or lead teachers wanted out of the evaluation, and for any of their thoughts, concerns and suggestions. Drawing on the ideas raised, we developed a more detailed draft evaluation plan. We also drew on the *E4E Strategy: Draft Version 4.0* (Ministry of Education, 2007a) Critical Changes and Measures of Change as reference points for developing our information needs. We discussed the draft plan initially with the national co-ordinator, and after incorporating some of his feedback discussed it in more depth with the MOE and NZTE.

We also met with all four regional co-ordinators and the national co-ordinator at their first national hui in late May 2007 and facilitated a workshop to identify and clarify their objectives for the Regional E4E Clusters Initiative.

At the second regional co-ordinators' hui in August 2007, we presented interim findings from student survey data that had been collected by that point, and discussed with the co-ordinators how this data could be shared back to the individual schools in their clusters.

In early 2008 we developed a more detailed plan for the remainder of the evaluation.

Recruitment

In early-to-mid-2007, each regional co-ordinator gave us a list of the schools they intended to work with in their cluster. Where possible they also gave us the name of principals and/or lead teachers.[14] We gave each principal an information pack, with a mini-pack for the lead teacher. The information packs included a personalised letter, an information sheet about the evaluation and a copy of the evaluation plan. Principals also received a consent form and a Principal Priorities Survey.

We sent the introduction pack to 47 schools between Terms 2 and 3, in person or by post. Up until early Term 4 we periodically sent emails and made phone calls to schools we had not heard back from. A total of 31 principals gave permission for their school to be involved in the evaluation in 2007. Three schools did not give permission (at least for 2007),[15] seven schools told us that they were not involved in E4E for 2007 and six schools did not respond. In 2008 we contacted the

[14] Many principals/lead teachers had also met us at initial consultation workshops.

[15] Reasons included: not feeling ready for involvement; having too much else on; and not feeling like they had got enough out of previous research and evaluation involvement.

principals who declined to be involved in 2007 to invite them to participate in 2008. Two additional schools agreed to take part in the evaluation.

Data collection

Following from the methodology used in the NZCER evaluation of NET (Bolstad, 2006), we employed a mixed-method design.[16] This involved collecting a combination of qualitative and quantitative data over two school years from school staff and students, community/business partners, regional and national co-ordinators and professional development providers involved in the Regional E4E Clusters Initiative.

Table 3 provides a summary of data collection and reporting/feedback carried out during the evaluation.[17] Table 4 shows how many surveys of each type were returned and Table 5 shows the number of qualitative case study visits and other interviews undertaken. Table 6 shows the year levels of students who returned surveys. The main data collection methods are described in more detail below.

Principal surveys

Principals were surveyed twice: once in mid-2007, and again in late 2008. The first survey focused on principals' perspectives and priorities with respect to E4E. For example: reasons for their schools' involvement in E4E; current E4E understandings and practices in the school; two-year priorities for E4E development; and views about current and future schooling practice. The second survey (late 2008) focused on principals' perspectives on the impacts and outcomes of E4E in their school during 2007–08, as well as their intentions regarding ongoing development and support for E4E, views about impact and effectiveness of the regional cluster model and beliefs about the possible future of E4E and schooling in New Zealand over the next two years and next 10 years.

Lead teacher and teacher surveys

E4E lead teachers (schools often called these "Enterprise co-ordinators" or "E4E co-ordinators") and other teachers were invited to complete surveys at the end of 2007 and the end of 2008[18]. In both years, lead teachers and teachers were asked questions about a specific unit, activity or sequence of work they had done with their students which they felt drew on an E4E approach.

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[16] However, the current evaluation goes beyond the scope of the NET evaluation. The evaluation purpose, general approach, time frame, methods/tools and range of participants are much wider.

[17] This table does not include the regular quarterly milestone reports prepared for the MOE, NZTE and the Tindall Foundation.

[18] We sent each lead teacher a survey to complete themselves, as well as up to five additional teacher surveys which we asked the lead teacher to pass on to other teachers in their school who had been using E4E approaches in their teaching.

The survey also sought teacher/lead teacher perceptions about the degree to which E4E was embedded into school culture and structures, the potential value of E4E for students and the benefits and challenges of taking an E4E approach. Lead teachers were also asked additional questions about their role and their priorities for E4E development in their schools during 2007–08. In the 2008 survey, both teachers and lead teachers were asked questions about the support provided in association with the regional clusters model, as well as their beliefs about the possible future of E4E and schooling in New Zealand over the next two years and next 10 years.

Student surveys

Students were surveyed at three stages during the evaluation. In mid-2007, we sought to establish a "baseline" picture of the state of teaching and learning practice in the schools in the Regional E4E Clusters Initiative. Rather than focusing on E4E specifically, the intention of this survey was to identify what students had to say about teaching and learning practices they regularly encountered in their school *in general*, i.e., learning opportunities aligned with key competencies, 21st century learning ideas, E4E principles etc., not just E4E activities and/or enterprising learning experiences. This wide focus was designed to suit schools at the start of an E4E journey (that, for example, may not have had E4E learning opportunities in place) through to schools that could have embedded enterprising approaches across the curriculum (with or without adopting "enterprise" or E4E language). Our aim was to give schools back data that they might find relevant to all teachers and useful for seeing links between current practice, underpinning E4E approaches and new directions in education generally. We sent up to 110 student surveys[19] to schools for which we had principal consent. We asked the lead teacher to liaise with four teachers for large schools to invite students in two senior and two junior classes to complete the survey (Year 6 and above). In small schools, fewer teachers and classes were involved. The findings from this survey were discussed in detail in the first report from the evaluation (Roberts et al., 2008).

At the end of 2007 we asked schools to invite up to 40 students who had been involved in what teachers considered to be E4E activities, units or projects that year to complete a survey about their E4E learning experiences. The surveys asked students to describe the project or activities they had been involved with, and answer various questions about how they worked, with whom, what they learnt, and how the E4E learning experience compared with their "regular" experiences of teaching and learning at school. The 2008 student survey asked similar questions, and also canvassed students' opinions about what E4E and school learning should or could be like in the future.

Given the way the samples were obtained, the 2007 and 2008 end-of-year E4E student survey samples can be assumed to be two independent samples. In other words, it is unlikely that many students completed end-of-year E4E surveys in both 2007 and 2008.

[19] We sent a lesser number of surveys to small schools.

Table 3 **Data collection and feedback/reporting 2007–09**

	2007		2008		2009
	Jan–June	**July–Dec**	**Jan–June**	**July–Dec**	**Jan–June**
Data collection	Qualitative Cluster introduction/ consultation visits Regional co-ordinator workshops Quantitative Principal survey General student "teaching and learning" survey	Qualitative School case study site visits Business/community partner interviews Regional and national co-ordinator interviews Quantitative Business/community partner survey E4E student survey E4E lead teacher survey Other E4E teacher survey	Qualitative Regional and national co-ordinator interviews	Qualitative School case study site visits Business/community partner interviews Quantitative Business/community partner survey E4E student survey E4E lead teacher survey Other E4E teacher survey Principal survey	Qualitative Student leader interviews Māori development interviews Professional development provider interview
Feedback/ reporting (See Appendix A for full list)		Individualised reports to schools on findings from student "teaching and learning" survey Region-specific survey feedback to regional co-ordinators Presentation to ECSA key stakeholders meeting (Auckland) Presentation to E4E staff/conference (Wellington)	First report: *Enterprising and future focused?* (2008), plus four short summary brochures for different audiences Supplementary report to MOE/NZTE Presentations to ECSA stakeholder meeting (Wellington) Newsletter for schools Mini-report 1—individualised school reports on 2007 end-of-year student survey data Mini-report 2—summary of 2007 end-of-year staff survey data	Workshop at Regional Co-ordinator Hui (Wellington) Regional qualitative data summaries to each regional co-ordinator	Mini-report 3—individualised school reports on 2008 end-of-year student survey data Mini-report 4—summary of 2008 end-of-year staff survey data Final report for the Evaluation of the Regional E4E Clusters Initiative

Table 4 **Surveys returned 2007–08**

	Mid–2007	End of 2007	End of 2008
Principals	25 (25 schools)	N/A	20 (20 schools)
E4E lead teachers	N/A	20 (20 schools)	18 (18 schools)
Other teachers	N/A	51 (22 schools)	45 (15 schools)
Students	1,682 (26 schools)	506 (22 schools)	409 (18 schools)
Business/community partners	25	N/A	28

Table 5 **Qualitative data collected 2007–08**

	2007	2008
School case study visits	15	12
Regional co-ordinator interviews	4	4
Business/community partner interviews[20]	25	24
National co-ordinator	-	1
Professional development providers	-	1
Regional student leadership group interviews	-	2

Table 6 **Year levels of students who completed surveys 2007–08**

Year level	2007 general "teaching and learning" survey	2007 E4E survey	2008 E4E survey
6	15	3	9
7	88	24	20
8	146	22	42
9	329	196	33
10	409	185	163
11	226	17	12
12	229	38	54
13	239	21	63
Other/not specified	1	-	17
Total	**1,682**	**506**	**409**

[20] Including Māori regional development interviews.

School case study visits

NZCER researchers visited each regional cluster once a year in 2007 and 2008 to carry out qualitative school case study visits in approximately three to four schools per region. The schools were selected to illustrate a range of potential contexts for E4E. We drew on MOE school profile data and regional co-ordinator information to select a range of schools within each region and nationally. In 2008 we sought to identify schools that could provide data related to a set of qualitative themes related to the evaluation questions. Practical issues of distance and travel cost were also taken into account. Each school visit lasted one to two days. Where possible, each case study involved:

- a semistructured interview with the principal and/or deputy principal
- a semistructured interview with the E4E lead teacher
- between one and four student focus groups, each with approximately four to seven students
- between one and three focus groups or interviews with teachers who were part of an E4E team or were involved in E4E-type approaches
- the collection of school documentation mentioned during interview
- a semistructured interview with at least one business/community partner (see next subsection).

In most schools we interviewed between three and 12 staff members, and between eight and 16 students in total during our visit. School visits also provided opportunities to view examples of student work, and in one case, to attend a presentation by students of their E4E work to business or community partners. Of the 21 schools that were visited in total, 14 were visited only once during the two years, and seven were visited in both 2007 and 2008.

Business and community partner surveys and interviews

We asked schools and regional co-ordinators to help us to identify and contact partners with whom they had worked who might agree to be interviewed for the research. Business and community partners were also surveyed twice. In 2007 we provided paper-based partner surveys to regional E4E co-ordinators and schools and asked them to distribute these to all their business and community partners. In 2008 we asked schools and regional co-ordinators to send us the contact details for their business and community partners. We then sent email invitations directly to the partners to complete an online survey.

In both years, the number of surveys received from business and community partners was low, given our knowledge of how many partners had been involved in E4E activities with schools. We believe that the different "valuing" of time for business and community partners may explain the relatively low response rates. Whereas teachers and students are possibly a "captive audience" for educational research, and schools tend to be interested in the findings from surveys, business and community partners may not necessarily feel there is an inherent benefit to them participating in surveys. A few partners completed surveys in both 2007 and 2008; however, in most cases, the respondents were not the same people in the second year.

Regional co-ordinator and professional development provider interviews

The regional co-ordinators were formally interviewed in the second half of 2007, and again in the first few months of 2008 (at which time the national co-ordinator was also interviewed). NZCER researchers also maintained ongoing informal communication with the regional co-ordinators during the two years of the evaluation through email, telephone conversations and during workshops and presentations at national E4E co-ordinator hui. One professional development provider was interviewed in early 2009 to provide an update about recent developments in two regions.

Data analysis

Qualitative interviews

The interview data from the case studies, and additional student focus groups, were reviewed and analysed for significant themes and patterns in relation to our evaluation model. We prepared an initial overview of themes from within each case study, and then extended our second phase of analysis to look for themes across and between case studies. Where appropriate we used a systematic data retrieval process to group together all data relevant to emergent subthemes.

Data and themes from our case study analyses in 2007 informed the development of Term 4 end-of-year surveys for lead teachers, teachers and students who had been involved in E4E-related teaching and learning during 2007. Similarly, findings from the 2007 end-of-year surveys and the 2007 case studies informed our case study approaches and end-of-year survey designs in 2008.

Quantitative surveys

NZCER's Statistics and Data Management team captured the responses to all surveys and produced frequency tables and graphs for each topic area and item. The survey data included two kinds of responses: closed responses, where respondent chose one or more responses from a given range of options, or chose one rating from a given scale (e.g., from strongly disagree to strongly agree); and open responses, where the respondent could write an answer to an open question. Open responses were coded (grouped into broad categories) so that the percentages of respondents giving each response could be calculated. Some open comments—selected either for their representativeness of comments, or in some cases because they are more *atypical* or different from the majority view—have been reproduced verbatim in relevant sections of the report, with commentary as to how representative these kinds of comments were overall.

In some cases, identical or similar questions were asked across different surveys (for example, principals, teachers, lead teachers and partners may have answered the same question), or across time (for example, students in 2008 may have answered the same question as students in 2007 etc.). Where this is the case we present the data in graphs or tables that enable comparisons of

responses across these different groups or different years. Where tests for statistical significance were carried out, these were done using a *p*-value of 0.05.

Synthesising the evaluation findings: The structure of this report

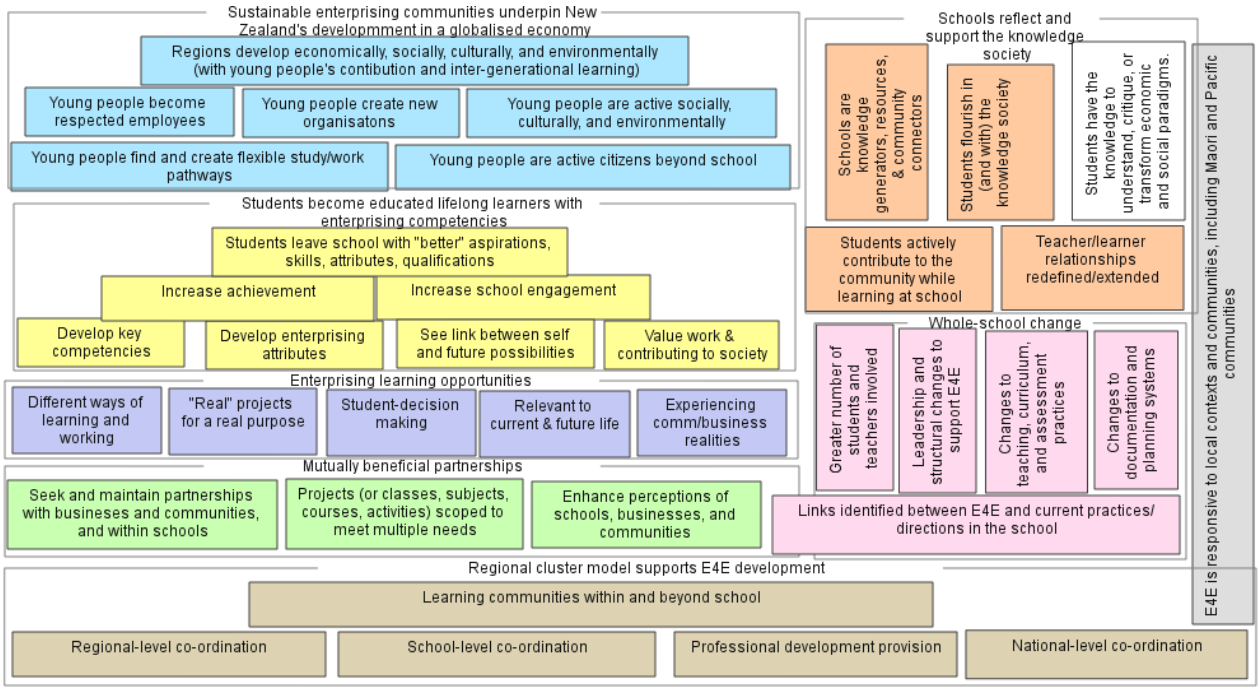
The evaluation findings in this report are structured around a visual model of objectives for the Regional E4E Clusters Initiative represented in Figure 2. This model was developed by NZCER during the first year of the evaluation (2007) in order to represent the multiple layers of objectives various stakeholders held for the regional clusters initiative (Roberts et al., 2008). Sources that informed the model's development included: interviews and surveys with principals, business and community partners and regional and national E4E co-ordinators; and discussions with and feedback from national stakeholders including the MOE and NZTE with reference to key information such as the draft E4E strategy and ECSA material.

The model provides a structure for evaluating the regional clusters initiative against six broad aims (represented in different colours in Figure 2). Each of the broad aims contains a subset of specific goals, objectives and/or "necessary conditions" that were identified as important by participants and stakeholders in the Regional E4E Clusters Initiative during the two years of this evaluation. The six broad aims are:

1. A regional cluster model is set up and fostered
2. Mutually beneficial partnerships are created and maintained
3. Enterprising learning opportunities are provided
4. Students become educated lifelong learners with enterprising competencies
5. There is whole-school change towards E4E integration and an enterprising culture
6. E4E is responsive to different communities and contexts, including Māori and Pacific communities.

The model could be seen as similar to a programme logic diagram, which represents sequential relationships between inputs, outputs and outcomes (immediate, medium-term and long-term). While we do not use this language here, we have drawn on some programme logic literature to develop the diagram (Duignan, 2004; Monroe & Fleming, 2005; Rogers & Huebner, 2000). Placement on the diagram illustrates the relationship between the zones. While it is easy to see a sequential pattern from bottom to top, we argue that educational change is far more complex than that. For example, spontaneous relationships, feedback loops, simultaneous changes, snowball effects and unexpected results emerge in ways that a model like this cannot illustrate.

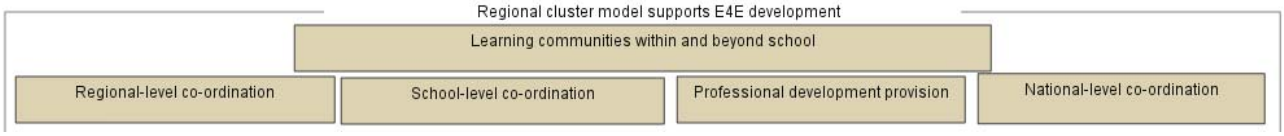
Figure 2 **Objectives for the Regional E4E Clusters Initiative**



Below we discuss each of the broad aims and associated subcomponent (goals, objectives and necessary conditions for each aim) represented in Figure 2.

Aim 1: A regional cluster model is set up and fostered ("brown zone")

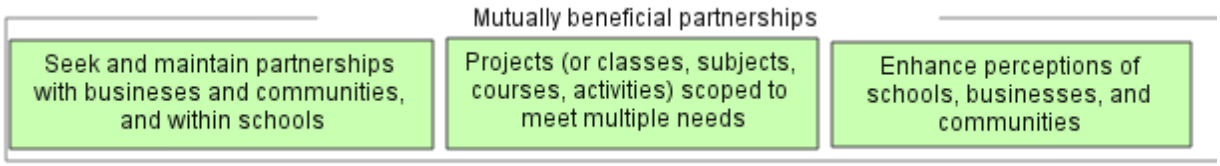
Part of the rationale for having clusters rather than individual schools working on E4E was to foster the development of E4E beyond the silo of individual teachers or schools, by establishing networks or learning communities that linked teachers, schools and regions together. Some of the components that participants in the Regional E4E Clusters Initiative believed to be essential for the cluster model to support E4E development are shown in the "brown zone". Chapter 3 evaluates the Regional E4E Clusters Initiative against these objectives/components.



Aim 2: Mutually beneficial partnerships are created and maintained ("green zone")

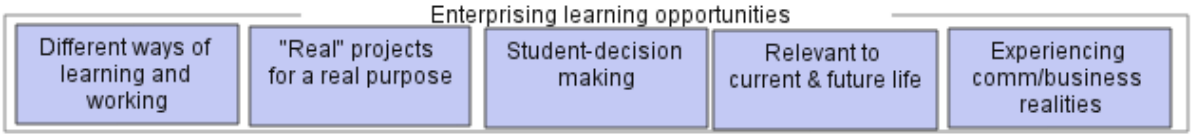
A key aim for the regional clusters was to create and sustain partnerships that enable more enterprising and "authentic" learning opportunities for students. Such partnerships should ideally be of mutual benefit, with projects set up to meet the needs of all involved—students, teachers, schools and partners. However, E4E does not have to be bounded by discrete projects, and a longer term aim is for enterprising approaches to permeate all classes, activities and curriculum areas within a school. These types of objectives are captured in the "green zone" below. They also

link to the "pink zone" (Aim 5: There is whole-school change towards E4E integration and an enterprising culture) which is discussed further below. Evaluation findings related to the "green zone" are discussed in Chapter 4.



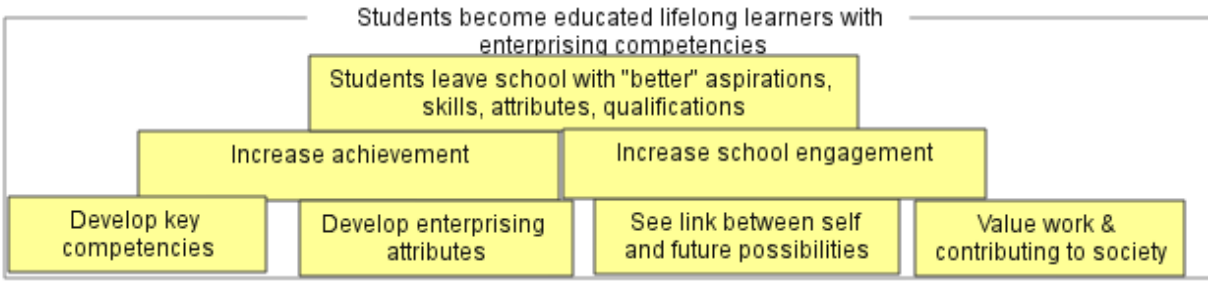
Aim 3: Enterprising learning opportunities are provided ("purple-blue zone")

The immediate point of setting up a project in partnership is to provide enterprising learning opportunities for students. Different elements of enterprising learning opportunities that participants, including students, teachers and principals, tended to cite when they were asked to describe their understanding of E4E are presented in the "purple-blue- zone" below. Evaluation findings related to this aim are discussed in Chapter 5.



Aim 4: Students become educated lifelong learners with enterprising competencies ("yellow zone")

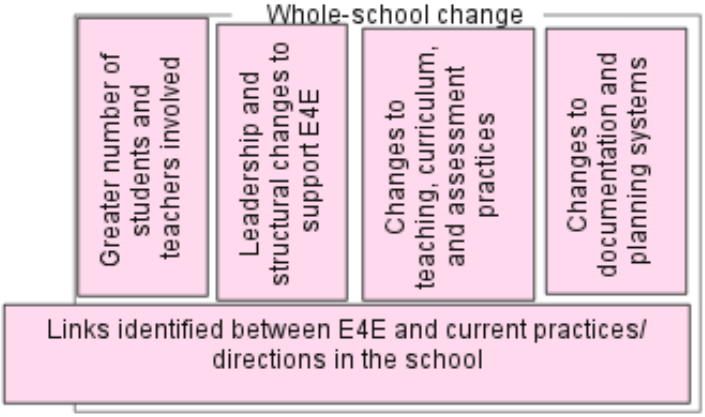
Why do people want to develop enterprising learning opportunities? Ultimately, the intention is that E4E will help schools to help students become educated lifelong learners with "enterprising attributes". The desire to build students' enterprising attributes is complemented by a host of related aims including the development of key competencies, and increasing students' engagement, achievement and aspirations. These are summarised by the "yellow zone" below. Evaluation findings related to this aim are discussed in Chapter 6.



Aim 5: There is whole-school change towards E4E integration and an enterprising culture ("pink zone")

A key aspect of E4E is its whole-school change aim. The aim is to develop enterprising teachers and enterprising schools, as well as enterprising students. The "pink zone" shows that E4E cannot be integrated into curriculum and school culture on its own. Other concurrent shifts are needed.

Some of the "necessary" shifts mentioned by participants in the Regional E4E Clusters Initiative are presented in the "pink zone". We should note that there are differences of opinion about the extent to which E4E can or should either *drive* whole-school change, or *emerge* from whole-school changes driven by other priorities (such as the implementation of *The New Zealand Curriculum*). There are also differences of opinion about how fast such changes can be expected to happen. Findings in relation to the "pink zone" are discussed in Chapter 7.



Aim 6: E4E is responsive to different communities and contexts, including Māori and Pacific communities ("grey zone")

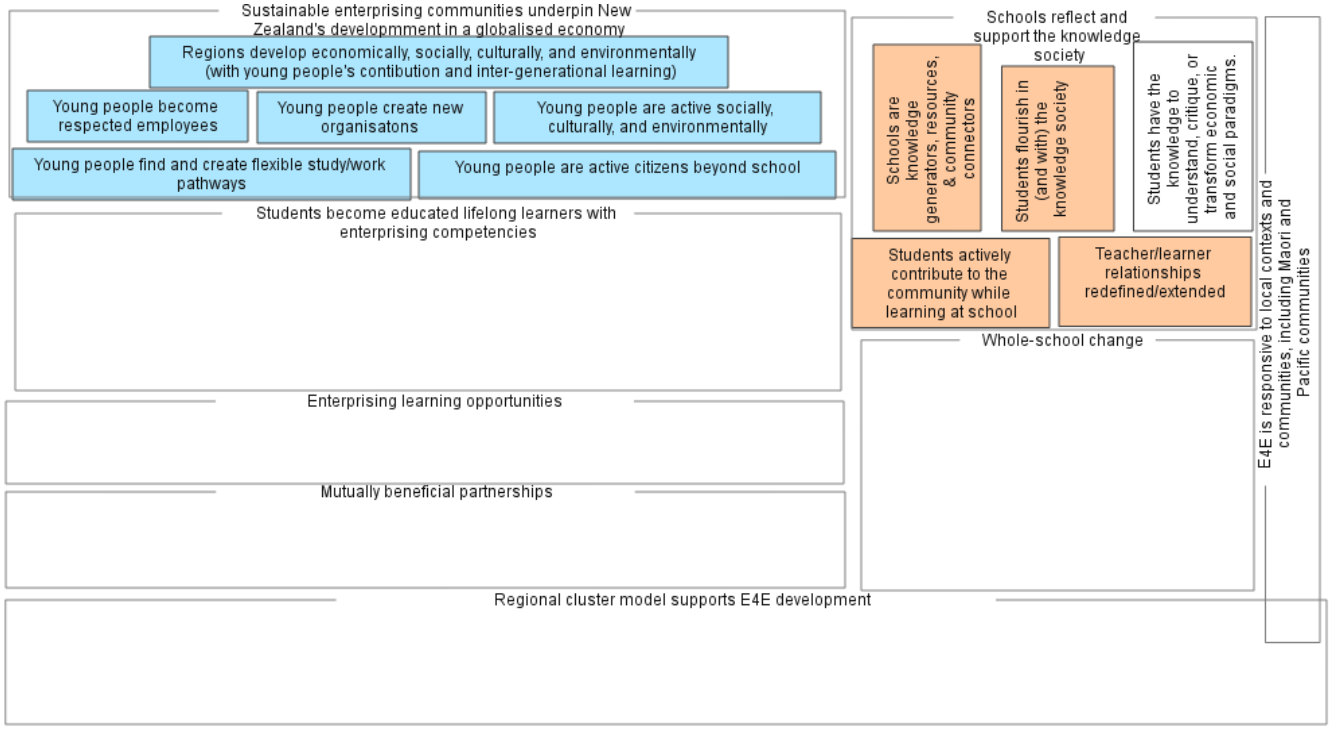
The "grey zone" stretches across the entirety of the model and shows that E4E is intended to be responsive to local communities, including Māori and Pacific communities, to the extent that E4E is likely to develop differently and look different in different contexts. Each community's needs, interests and aspirations are unique and hence E4E is intended to manifest differently across the different regions, communities and schools involved. E4E is hoped to serve the aspirations of Māori communities and of Pacific communities, and it was hoped that E4E would help to raise Māori and Pacific people's expectations that education environments will support their young people's potential as successful learners. Findings in relation to the "grey zone" are discussed in Chapter 8.

Wider goals of E4E for New Zealand society

Different people have different ideas about whether and how E4E should aim to influence students' lives beyond school or influence New Zealand society generally. We have added three additional zones below to represent the higher level objectives, or more long-term potential outcomes (both intended and unintended) of E4E mentioned by various people in the regional clusters initiative. These are:

- Aim 7: Sustainable enterprising communities underpin New Zealand's development in a globalised economy ("sky-blue zone")
- Aim 8: Schools reflect and support the knowledge society ("orange zone")
- Aim 9: Students have the knowledge to understand, critique or transform economic and social paradigms ("white zone").

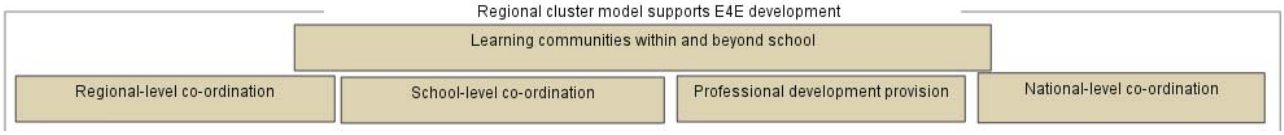
The figure below shows these three aims in relation to the six aims represented in Figure 2. We discuss these together in Chapter 9, as an exploration of ideas generated by the evaluation.



3. The regional cluster model as a support for regional E4E development

The Regional E4E Clusters Initiative can be considered a pilot test for a cluster approach to E4E as an alternative to schools working in isolation. This chapter evaluates the regional cluster model as a support structure for the development of E4E in the four regions. In Figure 2 (p. 26) objectives pertaining to the regional cluster model are represented in the "brown zone". It shows that four elements of the initiative (school co-ordination, regional co-ordination, national co-ordination and professional development) are intended to foster learning communities within and beyond schools.[21] The zone's position at the base of Figure 2 implies that the purpose of the regional cluster model was to help build and strengthen the foundations upon which E4E could continue to grow and develop within individual schools and communities, and across the region.

Figure 3 **The "brown zone": Regional cluster model supports E4E development**



In this chapter we will consider how well each of the elements of the regional cluster model presented in the "brown zone" had developed to support and sustain E4E locally by early 2009. In order to evaluate these elements individually—and together—it is important to understand the deeper intentions of the cluster model as a whole.

The Regional Clusters Initiative was designed to make E4E development a shared and networked practice, which we describe here in terms of horizontal and vertical collaboration. The aim was to have a range of groups feed into E4E development at various "horizontal" layers of the education system (illustrated by each row in Table 7 below). The aim was also to have a "vertical" ground-up and simultaneous top-down approach to E4E development, so that the learning journeys of each layer could inform one another (illustrated by the left column in Table 7 below).

[21] These were identified as significant during our exploration of E4E objectives according to various participants, documents and the E4E website. NZCER's 2007–08 evaluation could also be considered to be part of the structural support for the Regional E4E Clusters Initiative.

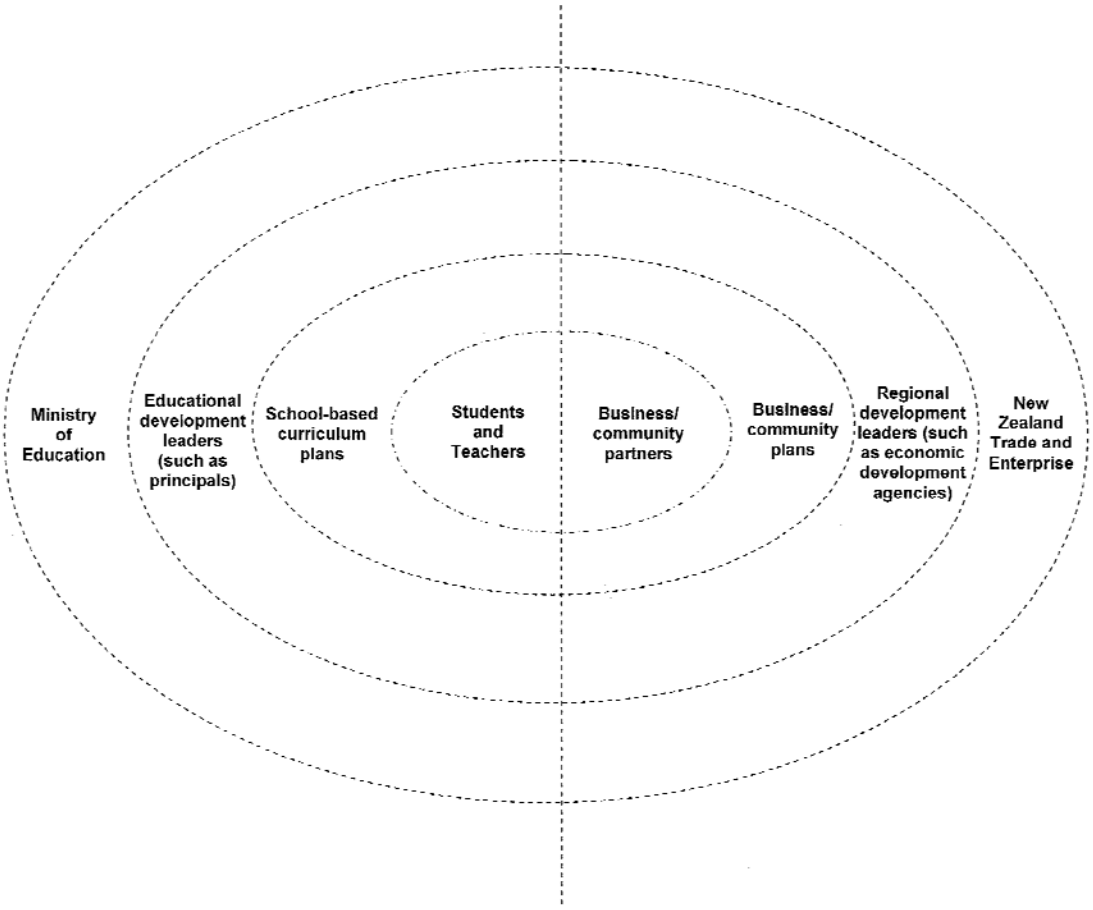
Table 7 **Collaboration enabled by the cluster model**[22]

Layer	Groups involved, i.e. input for E4E development is sought from …
Project level	teachers, students and business/community partners.
School level	a range of teachers representing different learning areas (e.g., art, English, maths, science, business etc.).
Cluster level	a range of schools from across the region.
Regional level	a regional co-ordinator, who works with/is advised by a range of sectors, such as local businesses, school leaders, community associations, local government etc.
National level	a partnership between education and economic development agencies, with input from a range of other sector bodies, such as the Ministries of Youth Development and Economic Development, Enterprise New Zealand Trust, Post Primary Teachers Association.

Another representation of these layers is presented in the figure below to emphasise a relationship between "education sector" on the left-hand side and the "business sector" on the right-hand side. The lines represent how E4E enables two different sectors (e.g., teachers with business community partners) and various layers (e.g., national level with local level) to come into contact with each other.

[22] This model has parallels with the six strands of an effective Network Learning Community programme described in Jackson and Temperley (2007).

Figure 4 **Local and national interfaces between education and business sectors**



Overall, we see that the regional E4E cluster model, with its horizontal and vertical collaborations, is an attempt to ensure that at least four things happen:

- E4E thinking and practice is shared as the initiative continually evolves, raising the capacity of all parties to be reflective and collaborative knowledge innovators.
- Networks exist and spread new learning out—and bring new learning in—from one site/layer to another, thus creating the opportunity for both E4E coherence and diversity.
- E4E is locally relevant and created/tailored to local communities' aspirations and needs as identified by members of those communities.
- E4E supports a view of education as a public good that should be guided by citizens' and stakeholders' active engagement in direction setting and implementation of learning opportunities fitted to the needs of learners and the needs of society.

These four intentions align with current thinking about learning and leadership in the 21st century. In the knowledge society, old institutional hierarchies and sector delineations are being replaced by networks where everyone in a system has responsibility for connection, communication and innovation. This has major implications for how both schools and governments operate. Recent

theorists have been calling for more democratic public services that can better reflect and serve today's society (Eppel, Gill, Lips, & Ryan, 2008; Parker & O'Leary, 2006; Seltzer & Bentley, 1999; Stoll & Louis, 2007). Educational change should not be directed by one individual, management stratum, Ministry or sector working in isolation. Instead we need new forms of organising—and thinking about—education as a public service:

> Many of the challenges that lie ahead for New Zealand—from energy to community cohesion—will not be met by government acting alone, or without it acting at all. Instead, people and government must build a new relationship, working in partnership to drive economic and social progress. In our complex world, real change happens where people meet policy—shaping it, deliberating on it, participating in its delivery. (Parker & O'Leary, 2006, p. 87)

From this perspective, a regional cluster model makes sense, especially one that was deliberately set up to feed into the iterative drafting of a national E4E strategy.[23] School clusters have become an increasingly popular means for distributing leadership to "assist in the process of re-structuring and re-culturing educational organisational systems [and] … enhance the quality of pupil learning, professional development, and school-to-school learning" (Jackson & Temperley, 2007, p. 53). A cluster approach moves responsibility for E4E away from a central/hierarchical source, towards a wide range of people "thinking together" in leadership networks and learning communities.

The model and its timing meant that regional and national E4E development was dependent on learning communities forming to imagine, plan for, enact and adapt E4E in each of the regional clusters. Professional learning communities have been described as:

> An inclusive group of people, motivated by a shared learning vision, who support and work with each other, finding ways, inside and outside their immediate community, to enquire on their practise and together learn new and better approaches that will enhance all pupils' learning. (Stoll et al., 2006, as cited as in Stoll & Louis, 2007, p. 6)

Previous research has shown that it can be extremely difficult to establish successful learning communities that achieve substantive change in teachers and student outcomes (Stoll & Louis, 2007; Timperley, Phillips, & Wiseman, 2003). The E4E cluster model incorporates all three aspects of the most demanding learning communities (Stoll & Louis, 2007), since it aimed to:

- establish professional learning communities within secondary schools
- extend professional learning communities beyond teachers and school staff
- maintain the sustainability of these professional learning communities.

We will now evaluate the extent to which each central element of the regional cluster model (as presented in the "brown zone") has developed and how successful it appears to have been in

[23] In the interim report we noted that this "multi-directional development process sometimes created a sense of discomfort for people involved in E4E at all levels (local, regional, and national), precisely because it involved breaking new ground, and moving from the prescribed and familiar into the unknown and challenging" (Roberts et al., 2008).

matching the intentions of the model and contributing towards E4E professional learning communities.

School-level co-ordination

Each of the schools involved in the E4E clusters was expected to appoint an E4E lead teacher, supported by the school principal, and to set up a small group of other staff who actively work on developing enterprising learning opportunities in their school (Te Kete Ipurangi, 2009). In an ideal scenario the lead teacher, principal and small-group teachers would form an E4E learning community that would also function as leadership network within the school. In this section we evaluate the extent to which each role was established across the schools within the four clusters, and discuss this in relation to four leadership roles known to support effective professional learning (Timperley et al., 2007). These are:

- developing a vision
- managing and organising
- heading and/or promoting the professional learning community
- developing the leadership of others.

E4E lead and cell teachers

All 20 principals surveyed in 2007 claimed to have an E4E lead teacher. (Of the 20 principals surveyed in 2008, 18 had a lead teacher in 2008[24] and 15 intended to have one in 2009.) E4E lead teachers carry out a variety of tasks, depending on their school's approach to E4E as well as their employment position in the school. Two-thirds believed that their school had strengthened the role of the E4E lead teacher over the past two years.[25] Table 8 below shows the main aspects of their role, some of which are no doubt reflected in the job descriptions that some clusters have developed. At the top of this list are: making E4E more visible in the school, and providing a link between the school and the regional E4E co-ordinator. Many lead teachers also said that providing intellectual leadership, day-to-day help and modelling E4E practice for other teachers within their school was a big part of their role. Many items here align well with the four leadership roles mentioned in the introduction to this section (Timperley et al., 2007).

[24] At least one school has co-leadership. Another did not have a lead teacher in 2008 as the previous one had taken long-term leave and the principal retained E4E co-ordination.

[25] According to the 2008 lead teacher survey, 11 percent thought major progress had been made, 56 percent indicated moderate progress and 33 percent thought little or no progress had been made.

Table 8 **Aspects of the lead teacher role (end-2007 survey)**

	Percent of lead teachers (*n* = 20)		
	A major part of my role	**A minor part of my role**	**No part of my role**
Making E4E more visible in the school	85	15	-
Providing a link between the school and the regional co-ordinator	80	20	-
Acting as a go-to person for teachers implementing E4E approaches	70	30	-
Providing "intellectual" leadership and inspiration about E4E	70	25	5
Using my own class to model E4E approaches	65	20	15
Setting up new business/community partners for teachers	40	40	20
Managing an E4E budget	25	45	30
Reviewing the new curriculum/key competencies in relation to E4E	35	45	20
Developing school documents around E4E	35	45	20

All 20 lead teachers surveyed at the end of 2008 agreed that they were enthusiastic about making E4E happen at their school (all but two strongly agreed). Being part of E4E communities of practice (within the school and the cluster) means that they provide support for others while needing support for themselves. At the end of 2007, 62 percent of the teachers we surveyed indicated that they felt well supported by the E4E lead teacher in their school (n = 51). Of the 20 lead teachers surveyed, 14 felt well supported by other teachers in the E4E cell, and 18 felt well supported by their principal.

The E4E cluster initiative expected each school to form a group of teachers (an E4E cell) who are committed to developing E4E in their own practice and the school, supported by the E4E lead teacher and other leaders within and beyond the school. By the end of 2008 two-thirds of the teachers we surveyed agreed that their school had "a small group of staff mainly responsible for E4E in the school". A slightly greater proportion of principals (75 percent) indicated that their school had established or strengthened a key group of enterprising teachers during 2007–08, and intended to continue this in 2009 (as had been an initial priority for all principals at the start of the evaluation). Sixty percent had also expanded the number of teachers involved in developing E4E between 2007 and 2008, and 85 percent intended to further expand in 2009.

As noted in our first report (Roberts et al., 2008), the exact configuration of this E4E cell varied between schools. In some schools the team was made up of a representative from each department, in others it comprised teachers from a particular level of the school (such as the

middle school), teachers within one or two departments (such as business, ICT or technology), or teachers who were interested in or already doing enterprising activities. While an interdisciplinary cell is the ideal, we found that even in a school where the cell teachers were from one department (business) they were actively engaging other teachers in E4E approaches and were also trialling team teaching.

Principals and senior managers

Support from school leaders, such as principals, has been identified as essential to successful E4E development. This call for strong leadership was echoed through ECSA funding criteria,[26] the draft E4E strategy and interviews with regional co-ordinators and lead teachers. By the end of 2008 all 20 lead teachers surveyed agreed that "the principal and senior management team support E4E" (with just over half strongly agreeing).[27] This agreement pattern was also identical in respect of board of trustees. On the basis of our 2007 case studies we suggested that school leaders have a part to play in at least three areas:

- practical support (for example, providing management units, weaving E4E into strategic documents etc.)
- intellectual direction (for example, horizon scanning for "big ideas" in education, articulating a vision for the school etc.)
- leadership networks (for example, working with other principals on E4E, encouraging E4E leadership from teachers within their school etc.).

We will briefly draw on 2008 survey and interview data to map progress in these areas. All three demonstrate principals "heading or promoting learning communities", and each can also be mapped to one of the other three leadership roles associated with improved student outcomes (Timperley et al., 2007).

Practical support

Table 35 in Chapter 7 (p. 133) outlines some of the practical supports provided or enabled by principals. The table provides some insight into how E4E is "managed and organised", an important role for effective school leaders (Timperley et al., 2007). Items at the bottom of the table were not common in schools at the end of 2008 but may well be established during 2009.

Intellectual direction

This subsection relates to leaders "developing a vision" for E4E (Timperley et al., 2007). Many, but not all, of the principals we interviewed articulated their vision, generally with reference to their broader educational theory, their school's unique philosophy and communities and their expectations and dreams for the future of society. It was not unusual to hear principals distancing

[26] For example, "Strong visible leadership from Senior Managers and Boards of Trustees" is one of the "critical changes" expected to occur (NZTE, 2007, ECSA criteria).

[27] Although two indicated that principals did *not* adequately support the E4E lead teacher role.

themselves or their schools from the language or national framing of E4E. They tended to see E4E as providing a flexible concept or tool to help teachers engage intellectually and practically with both the principles underpinning E4E and the broad aims of E4E, rather than heralding E4E as a recipe or label. This may partly explain why some regional co-ordinators have been disappointed by what they see as a lack of E4E commitment from some principals.

Table 9 illustrates the intellectual leadership provided by senior managers in two clusters.

Table 9 **Senior managers discuss their role in E4E development**

Principal
My role [in relation to E4E] hasn't shifted [over the past year]. It has always been to encourage, to facilitate, to horizon scan, to look for opportunities, and to cherry pick when I can see things happening … It is to be out there looking for new opportunities and ideas and feed them back in [to the school] … encouraging some staff to take it to the next step, and offering support … Often teachers aren't in the position to be horizon scanning or they only horizon scan in particular areas … A principal is scanning 360 degrees all the time … Senior managers have a responsibility to be in that unique position to see further, which is scary at times, but you have that obligation. Long term you hope that more and more people will be involved in seeing opportunities themselves and then it's just about encouraging them to fly with those. (2008)
Deputy principal
When the project came I had a term off and I visited quite a few schools in the South Island and Northland. When I came back and I was going to save the world. I came back as a crusader and drove everyone crazy … I visited [another local principal] because I knew he was starting E4E … and came away all glassy eyed and thought yes this is the way to solve engagement in classrooms and all kinds of things. Then we were into the [Regional E4E Clusters Initiative] contract so there was a formal way to make a buy-in. I started championing the cause here. I had a bit of ownership over it, though my intentions are probably a bit stronger than the actual reality … At the moment it's tokenism, we're just adapting units we already do to be more authentic. I think there are bigger and better things going to happen. (2007)

Leadership networks

This subsection relates to the important role of "developing the leadership of others" (Timperley et al., 2007). Principals are expected to be active in E4E networks with teachers in their school, with their local parent and business communities and with their E4E cluster including other principals. In 2007 we found that some principals appeared to be a vocal advocate for E4E within their school, whereas others took more of a back seat. Both approaches had potential to encourage a lead E4E teacher to step into a leadership role, aligning with the concept of networked leadership (Roberts et al., 2008).

> There is potential to make these changes because the principal is onside—if you didn't have the leadership [on side] it would be impossible. (Lead teacher, 2007)

At least from the principals' perspective, lead teachers and principals are heading in the same direction with E4E, as shown in Table 10 below.

Table 10 **Alignment between principals and lead teachers (principal survey, 2007)**

The lead teacher and principal …	Disagree	Agree	Strongly agree	Don't know/ Did not respond
	%	%	%	%
… share a similar understanding of E4E	4	40	35	-
… share similar school priorities for E4E	-	48	48	4
… share similar concerns about E4E	-	48	48	4
… share the same level of enthusiasm for E4E	-	40	56	4

All 18 lead teachers in 2008 agreed that "the principal and senior management support E4E" (10 strongly agreed). They also agreed that the board of trustees supports E4E, although two selected the "do not know" option. We note that some interviewees suggested that they were frustrated by principals who did not understand, or who did not promote E4E in a way perceived as optimal for E4E development. For example, some principals did not take an active role in cluster meetings nor invest time in E4E groups/developments within their school. While we also interviewed principals who were less engaged than others, this did not necessarily mean that E4E could not develop in their schools. Leadership in the knowledge society is not the sole territory of principals and management teams, but instead can—and should—reside at all levels of formal management hierarchies, and in networks themselves (Hargreaves, Earl, & Ryan, 1996; Seltzer & Bentley, 1999).

Regional co-ordination

Four clusters were set up to network E4E schools together, and to provide a regional co-ordinator who "acts as a school/community broker to help [schools] team up with local community and business organisations, to enable students and teachers to make real and meaningful connections with their learning in an authentic context" (Te Kete Ipurangi, 2009). School clusters have been said to connect a macro-policy level with a micro-school level (Istance & Kobayashi, 2003, p. 16) and to mediate between centralised and decentralised structures (Jackson & Temperley, 2007, p. 53). These possibilities can be strengthened by having a regional co-ordinator working with a school cluster.[28] In theoretical terms the regional co-ordinator role could function as a *mediator* between the macro-micro and centralised-decentralised interfaces, a key *node*[29] that develops—

[28] Although school clusters are becoming more commonplace in New Zealand, the E4E regional co-ordinator role is fairly unique, especially as it positioned with development agencies outside of schools and training institutes. They have some similar roles within other initiatives, such as Enviroschools where co-ordinators are housed with local councils.

[29] Nodes (such as experts, teams and institutions) are linked together in networks (van Aalst, 2003)

and shares—E4E knowledge, and a *facilitator* of network connections (such as teacher-to-teacher, school-to-school, school-to-businesses/community, region-to-region and regional-to-national).

During the evaluation the national and regional co-ordinators commented that the scope and nature of the regional co-ordinator role evolved and changed both to meet specific needs and demands within each cluster, and in response to the contracting and reporting requirements of the funding stakeholders (the MOE and NZTE). Similarly, the funding stakeholders made changes to their contracting and project management in response to cluster feedback and emergent needs within and across each cluster. By 2008 the national and regional co-ordinators had developed a sense of themselves as a team, and were utilising opportunities facilitated through NZTE's project management and the MOE to exchange or compare news, ideas and experiences through Skype calls and annual meetings.

Three key aspects of their role have been: to support schools to understand and develop E4E; to support E4E partnerships between schools and their local communities/businesses; and to facilitate enterprising leadership across the region. Evaluation data related to these roles are discussed below.

Supporting schools' E4E learning

The early 2007 principals' survey asked what kinds of support they wanted from regional and/or national co-ordinators. At that point it was clear that the greatest perceived need was for professional learning. For example, 80 percent wanted the co-ordinators to give suggestions about how E4E could be integrated into the curriculum and 72 percent wanted the co-ordinators to ensure the school would have professional development opportunities (n = 25). In this sense they positioned the regional co-ordinators as a "node" of E4E knowledge that could transfer learning to staff and connect staff to other E4E experts/resources. In all four clusters, we found that the regional co-ordinators did play a role in identifying professional development needs, and, in many cases, facilitating meetings and workshops within and across schools to support professional learning and networking:

> You couldn't do it without [the regional and national co-ordinator]. I don't have enough clout without a core of passionate people to bring in something across a school—unless you have someone coming in from the region or from a national level it is too big an ask. (Lead teacher, 2008)

The history and characteristics of each cluster had some impact on the role of each regional co-ordinator.[30] E4E was relatively new to two regions in 2007 (Manukau and Nelson), although some schools in each region had a history of engagement with ideas related to enterprising education. Introducing the E4E concept to schools and working with staff to further develop their understandings of E4E was therefore an important priority for these co-ordinators. Two other

[30] For a more detailed description of each cluster and its E4E initial developments, see Chapter 6 in the first report of the evaluation (Roberts et al., 2008).

regions built from a previous locally-driven enterprising cluster with regional co-ordinators (Northland and West Coast), although the large number of potential schools in each cluster and their wide geographic spread posed a logistical and resourcing challenge. This challenge was met by identifying a subset of schools in each region that could make a commitment to E4E as a priority focus (approximately seven to eight schools per region). These schools were engaged with a more "intensive" or "full model" version of regional cluster support, particularly in terms of access to professional development through the regional co-ordinator and associated professional development providers. These two clusters put (somewhat different) strategies in place for sharing key E4E knowledge throughout the region, while continuing to provide some school-to-business brokerage.

In 2008, 95 percent of principals and 67 percent of all other teachers we surveyed had interacted with the national or regional co-ordinators. The table below shows that principals and lead teachers rated various aspects of regional co-ordinator support to be "very important" in helping the development of E4E in their school. The most important forms of support were perceived to be encouragement for the school to get involved in E4E, initial liaison with business and community partners[31] and keeping schools up to date with what was happening regionally and nationally in E4E.

Table 11 **Regional cluster support that schools received and found very important (2008 principal and lead teacher surveys)**

	Percent of principals and lead teachers (*n* = 38)
Encouragement for my school to get "on board" with E4E (e.g., promoting why it is worthwhile to do E4E)	71
Help making initial contact with business and community partners	66
Keeping schools up to date with what's happening regionally and nationally with E4E	66
Professional development for groups of teachers/whole staff	63
One-on-one support/professional development for individual teachers	61
Feedback from NZCER's evaluation	55
Help managing ongoing relationships with business and community partners	50
Strengthening links and relationships between schools in this region who are doing E4E	50
One-on-one support/mentoring for the principal	18*

* Thirty percent of principals agreed with this item.

[31] In the original principal survey in early 2007, just over half wanted the co-ordinators to broker partnerships with community/business groups and just under half wanted them to support these in an ongoing way.

Supporting partnerships with business/community

Another significant part of the regional co-ordinator role through 2007 and 2008 was to engage people from businesses and the community as potential—and ideally ongoing—partners for E4E activities in their region. As a "facilitator" of connections they did this by establishing and supporting specific E4E project partnerships, and by raising the profile of E4E across the business community generally (we discuss the latter in the next section).

As we saw above, 66 percent of principals and lead teachers thought it was very important for regional co-ordinators to initiate partnerships, and 50 percent found it equally important to have support for the ongoing maintenance of these partnerships. Many of our interviewee's comments about the regional co-ordinators stressed the vital role they played in the partnership process and its success. The 2008 data echoed our first report's discussion on the role of the regional co-ordinator in noticing and navigating potential "paradigm clashes" between schools and businesses or community groups (Roberts et al., 2008). The 2008 case studies also emphasised that the regional co-ordinators could "mediate" between teachers' and business partners' availability:

> Our local E4E co-ordinator has been fantastic. [The co-ordinator] has managed to set our school up with a new partner. This is going to be an exciting initiative and one that [the co-ordinator] has supported by developing our idea into a partnership. (Principal, 2007)
>
> It was great! Great support (PD/co-ordinator/lead teacher) made it easier, minimised challenges. (Teacher, 2008)
>
> It is totally necessary to have the support of regional and national co-ordinators and development people. [Our regional co-ordinator] made our E4E studies possible. [The co-ordinator] has been invaluable, has made the contacts, organised outside interests etc. The opportunities for students to participate. The work [the co-ordinator] does would not be done by teachers. I feel that E4E would founder if this support was not there. (Teacher, 2008)
>
> It has offered support which was the critical thing needed from a cluster [approach]. The biggest thing of having a cluster is [the regional co-ordinator] who is building links and connections for us … It became clear from two years ago that business communities and school communities are really busy, and both are keen to work with each other but it's that gap in the middle. In the past, partnerships used to happen from two people getting together by chance, which dies if one of them leaves. (Principal, 2008)

About half of the 25 community/business partners surveyed in 2007 had first heard about E4E through the regional co-ordinator (48 percent) or their economic development agency (12 percent). By 2008, three-quarters of the 28 partners surveyed had interacted with a regional E4E co-ordinator, and 82 percent agreed (with about half strongly agreeing) that it was an important role. According to these partners, regional co-ordinators most often provided support by:

- explaining and promoting why it was worthwhile for the organisation to get involved in E4E (71 percent of partners in 2008, $n = 28$)
- helping with initial contact and relationship building (71 percent)
- helping manage the ongoing relationships with schools (68 percent)

- keeping the partner informed about regional or national E4E developments (64 percent).

Only a few made suggestions for new kinds of support, which generally related to their wish to have the E4E concept spread further:

> There is a need to advertise this initiative wider into smaller communities like [this one]. Schools know about it but I suspect not so much in the community. Some people think that [this town] is a non-event as far as businesses go. Yet [it] is the home of a number of large businesses that do not appear to be actively involved in the schools that have senior students. (Partner, 2008)

> E4E needs greater support to ensure that communities (particularly businesses) are aware of the role. E4E needs to become an easily recognised community word. In places like [this town], if you are not in education circles, you are unlikely to know what it is all about and how you can be involved. (Partner, 2008)

> Having an understanding of the other organisations and activities already happening in that school, which could be built upon, as opposed to pulling in fresh faces. (Partner, 2008)

> Perhaps it would be a good idea to get E4E business and community partners together to discuss their experiences. That way, we could learn from each other's E4E projects. (Partner, 2008)

All business and community partners we interviewed spoke very highly of the regional co-ordinators. The only exceptions were when the partner had worked directly through the school and had not met the co-ordinator. Generally, they perceived the co-ordinators to be well connected with people in both the business/community sector and their local schools. Table 12 presents an excerpt of an interview with a partner in a project that involved several schools in the region. Other partners also suggested that they become less dependent on regional co-ordination over time but still needed some form of support in the second or even third year of partnerships.

Table 12 **The role of the regional co-ordinator (partner interview, 2008)**

The [regional co-ordinators] have been phenomenal considering how many projects they're involved in. They always have time for you, they were at every visit we had at the schools, and they were communicating with the schools, making sure they had support for this big project (there was a lot of pressure on for teachers and students), and making sure we were happy as well. They never made us feel like we had come up with too big an idea and they were supportive because they knew we were taking a risk as well. It was a project that could have fallen on its face quite easily. And it was a lot of work for us, although the benefits far outweighed that. **Would you need the same level of support again if you did a similar project?** Not the second time, because I know more about it now. I know they would be there and it's a level of comfort. For me it was about finding what the line is that I could step over, how much was I totally a professional client or could I get there on a more personal level? Which I discovered that I could do because that's what teachers want—to find you're an approachable person. If I was to do it in the future I wouldn't need [the regional co-ordinators] so much, although I would still need them to co-ordinate it actually. **What do you mean by co-ordinate it?** From all their projects they've got their established relationships with different teachers and schools, and they're good in still approaching schools that haven't taken E4E on board yet. And because they understand that it's best to leave that initial co-ordination and approach to schools with them and then they can bring people who are interested to us. We'd then develop the relationship from there, from the client to the school.

Enterprising leadership across the regions

The regional co-ordinators have a key role to play in helping to develop a more enterprising culture across each region, not just with individual schools or their project partners. They do this by taking advice from cross-sector advisory groups, taking part in intersectoral forums, introducing E4E at key events or agencies, and supporting student leadership across the region. We consider each in more detail in this subsection.

A cross-sector regional E4E reference group and/or executive committee support the direction and work of most regional co-ordinators. The make up of these bodies varies between regions, although business representation appears to be greater than community sector representation. For example, in one region membership includes representatives from E4E principals, NZTE, the MOE, Chamber of Commerce, Small Business Advisory Group, Economic Development Agency and an Education Business Partnership Trust.

Most regional co-ordinators also established links into other forums to promote E4E, to develop visions as enterprising regions and to open channels of communication between different sectors:

> We went to the [region's iwi authorities'] CEO's forum, which is the CEOs of all the iwi organisations, and we got a mandate from them to actually go and talk at grass roots within their individual iwi. (Regional co-ordinator, 2007)

At least two of the regional co-ordinators we interviewed in early 2008 had attempted to build long-term relationships with particular large employers in the region, in the hope of enabling multiple partnerships with different units within the workplace and to increase the employer's

understanding of the relationship between enterprising education, enterprising communities and enterprising business:

> We're trying to get [local council and local District Health Board] to take on formal professional development just like the schools. [A contractor] and myself will do it. We are going to approach these organisations and say we want to grow their capability to work with all the schools around them in E4E. We will target their management teams. The sessions will be planned in conjunction with the location and nature of the organisation. [We chose them because they are] really keen to do this and have so many different roles within [their organisations for E4E] to tap into. (Regional co-ordinator, 2008)

Some regional co-ordinators have invested time in trying to secure long-term cluster-sponsorship partners in their own regions:

> We only have 2–3 big businesses with the discretionary funds available for sponsorship [in our region] and they are constantly being tapped for that, not only by us, but others as well. I imagine that other rural regions would have something similar. (Regional co-ordinator, 2008)

The comments and approaches discussed above represent the range of different ways in which regional co-ordinators were seeking to ensure successful long-term partnerships, and hence long-term sustainability, of E4E in their regions.

Student leadership

Two regions (that we know of) have developed avenues for student leadership of E4E at a regional level. Each of these two approaches appeared to have different purposes, and differing results.

In one region, E4E student representatives from the range of schools were selected to attend a three-day regional E4E student forum. According to a focus group with four of these students—four months after the forum—an adult support crew handed over the decision-making reigns but outlined several "outcomes" for the young people to achieve over the weekend, and several adult key speakers highlighted avenues for youth leadership across their schools, the region and New Zealand. The students said they were inspired by the process, and intended to seek/encourage more youth leadership opportunities and enterprising approaches within and beyond their schools. They expected to be spokespeople for E4E in their schools the following year (while recognising that the nature of and enthusiasm for E4E varied between schools), and were imagining ways that they could develop the E4E forum to expand (possibly as a model that could be mirrored at a town or school level) to enable better connections with adult school leaders and local government. The students felt that young people generally received little respect from the media, and that more could be done across the region and within schools to: recognise the abilities and contributions of students that already exists in the region; bring out the "untapped potential" of young people; and support teachers—and others—to better understand and respect different cultural values. The students said that the regional co-ordinator had maintained contact with forum attendees, and

some succession planning was underway for replacing the Year 13 students, although they were unclear as to what exactly might unfold in 2009. Some of their comments include:

> Both of them [key speakers] managed to teach us about legally how we could get our rights and how we could be assertive about it, especially in school. A lot of students don't like approaching school boards and writing submissions. We learned about other forums—like advocacy groups.
>
> [What do you think E4E co-ordinators learnt?] That by giving students a voice, they will stand up and say something … If you just give us a chance we'll give you a run for your money. There are stereotypes against us and in two days we proved them wrong. Media presents bad stuff, but you'll never hear about our forum. Youth parliament is like E4E—it showed how much untapped potential we have … If we keep as many student role models as we have now it [the bad reputation of youth] will grow out—we have so much potential.
>
> Having our new head boy go to the forum [was good because] he's going to be someone that when other opportunities come up with E4E he can encourage students to take part in it. He can speak in assemblies—and that has a lot more influence than if a teacher said the same thing.

In the second region, student leadership was encouraged in a rather different way. There, a group of student E4E representatives were selected to take part in a meeting with the regional co-ordinator, and one student was selected to be the region's main E4E student leader for 2008. According to an interview with this student, no further networking occurred between the original group, but the student leader role involved attending the region's E4E advisory meetings and was involved as an organiser of, and spokesperson for, E4E within her school. The student representative was grateful for the learning she had received though: conversations with the regional co-ordinator; being party to high-level E4E discussions; and in-school experiences including, for example, in public speaking at assemblies. However, she also spoke of the difficulties she had in understanding the adult conversations and finding a voice as the only student on the advisory group, and was unsure about how to "represent" students or how to "translate" E4E in a way that fully engaged young people:

> It was a good experience for me. I wouldn't have had that kind of learning without it, like being at the meetings and doing a speech for a sponsor. NCEA gives you no idea of what our society is like after you leave college, unless you've worked [in paid work] young … [But] I think it would have been easier if it [student leaders group] was a regular thing because I found it quite hard being with business people and as a student I would get kind of lost … I never really understood what they were saying and they didn't break it down. Most of the time how I would catch up was through being sent the minutes or talking with the regional co-ordinator … The students could meet separately from the adults and then one student can take what everyone is thinking to the meetings.

It seems that the model in the first region was founded on youth development principles (Ministry of Youth Development, 2002) and provided a means for E4E and enterprising approaches to serve students so that they could better serve their schools and communities. The second model better reflected a more traditional model of a student representative on a board, and provided one

mechanism for students (or a student) to serve E4E as it was conceptualised by adult leaders. However, it will take at least another year to evaluate the longer term impacts of these approaches.

Summary of regional co-ordinator impact

By early 2008, the regional co-ordinators all felt that despite some challenges, and (for some regions) a slow beginning, their work in 2007 had contributed to a gain in momentum for E4E. The greatest challenges they faced related to gaining leadership buy-in and operating under the formalised contracting and reporting requirements of the regional cluster initiative's funders. Such contracting and reporting structures are a feature of government systems, and are set up to ensure accountability and transparency in the way that public money is spent. However, fiscal timelines and reporting dates do not always align easily with other timelines—such as those which tend to dictate "what can happen by when" in a school year. Within allowable parameters, reporting arrangements became more flexible as the NZTE contract managers responded to regional co-ordinators' feedback over time.

By late 2008, surveys and interviews with school staff and their business/community partners suggested that a regional E4E co-ordinator was essential to brokering initial relationships, mediating planning and supporting ongoing partnership processes. The regional co-ordinators were seen to speak the language of both schools and business, and to provide a meso-level conduit between grassroots and government interests. They had also "teamed up" with the national co-ordinator, and in some cases, a separate professional development provider.

National co-ordination

The pilot Regional E4E Clusters Initiative was in action *while* the national E4E strategy was being drafted. Learning from the four regional clusters was intended to inform the iterative development of an E4E strategy and national resources, while clusters were envisaged to be guided by national structures and resources as they emerged.[32] This section explores two areas perceived to be fairly undeveloped at the time of data collection for our first report. Many interviewees, at that time, believed that for E4E to successfully develop, more attention needed to be paid to national co-ordination by ensuring that:

- the role of the national co-ordinator was clear to everybody
- contracting requirements make sense for an enterprising vision and schools' sensibilities
- teachers have access to resources to help them develop E4E in their learning areas
- E4E visibly aligns with *The New Zealand Curriculum* (Ministry of Education, 2007c)
- assessment structures are supportive of E4E approaches.

[32] For example, an E4E slogan, vision, key messages and intended outcomes were developed in mid-2007 by an interagency working group and immediately posted on the E4E webpages of Te Kete Ipurangi.

Overall, we believe that interviewees were calling for greater system coherence and more practical support. The national co-ordinator has had a role to play in addressing both of these areas since our first report, as has national resource development.

National co-ordinator

A national co-ordinator, funded by the MOE, "works closely with regional co-ordinators, school leadership, [resource developers], and classroom teachers" (Te Kete Ipurangi, 2009). The national co-ordinator role includes both the operation of the regional E4E clusters, as well as other enterprise education developments in New Zealand. Like the regional co-ordinator role, the national co-ordinator role has developed over time, partly in response to the emerging needs and desires of the regional clusters and/or national funders. Over the past two years the role has involved—amongst other things—networking with national and regional stakeholders, supporting the regional co-ordinators, providing teacher professional development, engaging principals, developing resources and involvement with other E4E developments such as BEST.[33]

With reference to the Regional E4E Clusters Initiative, in early 2008 the national co-ordinator believed that while working with the regional co-ordinators had been the most successful aspect of his role, he had experienced less success in making contact with teachers and principals. The national E4E co-ordinator ran some form of school-level and/or cluster-level professional development in most regions during 2007 and 2008, including subject-specific workshops. Table 13 presents comments from two principals with quite different viewpoints, and the national co-ordinator, to highlight different understandings of the role of the national co-ordinator (we discuss professional development in more detail later).

[33] Building Enterprising Students Today (BEST), an E4E initiative developed by the MOE for students in Years 1–8.

Table 13 **Three understandings of national co-ordination**

National co-ordinator, early 2008
It has been not as easy as I thought it might have been. Where I've had previous connections it has helped … I have met with quite a few of them but not enough to build a relationship. There are cost constraints on visiting regions so I have worked through other mechanisms to try to engage principals.
Principal, late 2008
It is useful to have a national co-ordinator, but principals should have more input into shaping this role. The person needs to have a good research background and practical background in approaches to teaching and learning. They need to be in the regions for reasonable periods of time. Better to have an intense period of learning [since] short-term is not enough to motivate people. For example, we just had a principals' meeting and an hour session with [the national co-ordinator]. A full-day intensive would have been better.
Principal, late 2008
E4E coming through from national level is not exactly prescriptive but it's a clear model that you can do professional development around … [There's an assumption that] if we do the professional development and provide teachers with this 'stuff' it will happen. That works in some cases to a certain level, but … if you have the right frame of mind and pedagogical approach to things E4E is a given … Putting resources into professional development does not necessarily change pedagogies. It's about how to light the hearts, minds, and souls of people and that's something that all principals are trying to find the answer to.

The national co-ordinator worked in a one-on-one coaching arrangement with at least one principal in each region. Interviews suggest that this deepened the thinking of both parties, and helped to make national-level resources more practical and grounded in school realities:

> I had the opportunity to do some readings with [the national co-ordinator]—not critiquing so much, but making sure that material going out to schools has a pragmatic approach to it. It has been good to challenge my thinking, like about where E4E fits with the curriculum and a futures focus … [It has been useful] in terms of deep learning—through that process you are forced to examine at a deep level. It hasn't filtered out as a cluster but has filtered into our school—the E4E team have access and filtered out. Personally I've found it beneficial. (Principal, 2008)

Some principals appear to have taken a leadership role among the E4E principals in their regions. The next comment comes from a principal in this relationship. Other principals have also been invited to feed into regional and national thinking; for example, as a speaker at key E4E events:

> I'm able to give a perspective from a predominantly Māori school. [The national co-ordinator] wants this to be heard. (Principal, 2008)

Resource development

A new E4E website was launched in mid-2008. Our evaluation cannot provide details about the effectiveness of the resources on this site. However, we can comment that it appears to have made good headway on meeting the requests of our 2007 case study interviewees. Several interviewees called for a wider range of national support structures and resources to help teachers feel confident with E4E. Of the few 2007 interviewees who had browsed a previous version of an E4E

website on Te Kete Ipurangi, most said that they were glad it had expanded during the year but also called for more to be uploaded.[34] For example:

> We would like more on Year 9 up [and] job descriptions of lead teachers. We'd like information on how to assess it [E4E learning]. And we need more case studies so teachers can realise they are doing it already. (Principal)

Teachers and principals involved in conversations or workshops to design or review resources to upload on the site also appeared to gain a lot of professional learning from their involvement (as demonstrated by comments from the principals, and the regional co-ordinator):

> [The resource development workshop] provided an opportunity for me to get alongside teachers and write a resource. It showed teachers who were already innovative and doing E4E-style activities, that there was something new with E4E. It was taking their project and learning experience with the kids into a greater understanding particularly with the enterprising attributes and the new curriculum … It gave me an added way into schools so I'd go and see these teachers [to] critique their activities … and it gave me valuable links with people already there. (Regional co-ordinator, 2008)

We will further discuss the coherence between the revised *New Zealand Curriculum* and E4E in Chapter 7, but this regional co-ordinator comment highlights its importance for regional cluster developments:

> The curriculum is a strong driver of teaching and learning in schools, it's the document they're accountable for. For me the receptiveness of a number of principals that were [initially only] moderately interested in E4E, now that I can come in with workshops and information related to the new curriculum, and E4E as the vehicle of delivery, and show them some examples of how it can be written up with enterprising attributes and key competencies etc. I am winning them over to get stronger support. (Regional co-ordinator, 2008)

Summary of impact of national co-ordination

National co-ordination, including but not limited to the national co-ordinator role, has evolved throughout the evaluation period. On one hand this makes sense for a pilot initiative that was set up to feed into—not just follow—national leadership. On the other hand it has meant that we cannot fully evaluate how well national co-ordination has functioned within the regional cluster model to support professional learning communities. However, qualitative data suggest that national co-ordination has: mediated national and regional E4E interests; helped connectivity in E4E networks; developed E4E leadership; and identified and filled some E4E knowledge/tool gaps.

[34] We provided more detailed interviewee feedback on the website in a supplementary report to the MOE and NZTE in 2008.

Professional development

Professional development has been made available to schools in each cluster through the regional and national co-ordinators, and a contracted professional development provider funded by NZTE. The specific arrangements for professional development varied in each region depending on the needs of that cluster. Regional co-ordinators were able to meet some particular professional development needs themselves, and drew on a professional provider or the national co-ordinator to meet other needs. Various forms of professional development included: mentoring of lead teachers and/or principals; school-specific or subject-specific teacher workshops; and, in some cases, personalised support for individual or groups of teachers as they developed their E4E approaches over time.[35] New Zealand's Best Evidence Synthesis on professional learning (Timperley et al., 2007) suggests that some form of external expertise should support professional learning communities. This balance between insider–outsider input helps participants to avoid maintaining the groups' status quo and realise that new understanding, knowledge and skills are needed.

External professional development

Apart from the cluster meetings that regional and national co-ordinators were to facilitate, centrally co-ordinated in-depth professional development was not originally envisaged as part of the Regional E4E Clusters Initiative. Rather, external professional development was a key area in which NZTE support emerged in response to needs that were identified once the clusters got underway.[36]

While 92 percent of principals in the early 2007 survey indicated that it was of high or moderate priority to source professional development for their school (not necessarily just from regional co-ordinators), neither the extent/format of E4E professional development provided—nor the actual uptake of these opportunities—appeared to match this level of initial enthusiasm.

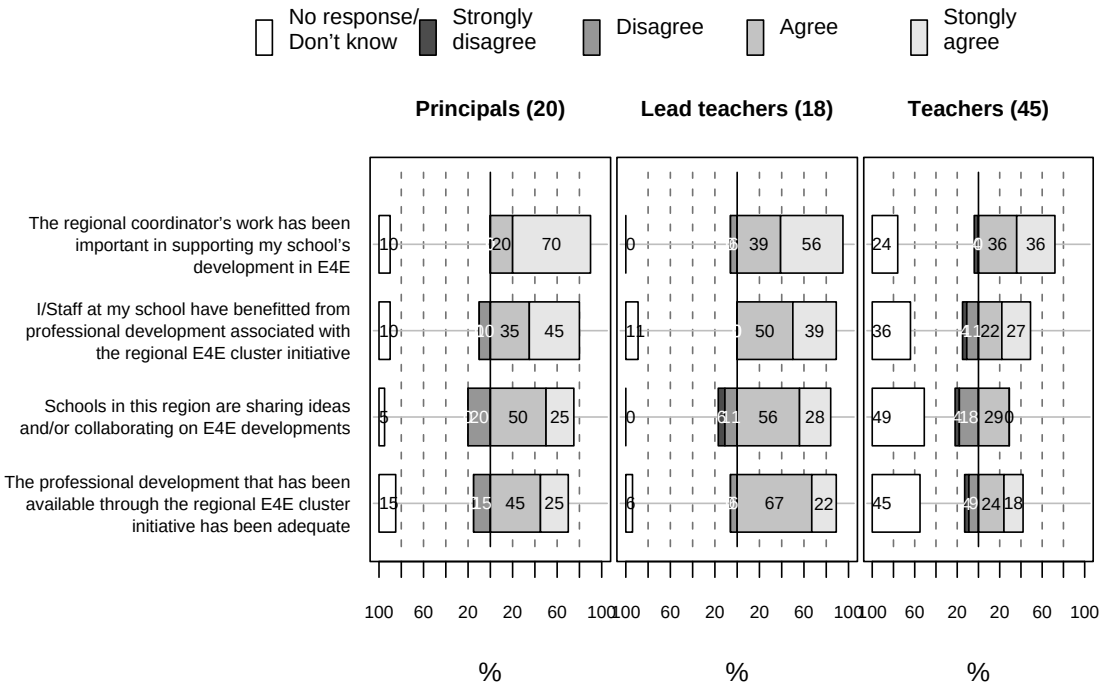
Our evaluation was not originally set up to evaluate E4E professional development activities per se, but various data on professional learning and development were gathered as part of the overall evaluation of cluster development. In general terms, survey results showed that by late 2008, 33 percent of lead teachers (n = 18) thought that their school had made major progress/success on sourcing and organising staff professional development related to E4E (50 percent thought moderate progress/success had been made, and 17 percent thought there was little or no success). The figure below shows the perceived opportunities and impact of professional development (remembering that in some regions this professional development has mostly been provided by the regional or national co-ordinator, rather than an external provider). It shows that respondents have largely been satisfied by what they have received, although it appears that between a half and a third of non-lead teachers may not have experienced these opportunities (as suggested by

[35] E4E professional development was also offered to businesses in at least one region.

[36] Professional development formed part of the West Coast cluster's initial development (see page 52 – 53).

the levels on the "disagree", "don't know/did not respond" columns). Our interviews with regional co-ordinators and school leaders in both 2007 and 2008 suggest that several misunderstandings, mismatched expectations and missed-timings might explain this pattern.

Figure 5 **Staff views about regional co-ordination and professional development (2008)**



Each region's E4E (emerging) professional development structure was unique.

The West Coast contracted in a professional development provider, CORE Education, before it was part of the official cluster initiative. We noted in our first report (Roberts et al., 2008) that the regional co-ordinator and professional development provider designed a flexible needs-based model when there were few E4E resources available for the provider to draw on:

> It's the hardest PD to put in place … It's like sending a PD person off a cliff [because we didn't know exactly what E4E should look like]. It's quite reactive [in that it is] meeting needs of teachers … [The PD adviser] didn't want to be dictatorial, but found some teachers want more strong advice, others want open discussion. So she takes concrete stuff to some people—like a reading. For others she asks, 'What do you need?' (Regional co-ordinator, 2007)

The regional co-ordinator updated us again in 2008:

> The model is the same. [The provider] has six sessions [with each school through the year] that we expect [E4E cell] teachers to go to. Recently there has been more email contact between her, the teachers, and the lead teachers … and more video conferencing used to shift thinking and to stimulate conversation. She is very good at getting the teachers to focus back on the curriculum and to think about cross curriculum work … Our goal is to empower the teachers and she does that very well. (Regional co-ordinator, 2008)

By mid-2008, most West Coast teachers we interviewed were also extremely grateful for contracted professional development in their region,[37] and could identify shifts in their teaching because of it. The same schools received professional development in 2008, but each organised it in a different way to balance deepening of practice with breadth of teaching staff. Another professional development provider was also due to start supporting new E4E schools in the region:

> [The professional development provider] was my saviour—by having her come over it was mentoring and always very positive. She would take my excitement and help me see what I can do … I had a good understanding of E4E—it was more about giving me positive encouragement. (Lead teacher, 2008)
>
> When you're hitting obstacles, the PD helped you move forward—very good at motivating and brings the best out of you. Also she is quite neutral so she isn't part of school or client set up but knows what you are going through. (Teacher, 2008)
>
> Last year I was putting up mental blocks but [the professional development] just removed those. (Teacher, 2008)

In the three other regions, Manukau, Nelson and Northland, E4E professional development associated with the Regional Clusters Initiative had a slower beginning. Prior to mid-2008, Manukau's primary professional development came from the national co-ordinator. Beyond what was offered by the regional and national co-ordinators prior to 2008, the Northland cluster also sourced professional development from local members of the business and education communities, and the Nelson co-ordinator partnered with an E4E resource development contract which doubled as professional development for the teachers.

In mid-late 2008 several new developments occurred across these three regions as NZTE established new contracting arrangements to support further professional development. In Nelson, the regional co-ordinator formally took on a professional development portfolio in mid-2008 in light of his particular expertise. Meanwhile, NZTE contracted an external provider, CORE Education, to support Manukau and Northland schools. As these later arrangements were still being finalised to start just after our 2008 case study visits, we interviewed the professional development contractor in early 2009. She suggested that a number of outcomes had been negotiated and reviewed in light of a "needs analysis" from an initial round of school visits. Some outcomes for 2009 included: to mentor the regional co-ordinators; to establish a community of practice amongst lead teachers; to tailor in-school professional development according to each school's unique E4E developments and needs, including expanding E4E into new curriculum and cross-curriculum areas; and to support lead teachers to lead E4E professional learning within their schools which would collect and reflect on student data to help set their directions. The contractor noted that schools in each region tended to be operating fairly independently, and that some were further ahead with enterprising approaches and development than others.

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[37] They commented on the effectiveness of various aspects of her practice, including the balance between group work and one-on-one support and her "critical friend" role in working with where they were at.

Internal professional development

In New Zealand, as in other countries, there has been a move from professional development focusing on changing individual teachers, to professional development to support teachers to form professional learning communities so that together they can continue to share practice, make changes and reflect on next steps beyond initial "expert input" by "learning how to regulate one's own and others' learning itself (i.e. new knowledge and practice gives people the tools to engage in ongoing inquiry)" (Timperley, Wilson, & Fung, 2007). One way to consider "ongoing inquiry" is to look for the ways in which professional learning infuses through a school.

Three-quarters (15/20) of the principals surveyed in 2008 agreed that "key staff within the school had led professional learning for their colleagues in relation to E4E" (for example, though mentoring/supporting other teachers, running staff professional development sessions). Likewise, several of the case study schools we visited in 2008 had developed a system to spread professional learning and practice amongst teachers not directly engaged with the E4E cell, regional co-ordinator or external professional development. The table below illustrates different approaches from five schools.

Table 14 **School-based professional development approaches**

School A: The school ran a professional development series on the new curriculum. One session, facilitated by the E4E lead and cell teachers, explored the curriculum development potential of enterprising learning.
School B: A peer coaching system operated in the school, and each teacher could choose one of five areas to focus on during the year. One option was "authentic learning" which was seen to reflect E4E intentions. The E4E lead teacher was a coach and had also facilitated some group professional development on authentic contexts.
School C: The cell teachers provided whole-staff professional development on E4E. This led to all staff looking for a unit in which they could develop E4E with ongoing mentorship from the lead teachers. The model was generally seen to be successful, although some staff committed more than others.
School D: Up to eight active E4E teachers met regularly over a catered lunch to discuss their progress, issues and visions. Interested staff members were invited to attend.
School E: An E4E committee involved one teacher from each faculty. Planning for a two-day event for all Year 10 students was seen as one way to get more teachers upskilled and involved.

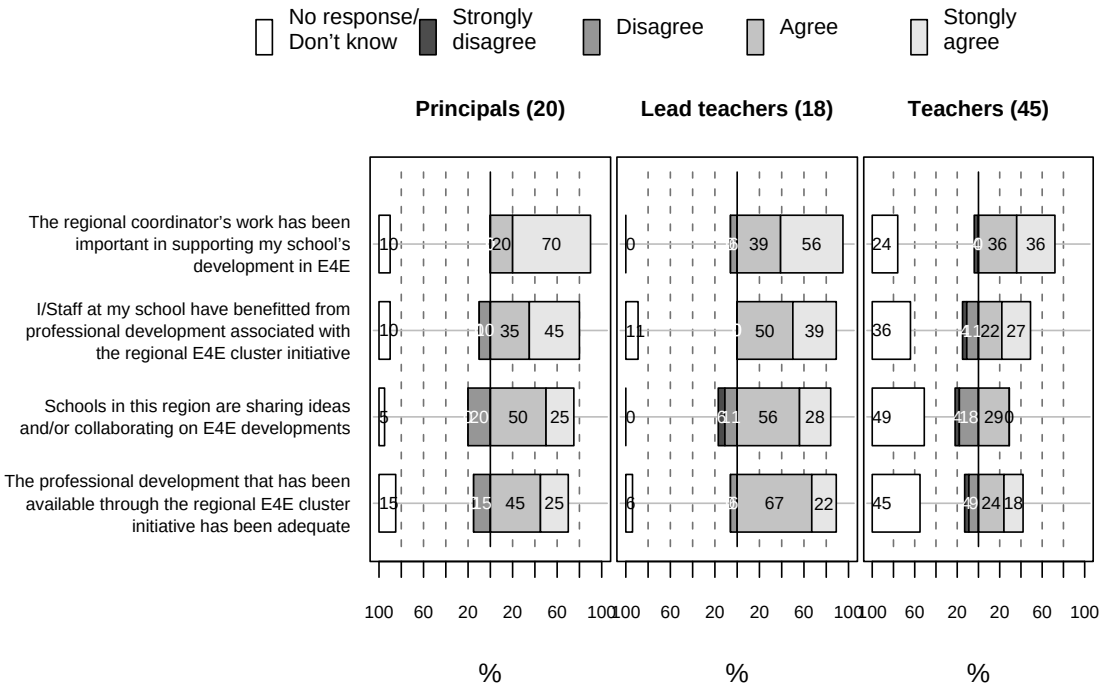
Summary of professional development impact

This section has shown that professional development has become an aspect of E4E development, although there was low uptake in some schools and regions, due partly to teachers' interests and availability and partly because it was not initially built into the Regional Cluster Initiative. E4E development requires time for professional learning, being part of a learning community, working in partnership and having time for in-depth authentic student-led projects. For example, a teacher mentioned that of all the staff committees within the school the E4E committee "probably has the biggest workload". Professional development appears to offer a means to provide a grounding in E4E aims and approaches, expose teachers to ideas and possibilities from outside their school and encourage E4E planning and projects, while offering opportunities for planning, problem solving and networking.

Professional learning communities within and beyond school

The 2008 survey data, presented in Figure 6 below, suggest that principals and lead teachers (and to a lesser extent other teachers) are reasonably satisfied with the regional/national co-ordination, professional development opportunities and school-to-school collaboration as it stands. However, our case studies suggested that more may be needed to reflect recent literature about effective professional learning communities.

Figure 6 **Regional co-ordination, professional development and school collaboration**



In early 2008 we reported that pushing the co-creation boundaries within the design phase provided possibilities for excellent learning and synchronisation between various levels of the education system (Fullan, 2003; Istance & Kobayashi, 2003). However, this was experienced by some of the participants as uncomfortable territory, especially when it felt like they were expected to operate in an E4E resource vacuum or when they perceived some emerging top-down requirements to contradict ground-up sensibilities. We also reported that, at that stage, no cluster clearly met research indicators of a *strong* professional learning community (as described by Timperley et al., 2003) despite several positive signals.

Although there appeared to have been some movement in some schools, as with the first report (Roberts et al., 2008), we cannot confidently say that strong E4E/enterprising professional learning communities are operating in all schools. While a few schools that we visited had started to develop their own E4E learning communities and one region had developed regular networking opportunities for sharing between lead teachers, beyond that school-to-school collaboration could also not be described as a regional E4E learning community. Instead, as with 2007, it appears that

through 2008 a regional co-ordinator tended to function as a central translator/conductor in each cluster network, through which E4E principals and/or lead teachers were connected to each other, some more actively/less tenuously than others (Roberts et al., 2008). We would not necessarily have expected this picture to have turned around in one year, especially without sustained professional development or regular structured professional learning conversations. That said, we did see examples of what we could probably describe as some microlearning communities within some case study schools. According to Timperley et al., (2003), key features to continue to develop and spread include:

- a shared belief that all students can learn through cross-curricular enterprising education
- a shared goal of raising student achievement through E4E (including defining what good E4E achievement could look like)
- reflective conversations about E4E practice and pedagogy
- the "deprivatisation" of E4E practice so that teachers and schools can draw from each other's experiences
- joint planning and curriculum development in relation to E4E.

One principal's account of the interface between schools, regional co-ordination and national co-ordination provides a pragmatic account of various mini-learning communities and their support systems in one regional cluster as at late 2008.

Table 15 **A principal's account of school/cluster/national relationships (2008)**

The cluster model is really important, and has even more importance in the future. It provides connectedness to other schools, it provides the vital link out into the community and build relationships, and spreading the message of what people are doing. And national [level support] is really supporting the local cluster. We've had good meetings with [national co-ordinator] to get some good perspectives from there, which is good and keeps us thinking on the right lines, which you need for people to keep prodding us and pushing ideas. It's also really important to support the [regional co-ordinators] to make sure they are supported about where they're going, so they're not sitting out there on their own trying to do something that nobody else in the world is doing. Schools are in various stages … so we need that [national] structure for the regional co-ordinators to be supported and to be connecting with the other regional co-ordinators, so that they are getting ideas of how to stretch us. A lot of what we could or should be doing, we don't even know about yet. Probably every region has a little bit of the picture, but if we knew a bit more about what other regions are doing in a bit more detail we could use those ideas … through the regional co-ordinator as the conduit for that. It could be possible to have all the regions together to hear about what people are doing first hand. But, with the resource that would cost, the more economical way to do it is through the regional co-ordinator as well as other avenues that I try to get involved in as much as I can [as a principal], like stakeholders' meetings and events—to be seen and to have my ears open.

Questions of sustainability

Many interviewees and survey respondents expressed questions or concerns regarding ongoing funding to support the school clusters, suggesting that E4E could not be sustained without regional co-ordination and financial/resource support for schools. Many interviewees suggested that the MOE should be resourced to fund E4E, including regional co-ordination, to recognise that

it is an educational development that takes time and resources above and beyond what schools can manage out of current budgets. For example, here are two quotes from people with different roles:

> This is well resourced outside schools (MOE, Economic Development Agencies) but this doesn't seem to filter down to schools to support E4E once the pilot project ends. It needs to be more than a PR exercise. It would be helpful if achievement or unit standards were identified or developed to support assessment for a generic group enterprise project at level 2 or level 3 of the curriculum. (Lead teacher, 2008)

> It takes a very long time and a bit of hard work to embed it into the culture. The first bits are easy and fun—now we are into the 'hard slog' where we want it to be visible and at the forefront of all planning. It would be nice to have some tangible assistance from the MOE to know that they will keep the regional co-ordinators in place so we can plan long term. (Principal, 2008)

It looks like the lead teacher position may also be partly dependent on funding. As we noted above, from between 2007 and (intended) 2009 the proportion of surveyed schools with lead teacher positions has decreased slightly. Furthermore, only 40 percent intended to provide a management unit for their lead teacher in 2009, even though 70 percent provided it in 2007–08. This is somewhat concerning, considering that most lead teachers mentioned the extra workload and leadership associated with their role. On the other hand, schools may be making other kinds of arrangements to provide time for teachers to develop and sustain E4E in their schools:

> I worry that if E4E funding goes the whole thing will stop. I get funded from E4E to do the extra work, no way I would do it if I wasn't funded … I don't get extra time to do it. This year we get a PA unit for 10–12 hours on top of normal teaching. I wouldn't have taken it on without a monetary incentive, and school can't afford for next year. I'll continue cos that's what I've always done. People with some experience of it might work on it, but if they don't have any budget (e.g. got $800 for budget)—no way school would put that into one thing. (Lead teacher, 2008)

Three principals we interviewed in 2008 were considering options for how schools could potentially collaboratively fund a regional co-ordinator position. However, two of these schools believed that they did not have sufficient evidence of success to justify it, and the other could not see any way to fund it. At least two principals from 2007 case studies had suggested that funding would not be necessary once E4E was truly embedded in schools' everyday teaching and learning practices:

> If you have a curriculum, you fund it. If you don't spend it on this you spend it on that … The key is it [E4E] is not extra from what you're doing; it's instead of what you're doing. (Principal)

In 2007 we reported that school staff's personal explanations of what would be necessary for E4E sustainability suggested these eight essential aspects (in addition to securing ongoing funding):

1. reaching a critical mass of E4E supporters and developers
2. achieving and noticing good results from partnerships and projects
3. embedding E4E in the everyday operations of a school and curriculum

4. prioritising of E4E by leaders within a school and region
5. enabling E4E to be responsive to local needs and contexts
6. realising E4E will be a long-term (and possibly slow) journey
7. ensuring that the wider education system supports E4E
8. assuring permanent regional E4E co-ordination.

Overall, this final evaluation report suggests that progress has been made in most of these areas over the past two years. However, the following indicators of professional learning sustainability may need to be strengthened before nationally co-ordinated support is withdrawn:

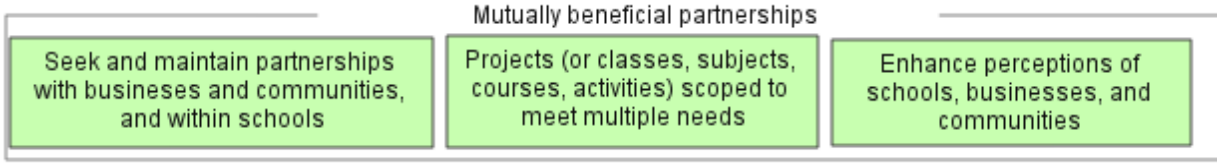
- There is a strong theory base to found changes and assist ongoing decision making.
- Teachers are equipped with skills to inquire into the impact of teaching to decide next steps.
- There is strong leadership.
- There is ongoing engagement motivated by a sense of responsibility for student outcomes.
- Theories locate solutions to be found in educational opportunities.
- Competing initiatives/policy directions are minimised. (Timperley et al., 2007)

Summary of key messages

- Structures are in place at the national, regional and school levels to support E4E developments and networking.
- Regional co-ordinators are central connectors in these networks, having three main roles: brokering partnerships; supporting teachers and schools to develop their understandings of E4E; and developing E4E leadership across regions. They have been most successful in the first of these roles, but were also making progress in the other two areas.
- The national co-ordinator role has taken shape over the course of the Regional E4E Clusters Initiative, and appears to have responded to schools' calls for more resources and national leadership for E4E. Some participants suggested that the national co-ordinator role should continue to involve mentoring for regional co-ordinators and possibly principals, and continue to ensure there is national-level coherence across all levels of E4E development, including (but not limited to) that occurring within the regional clusters.
- Professional development was not initially built into the model for the Regional E4E Clusters Initiative model (although it was part of one cluster's approach from the outset), but emerged as a need. Arrangements were made for professional development providers to work with the clusters, but in some clusters this has had slow beginnings.
- At the regional level, not all of the clusters yet appear to be operating as *strong* professional learning communities with respect to E4E, particularly in terms of school-to-school collaboration. However, a few schools have started to develop their own E4E learning communities, and at least one region had developed regular networking opportunities for sharing between lead teachers.

4. Mutually beneficial partnerships

This chapter evaluates the Regional E4E Clusters Initiative against objectives for the development of mutually beneficial partnerships to support students' enterprising learning. These objectives are represented by the "green zone".



During the evaluation, three objectives were identified as significant in relation to the initiation and maintenance of mutually beneficial partnerships. These were:

- projects (or classes, subjects, courses, activities) scoped to meet multiple needs (e.g., students, curriculum, partners etc.).
- enhancing perceptions of schools, businesses and communities about each other's sectors
- seeking and maintaining partnerships with communities and businesses.

In this chapter we begin by discussing what might be meant by "mutually beneficial partnerships" between schools and businesses/communities, why such partnerships are seen as desirable in E4E and how these might represent a shift from the conventional "status quo" of relationships between the school, community and business sectors. Later in the chapter we evaluate the extent to which E4E in the regional cluster schools appeared to meet the objectives listed above in the "green zone". Much of the data in this chapter are from the perspectives of E4E partners: students' and teachers' perspectives of engagement in E4E are addressed in more detail in Chapters 5–7.

We begin by introducing one example of an E4E activity—the street flags project—from the 2008 school case study visits. This was one of many examples we encountered in schools during 2007–08 which did appear to involve a mutually beneficial partnership between a school (or at least one teacher and class within a school), and a partner organisation. Table 16 outlines the context for the partnership, and the brief that was given to students.

Table 16 **Street flags Part 1: The relationship and the brief**

A small class of Year 12 graphics students received a brief from the local council to design a set of decorative summer flags for the main street in town. **How did the relationship come about?** Both the school and the council were keen on finding ways to work together. A regional E4E co-ordinator had contacted the council to see if there were any projects or opportunities where they could involve local school students. The council had several ideas for projects they could involve students in. Some of the ideas they put forward did not fit with the school's planning or timelines, or there wasn't an enthusiastic teacher to pick up the project. However, the graphics and design teacher had used real business clients for his senior graphics students in previous years, and thought the street flag design idea would fit very well as a project for his Year 12 Level 2 NCEA students. **The project brief** The council partner described the brief given to the students as "absolutely authentic, it's exactly what I would have given to a design company". The council wanted the flags to reflect the local area, and they suggested a number of ideas for images and icons from the local flora, fauna and landscape that might feature in the designs. After their initial meeting with the council staff, the students went away to work on their individual designs.

In the street flags project, there was an interest and willingness from both the teacher and the community partner to establish a partnership that would provide a "real-world" context for student learning. How easy is it for schools and business/community partner organisations to develop these kinds of collaborative partnerships? What sorts of challenges and tensions might schools and their potential E4E partners have to work through or work against in order to collaborate in E4E, and to what extent was this occurring in the regional clusters? Finally, what exactly *are* the needs of each of the parties involved in these partnerships, and to what extent can they be met through E4E? We will return to the street flags example several more times, alongside a range of other data collected during the evaluation, as these issues are explored and discussed in this chapter.

The "status quo" for school–business–community partnerships

Conventionally, schools' relationships with businesses and communities often tend to be linked with supporting extra-curricular and co-curricular activities—for example, parent involvement in school camps, fairs or cultural performances, students participating in a community-organised event (for example, litter clean-up days) or businesses providing sponsorship for particular school events, activities or resource materials. However, there are also many other ways in which schools can and do engage with people and groups from businesses and the community in more intensive ways to support curricular learning. Examples include:

- relationships with businesses and education/training organisations through initiatives like STAR, Gateway and other work experience programmes, which emphasise exposing students to experience different work and training possibilities and helping them to find pathways they

may choose to follow when they leave school (and supporting students to learn and gain qualifications linked to these pathways while they are still at school)
- community-oriented initiatives like Home–School Partnerships, which emphasise engagement of families and whānau to support their students' learning, or to shape school curriculum to meet local needs and aspirations
- whole-school and whole-community-oriented initiatives like Enviroschools, or activities associated with education for sustainability (EfS), which promote student and teacher engagement with local community environmental and sustainability issues, often involving significant community partners such as local and regional councils, groups and businesses associated with environment and sustainability, and so on.

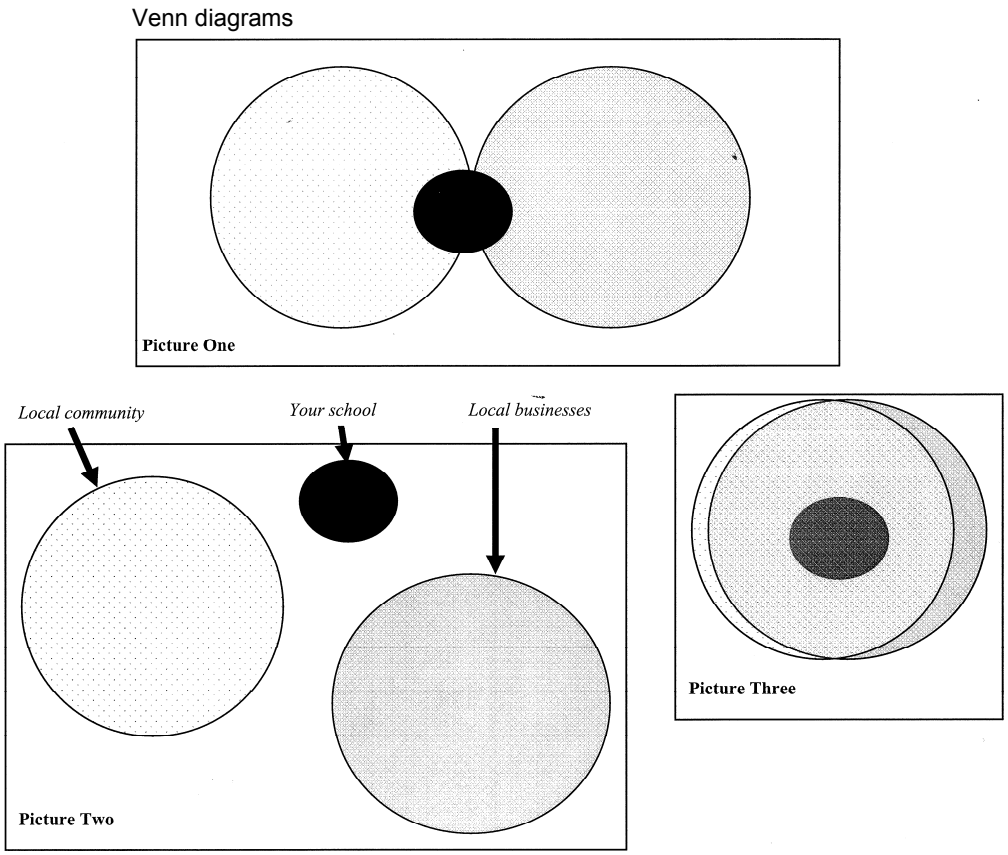
While each of these projects, initiatives and approaches has its own particular emphases and ways of working, all have the potential to shift the status quo with respect to school–business–community relationships and students' experiences of learning at school in relation to the world outside and beyond school—as does E4E. As the E4E website puts it:

> Education for Enterprise provides opportunities for students to link their learning to 'real-life' situations. It combines classroom learning and participation in the broader community, including the world of business, and reinforces the relevance and value of what is learned in the curriculum. To be effective, Education for Enterprise is best embedded across the curriculum and co-curriculum of the school. (Te Kete Ipurangi, 2009)

However, there is a great deal of evidence to suggest there are difficulties in overcoming the status quo. For example, our data collection in early to mid-2007 suggested that many students in the regional cluster schools did not perceive strong links between their school lives and the world of the local community. In the early stage of fieldwork in 2007 we provided focus group students with three diagrams showing possible ways of conceptualising the relationship between their school, local community groups and businesses and asked them to identify which one most closely represented their experiences of learning at school overall on a daily basis. The majority of students selected Picture Two (see Figure 7), sometimes for the following reasons:

> If we have a big event coming up it [Picture Three] is like everywhere but in a normal day at school, business and community aren't involved.
>
> Most of the community don't know what we do. Everyone doesn't know what everyone else is doing.
>
> I don't learn about business or community—just school, school, school.

Figure 7 **Diagrams used in student focus groups, mid-2007**



Baseline student survey data gathered in 2007 (see Table 21, Chapter 5) further indicated that opportunities for students to learn through relationships with others (both within and outside the school), where present, appeared to be more commonly part of students' extra-curricular activities rather than part of their everyday teaching and learning, and while most students had at least some opportunities to learn outside the classroom and get involved in enterprising activities, less than half had opportunities to come up with ideas to meet real needs in the school, community or businesses, to get involved with these groups or lead school events or changes.

Challenges for school–business–community partnerships

There is a variety of challenges involved in forming working relationships between schools and people and groups from other sectors. For example, during the evaluation we identified evidence of philosophical differences between those within the education sector and those outside the education sector. This was sometimes manifested in each sector being perceived as "not really understanding" the realities of the other. From the business and community partner perspective, there was sometimes a view that the current education system does not necessarily "teach the right sorts of things"—that is, that schools do not provide enough of the kinds of learning that employers and the community value. In our 2007 survey of community and business partners (n = 25), only about half agreed that New Zealand schools currently do a good job of preparing

students to: succeed in the workforce;[38] contribute to their local communities and whānau; and support the country's future economic growth and environmental sustainability. Some people in the business and community sector (particularly in 2007) also identified negative perceptions that some people in their own sector held about schools and students (even if the partners we interviewed did not hold these perceptions themselves). These included concerns that students were "mollycoddled" at school, that they tended to be unmotivated, did not value hard work and were not really capable of delivering something that would be useful to the business or community partner.[39]

Likewise, some people in the school sector wanted to emphasise what they saw as the philosophical differences between the goals and realities of education, and the goals and realities of business. For example:

> Business is about making money, education is about life. (Principal, 2007)

> Businesses and business people have an idea of what it takes to become a business person [but they don't] understand the realities of school students. (Principal, 2007)

In addition to these philosophical differences, a range of practical challenges arise out of the very different planning cultures and requirements in each sector. Table 17 provides a simplified summary of some of these differences.

Table 17 **Simplified education and business plans at the interface**

	School-based curriculum plans	Business plans
1.	Curriculum plans are subject-based	Business plans are project-based
2.	School planning is assessment-driven	Business planning is market-driven
3.	Education is timetabled	Business time is money

Broadly speaking, from the point of view of a business or community organisation, when time or resource is invested in a project, there is an expectation that the products or outcomes of the work must actually be of use, and the value of the work should justify the time and resource that went into it. The next quotes highlight some of the practical challenges from partners' perspectives when business and educational planning intersect:

> How do you contact a teacher in a school? Teachers don't have cell phones. They don't even have answer phones. Businesses are only going to try one or two times and if they can't get hold of you they will do other things. (Partner, 2007)

> Time is money. If you give me money I will have time. (Partner, 2007)

[38] Even fewer believed that schooling was preparing students well for self-employment.
[39] We also found many counterexamples to these perspectives, as discussed later in the chapter.

> We did an hour a week [working with students] for a term last year … We found it difficult time wise last year. This year we did 2–3 hours at the beginning and less visits. (Partner, 2007)

Meanwhile, from the point of view of schools, when time or resource is invested in a learning activity, there is an expectation that students should actually learn something, that the learning should meet intentions laid out in the curriculum and (particularly for senior students) that outcomes of the learning can be expressed in forms that can be assessed using available standard measures, which contribute towards a recognised educational qualification (such as NCEA or another National Certificate). Teachers' decisions about whether to engage in such partnerships can thus be contingent on their views about whether the outcomes—however worthwhile—do or do not fit with the outcomes that are valued by the curriculum, and by educational assessment measures.[40]

Beyond these immediate differences, however, it is possible that people from schools, businesses and communities could share similar "big-picture" goals with respect to education. For example, seeing education as an investment in young people as future citizens, workers and members of the community, and/or seeing the point of education as being to develop lifelong learners who will continue to learn and contribute their own energies and efforts in the environments they encounter through the rest of their lives (including workplaces and community settings). These kinds of shared views could provide strong motivation for working through the challenges of cross-sectoral partnership. In 2007 and 2008 we found evidence that many business and community partners did see their involvement in E4E in these terms. Furthermore, in many cases the organisations they worked for had an intentional commitment to "giving something back" to community, and E4E was seen as a good avenue for doing this,[41] as illustrated by the selection of quotes below:

> I think it is worth it to do this [kind of project, in spite of the time involved] because of the connections you make with the community … Education is an important part of [my organisation's] role, and the more we can be involved in various ways with schools, the better. And particularly to have highschoolers, thinking young adults up here, is a great opportunity. (Partner, 2008)

> If you could quantify the time and value [we have put into these E4E activities], we wouldn't get back what we spent, but as an organisation it's a way we give back to the community that supports us. (Partner, 2008)

> … sometimes [as a community] we're not good at letting them [students] know that they are a valuable resource, and that there are the career opportunities for them here, if they want to

[40] Teachers tended to have different views about the fit and flexibility of NCEA with respect to E4E. Issues of E4E and assessment will be discussed further in Chapter 7 (see pp. 140–144), but the excerpts from the street flags story further illustrate one interesting viewpoint on these matters (see Table 19).

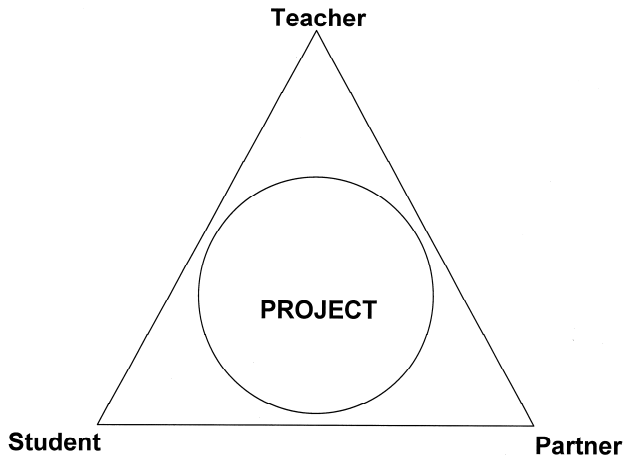
[41] For businesses, this was viewed in terms of corporate social responsibility. However, some other partner organisations (such as museums, councils, health promoting organisations or the public services) had an explicit mandate to promote and support education as part of their institutional purpose.

find them. And I think any links between the students, the school and the business community should only enhance the fact that they get to see that there are more opportunities than they might have thought. (Partner, 2008)

What would a successful E4E partnership model look like?

In 2007 a regional co-ordinator drew us their model of successful partnerships involving teachers, students and a community or business partner, reproduced in Figure 8 below.

Figure 8 **One regional co-ordinator's representation of an E4E partnership approach**



It shows that all three parties need to be involved in an E4E project.[42] The regional co-ordinator's main point was that when the focus of relationships becomes the project itself, then new possibilities are enabled for each of the parties. All three parties can move in and out of the roles of expert, learner, producer and consumer in order to share the "teaching" weight and get the best job done. This is one model which encourages individuals from different sectors to focus on mutual negotiation to create something new. Creating a partnership of this type requires trust, commitment, flexibility and good communication between all parties. Beyond the project-based approach represented above, long-term successful partnership models for E4E could also include parents/whānau, iwi and local and regional communities as partners in the teaching and learning process.

Tables 18 and 19 present excerpts to illustrate how a project-based partnership approach played out in the street flags project. For example, the evaluation provided considerable evidence that the teacher's role can be crucial in helping to mediate and negotiate between the "curriculum and assessment" requirements of an activity, and the "partner/real-world" requirements of the activity, while also supporting students to develop confidence and capabilities in the new, more open-ended learning situations. The first excerpt (Table 18) illustrates how both the teacher and the

[42] E4E goes beyond one-off projects but thinking in terms of a single project may be a useful starting point.

community partner acted to provide flexibility and support/encouragement to the students to rise to the demands of the project.

Table 18 **Street flags Part 2: Being flexible and supporting students to develop their capabilities**

According to the council partner, the Year 12 students "followed a process that I would expect from a design company, there wasn't quite as much back-and-forth but that's part and parcel of it being within a school curriculum and them having lots of other things that they're focusing on". To accommodate this, the council worker had relaxed her expectations about time frames somewhat to allow time for the students to come up with a good product in the end—something she would not have necessarily done had she been dealing with a commercial design company.

Behind the scenes, the students were indeed struggling with some of the demands of the street flags project task. Four of the students from the street flag project were interviewed by NZCER just prior to presenting their final designs to the council. Looking back, the students recalled a number of important things they hadn't done very well at the early stages of the project. For example, they had come to realise that they hadn't been well-prepared at their initial briefing meeting with the council. They had been shy and were not used to meeting with real clients, and thus hadn't asked many questions, and hadn't taken sufficient notes about what the council had asked for in their brief. They had also thought of consulting the community to see what kinds of things the public might like to see on their local street flags, but this did not really eventuate as the students felt awkward about approaching people they didn't know, choosing instead to ask their friends and family members.

The teacher's role

Their teacher had noticed his students' shyness and reluctance to ask questions. In his interview, he discussed his own role in supporting the students to develop their confidence and competencies:

> … different groups of students will bring different issues of their own to [this kind of process] … Some students may be a little less [confident] in terms of being able to work with clients, so you have to spend a lot more time on their people skills, and their relationship building with outside organisations … (Graphics teacher)

Sticking with it

Although it took time, the students continued working on their designs, and with the support of their teacher and some further feedback from the council on their initial design drafts, their concepts and designs continued to improve. Looking back, the students felt they had learnt something important through this process:

> [We] time management skills … We've learnt how to connect with a client. It's not about what you want, it's about what they want. If I was doing [this project] again I would listen to [the client] a lot more, because I don't feel I did. I feel I was working more like I normally work, like for myself. (Student)

> [We learnt about] making sure that when you go into things like that [initial meeting], you know what you want to get out of it. Because we went in, we kind of had some questions but we really needed to ask quite a bit more. (Student)

The next excerpt (Table 19) provides the teacher's perspective on balancing assessment demands and "real-world" demands of the activity.[43]

[43] See Chapter 5 for a discussion of what it means for students to be involved in "real projects for a real purpose".

Table 19 **Street flags Part 3: Balancing assessment demands with the "real-world" demands of the activity**

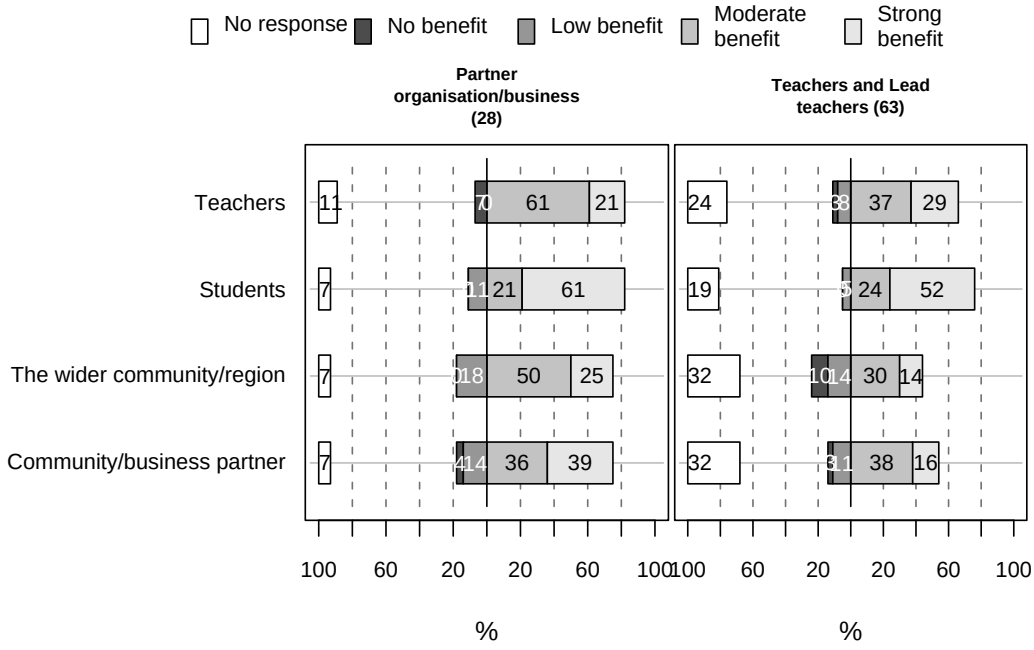
The teacher suggested that E4E allowed him to teach and assess in ways that he felt were ultimately of more value to his students:

> That's the good thing about the E4E project and having a real client, because it's not hypothetical, it's not completely controlled or contrived. And often some of the feedback can be unexpected, and you actually have to think on a different level. And I find that's a really positive part … (Graphics teacher)
>
> [Working in this way] means I've got to be very open in the way that I approach the unit of work we're doing. I've used the [street flags project] this year to assess the media component of my course. It means that I have to be a bit flexible in the way students bring things together. I've got to be a little bit flexible about the changes they have to make. I've got to make sure they meet the requirements of the achievement standard, but I've also got to make sure they meet the requirements of the client …There is more work in it in terms of being organised and planned, but that's good too. You're not continually teaching the same thing, so it makes it more exciting for you as a teacher, and a lot more rewarding … the students and myself see a real need for it, it's actual, and it's real. And it involves a whole other skill set, and [working with] other people … (Graphics teacher)
>
> Apart from opening you [as a teacher] up to different styles of teaching and learning as well. I guess … it steps further away from being assessment-driven. It's actually driven by what students need to learn, and it really helps you to do that. [The authentic need] drives everything, then you look for what assessments can fit into it, rather than letting the tail wag the dog. (Graphics teacher)

Projects scoped to meet multiple needs

The street flags project illustrates one example of a project that appeared to be meeting the needs of all partners: students were learning and developing certain knowledge, skills and capabilities, while also being assessed and gaining credits for their work; the teacher was able to work in ways that he found more rewarding for himself and for students; and the partner was getting a set of street flags designed. To what extent were other E4E activities in the regional clusters being scoped to meet (and meeting) the needs of all partners? The 2008 end-of-year survey asked teachers/lead teachers and community/business partners to indicate whom they felt benefited from the partnership between schools and the partner organisations. As Figure 9 shows, both partners and teaching staff tended to see students as receiving the greatest benefits. However, most partners (and most teachers) also saw benefits for teachers, their own organisation and the wider community.

Figure 9 **Who benefits from the partnership: Teacher and partner views (2008)**



One way that community or business partners stand to benefit from E4E is when students' learning involves researching, making, designing or doing something that meets the partners' authentic needs or purposes (as in the street flags example). Seventy-five percent of partners surveyed in 2008 said students had produced or done something for their organisation as part of their E4E activities. A brief sampling of teacher and partner comments from the 2007 and 2008 surveys highlights many examples where the partner organisation stood to benefit from the outcomes of students' E4E work[44]:

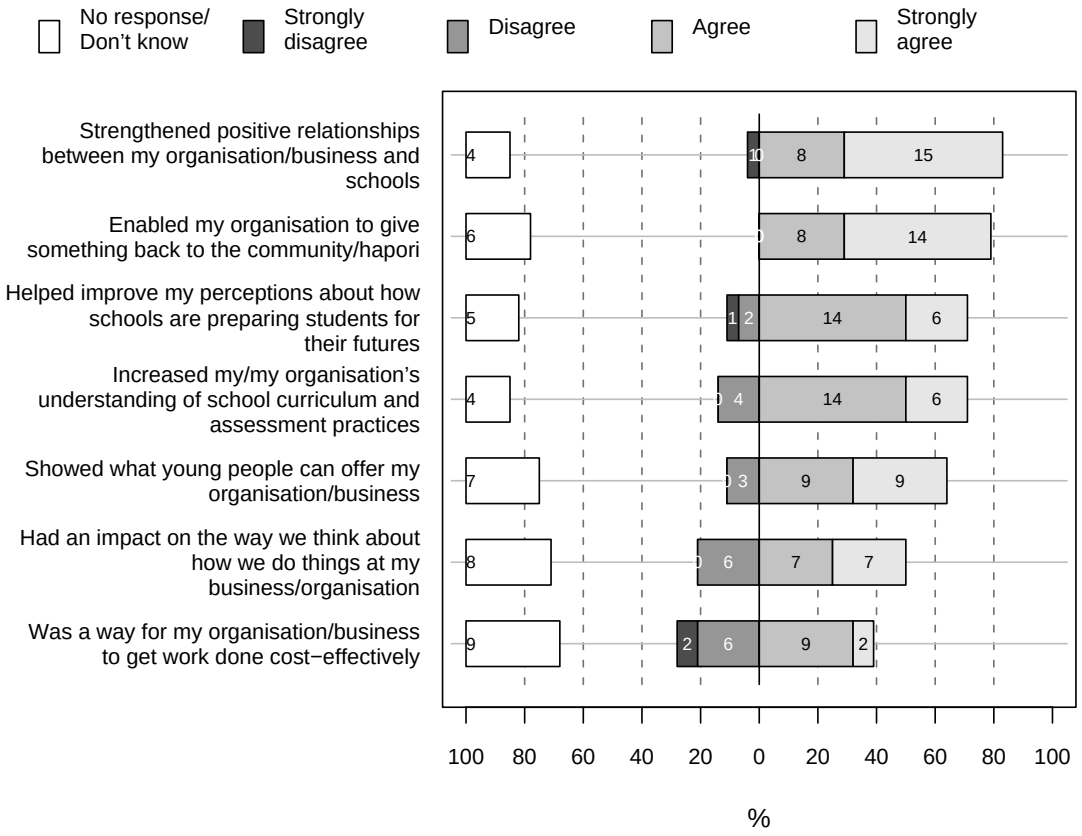
> [The students] produced a resource for the Health Promoting Schools co-ordinator to use [throughout this region]. The resource was designed to show the process of HPS in action and how a school can integrate the curriculum into the ethos of the school. (Community partner, 2008)
>
> [The students] produced a picture book for students at a primary school. Primary students provided the storyline which was further developed by my students. (Teacher, 2008)
>
> [An area in the town centre] has problems with rubbish, illegal parking, pollution, wear and tear, drinks from a night club. With [local council] employees, a class visited the area and worked through the problems and solutions involved with the case to come up with the plans, ideas, concepts for the council to think about using in conjunction with this area. (Teacher, 2008)
>
> [The students built] a computer for a Year 8 class in a local primary school that was powerful enough to do music and film editing. (Teacher, 2008)

[44] Many other examples of student E4E activities are described in Chapter 5, and Appendix B.

> The students developed a brochure detailing some local history that is not currently in print. (Community partner, 2008)
>
> The students had a telephone poll of the [town] business community to find out who had heard of our [waste management] service. [Students] promoted our service: they designed and made posters, with success stories, and put up a static promotion at their high school, the library and the [regional economic development agency]. (Business partner, 2008)
>
> [Students] ran two property auction campaigns with our assistance. (Business partner, 2008)

Benefits to partner organisations can extend beyond the simple utility of "getting work done", however. Figure 10 below presents partners' views of the impacts of the E4E partnership for their organisation. Most partners agreed (80 percent, with more than half strongly agreeing) that it had strengthened positive relationships between their organisation and schools and enabled the organisation to "give something back" to the community. Most also agreed that they had learnt something about schools, or improved their perceptions about schools. Eleven partners (40 percent) indicated that the activity had been a cost-effective way to get work done, although eight disagreed and nine did not respond.

Figure 10 **Impacts for my organisation/business—partners' views (*n* = 28)**



Additional benefits mentioned by some partners who were interviewed included: gaining new customers for their business or increasing patronage of their service or organisation; getting additional work as a result of the raised profile that E4E gave their organisation (e.g., through local media coverage); more positive interactions with students when the partners encountered them again in their business or organisational premises or in the community; and gaining a "youth" perspective that they would otherwise not have tapped into:

> They have young, new ideas. (Partner, 2007)

> We've had quite a buzz out of it—we were blown away by the kids and by the designs—we'd never have found it in the commercial world—because coming from their world … They have designs that are very innovative—we had 16 diverse concepts. (Partner, 2007)

Partners' views of the benefits for students and teachers

Partners also had views about what teachers and students were gaining from their organisation's involvement in E4E. For example, over 80 percent of the partners surveyed in 2008 agreed that the E4E partnership enabled students to achieve or produce something meaningful, that it exposed them to workplace and community realities and that it showed students the value of work and contributing to society. More than half agreed that "students demonstrated qualities I look for in an employee or member of my organisation". Below, we provide a selection of partners' comments about what these qualities were:

> Innovation, enthusiasm, good communication skills (listening and presentation skills).

> They listened, took note of what they needed to do and actively participated in finding results. They were polite, and worked hard.

> Students got on with the job and showed a capacity to learn new ideas/concepts.

> Pride and commitment to producing a quality product, thinking about the end result [for] the person who would receive the product.

> Only four students within the class showed interest in the initial stages of the project so I am commenting on their behalf. Teacher recorded details and prompted students most of the time. Students that were interested showed qualities of initiative, responsibility and forward thinking.

> The ability to work with people of all ages in the community and to also work with dogs as a therapeutic or learning tool or catalyst. The students learnt over a period of years what the goals were when working with children or patients in different environments.

Most partners who were surveyed at the end of 2008 also thought the E4E partnership had benefited teachers in several ways. Over 80 percent thought it gave teachers the chance to be learners as well, and over 70 percent thought it enabled teachers to be more innovative and enterprising in their teaching. While half thought the experience would change the way teachers will plan for and teach this subject in the future, the other half disagreed or did not know.

The final excerpt from the street flags story illustrates students', teacher's and partner's own views about how they had benefited from their involvement in the project (Table 20).

Table 20 **Street flags Part 4: Benefits for everyone**

The students, teacher and council partner all commented on the positive effects for both the students, school and community the value of the street flags project, which they tended to link to its "real-world" dimension.
For example, from the students' perspectives:
I reckon it's good because normally you just do your work and it gets filed away somewhere. With this you've done your work and you have something to show for it. You give more effort, more motivation. The other projects, you get credits for them and they just get chucked away. With this we get credits and we get the chance to have our flags on the streets. (Student)
We're going to know we've done the flags, and then people are going to find out. It's good to get input from students. You learn to interact with people a lot more. The council gets work done for free! The newspaper might like to write a report on it. (Student)
From the teacher's perspective:
For many years there was always this distance between schools and the community … To me, when people are closer together, and they're willing to work with each other, it's just bringing out all this knowledge that's out there in the community, and the learning that's out there. Only a small amount of your learning takes place at school. There are people out there in the community that are extremely clever, and by involving them in the school, it just brings a whole new dimension into the place. In saying that, there's an onus on the school to get it right. (Graphics teacher)
And from the council partner's perspective:
I just really like the fact that the students have engaged in a council project. Too often the council does stuff, we consult about it, but at the end of the day we make the decisions, manage the project and there's often not a lot of community buy-in as a result … I'd be keen to see more of these type of projects. I think it's a win-win. (Council partner)
Epilogue: The final outcome
After reviewing the students' final designs (each student presented their own set of flag designs, which they were assessed on for NCEA), the council decided they wanted the flag design to incorporate elements from several students' designs. The students re-drafted a "combined" design. These flags were printed and hung in the main street of the town. The council issued a press release for the local media, including photographs of the students, their teacher, a town councillor and the finished flags. The councillor partner described the project as "an absolute success".

Supporting schools', businesses' and communities' positive perceptions of one another

An evaluation question of interest to the MOE and NZTE is the extent to which school, business and community perceptions of one another are enhanced and changed by E4E clusters (for example, the extent to which the community and businesses learn new things about schools, schools learn new things about business and communities etc.). As mentioned in the section above, 80 percent of partners surveyed in 2008 agreed that E4E had strengthened positive

relationships between schools and their business/organisation. Seventy-one percent (20 of the 28 partners) agreed or strongly agreed that it had helped to improve their perceptions about how schools are preparing students for their futures, and that it had increased their understanding of school curriculum and assessment practices. The comments below illustrate the kind of things some partners felt they were learning:

> I got a little bit of an insight into how much the curriculum has changed since I was [at school], and how much the assessment systems have changed …When I was there it was all very much focused within the school, I don't remember there being any sort of external view. School was a place that you went to learn, but there were no links out into either the business community, in terms of the community seeing them [students] as a resource, in terms of future employability as well as the skills they have, that they're fostering [in school]. I don't ever remember being given a project that had a tangible outcome like [the one these students have been involved with]. (Partner, 2008)

> I've learnt how to align some of what we do to the curriculum, and also learnt how to better position ourselves in relation to the curriculum. (Partner, 2008)

> The partnering was a wonderful experience that I would look forward to encouraging more of in the future. A great insight into the workings of schools and the potential of so many students. (Partner, 2008)

It appeared that successful E4E partnerships were likely to enhance partners' positive perceptions about schools (and, in particular, about school students). However, some partners still expressed views that schools didn't go far enough in terms of providing learning experiences that were relevant to the "real-world", and a few expressed disappointment that schools they had attempted to work with had not appeared to be committed to following through with an E4E project opportunity. Thus, greater involvement with schools could also serve to confirm partners' perceptions that schools still have to undergo significant structural and cultural changes in order to allow learning opportunities like E4E to become more widespread:

> It's probably reinforced some things [I thought] about schools—it's a rigid curriculum for consistency and measurability … [Schools and businesses] are like different poles and paradigms—corporate structures have to be flexible—[whereas] in schools, heaven help you if you want to make a change within a curriculum. (Partner, 2008)

Overall, the data gathered during the evaluation suggest that E4E partnerships have supported small shifts in the status quo with respect to school, business and community relationships. At this stage, though, it is difficult to assess the depth and permanence of these shifts for the long term. Part of the vision for E4E is that some or all of the responsibility for sustaining E4E in the regions will be taken up by schools, businesses and communities themselves, simply becoming part of the "way things work" in education in these regions (although Chapter 3 discussed many interviewees' and survey respondents' views that sustainability of E4E would continue to require some kind of centralised support). The next section looks at some short-term indicators from partner organisations about their interest and commitment to continue their working relationships

with schools, and their views about what this could mean for schools and their organisations in the short to medium term.

Seeking and maintaining partnerships

As outlined in Chapter 3, regional co-ordinators were one important conduit for the initial connections between teachers and business/community partners. Some connections were established by teachers and schools themselves, often through teachers' own personal networks (e.g., the business or community partner being a spouse, family member or acquaintance), some connections were initiated by partner organisations and, in a few cases, partnerships were initiated by students. At least one example we encountered was seen by the partner as a case of "being in the right place at the right time":

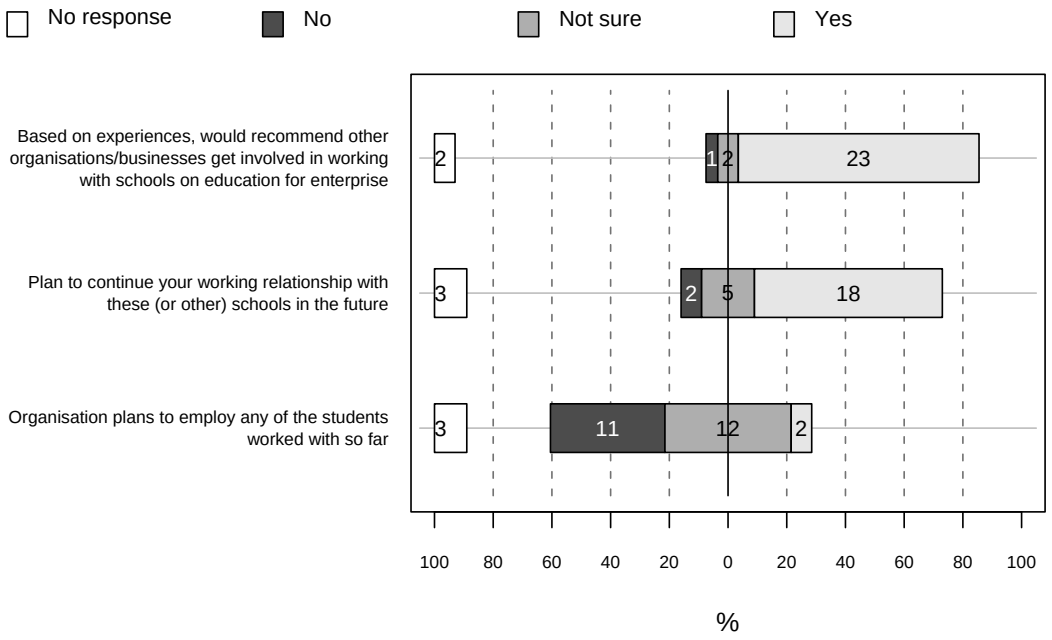
> It was by chance that we were in the right place at the right time (staffroom) to overhear the E4E co-ordinator talking with the health teacher about health promotion. It would have been interesting to see what our involvement [in the school's E4E] would have been, if we hadn't been there that day. (Partner, 2008)

In whatever way the initial connections are made, as this chapter has shown, forming and establishing relationships between schools and business/community partners requires time and commitment from all parties. Given the initial "cost" of relationship building, if E4E is to be sustained in the long term it seems likely that schools' engagement with business and community groups will need to include at least some long-term partnerships, as well as various one-off partnerships designed around particular just-in-time needs or opportunities.

Data from the evaluation suggest that at least some of the school–businesses–community relationships that formed around E4E would continue. For example, in 2007, 59 percent of teachers/lead teachers whose E4E activities had involved a business/community partner intended to continue the working relationship with this partner. In 2008, the figure was 70 percent.

Twenty-three of the 28 partners (82 percent) surveyed at the end of 2008 said that based on their experiences they would recommend other businesses or organisations get involved in E4E, and 18 partners (64 percent) confirmed they had plans to continue working with the(se) schools in the future. Two partners planned to employ students they had worked with (Figure 11).

Figure 11 **Partners' intentions to continue the working relationships with schools**



In case study visits we interviewed a few partners who had been involved in multiple E4E engagements with one or more school over time. As the comment below illustrates, while this can allow a substantial deepening of the connection between the schools and the partner and offer more opportunities for them to generate new ideas and possibilities collaboratively, this does not necessarily happen quickly:

> It's probably taken 2–3 years of working with [the regional co-ordinator] to have a good working relationship with the schools based on trust where we can have open dialogue and can get things done. (Partner, 2008)

One possible problem in developing these kinds of long-term relationships is that they are often dependent on one individual within the partner organisation, who may leave that organisation and is not replaced by someone with an interest in this role. In the 2008 survey, we asked partners to identify how many people from their organisation had been involved in working with teachers and students. Although 15 of the 28 partners (53 percent) said only one or two people from their organisation had been involved, 11 (39 percent) said three or more people had been involved. A greater number of partner staff involved in E4E could increase the likelihood that at least some of these staff will continue their connections to the schools, although this is not guaranteed. Just as E4E can occur in small pockets within schools, without others in the school being aware of it, so too can people from businesses or community organisations cultivate meaningful partnerships

with schools and students without their organisation as a whole being aware of this, or developing the capacity to sustain the relationship in that person's absence[45]:

> We have been involved in one project which started at primary school and was finished at high school. It was good experience but all our staff are still not aware of the relationship yet. (Partner, 2007)

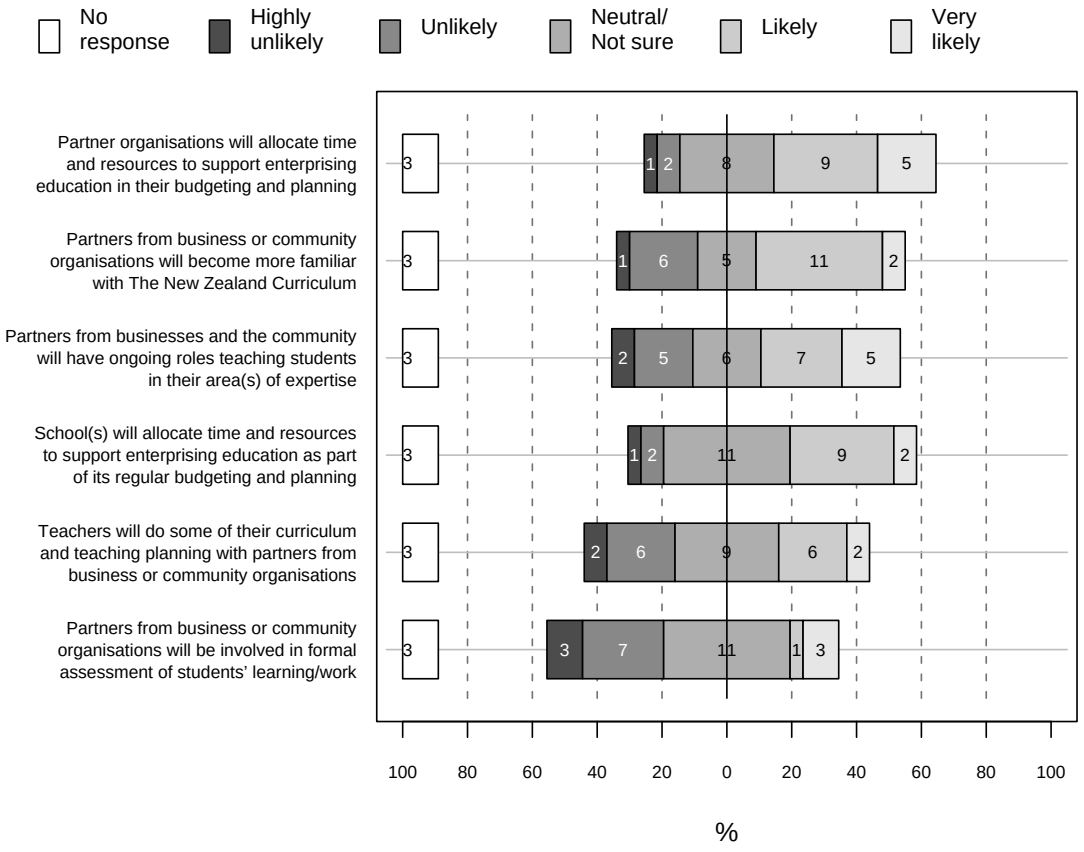
As mentioned in Chapter 3, some regional co-ordinators were working to build long-term relationships with particular large employers in the region, in the hope of enabling multiple partnerships with different units within the workplace and to increase the employers' understanding of the relationship between enterprising education, enterprising communities and enterprising business.

Figure 12 shows partners' views about their or their organisation's likely involvement in E4E over the next two years. Just over half thought it was likely that their organisation would allocate resources and time to enterprising education, although fewer thought they would have ongoing teaching roles in their areas of expertise. Just under half thought people from their organisation would become more familiar with *The New Zealand Curriculum,* and were generally less likely to see themselves having ongoing roles in curriculum planning or formal assessment of student work.

Overall, the data we have presented in this section suggest that members of schools, businesses and community groups have sought out project partnerships, often encouraged and facilitated by a regional co-ordinator. We heard about the occasional situation where a partnership had not continued through to project completion, but, on the whole, most had a positive experience. It is these successes that motivate people to maintain partnerships, perhaps leading to another project the following year or to wider involvement across a school or partner organisation. It appears that over time these small increments may help to embed E4E as a regular aspect of school practice.

[45] Of course, in some cases partner organisations comprised small enterprises with only a few staff, or individuals who were self-employed.

Figure 12 **What is possible within the next two years—partners' views (*n* = 28)**[46]



This chapter has mostly focused on partnerships involving people and groups from businesses and community groups outside the school. However, as discussed in the next chapter, some students' E4E "partners" were people from within their own school, or from other schools.

Summary of key messages

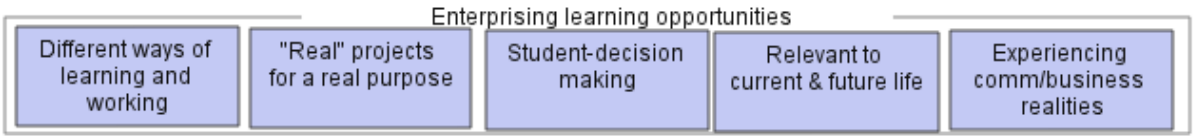
- E4E, like other cross-curricular and future-focused education approaches, presents an opportunity to change the status quo regarding relationships between schools, businesses and communities. The evaluation showed that collaboration between different sectors presents a number of challenges, such as working around the differences in operational styles and values. However, there was evidence of E4E activities being developed which satisfied educational goals while also satisfying the needs of business and community partners. The teacher's role was often important in achieving a balance between these needs.

[46] Note: In the partner survey, questions were phrased in terms of the partner's own business or organization. For example: "My business/organisation will allocate time and resources to support enterprising education as part of our regular budgeting and planning."

- In addition to the short-term benefits of receiving students' work, partners often saw their involvement in E4E as helping to meet longer term outcomes including: supporting education to shift to become more relevant to the 21st century world and workplace; supporting students to develop confidence and learning capabilities; supporting businesses and community organisations to deliver on their commitments to corporate and social responsibilities; and showing young people that they are a valuable resource for the community.
- Survey data suggest perceptions of "schools", "businesses" and "communities" were being enhanced, particularly with respect to business and community sectors seeing schools and students in a more positive light. However, some partners felt schools were still not moving far or fast enough in reshaping education to better fit the demands of the 21st century.
- Regional co-ordinators were important in setting up a lot of partnerships, although some were initiated by teachers, partners, even students. Once partnerships were established, partners and schools suggested that it was easier to find other opportunities to work together. However, it still takes time and commitment to reach a new level of partnership where the partners can plan new ideas together. There is also a risk to long-term partnerships when these depend on individuals rather than organisational relationships, and regional co-ordinators in all regions were working to establish long-term E4E partnership commitments from business and community groups in their areas.

5. Enterprising learning opportunities

This chapter evaluates the extent to which the regional clusters have been able to provide enterprising learning opportunities for students—the "purple zone". In this chapter we describe data from teachers, students and business/community partners on the nature of E4E learning activities being undertaken by students. The data in this chapter are primarily drawn from student and teacher surveys, interviews and school visits. The focus of this chapter is to understand *what* teachers and students did, and *how* they did it, when engaged in whatever they considered to be "enterprising learning opportunities". At the end of the chapter we look at some of the impacts and outcomes of these learning experiences as seen by students. This discussion will be extended further in Chapter 6.



During the evaluation, five objectives were identified as significant in relation to the development of enterprising learning opportunities for students. These were:

- different ways of learning and working (e.g., in different spaces, with a range of people, team-based work with role differentiation, open-ended problem solving)
- "real" projects for a real purpose
- student decision making
- relevant to current and future life
- experiencing community and business realities.

To provide a theoretical platform for evaluating against these five objectives, it is helpful to return to the ideas presented in Chapter 1 in relation to 21st century learning. As discussed in the first report on this evaluation (Roberts et al., 2008) E4E has the potential to be a means through which teachers and students could develop ways of learning and working that are more closely aligned with 21st century learning. Briefly, this term can be seen as a kind of shorthand for what needs to be different in schools if young people are to be well prepared for life in the knowledge age (Gilbert, 2005). Barnett (2004) calls this "learning for an unknown future", while Kress (2008) to "a pedagogy for a world of instability and multiplicity". In such a world, there is no way that we can accurately predict *exactly* what young people will encounter nor which kinds of knowledge they will need to draw on. Students therefore need confidence and a sense of investment in themselves to go out into a challenging environment. They need the ability to cope with

uncertainty, partial knowledge and change, and a willingness to go on learning throughout life. They also need dispositions that enable them to think critically, work with other people and navigate their way through the complex and everchanging situations they will encounter. To prepare learners for this, Kress (2008) argues that "school's focus … must change so that the interests of students and their transformative work are at the centre of educational attention" (Kress, 2008, p. 254).

Some key ideas associated with the 21st century learning ideas are as follows[47]:

- **building learning capacity**—building the ability to learn, and to go on learning more—and harder—things, without a teacher or other authority figure to help. This is very different from seeing learning as instruction designed to help students "get" existing bodies of knowledge
- **developing competencies**—building a broad set of basic skills needed by everyone for life and work in the 21st century. This is a different approach from encouraging students to accumulate knowledge-based credentials
- developing the ability to **do things with knowledge**—using knowledge to develop new knowledge, as opposed to "getting" existing knowledge
- **developing personalised learning programmes**—co-constructing programmes of learning for students that build their general competencies and scaffold their development as learners, but allow them to work at their own pace, and in contexts of interest to them. It is the opposite of one-size-fits-all approaches
- **explicit teaching of general intellectual skills**—such as analysing, synthesising, creative thinking, practical thinking and so on. The 20th century expectation is that these would be developed implicitly, via exposure to the traditional subjects
- developing people/relationship/collaborative skills and emotional intelligence.

Thus in a 21st century learning environment we would expect to see frequent opportunities for students to:

- work collaboratively in teams
- learn how to recognise and utilise one another's strengths
- manage their working relationships to achieve solutions to open-ended questions and problems
- be much more involved in decision making about what and how they learn.

Their learning might also involve interactions with a range of people including, but not limited to, their teacher and classmates, and working in a range of spaces, including, but not limited to, their regular classroom spaces. We would also expect to see students engaged in learning about how different disciplines "work", that is, how they help us to understand the world, and how new knowledge is generated within and through—and in connections between—each discipline.

[47] See www.shiftingthinking.org

Baseline data: How commonplace were these ways of learning?

To provide a baseline picture of teaching and learning practice in the regional E4E clusters in relation to these 21st century practices, in early 2007 we undertook a large-scale survey, completed by 1,682 students from 26 schools. This General Teaching and Learning survey was designed to explore what students thought about school and the ways they learn at an early stage in the evaluation, and was focused on students' total experiences of school, not just their E4E activities and/or enterprising learning experiences.[48] Based on some of the key findings (summarised in the table below), it appeared that while some students were given some learning opportunities with the potential to support 21st century learning approaches, for many students, learning often involved the (20th century approach) transmission of information from teachers to students, with few opportunities for students to learn in collaboration with others, or to generate new knowledge or ideas in response to a real-world need in the school, in the students' own lives or for someone in the community.

Table 21 **Key findings from the 2007 General Teaching and Learning survey (see Roberts et al., 2008)**

- Most students agreed that: doing well at school is important to them; the things they learn at school will be useful when they are older; they are, overall, doing well at school; and their school celebrates their students' successes and achievements. However:
- Over two-thirds of students considered they "often" or "very often" had to remember lots of facts and considered that they "often" or "very often" spent lots of time taking notes. The most frequent student response in the open-ended section of the survey was negative comments about note taking from books, the whiteboard or teachers talking, and having to remember facts, which many students felt did not contribute to meaningful learning.
- While many students felt that even "boring" learning that was would somehow prepare them for their future lives (even if they couldn't articulate how or why), many students also often perceived a lack of relevance in what they were required to do at school.
- Opportunities to learn through relationships with others (both within and outside the school) appeared to be more commonly part of students' extra-curricular activities rather than part of their everyday teaching and learning.
- While most students had opportunities, at least in some of their classes, to learn outside the classroom and get involved in enterprising activities, less than half often had opportunities to come up with ideas to meet real needs in the school, community or businesses, to get involved with these groups or lead school events or changes.
- While more than half the students felt they had reasonably frequent opportunities to present work in different ways, use ideas and skills from one subject area to help in another and be curious, questioning, creative, trying new things and making mistakes, less than half felt they had frequent opportunities to think about and explain their own, and others', ideas, values and assumptions, learn how the way ideas are presented can change what people think, draw from a range of curriculum areas to work on projects in depth and learn about the conventions of, and theories underpinning, subject areas.

[48] The baseline survey asked students how learning happened in *most* of their classes *most* of the time.

In the remainder of this chapter we draw together qualitative and quantitative data to evaluate the nature of the enterprising learning opportunities available to students in the regional E4E clusters, including the extent to which these learning opportunities represented a shift from the patterns identified in the baseline teaching and learning survey, and the extent to which enterprising learning opportunities met the five objectives outlined in the "purple zone".

The nature of E4E learning opportunities (survey data)

In the 2007 and 2008 end-of-year surveys we asked teachers and lead teachers to answer questions about one unit of work they had taught that year in which students had opportunities to become more enterprising. Similarly, the end-of-year student surveys asked students to answer questions in relation to the E4E activity or project they had been involved with. In some cases, we received surveys from both the teacher and the students from a particular class, providing both a teacher and student perspective on the same E4E activity. However, we also received many teacher surveys for which there were no corresponding student surveys, and vice versa. For this reason, it was not practical to analyse teachers' survey responses against the specific survey responses of those students they taught. The student and teacher surveys can thus be considered as two distinct but overlapping sources of information about the range of enterprising learning opportunities that were occurring in the regional clusters.[49]

This section describes the nature of E4E activities as described by teachers and students who were surveyed and interviewed, including the students' year levels, and curricular and co-curricular contexts for their enterprising learning. The sections that follow consider the examples described by teachers and students in relation to the objectives listed in the "purple zone".

Year levels of students involved in E4E examples described by teachers

Table 22 shows the year levels of the students involved in the E4E example described by the teachers and lead teachers. Consistent with the greater number of secondary than primary or area schools in the regional E4E clusters, in both years 80 percent or more of the teachers described E4E examples involving students in Years 9 to 13.

[49] The school case study visits and teacher, student and partner interviews represent a third source of information, and these qualitative data are discussed throughout the report.

Table 22 **Student year levels in E4E units described by teachers/lead teachers**

Year level	Percentage of units/examples	
	2007 (*n* = 71)	2008 (*n* = 61)
Not specified	4	3
Years 1–6	1	3
Years 7–8	8	13
Years 9–10	51	43
Years 11–13	35	38

Curriculum areas involved in E4E examples described by teachers

As Table 23 shows, the most common curriculum areas that teachers said were involved in their E4E unit or activity were technology and commerce/enterprise subjects. However, examples from a range of other subjects were also described, including English, science, mathematics, social studies etc. The 2008 examples included a slightly wider spread across different curriculum areas. In both years around two-thirds of the examples described by teachers and lead teachers involved a single curriculum/subject area (62 percent in 2007, 66 percent in 2008), and about a third involved two or more areas.

Table 23 **Curriculum areas involved in the E4E units described by staff in 2007 and 2008**

	Percentage of units	
Subject area	2007 (*n* = 71)	2008 (*n* = 61)
Technology	42	34
Enterprise, business, economics, accounting, PrEP	35	31
Social studies	20	10
Maths	18	13
English (including media studies, drama)	14	20
Art	10	10
Health or PE	9	11
Science	4	15
Languages	3	2
Other	21	13

Note: Teachers could select more than one curriculum area, therefore percentages total more than 100.

Curriculum and co-curricular areas in which students experienced E4E

As Table 24 shows, the students who were surveyed in 2007 and 2008 experienced enterprising learning activities across a variety of classes/subjects. In addition to curriculum-based learning, in each year around 12 to 13 percent of students answered the survey in the context of enterprising learning they had done as an extension or extra-curricular/co-curricular activity. These included

activities like participating in school "healthy eating" committees, Future Problem Solving, the BP Community Enterprise project or other "business challenge" projects, science fair projects, volunteer work and co-ordinating performance or social activities like Stage Challenge, musical performances or the school ball.

Table 24 **Subjects/contexts where students' enterprising learning occurred (student surveys 2007 and 2008)**

Subjects/contexts	% students	
	2007 (*n* = 506)	2008 (*n* = 409)
Enterprise (includes YES, PrEP, Enterprise, SELL)	7	19
Business studies, economics, accounting	7	13
English, drama, media studies	8	10
Science	3	9
Health and physical education	-	9
Design, technology & trades (including multimedia design, textile design, food technology, hospitality and catering)	13	8
Integrated subjects (e.g., primary class or integrated studies)	6	6
Mathematics	-	4
Art or music	-	1
Horticulture	-	1
Social studies	6	-
Information management	5	-
Extra-curricular/extension activity	13	12
Other	13	3

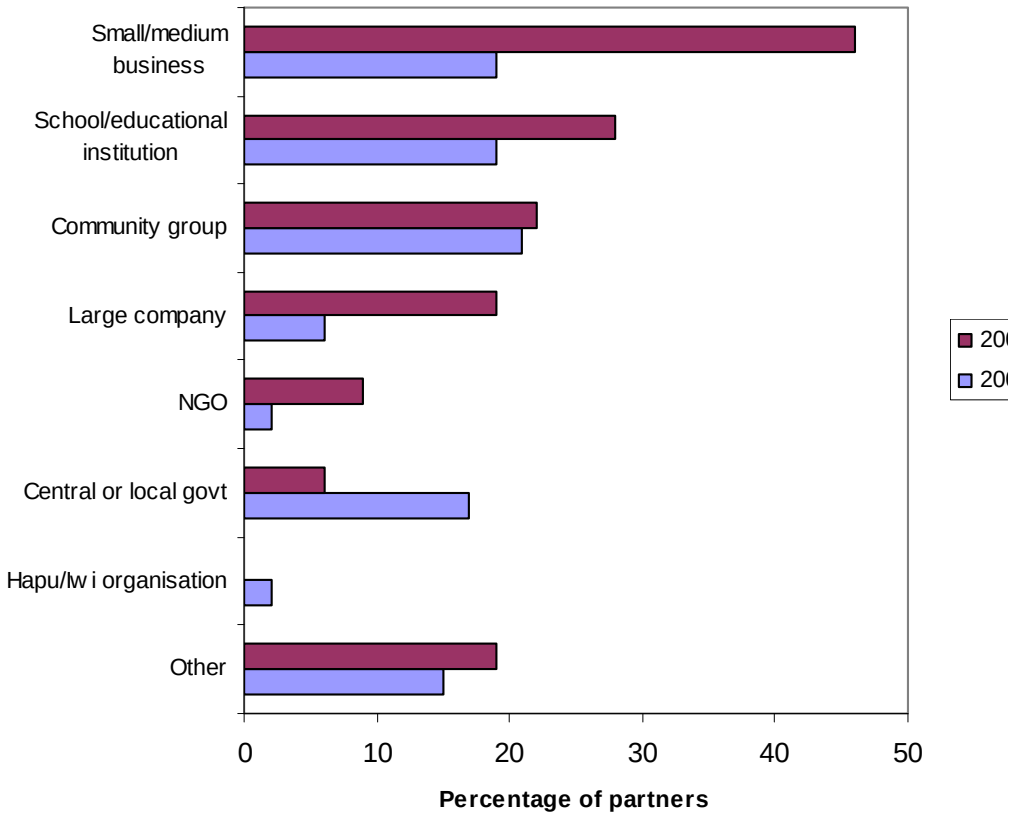
Involvement of business and community partners

In 2007, just over three-quarters (76 percent) of the examples described by teachers and lead teachers involved students working with people from businesses or the community/hāpori. In 2008, the figure was 85 percent. The most common types of partners were small/medium businesses, other schools or educational institutions and community groups, with a slightly broader spread across different types of organisations in the 2008 examples.

Sixty-four percent of the students surveyed in 2008 said their E4E activity had involved working with someone from a business or the community.[50]

[50] E4E partnerships with community and business organisations are discussed in more detail in Chapter 4.

Figure 13 **Types of E4E partner organisations (described by teachers/lead teachers)**



Different ways of learning and working

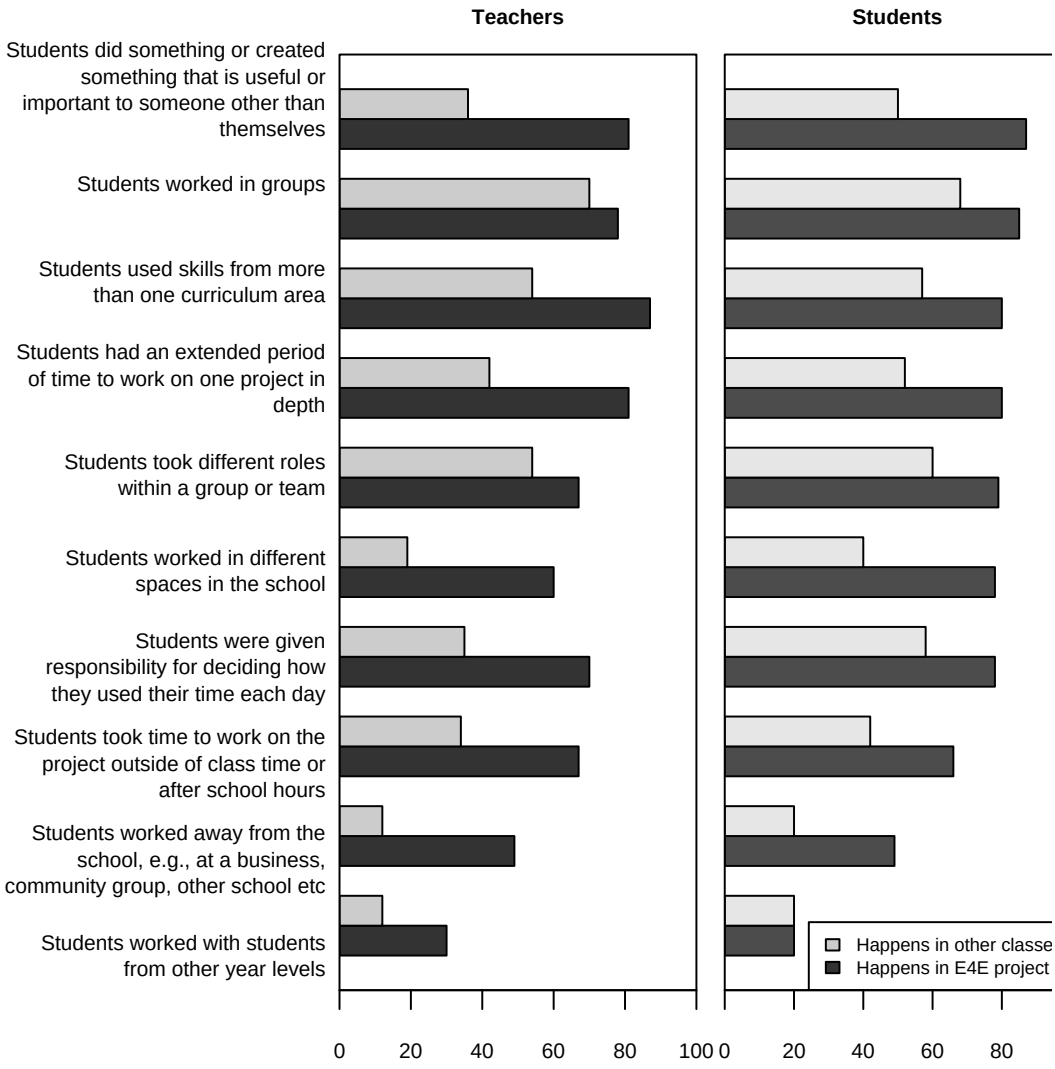
As discussed in the beginning of this chapter, if E4E was providing a platform for 21st century learning, we might expect to see students and teachers working in ways that differ from the patterns experienced by most students most of the time, as represented in the findings of the 2007 baseline teaching and learning survey (see Table 21). In the 2007 and 2008 surveys we provided a list of different things students might have been doing during their enterprising learning. We asked both students and teachers to indicate whether each of these things occurred in the course of their enterprising learning activity, and how often these things *usually* occur in their other classes.[51] Figure 14 below shows their responses. The black bars represent the proportion of teachers or students saying each thing happened during the enterprising learning, while the grey bars represent the proportion of teachers or students saying each thing happens "often" or "very often" in other classes/teaching. The statements are ordered so that the things that most students said happened most often in E4E are listed at the top, and the things that the least students said happened in their E4E are listed at the bottom. From this ordering we can see that it was quite common for students' E4E activities to involve doing something useful for someone else, and

[51] Students were asked how often each of these things normally occurred "across all your classes at this school", while teachers were asked how often they normally happened "in your teaching of students in this subject and year level".

working in groups, but reasonably uncommon for students to work away from the school, or work with students from other year levels. However, is this any different from what normally happens in these students' learning? By comparing the length of the black bars to the grey bars we can see that working in groups, and students taking on different roles within a team or group, are reasonably common practices in other classes as well (although perhaps slightly more prevalent in E4E learning). However, in most of the other items there is a much bigger difference between the grey and black bars, suggesting that many students were engaging in different ways of working in E4E compared with normal teaching and learning practice. Furthermore, teachers were much more likely to report that, in comparison to their usual teaching, during E4E students were doing something that is useful or important to someone else, or had an extended period of time to work on one project in depth, or worked in different spaces in the school or away from the school, or were given responsibility for deciding how to use their time each day.

The data in Figure 14 suggest that at least some students were working in different kinds of ways that could support 21st century learning approaches for at least some of the time during their enterprising learning. However, these items only provide a crude indication of what was actually occurring during these enterprising learning opportunities. It impossible to tell, for example, whether these shifts from the "usual" ways of working and learning were actually supporting students to engage more deeply in creative and critical thinking, collaborative problem solving, the generation of new knowledge or any of the other practices and habits associated with a 21st century learning approach. In the next few sections we look in finer detail at what kinds of projects and activities the students were actually doing, and what kinds of roles and opportunities these presented for 21st century learning for both the students and their teachers.

Figure 14 **How students worked during their enterprising learning, compared with what normally happens in other classes/learning (2008 teacher and student surveys)**



"Real" projects for a real purpose

The E4E website states that "enterprising learning is relevant and authentic" (Te Kete Ipurangi, 2009), and a key evaluation question for the MOE and NZTE was: To what extent does E4E enhance opportunities for students to engage in "authentic learning" and for schools to "personalise learning" for their students, through relationships with people/groups/businesses?

By what measure can we evaluate what is authentic and relevant, and by whose standards? Hipkins (2006) 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 relevant or personally meaningful to the students? Third, is it authentic in terms of being significant and meaningful to society (or at least to some particular segment of

society or the community)? In this subsection we focus primarily on the third meaning, evaluating the extent to which students' enterprising learning occurred within the context of "real" projects for a real purpose. A simple way to measure this is to ask: Did someone other than the teacher and students themselves actually use, or benefit from, students' enterprising learning activities?[52] Later in this chapter we address questions about the authenticity and relevance in terms of the discipline areas, and in terms of relevance and personal meaningfulness from students' perspectives.

In 2007, after our first year of case study visits to schools across the four regions, we categorised the E4E examples we encountered into six broad types.[53] Characteristics of these six types were described in detail in the interim report prepared at the mid-point of the evaluation (Roberts et al., 2008), and are summarised in Table 25. The typology was not intended to be used as a strict hierarchical system for classifying enterprising education approaches—indeed, as this section will illustrate, given the breadth and diversity of activities and projects that could be described as "enterprising", it is very difficult to categorise or classify examples using any single approach. Rather, the typology in Table 25 was intended as a guide for considering the points of difference between various E4E examples and the "big-picture" learning intentions behind them—including questions of relevance and authenticity. We saw these approaches as sitting loosely along a continuum where number one was most like the current schooling situation and number six was closest to 21st century learning, with the caveat that the ways and contexts in which these approaches were taken could alter their position on such a continuum. At the upper levels of the typology (categories 5 and 6, for example), students' learning is integrated with meeting a real purpose or need in the "real-world", whereas at the lower levels of the continuum (categories 1 and 2, for example) students' learning is more likely to be set within a context that has been contrived by the teacher for the purposes of teaching particular knowledge or skills.

We used this typology in various feedback reports and presentation sessions for clusters and stakeholders and during late 2007 and early 2008 to generate discussion about the different ways in which E4E was being understood, interpreted and enacted by different schools and individuals.

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[52] For now, we will put aside wider questions about the *value* of the students' contributions in social, moral, communitarian or economic terms. These questions are discussed further in Chapter 8.

[53] We are presenting a typology here which means we are working with different categories within which some E4E activities neatly fit, and we have used these activities as examples. It is, however, important to remember that some activities straddle two or more of these categories.

Table 25 **Six possible approaches to E4E (summarised from Roberts et al., 2008)**

1. Identifying "enterprising" opportunities within existing school approaches

This approach requires teachers to identify the components of what they already do which could be considered enterprising. This approach signals that subject-bound teachers can still find ways of offering enterprising education, and that external partnerships are not necessary for developing enterprising attributes. It is one way of gently introducing teachers to E4E and several lead teachers and principals indicated that this was their reason for taking this approach. The risk is that in some classrooms no change actually occurs and you end up with "business as usual". The challenge is to ensure ongoing movement towards full realisation of 21st century learning goals.

2. Business or community expert as teacher

The second type of activity involves arranging visits between students and business/community experts. The business/community expert tends to take on the traditional teacher role, responsible for disseminating knowledge. Students are positioned as recipients and have few opportunities to work with partners to build knowledge. This approach builds connections between the school and community. The risk is partner "burn out" because the relationship tends to rest on partner altruism rather than mutual benefit. There is also the risk that, apart from the novelty factor of having a different person in the teacher role, this is "business as usual". The challenge is to develop more reciprocal partnerships, for the benefit of both student and partner learning.

3. Teacher-created "purpose"'

The third approach in our typology involves students creating new knowledge, products or services for a purpose which has been constructed by the teacher (for example, the teacher provides a scenario for a problem the students must solve or something they must design, but the students' solutions are not actually applied to a real-world situation). While this approach can provide students with many 21st century learning opportunities, students are not creating new knowledge to meet a real need. The challenge for schools here is to apply the approaches used to real projects which involve students creating new knowledge to meet real business or community needs.

4. Creating real knowledge to meet a real need as a practice activity

This type of activity involves students creating a product or new knowledge which could be used for a real purpose but is not taken to the point that this eventuates. As with the "teacher-created purpose" this approach can provide students with many 21st century learning opportunities. However, the community does not benefit from students' work and the students spend time and energy creating knew knowledge for no purpose other than meeting their curriculum requirements and developing skills which they might use in the future. The challenge is to extend this approach one step further so that the potential of the new knowledge or product can be realised, and both the community and students can benefit.

5. Teacher-directed work for a real purpose in the real-world

This fifth type of activity involves students creating new knowledge or a new product for a real purpose but is so strongly teacher-directed that potential 21st century learning opportunities are not realised. In such activities teachers tend to take responsibility for initial meetings with business/community partners, make many of the important decisions with little, if any, student input and to organise, direct and compartmentalise the task. Such projects may appear to involve curriculum integration in that students from different curriculum areas might contribute. However, if the collaboration across curriculum areas only occurs at the teacher level, and if the students are not required to draw together their knowledge from across different subject areas, then this approach risks being experienced by students as "business as usual". The challenge for teachers is to increase the amount of control they hand over to students, especially in the early stages of the project when things are being set up and important decisions are being made.

6. Student-led creation of new knowledge for a real purpose in the real-world

This type of activity involves students creating new knowledge or products to be used for real purposes. Some examples we saw were extra-curricular while others were part of the curriculum. Some involved curriculum integration while others did not. Most involved community links but not always. What distinguishes this type of activity from the type described above is that projects are student-led. The challenge for schools offering this type of activity is to incorporate systems-level analysis and understanding of both subject areas and (where relevant) business and market economies.

In the subsections below, we analyse data from 2007 and 2008 to consider the extent to which students' E4E learning opportunities across schools in the regional clusters resembled the categorisations described in the typology above, with a particular focus on whether, through their enterprising learning, students were doing something "real" for a purpose in the real-world.

Analysis of 2007 examples: Teacher descriptions of enterprising learning opportunities

In our analysis of the teacher and lead teacher end-of-year survey data in 2007, we sorted the 71 examples of E4E units of work described by staff into three broad groupings according to teachers' responses to particular questions.[54] These groupings bore some resemblance to the six-category typology discussed above, as shown in Table 26.[55] Although groups B and C each involved a business or community partner (or, in some cases, a "partner" person or group within the school), only the examples in group C—just over half of all the examples described—explicitly appeared to involve students producing or doing something specifically to be used by (or useful to) their business, community or school-based partner.

Table 26 **Analysis of 2007 E4E examples described by teachers (*n* = 71)**

Group	Description	Percentage of examples	Most similar to which approaches in Table 25
A	Little or no involvement of business and community partners	20	1. Identifying enterprising opportunities within existing school approaches; and 3. Teacher-created purpose
B	Some partner involvement, but not as the recipient or beneficiary of the students' activities	8	2. Business or community expert as teacher; and 4. Creating real knowledge to meet a real need as a practice activity
C	Significant partner involvement—activities for a real purpose in the real-world	54	5. Teacher-directed work for a real purpose in the real-world; and 6. Student-led creation of new knowledge for a real purpose in the real-world

Analysis of 2008 examples

The analysis of the 2007 data shown above required a complicated and time-intensive analysis across a range of question areas. To simplify the analysis, the 2008 teacher/lead teacher survey included a direct question asking teachers whether students made or did something useful for

[54] The questions included a) whether the activity involved a business/community partner or partner from within the school, and b) who benefited from the students' work (i.e., if the work or learning was shared with, communicated to or used by anyone other than the students in the class and their teacher). We also used the teachers' written description of the project to help us categorise the examples.

[55] In approximately 17 percent of the examples described in the 2007 surveys, teachers did not provide enough description to tell which (if any) of these three categories the E4E activities might fit into.

someone else as part of their E4E activities. Most (84 percent) of the teachers and lead teachers said that their students had produced or done something that benefited people from business or community organisations, the community or the school. Twenty-one of the 28 business and community partners (75 percent) surveyed at the end of 2008 also said students had produced something of benefit to them or their organisation (See Chapter 5). Table 27 shows what students did or produced in 2008, according to teachers.[56]

Table 27 **What students did or produced that was of benefit to business, community or school (2008 lead teacher/teacher survey data)**

What students did or produced	Percentage of units (*n* = 61)
A product	44
An idea, concept or design plan	26
Research information or data	30
A service	20
Other	8

Note: Teachers could select more than one response, therefore percentages total more than 100.

While the analyses above appear to suggest a slight increase between 2007 and 2008 in the proportion of E4E activities resulting in something "real" and "useful" being produced by students, this may simply be an effect of the different ways the data were analysed in each of the surveys. It is also worth remembering that these data are from teachers who chose to complete a survey, and do not necessarily include every example of an enterprising learning activity that occurred within the schools in the regional E4E clusters. It is therefore difficult to make an overall statement about whether there was a general change in the nature of E4E activities (for example, a general shift away from more contrived E4E activities, to more relevant "real-world" activities) during the two years of the evaluation.[57] It is, however, clear that in both years there was a wide diversity of E4E learning opportunities which suggests that the E4E concept is broad and adaptable. To get a sense of the diversity of E4E activities reported by teachers in *both* years, see the short descriptions provided in Appendix B.

Students' descriptions of their enterprising activities

We also asked students to describe in their own words what their E4E project involved. Naturally, the specific details of each E4E project varied considerably; however, it was possible to categorise the most common types of projects as shown in Table 28 (bearing in mind that there was a degree of overlap and blurring between some of these categories).

[56] See Chapter 4 for a selection of teacher and partner descriptions of the kinds of things students did or produced through their E4E activities.

[57] Although in some case study schools we visited in both years, we did see some examples of this trend.

Table 28 **Students' descriptions of what their E4E project/activity involved**

	% students	
What the E4E project involved	**2007 (*n* = 506)**	**2008 (*n* = 409)**
Creating or doing something for a specific client or purpose (either within school, or outside the school)	50	35
Creating or doing something without a specific client or purpose at the outset	21	34
Researching and solving a school or community or local problem	18	5
Writing, performing or producing a performance (e.g., a radio show, Stage Challenge)	9	8
Authentic learning linked to the "real-world" (e.g., learning in a real-world context)	6	12
Other	8	4

Creating or doing something for a specific client or purpose

The most common type of activities (row one in Table 28) involved students designing a product, planning or promoting an event or delivering a service with a specific client or purpose in mind at the outset (50 percent of the 2007 examples, and 35 percent of the 2008 examples). In many of these cases, the client or beneficiary of students' E4E activities appeared to be a business or community partner (people or a group) from *outside* the school. For example:

- researching information about local towns and sites to develop content for a district council's website
- rebuilding a computer to donate to the local primary school
- designing a logo for a local business
- designing Meals on Wheels suitable for particular groups of elderly people in the community.

For other students, the client or purpose for the students' activities appeared to be someone *within* the school, or the students were doing something as a service to the school. For example:

- designing promotional materials, a menu and a schedule for the school's 50-year reunion
- landscaping school grounds or investigating ways the school could be more environmentally friendly
- designing a maths game for special education students
- promoting healthy food choices within the school.

Creating or doing something without a specific client or purpose at the outset

The next most common kind of E4E activity (row two in Table 28) involved students designing (and sometimes selling) a product or delivering a service without an actual client or purpose at the outset (though some of the products or services appeared to be designed with a hypothetical target market in mind). These kinds of activities tended to be associated with "school market day" activities and YES projects. For example:

- designing, making and selling a product at a school "market day"
- forming a small model business and developing a concept—such as headphones designed for teenagers—and a business plan
- creating a product or event to raise money for a school activity (a school camp, or a pet day).

Other kinds of E4E activities (rows three to six in Table 28)

Between 6 to 12 percent of students described activities in which learning—often in science—was grounded in a "real-world" context. For example, learning about forces in the context of road crash investigations (working with a Police Road Crash Investigator); making biofuel out of chip oil; or collecting local weather data for an online global weather monitoring project. Other students had been involved in writing, presenting; or producing some kind of performance (such as a film documentary, radio play, musical performance or Stage Challenge), or had worked on solutions to a local issue or challenge (for example, an environmental, health or safety issue in the school or local community).

Discussion: "Real" projects for a real purpose?

The teacher and student survey data analysed above suggest that, broadly speaking, many of the E4E activities being undertaken in the regional clusters involved students doing or creating something for a "real" purpose (as opposed to simply learning knowledge and facts in order to write assignments, for example). In this sense, E4E does appear to provide more opportunities for students' learning to be "relevant" and "authentic". However, as discussed at the beginning of this section, relevance and authenticity can mean different things, depending on the frame of reference. In both this section, and in Chapter 3, we have discussed examples where students were producing something that was seen as useful, meaningful and relevant by someone else (such as a business or community partner). Later in this chapter we look at other measures of "relevance"—for example, is "real" work for a "real purpose" by definition more authentic and interesting to students, and/or authentic to the subjects/disciplines they are studying? Below, we begin by examining the extent to which enterprising learning opportunities supported students to have greater ownership and involvement in decision making about their learning.

Student ownership and decision making

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

given to students in the early 2007 "general" student survey.[58] As Table 29 shows, there was a clear difference. In the end-of-year E4E surveys in 2007 and 2008, 72 and 78 percent of students placed themselves on the upper two rungs of the ladder during their E4E learning opportunity, compared with only 18 percent of students in the general teaching and learning survey from mid-2007 who said they worked in these ways "most of the time" in their classes.[59]

This suggests that student decision making was a central feature of many E4E learning opportunities, which has implications for the role that teachers play.

Table 29 **Decision making in learning (student surveys 2007–08)**

Most of the time…	% Students—general school sample 2007 (*n* = 1,682)	% E4E students (2007) (*n* = 509)	% E4E students (2008) (*n* = 406)
… we decide(d) how we should do our project with a small amount of help from a teacher	5	43	50
… we work(ed) together with a teacher to decide how we should do our project	13	29	28
… a teacher asks/asked for our ideas when he/she makes/made decisions about how we should do our project.	21	12	8
… a teacher tells/told us how we should do our project, but he/she seems/seemed to think about our ideas and interests first.	30	8	5
… a teacher tells/told us how to do our project, without taking our ideas and interests into account	23	3	2

The role of the teacher in E4E

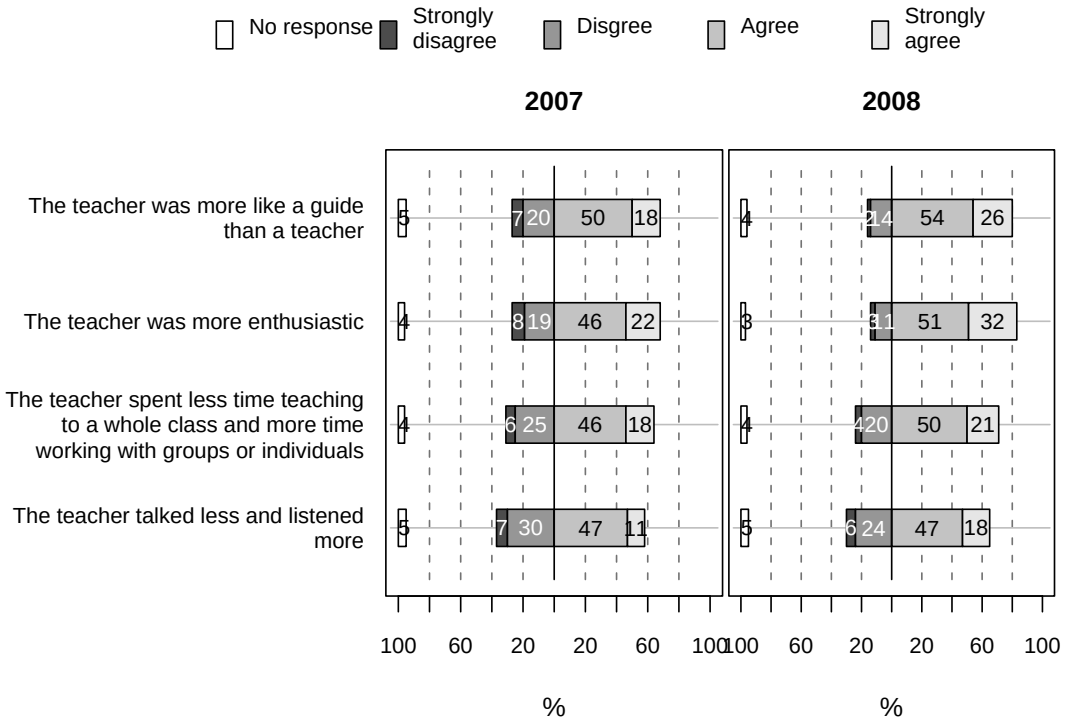
In addition to feeling they played a significant role in making the decisions about their learning activities or how to do their projects, most students also tended to think their teachers' role during the enterprising learning activities was different from what they normally experienced during most of their day-to-day school learning experiences. As shown in Figure 15, in 2007 around two-thirds (66 to 68 percent) of students said their teacher was more enthusiastic, and more like a guide than a teacher; and in 2008 the proportion of students agreeing with each of these

[58] The general Teaching and Learning survey was completed by 1,682 students from 26 schools in the E4E clusters mid-way through 2007. This survey was designed to explore what students thought about school and the ways they learn at an early stage in the evaluation. The survey was about whole-school practices, i.e. learning opportunities aligned with key competencies, 21st century learning ideas, E4E principles etc., not just E4E activities and/or enterprising learning experiences. This wide focus was designed to suit schools at the start of an E4E journey (that may not have had E4E learning opportunities in place) through to schools that could have already embedded E4E across the curriculum.

[59] Students were asked to select the step that best reflected what happened most of the time in most classes (2007 baseline general survey) or in their E4E project (2007 and 2008 end-of-year surveys).

statements was around 80 percent. In both years, well over half the students said their teacher spent more time working with groups or individuals and less time teaching to the whole class, and talked less and listened more.

Figure 15 **Student perceptions of teacher during E4E, compared with what normally happens in most classes (student surveys, 2007 *n* = 506, 2008 *n* = 409)**

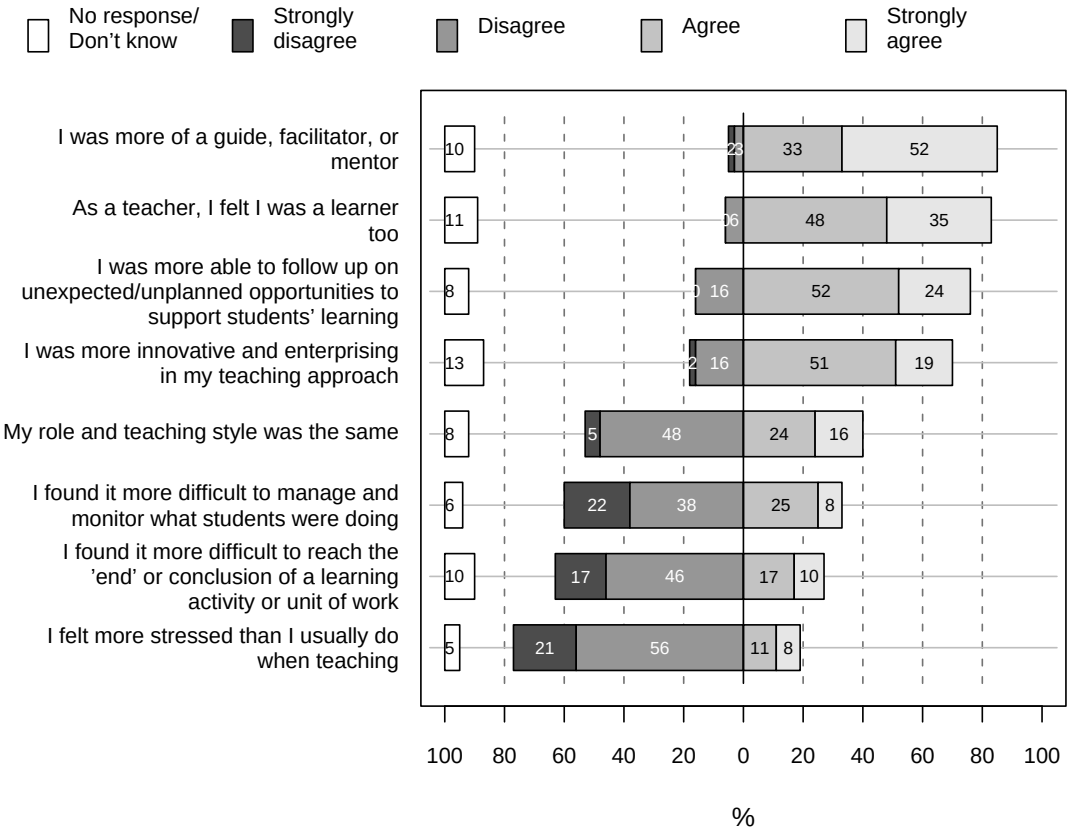


Given the data above, we might expect to find teachers also reporting "something different" in their own roles and practice in E4E, when compared with their previous teaching practices. Such differences were reported by many teachers during the two years of the evaluation. For example, the 2007 survey included an open question asking teachers and lead teachers to comment on their role during the E4E learning activities, and whether this differed in any way from the way they usually worked with students. Table 30 shows the most common theme in the teachers' responses was the view of themselves as being more of a mentor, coach, guide or facilitator of learning. Based on the comments yielded by the open question in 2007, in 2008 several closed questions about teacher role were included in a series of Likert-scale statements in the 2008 teacher and lead teacher survey (Figure 16).

Table 30 **Teaching role in E4E compared to usual practice (2007)**

Teaching role	Percentage teachers and lead teachers (*n* = 71)
Facilitator, guide, coach, adviser, mentor	60
Same as usual teaching style	17
Liaison with business or community partners	14
Directing and planning students' work	8
Assessment	6
Other	20

Figure 16 **Teaching role in E4E compared to usual practice (2008, *n* = 61)**



Once again, most teachers and lead teachers agreed that compared with "normal" teaching practice, they were more of a guide, facilitator or mentor (85 percent), and felt they were learners too (83 percent). More than 75 percent also agreed they were more able to follow up on unexpected/unplanned opportunities to support student learning. While some teachers felt these ways of working were "the way I usually teach", others expressed it in terms of a change from

their previous habits and ways of teaching, as illustrated by the selection of open comments below:

> Students led, teachers there to facilitate, give ideas/feedback when appropriate. My approach changed as it was less teacher directed. (Teacher, 2007)
>
> I was the facilitator and at times learning more than the students. I believe this is to be close to my usual style of teaching except there has been more visitors/visits. (Lead teacher, 2007)
>
> Providing them with opportunities, guiding them through design and making process. [I] usually work this way with senior students. Technology is a perfect process for E4E. Having a client in the community for students to work with, instead of friends/family is ideal. (Teacher, 2007)
>
> Being the facilitator and not the teacher who knows everything has helped me to learn more about the unit and how the students are able to become more motivated when they are taking more of an active role in their own learning. (Teacher, 2008)

The case study interviews provided further examples of teachers perceiving shifts in their teaching practices, as well as their beliefs about students, teaching and learning, as a result of their decisions to adopt an "enterprising" approach. However, we must be careful not to leap to conclusions about the profundity or permanence of these shifts in terms of teachers' future practice, or their practice across different classes and year levels they may teach. It is also important not to overlook counter-examples (for example, a few teachers' comments implied that E4E required them to take on a more, rather than less directive role). These and other issues related to school-wide changes in teaching, curriculum and assessment will be discussed further in Chapter 7.

Relevance to students' current and future lives

Earlier in this chapter we raised the idea that "relevance" and "authenticity" of learning can have multiple meanings, depending on the frame of reference. We have already considered how students' enterprising learning opportunities might be evaluated in terms of their relevance and authenticity as "real projects for a real purpose". In this subsection, we consider the question of relevance at a more personal level—was the enterprising learning perceived as personally meaningful and/or relevant by the students themselves, both in relation to their current lives and interests, and in relation to where they see themselves in the future?

The example given in Table 31 illustrates why we need to be careful not to conflate "real-world" relevance (or even disciplinary relevance) with personal relevance to the learner, and vice versa. In this small example, students were engaged in carrying out a project that was of real-world relevance for a community partner, and which provided an authentic opportunity for students to learn and use disciplinary skills and knowledge (in this case, in statistics). Yet for various reasons, the actual work involved in the project was experienced by students as more like "business as

usual", and less personally relevant than another learning experience they described which was *not* necessarily linked to meeting a real-world need.

Table 31 **An authentic project is experienced as "business as usual" for students**

A local government body wanted to gather data about cycle transport in the area. A contractor to the council contacted a local secondary school, and the school's E4E cell decided it would be a good project for a particular top-stream junior maths class. The teacher told the students they would be doing this project, and the students had a certain number of periods to design and carry out a survey within their school to find out about the proportion of students who cycled to school (putting statistical concepts such as sampling and data analysis into practice). The students also came up with several recommendations about ways that cycling to school could be made more attractive to students. Unfortunately, time constraints meant that the students did not have the opportunity to present their results and recommendations to the client (this was later done by their teacher).

A small group of students from the class were interviewed by NZCER. During the interview, the students contrasted the mathematics/statistics survey project with another learning experience they had been involved with as part of their school's gifted and talented extension programme. In the latter programme, students had spent most of a term working on a project linked to the theme of "time", integrating their science, social studies and English periods:

> [In the gifted and talented programme] we had a week to choose our topic [related to 'time'] and the rest of the term we worked on it [in our small groups]. If we needed a hand [our teachers] would help us, like some of us needed to go on trips outside the school … like if we needed to go down to the mall for a period and interview the public, we could.
>
> The 'time' project we did for the whole term] it was kind of like, you could do what you want, there wasn't a structure … [but] if you don't get it done it's not going to be good on the day, [so you learn to] use your time wisely. Whereas for the maths one it was 'you need to get this done by such and such a time, you need to do this today, this tomorrow, this the next day …'

Although the students saw that the cycling survey was going to be used for a real purpose, because they had not been able to follow up with the client themselves, they were not sure precisely what had happened with their research after they had completed it, nor whether it would lead to a change in the numbers of students cycling to school. Overall, they had preferred the gifted and talented project, because they felt they had more choice, flexibility, motivation and self-direction in their learning—even though these projects had not necessarily involved producing something that was meeting a real need in the real-world.

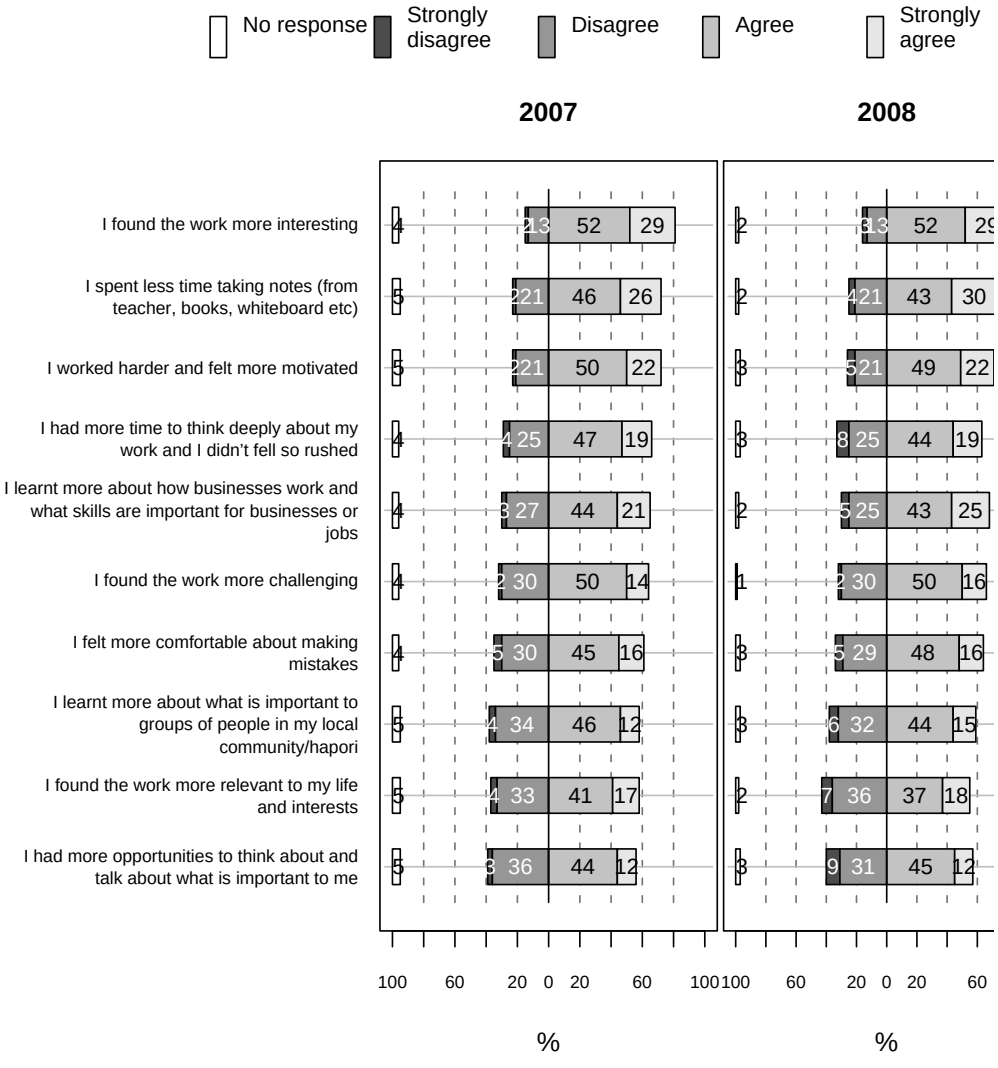
We have included the anecdote in Table 31 as an explicit counter-example to highlight that "real-world" relevance on its own cannot be *assumed* to necessarily create a sense of personal relevance to the learner. However, the general patterns that emerged in the 2007 and 2008 data suggest that most students *did* experience their E4E learning opportunities as at least as relevant and engaging (if not more so) than their other school learning experiences. These data are presented below.

Interest, engagement, motivation

One measure of personal relevance is the degree to which students find their learning interesting and engaging. Figure 17 shows how students compared E4E with regular classroom learning on various dimensions. In both 2007 and 2008, 81 percent of students said they found the E4E learning/work more interesting compared with most of their usual classroom learning experiences. On every other item, more than half the students viewed E4E in more positive terms than their

usual classroom experiences. Of all the statements in Figure 17, the lowest levels of agreement were that the work was more relevant to their lives and interests, and that they had more opportunities to think about and talk about what was important to them (between 55 and 58 percent agreement), but more students were likely to say that they worked harder and felt more motivated, the work was more challenging, they had more time to think deeply about their work, and felt more comfortable about making mistakes. As we found from the baseline survey, about half or less of students experienced these often across most of their school learning.[60]

Figure 17 **E4E compared with other learning experiences—students' perspectives (2007 *n* = 506, 2008 *n* = 409)**



[60] Some of these items were included in the general Teaching and Learning survey. For example, 41 percent of students said they often get to think deeply about one or more important areas and 53 percent often feel they can make mistakes and learn from them across their school learning.

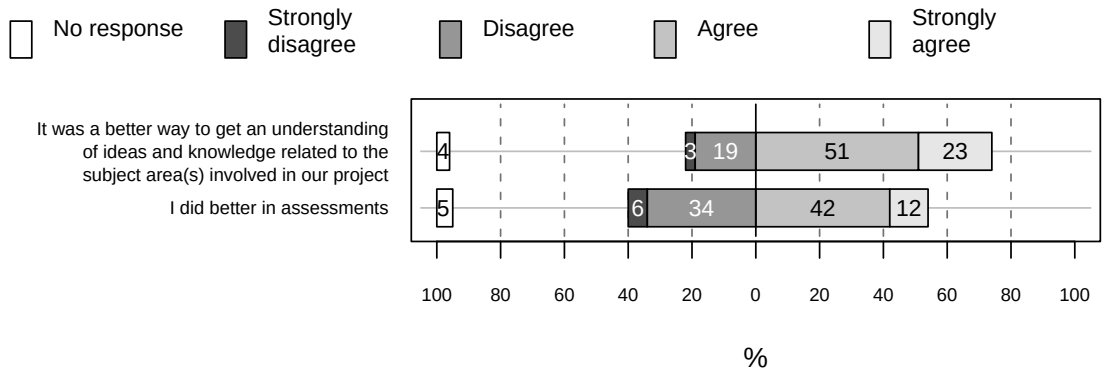
Student comments from surveys and case study interviews during 2007 and 2008 yielded many examples of students finding their E4E learning experiences personally relevant and rewarding. For example:

> I enjoyed this project, it was a real-life experience. It was fun. (Student, 2007)
>
> Because we were actually doing it or watching it, not just being talked to about it. (Student, 2008)
>
> It was a good opportunity to do real-life clients' work and design to an industry standard. (Student, 2007)
>
> The way we worked in groups and were doing more practical helped me learn, it wasn't just sitting in a class. (Student, 2008)

Getting a better understanding of the subject knowledge

Another important dimension of relevance is the degree to which students perceive the subject/disciplinary learning as personally relevant and meaningful.[61] As shown in Figure 18, in 2008 almost 75 percent of students felt that, compared to their normal classes/teaching, the E4E project/activity had provided a better way to get an understanding of ideas and knowledge related to the subject area(s) involved. More than half also thought they did better in assessments.

Figure 18 **E4E in relation to subject learning and assessment (student survey 2008, *n* = 406)**



Forty-five percent of students wrote a comment to explain their answers. Their rationales ranged from gaining more in-depth understandings of local, national or global issues, to seeing how the

[61] This lies at the boundaries between two of Hipkins' (2007) concepts of authenticity; that is, personal relevance/authenticity to the learner, and relevance/authenticity of the learning to the discipline. The question of whether the activities actually *were* relevant to the disciplines involved is an open one, and such a judgement would perhaps best be made by individuals who are highly experienced in, and knowledgeable about, the discipline(s), including how work is usually done and how new knowledge is usually generated within and through the discipline(s).

subject-related learning (such as in English, science or business) could help them in their future lives and careers. Some illustrative examples from 2008 are given below:

> The stuff we had learnt in class was used in a more practical and real way that required us to learn more and look at things in a more in-depth way. (Year 13 student)
>
> It made me realise about how things work in the real-world. It was good meeting people from our community. (Year 10 student)
>
> It had all the maths that we had to learn based around our project so that we had fun and learnt easily at the same time, I loved it! (Year 6 student)
>
> We learnt about conservation, the ecology of the sand dunes and the different uses for the area. And we learnt why we need to protect our local beaches from weeds spreading and have plants that stop erosion. (Year 12 student)
>
> By studying a range of texts we were able to prove the existence of different issues in society. It also gave us a better understanding of ideas and themes involved in English and things that we study in other subjects. (Year 13 student)
>
> We got to meet business people. That really motivated me to work harder and make my product more realistic. (Year 10 student)
>
> I found that [my region] has limited resources to create a business, and the economy isn't so wealthy. (Year 12 student)
>
> By designing/making this website I understand now when ICT is appropriate to my life and when I can use it in real situations. (Year 13 student)
>
> Because it taught me how people do non-profitable stuff just for love and sheer kindness. (Year 9 student)

Reflecting on selves and future

There is interest in identifying whether students see E4E activities as relevant to their current or future lives. The ability to reflect on learning experiences and connect them to one's goals and identity are also important capacities for life long learners.

Seventy-two percent (in 2007) and 75 percent (in 2008) of students agreed or strongly agreed that their E4E project led them to reflect on their own personal strengths and weaknesses (Figure 19). Slightly fewer said it led them to think about what an enterprising person is like (66 percent and 73 percent); however this may reflect the fact that not all schools explicitly frame their "enterprising" learning experiences in the language of enterprise. For example, in some focus groups and interviews we encountered students who did not ever recall having encountered terms like "E4E" or "enterprise"—even though what they described did, from our point of view, fit the intentions of E4E.

Overall, 63 to 65 percent of the students said it made them think about the different opportunities in their region, with a higher proportion of students in Years 11–13 agreeing with this statement (77 percent in 2008). Overall, half or more said it made them think about what kind of job they

want in the future; again, a higher proportion of students in Years 11–13 agreeing with this statement (73 percent in 2008). These proportions are quite high when we consider that not all students' enterprising learning opportunities necessarily involved working with a community or business partner. For some students it clarified what they did not want to do, as much as what they might like to.[62]

In 2008 over a third of the students wrote a comment about how their E4E activity had impacted on their learning, understanding of their own strengths and weaknesses, achievement or aspirations for the future. In the selection of comments below, we can see the diversity in both the students' experiences of their project, and where they positioned themselves with respect to their ideas about themselves and their potential future selves. Most of these comments involve students reflecting on something they had realised about themselves (or the dynamics of working in a group). Others talked about ideas it had given them about the wider world and/or their potential future pathways. For example:

> It shows me that there are a lot of opportunities out there. Makes me more respectful towards the elderly in our community. (Year 9 student)
>
> This project has taught me that everyone needs limitations when it comes to money. Money is not taught enough at school. (Year 10 student)
>
> I felt a lot more connected to my peers. I learnt to listen and trust them, to work in a team and that I don't have to do everything by myself and how to take risks. I'm glad I did, because it paid off. (Year 10 student)
>
> It made me realise even more that I am not really good with working together. I work the best when I am on my own. The product that we made is great and maybe I'm going to work with it in the future. (Year 13 student)
>
> This project has showed me what it's like to work with people you don't always get along with. (Year 12 student)
>
> It showed me I don't have to run every project and lead every group and take up the world's problems. I have strengths and weaknesses and can learn from both. (Year 9 student)
>
> I feel that I am more aware and tolerant of others. This topic has motivated me more to become an entrepreneur. (Year 10 student)
>
> Inspired me to get a job in the food and hospitality business. (Year 11 student)
>
> Directing Junior Stage Challenge helped me a lot with communicating with people of all age groups and also learn to get along with people I don't usually associate with. (Year 12 student)
>
> This project to do with [the local area] has made me seriously think about design landscaping in the future. Having client response and working for them with their ideas, inspired me to achieve the best I could. (Year 13 student)

[62] See Chapters 6 and 7 for more discussion about links between E4E and students' future goals and aspirations.

It was a better learning curve as all the work had to be done by me, I didn't have to listen to the teacher. I had to go out there and find a client. (Year 13 student)

A few less positive comments (about 8 percent of all the comments) included:

I'm 13, and I'm meant to be thinking about my future, say what? (Year 8 student)

Nothing, it wasn't a success. We made no money and it was a bit stressful. (Year 10 student)

I don't want to be an enterprising person. (Year 10 student)

I don't want to do a science project again because it's too much work. (Year 10 student)

Figure 19 **Doing this project made me think about … (student surveys, 2007 *n* = 506, 2008 *n* = 409)**

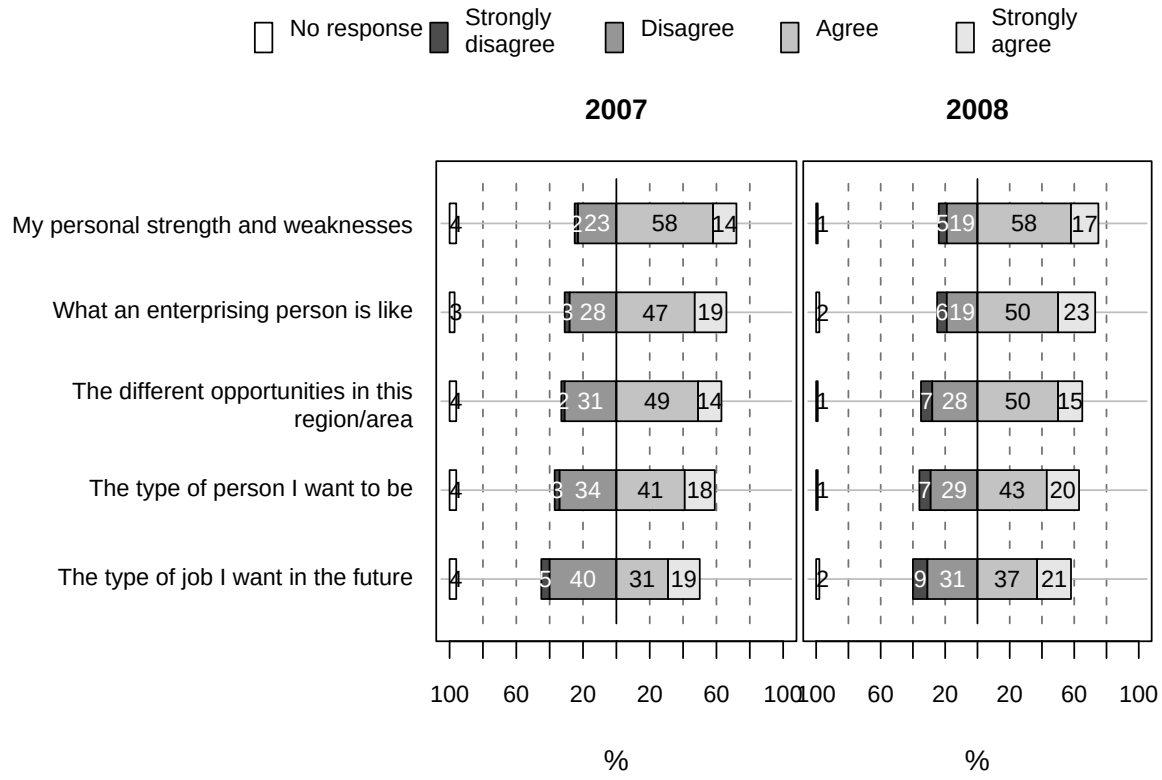
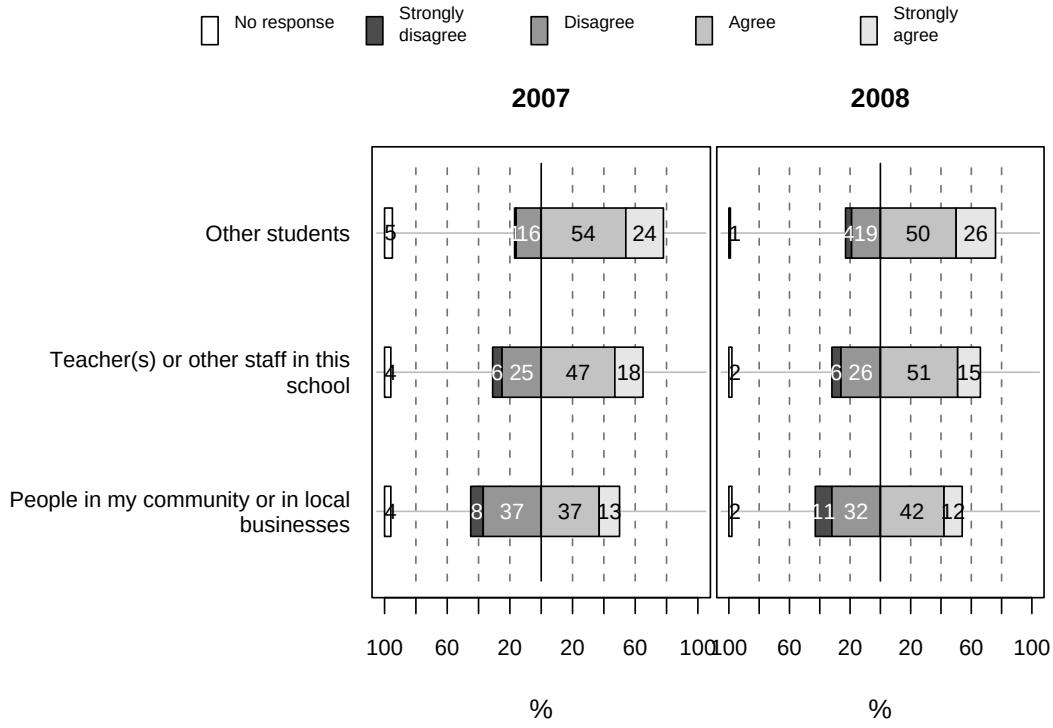


Figure 20 **Doing this project made me feel more connected to … (student surveys, 2007 *n* = 506, 2008 *n* = 409)**



Experiencing community and business realities

Whilst not all students' enterprising learning opportunities involved engagement with people from businesses or the community, some of the comments already discussed in this chapter show that many students did feel they were learning something new about business or the communities they were engaging with. Overall, 65 to 68 percent of students agreed or strongly agreed that their enterprising learning experience helped them to learn more about how businesses work and what skills are important for businesses and jobs (see Figure 17), and half or more agreed or strongly agreed that their enterprising learning opportunity made them feel more connected to people in their community or local businesses (see Figure 20).

We also asked adult participants to indicate the extent to which E4E had exposed *teachers* to community and workplace realities. Eight-five percent of principals (*n* = 20) agreed that E4E had a positive impact, as did 78 percent of lead teachers (*n* = 18), 66 percent of other teachers (*n* = 45) and 68 percent of community/business partners (*n* = 28).

While students and teachers all tended to believe they were learning more about the day-to-day realities of the business and community organisations they worked with, the data suggest that one area that is underdeveloped in E4E is using experiences of business and community "realities" as an entry point into reflective meta-level systems thinking. Critics of "enterprise education" remind us that if education about enterprise is to be truly educational it should enable students to develop

critical knowledge about prevalent and alternative economic systems, rather than focusing simply on experiencing/understanding, for example, business strategies or the workings of individual organisations (Clark, 2004). However, student interview and survey comments provided relatively few examples of students explicitly developing a critical understanding about the economic, social and educational systems/paradigms, or meta-level understandings of the different disciplines involved in their learning activities.

Twenty-first century learning encourages curriculum integration, but does not preclude—in fact it depends upon—knowledge of the origins and evolution of different ways of thinking about the world (Gilbert, 2005). It involves "big-picture" conceptualisations of how different knowledge systems work and interact; which requires thinking about paradigms and systems, and how people frame the world. Interdisciplinary approaches involve "communication across different languages and even paradigms" and enable students to engage more fully in "issues and challenges that … are too complex to be handled successfully by one discipline alone" (Kyburtz-Graber, Hart, Posch, & Robottom, 2006, p. 246). In order for students to understand "the rules of the game" for different subject areas—so that they can decide when, and in what combination, these different thinking tools might be useful—teaching attention should not so much be placed on the subject matter of science, history or art, business or community development. Instead the focus could be on how a scientist, historian, artist, businessperson or community activist might think, and how these thinking frames might impact on how we organise social/economic/political systems and how we approach complex problems.

The challenges we have outlined above can be illustrated in one region-wide project that involved a partnership between three schools and the organisers of an ecotourism conference. Teachers from three different learning areas (art, fabric technology and food technology) were able to draw on this context. We interviewed a number of students who were involved in making ecobags or ecotreats for the conference, and many told us that they appreciated doing something "real" for the partner organisation and for the conference delegates. Some suggested that they consequently felt more motivated to put effort into the learning area, and several believed that they had experienced some of the realities of being an artist, chef or designer. However, when we asked the students about their understandings of ecotourism, it seemed that few had a strong conceptual grasp of ecotourism, the significance it might have for their region, nor the systems that surround it, such as local and global economies, sustainability etc. (see Table 32).

Table 32 **Interview excerpts about ecotourism**

School One: Fabric technology students
It's about nature and animals and plants.
It's about protecting the environment.
It's tourism when they're seeing nature rather than theme parks. They're teaching people how to look after nature and the environment.
School Two: Art students
It's ecofriendly.
Q: Did you do much thinking about what it's about to be ecofriendly?
Yeah cos it grows in the environment.
Q: Did you guys know about ecotourism before you did this project?
No, not really.
Q: So what did you learn about ecotourism by doing ecobags? Like what's the point of it?
Just being friendly to the environment. (Silence)
What's the point of it? I dunno. (laughs)
Q: Did you get to go to the conference?
Na, we had to stay home.
We're supposed to be getting a photo or something back from the conference.
School Three: Food technology/enterprise students
Q: Did you talk about ecotourism?
With the truffles the [partner organisation] asked us to make sure all the ingredients were sourced through Fair Trade, so the workers have a fair go …
When we spoke with the lady from ecotourism, it made you aware that someone's trying to do something about making sure that workers have a fair go, and that everything's fair and that businesses don't get taken over. That people get things back for what they do.
Q: Do you feel like you did [get something back for what you did]?
I don't. (laughs)
We got skills out of it.

A teacher from one of the schools discussed in the table above mentioned some of the practical tensions that might contribute to "missed opportunities" for deeper systems-level thinking and discussion in the context of E4E activities. In this class, the task of making truffles for the ecotourism conference delegates' bags became repetitive and time-consuming, and near the end of the project the focus was on getting the job finished by the due date. Meanwhile, other students in their class were involved in a variety of other E4E activities in the community, and the teacher was struggling to manage all the different students' time frames and support requirements. The students making the truffles from Fair Trade chocolate started to question whether it was fair that they were doing this work for free when they realised that conference delegates were paying fees to attend. However, the opportunity to explore this tension further—for example, by considering whether the students themselves were engaged in "fair trade" for their work—went unrealised. For the teacher, it was important to get the job completed, as failing to do so would have denied the students the payoff of knowing their truffles were being used and appreciated by their

intended recipients. Managing all the different projects and activities in the class to completion thus had to take precedence over opportunities to critique, challenge and deepen students' thinking around some of the systems-level issues around fair trade, sustainability, economics and ecotourism.

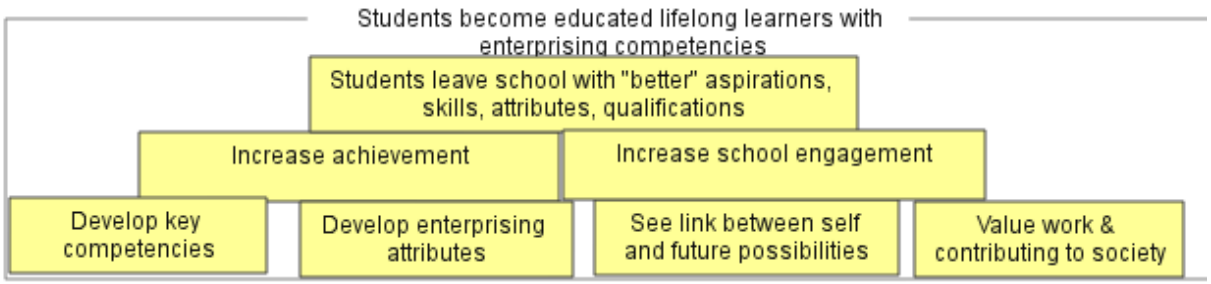
Summary of key messages

- A diverse array of things were occurring in the schools under the banner of "enterprising learning opportunities". Some involved some partnerships with businesses or community organisations, while others involved partnerships within schools. Some were oriented towards students making products or delivering a service, while others involved students identifying and working on solutions to school, community or environmental issues. It is difficult to develop a simple schema that can be used to classify or categorise different "types" of E4E approach, and there was as much diversity in 2008 as there was in 2007.
- Enterprising approaches were described across a range of curriculum areas and student year levels. Technology and enterprise were the most common subject areas, but many other curriculum areas were also represented, and some E4E activities were said to involve multiple disciplinary areas. More than three-quarters involved someone from business or the community.
- Many projects involved students doing something "real" for a real purpose—such as producing a product, designing an idea, solving a problem or providing a service for a business or community partner (or for someone with the school, or as a service to the school. Other students were doing more traditional YES-type approaches, forming mini-enterprises to learn about how to run a small business. Some "enterprising" learning opportunities were more connected to learning in an authentic context, rather than students actually creating something new.
- E4E learning experiences did seem to provide more opportunities for students to be learning in different ways compared to "regular" teaching and learning, including more time to work on something in depth, more opportunities for students to work collaboratively, using different spaces inside and outside the school and doing something useful or meaningful to someone other than themselves.
- Students tended to believe they were making more of the decisions about their learning and activities in E4E compared with their regular teaching and learning in other classes. Many students felt their teacher acted more as a guide or mentor, and teachers often reported this too.
- Overall, students tended to find their E4E activities more relevant, engaging, interesting and motivating than other learning experiences, although in case study visits there were examples where an authentic task was experienced as "business as usual" by students. About three-quarters thought it was a better way to get an understanding of the ideas and knowledge related to the subject areas in their project or activity. Their open comments about why this was the case signalled a range of reasons, including finding the learning more practical and in depth, to seeing how the ideas related to local and global issues.

- Many students found their E4E experience helped them to reflect on their own strengths and weaknesses, some felt more connected to their peers, teacher and people from the business and community and some had gained ideas about their future potential pathways.
- Many students thought they had learnt more about business or community "realities" through their involvement in E4E. However, case study data suggested that it was less common for these "realities" to be explicitly used as an entry point into reflective meta-level systems thinking. Teachers also suggested that sometimes having multiple projects and activities occurring at once presented classroom management challenges that may have precluded opportunities to delve into deeper systems-level issues.

6. Students becoming educated lifelong learners with enterprising competencies

Why should schools seek to develop enterprising learning opportunities such as those described in Chapter 5? Ultimately, the intention is that E4E experiences will support students to become educated lifelong learners with "enterprising attributes". The desire to build students' enterprising attributes is complemented by a host of related aims including the development of key competencies, and increasing students' engagement, achievement and aspirations. These are summarised by the "yellow zone" below.



During 2007, seven specific objectives were identified as significant in relation to the aim of students becoming educated lifelong learners with enterprising competencies. These were that students will:

- develop enterprising attributes
- develop key competencies
- see link between self and future possibilities
- value work and contributing to society
- increase achievement
- increase school engagement
- leave school with "better" aspirations, skills, attributes and qualifications.

Students' views in some of these areas were touched on in the previous chapter. In this chapter we draw on further data to evaluate the extent to which the objectives in the "yellow zone" were being achieved in the regional clusters. First, however, we discuss some of the inherent challenges associated with seeking to evaluate against these objectives.

Challenges for evaluating the "yellow zone"

The seven objectives in the "yellow zone" are arranged like a pyramid or a stack of bricks. A literal interpretation of this analogy might suggest that the four objectives on the bottom layer of the "yellow zone" (i.e., developing enterprising attributes and key competencies, seeing links between self and future possibilities, and valuing work and contributing to society) are precursors for achieving the fifth and sixth objectives (increasing achievement and engagement), and that all of these provide the necessary platform for the seventh objective (leaving school with "better" aspirations, skills, attributes and qualifications). However, this tidy arrangement belies the true complexity of the relationships between each of these individual objectives—not to mention their relationship to the overarching aim of students becoming "educated lifelong learners with enterprising competencies". For example, while the development of key competencies and enterprising attributes *may* be linked with increasing achievement and/or engagement, the development of key competencies and enterprising competencies can also be considered an end in themselves. Similarly, while it is plausible that increasing students' engagement and achievement will probably increase the chances that they will leave school with better qualifications, aspirations, skills and attributes, this does not necessarily mean they will go on to display characteristics associated with being an enterprising person with an interest in lifelong learning.

A better way to think about the "yellow zone" is that it represents an intermingling of two kinds of objectives: first, objectives for achieving outcomes that are high priorities within the current education system in general (such as engagement, achievement and accumulation of qualifications) and second, objectives for achieving outcomes that are seen as necessary for the development of lifelong learners and enterprising people in the 21st century. It is possible that the second set of objectives could challenge current conceptions of what achievement and engagement should look like. Although these two sets of objectives arise in different theoretical frameworks and assumptions, they are not mutually exclusive, and data gathered in the evaluation suggest that both kinds of objectives are valued by participants and stakeholders in the regional E4E clusters initiative.[63]

In the sections that follow we comment on what kinds of data were and were not able to be collected during the evaluation in relation to these objectives. We begin by discussing the objectives at the top of the yellow section: Increased achievement and school engagement, and leaving school with "better" aspirations, skills, attributes and qualifications.

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[63] For example, in mid-2007, principals were given a list of 29 possible reasons for developing E4E at their school. At least 80 percent of principals (n = 25) ticked "strongly agree" for the following five items:

- Raising students' enterprising attributes and attitudes (96 percent strongly agree)
- Helping students to feel positive about their future and themselves (88 percent)
- Increasing students' engagement, interest or motivation in school/kura (84 percent)
- Raising students' confidence and aspirations (84 percent)
- Increasing student achievement (80 percent).

Increased achievement and school engagement, and leaving school with "better" aspirations, skills, attributes and qualifications

Many stakeholders would like to see direct evidence that E4E is contributing to increased engagement and achievement, and that students' postschool outcomes are being enhanced. However, for both practical and theoretical reasons, this evaluation was not designed to directly gather data about student achievement as measured by school-based or national assessment. At the practical level, there is the question of what kind of achievement data would be appropriate to collect. E4E is an approach that can occur across curriculum areas and year levels, and there is no standard measure of achievement that is suitable for evaluating the learning of both primary and secondary students across a range of subject areas. Furthermore, even if it were possible to gather achievement data for all students who had been involved in learning in an enterprising way, how would we know how much difference E4E was making to achievement? Would we compare students' achievement to their own previous achievement, or to some other matched group of students in the same year level and subject area whose learning was *not* enterprising? These approaches—even if they could be carried out—would be very complex, and would also require setting aside the question of whether the achievement data that could be gathered through standard measures of assessment is the best measure of the difference that E4E has made for students' learning.

This is not to say that schools could not find ways to evaluate the overall impact of adopting an enterprising approach to teaching and learning across their own school over time. For example, medium- to long-term impacts on achievement could be evaluated by comparing certain standard measures over several years (for example, looking at the percentage of students gaining NCEA Levels 1, 2 and 3 each year, or the number of students going on to further studies or training in the year following school or the kinds of further studies and training students undertake). If there is an improvement trend on any of these measures, some schools would perhaps be able to attribute these trends to the widespread adoption of E4E, but no doubt it would be linked with a range of other factors within the school as well. Given that many schools were developing E4E opportunities for students in Years 9 and 10, it would take several more years of data collection to determine whether these students were achieving more highly in NCEA, or whether they were staying in school longer, as a result (and again, E4E might be only one of many factors within the school that could be contributing to these outcomes). For all these reasons, the evaluation was not designed to directly gather data about the qualifications gained by students who were involved in enterprising learning, nor about the destinations of school-leaving students who had been involved in enterprising learning opportunities.

The evaluation did, however, collect data on students', teachers' and school leaders' views of the extent to which enterprising learning opportunities were impacting on student engagement, achievement and aspirations, as well as the development of enterprising attributes. These data are discussed next.

Is E4E increasing student engagement, achievement and aspirations?

Teachers' and principals' views

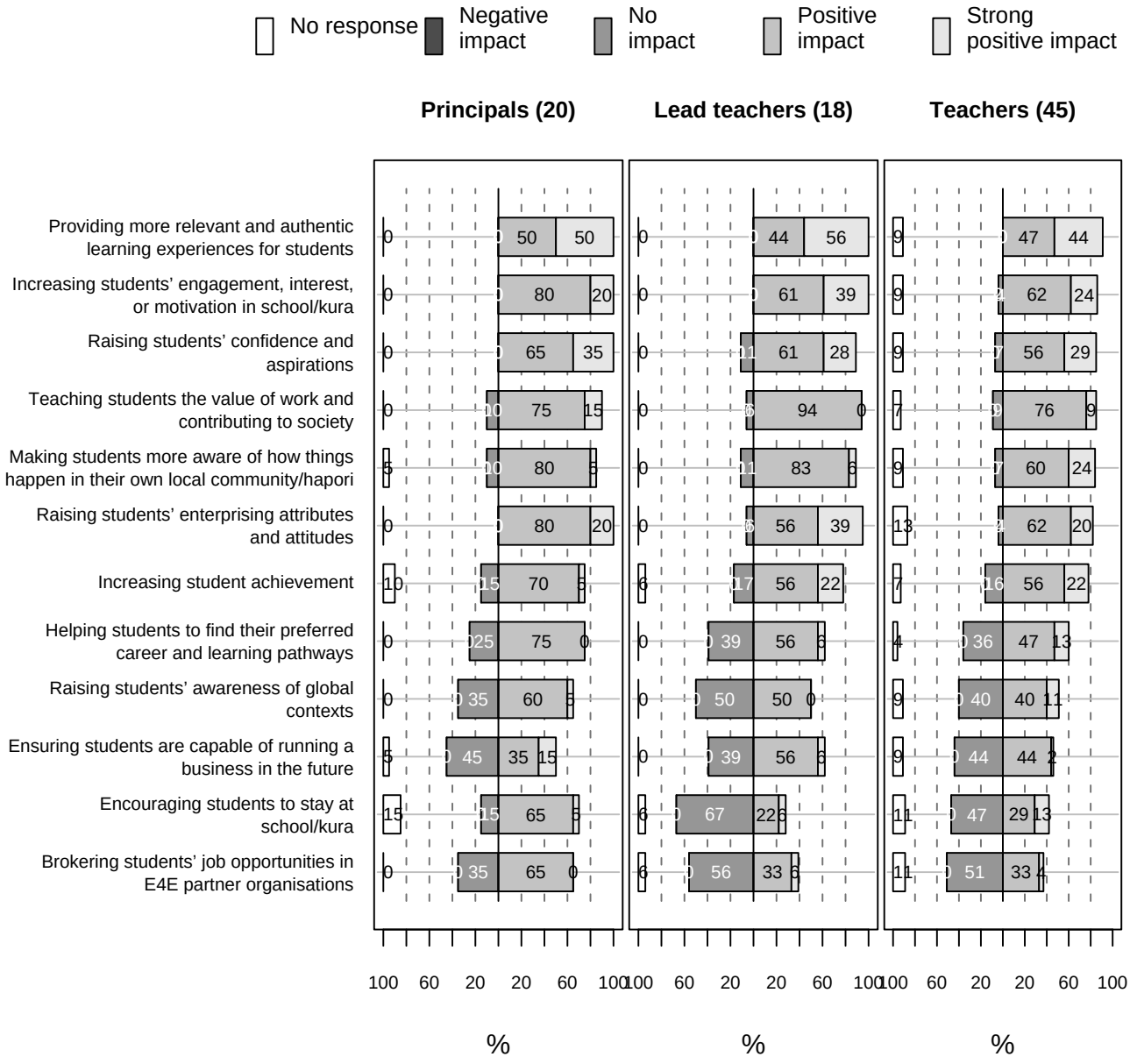
Figure 21 shows teachers' and principals' views about the impacts of E4E on their students by the end of 2008. Almost 100 percent of staff felt that E4E had a strong positive impact on providing more relevant and authentic learning experiences for students. Eighty percent or more also felt there had been a positive or strong positive impact on various "big-picture" goals such as: increasing students' engagement and motivation in school; raising their confidence and aspirations; teaching them the value of work and contributing to society; increasing their awareness of how things happen in their local communities; and raising their enterprising attributes and attitudes. Just under 80 percent felt there had been some improvement in student achievement.

Areas where a third to two-thirds of staff felt there had been no impact included: helping students to find their preferred learning pathways; raising students' awareness of global contexts,[64] ensuring students are capable of running a business in the future; encouraging students to stay on at school; and brokering students' job opportunities in E4E partner organisations. It may be that these specific areas (particularly those relating to staying in school or future career options and choices) were perceived as most relevant to students in the upper secondary levels, and less relevant in cases where E4E involved younger students. Alternatively (or additionally), some of the more business and entrepreneurial goals in this list may not have been a key focus for many enterprising learning approaches.[65] Next we discuss the objectives and the "base" of the "yellow zone", in particular looking at the relationship between developing enterprising attributes and key competencies as indications of the capacity for lifelong learning.

[64] This area will be discussed in Chapter 8.

[65] For example, many E4E examples described in Chapters 4 and 5 involved students undertaking activities to benefit the school or community, and did not involve business partnerships.

Figure 21 **Staff views about the impacts of E4E for students (2008)**



Becoming lifelong learners with enterprising competencies

To be described as a "lifelong learner" or "someone who is enterprising", it seems reasonable to expect that a person would have to have demonstrated their capacity to learn (or to be enterprising) on more than one occasion, and in more than one context, and probably over a reasonable period of time. Much in the way that we might describe a person as "friendly", "generous" or "cautious", saying that someone is a lifelong learner (or is enterprising) is to describe a person whom we believe *is* a certain way in the world. In everyday life, applying such labels to people is a shorthand way of saying that (under normal circumstances) we expect these people to carry their ways of being with them into new situations, contexts and environments.

Being a lifelong learner, or someone who is enterprising, then, is more than a skill or having particular knowledge—it is more like an attribute, disposition or "competency". As the next subsections will discuss, the shift towards thinking about the outcomes of learning in terms of competencies (rather than in terms of knowledge and skills) presents interesting challenges in terms of how to assess and evaluate "progress". In the New Zealand context, it is helpful to look at some of the emerging ideas and discussions related to the key competencies for guidance. This is particularly relevant for E4E, as work has been done to align the enterprising attributes with the key competencies (see Figure 22 and Table 33 below).

Enterprising attributes and key competencies

As discussed in the introduction, the New Zealand approach to E4E includes a list of "enterprising attributes" that illustrate what students ought to be developing through their E4E learning experiences at school (see Table 2, Chapter 1). These are described on the MOE's E4E website as "representing many of the competencies that the business community is now demanding of graduates" (Te Kete Ipurangi, 2009).[66]

During the two years of the evaluation of the Regional E4E Clusters Initiative, all New Zealand schools were expected to familiarise themselves with the newly revised *New Zealand Curriculum* (Ministry of Education, 2007c). One of the relatively new aspects of *The New Zealand Curriculum* is the inclusion of five "key competencies":[67] *thinking*, *managing self*, *relating to others*, *using languages*, *symbols and texts* and *participating and contributing*. These key competencies are intended to be infused throughout all aspects of students' learning:

> People use these competencies to live, learn, work, and contribute as active members of their communities. More complex than skills, the competencies draw also on knowledge, attitudes, and values in ways that lead to action. They are not separate or stand-alone. They are the key to learning in every learning area. (Ministry of Education, 2007c, p. 12)

Over the period of this evaluation, the MOE has developed diagrams and tables to help show the relationships between the enterprising attributes and the key competencies (Figure 22), and to further unpack what each of the enterprising attributes might mean for students in practice (Table 33).

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[66] See http://education-for-enterprise.tki.org.nz/About-E4E/The-NZ-Curriculum-and-E4E/Enterprising-attributes#resources

[67] The key competencies have their origins in the OECD's DeSeCo project, a multinational consultation exercise which investigated what kind of competencies were considered necessary for every person to know and be able to do if they were to lead a successful life in a well-functioning society (OECD, 2005; Rychen & Salganik, 2003).

Figure 22 ***The New Zealand Curriculum's* key competencies, and enterprising attributes (reproduced from Te Kete Ipurangi, 2009)**

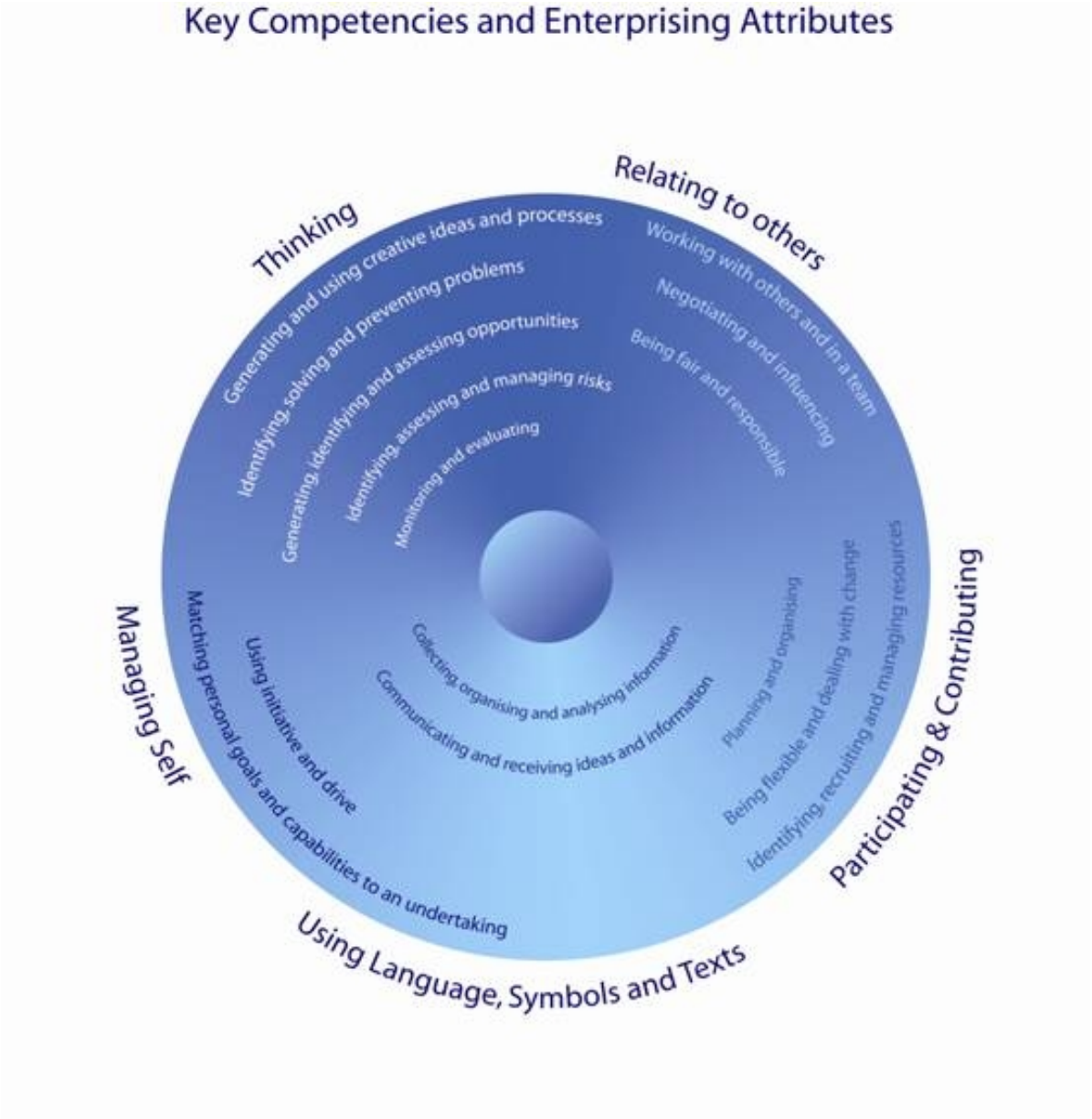


Table 33 **Enterprising attributes in relation to *The New Zealand Curriculum*'s key competencies and what they mean for students (reproduced from Te Kete Ipurangi, 2009)**

Enterprising attributes	What they mean for students
Thinking	
1. Generating, identifying and assessing opportunities	Thinking up new things to do and deciding if they are good ideas
2. Identifying, assessing and managing risks	Thinking of the things that could go wrong with an opportunity and making plans and decisions to limit that risk
3. Generating and using creative ideas and processes	Thinking up new ideas and ways to do things that work well
4. Identifying, solving and preventing problems	Looking ahead for things that can go wrong, thinking of ways to solve problems and planning ahead to avoid them
5. Monitoring and evaluating	Checking all the time and making changes if they are needed
Managing self	
6. Using initiative and drive	Seeing what needs to be done and doing it, persevering when things get tough and showing determination to keep going
7. Matching personal goals and capabilities to an undertaking	Using your own skills and abilities to get things done and achieving your goals
Relating to others	
8. Working with others and in a team.	Listening to others, encouraging people to take part and sharing the responsibilities
9. Negotiating and influencing.	Being persuasive, resolving issues, backing up ideas and reaching agreement with others
10. Being fair and responsible	Taking ownership of your own actions while considering what is right for others
Participating and contributing	
11. Planning and organising	Making a decision, making a plan and getting ready
12. Identifying, recruiting and managing resources	Sorting out what resources are needed, getting them and using them in the best way possible
13. Being flexible and dealing with change	Dealing with new situations, accepting new ideas, getting over change and moving on
Using language, symbols and texts	
14. Collecting, organising and analysing information	Getting information and sorting it to make sense of it
15. Communicating and receiving ideas and information	Sharing and taking in ideas from a range of sources

How might students' progress in developing enterprising attributes (or key competencies) be measured? Traditionally, schooling has measured students' "progress in learning" using various forms of assessment. Hipkins (2007) discusses three broad purposes for assessing learning. First, there is assessment for accountability and reporting. This purpose has traditionally been met by using benchmarked tools, tests and examinations which enable students' progress or achievement to be compared to the progress or achievement of their peers. Second, there is assessment to improve teaching and learning. Achievement is often measured against specified standards or outcomes—with a focus on identifying what students know and can do *now*, and what their next learning steps may be. In both instances, the main person collecting evidence and making judgements is the teacher. However, Hipkins' (2007) third purpose for assessing learning is fostering lifelong learning. This purpose extends assessment for learning by adding a focus on dispositions and actions. It more actively involves the students in all aspects of the decision making, from what kinds of evidence could demonstrate their learning, to evaluating what that evidence tells us about their learning, and which areas they need to work on to continue to build on their learning.

This evaluation takes a similar approach, emphasising students' own views and considering their ability to discuss their own learning as a major signal about the extent to which students were having opportunities to develop key competencies and enterprising attributes. Data on this are described below.

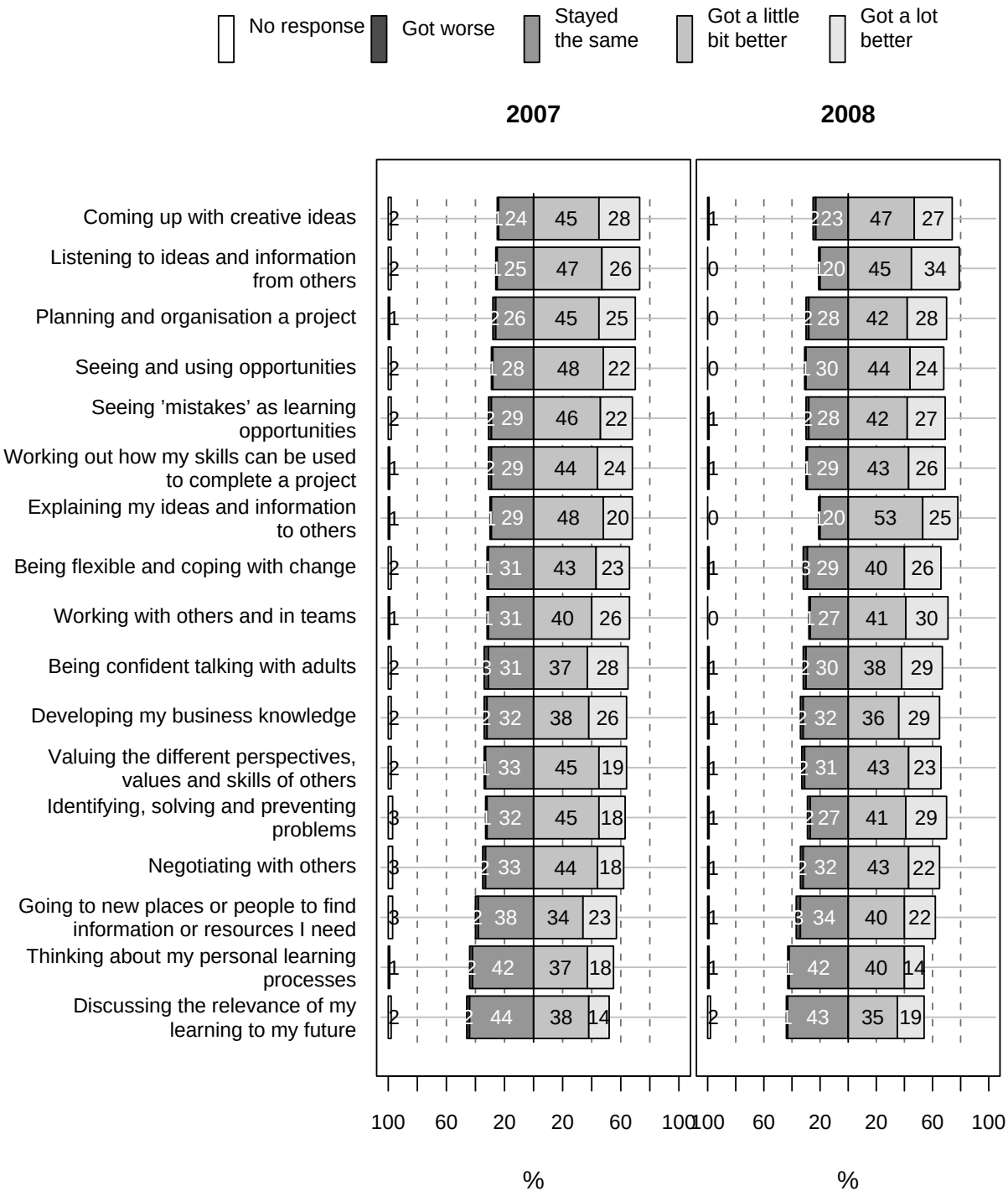
Developing enterprising attributes

In the 2007 and 2008 end-of-year student surveys we presented students with the list of enterprising attributes[68] and asked them to indicate how much they felt they had developed or improved in these areas as a result of their E4E experiences. The patterns from the data are very similar in both years. Overall, more than half the students (and in some cases, closer to three-quarters) felt they had improved in each of the enterprising attributes. In 2008, the percentages of students saying they had improved tended to be marginally higher than in 2007, with increases of 5 percent or more between 2007 and 2008 for the following items:

- Explaining my ideas and information to others
- Identifying, solving and preventing problems
- Listening to ideas and information from others
- Working with others and in teams
- Going to new places or people to find information or resources I need.

[68] The list used in the NZCER surveys was based on an earlier version of the enterprising attributes list, and varies slightly from the list shown in Figure 22 and Table 33.

Figure 23 **Impact on development of enterprising attributes (student surveys, 2007 *n* = 506, 2008 *n* = 409)**



When asked which of the above attributes they thought they *most* improved in, students' answers varied, suggesting that different students took different things out of the learning experience. The five most frequently cited "most improved" attributes were identical in both years. These were: working with others and in teams (15 percent in 2007, 12 percent in 2008), followed by: being

confident talking to adults (7 percent in 2007, 9 percent in 2008); developing my business knowledge (9 percent in both years); coming up with creative ideas (7 percent in 2007, 8 percent in 2008); and planning and organising a project (5 percent in 2007, 8 percent in 2008). In 2008, at least 5 percent of students chose the following as their "most improved" attribute: listening to others' ideas; seeing mistakes as learning opportunities; explaining ideas and information to others; working out how to use my skills to complete a project; and being flexible and coping with change. The survey invited students to explain what had helped them to improve on whichever attribute they had nominated as their "most improved". The most common types of responses are discussed below.

Working together

The most common type of comments (more than half of all comments in both 2007 and 2008) discussed the value of teamwork, exchanging ideas with other people, seeking to understand or relate to the people they were working with to enable the team to work successfully and/or managing conflicting views and opinions within the team. For example:

> [Before] when people have ideas I wouldn't listen to them but now we listen to all the ideas and put them together as one BIG idea. (Student, 2007)
>
> When all four of us sat down one period and described how we were performing. It helped us to value each other and work together. (Student, 2007)
>
> Normally I am the leader who knows everything. I'm not much of a gardener, so listening and watching some gardening pros taught me to value others' skills and abilities, and take up a following role. I learnt that following is just as good as leading. (Student, 2008)
>
> I knew that enterprise would be mostly working in teams and before I came to Enterprise I hardly ever worked in teams so I knew I had to try. (Student, 2008)
>
> We were able to resolve our conflicts in our team. (Student, 2008)

Coping with the unexpected and adapting to change

Another frequent type of comment (around a quarter of the comments each year) described specific instances in which students had to adapt to cope with the unexpected or solve problems along the way, including in response to feedback from their client. For example:

> At the start of the filming! Couldn't stop making mistakes so I got really angry at myself, but then my Dad said that mistakes are learning opportunities, i.e., to get better so now that's my motto. (Student, 2007)
>
> Every product we made was better than the last. We slowly eliminated mistakes. (Student, 2007)
>
> We had to change our whole project a week before it was due to make it better. We had to be positive about change to make it work. (Student, 2008)

> When we first developed our game it would not function properly and it was far too complicated for disabled students. So we had to make it functional and at the same time, not too hard. (Student, 2008)

Becoming confident in presenting ideas

Around 14 percent of students remarked on the confidence they gained from presenting their ideas to groups of peers or to adults, and receiving feedback from adults other than their teacher:

> Our enterprise group had an interview with the Vodafone manager in one of their stores. I grew confidence in talking as I felt I was seeing things the same way he did and I was also a little inspired. (Student, 2007)

> Each time I met with my client I was always given good feedback. This made me believe in my work and I knew I could do it. It gave me the motivation to do well planning and organising my project. (Student, 2007)

> Speaking about the business in front of the class, teacher and people from the community. The first time I was quite nervous and apprehensive but by the end I was quite comfortable doing it. (Student, 2008)

> Presenting the project. The adults' feedback seemed fair and square and even though we had lacked in some areas, they didn't bite our heads off but they were able to give it in a way we could understand. (Student, 2008)

Thinking creatively and self-management

Some students commented on having the opportunity to be creative and use their own ideas in their projects:

> At the development stage working on different ideas and made me realise that I could improve so many ideas to make it the best design work possible. And able to complete it to a high standard. (Student, 2008)

> This improved me by thinking of reality and I had to think of something that someone will use … so my creativity improved a lot. (Student, 2008)

Others suggested that their improved skills had resulted from having to manage their own time and make their own plans, leading to a significant level of self-motivation:

> We had to plan a lot for the E-waste day. It involved advertising it at assembly and transporting the E-waste to the proposed site. By planning well in advance we learnt that we could manage all the things we needed to do. (Student, 2008)

Stories of individual students "shining"

Our case study interviews with teachers and students provided numerous examples of individual students or groups of students who had experienced some sort of transformational change through E4E. Some teachers discussed students who had previously been known as class "troublemakers" becoming engaged through the E4E learning process, while others suggested learning experiences

and community relationships had brought out students' untapped leadership potential, or at least had led teachers to recognise leadership potential in students that they had not witnessed before.

In this section we have aligned the enterprising attributes with the key competencies and have provided a range of survey and interview data to suggest that at least some students have been developing enterprising competencies through E4E. Our survey and interview data suggest that E4E has provided some potential to provide rich contexts for learning, which involve students as active decision makers in authentic contexts, and the comments they and their teachers have made suggest that the learning has strengthened some students' self-reflexivity and dispositions similar to those expressed in key competency and lifelong learning literature. On the other hand, we suggest that competencies could be strengthened by more metacognitive conversations with students about how they are learning, why they are learning and what their learning is contributing to beyond the specific tasks and school subject areas involved (see Chapter 5).

Summary of key messages

- Stakeholders and participants in the Regional E4E Clusters Initiative saw E4E as having the potential to support several different outcomes for learning. These fell into two categories: outcomes that are high priorities in education generally (such as increasing student engagement, achievement, accumulation of qualifications and aspirations); and objectives for achieving outcomes that are seen as necessary for the development of lifelong learners and enterprising people in the 21st century. While these two kinds of outcomes are not mutually exclusive, they are underpinned by quite different ideas of what counts as "success" in learning.
- While the evaluation could not collect direct data on student achievement or qualification outcomes (or postschool destinations), teachers and principals tended to think E4E in their school had had a positive impact on "big-picture" goals such as: increasing students' engagement and motivation in school; raising their confidence and aspirations; teaching them the value of work and contributing to society; increasing their awareness of how things happen in their local communities; and raising their enterprising attributes and attitudes. Just under 80 percent felt there had been some impact on increasing student achievement.
- In terms of achieving the second set of educational goals—developing the attributes of lifelong learners and enterprising people—students tended to think their enterprising attributes had improved as a result of their E4E experiences. Different students took different things out of their learning experiences, thus, for some, learning to work collaboratively with others was the most significant thing they had learnt, while for others it was learning how to confidently share ideas with a wide range of people, or learning how to cope with the unexpected and adapt to change. Teachers also provided anecdotes about how certain E4E opportunities had enabled particular students to "shine", displaying or developing particular talents or interests that had not been witnessed previously.

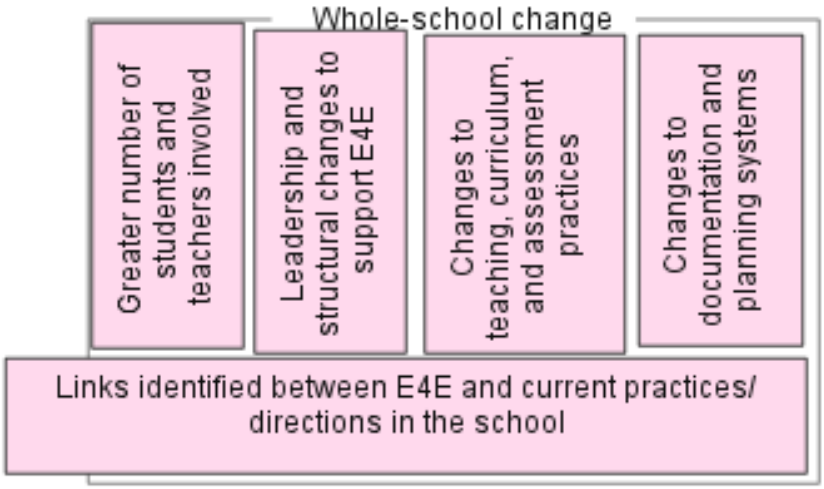
7. Whole-school change towards E4E integration and an enterprising culture

In the preceding chapters (4–6), the evaluation adopted a close focus; zooming in on data on the experiences and impacts of E4E relationships and "enterprising learning opportunities" for teachers, students and partners directly involved. However, a key aspect of E4E is its whole-school change aim, to develop enterprising teachers and enterprising schools, as well as enterprising students.

This chapter evaluates the extent to which there was whole-school change (towards E4E integration and an enterprising culture) in two ways. First, we look at the extent to which E4E appeared to be growing and spreading within the schools in the regional clusters. Did principals and lead teachers feel their schools had progressed in their development of E4E? Was it developing across more curriculum areas? Were more students and teachers becoming involved in E4E learning experiences? In evaluations of innovative curriculum and pedagogical approaches in schools, it is very common to find that such approaches are "islands" of practice. In other words, while the innovative approach may be valuable or rewarding for the teacher and students concerned, often it does not affect the practices (or views) of other staff, and will cease to exist if the key staff behind the innovation leave the school (e.g., see Bolstad, Cowie, & Eames, 2003; Boyd et al., 2005). It is worth noting here that the proportion of students and teachers who returned NZCER surveys on E4E is relatively small in relation to the total number of teachers and students in these schools. For example, the 406 student surveys received from 18 schools at the end of 2008 represent about 3 percent of the students at these schools, and the 63 teacher and lead teacher surveys represent about 10 to 15 percent of the teaching staff. With respect to E4E, it is pertinent to ask: Are enterprising learning opportunities described in Chapters 4–6 simply anomalies in regular teaching and learning, or are they becoming a mainstream feature of curriculum and teaching in some schools?

The second way of evaluating whole-school change looks at the extent to which E4E appears to be supporting (or is supported by) broader shifts in conventional schooling structures, systems, and practices. In our first report we suggested that for E4E to gain a foothold, people in schools need to be able to see links between E4E and either the current practices and directions already within a school, the shifting practices and directions associated with *The New Zealand Curriculum* and/or the goals of redeveloping schools for 21st century learning (Roberts et al., 2008). The kinds of broader shifts that may accompany development of E4E in schools could include rethinking or challenging conventional beliefs and practices about the roles of teachers and students, the nature of curriculum, methods and purposes of assessment, the way planning and documentation are approached and so on. In our first report (Roberts et al., 2008), we identified a

range of views on the extent to which E4E represents an opportunity for shifting conventional schooling approaches. At one end of the spectrum, some people saw E4E as a way to "tweak" the current system, focusing on increasing the relevance of school in order to increase student engagement and motivation and to better prepare students for life outside of school. However, others saw E4E as an opportunity for a more transformative shift of the whole structure of schooling and its place in society. Some of the necessary short- to medium-term shifts mentioned by participants in the Regional E4E Clusters Initiative are presented in the "pink zone" of the evaluation model.[69] Other longer term, "big-picture" shifts will be discussed in Chapter 8.



Specific objectives identified during the evaluation as significant in relation to the whole-school change aim include:

- greater numbers of students and teachers involved
- links identified between E4E and current practices/directions in the school
- leadership and structural changes to support E4E
- changes to teaching, curriculum and assessment practices
- documentation and planning systems change.

This chapter begins with the first three objectives listed above, looking at the degree of spread of E4E across whole schools as measured by student and teacher involvement, staff support and enthusiasm and leadership and structural changes in place to support and sustain E4E within the school. The second half of the chapter deals with the fourth and fifth objectives, evaluating the extent to which E4E is either supporting, or is supported by, deeper shifts in curriculum and teaching practice and views about the nature and purpose of schooling.

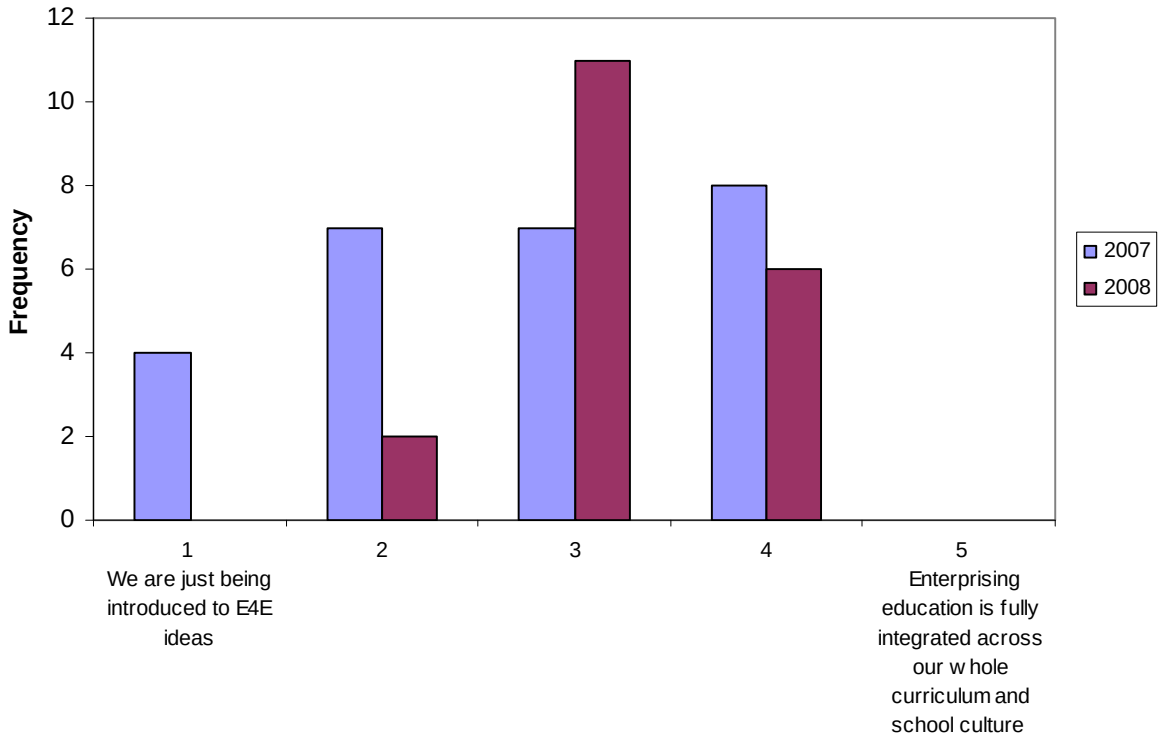
[69] Many of these were also signalled in the "critical measures of change" in the draft national E4E strategy (Ministry of Education, 2007a).

Have the schools progressed? Principals' views

As a simple gauge of each school's progress in developing E4E, in mid-2007 and again in late 2008 we asked principals to rate their schools' approach to or integration of E4E on a scale of 1 to 5, where 1 represented just being introduced to E4E ideas, and 5 represented E4E being fully integrated across the school. In neither year did any principal rate their school as a 5. Overall, however, principals' ratings do show a general increase from a mean value of 2.7 in 2007, to a mean value of 3.05 in 2008 (Figure 24). However, some principals who returned surveys in 2007 did not return surveys in 2008 (and vice versa), so the difference may partly reflect the views of different respondents during the two years. Of the 14 principals who provided a rating for both years, nine rated their schools higher on the scale in 2008, two rated their school the same in both years (in both cases, at a 3) and three rated their schools lower in 2008 than they had in 2007 (in two cases, from a 4 to a 3, and in one case, from a 4 to a 2).

Our case study visits suggested that schools were having different experiences with whole-school E4E development between 2007 and 2008. In some schools we visited in both years, we saw a visible growth of enthusiasm about E4E, and an increase in the number of staff engaged in taking on enterprising approaches in their teaching. In other schools, E4E seemed to be in about the same place as it had been a year earlier. Finally, in some schools we saw some signs of slight E4E "burnout" amongst some staff—though staff tended to say this was because they had been so enthusiastic and made so much progress with E4E in 2007 that it was unsustainable to continuously maintain their energies at this level for a second year in a row.

Figure 24 **Principals' ratings of their schools' E4E integration/approaches (2007 *n* = 26, 2008 *n* = 20)**



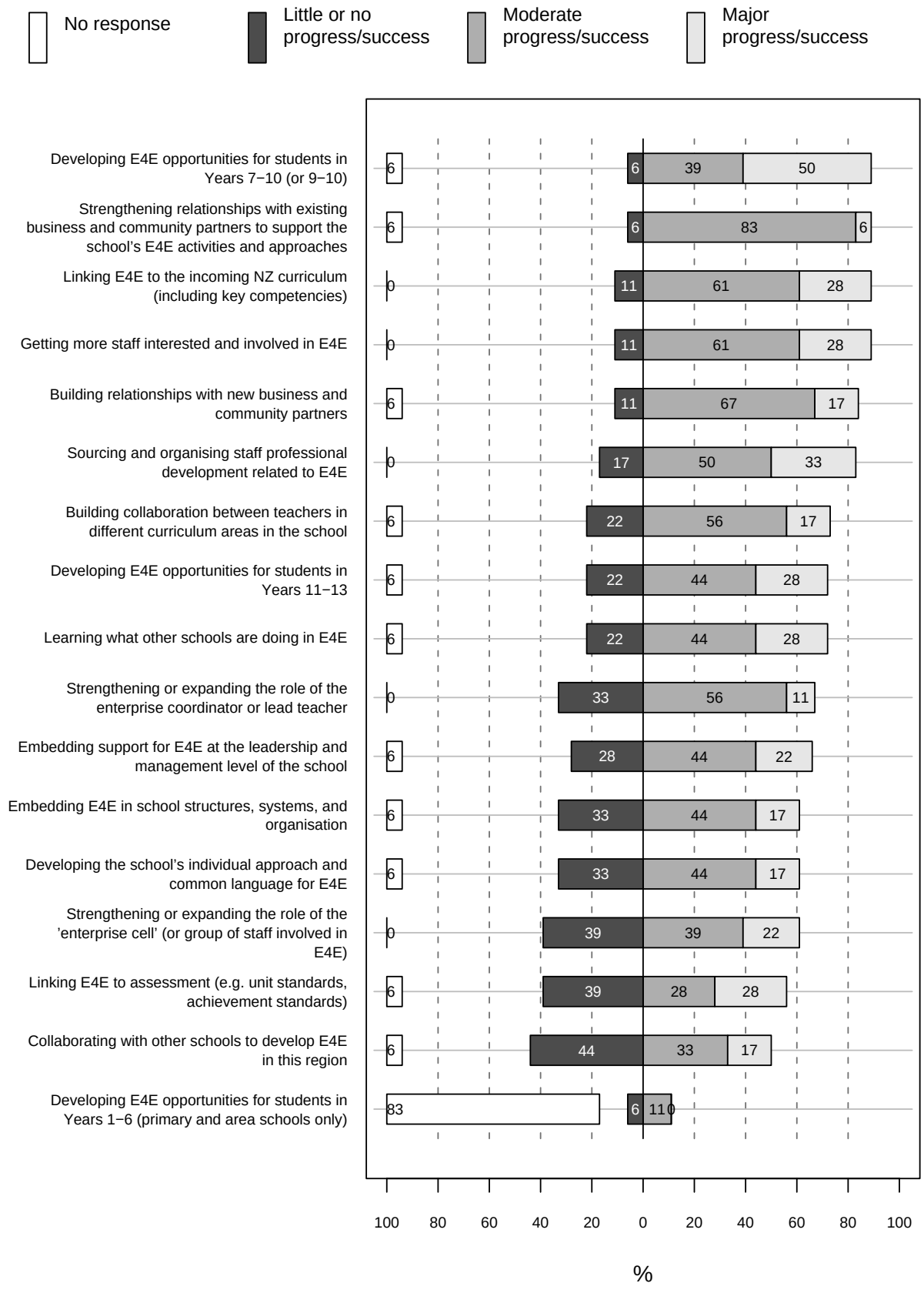
Greater number of students and teachers involved

How widespread is E4E within the schools?

In 2008 we asked lead teachers to rate the degree of progress or success they felt they had made in their school in key priority areas over the previous two years. As Figure 25 shows, lead teachers were most likely to feel their school had made major progress in developing E4E opportunities for students in Years 7–10 (or 9–10). While 89 percent felt progress/success had been made at this level (with 50 percent describing this as "major" progress/success), somewhat fewer (72 percent) indicated progress for developing E4E in Years 11–13. In terms of engaging staff, many or most lead teachers felt they had made some progress in getting more staff interested and involved in E4E, and building collaborations between teachers; however, in both cases these were less likely to be described as areas of "major" progress or success. Moderate or major progress was felt to have been made in most other areas shown in Figure 25. However, areas where a third or more lead teachers identified little or no progress included:

- collaborating with other schools to develop E4E in the region
- strengthening or expanding the role of the enterprise cell
- linking E4E to assessment
- strengthening or expanding the role of the E4E lead teacher
- embedding E4E in school structures and systems
- developing the school's common language and approach to E4E.

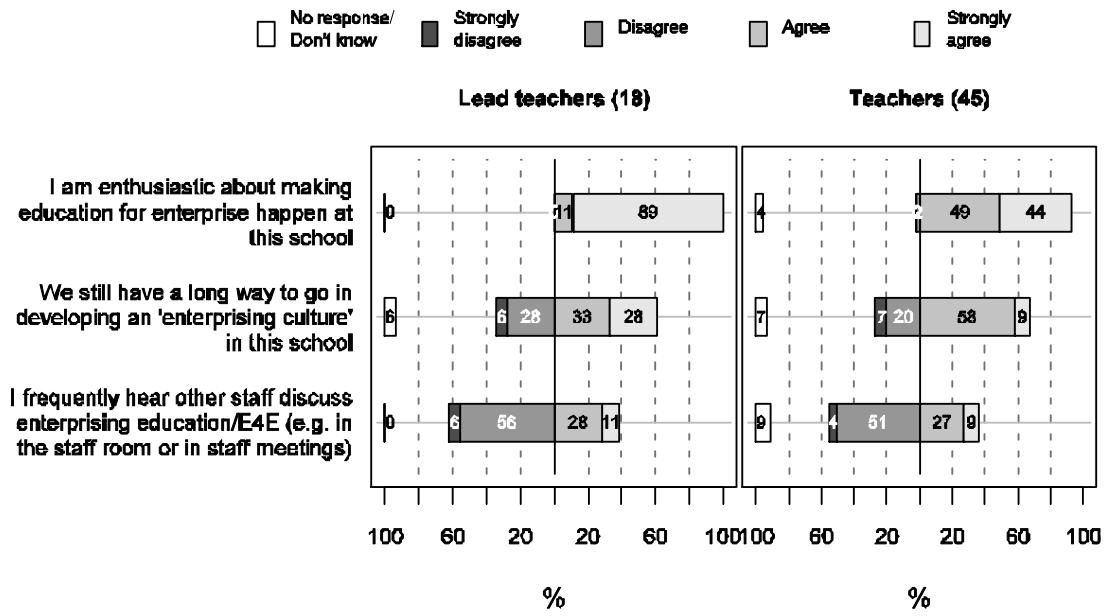
Figure 25 **Degree of school-wide progress with E4E during 2007/08 (lead teachers' views, *n* = 18)**



Staff attitudes towards E4E

One indicator of how integrated or widespread enterprising approaches to learning are in a school is the degree to which staff across the school believe in, and support the intentions of, E4E. Figure 26 shows lead teachers' and teachers' attitudes towards E4E in their schools by the end of 2008. Almost all agreed or strongly agreed they were enthusiastic about making E4E happen in their school. However, it should be remembered that the teachers who were surveyed had all been involved in some form of "enterprising" teaching, so it is likely that their level of support for E4E was greater than that of other staff in the school. Consistent with this scenario, over half the lead teachers and other teachers still felt their schools had some way to go in developing an enterprising culture, and more than half also *disagreed* that they frequently heard other staff discussing E4E. However, this may be partly due to a pattern that was identified in our 2007 and 2008 school visits—namely, that some schools have chosen not to adopt the particular language of E4E, choosing instead to focus on ideas like "authentic learning", or other language or concepts that have been developed and used within the school with respect to its particular educational goals.

Figure 26 **Staff views about E4E across the school (2008)**



Our case study visits in 2008 highlighted some schools where staff interest and enthusiasm for E4E had visibly grown since 2007. For example, Table 34 presents the voices of a lead teacher and a Year 8 teacher from a school that had expanded its E4E cell between our two visits to also include a number of teachers who had changed from reluctant followers to committed leaders.

Table 34 **Illustration of E4E growth within a school**

Lead teacher For us it's snowballed, up to 13 teachers [involved in professional development] and we have people coming in for little projects as well … We block people together [for professional development] as there's not enough time for one-on-one now. I just see the buzz from staff—they start off hesitant, but their confidence in talking about E4E grows … I have had staff come to me and say the kids are buzzing. Staff who've come to me are more enthusiastic about it … Some slow starters last year are in the foreground this year. Staff have talked informally, at morning teas, staff have bought into it. We have lot of new staff this year, keen to try everything! [We are setting up] mentors, looking at those who've done it for two years to work alongside those who are new to it. My role … hasn't been formally looked at, I will be keeping going this year, and it may have to be reviewed. The school may need to look at maintaining it if it's pivotal.
Year 8 teacher [We took an E4E approach with a] Year 8 class picture book—in the past it was just a unit we'd do in school. With E4E we have a target group for the book—we were partnered up with primary Year 2/3 class … I was a reluctant person [at first], I was probably the one who came back after the first visit with "whoah". It was amazing … probably at the beginning it just seemed like "another thing" to try to fit in. Also my ICT skills aren't brilliant [and] my Year 8 students are not top ability … We went down to visit. I told them to take a notebook and pencil, they were going to interview their client. A lot of them had come from that primary school: they got matched up, our students interviewed the [Year 2/3 students] … [My teaching was] more hands-off, I let them write it. It got buy-in from some of my more reluctant boy readers. Some have realised some of the kids at primary school read better than them. My kids are re-drafting a lot better. This [second] year I've allowed the class to get graphics from wherever (using ICT). I've actually opened it up a little bit.

However, not all schools were experiencing this kind of growth in enthusiasm. For example, in the 2008 survey a teacher at another school commented:

> I feel I am doing this in isolation in my subject area. There has been discussion that E4E activities for the school will take place but at this stage, this is yet to happen. (Teacher, 2008)

Structural and leadership support for E4E

While staff support and enthusiasm appear to be critical in supporting the growth and development of E4E, the national E4E strategy also highlights the need for structural and leadership support within schools (Ministry of Education, 2007a). In late 2008 we asked principals to indicate specific measures that were in place to support E4E in their school in 2007–08, as well as any measures planned for 2009. These are shown in Table 35. Having an E4E lead teacher and maintaining relationships with existing community/business partners were the most common support priorities in 2007–08. Several areas appear to be expected areas of growth for some principals in 2009. For example, compared with 2007/08, more principals anticipated that in 2009 their school would be:

- seeking new business/community partners
- expanding the number of teachers involved in E4E

- articulating a shared vision for E4E
- allocating budget or resource to support E4E
- making changes to school-wide curriculum
- incorporating E4E into teacher appraisal or recruiting processes
- setting specific objectives or targets related to E4E.

These findings suggest that principals believed further support would be needed in order to maintain and build upon whatever progress had been achieved during 2007–08. However, there were a few areas where anticipated supporting measures were less for 2009 than they were for 2007/08, most notably in the provision of management units for the E4E lead teacher/co-ordinator. Three fewer principals indicated their school would have an E4E lead teacher or co-ordinator in 2009, compared with 2007/08.

Twelve principals commented on specific objectives/targets they had set, or planned to set for E4E in their schools. Several principals indicated specific structural or curriculum plans in place for 2008 or 2009, such as:

> In 2008 [our target was] to have a Year 10 whole year group involved in a cross-curricular E4E activity. Currently in final stages of planning and will occur in four weeks' time. In 2008 all staff were required to set an E4E goal as part of their appraisal. Both the above will continue into 2009.
>
> For every curriculum area to do something for E4E and to acknowledge the E4E in extra-curricular activities. A main goal for several departments [in 2008] was to develop more and strengthen existing business contacts.
>
> Each curriculum area/dept will have at least one E4E initiative underway in 2009.

Other principals expressed more generalised progress goals such as:

> To widen teachers' knowledge and practiced applications of E4E programmes for students.
>
> Extend the opportunities for authentic learning through E4E to all departments.

Table 35 **Supporting measures for E4E reported by principals in 2008 (*n* = 20)**

Supporting measures	In place during 2007–08	Planned for 2009
Having a co-ordinator/head teacher of E4E (formally or informally)	18	15
Strengthening/deepening relationships with *existing* business/community partners	18	17
Establishing or strengthening a key group of enterprising teachers	14	15
Key staff within the school leading professional learning for their colleagues in relation to E4E (e.g., mentoring/supporting other teachers, running staff PD sessions)	15	14
Building relationships with *new* E4E business/community partners	14	19
Providing a management unit for the enterprise co-ordinator/E4E lead teacher	14	8
Gathering/seeking feedback from students to help evaluate approaches to E4E in this school	14	13
Expanding the number of teachers involved in developing enterprising approaches beyond the initial key group of enthusiasts	12	17
Articulating a shared vision for where the school wants to head with enterprising learning/E4E	13	17
Allocating resources or budget from operational funding to support E4E	13	14
Providing noncontact time for teachers' professional learning in E4E	11	11
Incorporating E4E or enterprising ethos into high-level documents (e.g., strategic plan)	10	15
Making changes to school-wide curriculum planning to support enterprising learning	9	15
Incorporating E4E or enterprising ethos into teacher appraisal for recruiting processes	5	12
Setting specific objectives/targets related to E4E	6	10
Making changes to the school timetable to support enterprising learning	5	5

Identifying links between E4E and current practices/directions in the school

Relationships to *The New Zealand Curriculum* and other programmes and initiatives

We asked principals to indicate which of the documents or initiatives listed in Table 36 have been discussed or explored within their school, and which (if any) they believed were directly relevant

to their school's E4E development. All principals said their school had done a little or a lot of discussion and exploration of *The New Zealand Curriculum*, and 14 of the 20 principals identified *The New Zealand Curriculum* as being directly relevant to their school's E4E development. Careers programmes were the next most commonly identified as being relevant to E4E. Other programmes and initiatives like Education for Sustainability, and Literacy and Numeracy programmes had been explored and discussed in depth in most of the schools, but were seen by fewer principals as directly relevant to E4E. Some principals reported that their schools had undertaken a little or a lot of discussion and exploration with respect to *Ka Hikitia* (Ministry of Education, 2007b) (10 out of 19) and Te Kotahitanga (five out of 19); however, only three principals saw these as directly relevant to E4E in their schools. A selection of principals' written comments about E4E in relation to the documents and initiatives listed in Table 36 is given below.

Table 36 **Relevance of various documents and initiatives to school's E4E according to Principals (2008,*n* = 20)**

Documents	Number of principals
The New Zealand Curriculum (2007)	14
Careers programmes (e.g. STAR, Gateway, CPaBL)	10
Environmental education/Education for sustainability	7
Schools Plus	5
Literacy or numeracy programmes or professional development	4
Te Kotahitanga	3
Ka Hikitia	3

The New Zealand Curriculum

> We have used E4E as a way of developing professional learning for our staff as to the role of effective pedagogy in *The New Zealand Curriculum*. E4E approaches are a way of showing what shifts need to happen in teacher practice. This has been the focus for us in E4E, we have based a significant part of in school professional learning on E4E. (Principal)
>
> New curriculum has a focus on enterprise and entrepreneurity [*sic*]—both fit with E4E. (Principal)
>
> *The New Zealand Curriculum*—key competencies, pedagogy, principles—all link to E4E as a vehicle for delivery. E4E becomes an integral part of unit planning across the curriculum. (Principal)
>
> *The New Zealand Curriculum* and Datasmart projects are directly connected to our E4E focus. The Datasmart project is informing us about how our students learn best, their interests, what teaching and learning styles they prefer. The project for our school has a focus on improving student engagement to raise student achievement. The intent of *NZC* has a focus on authentic learning and developing enterprising attributes in our students. We are using E4E as a strategy that uses the information gathered in the Datasmart project to examine and change the way *NZC* is delivered here. (Principal)

Education for Sustainability

> Relevant because the support we get allows us to provide the students with hands-on opportunities to make things happen, e.g., recycling, worm farm. (Principal)
>
> With our acceptance onto the Enviroschool's contract we will see that sustainability and the environment directly impacts on our school and community. Through this, students are looking at ways to enhance our school through projects such as E4E offers. To provide depth of learning and understanding, it must link the curriculum and our strategic goals. We will appreciate guidance to develop the links and planning. (Principal)

Careers programmes

> A lot more departments are wanting to use STAR as a result of E4E activities raising their awareness of the possibilities. Gateway is invaluable in placements in work experience for an increasing number of classes (e.g., hospitality and childcare) rather than the individual students it used to cater for. We long ago identified people working in this area. We are establishing a platform through career plans for a whole lot more business partnerships and tertiary links. We have just cemented a good partnership with a local engineering firm as I write.
>
> Careers [education] etc. links with community/school relationships. School plans would develop these links. (Principal)

Te Kotahitanga and *Ka Hikitia*

> Te Kotahitanga provides pedagogical practices that align with E4E. (Principal)
>
> *Ka Hikitia* is providing the framework which we are building everything else on. We like the presence, engagement and retention emphasis and the way it really involves a shift in thinking. We have it all the way through our new draft annual plan. (Principal)

The fact that E4E can be linked to a range of other programmes and areas is consistent with the idea of E4E as an approach that is adaptable and flexible enough to be tailored to the needs and contexts of each school and community, and the data above suggest that each principal saw E4E as linked to a different combination of documents and strategies, depending on what was a current focus or priority within their school. As many of the documents and strategies have only been released in the past one or two years, schools are only just becoming familiar with them and it is not surprising that not all principals saw strong connections between these and their E4E development. However, like E4E, many of the documents and strategies listed in Table 36 above have the potential to support quite significant and long-term changes and developments towards 21st century schooling. In the remainder of this chapter we evaluate evidence of the extent to which E4E in the regional cluster schools appeared to be linked with broader shifts in teaching, curriculum and assessment practices.

Shifting teaching, curriculum and assessment practices

Chapter 5 presented evidence that enterprising approaches had, for some teachers at least, prompted some shifts in teachers' practice, from both students' and teachers' own perspectives. This subsection looks further at evidence from the evaluation about the extent to which changes or developments were occurring in teaching, curriculum and assessment practices to align with "enterprising" approaches. If these shifts were occurring, were they limited to teachers' individual practices, or were they seen as having implications for whole-school-level or system-level shifts?

Table 37 summarises a conversation with a group of secondary teachers from one school where enterprising approaches were developing across a range of curriculum areas. This example illustrates a school in which teachers could articulate how they were developing curriculum, teaching and assessment approaches that fit comfortably with the aim of providing enterprising and/or "more relevant" learning in their school. The school had been involved in E4E for a number of years, and the teachers felt that their school provided a supportive environment for staff to try new ideas and to develop new courses and programmes to engage students' needs and interests.

Table 37 **A discussion with a group of secondary teachers (2008)**

What were these teachers doing that was "enterprising"?
An English teacher had started a new writing course for Year 12 students. This had a focus on taking students out into the local community/environment to provide authentic contexts and material to inspire their writing. This led to a partnership with a local museum in which students' poetry, inspired by a stand of native bush near the museum, was incorporated as a "poetry bush walk" installation accompanying the museum's exhibition on local writers.
A social science teacher said she didn't necessarily "do" or talk about E4E per se, but discussed how the school used its connections with people in the community to support senior geography fieldtrips, and expose students to different career possibilities in tourism classes.
A mathematics teacher was experimenting with inquiry teaching and learning in one of her "top band" Year 9 classes, while another mathematics teacher was doing the same with a "bottom band" Year 10 class. Within this inquiry approach, in the first half of the year the students' mathematics learning was set in the context of designing the ideal nutritional snack for a student in the year 2030. The second half of the year, the learning was set in the context of sustainability, with students identifying an environmental sustainability issue/problem they would like to solve.
A drama teacher mentioned three enterprising examples: 1) The Year 10 class did a "fairy tale" show and took this out to the community, performing for children from local schools, families and the general community. 2) The Year 13 students approached their drama production as a real show: because the show costs several thousand dollars to produce, the students had to help to recoup costs, taking on responsibility for marketing, advertising and taking the show out to the community. 3) The Year 12 students researched and performed roles as patients for an emergency services day, helping medical staff to test their emergency treatment procedures. The emergency services personnel were very pleased with the students' commitment to their roles, and thanked the school with $500.
A biology teacher wanted to provide a biology subject for students who were turned off by a very "academic" style, and set up an applied biology programme which used the local harbour as a major learning context. This involved support from and interactions with a variety of other people and groups, including those associated with local marine reserves, the Ministry of Agriculture and Fisheries and the Regional Council.
What were the benefits of these approaches?

Teachers felt that the new course options at Year 12—such as the applied biology, tourism and writing course—were proving very popular and creating demand from students for these courses to continue to Year 13. Students saw these programmes as relevant, as they were built around contexts that were interesting and connected to students' lives and/or the local community and environment. Similarly, the maths teacher felt that the inquiry approach could help students see mathematics in a more relevant and meaningful way.

> Most kids don't find maths a meaningful subject; they find textbooks really boring, it doesn't give a lot of scope for differentiation … I suppose a lot of kids have lost passion for my subject. But I know mathematics is a lot more than 'Oh [groan] … which exercise are we doing today? (Maths teacher)

How were they approaching assessment?

The tourism, writing and applied biology programmes used unit standards and were internally assessed. The teachers in these classes discussed the flexibility the unit standards approach gave them to build the learning programmes around the context and content of these courses:

> We assess what we teach. Instead of, when you're going to an exam, you need to know everything the examiner might assess. Whereas what we can do is to teach what is relevant to them. We used to see [in our other senior biology classes] in Year 12 after the 3rd and 4th week, the kids eyes would just glaze over. Whereas in this new course, their interest was maintained because it was real, on the weekend when they went to the beach they saw they stuff we were talking about. (Biology teacher)

> Unit standards work really well for [the writing class] as well, I find I put a lot of energy in the first and second term into going out and bustling around, getting them out in the community and environment, trying to absorb stuff [they will use later in their writing]. In the third term they need to be on their own projects, they've selected what unit standards they want, so they are much more in control about what they are producing. (English Teacher)

What are the challenges?

Teachers talked about logistical challenges involved in taking students offsite as part of their learning. They also felt that more open-ended learning experiences often required more time to plan. However, one of the biggest challenges for the teachers was learning how to support students' confidence and motivation in a learning environment where the teacher was less directive, and students had more opportunity to shape the pace and direction of their own learning:

> With the shows at Year 13—it's entirely up to them. I am not getting paid as producer director. I have to keep an eye on the set … we have these markers along the way—this is where we're at, this is what we have to do … are we going to do it? [So] the responsibility [for ensuring the drama production goes ahead] is entirely up to them—I'm amazed at how well they handle it. (Drama teacher)

> They [students] do struggle with the independence a bit (maths inquiry)—first unit was quite structured but with sustainability I give them a choice … they said to me 'Haven't you planned it?' They think you are being lazy. (Maths teacher)

> Sometimes I feel I need a bit of tape over my mouth—you see them going off down the wrong path but you know it's them [the students] that has to figure it out and turn around. (English teacher)

Challenges of taking an enterprising approach

As illustrated at the end of the discussion in Table 37 above, teachers experienced a variety of challenges when taking an enterprising approach to their teaching. Other teachers' comments from the 2007 and 2008 surveys give further insight into the kinds of tensions and challenges some experienced during their E4E activities:

> It was a challenge to realise that I need to take a lot of time and let students be really independent. I also had to be prepared for it to be a huge flop!
>
> [Challenges included] dealing with multiple (different) projects all happening at once because the students could choose their project. Assisting students with initial ideas and 'how to start' their project.
>
> This project set me back about two weeks. In the end the students got fed up with collation of data and I stepped in. Only one or two were really interested in helping outside of set hours. We also ran out of time to feed the information back to the other classes. Paperwork was definitely not a plus.
>
> Time pressure—pressure to be in school teaching—so someone else (co-ordinator) gets to do the 'fun' part outside school with students.
>
> Feel a slight loss of control, and is quite hard to manage, as there could be several groups in very different places, town, kitchen, art room, computer room, my room, on phone, etc.
>
> Definitely [a challenge] trying to cater for students who had little motivation or lacked skills to work creatively or independently.

However, some teachers reflected on how an E4E "challenge" they encountered had provided an opportunity for an interesting or emergent solution to a specific dilemma, to the benefit of students:

> Only a small group in both cases—landscaping and hydroponics wanted to do this group enterprise. I just made space in our class time for them to pursue their interests. They still completed other assessed tasks in class time—but were much more motivated so completed these tasks faster and did them well. Students were not on the 'how many credits' mill but just did what they were interested in.
>
> Not a challenge but interesting. Whose intellectual property were the logos [designed by the students]? Because prize money was involved the stakeholder drew up a contract of competition rules. I liked this—a safeguard for them and the class.

Other challenges identified in the 2007–08 surveys are summarised in Table 38. Foremost of these were working within the constraints of the school timetable, matching up students' and community/business partners' time frames (or ensuring students could work within the partners' expected time frames) and supporting students who struggled to work independently.

Table 38 **Challenges of an enterprising teaching approach 2007 and 2008**

Challenges	% teachers/lead teachers	
	2007 (*n* = 71)	2008 (*n* = 61)
Working within the constraints of the school timetable	61	69
Finding times when students and business/community partners were both free to work together	54	44
Catering for students who struggle with the motivation or skills needed to work independently	52	48
Ensuring students completed work within the expected time frames of partners	44	54
Letting students find their own way and make their own mistakes	37	41
Setting up working relationships with business/community partners	31	21
Catering for students who struggle with the skills needed to work successfully as part of a group	30	38
Ensuring students gained credits, achievement standards or unit standards	27	15
Working within the constraints of subject/discipline boundaries	25	21
Ensuring business/community partners understood the work that students of this age are capable of	25	20
Satisfying curriculum needs	24	21
Maintaining/monitoring relationships with business/community partners	17	25

Other than those listed in the table above, we asked teachers to describe any additional challenges they faced. These included:

- physical distance from suitable business or community partners (especially in isolated areas)
- access to resources and technology (such as video cameras, phones, fax machines and the Internet) or appropriate spaces to work in
- juggling many activities all at once, coping with the unexpected and keeping all students engaged
- lack of support/enthusiasm from other staff
- running out of time to complete projects.

One way that a couple of schools we visited had worked some of these issues was through team teaching. Views from two schools are presented in Table 39.

Table 39 **Team teaching experiences (2008)**

School One: Ended team teaching between 2007 and 2008
E4E is harder this year because [the other teacher] and I are not working together [team teaching]. We have slightly different age groups of students, and it's not as fun—[we're not] bouncing ideas off each other. I haven't been doing as much E4E … perhaps it's because last year we were so into it, it would have been hard to keep that up. I find I am not as motivated either … [This year] keeping all these E4E student groups going in one class with them all doing diff things, [I'm just] managing that, so it's difficult to get to the deeper issues … With last year's group, at one stage we have 10 different things on the go and it was mad but it worked.
School Two: Extended team teaching in 2008 and (intended) 2009
We have team teaching—before we didn't … This whole year has been trial. They are interesting students—they are erratic [with] behavioural issues etc. We've tried "good cop, bad cop" [teachers] etc. So [team teaching] gives you the flexibility to think unit by unit, and you can think about their needs and change along the way … also it allows stronger and weaker teachers to work together. It allows us to have one person conferencing one-on-one with the kids and the other person can be scanning and keeping an eye across all.

E4E and assessment

A particular question of interest to the MOE/NZTE is the extent to which E4E is supporting (or is supported by) more flexible approaches to NCEA and other forms of assessment. Like many approaches to curriculum innovation in secondary schools, E4E has the potential to support schools to move away from a paradigm of "assessment driving the learning" or "assessment driving curriculum", towards a paradigm where the focus is on designing deep, relevant and "authentic" learning experiences, with assessment being used flexibly and tailored to the particular learning contexts.

Different teachers had different views about the extent to which NCEA could or could not be aligned with authentic, "real-world" learning experiences that E4E could provide for students, as in the following conversation between a group of staff in 2007:

> NCEA focuses on 'arty' photography, but in the real-world the work is mostly commercial photography.
>
> Graphics and materials work [for E4E projects because] E4E fits easily with NCEA.
>
> History would be a good subject to do E4E with, but you just can't because you have to concentrate on giving them some credits.
>
> The powers that be need to bring out a form of NCEA that this [E4E] would fit in to …
>
> We're going to try and make a school paper and a TV commercial because there are unit standards for them.
>
> You can write your own assessments to get credits for NCEA—don't forget that.

In case study visits we encountered some examples where teachers' involvement in E4E had provoked some deeper thinking about tensions with existing assessment paradigms. One such

example is discussed in Table 40. In this case, the teacher expressed interest in taking these ideas further with colleagues from across the country in her disciplinary area (arts education).

Table 40 **E4E provoking a teacher to reflect on assessment tensions (2008)**

A secondary art teacher had been involved in several E4E projects involving different classes of students working on community and public art projects. These included students interacting with a public/community artist to learn more about the ethos of public art designing and painting a mural for a building in a local park, and designing and painting calico ecobags for a regional conference on ecotourism. Working across these projects had encouraged the teacher to start thinking critically about the way art is conventionally assessed—and provoked some deep thinking about current assessment paradigms, and the potential scope of E4E as a more holistic approach to teaching and curriculum:

> I'm increasingly interested in public and collaborative art and thinking about how that kind of clashes with the NCEA assessment ethos. [NCEA] very much packages students into working individually on individual artworks, within a very narrow stream, whereas this [collaborative and community art] is a whole other aspect of art that can give students the scope to connect and contribute to the community, through their own skills and on their own terms … [I'm wondering how we] get that rewarded, how to acknowledge that particular aspect of art-making … It's given me lots of food for thought … It's dovetailed in a whole lot of ways—it [the E4E activities] wasn't just about making things run more smoothly for the students, it's brought in my professional interests about giving students much more scope to bring in what's important to them.

Where do you think you might go with that tension [between NCEA and E4E approaches], are those sorts of conversations happening within your school?

> I guess the only person I've talked through that with is [the regional E4E PD provider], who I found really great in terms of [helping] me understand that E4E has this much broader context than being just a tight little specific project. Because I'm interested in all those other things that are drawn in [like the value of public art, the ways artists can contribute to the community], and making all those things quite overt to students. It's still kind of bubbling away in the back of my brain because I haven't had sufficient time yet to actually sit down and nut our how I can manipulate existing systems to accommodate that a bit more, or else put our feelers to connect with other art education people to see what opinions and ideas might be out there, because it seems like something reasonably big and interesting.

The "street flags" example discussed in Chapter 4 illustrated another teacher's view about the need to take flexible NCEA assessment approaches in the context of an E4E project (see Table 19). In case study interviews, it was quite common to hear technology teachers say that the ethos of E4E fit very comfortably with the processes outlined in the Technology curriculum. The example in Table 41 below illustrates a third teacher's views about this compatibility. In this particular example, the teacher also had some ideas about how her school and community could benefit through an expansion of E4E in her curriculum area.

Table 41 **A good fit between NCEA and E4E: One teacher's perspective (2008)**

At one school, an in-house professional development series on E4E culminated in each teacher in the school being encouraged to come up with at least one "enterprising" project or unit in their teaching. An ICT teacher taught a Year 12/13 National Certificate in Computing class, and she suggested her students make a promotional video (putting their filming, computing and editing skills into practice). One group of students decided to make a promotional video about their band, which had done well in a recent RockQuest. They undertook a lot of planning, deciding in advance where they would film, what shots they needed and so on. At the time of the interview they had begun their first lot of filming. Another group of students were encouraged to take on a desktop publishing project to design and produce Christmas cards for a community partner. The teacher also had a few other ideas—not yet realised at the time of the interview—about connecting her students up with real clients in the community. For example, a local health organisation had approached the school about getting help to develop their website.

Fit with NCEA

The teacher felt that NCEA fitted easily into an enterprising approach:

> E4E lends itself to a lot of technology achievement standards. That's really important, even though we're giving students really good skills, we don't want them to miss out on credits.
>
> Some people write a unit and it's quite rigid, but with the video project for example, there is a lot more flexibility with the way they're doing the project … giving them different activities where they can all end up achieving the same things [by different routes]. A lot of things I'm doing [with the students] are transferable, can be used in other subjects as well. We could all sit down in senior syndicate and look at the skills needed in different subject areas, and plan together. Because we have that E4E approach I think we could be doing that in the future.

Connecting with the community

The teacher thought that students invested more energy and detail into their work when it involved a real client or purpose, and similarly, that the community benefited from work done by students. Thinking ahead to the future, the teacher speculated that in her very small community, there were many small business "niches" that enterprising students could fill:

> When it gets into full swing, certain areas of the school could raise money through their E4E projects—[it would become] actually known out in the community that there's kids in the schools that are capable of doing this stuff.

For example, in her own curriculum area she could envisage ICT students offering a business service to the community creating personalised "digital stories" using people's photos and video (for example, for a special birthday or anniversary event), or designing and printing business cards for local clients.

However, comments such as the one below suggest that while individual teachers may see the value and potential of E4E, some may feel they are still constrained by a school-wide culture of "inflexible" assessment:

> I use E4E as a way to engage my students as my previous business experience means I know the value it adds. The school culture is entrenched with NCEA-based credit outcomes and this is what students expect. Current school teaching is not preparing students well for real life. (Teacher, 2008)

Since E4E is not limited to Years 11–13, our evaluation gathered evidence about approaches to assessment in E4E across all year levels. As Table 42 shows, the two most common assessment methods teachers used during E4E learning activities were teachers' observation or anecdotal records, or student self-assessment. Some teachers used feedback from community or business

partners, or student peer assessment. These methods were all more common than formalised assessment approaches, such as unit standards or achievement standards. However, the latter would only be relevant for the examples involving students in Years 11–13 whose E4E activities were curriculum-based (rather than extra-curricular).

Table 42 **Forms of assessment used by teachers during the E4E activities**

Assessment methods used	2007 % teachers/lead teachers (*n* = 71)	2008 % teachers/lead teachers (*n* = 61)
Teacher observation/anecdotal records	72	67
Student self or peer assessment	63	64
Feedback from business/community partners	42	57
Teacher-developed rubrics/standards-based assessment	28	25
Achievement standards	23	16
Unit standards	20	16
Other	11	13

We asked teachers and lead teachers to explain what aspects of the learning they were assessing and for what purpose. The selection of comments below illustrate some of the ways teachers were approaching assessment in E4E. Some were using conventional assessments such as knowledge-based testing, or using unit or achievement standards. For example:

> Assessing maths/CV skills using a pre- and post-test system developed by PrEP. Assessing money skills and accounting/recording systems. Used this to show what children know and the gaps needed to be filled in in maths lessons. Also shows the effect PrEP has on children's learning/progression.

> I wasn't going to assess it, but students were proud of their work and asked for a formal assessment (excellence, merit etc.). Focus was on skills—composing an image, painting technique.

Other approaches involved gathering a range of documentary evidence and/or looking at student performances to evaluate development of knowledge, skills and, in some cases, key competencies:

> [I assessed] their presentation to the class and staff. Ability to gather and effectively communicate. Established criteria with class, students assessed it and fed it back to the group presenting so they could improve before the staff presentation.

> Feedback/assessment was given directly by the experts in this particular case and then teacher provided an assessment matrix that students used.

> One aspect of the project was the school planting where senior students buddied up with primary students and planted together—assessment was carried out by observation and based on the key competency of *relating to others*.

> [I was assessing] 1. Understanding of problem solving process, 2. Links to the major concepts change and transformation, order and class, 3. Managing self. [This was] assessed through the compilation of a project booklet. Assessed to show understanding of major integration concepts above and understanding of roles, responsibilities and rights of shareholders.

Some teachers' assessment approaches also involved students' gathering and reflecting on their own learning and performance. For example:

> I wanted students to give a day-to-day account of how they progressed with the project and reflect on what they did. Could they have done more? Were they happy with the work they had done? They had a notebook each for their log.
>
> One aspect of learning that was being assessed and developed in the students was the process of scientific investigation and why particular steps are taken, in particular, control variables and carrying out trials in order to improve a method. Students kept a log of their investigations and presented that together with their final report. Discussion with each group about what they had learned was also carried out by myself.

One teacher commented:

> I really like E4E as a way to investigate the potential of the new curriculum and as a place to 'challenge' assessment paradigms that lack flexibility.

The evaluation data discussed in this subsection suggest that teachers are approaching assessment in E4E-linked activities in a broad variety of ways, often integrating conventional formal assessment approaches where this is appropriate. There is evidence that many teachers are using peer and self-assessment, or feedback from community partners, to support their own assessments of students' learning and achievement. Greater involvement of students in evaluating and assessing their own learning—for example, through compiling portfolios where students can provide evidence of their own learning—is consistent with the goal of developing lifelong learning capabilities. While there is not enough evidence to say whether E4E is supporting widespread changes in the ways teachers approach NCEA assessments, the examples given in Tables 19, 40 and 41 and some of the quotes above show that at least some teachers did see E4E as enabling them to approach NCEA assessments flexibly or even to challenge what are perceived to be "inflexible" assessment paradigms.

Documentation and planning system changes

In 2007 we found some initial examples of school-level plans and resources being changed in order to better support the development of E4E approaches. Case study examples included:

- having an E4E section on unit planning sheets
- developing a booklet to provide examples of the school's E4E activities
- designing a template for departments to develop E4E learning in their schemes of work, which also outlined how E4E related to the draft curriculum

- changing the school timetable to better accommodate E4E
- bringing together different unit and achievement standards to support E4E
- devising alternative assessment strategies (such as self-assessment) to recognise E4E learning.

Other case study schools had not reached this stage:

> Teachers are doing enterprising things but it is not labelled as such in planning. (Principal, 2007)
>
> We need to spend time and effort embedding it into our schemes and unit plans so it's not a one-off wonder. (Lead teacher, 2007)
>
> If I'm voted back onto the board we will bring these [enterprising attributes] ideas into strategic planning. (Student, 2007)

Table 43 shows the inclusion of E4E in various school documentation as reported by lead teachers at the end of 2007 and 2008.

Table 43 **Inclusion of E4E in various school documentation (reported by lead teachers)**

School documentation	2007 % lead teachers (*n* = 20)	2008 % lead teachers (*n* = 17)
Policy documents	55	61
School, departmental or syndicate-level curriculum plans	50	78
Teachers' own curriculum plans[70]	55 (some)	16 (most)
On the school website	45	28
Reports on student learning or achievement to parents	15	28

These kinds of documents reflect a school's vision and direct its planning priorities. They also tend to reflect involvement and buy-in of key leadership teams within a school. Each school we visited had infused E4E through key documents and planning structures in different ways. For example, the curriculum leader at one school we visited had taken interest in E4E developments within the school, and was working closely with the principal to strengthen enterprising approaches across the curriculum and associated planning documents. In Northland, at least, it appears that there may be some funding-related expectations to include E4E or enterprising education in particular documents and signage.

[70] In 2007 this was phrased "included in teachers' own curriculum plans", while in 2008 this was phrased "included in *most* teachers' curriculum plans".

Looking ahead: What could participants imagine happening in the next two years and the next 10 years?

At the end of 2008 we presented principals, lead teachers, teachers and business and community partners with a list of things that could possibly happen with E4E in the future and asked how likely they thought each of these possibilities were for the next two years. As Figure 27 shows, between 70 and 80 percent of school staff thought it was likely that business and community partners would have ongoing roles teaching students in their area(s) of expertise. Partners were somewhat less likely to agree, although for them the statement referred to the possibility that people from *their* organisation would be doing this in the next two years. Between 55 and 75 percent of school staff could see teachers doing some of their curriculum planning with partners from business or community, and about as many thought their school would allocate time and resources to support E4E as a regular part of school budgeting. However, fewer school staff thought business/community partners would have a role in formal assessment of students' learning, nor that these partners would become more familiar with *The New Zealand Curriculum*. Principals and lead teachers were unsure how likely it was that partner organisations in the community/region would allocate time and resources to support E4E in their budgeting and planning, although just over half of other teachers thought there was some chance that this may happen.

This suggests that a closer relationship between schools, businesses and communities is imagined (or at least not discounted) to be a real possibility amongst a wide range of evaluation participants. These potential relationships appear to challenge current schooling structures and may start to shift the status quo of an education system that is reasonably well bracketed off from other sectors with teachers being the sole leaders of student learning.

Figures 28 and 29 show what principals, lead teachers, teachers and business and community partners could imagine happening in the next 10 years. Figure 28 shows that participants held reasonably optimistic views about what was possible in terms of student learning. For example, most school staff, and many business/community partners, thought students would leave school better equipped to contribute to the wellbeing of their communities, better equipped to succeed in business and self-employment and that most students would be involved in E4E while at school. School staff were also likely to think that in the next 10 years students would be able to plan their own learning pathways and learning experiences through school, though business and community partners were less certain to think this was likely.

Figure 29 shows what participants thought was likely in terms of shifts to schooling systems, national-level structures and the role of teachers. Here, we see a somewhat greater degree of uncertainty. Thus, while most thought New Zealand schools would have long-term partnerships with businesses and organisations in the community to support student learning, and most *disagreed* that E4E is just another fad that will disappear into obscurity, between a quarter to a half of respondents were uncertain or chose a neutral stance as to whether New Zealand would have fewer underachieving students, whether there would be support at the national level to

ensure that schools and communities/businesses can work together and whether it will be common for people to move from teaching careers to other careers, and vice versa.

Figure 27 **What participants thought could happen in the next two years (2008 surveys)**

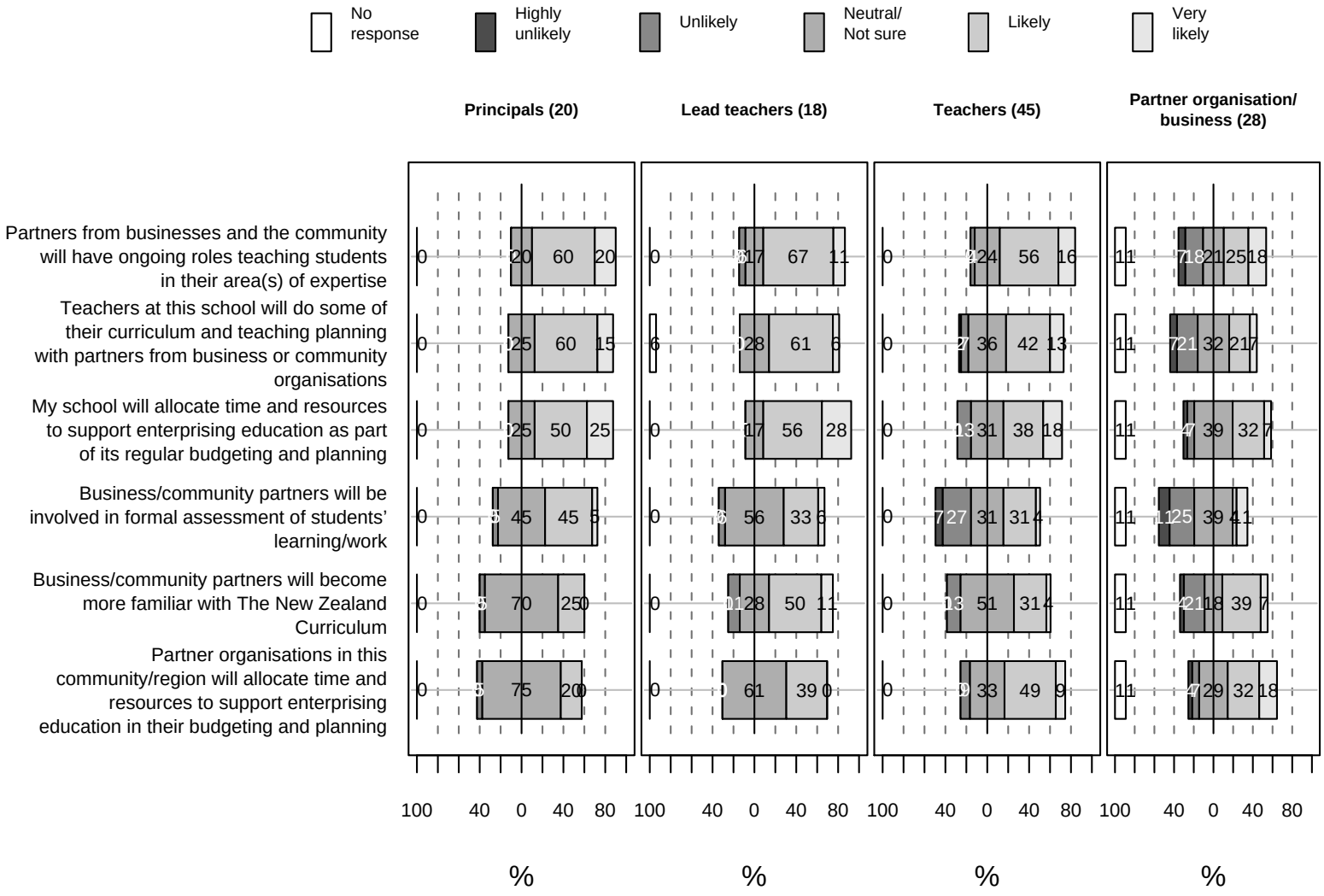


Figure 28 **What participants thought could happen in the next 10 years—students' learning (2008 surveys)**

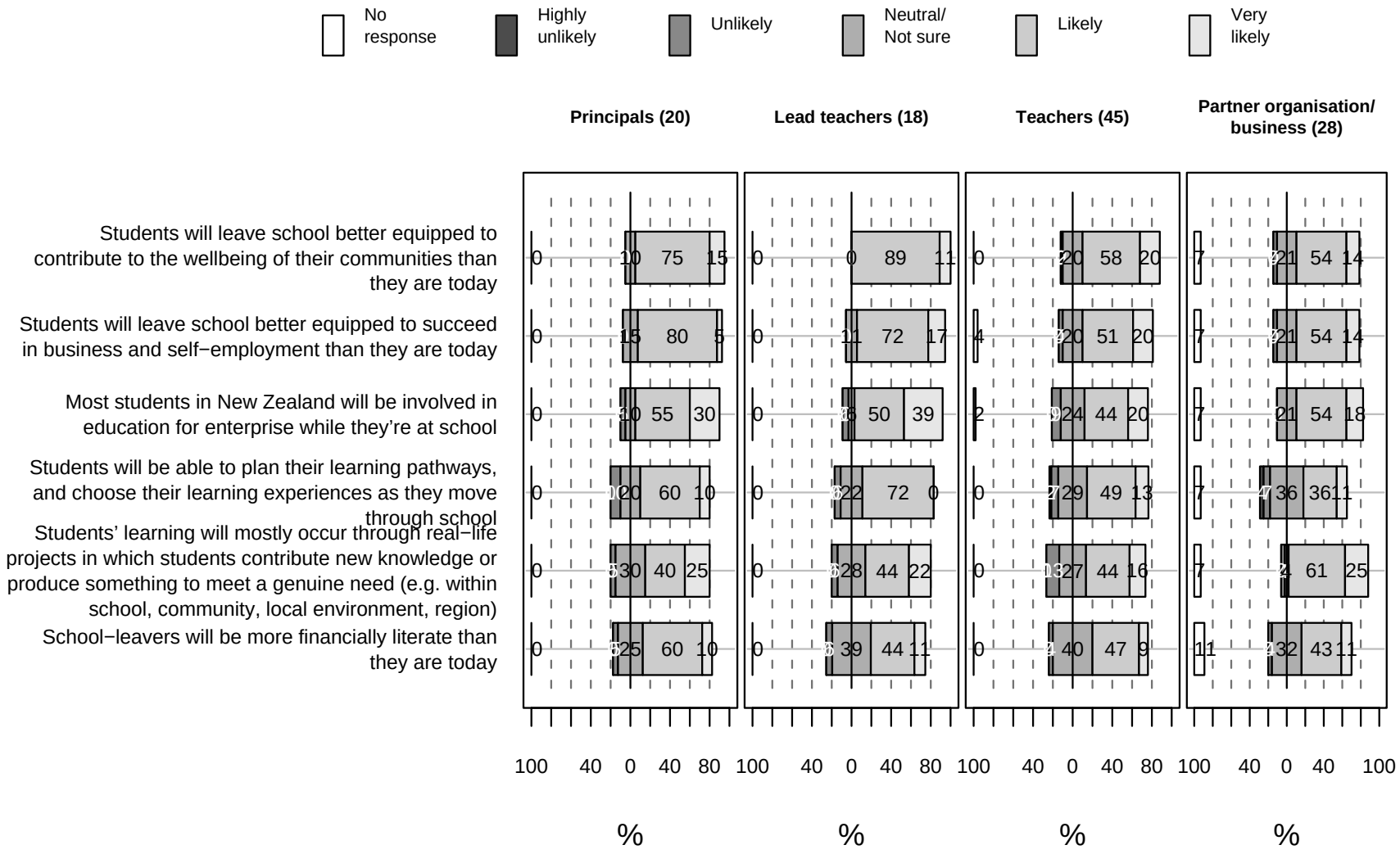
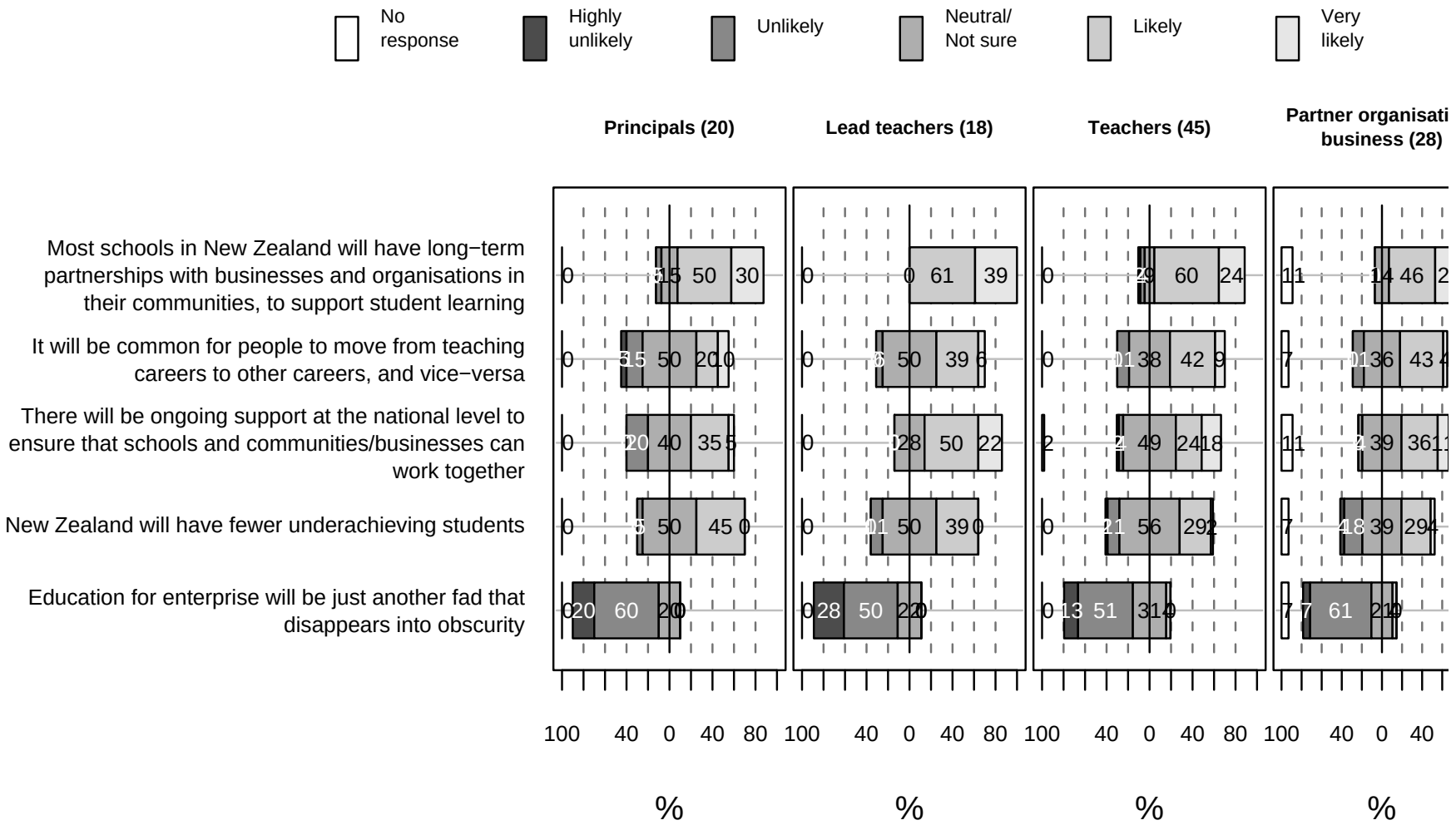


Figure 29 **What participants thought could happen in the next 10 years—systems and structures (2008 surveys)**



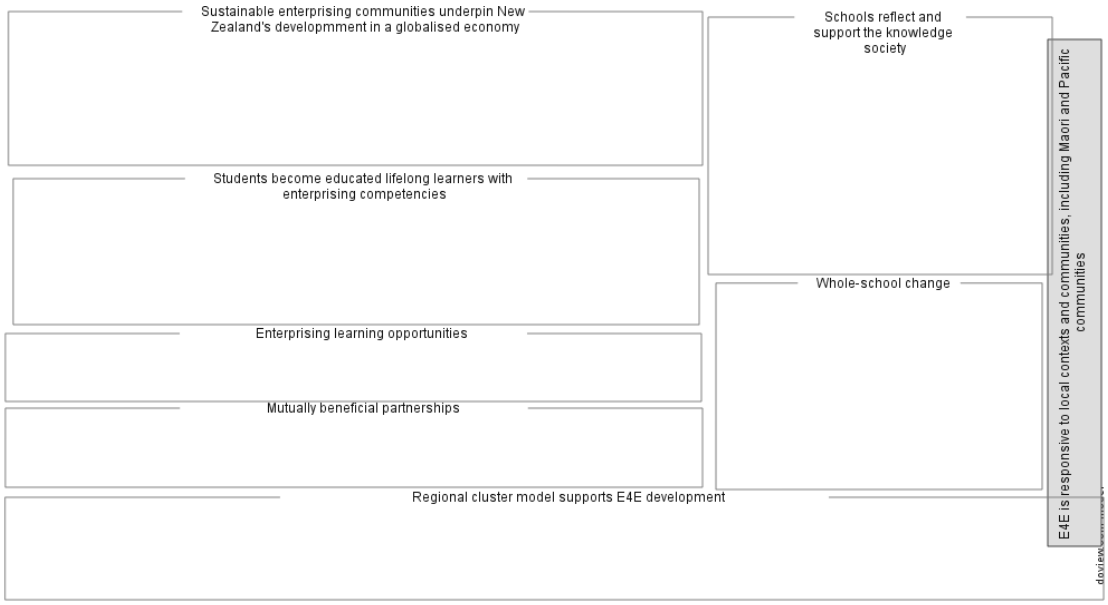
Summary of key messages

- E4E aims to build a whole-school enterprising culture, which entails extending enterprising approaches across all aspects of school organisation, such as planning, visioning, documenting etc. An enterprising approach also calls for structural shifts that might alter, for example, the ways that schools tend to divide up their timetables, learning areas, teaching staff or student year levels. These kinds of structures, which have been in place since the Industrial Age, are not easy to change.
- The evaluation data suggest that schools are developing "more" E4E projects involving "more" teachers and "more" students, and this expansion sometimes spurs small shifts in school organisation and structures. Schools, to varying degrees, have begun to make incremental changes to systems and documents that reach across the whole school and may well set the stage for more fundamental structural shifts in the future.
- Many of the shifts we saw in the case study schools were also spurred by the revised *New Zealand Curriculum*. It appears that E4E has the potential to develop some of the transformational aspects of the national curriculum, but it is not yet clear what else needs to happen to support this.

8. E4E responsive to local contexts and communities including Māori and Pacific communities

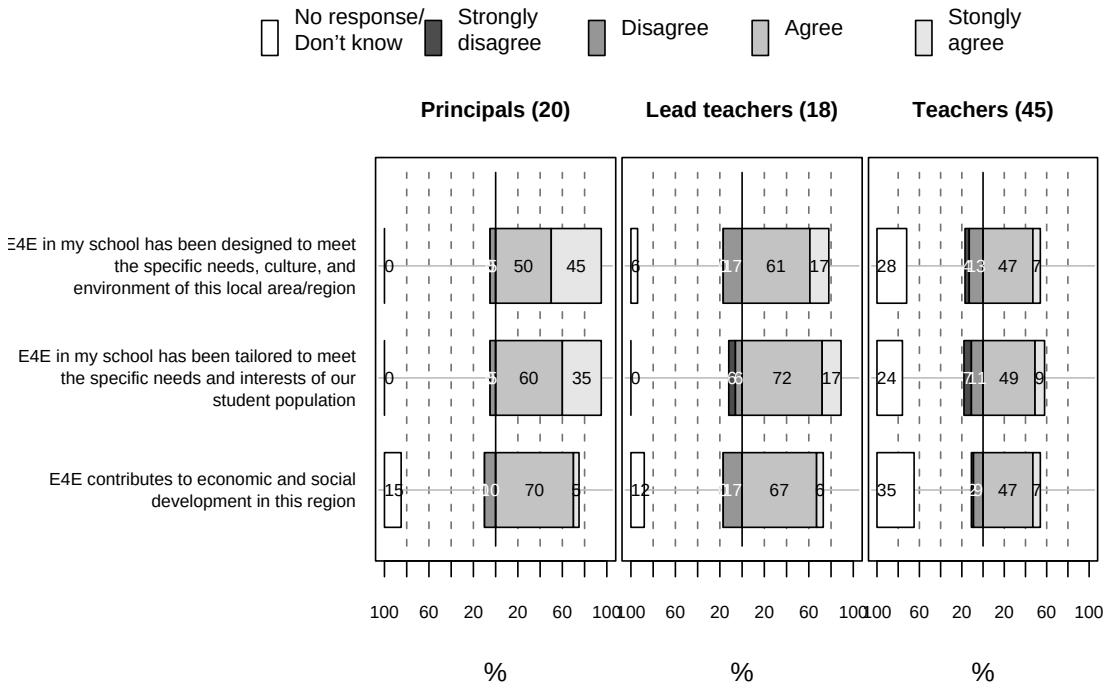
As indicated in the "grey zone" a key message of E4E is the need to be responsive to local contexts and communities.

Figure 30 **The "grey zone": E4E responsive to local contexts and communities including Māori and Pacific communities**



The 2008 survey results show that school staff tended to think that E4E was designed, and being tailored, to meet local needs. As shown in Figure 30, most teachers, lead teachers and principals either agreed or strongly agreed that E4E had been designed to meet the specific needs, culture and environment of the local region; that in their school, E4E was tailored to meet the specific needs and interests of their student population, and that E4E contributed to the economic and social development of the region.

Figure 31 **Staff views about E4E in relation to local needs, culture, environment and development (2008)**



The concept of local needs meant different things to different people. In rural areas or in small communities some people talked about developing E4E in particular ways so that students would be able to fill "niches" in the community (for example, see Table 41, Chapter 7). Others talked about E4E as an "overlay" or as a new name for what had already been happening in their schools and communities. Some focused on the needs of particular community groups such as Māori and Pacific communities.

In our first report we attempted to answer the question, "How can partnerships with Māori communities develop E4E to better meet the aspirations, needs and values of these communities?" In this chapter we revisit this question in the light of our 2008 data. We then go on to consider how partnerships with Pacific communities might also shape E4E to better meet the aspirations, needs and values of Pacific people. In the third part of this chapter we present findings from the student surveys to provide an overall picture of the E4E experiences of Māori and Pacific students across the regions. We end this chapter with a discussion about the ways partnerships with Māori, Pacific and other communities might be thought about within an E4E frame, and the implications for the ongoing development of E4E strategies and messages. The material we present in this chapter includes the views of E4E leaders, community and business partners and school staff as presented to and interpreted by a Māori member of the NZCER research team in 2007 and Tauiwi researchers in 2008.

E4E with and for Māori communities

Our findings from 2007 suggest that some school staff, and E4E regional and national leaders, may have had pre-existing ideas about how they wanted to engage Māori communities, and about what they wanted to gain from "partnership" with these communities. We suggested this could be problematic for two main reasons. One was that it might limit the opportunity for Māori communities to define the ways in which they would wish to be involved or the types of outcomes they might want a partnership to achieve. The other was the presence of unexamined assumptions which may not be shared by all involved. For example, the draft E4E strategy's aim to raise the aspirations of Māori students[71] (Ministry of Education, 2007a) might assume that Māori aspirations need to be raised, possibly in particular ways.

In our first report we considered the meaning of partnership in other contexts, such as the commercial world, to suggest that the goals and values of the communities and the purposes of partnership could be surfaced and discussed in an ongoing way:

> … the notion of 'partnership' signifies the idea of two parties joining together to achieve a series of aims and objectives that are mutually beneficial … It is through discussions with each other that the ways in which the relationship can be mutually beneficial become clearer … through the relationship … *new* things are developed and created. It also requires each of the parties to define the ways in which they can be involved and to negotiate the shape and nature of the partnership … (Roberts et al., 2008, p. 151)

We suggested that schools and E4E leaders should continue to take the time to build relationships with local hapū and iwi, and also give some further thought to which part the Māori community they might work with (which may or may not be iwi-based). We noted that while the Government's focus on "local partnerships" over the past 10 to 15 years has been embraced by Māori communities, many have also become weary of partnerships that may or may not share their needs while requiring time and resources. We suggested that Māori communities may be more likely to engage in sustainable partnerships which assist hapū and iwi in achieving *their* aims and objectives, and that this might reflect the principles of the Treaty of Waitangi.

In 2008 we found partnerships involving this type of negotiation, and which stepped off from, or at least included, Māori goals, aspirations and needs. We describe two of these partnerships below—one at the regional level, and one at the school level. In both cases the partnerships concerned emerged from within Māori communities, and E4E was used as a vehicle to support community goals.

Regional-based initiatives driven by Māori and supported by E4E

A key intention of Northland's E4E application in 2007 was to strengthen relationships between schools and iwi organisations and to expand the E4E model/concept to support this. During the period of our evaluation we were told of three strategies for Māori youth and education that were

[71] Which is also a MOE aim for *all* students.

being developed with input/leadership from iwi representatives as well as E4E representatives. Two of these were being developed through government agencies in collaboration with local forums, and one was being developed by an iwi-affiliated health trust.

We focus on the latter here—to provide an example of a potential partnership informed by the aspirations, goals and needs of Māori to illustrate the potential such a partnership between an iwi and schools has to support the further development of E4E.[72] The iwi-affiliated health trust, with support from other iwi organisations, was developing its strategy for the education of their people through local schools to support the iwi's vision, explained in English to our researcher as:

> … self-determination through community … it's all about independence and the various strands of what it actually means, one of them being economically independent and interdependent, and I guess being able to influence and be in control of what is ours … And we want our people to have a strong sense of identity and to be proud of who they are, and contribute—as the catch phrase is—to be engaged citizens of the world.

The concept of enterprise was an important part of the iwi's vision and its new education strategy. Those involved in the development of the strategy could therefore see the potential of E4E to support this vision. However, our interviewee was very clear that interpretations of enterprise should be determined first and foremost by the aspirations and values of iwi, and that this should echo through local and national conceptions of E4E:

> … if we're going to be implementing an enterprise education kaupapa, we think it should be aligned with the aspirations of the Tangata Whenua.
>
> I think we should be marketing ourselves as a … bicultural society based on Te Tiriti Waitangi and that enterprise education could be more aligned to that sort of vision.

The health trust saw enterprise as a collective and intergenerational endeavour:

> …our view is that everybody has a role to play in developing an enterprise culture … it really is in the end about lifelong learning so that you have intergenerational learning and the grandparents and parents and students, everybody has a role to play, so that people are able to bring out their creative skills and their innovative skills.
>
> So we as local people would need to be very clear about what success means in our community, and if I take a term like manākitanga or providing hospitality to visitors, our people's ability to look after and cater and entertain are huge indicators of success for us in our communities. So enterprise education should be aimed as much towards fulfilling those expectations as they should be of anything else. But certainly we don't want anybody else determining what success is, so one of the major foundations of [the strategy] would be to develop in collaboration with community, marae, schools [a collective answer to the question] 'What is success?', so that those building blocks provide clear learning outcomes as part of the enterprise strand of our strategy.

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[72] We are drawing on an interview with a representative of the iwi-affiliated health trust, not the rūnanga that formally represents the iwi.

The trust had been meeting with representatives of E4E and Enterprise Northland, and enlisted their help in developing their strategy. The relationship described seemed to align with the mutually beneficial model of partnership we proposed in our first report (Roberts et al., 2008). It appeared that both parties were able to listen to the other without being subsumed into the goals of the other:

> They [the E4E co-ordinators] had a presentation to put up, but I think they quickly became aware that we were in the initial stages of just getting people together to talk about, 'We need to put a strategy together, how should we do it and who's going to be involved?' So, I guess I better get back to answering your question: at no point have I ever thought that they said this is Education for Enterprise and we should do it a particular way. I also think that they know we won't allow them to do that. (laughs)

As a result, new directions and developments of both the health trust strategy and the E4E strategy were made possible as a result of this coming together:

> … they certainly brought a sharp-edge focus to the meetings and to the strategy, and then they continued attendance at the meetings, and brought with them links to the national strategies, the regional strategies, [which] brought with it advice, brought with it support and brought a real link, somebody you could ring locally …

The intention was that over time partnerships with E4E and Enterprise Northland would develop:

> … over time we intend to work with Enterprise Northland to make sure that we're working with local and regional strategies, and that we're working with other schools and businesses who can help that happen. And we also want to make sure that we're well aware of what's happening on the national scene in terms of enterprise education, so that we're as well informed as we can be and that we can apply what's unique to us to how we see things should be applied.

While the trust had developed a range of goals to work in partnership with and through local schools, at the time of our interview they had not yet heard whether a funding application which would make this possible had been successful.

This case study highlights the potential for enterprise education to be responsive to—and driven by—Māori communities in ways which align with E4E concepts of enterprising cultures/attributes and community partnerships. We are not suggesting that other iwi in the region or nation would necessarily share the same views about enterprising education or have the same relationship with regional E4E leaders. We are, however, suggesting that it is possible for conceptions and leadership of E4E to be responsive to Māori communities and to be committed to the Treaty of Waitangi if it remains flexible enough to be tailored to—and challenged by—iwi aspirations.

School-based initiatives driven by Māori and supported by E4E

In *Ka Hikitia* (Ministry of Education, 2007b) there is an attempt to shift the focus of education from participation and success *of* Māori to participation and success *as* Māori. This MOE strategy

aligns well with the Te Puni Kōkiri[73] and Northland Intersectoral Forum (2008) strategy that we were told about, which aims to realise the potential of Taitamariki (Northland Māori youth) and raise their educational achievement through raising the expectations that whānau and students have of the performance of the education system.[74]

In both 2007 and 2008 we found examples of school-based E4E initiatives that were driven by Māori aspirations, rather than E4E, or school-determined aspirations for Māori. In our first report we described three Northland schools in which "being Māori" was normalised—all had high Māori student enrolment, Māori principals and relationships with whānau, marae and rūnanga. These three schools had developed E4E to support the educational priorities of the schools and their students. In doing so, they provided examples of what enterprising learning and enterprising schools might look like in these contexts. We returned to one of these schools in 2008 to see how it had further developed.[75]

The school's principal was involved in many community activities and worked both with his own staff and with schools across the region, to build a regional sense of collective- and self-determination. He contributed to a vision and a voice in and for the region about what enterprising schools could look like for Māori communities. Although the school's staff did not necessarily use the language of E4E, those we spoke to in 2008 appeared to share the principal's vision of enterprise for and as Māori:

> [We are] looking for solutions to issues within our school and local community—looking at our own internal strengths—what's pumping in our blood. (Year 10 agriculture teacher)

The principal's vision was to provide students with learning experiences that would support them in the communities and areas of work they would most likely find themselves. To this end the school had adopted a "trade school" approach through involvement with Tai Tokerau Trades Training, and had established academies in the areas of carpentry, hospitality, agriculture and horticulture. The trade school involved bringing trained tutors, largely from nonteaching backgrounds, into the school to help run authentic learning activities (such as building houses for community auction, and running a café). In doing so, they provided a model for how school/community boundaries can be opened up and different forms of knowledge shared. According to some of the students we spoke with, the tutors were one of the reasons why the trade schools were so successful, and they felt engaged as learners:

> Our tutors are very good—[they're] qualified for what they do, but not as teachers. They are ultimate. We call them by their first names. (Trade school student)

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[73] *Engaging Taitamariki in Learning* was also co-led by MOE and the Ministry of Social Development.

[74] Principles are to: engage whānau, school, communities and peers in the approach; recognise the importance of iti in whānau and taitamariki development; build on existing educational and community initiatives; and allow communities to determine how they will achieve the goals.

[75] The other two schools were not within Northland's "intensive schools" which became the main focus of the Regional Clusters Initiative co-ordination and therefore evaluation partway through 2007.

The senior school trade schools, as well as a cross-curricular farming thread involving the whole of the junior school, provided experiential learning. They focused on building theory through practice. Junior students had opportunities to plant and harvest food, weave food baskets and cook on open fires. The agriculture tutor described how these learning experiences, and those available through the senior school, provided students with "the best of the old ways and the best of the new ways" of knowing in order to address community issues, and meet the goal of self-determination as Māori:

> We have a lot of kids with ties to Māori land but don't know enough about modern farming—nor are they familiar with traditional knowledge. A lot of us have lost the art of putting in a garden—I was brought up with that as a kid … Māori have access to thousands of acres … A few of my boys have affiliations to quite big land blocks….My idea was to write us a programme so that our kids come out of senior school with an idea of what they want to do—they will know and [be able to] say 'Trust me uncle, I know what I'm doing.' When you are working with family land, no matter how prosperous, you cannot speculate on it, you cannot sell it. So you have to make that land sustainable economically, and then to be able to incorporate the whānau around it … I want them to be excellent managers … [so] we can make this land productive. (Agriculture tutor)

For the students we spoke with, opportunities to draw on the knowledge and practices of the past was an important part of the trade school experience, as were opportunities to combine these with more recent forms of knowledge to create something new:

> Last time—revision with our weaving, was taking a video that I'm going to edit … in media studies class. He'll mark me on that for my work—my media studies teacher wants me to put it in a festival. (Junior farming student)

> It's like a learning thing—just showing us what it would have been like in the past. (Junior farming student)

> Just to know about our culture how it was like back in the day. (Junior farming student)

Students could see connections between the work they were doing at school and their current and future lives. One of the senior school students had recently moved from the trade school to studying viticulture at Lincoln University, and other students expressed interest in farm work or management:

> I could be a farm manager or dairy owner—but you have to start at the bottom and work your way up. You never know! (Senior trades student)

> The academy is probably the only thing that keeps us here [at school]. We want to get somewhere in life. (Senior trades student)

The initiatives we have described occurring at this one particular school in one particular community provide insights into how the combination of E4E funding, a principal with an enterprising way of thinking and staff who, while not necessarily familiar with the language of E4E, shared this vision resulted in enterprising ways to serve Māori aspirations and to be enterprising *as* Māori.

While we did not see formal project-based work going on with the local marae, or other community groups, relationship building and community connections were central to this school's ethos. However, as noted in our 2007 report, all three Northland schools that we visited were well placed to develop or enhance mutually beneficial relationships with hapū and iwi in the region, having Māori principals with whakapapa connections to iwi in the north, and the knowledge of how to go about developing these relationships on behalf of the school.

Across the other regions, staff views on how E4E might support the aspirations of Māori students and communities varied within and between schools. Not all schools had the capacity to connect with local iwi in the ways available to the Northland schools. Some of these other schools had come up with alternative approaches to building partnerships with their Māori communities. For example, at one Nelson school there were large numbers of students from iwi of other areas, and initiatives were being developed to include all students in the activities of and for the local marae. In addition, Māori language students were working alongside kaiako in the local kōhanga. Staff at one of the Auckland schools we visited had done a lot of thinking about connections between E4E and *Te Kotahitanga*, and had looked for authentic opportunities for their students to use the cultural knowledge held by their communities in order to contribute to mutually beneficial partnerships with Māori businesses and community groups.

However, across all four regions the responses of many teachers we interviewed for their views of E4E in relation to Māori suggested that this was not a question they had really thought about. Others told that, at their schools, staff did not think of Māori students differently from other students. This finding is not just about E4E and reflects wider educational issues. It highlights the necessity of school staff engaging with the messages of *Ka Hikitia* (Ministry of Education, 2007b) and of initiatives such as E4E including a focus on the aspirations of Māori and the Treaty of Waitangi as part of their strategies and practices.

E4E with and for Pacific communities

In this section we discuss the relationships between schools and Pacific communities, with a particular focus on the Manukau region. The E4E principles of teamwork, contribution and connectedness, which the schools we visited in 2007 saw as part of their philosophies, seemed to align with the community values of Manukau. The main challenges they faced included: providing authentic contexts in which Pacific students could draw on the knowledge, skills and experiences of their communities; developing mutually beneficial partnerships; and considering how E4E might adapt to different cultural frameworks.

In 2007 most of the E4E-type activities students were involved in did not specifically require the knowledge and skills of Pacific students and their communities. Those that did, tended to either do so in contrived, rather than authentic, contexts, or they involved external partners working with students in mentor/benefactor-type roles. One of the teachers we spoke with in 2008 described how students sometimes expressed discomfort in being the focus of these experiences, and

emphasised the need for authentic learning contexts in which both students and their community partners benefited through finding solutions to community-identified needs:

> Our learners are saying, 'Why are we being watched all the time?' It's a double-edged sword we need to address … Unless there are appropriate links it won't make a difference. (Teacher)

In 2008 we saw the emergence of mutually beneficial partnerships drawing on the cultural strengths of Pacific students in genuine ways through projects which included film making on community issues; working in local primary schools; designing and marketing antiviolence wrist bands; and working in partnership with Meals on Wheels.

In order to provide an in-depth example of the ways in which these projects drew on community knowledge, we focus here on one, the Meals on Wheels project. This involved students working in conjunction with a hospital dietician to research, develop and trial recipes for meals that would be palatable to the Māori and Pacific clients of Meals on Wheels. This project was based on a partnership that was mutually beneficial to the parties involved. The dietician who oversaw the project described how she depended on the students to gain the information she needed from Māori and Pacific communities:

> I had no way of doing this [consulting with the Māori and Pacific communities] myself. I needed people from those communities … The work these students have done—I will [gain really useful] information … It's not that easy [as a Palagi person] to interview an older Māori or Pacific person.

For Palagi teachers the Meals on Wheels project necessitated linking up with other teachers at their school with the knowledge or connections needed for them to succeed. This provided opportunities for teachers as well as students to be more actively involved in local communities:

> We have had to be (culturally) aware—using our Pacific teachers to work with us, using their churches and marae. You need those teachers. (Teacher)

> One of our teacher's husband is Samoan and I'm learning to cook myself with a friend who's Samoan. (Teacher)

The teachers and community partners we interviewed described the benefits they considered authentic projects based on mutually beneficial partnerships had for students:

> With Meals on Wheels the Māori and Pacific learners have loved being the experts and having links [from their homes/communities] to their class. (Teacher)

> The students really related to the Meals on Wheels people who spoke to them. You could see in the letters they wrote. One here, she says 'You're a nice lady and you're funny. You just remind me of my nanny because of the things you say and do … I hope you love the custard and coconut cake we made for you.' (Dietician)

The second main challenge we saw as a result of the 2007 data involved considering how E4E partnerships in Manukau might add to or help develop conceptions of E4E by taking into account

perspectives of what being enterprising means for Pacific communities. Our findings from 2007 suggest that views about the purposes of E4E, particularly in relation to building sustainable partnerships with business, were sometimes interpreted as the need to foster individual achievement, financial gain and moving above and beyond the community. These interpretations did not seem to be consistent with the goals and values of some of the Pacific people we spoke with, or with their hopes and dreams for their young people. Nor were they consistent with the goals of the teachers in schools with high Pacific enrolment. Some of school staff we spoke to objected to the emphasis on business and individual success in E4E rhetoric and early website material:

> 'Business' gives the impression of making money. But non-profit organisations are not covered. It could be a service. You might be improving an environment. (Teacher)
>
> I object to the emphasis on business at the end of the list of student attributes. Personal development and sustainable communities is also important. We want our young people to find answers to social problems like the gangs in our community and the focus should also be on participation in the community. (Principal)

In Manukau, as in other regions, we saw the emergence of an interpretation of E4E in which concepts of enterprise and entrepreneurship were combined with concepts of community connection:

> To me enterprise is about … acting on opportunities to the benefit of yourself and others. I think that our [regional E4E] flavour will be multicultural and reflect that it's not just about business and making money but reflect the caring nature of Manurewa. (Principal)
>
> These kids are going to look after me in my old age. They are the citizens of the future. (Lead teacher)

One of the Pacific partners we interviewed had a very clear vision of how entrepreneurship could be interpreted in ways consistent with his values of community connectedness. For him being an entrepreneur did not necessitate standing out from the crowd, or working independently from, or in competition with, others:

> I saw that [student] had unrealised leadership potential. He did not stand out as the brightest kid but he was resourceful, proactive, creative … He took initiative—all the things you need to be an entrepreneur.

He saw the big picture for his community as collective prosperity through concepts of enterprise as a collective endeavour:

> Prosperity [for Pacific people in the community]—a better society … We [Pacific people] have skills and it is about building on what we are good at … At the moment we are being left behind … It's about a community participating in the economic development of this community and building the confidence to participate and contribute … We get referred to as the underclass. Our goal is to change that … If we can row one thousand miles across the ocean to get here I am sure we can do that.

We consider the E4E approaches emerging in Manukau make an important contribution to the wider picture of E4E, particularly in relation to the future-focused themes of citizenship, globalisation and enterprise in *The New Zealand Curriculum*. As we see it, the challenge for E4E is to incorporate these other ways of thinking about concepts such as enterprise, achievement and success so as to ensure that E4E activities and projects reflect the values and aspirations of Pacific communities.

E4E experiences of Māori and Pacific students

In this section we present the findings of the student surveys to provide a general picture of the E4E experiences of Māori and Pacific students across all of the regions studied. Table 44 shows the proportions of students by ethnicity who responded to the survey.

Table 44 **2008 student surveys returns by ethnicity**

Ethnicity	Number	Percentage*
Pākehā	264	64
Māori	62	15
Pacific	43	10
Asian	42	10
Other	48	12

* As some students selected more than one, the percentage total comes to more than 100. When checking for differences by ethnicity we prioritised according to the 2001 Census criteria.

The student surveys show that Māori and Pacific students were engaged by E4E-related experiences, and had opportunities to learn about themselves and their world. They were as positive as (and sometimes more positive than) their Pākehā[76] peers about their E4E experiences. Statistically significant differences are reported below (these differences were often small, but significant).

This section may be of particular interest to those involved in the *Engaging Taitamariki in Learning* strategy (Northland Intersectoral Forum, 2008), since the interviewee who told us about it suggested that their ongoing support for E4E was dependent on evidence to suggest that Māori students were full participants and that enterprising education was raising their achievement (some of the measurement difficulties are discussed in Chapter 7).

There were significant differences in the proportion of students by ethnicity who considered they had got "a lot better" at: working with others and in teams; explaining their ideas and information to others; listening to ideas and information from others; coming up with creative ideas; identifying, solving and preventing problems; working out how their skills could be used to

[76] We do not report on the findings for Asian and other ethnicities in this chapter, as our focus is on Māori and Pacific communities in relation to the "dominant culture" in New Zealand.

complete projects; and being flexible and coping with change. In all cases a greater proportion of Māori students and of Pacific students than Pākehā students considered they had got "a lot better" in these areas. Consistent with this are the significant differences in the percentage of students who "strongly agreed" that doing their E4E project made them feel more connected to other students, with more Māori than Pākehā, and more Pacific than Pākehā, strongly agreeing.

There were significant differences in the percentage of students who "strongly agreed" that doing their E4E project made them think about: the type of jobs they wanted in the future; different opportunities in the region; and what an enterprising person is like. In all cases a greater proportion of Māori students and of Pacific students than Pākehā students strongly agreed.

There were also significant differences in the percentage of students by ethnicity who "strongly agreed" that, compared with work in other classes, they: found their E4E project work to be more interesting; worked harder and felt more motivated; learnt more about how businesses work; learnt more about what is important to groups of people in their local communities; and found their E4E-related work to be a better way to understand the ideas and knowledge of the subject areas they drew on.

When interpreting these findings it is important to remember that the data come from students across a wide range of schools, who have had very different E4E experiences. Many of these students, especially those in schools with high Pākehā enrolment, will have had E4E learning experiences that are very similar to those of their Pākehā peers, without a particular focus on linking to Māori or Pacific needs, cultures, values and aspirations.

There are a number of possible interpretations of the more positive responses of Māori and Pacific students. One explanation is that these students are less critical of their education experiences than their Pākehā peers—other research projects carried out at NZCER show this to be so, at least for Pacific students. Another explanation is that E4E-type activities offered Māori and Pacific students learning opportunities that were not usually available to them, but were available to Pākehā students, through traditional approaches. A third explanation could be that Māori and Pacific students were overrepresented in schools with high Māori and Pacific enrolment, and that these schools may share a number of characteristics that contribute to the patterns. (For example, they are often low-decile schools, and teachers may already "tailor" their approaches to Māori and Pacific students.) A fourth explanation is that Māori and Pacific students may value E4E teaching and learning approaches slightly more than their Pākehā peers, and therefore tend to rate them more highly.

Interview responses from Māori and Pacific students across different types of schools and regions in both phases of the project suggest that, even in schools with high Pākehā enrolment and in projects without a particular Māori or Pacific focus, there were often opportunities to bring cultural knowledge into—and/or access it through—the E4E experience. For example, a student at one school worked at the local Pacific radio station. At several other schools students worked alongside kaiako in the local kōhanga. The potential for these experiences offered by E4E may help explain the more positive responses by Māori and Pacific students, when compared with their

Pākehā peers, for whom opportunities to draw on their cultural knowledge are, and have historically been, provided by the traditional curriculum.

Summary of key messages

- Most school staff considered E4E was designed and tailored to meet local needs. Interpretations of what this means, and the extent to which this was happening, varied within and between schools.
- Some E4E-type activities did appear to provide Māori and Pacific students with authentic opportunities to draw on community knowledge and experiences in meaningful ways.
- Some schools were investigating how they could help meet the self-defined needs of the local community, but overall this practice was still not very widespread, a situation which would be true of most New Zealand schools. Traditionally, students and communities have not played a major role in determining curriculum (Bolstad, 2004). This is a challenge, not just for schools involved in E4E, but for New Zealand schools more generally, especially in the light of the emphasis in *The New Zealand Curriculum* (Ministry of Education, 2007c) on shaping curriculum according to the needs, interests and aspirations of students and their communities.
- In some predominantly Māori or Pacific schools and communities E4E was being interpreted in ways that made sense to those involved, and in ways that were different from interpretations of E4E in predominantly Pākehā schools.
- These interpretations could be drawn on to further develop E4E. This would involve expanding the enterprise concepts to be more inclusive of the values and aspirations of Māori and Pacific communities, and ensuring that notions of partnership are informed by the Treaty of Waitangi.

9. Discussion and conclusion

This chapter summarises this evaluation's findings to answer the MOE/NZTE evaluation questions, as these were of particular interest to the stakeholders. We also refer readers to the summaries at the end of each chapter which identify the key messages in each area of the evaluation's "programme logic" model (Figure 2, Chapter 2). The chapter then goes on to discuss some of the higher level, longer term potential outcomes (both intended and unintended) of E4E for New Zealand.

MOE/NZTE evaluation questions

1. **To what extent have the enterprising programmes of learning been shaped to suit the needs of students and the local community?**

The evaluation shows that participants in the Regional E4E Clusters Initiative do tend to see E4E as something that can be adapted to the local values and priorities of the school (see Chapters 3, 7 and 8). School values and priorities were often linked to school leaders' and teachers' perceptions of their students' needs, and the characteristics of the local community. Although some schools consciously chose not to adopt the language of E4E, most teachers and school leaders related positively to the notion of developing students' "enterprisingness", and saw value in providing more relevant and authentic learning experiences for students and linking their learning with people and groups in local business and/or the community. This has produced a broad and diverse array of different activities seen as "enterprising approaches".

One advantage of E4E being locally interpreted is that schools can think creatively and innovatively about the kinds of learning experiences they want for their students, and the kinds of relationships they want to foster with people and groups outside the school that could support these learning experiences. However, one risk is that E4E or "enterprise" will be applied as a new label for existing schooling practices, without providing the stimulus for rethinking these practices and/or considering whether or not they are well-suited to developing learners to participate in and contribute to the 21st century world. Evidence of both possibilities was visible in schools in the regional clusters.

With respect to the aspirations of Māori and Pacific students and communities, in schools with predominantly Māori and Pacific students we saw some evidence of some engagement and interest in E4E from community leaders, and some instances of projects, programmes, partnerships and practices in these schools which supported Māori and Pacific interpretations of what it means to be enterprising, and what it means to be successful. However, in predominantly

non-Māori and non-Pacific schools, there were fewer examples of partnerships or enterprising activities specifically planned to engage Māori or Pacific culture, communities and ways of doing things, although (depending on the E4E activity) there were occasionally opportunities for Māori and Pacific students to bring their own knowledge and interests to the learning experience. School staff could more fully engage with the messages of *Ka Hikitia* (Ministry of Education, 2007b), including a focus on the aspirations of Māori and the Treaty of Waitangi, as part of their E4E strategies and practices.

Most New Zealand schools are only just beginning to explore ways of engaging students and communities in identifying their own needs, interests, aspirations and values in relation to school education. The revised *New Zealand Curriculum* provides schools with the challenge of:

> … [giving] effect to the national curriculum in ways that best address the particular needs, interests, and circumstances of the school's students and community. It requires a clear understanding of the New Zealand Curriculum and the values and expectations of the community. (Ministry of Education, 2007, p. 37)

The evaluation of the Regional E4E Clusters Initiative suggests that the same is true of E4E—that, to give effect to E4E, schools need to clearly understand (and, where necessary, critique, challenge or reconstruct) the ideas underpinning E4E, and also examine ways to involve students and communities in identifying their own educational needs, interests, aspirations and values. This process is beginning to occur in some schools, but it is likely that more time will be needed before widespread changes will be seen.

2. **To what extent have outcomes demonstrated teachers as responsive learners? For example, what evidence is there of teachers:**
   a. **working collaboratively with colleagues in new ways, adapting resources to fit the enterprise framework, and adapting NCEA achievement standards to meet the local community?**
   b. **demonstrating enterprising skills and attributes as teachers/learners, e.g., taking risks?**

The evaluation provided evidence that many teachers experienced themselves taking on different (and sometimes unfamiliar) roles in teaching when they adopted more enterprising approaches. Many students also reported this (see Chapters 5 and 7). Teachers were likely to see themselves as learners, too, and discovered both benefits and challenges when they took on the roles of mentor, guide and/or liaison person between students and their business or community partners.

In some schools, curriculum and teaching plans were being adapted to incorporate E4E. With respect to NCEA, teachers had differing points of view regarding how flexible or inflexible NCEA was in allowing the incorporation of E4E approaches (see Tables 20, 40, 41, and pages 140–144 in Chapter 7). While the evaluation did not find specific evidence of teachers adapting achievement or unit standards in relation to E4E, there was evidence of teachers selecting NCEA standards more selectively to fit into an "authentic" E4E learning experience, rather than

contriving class work to fit the requirements of the NCEA standard. Some teachers were also using standards from more than one curriculum area.

Some schools were developing a culture of shared learning amongst teachers, and this seemed to be encouraging teachers to share ideas, try new things and take risks. However, a few teachers in other schools suggested they were undertaking enterprising approaches in isolation, without widespread support or encouragement from other staff. Chapter 7 suggested that while E4E has had an impact for many teachers, students and schools, there is still a long way to go in shifting overall school cultures and deeply entrenched beliefs and practices about curriculum, teaching, learning and assessment in many secondary schools.

3. **To what extent do the outcomes show students developing enterprising skills and attitudes (within and beyond their core learning areas), and to what extent have student motivation for achievement and career aspirations been enhanced by involvement in E4E?**

Students believed their E4E learning experiences supported them to learn and develop in a range of ways, including developing enterprising attributes (see Chapter 6, pp. 117–121). Although students' enterprising learning happened in a range of curricular and co-curricular areas (see Tables 23 and 24), the explicit focus on the meaning of "enterprise" and "being enterprising" tended to occur predominantly in classes that were labelled "enterprise studies". Further focus and reflection on the meaning of enterprise and the enterprising attributes in other classes and subject areas may support greater student awareness and understanding of these attributes. One challenge for teachers was finding ways to maximise and plan for opportunities for these kinds of deeper learning conversations to occur. For example, in some classrooms students were undertaking different projects, and were in need of just-in-time support, resources and guidance. Helping students carry a project through to completion tended to be the main priority.

Teachers surveyed in 2008 thought that E4E has had a positive impact on students' motivation to achieve and their career aspirations, and some students also thought this. Though the evaluation could not collect direct data on impacts on student achievement or postschool study or career destinations, E4E provides an opportunity to re-examine conventional views of assessment, and to look at the tensions between these and the changing nature of communities, society and employment in the 21st century. Principals, some teachers and many community and business partners referred to these tensions.

4. **To what extent have school management/leadership structures been organised to allow opportunities for E4E growth and development (for example, organisation of middle management roles and responsibilities, changes to timetabling, creation of new/different subject options, development of cross-curricular/cross-departmental education for enterprise etc.)?**

In most schools there was a leadership commitment to E4E, and arrangements were made to support this through conventional school planning and management structures. This included the inclusion of E4E in school policy and curriculum planning, and the appointment of middle

management roles (e.g., the E4E lead teacher). Some schools also created new structures, such as new courses or units of work, new relationships between teachers of different subjects through the E4E cell groups and new links and networks through the regional cluster.

Few, if any, schools in this study showed evidence of a major transformation of current school structures through their involvement with E4E. However, there were some small shifts in conventional practices: for example, a few schools were experimenting with team-teaching approaches (although this was not necessarily solely linked to E4E). Some E4E learning experiences have involved curriculum integration of some form. These include: projects where different aspects were focused on in different subjects (e.g., designing something in a technology class, then doing costings for its manufacture and sale in a maths class, and developing marketing plans in an English class). Others have developed activities based in one learning area, but bringing in achievement objectives from other subject areas; or extended (e.g., three-day) projects where the normal timetable was suspended, and students could draw on the resources and support from teachers across all curriculum areas. However, this approach to integration is only partway towards the 21st century vision of learning as drawing on many disciplines, independently and together with others, in rich contexts that use the "thinking tools" of each in principled ways.

5. **To what extent have schools', business and community perceptions of one another been enhanced and changed by E4E clusters? (For example, to what extent have the community and businesses learnt new things about schools, and to what extent have schools learnt new things about business and communities, etc.?)**

The evaluation provided evidence of E4E activities being developed which met educational goals while also meeting the needs of business and community partners (see Chapters 4 and 8). In addition to the short-term benefits of receiving students' work, partners saw their involvement in E4E as helping to meet longer term outcomes—including: supporting education to become more relevant to the 21st century workplace; supporting students to develop confidence and learning capabilities; supporting businesses and community organisations to deliver on their commitments to corporate and social responsibilities; and letting young people know that they are a valuable resource for the community. The evaluation suggests that, in many cases, E4E learning opportunities were raising students' capabilities in line with what people from businesses and the community said they valued. Our survey data suggested that, the school, business and community partners' perceptions of one another were being enhanced: in particular, that the business and community sectors were seeing schools and students in a more positive light. However, some partners also felt schools were still not moving far or fast enough in reshaping education for the 21st century.

6. **To what extent has E4E enhanced opportunities for students to engage in "authentic learning", and opportunities for schools to "personalise learning" for their students, through relationships with people/groups/businesses in the community, and what have been the impacts of this for students, schools and communities?**

The provision of "authentic learning" for students was the single biggest focus of—and motivation for—E4E across schools and clusters. It was something that all leaders and staff could connect to, even those who rejected the labelling or language of E4E, or who were suspicious of the ideas around "enterprise" in a business sense. There were many instances of students, teachers and partners seeing mutual benefits from their engagements with one another (see Chapters 4, 5 and 6). However, one tension for teachers in seeking to provide more relevant, authentic and personalised learning is the necessity to juggle the large number of different things happening in the classroom at once. Another is the need to support students through the emotional challenges of taking on greater responsibility and control in shaping the directions of their own learning. This suggests that there are likely to be difficulties in developing personalised learning approaches within conventional 20th century schooling structures.[77] As discussed earlier, above, these kinds of changes, if they occur at all, are not likely to happen in a short period of time (such as our two-year evaluation period).

7. **To what extent can E4E enhance or extend current understandings of "effective teaching"?**

The New Zealand Curriculum (Ministry of Education, 2007c) indicates that aspects of effective teaching include:

- creating a supportive learning environment
- encouraging reflective thought and action
- enhancing the relevance of new learning
- facilitating shared learning
- making connections to prior learning and experience
- providing sufficient opportunities to learn
- inquiring into the teaching–learning relationship.

All of these aspects are equally important for effective teaching in the context of E4E. However, due to its focus on relationships and partnerships with a wide range of groups and individuals from businesses and the community, E4E also has the capacity to reconstruct the teaching role for the 21st century. If school structures and practices are to move towards involving a wider range of people in supporting students' learning, teachers will need skills and capabilities beyond the above list of effective teaching practices.

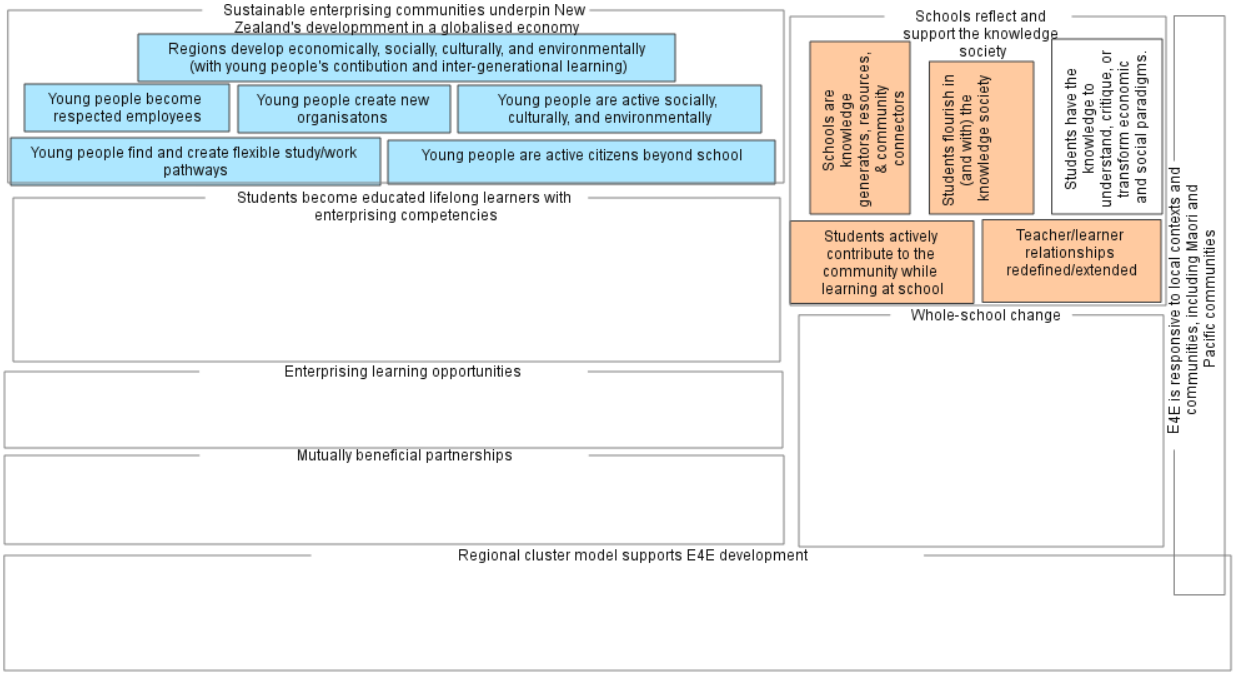
These include: the ability to reflect on their own practice; a willingness to form working relationships with other teachers to develop and trial new ideas and approaches; the ability to

[77] In particular, subject divisions; timetables; teacher–student ratios; the involvement of people from outside the school in student learning; and prevailing views of what matters in curriculum, teaching and assessment.

participate in professional learning communities with other teachers and people from other sectors; the ability to reflect on and enable students to see real-world sector interfaces and systems dynamics as an object of learning; and the ability to step back and critically examine current directions in schooling and to consider whether or not these meet the needs of 21st century students.

Long-term objectives of E4E for New Zealand society

People have differing views of the extent to which E4E should aim to influence students' lives beyond school, and/or to influence the shape and development of New Zealand society. Underpinning these are different conceptions of social change, and education's role in it. In this report we have not, as yet, discussed E4E's most contested goals and aims—the long-term objectives or potential outcomes (both intended and unintended) shown in the "sky-blue", "orange" and "white zones" below. The last section of the report looks at these.



What can the evaluation tell us about these long-term objectives and potential outcomes of E4E for New Zealand society?

The long-term goals and potential outcomes of E4E are contested because people have very different ideas/visions of how society should grow and develop, and different points of view on education's role in (re)producing society. These views span a continuum from "improvement" agendas at one end, to "transformative" agendas at the other.

For example, looking at the objectives in the "sky-blue zone", some people think current models of economic development (i.e., linear economic growth, and open competition in free market

economies) can continue indefinitely, although some "improvements" and adjustments may be necessary to keep the system sustainable. Other people contest this view, arguing that current thinking about the relationship between the economy, society and the environment is in need of major change. Economic growth should be viewed as a subset—rather than a driver—of other forms of development/regeneration (e.g., social, cultural and environmental development).

Similarly, looking at the "orange zone", some people think that our current schooling systems are simply in need of "improvement" (e.g., requiring better teaching, the teaching of more relevant or advanced knowledge and/or better performance against standardised measures etc.), whereas others think schooling needs major change if it is to meet 21st century needs.

Finally (as discussed in Chapter 1), some people see the proper role of enterprise education as preparing young people to *participate* in economic activities, while others think it should prepare young people to critique, challenge and transform current economic paradigms. These debates have a long history in education, and can lead to entrenched viewpoints, impasses and either/or thinking.

This evaluation shows that E4E means different things to different people, and what is actually enacted as E4E in the schools encompasses a broad spectrum of activities. While some examples have strong community-building and community-service dimensions (such as building a computer for a local primary school, or designing recipes for Meals on Wheels), and/or environmental sustainability dimensions (such as seeking solutions to local environmental issues, or engaging with a regional conference about ecotourism), others are much more explicitly focused on helping students learn about business processes and ways of working, or how to produce ideas, services or products for the benefit of a business or community partner. Some might see it as a stretch to describe the latter examples as community-building. However, in many of the small communities in the Regional E4E Clusters Initiative, the social and economic wellbeing of the community (and by extension, local schools) is interlinked with the viability and sustainability of local enterprise, and the degree of social entrepreneurship in the community. It is possible that the boundaries between school, communities and businesses are more fluid in these areas.

Increasingly complex and networked cross-sector (and cross-cultural) relationships are a feature of knowledge society developments. The tensions inherent in these kinds of relationships are important because it is in the spaces between different ways of knowing and doing that *new knowledge(s)* (and new solutions to old problems) are developed. The knowledge society literature suggests that, if they are to make the most of these tensions and spaces, people working in them need a good understanding of the different lenses they—and their partners—bring to the relationship. E4E provides some tools for beginning this process of "thinking together" in these spaces—for example, the co-ordinated cluster structures; the local partnerships; and the enterprising metaphor. It seems to us that a key next step for E4E development could be to foreground this role—through an explicit focus on thinking together to develop new knowledge in the partnerships. If framed in this way, the findings from this evaluation could be used to promote discussions about the nature, scope and future of E4E at two levels:

1. at the local, regional and national level, through discussions and debates amongst people and groups involved in E4E partnerships

2. at the level of school curriculum design, and the development of teaching and learning experiences for students.

Currently, the most frequent shared meanings for E4E are: its role in providing more "authentic" "real-world" learning opportunities for students; cultivating students' understanding of themselves as innovative, creative, problem-solving people; and developing stronger connections between schools, communities and businesses. These are all aspects of 21st century learning. However, another key aspect of 21st century learning is helping students to see relationships *between* ideas, to *synthesise* ideas, to see the "big picture" and to see ways to build *new* "big pictures". We suggest that a next step for E4E development could be to explicitly focus on some of these "big-picture" ideas in the context of E4E.

For example, the recently revised *New Zealand Curriculum* (Ministry of Education, 2007c) signals *future focus* as one of eight key principles:

> Future focus: The curriculum encourages students to look to the future by exploring such significant future-focused issues as sustainability, citizenship, enterprise, and globalisation. (Ministry of Education, 2007c, p. 9)

At present, the positioning of "enterprise", alongside sustainability, citizenship and globalisation, in such a prominent part of the curriculum[78] is largely unexamined in New Zealand schools. We think that further exploration and unpacking of the curriculum's *future focus* principle—including explicit discussion of the *tensions* between enterprise, sustainability, citizenship and globalisation—is needed within and beyond schools.

[78] They appear in the "principles" section, and *The New Zealand Curriculum* states that the principles of *The New Zealand Curriculum* "embody beliefs about what is important and desirable in school curriculum—nationally and locally. They should underpin all school decision making …" and "all curriculum should be consistent with these eight statements" (Ministry of Education, 2007c, p. 9).

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Appendix A: Evaluation feedback

Presentations and workshops in reverse chronological order

Roberts, J., & Bolstad, R. (2008). *Wrapping up the regional E4E clusters evaluation*. Presentation and workshop for the regional coordinators hui, St Pauls Building, Wellington, 4 November.

Roberts, J. (2008) *Enterprising and future-focused? Regional E4E clusters evaluation and 21st century learning.* Manukau and Northland cluster feedback, Manurewa RSA, Auckland, 29 May.

Roberts, J., McDowall, S., Bolstad, R., Cooper, G., & Gilbert, J. (2008). *Enterprising and future-focused? Regional E4E clusters evaluation and 21st century learning*. NZCER research group meeting, ANZAC House, Wellington: 27 May.

Roberts, J. (2008). *Enterprising and future-focused? Regional E4E clusters evaluation and 21st century learning*. Nelson cluster feedback, Monaco Resort Hotel, Nelson, 13 May.

Roberts, J., McDowall, S., & Bolstad, R. (2008). *Focused on feedback: Evaluating the E4E regional clusters.* Presented at ECSA/E4E key stakeholders workshop, James Cook Hotel, Wellington, 14 March.

Roberts, J., & Boyd, S. (2008). *Evaluation: What's it all about?* Presented at ECSA/E4E key stakeholders workshop, James Cook Hotel, Wellington, 14 March.

Bolstad, R. with Gilbert, J. (2008). *21st century learning: What is it? What's it got to do with E4E?* Presented at ECSA/E4E key stakeholders workshop, James Cook Hotel, Wellington, 13 March.

Roberts, J. (2008). *Enterprising and future-focused? Regional E4E clusters evaluation snapshot.* Presented at ECSA/E4E key stakeholders workshop, James Cook Hotel, Wellington, 13 March.

Roberts, J. (2008). *E4E evaluation: Feeding back to look forwards.* West Coast cluster feedback. E4E induction day, Kingsgate Hotel, Greymouth, 27 February.

Roberts, J., & McDowall, S. (2007). *E4E evaluation: Preliminary findings*. Annual E4E key stakeholders meeting, Te Papa Museum, Wellington, 7 December.

Roberts, J. (2007). *Evaluating the Regional E4E Clusters Initiative: Working with the Nelson cluster.* Waimea College, Nelson, 11 June.

Roberts, J., & McDowall, S. (2007). *Developing an evidence base: Evaluation of the Regional E4E Clusters.* ECSA key stakeholders workshop, Quay West, Auckland, 6–7 June.

Roberts, J., (2007). *Evaluating the Regional E4E Clusters Initiative: Working with the Manukau cluster.* City of Manukau Education Trust, Auckland, 5 June.

Roberts, J., & McDowall, S. (2007). *Evaluation plan for the four E4E clusters.* Education for Enterprise regional co-ordinators hui, Duxton Hotel, Wellington, 17–18 May.

Roberts, J., (2007). *Evaluating the Regional E4E Clusters Initiative: Working with the West Coast cluster.* Presentation at the West Coast E4E introductory gathering, Kingsgate Hotel, Greymouth, 6 March.

Bolstad, R., & Roberts, J. (2007). *Evaluating the Regional E4E Clusters Initiative (part 2): Where to from here?* Kaikohe, Northland College, 13 March.

Bolstad, R., & Roberts, J. (2007). *Evaluating the Regional E4E Clusters Initiative (part 1): What was learned from NET?* Kaikohe, Northland College, 13 March.

Appendix B: E4E examples described in teachers/lead teacher surveys (2007/08)

2007 survey examples

Subject(s)	Description
Accounting and economics	Carrying out a waste management survey for a waste exchange business, making a display for the business.
Biotechnology and agriculture/horticulture	Students set up a business using horticultural skills to develop products to sell.
Commerce	Studying consumers and consumer law, students had to develop a product testing regime for toilet paper and present an article for *Consumer* magazine.
Drama	Students produced a performance of "Alice in Wonderland", performing to primary school audiences. A local intermediate class came to watch and ask the drama students questions about the production process for their own unit of work on play-building.
Drama	Students worked with a museum to provide a performance based on the current educational display.
Drama, enterprise, technology, social sciences, media studies	Students produced and performed political theatre at a local theatre.
Enterprise studies	Developing and marketing a product, culminating in a product launch to which family and friends were invited.
Enterprise studies	Community link with a company which provides indigenous New Zealand art. Students researched background descriptions for the work, using local library and stories from local kaumātua, drew their own version of images from the research and planned an art exhibition.
Enterprise studies	Community challenge: Students worked on a project to improve the school community. Students implemented paper recycling, improved school noticeboards and sent old textbooks to schools in Samoa.
Enterprise studies	Designing and making invitation cards for a networking meeting for a Non-Government Organisation.
Enterprise studies	Formation of companies, from planning to wind-up, including product development and production.
Enterprise studies	Liaising with the school library to scope and present a proposal for a new website. The winning team will develop the final product.
Enterprise studies and art	Developing a product to sell at the school market day.
Enterprise studies and social sciences	Developing a product to sell at the school market day.

Subject(s)	Description
Enterprise studies and technology	Students identified needs within the school and worked in groups to meet the need—for example painting the school wharenui.
Enterprise studies, English, mathematics	Speakers from the community came to speak to students about their chosen careers, qualifications, pathways, experiences.
Enterprise studies and technology	Making and selling chocolates as a mini-enterprise.
Enterprise studies, technology, art, English, mathematics	Starting a company and producing a clip to seal food packaging.
Enterprise studies, technology, social sciences, PE and health	1) Creating a healthy eating environment at school, bringing in guest speakers, bringing healthy sandwiches and filtered water into the school canteen. 2) Working with city council town planner and surveying people in the community about what they want in their town centre.
Enterprise, technology, social sciences, English, mathematics	Preparing and marketing a food item for a fundraising project.
Health and PE	Increasing recycling and reducing litter around the school, support from a business that provided information and resources to the school to support composting and recycling.
Horticulture	1) Students visited a hydroponic lettuce enterprise and one student was inspired to set one up in the school, working with two classmates. 2) Another student initiated a landscaping project to create a paved seating area in the school.
Hospitality	Undertaking a practical unit standard in coffee making at a polytechnic, then running a coffee business in the school.
Language	Running small business/community organisations within class.
Language	Students mixed with a community of German speakers, visited an exhibition to look at the impacts of German settlers and were helped by the German speakers to complete an exercise in German language.
Languages	Developing signs in other languages for tourists at the local supermarket.
Mathematics	Challenging students to design new features on cell phones.
Mathematics	Students designed a “pizza for profit”. Students visited butcher and hotel, where they made pizzas and talked to the cooks and owners about their businesses, how they got to that point and how much maths was involved in the work etc.
Not indicated	It will involve students growing produce for donation to local community food bank, senior citizens and for sale to the local hotel (still under development).
PE and health	Becoming aware of the fat content in foods, comparing fat content in different meals and considering the health effects.
Religious education	Researching food from the Bible.
Science	Making biodiesel from old chip oil, and running the school tractor on this.

Subject(s)	Description
Social science	Army personnel came to talk with students about New Zealand's peacekeeping role, share their own experience as a peacekeeper and give students drills to complete and scenarios to experience and plan how they would react.
Social sciences	Designing an ecotourist resort and presenting proposal to NZTE.
Statistics	Identifying a need with the school (student lockers), gathering statistical information on this (weight of student bags) and reporting back to various people within the school.
Technology	Developing signage for a local business warning the public of the dangerous exit that goes out of the rear of the store onto a roadway with no footpath. The hazard had been identified the previous year by a Years 7–8 class project from a contributing school.
Technology **(2 examples described)**	1) A media package for a firm. 2) Landscape idea for local community.
Technology	Redesigning a business logo for a retail shop, run as a competition with prize money, with client providing the brief, feedback and prize money.
Technology	Designing and producing a Christmas card for regional economic development agency.
Technology	Designing and making Christmas decorations for a client.
Technology	Designing and manufacturing hand/eye co-ordination toys/articles for a local kindergarten.
Technology	Working with a retail business to design and promote the use of cloth bags rather than plastic.
Technology	Students work with a parent (who is a chef), preparing and serving food to students (ordered and paid for by the client students) once a week , and catering for special community events.
Technology and science	Implementing a school-wide recycling scheme, planting native trees and shrubs
Technology, English, mathematics	Creating an event for "pet day" fundraising.
Technology and social sciences	Surveying the community's opinions about the town centre and what kinds of services and activities they would like to have available.

2008 survey examples

Subject(s)	Description
Accounting	Investigation of the hospital and commercial laundry—flow chart, costing and recommendations.
Accounting and economics	Café survey on breastfeeding guidelines. Design of breastfeeding-friendly café logo for display in windows of [local] cafés (on behalf of HEHA (Healthy Eating, Healthy Action) arm of this region's District Health Board).
Art	Students painted design for Ecotourism Conference pack bags (ecotourism theme/calico bags).
Art	Re-designing the New Zealand flag. Exhibit concepts (A4 prints) in [a local] art gallery. Next time round we'll consider selling work, as there was a demand.
Art, English, Three-day episode	Mask making for the college ball.
ASDAN (asdan.org.nz)	Financial literacy. Purchase of a car—no deposit. Extra costs. Borrowing to add extras to the car. Paying cash.
Business studies	[The students] saw the process of selling a house—watched activities of a real estate agent.
Economics	Worked with a product to design a survey which investigated the influences on demand including price sensitivity. Reported back to local retailer.
Enterprise studies	Three groups worked with volunteer organisations. They entered the BP Community Challenge.
Enterprise studies	Year 12 students prepared units to be taught to local primary school children. Units included dance, choir, health and nutrition, art and teamwork
Enterprise studies	Ran a small business in 10 enterprise studies. Groups presented business plan to mentors (from business) who listened, gave feedback and lent start up capital. They also acted as business mentors. Groups then presented business financial reports and other info back to mentors—like Dragon's Den.
Enterprise studies	The environmental group has been instrumental in organising a large group of people, over a wide area in the protection and restoration of the arms of the [local] harbour. Have been involved with the regional council.
Enterprise studies, art, English, mathematics, PrEP	PrEP involves students applying for business positions, taking on "real-life" roles of business manager, 2IC, accountant or general/specific worker. The students get paid in our school community currency and produce either a product or service. This year we are taking it one step further and combining market day with a whole-school community showcase gala.
Enterprise studies and business studies	Young Enterprise Scheme—students produced their own product to sell during the year.

Subject(s)	Description
Enterprise studies, food technology, health and PE, media studies	Healthy Eating project—Fuelled for School challenge “Smoothies”.
Enterprise studies, health and PE, science	Gardening project—growing vegetables for the local food bank in conjunction with a senior citizen, growing sprouts for a local hotel to use in their restaurant and in food for the local garage.
Enterprise studies, media studies, art, mathematics	Year 10 business studies duplicated the idea of YES and ran mini-businesses in groups.
Enterprise studies and technology	Creating financial literacy learning tools for Years 5/6 learners. Students surveyed Years 5/6 children on what they know about money. Discussed with [bank partner] what they want children to know. Made games and books to teach concepts required. Trialled at local school.
Enterprise studies, technology, social studies, English, mathematics, science, languages	[The students’ activity was] to develop the bottom section of a house to make it more functional and usable by students during the school day.
Enterprise and food technology	Meals on Wheels menu planning, cooking trialling, testing foods.
Environmental	Planting fenced-off stream margins/ developing community harbour care groups—inspiring adults to take action.
Food technology	Cooking once a week for a group of women over a six-week period, preparing morning tea and lunch.
Food technology, health and PE, mathematics	Year 10 students worked for seven weeks on a sports education unit. This culminated in a tournament. Year 9 students planned, shopped and prepared food for afternoon tea.
Future problem solving	Students (teams of four) studied a topic, set in the future, and identified key challenges. They chose an underlying problem, offered 16 solutions, chose the best solution and wrote an action plan.
Health and physical education	Fuelled for School initiative. Students made smoothies and promoted them as a healthier option.
Health and PE	Diving for seafood with locals—seafood was then given to local families.
Health and PE and media studies	Took photos of schools at regional athletic champs and sent a CD to the school involved. Two media studies students involved.
Horticulture	Level II horticulture students redesigned the landscape at a local kindergarten. Redesign to introduce plants and hard feature that would better meet the needs of the kindergarten.
Mathematics	Using maths concepts with energy and calorie calculations to develop a snack food within certain parameters.
Mathematics	Producing maths educational games for special education students.

Subject(s)	Description
Mathematics	A group of six Year 12 students designing a questionnaire for our local community board so that they could gather information from the community about council-funded facilities. They were then going to submit the information gathered to the Council. Students also conducted phone interviews using the questionnaire to record feedback.
Media studies	Students co-ordinated and facilitated a public film festival.
Not specified	Constructing a questionnaire, then interviewed 500 people in the community about the issue of a new heated, covered pool, processing the results and presenting a slide show of the results to the community group responsible for the pool concept.
Not specified	Researching a local business.
Psychology	Students practised surveying for local government organisation plus developed own survey for [partner organisation] and administered it.
Science	Students learnt about forces and motion in the context of car crashes. They worked out stopping distances of bikes, speeds of traffic outside the school using laser guns. They estimated stopping distances of the traffic based on previous readings. They analysed friction in terms of tyre treads. Finally, they prepared a presentation to describe the forces involved during a video clip of a car crash.
Science	[The school] has a weather station set up to collect data for the Globe programme. This involves students collecting data on weather in this region. The data are then collected and organised visually within the classroom for comparisons to each week. The data are sent via the Globe website by the students. Feedback is often sent back regularly.
Science	A student did his project on bacterial growth in the mouths of boys & their dogs. Both boys and their dogs "licked" a plate (agar) and the student cultured them. They found that teenage boys had more bacteria than their dogs and this has sparked further investigations.
Science	Designed energy system for habitat on Mars for University of Canterbury competition.
Science	Restoration of [local creek]. Learning why it is necessary, the types of plants best suited to the area and why, identifying ongoing problems and finally planting in conjunction with primary school students. Senior students were mentors to the younger ones.
Science and horticulture	Will produce more food! $
Social studies	Learning about environmental sustainability and pest management.
Social studies	A place in the [local area] run by [the council] has problems with rubbish, illegal parking, pollution, wear and tear, drinks from a night club. With [council] employees a class visited the area and worked through the problems and solutions involved with the case to come up with the plans, ideas, concepts for the council to think about using in conjunction with this area.
Social studies and drama	A Year 13 drama class working in conjunction with community, iwi, playwright and others to create a performance (public) of Hone Kouka's play "Wairoa".
Technology (graphic design)	Students design an environmental structure for the council—located at the sunset point.
Technology (graphic design)	To design a Christmas card for a [regional] company to use.

Subject(s)	Description
Technology (graphics)	Three activities in the same class: Environmental—landscape Architectural—building design Media—product design.
Technology (ICT)	Students met with [our partner organisation] kindergarten teachers and spent time with kindergarten kids finding out what kind of picture book they wanted. Taking photos around town, making text to go with photos, [the students] produced a booklet using computers and digital cameras.
Technology (ICT)	The students built a computer for a Year 8 class in a local primary school, that was powerful enough to do music and film editing.
Technology (ICT)	Developed online presence (website) for authentic business clients.
Technology (ICT) and English	Producing a picture book for students at a primary school. Primary students provided the storyline which was further developed by the secondary students.
Technology (ICT), English, art	Students produced a reading/picture book suitable for their client—a 5/6-year-old student.
Technology (textiles)	Sewing pencil cases, mobile holders and bags for sale.
Technology (textiles)	They made bags to sell.
Technology (wood)	Replicating “Chinese Yoke”.
Technology, English, science	The class decided to retell a myth that was related to the science project on the sun, to give a presentation to the community members who had read to them each week in the library. This was to thank them for their time. The students (Years 1 and 2) used various media to make the presentation on the interactive whiteboard. The students introduced the presentation and answered questions afterwards about the skills they used. This also introduced this new technology to the community.
Technology, health and PE	Designed sunsmart sunhats, surveyed other students, researched sunsmart approved hats. Wrote to BOT asking permission, outlaid plans, altered plans to suit BOT provisions, friends of school made hats. Students decorated hats.
Technology, media studies, art	Students worked with [a local] community radio station to record and produce radio shows.