Enterprising and future focused?

The first report from the Regional Education for Enterprise Clusters Evaluation

Report prepared for Ministry of Education and

New Zealand Trade and Enterprise

Josie Roberts, Sue McDowall, and Garrick Cooper
New Zealand Council for Educational Research

2008

ISBN 978-1-877293-62-7

Acknowledgements

There are many people we would like to thank for their part in this evaluation. We are extremely grateful for the time that students, school staff, and community/business partners dedicated to our surveys and interviews. Special thanks to the E4E lead teachers and principals who attended initial meetings to guide planning and who supported our work with their schools. We appreciate the hospitality and willingness to share from case study schools and kura kaupapa Māori.

To the E4E national co-ordinator and the four regional co-ordinators, thank you for enabling our visits, for providing us with feedback on draft instruments and plans at your busy national hui, and for being receptive to our emerging findings. We are also grateful to the Ministry of Education, New Zealand Trade and Enterprise, and the Tindall Foundation for supporting the evaluation.

At NZCER we wish to thank Jane Gilbert for comments and feedback on our work and Robyn Baker for ongoing advice. We are very grateful for Rachel Bolstad's crucial role in the evaluation design. We received excellent data capture, analysis, and quantitative reporting assistance from Rachel Dingle, and Edith Hodgen. Thanks also to Christina Smits and Ben Gardiner who kept track of logistics. Finally, we much appreciate Kristina Louis' library support and Christine Williams' administration support.

Table of Contents

Tables

Figures

Appendices

Executive summary

This is the first report in a two-year evaluation of Phase Two of the Regional Education for Enterprise (E4E) Clusters Initiative. Phase Two extends and adapts a regional cluster model, initially piloted by Northland and the West Coast, to two additional regions—Manukau and Nelson. This involves further piloting of the model, working towards sustainability, evaluating the processes and outcomes, and developing an E4E strategy. The initiative's overall aim is to embed an enterprising culture within clusters of schools nationwide based on characteristics of their communities.

This multidimensional evaluation aims to: investigate processes and outcomes; provide ongoing formative feedback; evaluate progress towards sustainability; and assess the conceptual viability the draft E4E strategy. Three overlapping focuses ("cluster focus", "E4E strategy focus", and "21st century learning focus") each represent different evaluation questions and stakeholder interests. The intention of this report is to capture key aspects of the beginning of the cluster journey (from survey and interview data mainly collected in Terms 2 and 3, 2007) to inform thinking and development in E4E. Each chapter is guided by a question. A summary of each is provided below.

What are the characteristics of each regional cluster, and how has each begun to establish a unique approach to E4E?

Northland, Manukau, West Coast, and Nelson each have distinct educational, environmental, cultural, and economic contexts which appear to have influenced their E4E cluster arrangements, and the work of their regional co-ordinator. There were a few very narrow regional differences on an initial student survey, and these were not geographic effects *per se*.

How closely does current schooling—and visions for schooling—in the clusters align with ideas about 21st century learning?

A motivation behind E4E is to change students' education experiences in ways that fit with 21st century society. Principals were more inclined than community/business partners to agree that current schooling practices prepare students to contribute to their families, communities, and to New Zealand society, economic growth, and environmental sustainability. The results of a survey that asked students about learning experiences across all their classes (not E4E specifically) showed there were some 21st century learning opportunities, but these weren't happening very often for most students.

Most interviewees (including school staff, students, and community/business partners) thought that at least some aspects of schooling need to change to increase student achievement and

engagement, and/or to meet the new needs of the 21st century. Their visions for schooling in general, and their hopes for E4E specifically, form a continuum from "tweak the known" to "radically shift for the future". The latter is more aligned with the transformative agenda of 21st century learning theorists.

How do actual E4E learning opportunities in the clusters fit with 21st century goals?

The activities presented under the E4E "umbrella" most commonly involved in-depth problem-focused projects, increased student decision making, and team work. Less common were activities which involved serving the local community through true partnerships, interdisciplinary work, or systems-level thinking. Six broad types of E4E activities, each with different strengths and challenges, were:

1. Identifying "enterprising" opportunities within existing teaching and learning approaches
2. Business or community expert as teacher
3. Teacher-created "purpose"
4. Creating real knowledge to meet a real need as a practice activity
5. Teacher-directed real work for a real purpose in the real world
6. Student-led real work for a real purpose in the real world.

Although this is not a clear-cut hierarchy, examples of the last of the six activities tended to most closely align with 21st century learning ideas. Case study teachers noted some differences between their "E4E teaching" and previous teaching. Early indications of impacts for students align with the new key competencies (a major focus of the new *New Zealand Curriculum*, developed to better meet the needs of 21st century society).

How has E4E operated at a cluster level to support E4E development so far (in terms of local development objectives and the structures or roles that support it)?

According to our early data, it appears that the clusters are on the way towards establishing networked leadership and professional learning communities, although they may not yet meet literature-based expectations associated with quality professional development and transformational whole-school/system change. Key aspects of E4E cluster arrangements include roles for:

- a regional co-ordinator
- professional development/national co-ordinator
- cluster collaborations
- principals
- teachers' E4E "cell" or wider school groups
- community/business partners.

People within regional-level roles hold a wide range of (sometimes implicit and sometimes competing) objectives for E4E. These objectives include:

- setting up and fostering a regional cluster model
- creating mutually beneficial partnerships
- providing enterprising learning opportunities
- supporting students to become educated lifelong learners with enterprising competencies
- supporting whole-school change towards E4E integration and an enterprising culture
- ensuring sustainable enterprising communities underpin New Zealand's development in a globalised economy
- supporting schools to reflect and support the knowledge society.

Given that national and regional/school stakeholders from the education and business sectors are all working towards E4E development, which are the strongest drivers behind E4E developments in the clusters?

Because the draft strategy itself was still in development at the time Phase Two began, there is room for "co-creation" in E4E. Our analysis shows that influence has been two-way, with schools and clusters driving E4E development "on the ground" as well as national leaders driving it "from above". Sometimes pushing boundaries within the design phase has been experienced as uncomfortable territory for all parties, for a variety of reasons. In line with a "ground up approach", many schools are initially using the term "E4E" to refer to particular subjects, programmes, or activities that they believe relate to E4E even though they existed in the school prior to being part of an E4E cluster. Within E4E projects, we also found examples of the education sector and business sector, coming together to create "something new" rather than one simply driving the other.

How can partnerships with Māori communities enable E4E to better meet the aspirations, needs, and values of the Māori community?

E4E is aligned with a long-term shift in the Government's thinking towards local level partnerships with Māori communities. The types of partnerships that schools and their communities desire and aspire to may vary from community to community. To establish partnerships with Māori communities as part of E4E, it appears that more time may be needed to think about how to achieve this and what it might look like. This calls for more talking about what a "successful" partnership might mean in this context. There are two questions we think need to be considered further:

- When talking about the Māori community, who are we referring to?
- Who should be involved in defining the type of relationship between the Māori community and/or members of the Māori community and schools?

E4E could become a vehicle for schools to meet Māori community needs and aspirations, however, neither E4E leaders nor schools can assume they know what these are. Ideally these would be identified and defined through discussions between schools and Māori communities.

How well does the E4E Strategy: Draft version 4.0 *currently align with 21st century learning?*

Although the statements in the *E4E Strategy: Draft version 4.0* (Ministry of Education, 2007a) may be interpreted in different ways, many seem to align, to some extent, with ideas about 21st century learning. The full realisation of 21st century learning environments requires system-wide change that is bigger than E4E or even the Ministry of Education. However we see that the *E4E Strategy: Draft version 4.0* (Ministry of Education, 2007a) has the potential to support schools to move towards this goal. Future iterations of the draft might benefit from making more reference to the deep and fundamental changes that may be necessary for schools to fully embed 21st century learning ideals and become part of the knowledge-based economy.

Conclusions

There appear to be (at least) two different sets of assumptions and goals driving E4E regional cluster developments: those reflective of 20th century ideas about schooling; and those more closely aligned with 21st century learning ideas. This is not surprising given that existing school structures were set up to align with 20th century thinking.

We see E4E as a potential vehicle for 21st century learning. In order to further support E4E schools as they move towards this way of teaching and learning we have identified a number of recommendations. These include:

- Ensure that professional development is well-timed and provides opportunities to engage in theory and visioning for E4E, as well as the nuts and bolts of how to make change over time.
- Continue to develop support materials that are not prescriptive but provide inspiration and practical guidance.
- Begin to extend learning communities to incorporate the full cluster of E4E teachers, as well as students and partners.
- Focus discussions between school and community/business partners on the primary purpose of the partnerships, including building educational value.
- Provide time and support for discussion and negotiation between partners so that "something new" can be created in the space between them.
- Provide teachers with more support and time to explore the knowledge of different disciplines, their origins, and how these have evolved, and to engage in systems-level thinking themselves as well as time and support to develop approaches to enable students to do the same within enterprising learning environments.
- Give students more opportunities in their work with business/community partners to serve the community so that both they and the partners benefit.

- Consider the question of how to achieve a balance between engaging and supporting innovation and trying to capture or predetermine innovation.
- Strengthen the messages about 21st century learning in future drafts of the national strategy, and outline the steps that might be achievable at different stages of an E4E journey.

1. Introduction

As part of Education for Enterprise (E4E), the Ministry of Education (MOE) and New Zealand Trade and Enterprise (NZTE) are funding four Regional E4E Clusters (in Northland, West Coast, Nelson, and Manukau). The aim is to embed an enterprising culture within clusters of schools based on characteristics unique to their individual communities. The New Zealand Council for Educational Research (NZCER) has been contracted to conduct an evaluation to track progress and support developments in these regional clusters through 2007 and 2008. This report presents our findings from the first two phases of our evaluation, and draws on our regional meetings, initial surveys, and case study interviews. The next report will be prepared in 2009, and will include findings from evaluation activity beyond November 2007.

Education for Enterprise

The four Regional E4E Clusters have been set up to pilot a regional cluster approach to E4E.

E4E is broadly defined 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. (Te Kete Ipurangi, 2007)

A 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[1]. The involvement of these other people and groups aligns with the intention that schools embed E4E approaches across their curriculum programmes and school culture:

> The goal of this initiative is to develop students who are enterprising in their core learning areas (such as English/te reo Māori, health and physical education, mathematics, science, social science, technology, and the arts) and in their co-curricular activities. Education for Enterprise adds value to school-based learning as a context and approach to learning, rather than as an additional programme. (Te Kete Ipurangi, 2007)

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*.

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

Schools in a number of different regions have been developing E4E and/or related enterprise education initiatives and programmes for the last few years, sometimes as part of small clusters supported by regional economic development agencies, local businesses, and community groups. To date, this has not been centrally co-ordinated by the MOE, and there have not been many E4E-specific resources available to guide such developments. E4E steps beyond previous initiatives—such as the Young Enterprise Scheme (YES), Primary Enterprise Programme (PrEP), and the Enterprise Studies Programme (ESP)—to bring about whole-school change designed to develop an enterprising approach to all teaching and learning.

This NZCER evaluation coincides with the beginning of a draft national strategy for a centrally co-ordinated regional approach to E4E. The MOE has recently 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 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 Enterprise Culture and Skills Activities (ECSA) fund administered by NZTE, and the Tindall Foundation.

Development phases

The Regional E4E Clusters Initiative consists of three phases:

Phase One (completed): A Northland Enterprising Teachers (NET) programme was established and run from April 2004 to September 2005, and a West Coast Education to Business (E2B) initiative ran over a similar timeframe. The NET pilot programme was designed to help secondary school teachers and school leaders in Northland to develop an "enterprising" approach to teaching and learning in their subjects and across their curriculum. NZCER evaluated NET in 2006 and some of the findings have fed into Phase Two developments (Bolstad, 2006a). Many of these schools began their enterprise journey with Enterprise New Zealand Trust programmes such as the Young Enterprise Scheme.

Phase Two: Commencing in 2007, this phase uses the evidence generated in Phase One to scope school cluster sustainability, pilot a regional E4E approach for new school clusters in selected regions, and evaluate the processes and outcomes of the Regional E4E Cluster model as a support structure for nationwide E4E development. This report describes the initial phase of that evaluation.

Phase Three: Building on the experience and evidence gained in Phase Two, the E4E programme is expected to be expanded for greater national coverage in Phase Three.

Regional E4E Cluster Funding is a contestable fund to which school clusters must apply. The Criteria and Guidelines for the Regional E4E Clusters state that the project:

> aims to embed an enterprise culture into clusters of schools based on characteristics of their individual communities. (NZTE, 2007c, p. 7)

Four school clusters were selected for funding in 2007, in Northland, Manukau, West Coast, and Nelson. A national co-ordinator position was established in early 2007 to support these four clusters alongside national E4E developments.

The *E4E Strategy: Draft version 4.0* (Ministry of Education, 2007a) suggests that the regional clusters receive seeding funding for one year (2007), with a possible extension for a second year (2008) dependent on a review of progress, and amount of funding received by the cluster to date. The clusters are expected to use the bulk of this funding to employ the contracted services of a regional E4E co-ordinator. The regional co-ordinator's role is to work with schools, businesses, and community groups to enhance E4E understanding and develop E4E partnerships between schools and communities/businesses. School clusters are expected to receive ongoing support in terms of professional development and E4E-specific resources during and after the initial year of funding.

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 NET and the West Coast cluster operated as a locally-developed initiative called Education to Business (E2B). Manukau and Nelson are 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. 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.

It is important to acknowledge the key role that NET played in national E4E developments. To quote from NZCER's evaluation of NET (Bolstad, 2006a, p. 3):

> By mid-2005, the NET project had helped Northland to gain considerable reputation as a leading New Zealand region in regards to the development of education for enterprise. As a result, the NET director had been asked to be involved in promoting the concepts in a range of other New Zealand regions. It was felt that this growing national profile provided additional impetus to enterprise education in Northland, and was a significant factor in the continuation of corporate sponsorship in this region and the increasing willingness of schools to carry some of the financial load to ensure sustainability (Leadley, 2005b)… A national strategic planning workshop was held on 18 August 2005 and was attended by staff from the Ministry of Education and New Zealand Trade and Enterprise, among others. The key result of the workshop was to form a task force to carry through recommendations from the various workshops, including the instigation of a review of the NET programme (Kirkley, 2005).

Key goals and outcomes

During 2007, E4E underwent national-level development, in addition to (and in relationship with) E4E developments within the regional clusters. For example, the E4E website on Te Kete Ipurangi has expanded to include a new range of key messages, outcomes, and statements that

were developed at a Strategy Development Group meeting in April. The website's slogan, "Enterprising learners lead enterprising lives", is supported by the vision, "Education for Enterprise is a community partnership creating a dynamic learning process that develops enterprising students". The three key messages are:

- An enterprising approach to learning develops enterprising, successful New Zealanders.
- Enterprising learning is relevant and authentic.
- Community partnerships are central to enterprising learning.

The national outcomes, for different sector groups, are:

- *Government agencies:* Agency partnerships that work to create sustainable enterprising communities.
- *Business and community:* (a) Students who have an appreciation of the importance of the place of business in New Zealand society and have the skills, attitudes, and desire to participate in it. (b) Communities see that students are actively contributing to the wellbeing of their communities.
- *Education for Enterprise providers*: Schools work in partnership with community and business to embed enterprise in the culture of the school and display it in the leadership, teaching, and learning, and all areas of school life.
- *Students*: Students 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.

These student enterprising attributes are listed to be:

- 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 2006 ECSA funding round (for 2007 funding) asked applicants to outline their outcomes in terms of:

- Pedagogy (in the classroom, including teacher practice)
- Management (school-wide changes)
- Partnerships with local/national business
- Community student outcomes raising achievement and reducing disparity
- Teacher practices that promote enterprising classrooms.(NZTE, 2006, p. 6)

This list was reduced to the first three for the 2007 funding round, and the partnerships outcome was extended to include communities as well as businesses (NZTE, 2007a). Applicants were also asked to identify how they intended to achieve the new desired outcomes on the E4E website. There is range of other objective-style criteria outlined in the ECSA funding guidelines (NZTE, 2007b), which are considered in the findings chapters of this report.

The evaluation's main focus is the Regional E4E Clusters ("cluster focus"), and how this fits with national E4E work ("E4E strategy focus") and other future-focused education developments ("21st century learning focus"). Before we outline the purpose and plan for this evaluation, we briefly situate E4E conceptually, taking into account New Zealand and overseas literature.

Conceptualising E4E

Theoretical divisions of enterprising education

E4E is a complex area because people see different enterprise programmes in different ways within the education area. Finnish enterprise education 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.

This section considers three different theoretical representations of enterprise education objectives, from Australia, Europe, and New Zealand.

In the Australian literature, a classic breakdown, similar to that of environmental education, is the education "about", "for", or "through" enterprise—as presented in Table 1.

Table 1 **Purposes of teaching enterprise education**

Purpose	Results
Education about business	Students learn about economics and how businesses and other enterprises work.
Education through enterprise	Using enterprise education activities to achieve learning outcomes from a wide range of learning areas.
Education for enterprise	Developing students' enterprising attributes.

Source: Western Australia Department of Education (2002) cited in Broz (2003, p. 3).

A similar but more complex breakdown is provided by Hytti and O'Gorman (2004) as the result of their review of 60 enterprise education programmes throughout Europe. They relate each of their three programme objectives to another European author who developed a simpler schema of three purposes of enterprise learning (Gibb, 1999, cited in Hytti, 2002). We have ordered them to show that they match roughly against the "about", "through", and "for" distinction captured in the above table—although they have a more explicit focus on business and entrepreneurship.

Table 2 **Objectives of enterprise education programmes**

Programme objective	Purpose of learning (Gibb, 1999)	Parallel
Programmes striving to create a better understanding of (small) businesses and entrepreneurship in order to prepare people for the world of work	Learning to understand entrepreneurship	About
Programmes aimed at creating skills and improving the information necessary for a person willing to start up or manage a small business	Learning to become an entrepreneur	Through
Programmes trying to help people to become more enterprising in their overall lives due to the changing nature of society	Learning to become entrepreneurial	For

Source: Adapted from Hytti and O'Gorman (2004), except for column three.

In New Zealand, the very title given to the enterprising education project being developed in the regional clusters, "Education *for* Enterprise", emphasises the middle category. Indeed, we see that of the three options the "for" category is best matched to E4E's aim to develop students' "enterprising attributes". That said, according to the table, enterprise *through* education best lends itself to E4E's aim to nest enterprising education within a range of curriculum areas—and even providing the vehicle for integrating them. In fact we see that the education *through* enterprise (not necessarily business) could be the main avenue by which schools might provide an "authentic" learning environment necessary for developing enterprising attributes *for* enterprise. Therefore, the evaluation is open to E4E being education for, through, and about enterprise.

A critic of enterprise education in New Zealand provides a rather different conceptual breakdown. Clark (2004) identifies "at least four different meanings, and hence four different ways that they might be dealt with in the curriculum" (p. 321), which we have summarised in the table below.

Table 3 **Four different meanings of enterprise education**

Meaning	Explanation
Education to be enterprising	Learning which equips students to be innovative, and develop enterprising attributes across different curriculum areas.
Creating enterprising organisations	To be an organisation that is "flexible enough to meet quickly, efficiently, and effectively the challenges" in the "push for a competitive global society and knowledge economy".
Education about enterprise	"Educating young people about the society we live in"—so they have understand the "broad free-market economic activity of the nation", including negative aspects, critical theories, and historical or potential alternatives.
Indoctrination into enterprise	"A mode of teaching that is aimed at or leads to students holding [educators'] beliefs in an uncritical manner" (Snook, 2003), thus reproducing the dominant ideology of the free-market economy and adopting the values of business in an uncritical way.

Source: Adapted from Clark (2004).

Clark (2004) critiques the potential value of—and motivation behind—each of these categories. His schema is developed from a conceptual reflection on two opposing forces (Beeby, 1992): the aims of education (where being an educated person is an end in itself) and the functions of schooling (which include contributing to the economic development and wellbeing of the country). His greatest concern is the "indoctrination into enterprise" category, within which he locates part of the MOE's 2003 definition of "enterprise education" (printed in an issue of *Education Gazette*) and the Young Enterprise Programme (YES), Primary Enterprise Programme (PrEP), and Enterprise Studies Programme (ESP). Quoting from 2003 YES, PrEP, and ESP web pages he contends that these programmes encourage students to uncritically adopt the values of business.

Although there are no doubt many who would challenge this view, 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, individual organisations' workings, or profit-making tactics). Clark's commentary was partially prompted by a curriculum stocktake recommendation that enterprise education be included in the *New Zealand Curriculum*, a new version of which has just been released.

Educational significance of E4E

New Zealand's E4E emphasis on authentic learning in dynamic relationships with community partnerships means that it aligns well with a 21st century learning agenda. The *New Zealand Curriculum*, released in November 2007, states that "Our vision is for young people who will be creative, energetic and enterprising;…" (Ministry of Education, 2007b, p. 8). The new curriculum includes "enterprise", defined as "exploring what it is to be innovative and entrepreneurial", as

one of four[2] future-focused issues that can connect or integrate different learning areas (p. 39). A level five social sciences achievement objective is for students to "understand how people seek and have sought economic growth through business, enterprise, and innovation" (Ministry of Education, 2007b, social sciences insert).

The Te Kete Ipurangi E4E website suggests that E4E is expected to provide an opportunity for students to do the following within the context of curriculum learning:

- Apply their wider school learning in real life situations;
- Make decisions about their learning rather than having decisions made for them;
- Have opportunities to exercise individual and group initiative, inside and outside the traditional boundaries of schooling;
- Exercise personal and shared responsibility, rather than being dependent on the teacher to solve problems and resolve issues; and
- Develop and apply knowledge and skills that will underpin successful transitions to participation in economic and social life. (Te Kete Ipurangi, 2007)

Indeed, both the *E4E Strategy: Draft version 4.0* (Ministry of Education, 2007a) and the ECSA Regional E4E Cluster guidelines call for regional clusters to facilitate schools' understanding of E4E as a context for the new key competencies. The key competencies replace the "essential skills" of the previous curriculum framework: "More complex than skills, the competencies draw also in knowledge, attitudes, and values in ways that lead to action" (Ministry of Education, 2007b, p. 12). The five key competencies are:

- Thinking
- Using language, symbols, and texts
- Managing self
- Relating to others
- Participating and contributing.

The new curriculum suggests that "people use these competencies to live, learn, work, and contribute as active members of their communities" (Ministry of Education, 2007b, p.12). Therefore students are expected to develop key competencies as an outcome of schooling, but they are also a "means" by which students can reach other learning goals. The curriculum states that students can develop key competencies "across learning areas and in increasingly complex and unfamiliar situations" (Ministry of Education, 2007b, p. 38). It suggests that "future-focused issues" are a potential source of rich and relevant learning opportunities which invite students to make connections across key competencies, values, and learning areas.

The NET evaluation (Bolstad, 2006a) completed while the *Draft New Zealand Curriculum* (Ministry of Education, 2006) was out for consultation, found that:

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

> The practices that tended to be ranked lowest in priority by teachers (but were valued highly by students) seem to align most closely to the key competency of 'participating and contributing'. Hipkins (2006) puts forward a strong case that this key competency provides a particularly strong focus for planning for meaningful student action that brings together all the other key competencies. This is because students need opportunities to *actively* develop the key competencies in *authentic* contexts. (Bolstad, 2006a, p. 64)

Our current evaluation of Phase Two of the Regional E4E Clusters Initiative is positioned to evaluate the extent to which the unfolding *E4E Strategy: Draft version 4.0* (Ministry of Education, 2007a) and E4E developments across four regions align with the recently-released *New Zealand Curriculum* (Ministry of Education, 2007b), its key competencies, and wider ideas about teaching and learning in the 21st century.

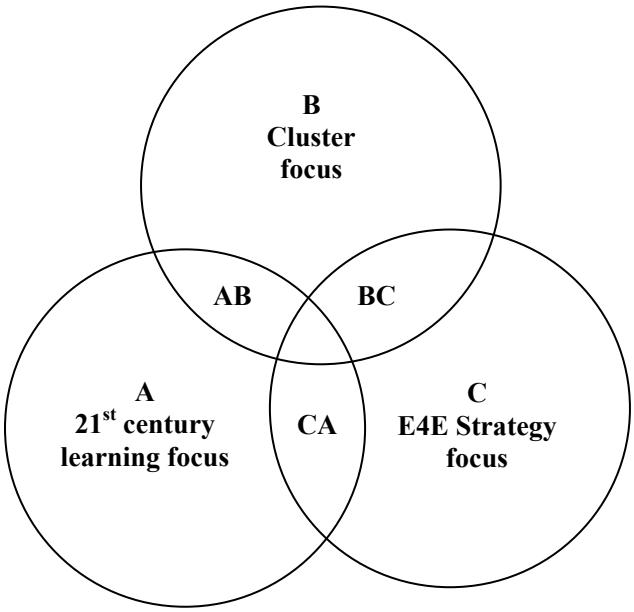
The regional E4E clusters evaluation (2007)

E4E is an area with the potential to involve and generate learning amongst many different people and groups across the school, business, and community sectors. This includes the learning that takes place within each cluster, as well as what can be learnt from analysing trends and patterns that emerge across the four clusters.

This evaluation is designed to track developments in the regional clusters through 2007 and 2008, and inform development of the *E4E Strategy: Draft version 4.0* (Ministry of Education, 2007a). It will provide insight into the effectiveness and impact of the E4E cluster funding, as well as indications of the clusters' progress towards sustainability in E4E.

Our evaluation approach was designed to include three overlapping focuses: a "cluster focus"; an "E4E strategy focus"; and a "21st century learning focus". The purpose for including these three focuses in the evaluation design is to acknowledge that there will be a range of goals and objectives with regards to E4E amongst different stakeholders in the Regional E4E Clusters Initiative and wider draft strategy. 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 enables NZCER to provide evaluation feedback that is engaging and meets the needs of different audiences.

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



More details about the evaluation methodology are provided next in Chapter 2. Beyond that the remainder of the report is structured by Figure 1 above. The table below shows that each chapter is guided by a question which relates back to a "space" in the Venn diagram above.

Table 4 **Report structure**

Space	Guiding question	Chapter
Setting	What are the characteristics of each regional cluster, and how has each begun to establish a unique approach to E4E?	Chapter 3
A	How closely does current schooling and visions for schooling in the clusters align with ideas about 21st century learning?	Chapter 4
AB	How do actual E4E learning opportunities in the clusters fit with 21st century goals?	Chapter 5
B	How has E4E operated at a cluster level to support E4E development so far (in terms of local development objectives and the structures or roles that support it)?	Chapter 6
BCi	Given that national and regional/school stakeholders from the education and business sectors are all working towards E4E development, which are the strongest drivers behind E4E developments in the clusters?	Chapter 7
BCii	How can partnerships with Māori communities enable E4E to better meet the aspirations, needs, and values of the Māori community?	Chapter 8
CA	How well does the *E4E Strategy: Draft version 4.0* (Ministry of Education, 2007a) currently align with 21st century learning?	Chapter 9

Phase Two of the Regional E4E Clusters had only been operating for a number of months at the point we began writing this report. Therefore the intention of this report is primarily formative. Our aim is for it to support further thinking and developments of E4E and regional clusters. To that end we have attempted to capture key aspects of the beginning cluster journey. Our focus is more on how E4E has been conceptualised and what processes have occurred to help it develop, rather than on impacts or outcomes. The report sets the scene for our 2009 report, and provides a form of "baseline" data and analysis. While the evaluation is not set up on a pre-post-test design, we are well positioned to investigate progress over time.

Given the timing and focus of this report we hope it will help all stakeholders, especially E4E national leaders, regional leaders, and school clusters, reflect on their role in E4E developments to date, including their theoretical assumptions. We hope this process supports people to make decisions about the directions that they want to head in from this point forwards.

2. The evaluation methodology

This evaluation involves elements of formative, process, and impact evaluation. We designed it to enable us to support the ongoing development of E4E (within individual schools, regional clusters, and nationally) by examining the processes by which the clusters establish and pursue their E4E objectives/practices and by investigating the outcomes that they achieve within the evaluation time frame. We also explicitly draw 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 is to be *part of* the E4E development process, hopefully as a critical change agent.[3]

The overall aims of the evaluation are to:

- investigate the processes and assess the impacts associated with schools (and regional 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 sustainable education for enterprise (for example, by using the Critical Change indicators and Measures of Change identified in drafts of the E4E strategy) and to assess the viability of the draft 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 education for enterprise in the clusters aligns with the kinds of curriculum and pedagogical practices that have been advocated as appropriate for 21st century education.

Our four evaluation principles are:

- flexible evaluation design
- collaboration and formative feedback
- student involvement
- informed consent.

[3] 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.

The diagram presented in Figure 1 has been used to frame all levels of the evaluation, including evaluation design, information needs, instrument development, analysis, and reporting. This evaluation began in early 2007 and will continue until early 2009.

The three focuses for the evaluation

As mentioned in the introduction, the evaluation has three focuses: on the individual regional clusters; the draft E4E strategy; and 21st century learning. Each focus area has its own set of research questions. These will be addressed throughout the entire evaluation, though some will come to the fore, or be adapted, at different phases of the evaluation. Below we introduce the main evaluation interests within each of the three focuses, and the 2007 research questions that guided the Terms 2–3 data collection which informs this report. This report is motivated by attention to the formative and process purposes of the evaluation: in the next report we will plan to pay more attention to outcomes.

Cluster-specific focus

We did not include specific research questions for the cluster-specific focus in our research proposal. Instead we suggested that our evaluation would seek to help schools refine their cluster's region-specific E4E objectives in relation to the draft E4E strategy, and evaluate progress over time. We took heed of a review of 50 enterprise programmes across four European countries, which suggested:

> …programme objectives may vary, but that in designing programmes, educators believed that clear objectives were important. In some of the national programmes, objectives and methods required local adaptation to ensure the programmes were embedded in the regional context. In addition it should be noted that while the promoters of enterprise education may have specific aims, the participants might have divergent aims. (Hytti and O'Gorman, 2004, P. 18)

Due to a variety of circumstances, early 2007 was not an appropriate time for us to work in an active way with the clusters, partly because not all clusters were meeting together themselves. Therefore, we sought to understand the different objectives (implicit or explicit) that different stakeholders held within each cluster. Our 2007 (Terms 1–3) research questions were:

- What are important components of the regional cluster model, and how do they support E4E developments?
- What are schools' and/or clusters' development priorities for E4E? (e.g. What are *they* hoping to achieve? Where do they think they're currently at? What do they think would support their development?)
- How do business and community partners perceive E4E, and what are the reasons for their involvement?

- How is 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 relation to Northland initially, how can E4E meet the needs of Māori students and communities? How does E4E support Māori development?

E4E strategy focus

There is interest in identifying how the experiences of and evidence from these four Regional E4E Clusters can inform Phase Three of the MOE/NZTE Regional Clusters Initiative—the further conceptual development, growth, and expansion of the E4E programme at the national level. Our evaluation is therefore set up to test how well schools and clusters achieve the intended outcomes of the national E4E programme; and to evaluate the viability of the national strategy's conceptual model for E4E cluster development.[4] 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? We have provided a tailored in-house report to MOE and NZTE specifically considering the second question. We also focus on the second question in this interim report, although some of the data we have collected shed light on the first question.

Our guiding questions for 2007 were:

- 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?

Outcomes achieved will be explored in more depth in the next report, as will answers to the MOE and NZTE's evaluation questions about the extent to which some outcomes of particular interest have been achieved (as outlined in Appendix A).

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". This

[4] 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.

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, (2007b)), and the recent "personalising learning" policy agenda (Maharey, 2006), and key ideas, literature, research, and theories in contemporary educational research regarding future directions for the New Zealand education system. The kinds of questions that will be addressed in this layer of the evaluation under the areas of learning communities, life long learning for the 21st century, and the key competencies are outlined in Appendix A. We condensed these ideas into the following research questions for 2007:

- What are different people's perceptions of the current teaching and learning environment in the schools and/or clusters generally and E4E-related activities specifically?
- How do these perceived learning experiences align with E4E intentions and 21st century learning ideals?
- How are E4E "learning communities" beginning to develop in E4E schools and/or clusters?[5]

Techniques and methods

Following from the methodology used in the NZCER evaluation of NET (Bolstad, 2006a), we employed a mixed-method design.[6] This involved collecting a combination of qualitative and quantitative data from school staff and students, community/business partners, and regional co-ordinators involved in the Regional E4E Cluster Initiative.

We did not interview a representative from either the MOE or NZTE as part of the evaluation.

Consultation/facilitation

In March 2007, NZCER researchers visited the West Coast and Northland to meet with the regional and national co-ordinators and attend E4E cluster meetings. We presented a PowerPoint summary of the 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 thoughts, concerns, and suggestions. Drawing on the ideas raised, we developed a more detailed draft evaluation plan, and the 2007 research questions outlined above. 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.

---

[5] We consider this under the "cluster focus" in this report.

[6] 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.

We also met with all four regional co-ordinators and the national co-ordinator at their first national hui in late May. After introducing our draft evaluation plan and asking for their feedback on recruitment processes that would suit their clusters and meet our ethical obligations, we gained their feedback on initial drafts of our principal, community/business partner, and student surveys. We also facilitated a session to help surface their implicit objectives. The regional co-ordinators brainstormed aims for themselves and their cluster, prompted by the following general questions:

- Why is E4E important for your region?
- What is important for schools, communities, and businesses in your region to develop via E4E?
- What particular contexts or issues do you want E4E to help address?
- What are you, your region, or different schools aiming to change or create?

They then discussed their individual objectives and grouped together similar objectives.

We attended one of the first cluster meetings in both Manukau and Nelson during June, after first meeting with the regional co-ordinator and national co-ordinator to discuss the region's past and present involvement in E4E and practicalities/suggestions for the evaluation. At the cluster meetings we introduced the final Evaluation Plan, answered queries, and asked for feedback on areas that we could still adapt. By that point our evaluation introduction packs had been prepared (see below), and so we handed these out.

At the second regional co-ordinators' hui in August, we presented some interim findings from the survey data that had been collected by that point. The regional co-ordinators advised us to feed the data back to schools that had already completed their student surveys, which we did. We also asked for co-ordinators' feedback on a draft for the lead teacher interview schedule, which provided the base for developing other interview schedules for the case studies.

Recruitment

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. We gave each principal an information pack, with a mini-pack for lead teacher.[7] The information packs included a personalised letter, an information sheet about the evaluation (Appendix B), and the Evaluation Plan (Appendix C). Northland and West Coast packs contained a summary of the advice that we had taken into account as a result of meeting with them earlier (Appendix D). Principals also received a consent form and a Principal Priorities Survey.

The consent form asked principals to indicate if they were happy for their school to take part in the evaluation and, if so, what data collection components in the plan they agreed to, and who

[7] These were sent to Northland and West Coast schools, and handed out (where possible) to Manukau and Nelson schools at an introductory session.

NZCER should contact about the evaluation in the future (we suggested they nominate E4E lead teacher).

We sent the introduction pack to all 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. The result of all this is that 31 principals gave permission for their school to be involved in the evaluation. Three schools did not give permission (at least for 2007)[8], seven schools told us that they were not involved in E4E for 2007, and six schools did not respond. Putting aside the schools that told us they were not part of E4E, our consent rate for 2007 was 77 percent.

We conducted three surveys during Terms 2 and 3: a principals' survey; a student survey; and a community/business partner survey. We carried out case studies and additional focus groups in Term 3. The table below outlines the responses to these main data collection methods, which are described in more detail next.

Table 5 **Participation rates**

	Northland	West Coast	Manukau	Nelson	TOTAL
Returned consent form	13 (inc 5 intensives)*	8	4	6	31[9]
Returned principal survey	10 (inc 4 intensives)	6	4	5	25
Returned student survey	10 (inc 4 intensives)	7	4	5	26 (1682 students)
Returned com/bus partner survey	3	9	6	7	25
Case study (inc student focus groups)	3 (inc 1 intensive)	3	3	3	12
Student focus groups only	3 (all intensives)	-	-	-	3

* When we started this evaluation we were provided with a list of 25 E4E schools in Northland. We invited all schools to take part in the evaluation and selected case study schools from schools where we had received principal consent. However, some time before our visits a subset of seven Northland schools were identified to work in depth through the ECSA Fund. We have maintained a view of the whole region, but have attended to potential differences between the "intensive seven" and the "wider pool" in our analysis and reporting.

[8] 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.

[9] Two of these principals have given verbal consent but have not yet returned a form.

Principal Priorities Survey

We sent a survey to all principals in our sample. We decided to get initial school priorities from principals, because it is their role to "sign up" to E4E, provide overall school leadership, and have an overview of how different initiatives and directions in a school fit together. The principals' survey was divided into the following sections:

- Principal's description of E4E
- Reasons for the school's E4E involvement
- Current E4E understandings and practices in the school
- Two-year priorities for E4E development
- Views about schooling
- Information desired from E4E co-ordinators and evaluators.

Twenty-five principals responded, most in early Term 3. Sixty percent were male and 36 percent female (one did not respond here). Sixteen percent identified as Māori, and 92 percent as NZ European.

Student Teaching and Learning Survey

We sent 110 or less[10] student surveys 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. Students were given an information sheet and were asked to complete a consent form if they decided to take part. We advised that one student should collect the class's completed surveys, seal them in an envelope, and give it to their teacher to return to NZCER.

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

The survey was organised under the following headers:

- Ideas about myself and my future
- My ideas about school

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

- How learning happens in my class(es)
- Managing myself and my learning
- Relating to other people
- Decision making
- Learning about different groups and relationships
- Participating and contributing in school and community
- Learning how to be a creative and critical thinker
- Using languages, symbols, and texts across subject areas.

Between 11 and 108 students from 26 schools completed the survey. The total number of student surveys was 1682, which meant an average of 65 surveys per school. The sample included students from Year 6 to Year 13, but few schools had responses from all year levels. The year levels covered were:

Table 6 **Year level**

Year level	Percent
6	1
7	5
8	9
9	20
10	24
11	13
12	14
13	14

Fifty-five percent of the respondents were female. Students were given the option to identify with more than one ethnic group, and the national patterns were:

Table 7 **Ethnic identity**

Ethnic group	Percent
Pākehā/NZ European	71
Māori	18
Pacific	10
Asian	9
Other	8

Community/business Initial Survey

During Term 3 we sent each regional co-ordinator surveys to hand out directly to community/business partners or to give to schools to hand out to their partners. Each survey came

with an information sheet, and a pre-paid envelope so the partner could return their completed survey directly to NZCER. The idea was that this could be an ongoing process, in which a survey pack could be given to new partners as they came on board with E4E.

The survey was designed to explore reasons for business and community involvement in E4E, and their thoughts about E4E, education, and career paths. It included the following sections:

- Information about the organisation and its relationship with the school
- Understanding of E4E and reasons for supporting it
- Attributes, knowledge, skills, and experiences important for employees
- The nature of the E4E partnership
- Views about schooling.

Twenty-five community/business partners returned a survey to us. Their organisation types and personal demographics follow.

Table 8 **Organisation type**

Type	Percent
Small/medium business	32
Community group	12
Central/local government	12
Large company	12
Non-government agency	8
Charity	4
School/education institution	4
Other	16

Table 9 **Organisation sector**

Sector	Percent
ICT	4
Service provider	28
Community development	12
Food/beverage	8
Manufacturing	8
Retail	8
Education	4
Other	28

Twenty-four percent of respondents were female, and 76 percent were male. In relation to ethnicity, 80 percent identified as NZ European/Pākehā, 15 percent as Māori, 4 percent as Asian, and 4 percent as "other".

Case studies

During Term 3 we visited 12 schools, three from each region (plus 3 additional schools where we solely interviewed students). 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 discussed during our initial meetings[11], to select a range of schools within each region and nationally. Practical issues of distance and travel cost were also taken into account. Two invited schools declined to take part in a case study due to inopportune timing. The table below shows the types of schools we visited.

Table 10 **Case study and student focus group schools**

Demographic	Proportions
School type	Intermediate (1 school) Secondary Year 7+ (2 schools) Secondary Year 9+ (8 schools) Composite (4 schools, including 1 Kura Kaupapa Māori)
Location	Main urban, large city (3 schools) Main urban, small city (6 schools) Minor urban (4 schools) Rural (2 schools)
Decile	1–2 (4 schools) 3–4 (5 schools) 5–6 (2 schools) 7–8 (4 schools)
E4E stage[12]	Emerging (2 schools) Active (7 schools) Leading (6 schools)
Total roll	Under 250 (3 schools) 250–500 (3 schools) 500–1000 (3 schools) over 1000 (6 schools)
Student ethnicity	Over 20% Māori (7 schools, including 3 over 50%) Over 20% Pacific (3 schools) Over 20% Asian (1 school) 80% or over Pākehā (5 schools)

[11] We summarised roughly as "emerging", "developing", or "leading".

[12] This was a *very* rough categorisation based on what we knew about the schools from ECSA applications, meetings with regional co-ordinators, and any contact we had already had with the school.

Case studies were designed to allow us to understand E4E in depth and in complex school environments. We asked E4E lead teachers and/or principals to help set up our one- or two-day visit to their school. 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
- one or two focus groups with teachers who were part of an E4E team or were involved in E4E-type approaches
- the collection of any school documentation mentioned during interview
- a semistructured interview with at least one business/community partner.

The case studies were designed to help us explore how schools and clusters were approaching and developing E4E, and how this fit with their local context. We developed an interview schedule for each of the above groups. Although there were a number of differences, the schedules tended to cover the following kinds of topic areas:

- personal involvement in, and understanding of, E4E
- school context and its history and approach with regards to E4E
- examples of E4E projects or related learning opportunities
- changes for students
- changes for teachers
- changes for school structures, documents, organisation, etc
- changes for partner organisations
- changes for school–business–community relationships
- experiences of regional cluster model and professional development
- challenges faced
- regional development
- E4E sustainability
- Te Kete Ipurangi E4E website material.

Three case studies in Northland were particularly focused on E4E and Māori. Our aim was to take up the NET evaluation's call to investigate and explore ways in which E4E can be developed in order to better meet the aspirations, needs, and values of the Māori community of which E4E initiatives and schools are part (Bolstad, 2006a). We selected three schools with at least 50 percent Māori students; one was in the "seven intensives" subset, and two were in the "wider pool" (see Table 5 caption, page 18). Two researchers, Māori and Pākehā, visited area school and secondary school, and the Māori researcher visited the kura kaupapa on his own.[13] We adapted the interview schedules described above for use in these schools. At this stage we were only able to

[13] We asked each school to set up interviews as they saw fit to help us understand how schools and local communities are approaching E4E, and in particular what E4E might mean for Māori students and their communities.

interview a community/business partner working with one of the schools, although we have been invited back to meet with others at a later stage.

Student focus groups

As E4E is still in development, "student outcomes" are not yet known. Students are the best people to help us understand what these outcomes might look like. In line with E4E priorities and current evaluation literature, we are interested in how well E4E is tailored to the needs of different students, as much as how well students respond to E4E (Millett, 2006). We carried out student focus groups within each case study to explore E4E through the experiences and priorities of students. In three of the "seven intensive" schools in Northland, student focus groups was the only form of data collection[14].

We asked the lead teacher to identify groups of students who could demonstrate the different ways that "enterprising" learning is developing within the school. The same schedule was used in each situation. It covered the following topic areas:

- favourite learning experiences
- E4E-related projects/learning experiences
- perceptions about teaching and school generally
- thoughts about, and examples of, being enterprising and/or "enterprising attributes"
- thoughts about leaving school (including where might live and why)
- impressions about "business".

Regional co-ordinator interviews

We interviewed each of the four regional co-ordinators when we visited their region. We asked them about:

- factors that contribute to schools they see doing really well or struggling
- different understandings of E4E and its potential
- regional characteristics that might impact on approaches to E4E
- factors that contribute to partnerships doing really well or struggling
- regional co-ordinator and professional development roles in the region
- reflections on Te Kete Ipurangi E4E website material
- reflections on the call for "sustainability".

[14] To minimise the burden of full case studies, and let students "talk for" the school.

Data analysis

This report draws interview and survey data together in relation to themes that relate to our three evaluation focuses, and the intersections between them. Where appropriate, we draw attention to individual school and/or regional contexts, and/or the method by which the data was collected. Below we briefly describe the analysis processes we used.

Qualitative interviews

The interview data from the case studies, and additional student focus groups, were reviewed and analysed for significant themes in relation to our three focuses, and the 2007 research questions. 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.

We considered the initial data and themes from our case study analysis to inform our development of Term 4 "wrap up" surveys for lead teachers, teachers, and students who had been involved in E4E-related teaching and learning during 2007. Data from these surveys will be captured and analysed in early 2008. The aim is to build a quantitative picture of E4E learning opportunities, perceived changes and outcomes, as well as challenges experienced.

Quantitative surveys

NZCER's Statistics and Data Management team captured the responses to each of the three surveys. They produced frequency tables and graphs for each topic area and item. These provide the basis of our reporting of principal and business/community partner survey results. Where principals and business/community partners responded to identical or very similar questions, we either compared frequencies directly or produced ranked scores to compare responses to multiple items within a survey section.

We undertook a factor analysis for the student survey data. This is because with 1682 respondents we were well placed to take our analysis beyond frequencies and averages. As described above, we had grouped student survey items under 10 general areas of interest, and we were interested to see whether students tended to respond to each area in a similar way, or whether other response patterns might emerge. We carried out a factor analysis to see the patterns in student answers.

Factor analysis is a technique which is used to deal with responses to large numbers of items, when many of the responses may be correlated with each other (that is, students' responses to one question might be related to their responses to other questions). Factor analysis attempts to define a smaller set of underlying factors which are related to the items responded to, and which explain or represent most of the correlation structure of the data. The set of factors we define in this way is not unique, and the final set used can be chosen according to a number of criteria. The process

of finding the "best" or simplest factor solution is known as factor rotation. We found that six factors—or groupings of student responses—best fit the data.

We could identify an overarching theme for each factor. For this report we have labelled the factors[15] as follows:

- Factor A: Authentic learning
- Factor B: Community connections and relationships
- Factor C: Engagement in education and region
- Factor D: Group work and metacognition
- Factor E: Critical and creative thinking
- Factor F: Copying notes and remembering facts.

Students' responses to items within each of these factors are described in more detail in Chapters 3 and 4.

Reports for schools and regional co-ordinators

We produced a student survey results report tailored for each school and each regional co-ordinator. This report presented the school (or region) against the interim national picture.

Twenty-three schools received a report with their results against interim national comparisons to 1237 students from 23 schools in August. The remainder received reports up until late September/early October when the last schools received comparisons between their own data and those of the final total sample of 1682 students from 26 schools. Where student survey result reports were already available for a case study school at the time of our visit, we handed these out and discussed them with school staff (and occasionally students). For all other schools we sent six copies of their results report to lead teachers to distribute or draw from it however they saw fit. We suggested that they might find it useful to:

- compare their school's data with the national picture
- consider their school's data in the light of their school context and areas of focus/priority
- consider how their information might inform future goal setting.

This report now presents the data we have collected under themes relevant to each area of our three-focuses diagram.

[15] In the individual school feedback reports, which we discuss in more detail next, we used slightly different labels for four of the factors: Factor A: E4E from a business entrepreneur angle; Factor B: E4E from a community/relationships angle; Factor C: Engagement in education and region; Factor E: 21st century learning with critical/creative thinking.

3. What are the characteristics of each regional cluster, and how has each begun to establish a unique approach to E4E?

This chapter sets the scene for the remainder of the report by providing a profile of each of the four Regional E4E Clusters. The Regional E4E Clusters' Criteria and Guidelines state that the project "aims to embed an enterprise culture into clusters of schools based on characteristics of their individual communities". This chapter outlines the early beginnings of E4E in each of the four regional clusters. It provides information about the four regions involved, and looks at how they have started to develop E4E in their region. The guiding question for this chapter is: What are the characteristics of each regional cluster, and how has each begun to establish a unique approach to E4E? Our aim is to examine the extent to which unique regional characteristics show up in our data so far, and to explore whether and how each cluster has begun to establish a unique approach to E4E.

Introducing the four regions

In order to introduce each of the four regions we will present information, drawn from various regional websites, on each region's social, environmental, and economic characteristics. We will then look at the educational characteristics of each region, drawing from information available on Te Kete Ipurangi, putting these together with findings about the general teaching and learning environment as captured by our initial student survey (in relation to the factors described in the previous chapter). Students who completed the survey had not necessarily been involved in any E4E projects or approaches, and they commented on their learning experiences across all of their classes within the school.

With regards to the student survey results, we do not provide tables or graphs of regional comparisons because they are extremely complicated to disentangle. We comment on two types of comparisons: (1) "broad brush" comparisons of each full regional picture against the full national picture,[16] and (2) statistically significant differences in the responses from Years 9 to 13

[16] This picture was provided to each of the regional co-ordinators in a report—each graph in the report provided the spread of their regional data next to the spread of the national data. Each school that took part also received a report which presented their school picture against the national picture.

students between each of the four regions.[17] We found several small but significant differences by region, and these are cautiously reported on in this chapter. Differences were more likely to reflect the characteristics of the individual E4E schools that comprise the regional sample (including the schools' deciles) than geographic effects *per se.*

When we looked for national significant differences across a range of school variables, we found that there were not clear patterns of significant differences for school types or size. The strongest pattern related to decile differences. We found that when schools were grouped into three decile-based groups—high (decile 9–10), medium (decile 3–8 inclusive), and low (decile 1–2), the higher the decile the less positive the student scores on several of the items.[18] We may take this decile analysis further in our next report. For this report it is important to note that the decile trend is relevant to some of the regional differences that we describe soon.

We consider the student survey data in light of the history of enterprising education in each region, taking into account each region's development of the following expected E4E structural arrangements:

- six or more schools, each with an E4E lead teacher and team supported by the school's senior managers
- support from stakeholder group(s) that reflect the community, such as an economic development agency, iwi, and/or Chamber of Commerce
- a regional E4E co-ordinator to work with schools, businesses, and communities locally and, where appropriate, nationally.

According to the ECSA Funding Criteria and Guidelines for Tender Applications (NZTE, 2007c), regional co-ordinators are expected to: deliver and co-ordinate professional learning about E4E for schools; foster partnerships with businesses and communities; profile E4E and its positioning in the *New Zealand Curriculum* and other government initiatives; and work with the clusters to enhance the region's understanding of E4E and how it will be incorporated into schools' curriculum, teaching, and learning.

The initial ECSA applications provided some regional intentions, although it is possible that these were reviewed during 2007 contract negotiations or changed for the 2008 ECSA Funding round.

Northland

The recently launched (award winning) website for Northland tourism states that:

---

[17] Responses from students younger than Year 9 were removed in order to create regional data sets that were more comparable, i.e., had the same range of year groups. Because the national student sample was large, statistically significant differences could be found on smaller differences than a smaller sample would.

[18] Statistically significant differences were found on several items within the survey topic areas of: How learning happens in my classes; Managing myself and my learning; Relating to other people; and Learning about different groups and relationships.

> Northland is known as the Birthplace of a Nation. Kupe, the legendary Polynesian navigator from Hawaiiki discovered Aotearoa/New Zealand around 950AD, landing on the shores of the Hokianga Harbour. Oral history tells us that canoe/waka migration followed at around 1000AD bringing sufficient numbers of people to form viable and sustainable communities [being]…the Tangata Whenua of Aotearoa/New Zealand… The first recorded European contact with New Zealand was by Dutch explorer Abel Tasman in 1642, but it was not until the late 18th century that other explorers, including Captain James Cook, and European settlers began to arrive. Trading, whaling and sealing communities along with missionaries were established…. The Treaty of Waitangi was signed on the 6th February, 1840 in the Bay of Islands…. The region of Northland today starts at around an hour's drive north of New Zealand's largest city, Auckland and reaches to the very top of the North Island at the spiritually significant Cape Reinga. It has a land area of 1.25 million hectares (approximately 3 million acres), with significant tracts of virgin, primordial forests providing a habitat for ancient trees and wildlife. Northland's economy is based on agriculture, tourism, forestry and wood processing, horticulture, construction and marine engineering. Emerging industries include the creative sector, mining and aquaculture. Northland has a full range of professional and retail services. (Destination Northland, 2007)

A regional approach to enterprising education, Northland Enterprising Teachers (NET), was first piloted in 2004–2005 and had extended to at least 24 schools by 2006. Its professional development programme aimed to develop secondary teachers' "enterprising" approaches to teaching and learning in their subjects, and across their school. NET built on the nationwide Young Enterprise Scheme (YES) and Northland's own Young Entrepreneur Programme (YEP), which both focused on enterprising skills, attributes, and business know-how. Explicitly underpinned by E4E principles, NET aimed to reach beyond economics, commerce, and business subjects, and emphasised whole-school responsibility for developing enterprising individuals and communities (Leadley, 2005a, cited in Bolstad, 2006a).

NZCER's 2006 evaluation of NET indicated that the schools involved were at different stages in the process of developing an "enterprising school culture" (Bolstad, 2006a). Some schools had developed a high level of enterprising education embedded in documentation and practice while others were in the early stages of bringing E4E into school practice. Many school leaders and enterprise co-ordinators who responded to NZCER's survey indicated that they were enthusiastic about, and understood, the principles of education for enterprise. However, they were less confident that all teachers in their school shared this level of understanding and enthusiasm.

While teachers held enterprising attributes in high regard, there were some subtle discrepancies between how teachers and students prioritised specific learning opportunities. During focus groups students articulated what they had learnt from NET experiences, placing the highest value on opportunities for student-driven leadership, "practical hands-on" activities with a relationship to the "real world", and interactions with people from outside the school. The evaluation also identified a need to strengthen and expand the E4E model to better fit with the needs, values, and aspirations of Māori students, teachers, and communities (this challenge is taken up in Chapter 8). Despite several noted challenges, including the uneven "take up" (typical of most school innovations in curriculum and pedagogy) the overall success in stimulating and supporting change

in its first two years (Bolstad, 2006a) contributed to the extension of a similar regional approach to be piloted with four Regional E4E Clusters in 2007.

According to its initial 2007 ECSA application, the major intention of the Northland E4E cluster was to strengthen E4E in all participating schools, building on foundations of NET and other E4E activities and initiatives. Particular aims for 2007 included:

- strengthening relationships between schools and iwi organisations and expanding the E4E model to support this
- increasing the participation and support from the wider community
- developing and sharing of resources within the region and nationally
- supporting schools to develop ownership and individuality in the development of an enterprising culture.

NET infrastructure remained in place to support ongoing E4E developments, administered by Enterprise Northland and its NET/E4E regional co-ordinator. E4E is co-funded by ECSA and Northland lines companies Top Energy and Northpower. A critical outcome of the Regional E4E Cluster Initiative will be to find ways to sustain funding from within Northland, considering that ECSA funding is set up to reduce overtime, and Northland is considered to be a year ahead of the other three clusters in terms of funding due to the NET pilot.

According to the regional co-ordinator, enterprising education has passed through three phases in Northland. Initially, enterprising education was promoted through business subjects and the YES. Next, schools were encouraged to adopt a cell approach and engage teachers from across different curriculum areas. Now the emphasis is on teaching processes and engaging whole schools.

Three Northland districts—Kaipara, Far North, and Whangarei—have up to 27 schools involved in E4E. To be on par with the small number of E4E schools supported by a regional co-ordinator in other regions, part way through 2007 a variation on Northland's ECSA contract directed the regional cluster funding to intensive work with seven schools:

> The information we've got and access to the website [is open to everyone]. Whenever we communicate it's with all schools. So if I send an email out, like if we're doing this property auction thing, the information goes to them all. So what I'm doing is being proactive with the seven schools and reactive to the rest … I'm a broker with a lot of those schools…if they approach me. I talked to the Secondary Principals Association, and so talked with all of [Northland's principals] about E4E. But we will work proactively with those seven schools…to report on the different models of those seven schools … and get some really meaty stuff on what works in the nitty gritty… We see that those schools can actually provide a model or an example for the rest of the region, so we're not leaving anyone behind. As others come on board, that's going to be the challenge for us, to look for the resources to bring those others on board … We're focused on the students and whatever we think will work for them, and we believe that this will. (Regional co-ordinator)

Nevertheless, despite (or perhaps partly due to) intensive enterprising approaches within these seven schools, at the early stage of our data collection it appeared to have been a challenge or a

low priority for some of them to fully engage with E4E opportunities and requests associated with the ECSA contract. For example, not all took up the offer of professional development from the E4E national co-ordinator and while five agreed to some part of the evaluation they did not necessarily opt into all components.

We looked to see whether students' survey responses within the "intensive" schools differed significantly from those of the wider group. Taking into account that we only had data from four of the seven, one of which returned a very small sample, we did not find any clear trends. This suggests that while the intensive schools may have a stronger focus on E4E now or in the future, other schools involved in the NET project have teaching and learning approaches (as perceived by students) which align with some of the broader E4E pedagogy. It is worth noting that when we compared these seven schools against the total list of E4E schools, we found that the overall spread of decile is slightly higher in the intensive schools, and the proportion of Māori students is lower.

"Broad brush" regional comparisons on the student survey data suggest that two notable strengths in the total Northland sample were Factor B: Community connections and relationships, especially with regards to learning processes (discussed in more detail in Chapter 4), and Factor D: Group work and metacognition.[19] [20]

Overall, Northland's regional picture generally showed up as on par with, or narrowly outstripping, the national picture.[21] An exception was Factor C: Engagement in school. That said, Northland had the highest proportion of secondary-aged students "strongly agreeing" to three out of 12 school engagement items:

- "I'm developing into an enterprising person because of this school"
- "The things we do at this school help to make this area/region a better place"
- "Most of my teachers get to know about my culture or beliefs".

About 60 percent of Northland's surveyed secondary students did *not* identify with the statement that "I'll probably live in this area/region when I'm an adult". Only about a fifth did not "love living in this area/region". Several case study interviewees mentioned that they might go somewhere bigger, like Auckland or Australia, to make money and bring it home:

> [I want to] make the money over there [Australia] then bring it back to my hometown here. (Student)

---

[19] The Northland region had a statistically significant (but narrowly) higher proportion of Years 9–13 students strongly agreeing with several items within each of those factors in comparison to other regions.

[20] See page 26 for explanations of the factors.

[21] The survey included schools outside of the seven intensive schools that the ECSA contract now focuses on, and the survey was about students' general teaching and learning experiences across all their classes rather than E4E experiences specifically.

> Australia is bigger with more opportunities. You can hardly get a job over here, unless you're like 'up there'. (Student)

West Coast

The West Coast Regional Council website states:

> The West Coast has been described as a region of mountains, rainfall and rivers. These features combined with the processes of uplift and erosion have resulted in a landscape of unique character, two thirds of which is mountainous… The West Coast economy has historically been based on the utilisation of the region's natural resources: notably gold, timber and coal. Early this century farming came to occupy a pre-eminent place in the regional economy. Tourism, long established at the glaciers, but now developing rapidly elsewhere, has recently begun to rival this. The past few years have seen the local economy expand in GDP and growth rates (5.6 percent) that exceed the New Zealand average. West Coast jobs have risen over 13 percent during a period when national growth was only 2 percent. (West Coast Regional Council, 2007)

The West Coast is divided into three districts—Buller, Grey, and Westland—each with 11 to 15 schools, and each including one main "not integrated" co-ed high school. A somewhat negative 2003 ERO report about education on the Coast was followed by a report in 2005 that better acknowledged the challenges educators faced in "the most sparsely settled area in New Zealand", and that: "ERO found many significant improvements in the quality of schooling on the West Coast." (NZEI Media Release, 10 August 2005). Several of our interviewees pointed out that E4E could provide a means to raise local and national perceptions about education on the Coast. Staff in our case studies suggested that while schools may struggle to attract and retain teachers and/or relievers, many believed that this had contributed to a push for resilience and innovation. Region-wide professional development, such as literacy, and recent ICT developments, including video conferencing, support an emphasis on professional learning communities.

The E4E Regional Cluster banner was officially launched on the Coast in early 2007. That said, the cluster was already established under the auspices of a similar initiative, Education to Business (E2B) funded by NZTE, unique to the region's economic development agency, Development West Coast. E2B's co-ordinator became the E4E regional co-ordinator, and Development West Coast took the initiative to contract in an external professional development adviser to assist. Development West Coast supplemented the E4E budget provided by ECSA. This contribution is seen to enable an intensive approach, fast-paced developments, and "protection" for regional self-determination.

Two principals explained some of the differences they had noticed between E2B and E4E[22]:

[22] One interviewee was disappointed to lose the "homegrown" E2B name, which had signalled a Coast initiative.

> The thinking behind [E2B] projects were about entrepreneurial Coasters, at an early stage. There has been a move from confident young people in the economy. It [E4E] moved from being project-based to [being about] higher skills and learning. That's been the role of the Trust [Development West Coast] and [the national E4E co-ordinator]. The whole enterprising movement is signalled in the new curriculum document so people have to look at what that means for each school. (Principal)

> I think with E4E we're maybe looking at us [the school] and the community more. You can actually do some education for enterprise stuff within the school without having to go out… In the past we had a 'one-off' approach. The new [E4E] approach is more continuous. (Principal)

One also pointed out that with regional co-ordinator check-ins, professional development visits, and evaluation requests, E4E had more of an "audit" feeling, the intensity of which was sometimes difficult to accommodate.

Key E4E intentions drawn from the West Coast ECSA application, reviewed by the regional co-ordinator, and then presented at the initial March 2007 cluster meeting, were to:

- build relationships and positive perceptions
- consolidate partnerships
- develop new enterprise activities and professional learning initiatives
- focus on the critical change needed to embed E4E across all levels and strands of schools' curriculum and to develop a school-wide enterprise culture that reflects the intention of the *Draft New Zealand Curriculum*
- support lifelong learning on the Coast (Roberts, 2007).

Development West Coast is motivated to support the economic growth of the region through E4E. Educational and social development is viewed as key to a proud community and a flourishing economy:

> [E4E is] connecting the age differences … long term it will get better understanding within the community of different demographics and age groups … As an economic development agency we see schools and students as the future for worthwhile citizens and communities. (Partner)

Several interviewees noted that the Coast loses its young people to larger cities "over the hill". While some hoped that E4E would help to retain the students raised on the Coast, others were clear that it should be about giving students the wings to fly:

> E4E might encourage students to look at their own region for starting their own business rather than having to go study. (Partner)

> I'd encourage them to fly. They need to go out and see the world then decide if they want to come back … you want people to *choose* here … there are opportunities here. In a small community you've got to be diverse, you've got to be creative. (Lead teacher)

Some students' responses to our question about whether they saw themselves living on the Coast as an adult were:

> It depends on business opportunities. There are not enough opportunities here. It's a nice town but not for teenagers. It's a good settle-down-town to retire or holiday. (Student)
>
> [I'd come back here] to live closer to my parents if I had a house. (Student)
>
> [I want to do] farming. When you live on the West Coast that's a very big option. (Student)

Five schools—three high schools and two area schools—are within the West Coast "full model", which means that they receive external professional development with support from the regional co-ordinator. Another three schools, with previous E2B experience, maintain partial involvement. They each developed at least one small "E4E" project in 2007, and are looking towards stepping up their E4E focus in 2008. Given the geographical spread, schools only had two cluster meetings in 2007 where principals and lead teachers came together. All eight schools participated in at least one 2007 component of the evaluation.

The role of the West Coast E4E regional co-ordinator reflects the longevity of E4E/E2B in the region. The co-ordinator works to initiate, support, and review partnerships between E4E schools and community/business partners, to advocate for E4E in schools and their communities, and to support school staff where necessary while overseeing the progress of the professional development contractor. Considering an interview comment that "there were four projects in 2006 but now there are 36 or more", the task list has increased over the year.

The Coast has set up a wide range of administrative processes to support and track E4E developments (initially set up within the E2B framework). For example, a patented Enterprise Development Alongside Learning (EDAL) objective-setting exercise is documented at the start of all relationships—from high-level E4E objectives set by principals and Development West Coast, through to objectives from each individual teacher and community/business partner. The same parties are expected to use these objectives to review the success of the project and partnership at its conclusion and/or complete a SWOT analysis (to identify strengths, weaknesses, opportunities, and threats). Development West Coast has also designed its own survey and interview instruments to be conducted by the regional co-ordinator and professional development contractor towards the end of the year. Other self-developed reports, such as benchmarks spreadsheets, fieldwork follow-up schedules, and end-of-year activity reports, are completed by different parties, especially those in lead roles.

The initial survey which gauged the current teaching and learning environment within E4E schools, showed that a relative strength of the West Coast region, in comparison to the national picture, was Factor A: Authentic learning. The West Coast's Years 9–13 students narrowly had the "highest" scores on the following survey items:

- "At this school I learn outside the classroom" (Factor A)
- "At this school I get involved with business" (Factor A)
- "At this school I come up with new ideas to meet real needs in the school, community, or a business" (Factor A)
- "We present our ideas to people other than students and teachers" (Factor B).

In most other ways the West Coast picture was similar to, or slightly lower than, the national picture. Like Northland, a particular area that appears to challenge the Coast is school engagement (Factor C—part one). That said, agreement for these items is still high overall, just not quite as high as it is nationally. Also two items, "The things I learn at school will be useful for when I'm older" and "I can see the point of what we learn at school" go against this trend.

Nelson

The Nelson Regional E4E Cluster comprises seven schools located across the geographic areas of Nelson, Richmond, and Motueka, and is within the authority of the Nelson City Council (a dual local and regional council) and the Tasman District Council. The official tourism website claims that the Nelson region is:

> … an irresistible blend of lifestyle and stunning landscape at the top northwest corner of the South Island. From the northern edge of the Southern Alps across the fertile plains and out to a great sweep of beaches, our place is beautifully laid out under a generous sun that delivers New Zealand's highest sunshine hours… The Nelson economy is based on the 'big four' industries: seafood, horticulture, tourism and forestry. Port Nelson is the biggest fishing port in Australasia. There are also a range of growth industries, including art and craft, aviation, engineering technology, and information technology (Nelson Tasman Tourism, 2007).

According to the Nelson ECSA application, E4E has been developing in the region since 2000, led by the Nelson Bays Education Business Partnership (NBEBP) and the principal of one school. Many schools had a history of what they perceive as enterprising education through school–business links, a STAR focus, and various programmes that aimed to provide students with "real world" experiences. Recent connections with NET and enterprise education initiatives overseas provided inspiration for at least some Nelson schools. While the E4E cluster structure is new, schools had collaborated in other areas, such as Information and Communications Technology, Resource Teachers in Learning and Behaviour, Extending High Standards, and the new fibre optic network, known as the "Nelson Loop".

Key outcomes for the Nelson Region Enterprising Schools Cluster outlined in their 2007 application were:

- schools understanding the benefits of an E4E focus in teaching practice
- teachers benefiting from professional development in E4E approaches
- increased student engagement leading to higher student achievement
- the growth of a regional enterprising culture.

With funding from ECSA a small executive within the Nelson Economic Development Agency now steers the May-appointed E4E regional co-ordinator, supported by a wider advisory group including tertiary and secondary school representatives, iwi, etc. As such, the regional co-ordinator "will be linking into specific economic developments in the region like WOW, food and hospitality, tourism, Sealords, [and] the MDF plant".

A business representative told us that:

> We lose most of our young people. It makes students aware of what's going on in this region. For example we have 200 scientists working here and most young people would not know that … the purpose is not to stop young people leaving the region but to show them the opportunities that are here if they want to come back after they have completed their study. (Partner)

Many students' descriptions of Nelson and whether they expected to live in the region beyond school endorsed the above comment. For example:

> It's nice but it doesn't have enough stuff. There's no university. (Student)
>
> I like Nelson. I'll probably come [back] and live here. (Student)
>
> I want to escape from Nelson. All the jobs I want to do can get me out. I want to live in a big exciting city. (Student)
>
> It's my home town. It's the best place I've seen in the South Island. (Student)
>
> Nelson doesn't offer big companies. (Student)

Being a new cluster, comprising seven schools with variable exposure to E4E ideas, has meant the regional co-ordinator has needed to initiate relationships with some schools, to help key staff engage further with the E4E concept. Likewise, he sees the importance of supporting professional learning within schools so that teachers can become comfortable with, and capable in, new business/community partnerships. By the time of our case study visits the co-ordinator had facilitated at least two cluster meetings, as well as one-on-one meetings and wider-staff briefings at individual schools, to provide inspiration and find ways that E4E can work in different environments. Teachers from some schools had also recently attended an E4E resource development group, led under another contract. The cluster structure had not developed to the point that a Nelson E4E vision, or explicit objectives, could be collectively developed.

Nelson is known as a fairly affluent area of the country. Only 10 E4E schools nationally are decile 7 or higher, and six of these are within the Nelson cluster (all decile 7 or 8). Hence it did not come as a surprise to find that many Nelson interviewees mentioned relative affluence as impacting on the regional flavour of E4E, alongside Nelson's support for the creative industries. Several interviewees perceived some link between decile, engaged students and parents, and quality teaching:

> Decile in Nelson [schools] is high. I think the standard of teaching is at a high level, and there are a number of very good-quality teaching programmes happening with teachers that quickly can identify what they are doing that's student directed learning and [E4E] is one more thing that they can flick on to. I think some of the initiatives that I'm hearing from other regions have been happening in this region for a decade or more … In this region all schools are good so students go to the school in their local area. (Regional co-ordinator)

A perceived benefit for the region was that community and business partners could be drawn from the parent community:

> Identify in your school your parents and their jobs—then link them into your modules—they are real people with far more expertise than teachers…. Critical for shaping young people for the future—students need good role models from teachers, community, parents. (Principal)

That said, many recognised that projects *within* schools can provide as many enterprising opportunities for "partnerships" and student-driven, authentic learning. Such projects also avoid demanding too much from Nelson's predominantly small–medium businesses, which, as some people suggested, may not have a lot of "fat in the system" for frequent or long-term involvement:

> In Nelson, we're a small town and small to medium sized businesses who have far less time availability to include ourselves in this process, so it's good will, we just don't have the time, time is money, to do this wonderful work. (Partner)

It may not come as a surprise that students who completed our initial teaching and learning survey appeared to have strong engagement within the region, in comparison with the national picture. This region had the highest proportion of Years 9–13 students who indicated that "I love living in this area/region" is "a lot like me" (38 percent). Senior students in Nelson and Manukau were more likely to identify with the statement, "I'll probably live in this area/region when I'm an adult" than students in Northland and West Coast.

Likewise, Nelson (narrowly) had the largest percentage of secondary students indicate that going to university, wānanga, or polytechnic sounded "a lot like" them (60 percent compared with 47 percent, 57 percent, and 58 percent in the other three regions). The next strongest area for Nelson was school engagement (Factor C), where Nelson had the second highest proportion of its surveyed secondary students strongly agree with each of the following items:

- "Doing well at school is important to me"
- "This school recognises and celebrates students' successes and achievements"
- "Overall I feel I am doing well at school"
- "I enjoy learning at this school".

Case study schools presented their history with "enterprising" teaching approaches, albeit not necessarily named as such. They all focused on encouraging excellence in and beyond academic achievement in "core" subjects, while opening up opportunities for student leadership within and between schools. With such strengths in mind, two interviewees expressed their concern that the Nelson region may not show a great amount of change overtime due to E4E:

> …another tool in the box is the E4E approach. While I hope it will be a significant core or thread in the longer term it won't be the only one. (Principal)

In fact our initial teaching and learning survey did not put Nelson in a "higher" position than any of the other regions overall. With the exception of the engagement Factor C, Nelson generally

came out slightly lower than the national picture. This matches with the national decile-related trend that we found on the student survey—high-decile schools had lower levels of student agreement on many items. Other possible explanations for the inconsistency between what people in the region might have expected and what we found *could* be:

- Nelson students are more critical—perhaps their schooling has enabled them to question what and how they are taught.
- Nelson students have had some exceptional learning experiences, and so when asked to rate how often things happen in their classes generally they down-scale their response.
- There is a misconception about the struggles or educational strengths of other regions, which means that either other regions, other E4E schools, or other surveyed students, are further ahead than assumed.
- The survey items we used did not fairly capture the types of ways in which the region might excel educationally.
- Some of the practices that we see as aligned with 21st century learning, the key competencies, and/or E4E may not be perceived by school staff to be as imperative to develop because they see that their students already achieve highly and their teaching quality is high.

Manukau

According to the Manukau City Council website:

> With a population of approximately 335,000, Manukau is New Zealand's third largest city, and the fastest growing. It is home to more than 165 different ethnic groups, with the largest Māori and Pacific communities in New Zealand … Just five minutes south of Auckland city, Manukau city is the gateway to the Auckland region, and is home to the Auckland International Airport … Our 320 kilometres of coastline take in both the west and east coasts. To the south of the city, the magnificent Hunua Ranges with their forests, lakes and waterfalls provide a dramatic backdrop to the gently rolling farmlands of Clevedon. (Manukau City Council, 2007a)

The website provides the following economic snapshots for Manukau:

> In addition to having one of the fastest growing populations in New Zealand, Manukau also has one of the best performing economies.
>
> For the year to March 2005, the local economy is estimated to have grown by 5.7 percent, compared to 5.1 percent in the Auckland region and 2.2 percent for the national economy.
>
> Retail and wholesale trade remain the primary drivers behind employment growth in Manukau.
>
> The estimated rate of unemployment in Manukau fell from 6.2 percent in December 2005 to 5.8 percent in March 2006. Unemployment is still significantly greater than that in the Auckland region (3.6 percent) and the country as a whole (3.9 percent).
>
> The average hourly rate in Manukau is $21.54, below the $22.57 average in the Auckland region. (Manukau City Council, 2007b)

The City Council established the City of Manukau Education Trust (COMET) to provide "leadership, facilitation, advocacy, and co-ordination services for education" (COMET, 2007). COMET now plays a leading role in E4E, and appointed an E4E regional co-ordinator in May 2007. Manukau's initial ECSA application named three schools to take part, but their reach extended to six secondary schools, one of which is located slightly outside the Manukau City boundary. Two of the six E4E schools were initially part of a business–education partnership initiative called the Enterprise Triangle project, while at least one other had engaged in enterprising projects outside of the Triangle. Five of the six have been E4E active to some extent in 2007.

Up until our case study visit, the new regional co-ordinator had focused on raising her own understanding of E4E, co-ordinating meetings, activities, and documentation with the cluster schools (one-on-one and as a cluster), as well as facilitating school–business partnerships, following up possibilities for mutually beneficial arrangements, and keeping enterprising attributes at the fore of E4E developments. She had made use of COMET's relationships and events to avoid "cold calling".

At one of their cluster meetings, school representatives developed the following regional vision: "The Manukau E4E cluster aims to provide authentic learning opportunities in a collaborative supportive environment that empowers students and teachers." The group brainstormed the following list to focus in on some enterprising attributes with special meaning for Manukau: innovative, creative, collaborative, critical thinkers, empathetic, ethical, productive, relevant, environmentally aware, and, possibly, globally aware.

Many case study interviewees suggested that E4E offered the potential for students to rise above the economic hardship prevalent in the area, though most were quick to point out that this should be driven from a social agenda rather than a strict economic angle. They hoped that E4E could engage students by providing a more interesting and relevant schooling system (be it through curriculum change or extra-curricular activities) that is responsive to ethnic diversity, and develops confident, aspirational young people:

> 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)

Many believed that E4E could expose students to community and business possibilities that they may not experience within the bounds of school or family:

> We're trying to steer these kids—who possibly wouldn't have the opportunity, or may not think about Web development as a career path. Many don't have the Internet at home and are limited in their exposure with business and marketing. (Partner)

Likewise, it could open community and businesses members' eyes to the strengths of local young people:

> The businesses round here are all operated by middleclass white folks. In this school we have all different cultures and they [businesses] get to see that these kids can do things. (Teacher)

Another motivation for E4E for some was to provide an antidote to the negative media coverage that poorly represents the region. Our initial student teaching and learning survey did just that. Generally we found that Manukau's student responses were similar to, and often narrowly higher than, the national picture—as might be expected considering the decile pattern we found. A particular strength for Manukau, relative to other regions, appears to Factor B: Community connections and relationships, especially learning about the local community and New Zealand. Another strength is Factor E: Critical and creative thinking.

Some alternative explanations as to why Manukau's student survey results look positive might be that Manukau students are less critical of their education experiences than students in other regions. Alternatively, it could reflect the comments made by some interviewees which suggested that it was imperative for their school to become enterprising and adopt innovative and group-based learning environments considering that "older" models of teaching were not working. Even though their student survey responses did not swamp the regional picture, it must be noted that one of Manukau's E4E schools is a new school that was set up specifically to develop a 21st century learning environment, with a school vision which includes a goal of developing their students' "enterprising" learning attributes.

Summary

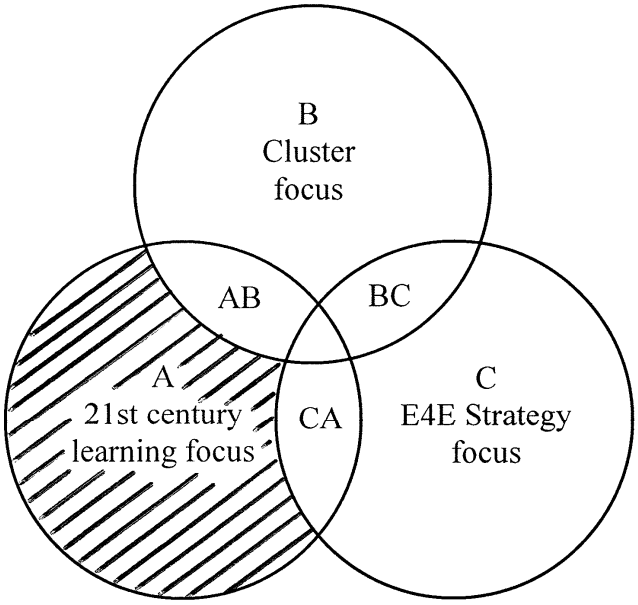
This chapter provides the broad context for the remainder of the report. The four clusters are all at different stages of cluster development. Northland's NET and West Coast's E2B provided these two clusters with a central regional co-ordinator and cluster model which could be continued into E4E (although Northland has now focused on a subset). Manukau and Nelson had a later start, meaning that more energy has been invested in bringing new schools on board and embedding fresh cluster arrangements.

We have drawn on a range of evaluation data and other background material about each region to show that each region is unique educationally, culturally, environmentally, and economically. We have suggested that each region has developed a slightly different cluster arrangement to best support what might work in their schools and communities, and to work with where schools are currently at. We are not yet in a position to comment on whether the different needs of students in each community might impact on what enterprising learning looks like in each region.[23]

[23] One of the seven main evaluation interests of the MOE and NZTE is the extent to which enterprising programmes of learning have been shaped to suit the needs of students in the local community.

The following chapters draw the data together from all four regions to explore E4E directions and activities according to our 3 focuses: “21st century learning”, “cluster”, and “E4E strategy”.

4. How closely do current school practices align with 21st century learning?



This chapter briefly outlines the concept of 21st century learning because, we argue, E4E has the potential to provide a vehicle for realising 21st century learning goals. We explore the question: "How closely do current schooling practices and visions for schooling in the clusters align with ideas about 21st century learning?"

Our interest in this chapter is not E4E *per se*, but the context in which it has developed. We discuss the theoretical underpinnings of 21st century learning, the school environments of which E4E is now a part, and our participants' thinking about what school should be about—now and in the future. (The next chapter will directly investigate E4E's potential to support a move towards 21st century learning, drawing on data from the case study schools.)

We begin with a brief account of some of the differences between 21st century and 20th century society. We unpack the term "21st century learning" in relation to recent economic and social change. We then discuss our data on students', principals', and community partners' perspectives of schooling in its *current* form, and their vision of what school *could* be, and explore how these relate to these ideas about 21st century learning.

21st century society and learning

How is society different in the 21st century?

Early 21st century society is very different from 20th century society. The late 20th century saw a transition from the Industrial Age to the new forms of social and economic organisation known as the Knowledge Age. Economic wealth, in the Industrial Age, was generated by exploiting natural resources to produce industrial and consumer commodities. Industrial Age economies were characterised by the development of mass production—the large-scale manufacture of goods on production lines—and bureaucratic forms of management. Industrial Age enterprises had three layers of personnel: owners, managers, and workers. 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.

A feature of the Industrial Age was the application of management models developed for enterprises involved in the production of goods to the "nonproductive" sectors (i.e., the service and government sectors, including schools, hospitals, and so on). Thus Industrial Age schools were set up to mass-produce educated citizens—or at least people who were literate and numerate enough to participate in Industrial Age enterprises. Children moved through the school "production line", acquiring basic skills at the early stages and, later, being screened and sorted for the various post-school pathways (broadly organised into the three categories listed above) (Gilbert, 2005).

For a variety of reasons too complex to go into here, the late 20th century saw a move to new forms of production, new forms of management, and, related to this, new ideas about knowledge. These developments, variously known as "fast capitalism", "post-industrial capitalism", and/or "the knowledge society", were a response to the shift to knowledge as the primary driver of economic activity (as opposed to using natural resources to manufacture consumer commodities). In this new environment, the new "high-tech" businesses must constantly innovate to develop new products and services to meet (or create) new market demands, often carving out and constantly re-energising niche markets driven by values and interests. Change is exponential, and it is no longer possible to specify in advance the kinds of products and services that consumers en masse will require. Thus there is a focus on innovation, and "personalising" products or services for increasingly smaller "niche" markets.

As businesses need to adapt "just-in-time", decision makers need to track their potential clients' ever-changing preferences. It no longer makes sense for change directives to be communicated down from "people at the top" who are disassociated from both the "producers" and the "consumers". Everybody within the system needs to take responsibility for innovation and communication. The world of "employment" has become equally complex and uncertain. It is no longer possible to accurately predict the jobs that will be available in the future, and it is now expected that *everyone*, if they are to be economically active, needs the capacity to adapt, change,

and innovate. Less hierarchical and more networked workplace structures and, consequently, new ways of working are part of this picture. So, too, are new ideas about knowledge.

Whereas in 20th century society, knowledge was something developed and known by experts, something that could be passed on from teacher to student, or manager to worker, in the 21st century knowledge is taking on a whole new meaning (Gilbert, 2005). New knowledge is rapidly *created* every day. Knowledge is no longer conceived of as something that already exists, something that can be classified, stored, and transmitted between minds. Knowledge 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 the 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 a key resource for economic development. 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.

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 model. Critics of this system suggest that it no longer provides opportunities to develop the knowledge, skills, and dispositions that individuals, community groups, or businesses need in the 21st century. In Knowledge Age economies, there are few semiskilled jobs for those who have been allowed to drop off the school production line. Furthermore, given the advancement of information communication technologies and the demands to continually learn and upskill beyond school, schools themselves are no longer people's main source of knowledge. As the future becomes less certain, educators cannot know in advance what information students may need. What 21st century students need is the dispositions and lifelong learning skills that will allow them to make the most of (and create) the unknown as it emerges.

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 (see, for example, Bolstad, 2006b; Gilbert, 2005; OECD, 2005; Vaughan, Roberts, & Gardiner, 2006). The future-focused literature suggests that, due to the increasingly complex, changeable, and culturally diverse nature of 21st century society, students need 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.

For some time OECD researchers have been considering how schooling needs to change to ensure students have these learning opportunities (see, for example, Bentley & Miller, 2006; Miller & Bentley, 2003). This international work has informed the directions of the *New Zealand Curriculum* (Ministry of Education, 2007b), including the focus on enterprising education. We discuss the development of the "21st century learning" concept that has emerged from this work in more detail next.

What is 21st century learning?

The term "21st century learning" has been developed to draw attention to the kinds of changes that are needed if we are to prepare students for life in the 21st century. A key focus of 21st century learning is to build learning *capacity*, to develop people's ability to function in an unknown future. Obviously, different authors have slightly different takes on what 21st century learning might entail (for example, Bentley & Miller, 2006; Bolstad, 2006b; Gilbert, 2005; Miller & Bentley, 2003). In this section we provide a brief summary of some key ideas about 21st century learning and contrast these with more familiar 20th century ideas about education.

Since knowledge is something that is created (rather than just passed down) in the 21st century, 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.

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.

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.

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, see the "big picture", and 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.

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.

How is this related to E4E?

So how does all of this relate to E4E? It seems to us that E4E has a great deal to offer as a vehicle for 21st century learning. We discuss this potential further in Chapters 5 and 9. But first we look at the survey and interview responses of students, principals, and community partners to provide a snapshot of the current state of schooling, as experienced by these groups.

Current school environment and 21st century learning

Student views of schooling in its current form

To what extent do students' current experiences of schooling align with 21st century learning goals? To explore this question we present student responses to the student teaching and learning survey conducted late Term 2/early Term 3. In this survey, students were asked to rate the extent to which they agreed with a series of statements about school, or to indicate the frequency with which they engaged in particular learning experiences. The survey was completed by students from Years 6–13, some of whom had been involved in enterprising approaches to education and some who had not.

The survey addresses whole-school practices in general and includes themes broadly related to E4E, 21st century learning, and key competencies. We present students' responses according to the following themes which emerged from the factor analysis described in the methodology chapter of this report: authentic learning (Factor A); community connections and relationships (Factor B); critical and creative thinking (Factor E); group work and metacognition (Factor D); note taking (Factor F); engagement (Factor C); and decision making.

We pay particular attention to statements that we consider align most closely with steps towards 21st century learning (we have highlighted these with asterisks). Some themes have more of these asterisked statements than others, which suggests that these themes are more aligned with 21st century learning overall.

We also draw on the case study students' interview responses. The interviews included questions about students' views of school in general, and about their views of the E4E-type projects they had been involved in. In this chapter we only present responses relating to students' experiences of school in general—we discuss responses relating to E4E-type projects in the next chapter.

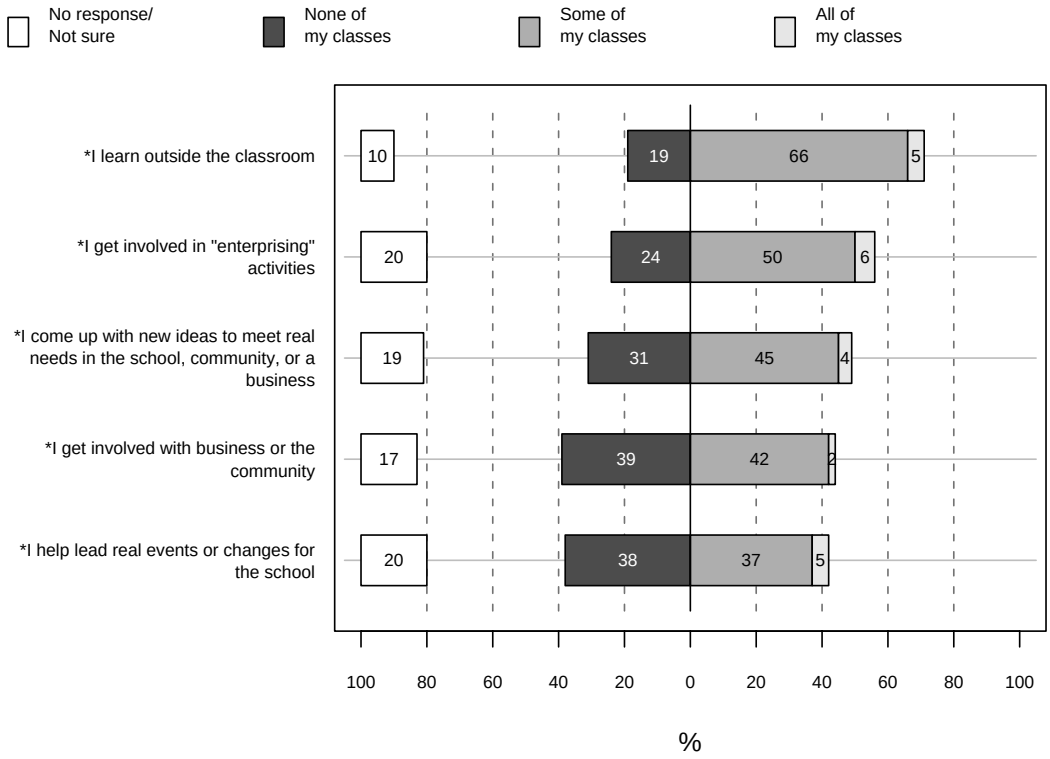
Experiences of authentic learning[24]

If our goal is for students to participate in and contribute to 21st century society, then we need to provide them with opportunities to carry out authentic or real-world projects, in which they can develop and use skills to produce something that will have a real use in today's society. This contrasts with the type of exercises students are often asked to do at school, where they just practise or imagine what they may need to do in the far-off future. Figure 2 shows that most students had opportunities, at least in some of their classes, to learn outside the classroom and get involved in enterprising activities, but that less than half had opportunities to come up with ideas

[24] We initially named this factor E4E and business/classic entrepreneurship, for the purpose of individual school feedback, partly because another item that correlated with the factor was "I'd like to be involved in business when I'm older". Forty-five percent of students said this was "a bit like me", and 32 percent said it was "a lot like me".

to meet *real* needs in the school, community, or businesses, to get involved with these groups, or lead school events or changes.

Figure 2 **Authentic learning (Factor A)**



Consistent with this data was our finding that most students we interviewed saw the purpose of school in general as to prepare them for their future adulthood and career path, as opposed to being useful in the here-and-now—an idea consistent with 20th rather than 21st century learning. As some students put it:

> Schools are about getting experience for when you are older. Even if they are boring it will be useful in later years.
>
> Practising stuff to do out in the world.
>
> Preparation for real life—a stepping stone.
>
> You need the skills for later in life like maths and writing and problem solving. And communication skills for later in life.

So while schools had gone some way towards providing authentic learning experiences, many were not yet at the point at which students had frequent opportunities to carry out real projects for real school or community purposes.

Community connections and relationships[25]

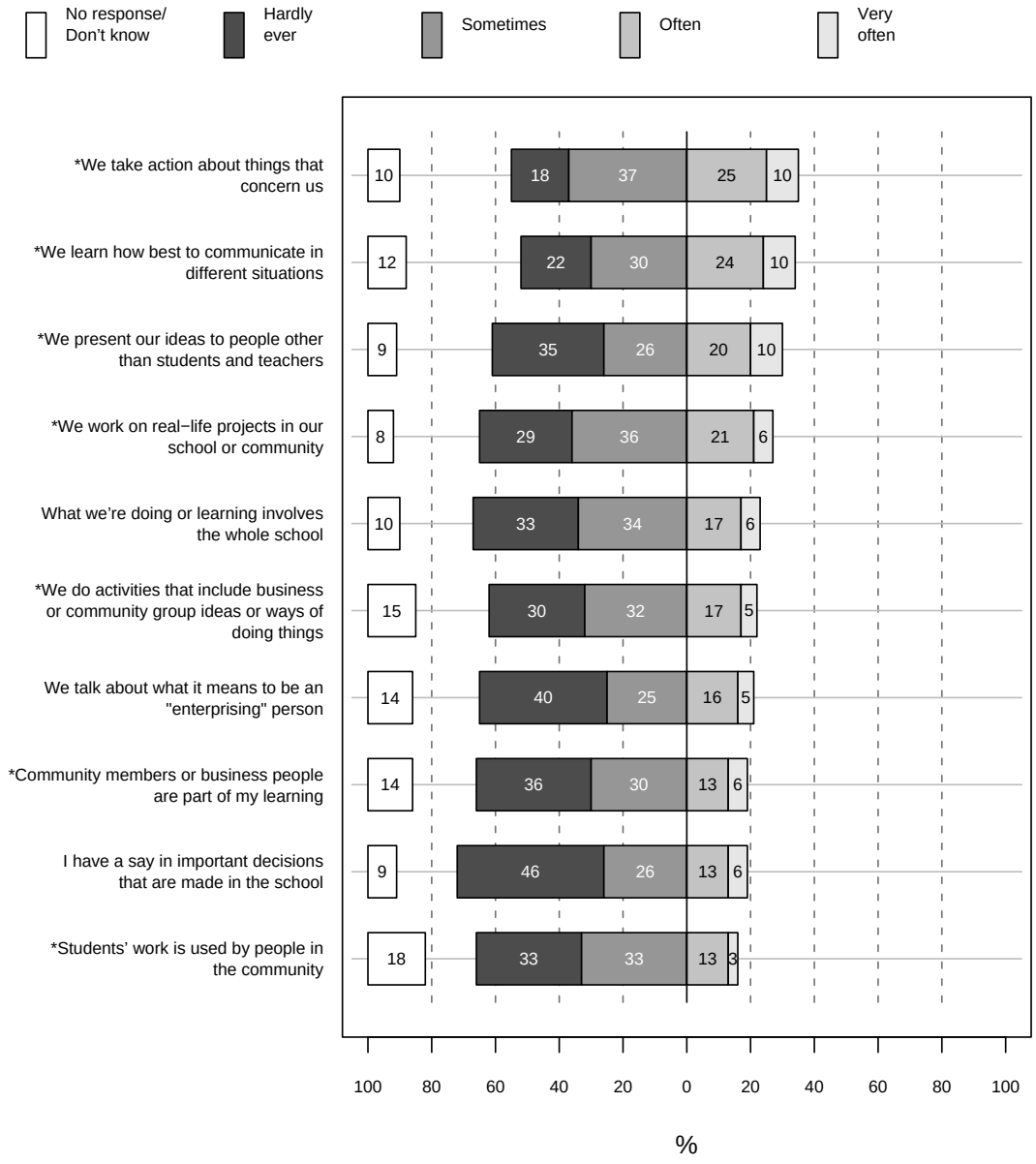
In this section we look at students' responses to statements about community connections and relationships (Factor B). We have divided the statements into two groups: those which focus on processes of learning *in relationship with* the school and local community (Figure 3); and those which focus on learning *about* communities and relationships beyond the school (Figure 4).

The statements in the former (focusing on learning *in relationship* with others) are those more closely aligned with 21st century ideas about learning. If, as Gilbert (2005) asserts, 21st century forms of knowledge are created in the "spaces between" people, then students need opportunities to collaborate with others to generate new solutions to real problems.

The relatively low levels of agreement in Figure 3 suggest that authentic learning in relationship with others across the school and wider community is probably the least well-developed area studied. Agreement is lower than it is in the "group work" factor which we describe on page 58, possibly because the items here are more about relationships which produce something for a real purpose.

[25] We initially named this factor E4E from a community relationships angle for the purpose of individual school feedback. This is because, as with in the above "authentic learning" or "entrepreneurship" items (Factor A), these Factor B items are well-aligned with E4E messages and learning opportunities presented on the E4E website.

Figure 3 **Relationship-based/community learning processes (Factor B part one)**



Survey comments suggested that opportunities to learn through relationships with others are more commonly part of their extra-curricular activities rather than as part of their everyday teaching and learning:

> A lot of learning I have done this year has been not in the classrooms but through the leadership role I have taken this year … I do a lot of learning in class but the stuff I do other than [in] class prepares me for more situations in life …

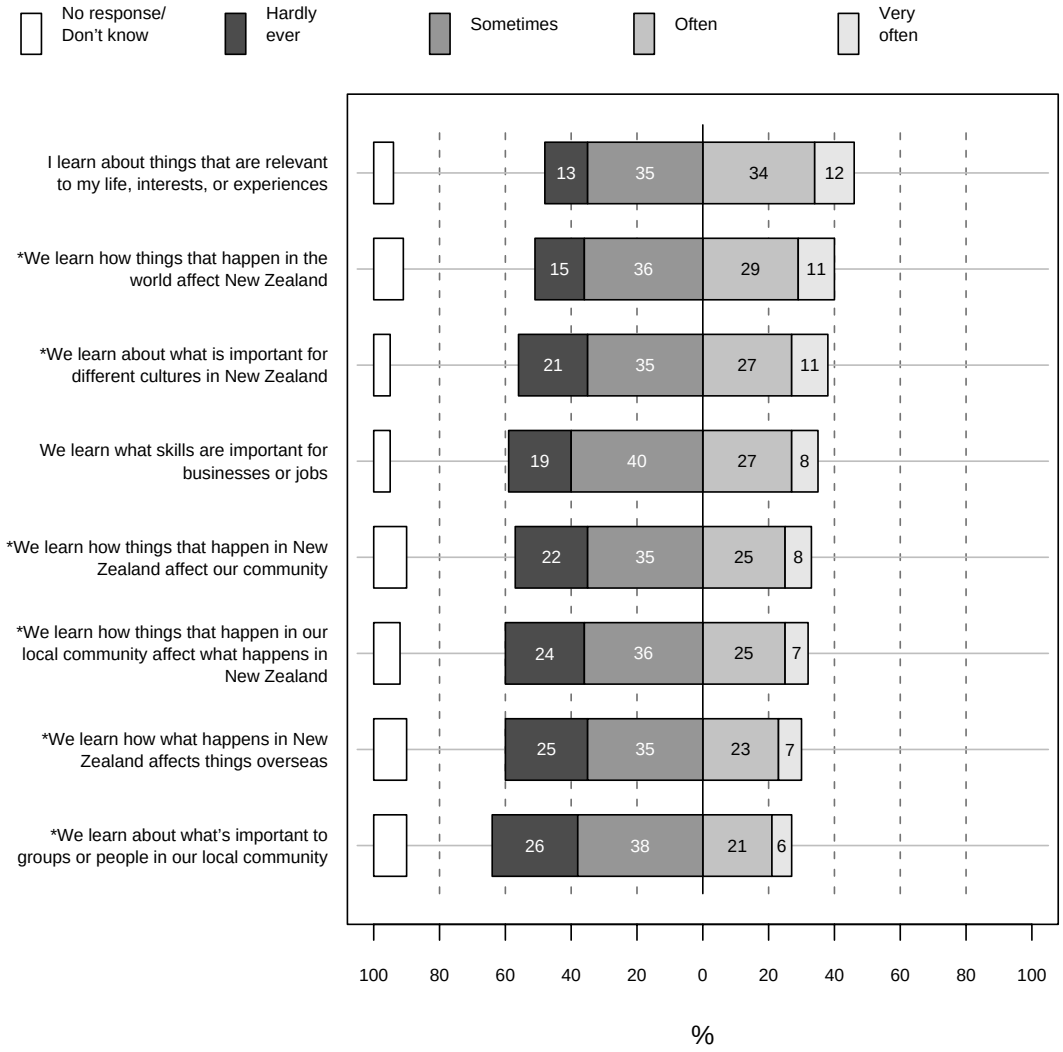
> Not always in the classroom. [I] learn a lot from outside experiences …

In the open-ended section of the survey students expressed the desire for more of the sorts of opportunities outlined in the above figure:

> We don't interact much with other year levels—we don't get to interact. The people in uniform (juniors) don't interact much with the people out of uniform (seniors).
>
> I would like to see more productive ways of learning—for example getting out into society to learn about business.
>
> We should be able to work outside at times.

The items in the figure below focus on learning *about* relationships beyond school. Learning *about* relationships is less aligned with ideas about 21st century than learning *in* relationship with groups of people, because of the focus on knowledge as content rather than process. On the other hand, 21st century learning experiences should enable students to see, and hopefully position themselves in an increasingly globalised society. Therefore learning should help students to interpret and maximise the interrelationships between what happens locally, nationally, and globally, as well as understand the positioning of different groups in local or virtual communities. The statements in the figure also highlight another important dimension related to 21st century learning: relevance to students' lives. Less than half of students agreed that they "often" or "very often" had the learning experiences described.

Figure 4 **Learning about communities and relationships (Factor B part two)**

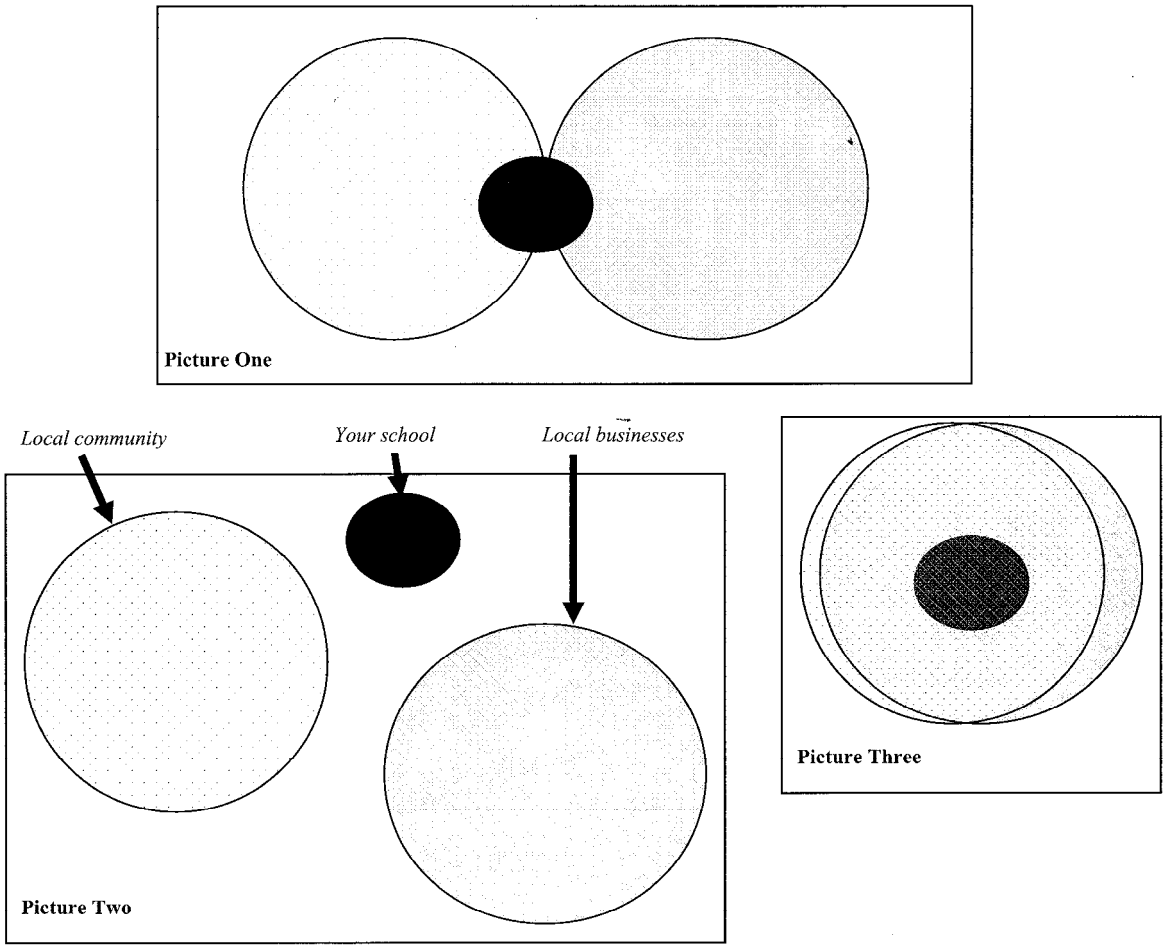


Several students made negative comments in the open-ended section of the survey about the lack of relevance in what they were required to do at school:

> Sometimes we learn things I can't see the point of learning but that's just me—the subjects I mean, like algebra and Shakespeare are taught in all schools.
>
> We always learn about stuff no one cares about or stuff we don't even need to know.
>
> There's some stuff in maths that I don't see why you need to know it, like triangle work, unless you are going to be an architect or [so you know it] for a test.
>
> You should not have to learn stuff that don't help you.

The students we interviewed also often expressed these views. We provided 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.

Figure 5 **Diagrams used in student focus groups**



The majority of students selected Picture Two, 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.

These data suggest that there is a pressing need to provide students with more opportunities to learn about and in relationship with community members, and these opportunities need to be emphasised in school curricula if 21st century learning is to be strengthened.

Critical and creative thinking

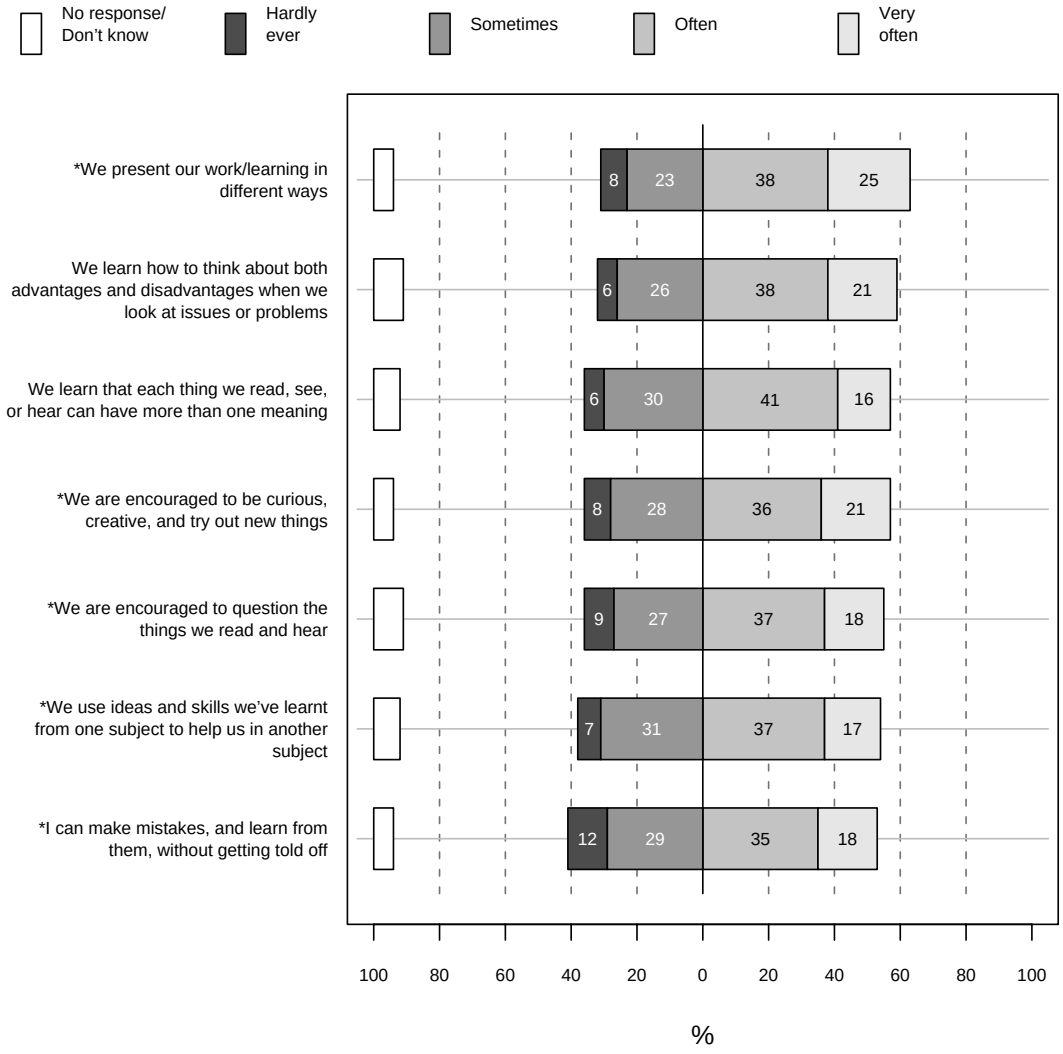
The statements discussed in this section are about critical and creative thinking. Many relate to the core intellectual skills that have been argued as important in today's society (such as analysing, synthesising, creativity, problem solving), and therefore should be an explicit focus in 21st century learning.

We have presented the statements students were asked to respond to in two figures. Figure 6 shows the things which more than half of students indicated happen "often" or "very often" in their classes. Figure 7 shows the things which half or less than half indicated happen "often" or "very often".

The learning opportunities which could be argued to reflect initial steps towards 21st century learning that students reported happening most frequently (over 50 percent) fall into three main areas:

- presenting work in different ways (Statement 1)
- using ideas and skills from one subject area to help in another (Statement 6)
- being curious, questioning, creative, trying new things, and making mistakes (Statements 2, 4, and 7).

Figure 6 **Creative and critical thinking (Factor E part one: over 50 percent)**



Students also expressed these views in the open-ended section of the survey:

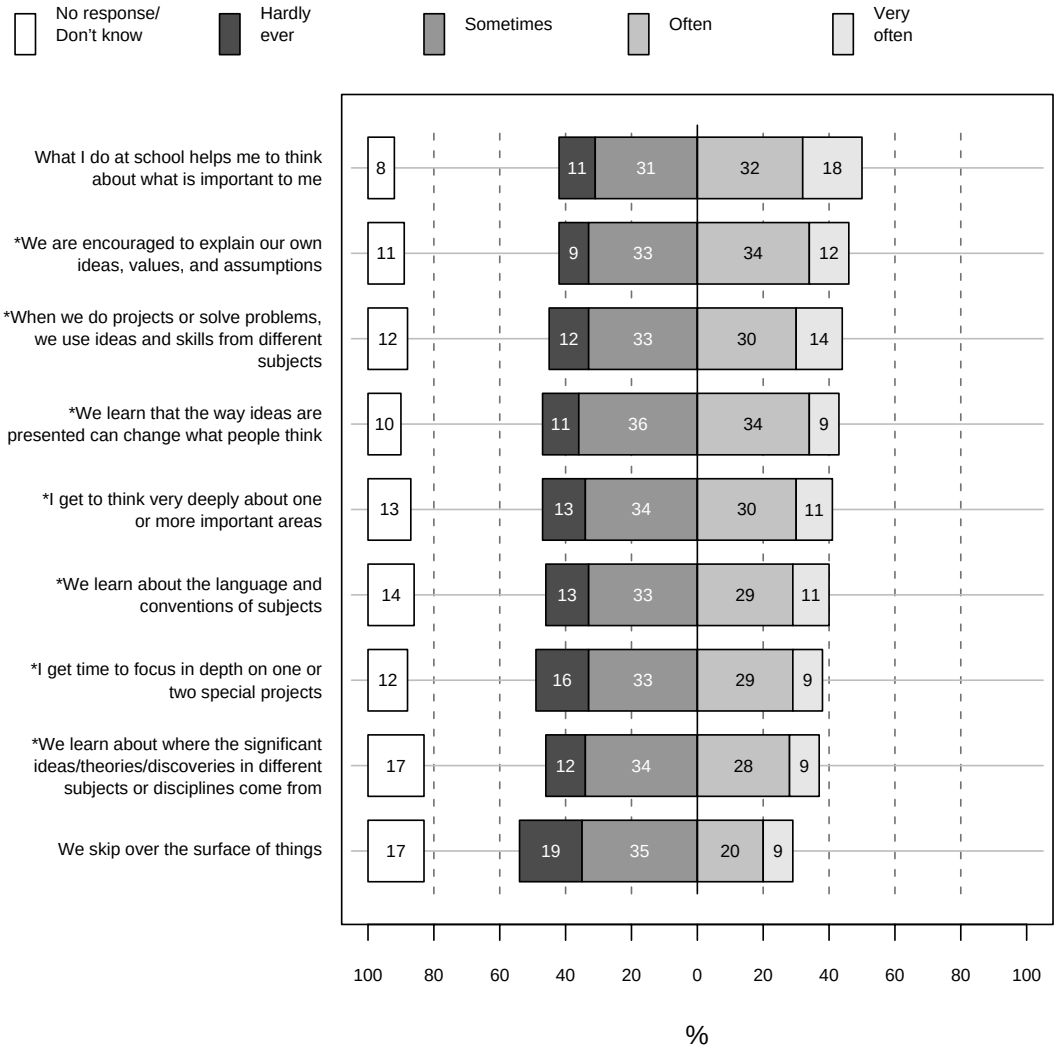
> I think the way I learn at this school is good because they are teaching us how to think, and analyse for ourselves. This also gives us transferable skills for other situations and real-life scenarios.
>
> Most of our teachers encourage us to ask questions and think about what other things can be linked to what we are learning about.
>
> We learn with the teacher in some subjects. We are telling and expressing to them our own ideas and opinions.

The 21st century learning opportunities which students reported happening less frequently (under 50 percent) fell into three main areas:

- thinking about and explaining their own, and others' ideas, values, and assumptions, and learning how the way ideas are presented can change what people think (Statements 1, 2, and 4)
- drawing from a range of curriculum areas to work in depth on one or two projects/areas (Statements 3, 5, and 7)[26]
- learning about the conventions of, and theories underpinning, subject areas (Statement 9).

In fact, these three 21st century learning areas cover all except two of the statements below. Furthermore, these statements (represented in the figure below) are possibly more strongly aligned with 21st century learning than the statements from the figure above.

Figure 7 **Creative and critical thinking (Factor E part two: under 50 percent)**



Surveyed students were particularly vociferous about their lack of opportunity to work in depth:

[26] Student responses to one statement do not fit this trend—less than one-third agreed with the statement "We skip over the surface of things", possibly because, as this is the only negative statement at the end of a list of positive statements, some students signalled their agreement but really meant the opposite.

We learn a lot of different subjects and it's hard to use your brain because it's full of different things.

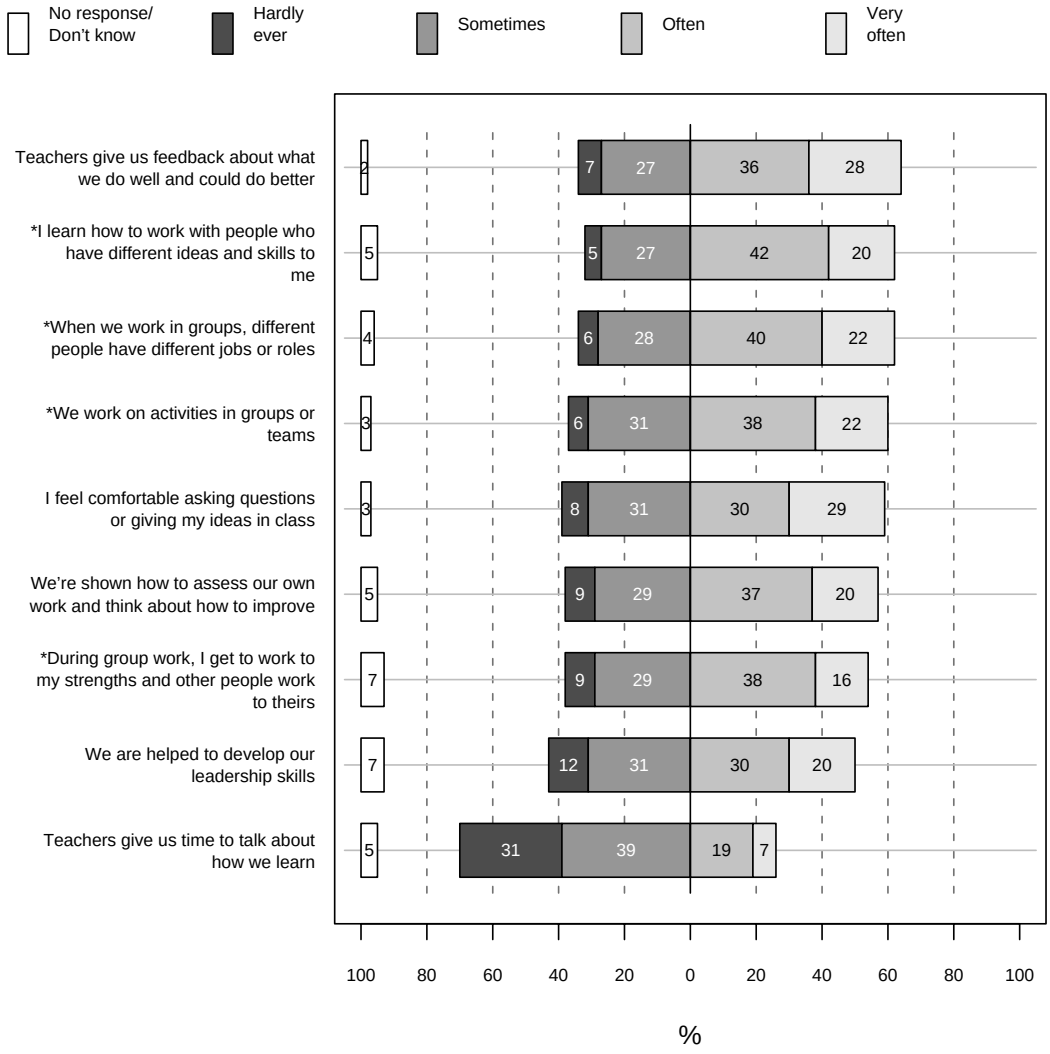
Every period we learn different topics so we can't understand because they go too fast.

We skip over subjects fast and don't go into depth in them just to keep up with the time you teachers are supposed to be at, instead of going at students' pace.

Group work and metacognition

Figure 8 includes students' responses to statements about group work and metacognition (Factor D). We focus here on the statements relating to group work. As discussed earlier, knowledge in the 21st century involves generating new ideas collaboratively to solve problems as they arise. The data in Figure 8 suggest that students often had opportunities to work in teams with other people who have different ideas and skills, and who take on different jobs or roles. However, the statements do not specify whether this might happen for "real" or "practice" activities.

Figure 8 **Group work with metacognition (Factor D)**



Engagement

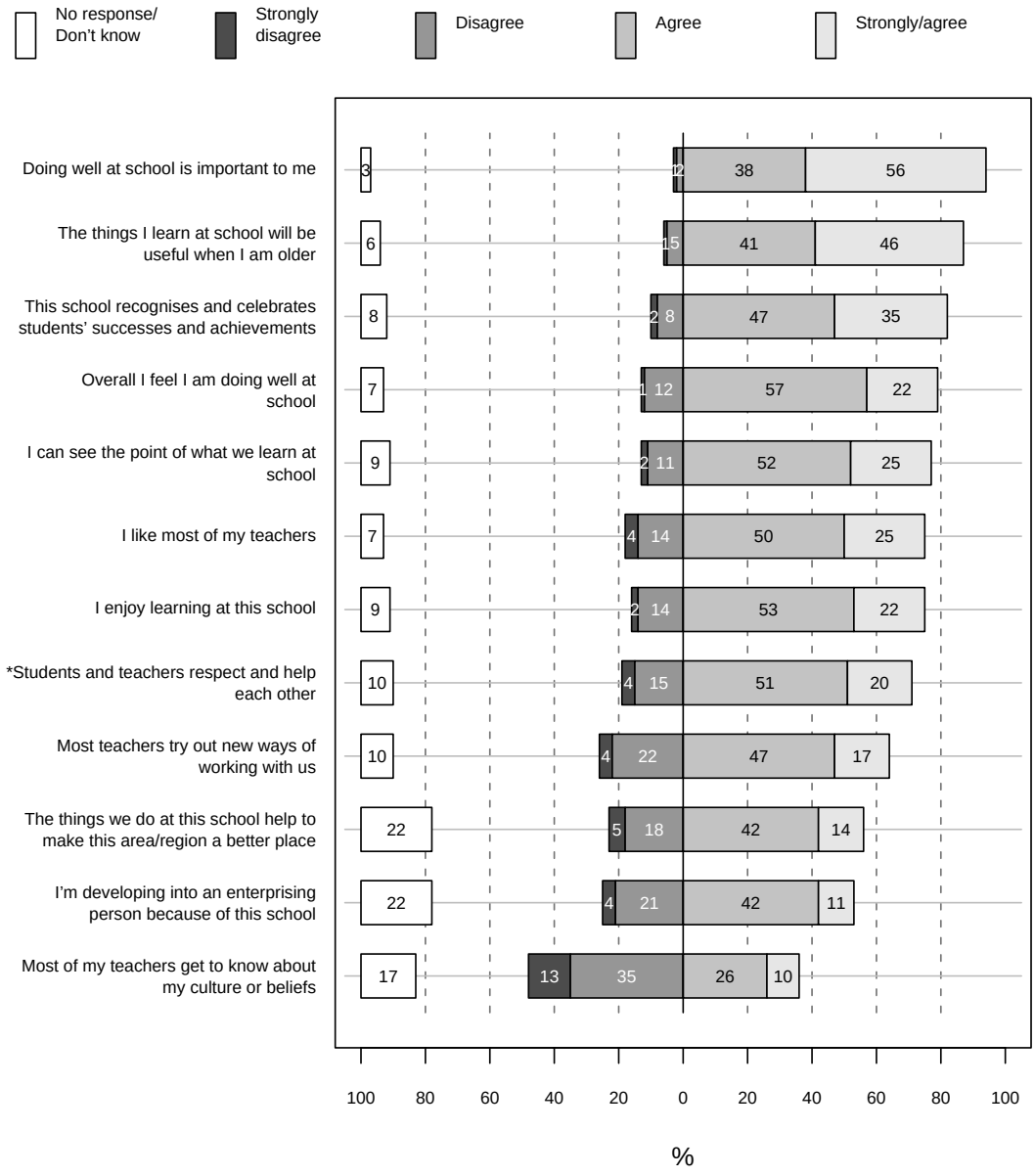
The statements in Figure 9 are about engagement in school.[27] Although student engagement may result from 21st century approaches to learning, and some might argue that it is a prerequisite for 21st century learning, school engagement in and of itself is not a 21st century learning goal. However, student engagement is a high priority for school staff—as we will discuss later it is one of the main reasons principals reported becoming involved with E4E. This may help explain why statements relating to student engagement had the highest student agreement overall (although note the different response scale from strongly agree to strongly disagree).

[27] We initially named this Factor C: Engagement in education and region, because some of the items in this factor included: "I love living in this region"; "I'll probably live in this region when I'm an adult"; and "I'll probably go to university/polytech/wananga when I leave school". Where appropriate, responses to these items were referred to in Chapter 3.

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. These data were supported by student comments in the open-ended component of the questionnaire:

> I think this school is a great place to learn. It has a happy environment and caring teachers.
>
> Great school. Teachers are always helpful and care about your progress and results throughout your school life which to me is very important to a student's level of achievement and interest in school.
>
> I like school. I understand that education is important. I reckon having a good relationship with the teacher is better for students' learning.

Figure 9 **Engagement in school (Factor C)**

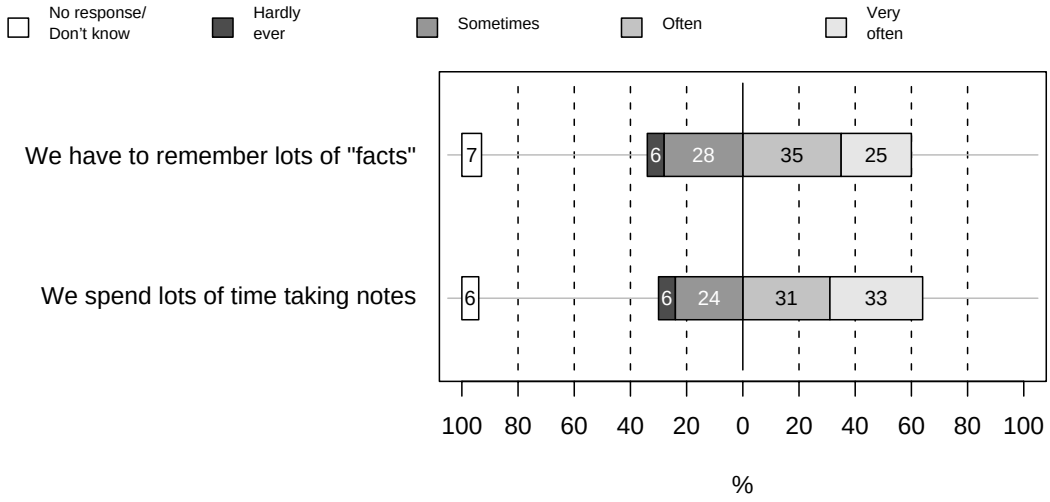


Copying notes and remembering facts

Copying notes and remembering facts are exercises consistent with 20th rather than 21st century ideas about learning, in that these activities are based on assumptions that knowledge is something which can be transmitted from teacher to student and that the role of schools is to facilitate this transmission. Figure 10[28] shows that 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.

[28] The two questions in Factor F did not correlate with any other factors; that is, you could not predict the extent to which students might agree with the statements provided based on their other answers.

Figure 10 **Facts and notes (Factor F)**



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:

> The teachers seem to pour the information onto us but don't really encourage us to want to know this stuff, so we get bored. We wade through all the work, and don't think about how this work could help in the future.
>
> It is hard learning in this school when you are force-fed information and then expected to know everything.
>
> In some subjects we copy a lot of information down but don't really talk about its context in what we are learning.

There were a few positive comments from students for whom this was not the norm:

> Most of our teachers make sure they don't just give us notes to copy, and actually teach us in ways we can enjoy and learn from at the same time.

Decision making

Those thinking about learning for the 21st century see students as citizens with something to offer the world in the present. If students are encouraged to "learn by doing" rather than simply "doing what they are told", then they must be respected as decision makers alongside their teachers (Boyd & Roberts, 2007). Twenty-first century learning theorists make it clear that schools and teachers should not just leave students completely to their own devises, thus losing an important teaching opportunity, but that teacher–student decision-making partnerships are key. Such a two-way dynamic decision-making process ties in with the Government's recent push for personalising learning:

> Personalising learning involves thinking about knowledge as an active process. Students get to be informed, active participants in their own learning, they contribute to decisions about how learning works best for them, and they have a much better understanding of how they are progressing. (Maharey, 2006, p. 1).

In order to gauge students' opportunities to make decisions about their 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. We asked students to mark the step which described what mostly happens in their classes. Table 11 shows the percentage of students who marked each step. We could argue either way, as to whether the top step or the second-to-top step is most aligned with 21st century learning ideas, and indeed as with all steps their appropriateness depends on context. Even so, most students marked one of the bottom three steps indicating that students saw teachers as the primary decision makers most of the time.

Table 11 **Decision making about learning**

Decision	National group (%)[29]
Students decide their own projects and learning with a small amount of help from teachers	5
Students and teachers work together to decide our projects or learning	13
Teachers ask for students' ideas when they make decisions about the projects or learning we must do	21
Teachers tell us what projects and learning to do, but they seem to think about our interests first	30
Teachers tell us what projects and learning to do, without taking our ideas or interests into account	23

Responses to the open-ended question in the survey were consistent with the statements on the bottom three steps of the ladder:

> Our teachers normally think of our interest when they are handing out projects, which is a lot of help because it means they are trying to make it a bit more better for our learning.
>
> It is a good school but children don't have much of a say.
>
> During writing we are usually given something to write instead of us deciding.
>
> …We hardly ever get to do our own kind of work…

Students wanted more opportunities to make decisions about what and how they would learn:

> [I'd like] to do things more independently.

[29] Due to rounding, total is 92.

I think we should be able to learn subjects that we want to learn instead of being told what to do.

Summary of students' views

We looked for patterns to see whether students' agreement to items most aligned with 20th century education received the highest level of student agreement, or whether all items more aligned with 21st century (marked with an asterisk) received the lowest level of agreement. If we had found this pattern, we could have confidently stated that schooling is clearly geared towards 20th century society rather than 21st century society. The results were not this clear cut, partly because the entire survey was fairly future-focused.[30] Overall, the findings from the student teaching and learning survey suggest that there were glimpses of 21st century learning opportunities happening in schools involved in E4E, but these weren't happening very often for most students. That said, the items did not necessarily reflect radically transformative approaches to either learning or the structures and systems of schooling. It was intended to measure some of the "beginning steps" of a 21st century learning journey, as could be commented on by a broad range of students in a broad range of schools.

Formal E4E material (for example, Te Kete Ipurangi, 2007) and our case study visits indicate that part of the motivation behind E4E is to change students' education experiences to be more in line with the 21st century. So far, we have presented students' views of what happens in school. Next we look at school staff and community/business partners' different views of schooling, and finally we explore their different visions for school change.

Staff and community partners' views of school

Different people hold different ideas about how well schools provide educational experiences and prepare young people for participating and contributing in society. This section compares the different views of school staff and business/community partners' views on how well the current schooling system meets the needs of today's students and the 21st century society they live in.

Table 12 shows most principals agreed that schools do a good job preparing students to contribute to their families, communities, and to New Zealand society, economic growth, and environmental sustainability.

[30] It mostly covered topic areas like the key competencies and learning that could be indicative of E4E-related learning.

Table 12 **Education in New Zealand (principal survey)**

In general, NZ schools do a good job of preparing students with the skills, knowledge, experiences, and personal attributes they need…	Strongly disagree/disagree %	Agree/ strongly agree %	Don't know/ Did not respond %
To succeed in the employed workforce	4	88	8
To succeed in self-employment	52	32	16
To contribute to their local communities/hāpori	12	84	4
To contribute to New Zealand society	8	88	4
To contribute to their family/whānau	8	88	4
To support New Zealand's future economic growth	20	76	4
To support New Zealand's environmental sustainability	36	56	8

As shown below, business and community partners tended to rate schools more negatively than principals, especially at preparing students to be self-employed and to succeed in the employed workforce.

Table 13 **Education in New Zealand (partner survey)**

In general, NZ schools do a good job of preparing students with the skills, knowledge, experiences, and personal attributes they need…	Strongly disagree/disagree %	Agree/strongly agree %	Don't know/ Did not respond %
To succeed in the employed workforce	28	56	16
To succeed in self-employment	64	12	24
To contribute to their local communities/hāpori	16	52	32
To contribute to New Zealand society	12	68	20
To contribute to their family/whānau	12	56	32
To support New Zealand's future economic growth	32	48	20
To support New Zealand's environmental sustainability	16	52	32

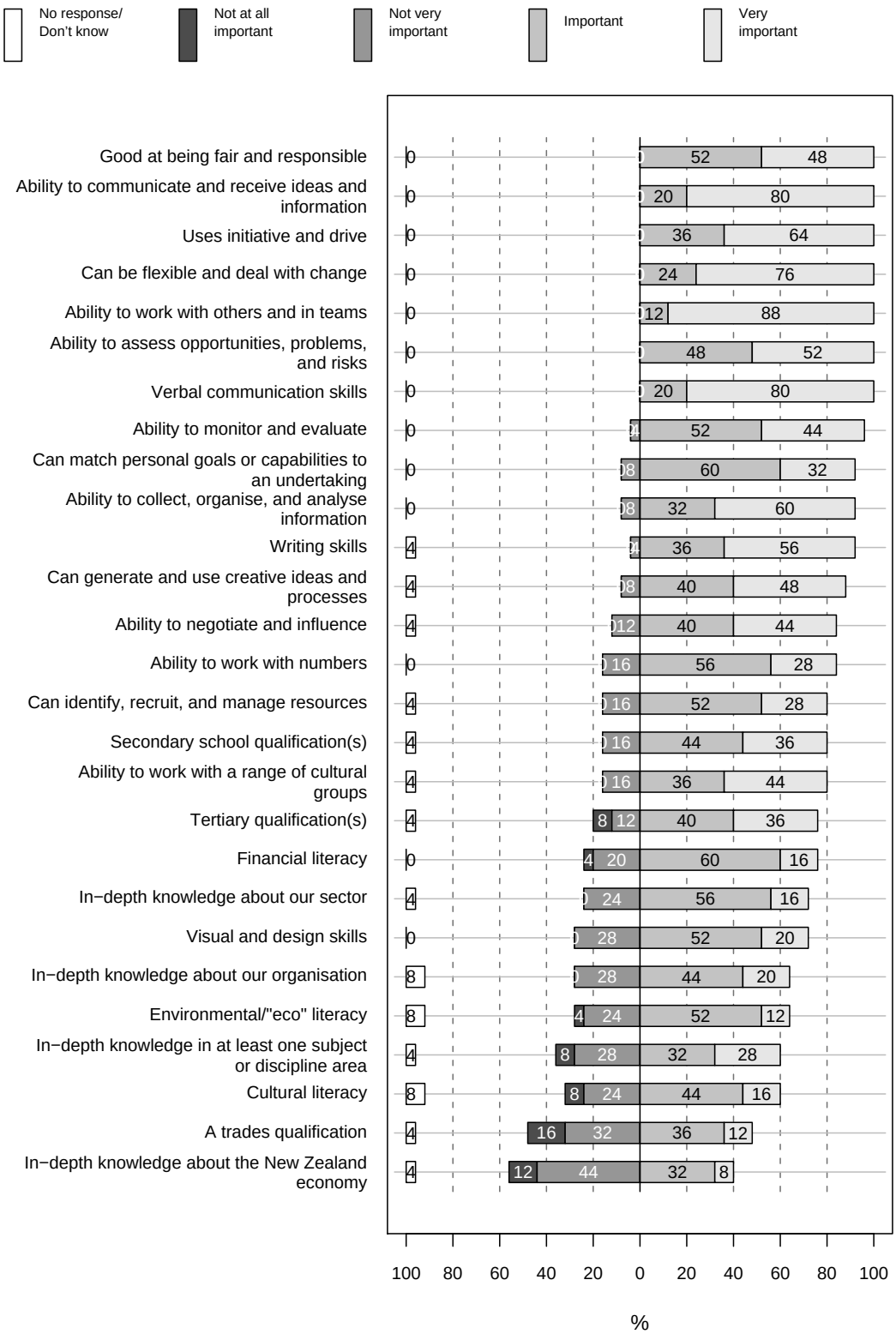
Some of the community and business partners we interviewed questioned the relevance and usefulness of current school learning experiences:

> Just looking at what the teachers have to produce in order to create a unit you really sit back and wonder about the value of it—I think kids would get more out of real projects. (Partner)

> I'm frustrated because what I want teachers don't encourage (i.e., risk taking; creativity). … Kids don't have the skill set I need… Kids have a narrow focus because they have been mollycoddled. (Partner)
>
> The old curriculum has to be really reviewed. Schools need to continue to think about making learning more relevant. (Partner)
>
> I got sick of junior designers who were passive. I work in a dynamic environment. I need young people who can do stuff. (Partner)

In general, community and business partners did not consider school adequately provides students with the knowledge, skills, and attributes which they considered important in their line of work. They wanted more from students and gave us an idea of the types of things they wanted schools to develop in students—generally these weren't "training for skills" but overall qualities. Their suggestions often aligned well with the competencies that are considered important for 21st century learning. Figure 11 shows that the five items rated "very important" by the greatest percentage of community and business partners were the ability: to work with others and in teams; to communicate and receive ideas and information; to be flexible and deal with change; to communicate verbally and in writing; and to demonstrate initiative and drive. Two other items also rated particularly highly, when we look at "very important" and "important" combined, were the ability to: be fair and responsible; and assess opportunities, problems, and risks. The data suggest that qualifications (which could be seen to signal school achievement) are not as sought after by business and community partners as communication skills, although this might be dependent on the core work of each organisation.

Figure 11 **Valuable knowledge, skills, experiences, and attributes (partner survey)**



So, to sum up so far, the data suggest that schools are doing some things consistent with 21st century learning, but principals and community/business partners acknowledge that more could be done to better suit today's society. Many of the principals and teachers we interviewed commented on the importance of making school more "real" or relevant, although they were not all motivated to achieve this goal for the same reasons. The primary motivation for many was increasing student engagement, achievement, and aspirations, while others saw the need to better equip students for 21st century society. Fewer commented on the need to engage students in real tasks because of the belief that student-constructed knowledge could benefit society.

Vision for the transformation of schooling

Taking into account different views of school, and different motivations behind the need for change, we now turn to what exactly it is that people foresee could or should change in education and how closely these ideas align with 21st century learning. This section attempts to answer the question, "How closely do students', school staff's, and business/community partners' visions for schooling align with ideas about 21st century learning?"

Our examination of case study and survey evidence suggests that most people agree that some aspects of schools and the schooling system need to change (whether that be to increase student engagement and achievement, or to enable schools to meet the new needs of the 21st century). However, we found within each group we talked to (students, staff, and business/community partners) that these views form a continuum. We could call one end of this continuum "tweaking" and the other end "radical shift". Those at the "tweaking" end can be seen as working within a school improvement agenda, eclectically bringing things together to make incremental changes, but without fundamentally changing the ways schools operate. Those at the "radical shift" end are closer to a transformative agenda in that they are thinking deeply about the underlying assumptions about the purpose and function of schools. This section explores each end of this continuum using comments from each of the participant groups. We also touch on where people saw E4E fitting in with their vision for change, which we take up in more depth in Chapter 5.

School staff's vision

The schooling vision of school staff varied enormously. This related to school goals and culture, and to their experiences of E4E-type approaches to date. Staff with more radical visions often came from schools where enterprising education approaches had long been part of their school. However, there was variation within as well as between schools. In some, the principal or lead teacher expressed a radical outlook which was not held by other teachers we interviewed at the same school, highlighting the potential need, especially when considering questions of sustainability, to support schools to develop ways to build shared vision and goals across the whole school.

Tweak the known

School staff at the "tweak" end of the continuum tended to focus on increasing the relevance of school in order to increase student engagement and motivation and to better prepare students for life outside of school, but without greatly changing the schooling system:

> It's what education should be about… It's hard enough to motivate students to do things. (Teacher)

> Some behaviour problems may diminish. (Lead teacher)

Anticipated change usually involved adapting and designing learning experiences to involve greater student choice, less teacher direction, more group work, and to varying degrees, authentic contexts. It often involved visiting speakers from the community or students going out to listen to or observe community members. Staff in this category did not see the need to change school structures such as the timetable, subject divisions, assessment processes, and so forth:

> I think you can work around structures like the timetable but we need funding for relief. (Teacher)

Some saw E4E as only suitable for particular groups of students such as those in lower year levels, those considered less (or more) academic, or those in particular extra-curricular activities:

> I think the nonacademic kids should be able to do this all the time but not the academic kids. (Teacher)

> I thought there would be less orientation on changing the curriculum and what happens in classes and more on offering E4E as something extra-curricular like rowing or the school production… I'm concerned about the focus on the whole school changing. Better to just let individual teachers who are interested to run with it rather than dragging lots of teachers in who aren't interested. If teachers were really enterprising a lot of them would not be teachers—they'd be in some other occupation… (Principal)

> Initially, [we opted into E4E] to showcase and practise organising "enterprising" activities, e.g., merchandise marketing for the school culture festival, hiring out school sound equipment etc. Lately the focus has shifted to more involvement with the community. From my perspective the former focus is more in line with how I thought it would run. (Principal)

Radical shift for the future

At the other end of the continuum were school staff who envisioned a radical shift of the whole structure of schooling and its place in society, commenting on the potential to change systemic aspects of school such as the timetable, working on site, curriculum divisions. Many challenged the current teacher–learner dualism, and imagined having community members involved in teaching, having students create new knowledge and services for the community, and so forth:

> Schools would look very busy with more technology in classrooms, more open classrooms where students come and go…like organised chaos. You wouldn't see the teacher up the front but everybody would know what they were doing…You would need areas where there were technicians, not necessarily teachers, you'd want to see schools open so experts would have the potential to come in. (Teacher)
>
> In the future there is potential…an open door policy where school, business, and community interact with each other. The school becomes the real world. (Lead teacher)
>
> I think bigger and better things will happen. [Like what?] Cross curricular…we've got to work together across departments—move away from the content focus to 'Here is a problem. How do we solve it?' rather than 'Here is some content. Let's make it relevant.' (Principal)
>
> Maybe senior students could mentor junior students. It [learning] could happen outside the classroom. It [learning] could be in their own time… It could be good for the school community as well as the individuals. (Student)
>
> Potential impact on regional and social development. It could change or spearhead certain initiatives. The students are part of that community. (Lead teacher)

Some described the ways in which their school had already made radical shifts:

> We're proving it can be transformational… This is how [it] already runs. Having students going down in to the community, for example working down with [community partner]. It just happens. Not having to turn up to school at 9 am. (Lead teacher)
>
> Within this school something like this can be easily grown because the school is flexible with timetable and structure. (Lead teacher)

Some expressed caution or added provisos about the potential for transformation. Nearly all the school staff we interviewed emphasised that the transformative potential of E4E could only be realised if it was not interpreted with a purely "business" focus, and some expressed suspicion about the assumptions underpinning E4E:

> It's really powerful if you come to it from an 'enterprising' angle as opposed to a purely business angle. (Principal)

This is consistent with Gilbert's (2005) conjecture that one of the reasons schools have been slow to take on board "knowledge economy" ideas is because they are seen by some as being "just another capitalist plot"—a way of making education better serve the needs of the economy and business.

Many emphasised the need to take things slowly and make small, incremental rather than sweeping changes to the way their school worked:

> The [transformative] potential is great…we're taking small steps…we're looking to go cross-curricular towards the end of the year…we don't want to run before we can walk. (Lead teacher)

Others observed that the full potential of E4E could only be realised if it was seen and implemented as part of the bigger vision of learning for the 21st century expressed in the new curriculum and futures thinking literature:

> [Do you see E4E as having the potential for transformation in schools?] Yes—if done in the whole new direction schools are taking… (Principal)

> With the new draft curriculum—that is it. That is E4E… People might think it is a trend but I think it's what we have to do for the future. (Teacher)

Students' vision

Like school staff, students' visions for school varied from making minor changes to the status quo to making more radical changes to the way schools function. We asked student focus groups what they thought were the most important things for people to learn or do at school, and then what would need to change in the school or outside of the school for things to make it happen.

Tweak the known

At the "tweak" end of the student spectrum were those who envisioned fairly small-scale change. Such students often wanted a wider range of subjects to choose from, more time doing hands-on or practical activities, and more class trips. They did not consider possible changes to the taken for granted aspects of school, such as year level and subject divisions, or the timetable:

> Having classes such as maths and English more fun so it can be more enjoyable for students.

> Teachers could reinforce teamwork in the class rather than the individual.

> Learning more about the world around—teaching more history, geography, etc.

> If people say we need maths they could prove it by bringing in someone who has to use maths in their job.

> Not have so many subject restrictions. Like in Year 13 there's four arts subjects but you can only pick two even if that's the direction you're headed and you have to choose something that's not at all relevant.

Radical shift for the future

Students at the other end of the spectrum envisioned ongoing working relationships with community or business partners as opposed to having them in as visiting speakers:

> Not just someone to tell you about their job, but [someone who] would work with you—e.g., an artist giving you suggestions.
>
> If we could do more work in the community—working in business and learning new skills and teaching others what we have learnt.
>
> People in the community could help you with all your subjects.
>
> Students should be involved more in the community and helping people to gain experiences in working with others and in teams.

They envisioned this work to be for real-life purposes, as the following focus group exchange illustrates:

> [Make it] more practical.
>
> If you write something—it's not fake.
>
> Make us do real work not school work.
>
> Learn about issues in our own community—not other countries.
>
> … activities in the local community.
>
> More people from out of school coming in to school. They can get some service out of us and we can learn about industry.

At this end of the spectrum were those who imagined a completely different approach to the way schools work as exemplified in the focus group exchange about potential changes to the timetable below:

> Night classes.
>
> Classes at different times.
>
> Choice of what classes you go to—like at university.
>
> Choice of who your teachers are.

Business/community partners' vision

Like teachers and students, business/community expressed visions for the future of schooling ranging from minor changes to the current system to reconceptualising the whole schooling system. Some actually saw no potential for the schooling system to change:

> The education system won't change because the Government has got a finger on it. (Partner)

It was harder to place community/business partners on a continuum, partly because their knowledge about how schools currently operate was sometimes minimal.

Tweak the known

At the "tweak" end of the spectrum were partners who wanted to assist schools in small ways. For example, a Web designer described how the school image could be improved as a result of his relationship with them:

> [Do you see the potential for transformation?] Even the school coming to us for their Web development and to design their prospectus—for them having a slick website could have the potential to transform. (Partner)

Others, too, saw that ongoing or more frequent school–business/community relationships could improve opportunities for students learning and their employment futures. They often talked about helping students:

> …These kids…possibly would not have the opportunity or may not think about Web development as a career path. Many don't have the Internet at home and are limited in their experience with business and marketing… We're an inner city business going to a suburb that doesn't have that business environment. There wouldn't be many Web design businesses in their area. (Partner)

> Kids potentially may stay at school for longer because if you have business leaders talking to kids it will hopefully be aspirational. Kids from lower socioeconomic groups often don't consider being in business as a valid career path… I always talk about what my background is and where we are now. (Partner)

> If we help educate our children…it's important to do. We're a small business, we're Māori and we believe what we do is quite unique, quite exciting. (Partner)

None of these positions explicitly questioned the purpose and function of school, or the way in which schools are structured to operate.

Radical shift for the future

At the other end of the spectrum were those who questioned assumptions about schooling and saw the potential to change the ways in which they operated. Some described how initiatives such as E4E could provide the impetus for such change:

> [I see E4E as] very transformative—the old curriculum has to be really reviewed. Schools need to continue to think about making learning more relevant. [What changes could you foresee?] The class environment could change. Teachers, students, and the community could all engage… (Partner)

Business/community partners in this category recognised the skills of students they worked with had, and saw the potential for expanding collaborations between businesses and schools. They often talked about students helping them:

> They have young, new ideas. (Partner)

> Diversity of the design—each is applying their ideas. For example, one has used photography—she's stood in one place for the right shot for everything to be perfect—tide, weather, light. You won't get that commitment form a service provider. They have more time to do this. (Partner)
>
> 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)

Some envisioned the blurring of institutionalised roles:

> In the long term, I could run the school's media department. They could change the timetable so it wasn't a single period but half a day so the students could work at school or here. (Partner)
>
> Frontline businesses are educating children directly… [I forsee raising] students' understanding of the real way business works—not just the theory side of it. (Partner)
>
> We'd like to see large corporate companies to be socially aware of the impact they could have on children. (Partner)
>
> …Moving away from being classroom-based. (Partner)

One of the business partners saw a potential transformation to the current qualifications regime:

> [Some of the graphic design students I've employed are] not really suited to it. They come in after three years' training but they're not a graphic designer…You can't beat natural flair—some people have natural flair because it's who they are… It's good if you can sort out early on who you are and then it works… I may offer one year work experience [to an E4E student] and then they may not need a qualification…you could get given a degree because you've reached a certain standard… (Partner)

Summary

The purpose of this chapter was not to look at E4E *per se* but to describe some of the educational context and theory in which it is embedded. It does two things: it provides a base of information for future evaluation work to consider overall directions and E4E-specific experiences in our sample schools; and it provides a foundation for future chapters in this report, especially Chapter 5 which looks at the E4E projects interviewees have mentioned so far, and picks up on 21st century learning themes in that context.

The survey data collected at the beginning of the evaluation provide some glimpses of first steps towards 21st century learning. Most students, for example, had opportunities to: engage in activities outside of the classroom, work in groups, and engage at some level in critical and creative thinking. However, relatively small numbers of students reported having many

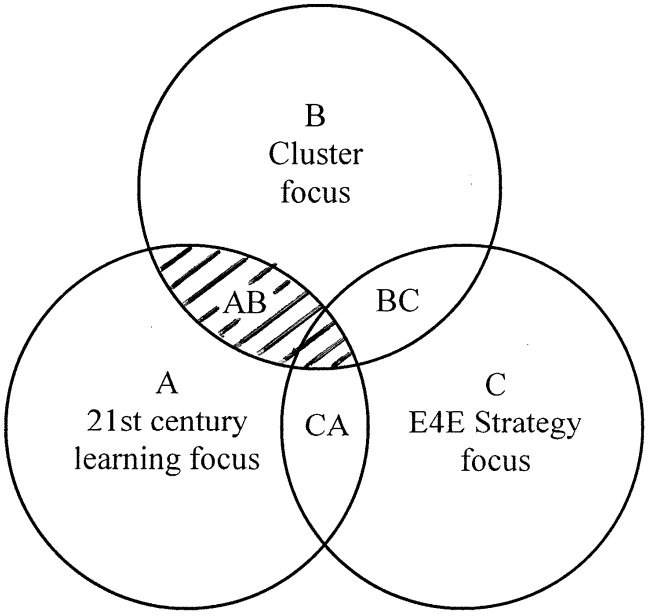
opportunities to work on large projects in depth over an extended period of time, carry out authentic tasks for real purposes with business and community groups, and engage in systems-level thinking.

The survey and interview data suggest that most people do think that at least some aspects of schooling need to change (whether to increase student achievement and engagement, and/or to meet the new needs of the 21st century). There tended to be a continuum of vision from "tweaking" the current schooling system to radically shifting for the future.

Teachers, students, and community partners whose vision was at the "tweak" end of the spectrum envisioned improvements to the current schooling system. Their vision sometimes included a slight lean towards some 21st century learning ideas, but this tended to be at a fairly superficial level. Teachers, students, and community partners whose vision was at the "radical shift" end of the spectrum were much more aligned with 21st century learning goals. They envisioned deep change to the *role* of schools involving major conceptual and structural shifts to the point that schools are transformed to *become* part of the knowledge society, in which students generate knowledge alongside business and community partners.

The findings presented in this chapter provide glimpses of the opportunities for 21st century learning being provided to at least some students, some of the time, in many of the E4E schools. There is potential for these to be developed further in the vision of many of those involved. This evaluation as a whole is designed to assess the extent to which this potential is likely to be realised, and the extent to which E4E can provide a vehicle for this. We plan to address these questions in more depth in the next report.

5. How closely do opportunities to learn from E4E-type activities align with 21st century learning?



In the previous chapter we described some of the characteristics of 21st century learning. In this chapter we look at our interviews with students, staff, and community partners for information on the extent to which E4E is providing opportunities to learn provided to students under the E4E umbrella. We then go on to present typologies of the approaches schools are taking towards E4E, analysing them in terms of 21st century learning. We draw on the qualitative data from the case study component of this evaluation to provide an early indication of the impact these approaches seem to be having on teaching and learning. We are also collecting quantitative data on these types of learning opportunities which we will present in a later report.

Opportunities afforded by E4E approaches and activities

A wide range of approaches and activities are being presented under the E4E umbrella in the case study schools. To provide some idea of this range we have listed some of the activities in Appendix E. The list is not exhaustive and where several schools were offering similar activities

we have only made one entry to the list. The purpose is to give an overall idea of the breadth and depth of E4E approaches at the time of our visits.

We did not find completely transformed 21st century learning environments in the case study schools but we did find evidence of some movement in this direction. We have drawn on the starting points Gilbert (2005) recommends for teachers to initially help start to close the gap between current school practices and 21st century learning ideals. We identified whether or not we believed each activity under the umbrella of E4E appeared to involve any of the following learning opportunities:

- engage in in-depth, problem-focused projects over an extended time period involving real research in which students manipulate and reconfigure old knowledge to create new knowledge
- make decisions about their learning
- work in groups and develop group skills
- work across spaces within the school and offsite
- serve the local community so both the school and the community can benefit
- engage in projects drawing on more than one discipline
- develop system-level understanding of subject area(s)/disciplines, and world economies.

Opportunities students most frequently experienced

In nearly all of the activities offered under the umbrella of E4E, students had the opportunity to work in depth on one large, problem-focused project over an extended period of time. This involved carrying out real research in which students had to manipulate and reconfigure old knowledge to create new knowledge. For example:

> Building new ideas—other subjects we don't make things or create them [ideas].
>
> *New* things about towns—not just repeating what you know—you're finding it.
>
> There's not a short deadline…We have time to do it. We don't have to rush…You can put more effort into it, and more thought.

Most activities also provided students with increased opportunities to make their own decisions about their work. Students observed that that their teachers were less directive:

> The teacher just listens to our ideas. If we need help we go to her. She just gives her ideas. We usually get to decide what to do… In normal classes you don't have teachers listening.
>
> He comes in if you need help but he lets you make your own mistakes.
>
> In our class we had debates on what to do—like we could have built another house this term but the boys decided to do theory—it was a pretty big debate because there were a few that wanted to do the house—but theory is hard so we wanted to use the teacher while we had him and get theory out of the way.

Another of the opportunities activities under the guise of E4E most frequently afforded to students was working in groups. In most instances this involved students taking on different roles:

> More teamwork—you have to take in to consideration each other's ideas. Different people take on different jobs within the team. [How do you decide who does what?] Whoever's best at it.
>
> I'm thinking it's a bit like a job—it's all a team effort but we're still working independently.
>
> You sit in a group and discuss it. It's a lot easier to get all the information. So one person might be in class writing a draft—two might be on the computers…

In the 21st century learning literature knowledge is conceptualised, not so much as a thing that can be transmitted from one mind to another but rather as a process that occurs between people to solve a particular problem. For example, Gilbert (2005) sees knowledge as a verb not a noun and describes how knowledge is created in the spaces between people. There was evidence that this may have been beginning to occur, although the language students used was more reflective of 20th century ideas about knowledge:

> When you're talking to other people you get more ideas—it gets your imagination running.
>
> I'm in subjects where you have discussion. You learn so much more from hearing each other's views.

Many projects provided students with the freedom to use spaces across the school, as well as their own classroom, in more flexible ways. In some projects this extended to spaces outside the school grounds.

Opportunities students experienced less frequently

When considering ways of closing the gap between 20th and 21st century learning through the vehicle of E4E it is important to think about areas in which further shifts could be made. One of the opportunities students experienced less frequently was serving the local community so that both they or that school and the community could benefit. Many activities under the E4E umbrella exposed students to people from the community through visits to or from business or community groups but fewer involved true working partnerships in which both partners benefited. We noticed that students who had been involved in true working partnerships showed a sense of purpose and a level of commitment to their work that was distinguishable from those who had not, as the following quotes illustrate:

> It's real important. You have to do things by a certain time. This is more important because it's for more important people, not just for our own learning.
>
> It has a purpose… It's better than just designing what you want to do. It's designing what the client wants. It's real life.

> There's the real-life thing we have. At the end of the day you can look at the [city council] website and think, 'Hey I wrote that!' You don't often look back through your [school] book and think, 'Wow I wrote that.' When you're writing off the board or from books you're finding new things but it's just sort of going through your hand.

Students were less likely to experience working across more than one discipline with the input of teachers from different disciplines. The E4E activities students engaged in tended to be situated within one subject area, such as business, technology, or graphics. Because of their holistic and open-ended nature, the projects themselves often incidentally afforded students the opportunity to draw on their understanding of other subject areas, as the following quote indicates:

> I've learnt a great idea about business and pay rates—not only about the topic I'm studying—other things pop up.

However, the onus for making these connections tended to rest with the student rather than explicit attention being drawn to this by teachers. Students did not describe having opportunities to develop system-level understanding of disciplines, or world economies as part of the E4E-type activities they engaged in.

Six main "types" of activity occurring under the E4E umbrella

We looked for common themes across the E4E activities and used these to categorise the E4E activities into six broad types[31] which we have named:

1. Identifying "enterprising" opportunities within existing teaching and learning approaches
2. Business or community expert as teacher
3. Teacher-created "purpose"
4. Creating real knowledge to meet a real need as a practice activity
5. Teacher directed real work for a real purpose in the real world
6. Student-led real work for a real purpose in the real world.

We see these approaches as sitting loosely along a continuum where number one is most like the current schooling situation and number six is closest to 20th century learning, although not yet at the point at which we consider it represents fully developed 21st century learning ideals. However, the ways and contexts in which these approaches are taken may alter their position on this continuum.

[31] 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.

Most schools offered activities in several of these categories. In the following sections we describe each of these approaches, provide examples from the case study schools, and consider the strengths and limitations of each.

1. Identifying "enterprising" opportunities within existing teaching and learning approaches

This type of activity shows teachers that E4E is not something new that requires a lot of extra work but rather something that all teachers already provide as part of their teaching and learning programmes. It requires teachers to look at what they currently do and identify those components which could be considered enterprising. It provides a gentle way to scaffold students to build up their confidence in more enterprising learning approaches. For example, at one school social studies students were working in groups within an inquiry learning framework to research different places in the region over an extended period of time in which they took responsibility for managing their time and making project decisions.

This approach signals that subject-bound teachers can still find ways of offering enterprising education, and that external partnerships are not a requisite. It is a good way of gently introducing teachers to the key concepts of E4E and several lead teachers and principals we interviewed indicated that it was for this reason that their school was taking this approach. The risk is that in some classrooms no change actually occurs and you end up with "business as usual", with perhaps the addition of some ticks in the appropriate columns on a planning sheet to signal perceived opportunities for students to exhibit enterprising attributes. 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 making traditional learning more relevant by arranging a series of visits between students and people, either at school or in the community. For example, at one school a maths class had a local business person come to speak with them about costing so that overheads can be covered and profits made. The group also visited the business person and then attempted costing and making their own product. At another school, graphics students had four sessions each sitting alongside a graphic designer to observe him working.

In this approach the person tends to be motivated by altruism and to take on the role of the Industrial Age teacher in that they are responsible for disseminating knowledge. There are few opportunities for students to work with the partner to build new knowledge. Rather they are positioned as recipients. There is a risk here of partner "burnout" because the relationship is not a partnership in which the business/community partner also benefits. This risk needs to be taken seriously as many of the lead teachers we spoke to expressed concern about finding business/community groups with the available time and energy to form ongoing partnerships with. 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".

This approach builds connections between the school and community. The challenge for schools taking this approach is to develop these relationships further so that they become 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 to provide students with the opportunity to build enterprising attributes. The classic example is "market day", an approach used in several of the schools we visited. Students work in groups over an extended period of time to invent, plan, and produce a product or service which they can sell to their school peers and teachers (and sometimes parents and community members) at the annual school market day.

This approach can provide students with opportunities to experience many aspects of E4E/21st century learning such as working in teams, working on a big, in-depth project over an extended period of time, working across subject areas, and working in different spaces around the school. However, the purpose is (to varying degrees) contrived. Students are not creating new knowledge to meet a real business or community need, and so if they do not do a very good job it doesn't really matter. The students we interviewed who had been involved in market day-type approaches tended to describe the experience as "fun" and could certainly identify some enterprising attributes they had developed as a result, but did not express the degree of passion, commitment, and focus as students who had been involved in creating new knowledge to meet genuine business or community needs did.

The challenge for schools engaging in these type of activities 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 real product, or real new knowledge which *could* be used for a real purpose in the real world but is not taken to the point that this eventuates. For example, in one class students worked in groups to develop spreadsheets for costing all aspects of decorating a new house and had these put onto CDs which they designed covers for. These students created new knowledge and a new product for which the teacher considered there was a real need in the market. But they did not go to the point of actually marketing and selling the CDs or sharing them with others who could have used them for a real purpose.

As with the "teacher-created purpose" described above, this approach can provide students with opportunities to experience many aspects of 21st century learning. But the community misses out on benefiting from students' work, and the students spent a lot of time and energy creating knew knowledge for no purpose other than meeting their curriculum requirements and developing skills which they could perhaps use for a real purpose in the future.

The challenge for teachers taking this approach is to extend it one step further so that the potential of the new knowledge and product can be realised, and both the community and students can benefit, even if this is not done as a profit-making activity.

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 to be used in the real world by businesses, community groups, or school-wide but is so strongly teacher-directed that some of the potential 21st century learning opportunities are not fully 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 organise, direct, and compartmentalise the task, especially in the early stages of the project. Consequently, the experience for students is pretty much "business as usual".

For example, staff at one school identified the need to change the food provided in the canteen to meet new health regulations and had embarked on a project working with the school canteen operator. The project involved collaboration amongst teachers across subject areas, with each teacher organising one component of the project their class could contribute to. For example, the food technology students would come up with menu options, the economics students would be responsible for marketing and promotion, the physical education and health students would do work in relation to calories and so forth. At the time of our visit there had been a survey of students' food preferences but although some students had been selected to analyse the results they had had no input into the design or organisation of the survey or the initial discussions about the purpose of the project, and so had little sense of ownership or understanding of the big picture.

At another school staff were planning a project to design, make, and sell a new item of clothing to be part of the school uniform involving collaboration with a local textiles manufacturer and business advisers from the local bank. Like the example above this involved collaboration amongst teachers across many subject areas, with each teacher organising one component of the project their class could contribute to. For example, the textiles students were to be responsible for pattern making and design, accounting students for costing, art students for designing the logo, physical education students for carrying out research into questions of comfort and style, and economic students for promotions and marketing. The initial meeting held to kick start this project included all the staff members involved and was catered for by the hospitality students, but no other students attended.

The approaches used in these two examples are invaluable for building collaboration amongst *staff* across different subject areas, and appeared to be highly motivating for them. However, they do not require *students* to draw together their knowledge from across different subject areas to create new knowledge or to make important decisions. For example, the costing activity planned for the accounting students in the second example was much the same as the usual work they did in accounting, albeit for a real purpose. Students had no ownership of the big picture. The benefits

of carrying out a real project for a real purpose were not being reaped by students as much as teachers.

The challenge for teachers involved in these sorts of activities 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. This is not as simple as it sounds as it opposes the way in which many teachers are accustomed to working—it would be fair to say that nearly all of the teachers we spoke to across the case study schools identified this as a challenge they were constantly working at.

6. Student-led real work for a real purpose in the real world

This type of activity involves students creating new knowledge or a new product for a real purpose to be used in the real world. Some were extra-curricular while others 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 these projects are student-led—it is students, not teachers, who make the important decisions about the project and how it will be carried out.

For example, one class of students was responsible for carrying out research for a small graphic design business that designed images and logos to represent Māori place names but did not have the time to carry out research into these places themselves. Students worked in teams to do the research for them and offered ideas about images that could be included to represent them. The graphic designers used the information gathered by students and took cognisance of their design ideas to create their images.

Another class of students was also involved in researching local places—this time for the city council website. Students were briefed by the council and were responsible for researching and writing a synopsis of their place to be included on the council website. This involved sourcing and collating information from a variety of places and people, and presenting the information to meet the requirements of the council.

As a another example, one school provided regular "three-day episodes" based around a broad theme, one of which was enterprise. Teachers worked across subject areas to provide students with a range of project options which they could select and then work on extensively for a period of three days in cross-level groups. Teachers who worked together pooled their collective subject knowledge and often also drew on their out-of-school interests in order to provide the resources students might need. The principal indicated that a goal for the future was to have students begin to take responsibility for initiating and leading three-day episodes themselves.

The challenge for schools offering this type of activity is to incorporate systems-level analysis and understanding of both subject areas and of business and market economies. There was no evidence from the student interviews that this metalevel analysis was occurring, although we did not directly question them about this.

Impact of E4E-type activities

In the remainder of this chapter we draw on the qualitative data from the case study component of this evaluation to provide an early indication of the impact E4E approaches seem to be having on teaching and learning. We are currently collecting quantitative data on the impact of these types of learning opportunities to supplement this early qualitative picture, which we will present in a later report.

Impact for teachers

One of the key evaluation interests is outcomes for teachers. As shown by student perspectives and the typologies above, teachers initiating E4E-type activities are cast in a new role. We asked teachers whether they had noticed any changes to their teaching approach when working with students on E4E-type projects. Their most frequent responses echo students' observations discussed earlier; that is, teaching practice that allows for more student team work, decision making; opportunity to work in depth on a large project over an extended period of time; and to create new knowledge.

The most frequent response related to being less directive and more responsive to student-initiated needs, as they arose "in the moment":

> Not needing to be the person in control. The learning happens by osmosis. (Lead teacher)
>
> I had to step back. I am often the most disruptive person in my class. I have to let them make mistakes. You teach skills, not knowledge. (Teacher)
>
> You get a lot more involved with students and their learning… I have students coming to me a lot more to discuss what they are doing. (Lead teacher)
>
> It's not directed, it's not 'teach just in case'. It's on a 'learn on and as you need' basis. (Lead teacher)

Some described having a less formal, more open, and more trusting relationship with their students as a result:

> I'm really open with the kids—my expectations are different, for example, about turning up to class. (Teacher)

One of the lead teachers we interviewed described the impact the teacher stepping back had on students' capacity to build new ideas amongst themselves during a lesson she observed:

> The students were enthusiastic, motivated. You could see them sitting up a bit straighter—the light bulb going on… The teacher was right there with them…she wasn't leading. She was letting the kids take the lead—they [the students] were driving the discussion further. (Lead teacher)

Most teachers observed that when involved in E4E projects they had to be more flexible:

> It's not like being on a train track—it's like juggling plates on sticks. (Teacher)

While this required less long-term planning it required a lot of organisation:

> Planning—you need to be incredibly flexible. You have constraints and so does [business partner]. You almost do minimal planning. (Teacher)

> You have to be well organised—well ahead. The deadline is a real deadline. (Teacher)

Although we did not directly ask about this, many teachers commented on increased job satisfaction when taking E4E-type approaches, although for some this was offset by an increased workload:

> It makes me a lot happier. (Teacher)

> It makes your job more vibrant and interesting—it helps your own professional development—understanding the processes out in industry and business. (Teacher)

Impact for students

Twenty-first century learning involves building the capacity to learn (as opposed to the ability to store and regurgitate knowledge) through the development of core intellectual skills and competencies. Although described in slightly different ways across the futures thinking research literature there is general consensus about the types of competencies considered important for 21st century society. For the purposes of this report we make use of the key competencies as described in the *New Zealand Curriculum* (Ministry of Education, 2007b) to frame students', teachers', and partners' views about the impact of the E4E-type activities on students.

Managing self

Those thinking about learning for the 21st century see students as having something to contribute to society here and now and this requires students to make the important decisions about their learning, to be self-motivated, and self-determining.

Teachers considered that involvement in E4E-type activities had a positive impact on their students' capacity to do all of these things:

> Getting together outside of class. Finding their own resources without me. One group thought to have name tags [for the primary school students they were working with]. They turned up at the [primary] school at 8.15 even though our school starts at 9.30. They email the principal of the school. (Teacher)

> At the start of the year I thought I should be allocating tasks and making them accountable—but now they are accountable to each other and people outside. (Lead teacher)

Students also noticed this:

> You've got to organise your plans for the different weeks. (Student)
>
> It's different from the teacher organising things. You've got to be organised yourself. (Student)

Participating and contributing

Teachers observed that working on large, in-depth E4E-type projects in groups had a positive impact on students' participation and contribution. This was because, in most instances, students took on different roles according to their strengths and depended upon each other to complete their projects, as the quote below illustrates:

> I can remember we had a group of four girls. One girl was amazing. She organised *everything*. They made these beautiful looking bags but when it came to the day of selling she could not stand up in front of her peers to sell the product. But another girl in the group was in her element doing this. It was good because it showed you needed everybody there in the team. (Teacher)

Teachers, partners, and students also considered a positive student impact of E4E experiences was increased participation in the community:

> It's good they get out of school. Any society that locks away young people from old people is unhealthy… Schools should not be a separate institution. (Teacher)
>
> I think it's connecting the age differences and closing the community gap. Not just businesses that benefit as students will start thinking about how they interact with the community. So students start thinking, 'The old codger who runs the store isn't so bad.' Long term it will get better understanding within the community of different demographics and age groups. (Partner)
>
> Students will think differently about their language, disrespect of elders… It may provide more tolerance at both ends—understanding each other. (Partner)
>
> This way of learning is better because you gain a bit more respect for the people that live in the towns. (Student)
>
> Their [business partner's] interests and your interests are quite the same so it connects. (Student)

Thinking

Twenty-first century learning involves the generation of new knowledge rather than the reproduction of existing knowledge and this requires students to be able to think outside the

square—to be able to think both critically and creatively. Teacher and student comments suggest that a positive outcome of involvement in E4E-type activities was increased thinking of this type:

> It gives them more creative ways of solving problems, common sense. When they're in schools it's a cushioned environment. (Lead teacher)
>
> Thinking more outside the box. Normally on a project like this you think. You keep urging yourself to want to learn more. (Student)
>
> You think about it more yourself rather than writing it down in books. (Student)
>
> When we start off with ideas then we change them, then we look at it again and change it. You go over it with [teacher] and he tells you what he thinks is good and bad and then I rework it. It's the only class I do it [reworking of ideas] in. The rest are just boring. (Student)

Relating to others

Another positive impact for students aligned with 21st century learning ideas was increased ability to relate with others both at school and in the wider community.

Students described how working in groups provided them with opportunities to get to know other people in their class they had not known previously, and to develop skills in relating to others:

> The different people—usually you work with your friends but it's different to have a mixture of people.
>
> You have to work with people you don't like but you get over it.
>
> To work better in a group. It was just a way to get to know people before judging, because we didn't have the teacher's help. The first session was like chaos...
>
> The teacher stepped back and you got to do everything yourself… We got a lot more co-operative and supportive of each other.
>
> Teamwork—you have to support other students and trust yourself. The teacher puts a lot of trust in you.
>
> To listen to everyone before you make decisions—it's hard because new people would come in and want last-minute changes.

It also provided opportunities to become more open to other people and their ideas, and to form closer relationships as the exchange below illustrates:

> Sometimes we all disagree.
>
> I think we're getting better. We all know each other really well.
>
> Our class is like a family. We all stand by each other.
>
> Everyone listens to each other more.

Everyone's ideas are pretty good at the moment, eh?

Teachers and partners also observed improvements in students' capacity to relate to adults in out-of-school contexts:

> It's teaching them in different situations how to manage those situations. For example, where one young man wouldn't even look at us, even though his personality is still shy, he talks to us [now]. He's learnt to manage himself in a professional setting. It's pretty comprehensive really. The four students have done most of those things, for example, negotiation—when we have critiqued something that was important to them, they have come back to us [to negotiate]. (Partner)

> They have to deal with people in a professional manner, do research, and do a public presentation. (Partner)

Only a few teachers and community partners made comments, such as the two below, on the importance of this team work, not just as an end in and of itself, but because of the capacity to build new knowledge:

> Brainstorming ideas—they all bounce off each other and respond. Having confidence in the group to add their comment and that it might be picked up and driven on by others. (Lead teacher)

> In the business world everything is collaborative but traditional learning is just about yourself—your grades and your knowledge. In the business world an individual's knowledge counts for very little. (Partner)

Using language, symbols, and texts and systems-level thinking

The key competency, using language, symbols, and texts, is related to systems-level thinking. It involves working with and making meaning of the codes in which knowledge is expressed. In this sense, language competency and critical literacy are prerequisites for systems-level thinking. Consistent with earlier data there was not much evidence of big-picture or systems-level thinking but there were some comments providing glimpses of potential movement in this direction:

> They understand the purpose of their task or activity—they are learning. (Lead teacher)

> Some of them are thinking more—you can see they are starting to look in a different way—in a much more 'designer' 'graphic' way. (Teacher)

> When students become involved they develop more of an overall picture of what they're doing and why they're doing it, for example when they do their own planning. (Partner)

Engagement

As discussed in the previous chapter, many principals saw student engagement as one of the most important reasons for offering E4E. There was evidence from the case study interviews that involvement in the projects being offered under the E4E umbrella did result in high levels of student engagement. Students described their E4E-type projects as more challenging and meaningful than the work they did in other classes. Many expressed passion, commitment, and excitement about their work, and this was particularly so for students creating new knowledge to be used by community or business groups for real purposes, as exemplified by the student and teacher reflections below. The project in question involved researching and presenting the history of a local place, to be used on the council website:

> We probably pick up, like the little things—like the real out of it ideas… Older people are just thinking of the township not the out of it places or crazy ideas. Like there wasn't much on [place being researched] but when we went into the little research room they had heaps, and I didn't know it. There is so much about such little places that it's amazing. Before you were like, 'It's a hot day I'm going for a swim' [at the place being researched], and now I'm there thinking, 'Oh maybe there was a hotel over there…and a house over there…' (Student)

> I've got one student who doesn't like to work and now he's so enthusiastic and he's always talking about [place he is researching as part of his project]. He's developed a bit of pride in his town and stopped calling it a hole. (Teacher)

Students considered that they worked harder, longer, or set higher standards for themselves on their E4E projects when compared with other school work, and described how they chose to do extra work in their out-of-school time:

> I don't talk to anyone [as a way of avoiding school work]—I tell them to go away. I can't do two things at once. In my other classes I don't do any work. (Student)

> [I learn] to actually do something. Like if I want to get it done on time I have to go home [and do it for homework]. I don't do homework for any other classes. But I don't mind this homework 'cos I like it. (Student)

> You start setting goals higher for yourself. (Student)

Summary

In this chapter we have provided a snapshot drawn from qualitative case study data of the learning opportunities afforded to students engaged in E4E-type activities early in the evaluation. We did not find many examples of radically transformed learning environments, and this is not surprising, given that teachers are operating within school structures, or in the process of trying to change school structures, set up for 20th century learning. These include: the timetable, the categorisation

of information according to subject areas, the organisation of students according to year level, the organisation of spaces into same-sized classrooms, and so forth.

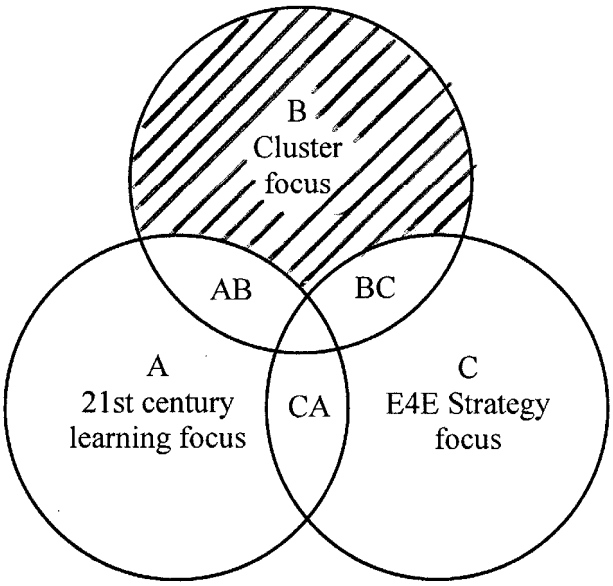
However, despite these constraints we did see some evidence of shifts towards 21st century learning environments. Most of the activities presented under the E4E umbrella afforded students with opportunities to:

- engage in in-depth, problem-focused projects over an extended time period involving real research in which students manipulate and reconfigure old knowledge to create new knowledge
- make decisions about their learning
- work in groups and develop group skills
- work across spaces within the school and offsite.

While only some activities provided opportunities for students to serve the community so that both they and the partners benefited, most had opportunities to communicate in various ways with members of the community.

Although many of the E4E-type projects provided the potential to draw on knowledge from a range of disciplines, this was not often made explicit to students and the onus to do so was left with them. As a result, we saw little evidence of the systems-level thinking necessary for 21st century society, suggesting that this may be a key area in which teachers require further support if 21st century learning ideals are to be realised.

6. How has E4E operated at a cluster level to support E4E development so far?



This chapter addresses the evaluation's "cluster focus".[32] The Regional E4E Clusters' Criteria and Guidelines state that the project "aims to embed an enterprise culture into clusters of schools based on characteristics of their individual communities". This assumes that each school, or whole cluster, might choose different ways to organise themselves to embed E4E. More importantly they might strive towards different goals. The cluster focus is concerned with understanding the different project-level "stakeholders" that exist within the regional clusters, in terms of their E4E roles and objectives.

This chapter examines what regional clusters want from E4E and how they have organised themselves to develop it. Our guiding question for the chapter is: How has E4E operated at a cluster level to support E4E development so far?

[32] Part of the evaluation's cluster focus has involved NZCER providing schools and regions with tailored feedback about their own situation, taking into account what we know of the directions they want to head in. This report steps beyond this individual feedback.

To unpack the term "operate" we ask, what *roles* are involved at the cluster level, and how have these supported developments to date? To unpack the term "development" we ask, what are different people's *objectives* for what they are trying to develop in E4E?

These two sub-questions are used to organise the chapter. The first, about roles, is considered in section one, and the second, about objectives, in section two. These roles and objectives support the kinds of 21st century directions and E4E activities outlined in the previous two chapters.

Cluster-level roles to support E4E development

Considering that the evaluation's "cluster focus" was set up to address the goals of stakeholders (broadly defined) within four clusters, it is important to understand the roles that might "house" these stakeholders.

This section addresses the sub-question: What *roles* are involved at the cluster level, and how have these supported developments to date? In order to understand how E4E has operated at a cluster level we need to know who has been responsible for what, and how well different structures and relationships have worked so far to support E4E developments.

We now consider three main "structures" with our cluster focus: regional cluster structures; internal school structures; and partnership structures.[33] Several roles are represented within each structure, such as a regional co-ordinator role within the regional cluster structure.

The regional cluster structure

Regional cluster pilots are set up to test a cluster approach to E4E, as an alternative to schools working in isolation. Three core roles within the regional cluster structure are the role of the regional co-ordinator, the role of professional development, and the role of the cluster collaboration itself.

Regional co-ordinator role

The regional co-ordinators work with schools and community/business partners, as well as with wider regional and national E4E stakeholders. The overall role of the regional co-ordinator is similar across all regions. That said, Chapter 4 explored how the way that each has worked with their schools and communities in 2007 has reflected: the longevity of the cluster; its history with enterprise education; the educational and regional environment; as well as the personal strengths

[33] There is also a national-level layer to E4E learning communities, which involves MOE, NZTE, the national and regional co-ordinators, plus other stakeholders working together. This is taken up in the next chapter, which looks at the evaluation's interface between the "cluster focus" and the "E4E strategy focus".

each co-ordinator brings from their previous experience. This subsection takes a closer look at regional co-ordinators' work with partners and then schools.

The principal survey asked what support schools wanted from the regional and/or national co-ordinator. The proportion of principals affirming each form of support listed in the survey is recorded below. Of all the options, principals most frequently called for co-ordinators to support professional learning about E4E within their schools:

- Give suggestions about how E4E can be integrated into various curriculum areas, including assessment demands (80 percent)
- Ensure our school has E4E professional development opportunities (72 percent)
- Raise awareness about E4E in our region, especially with business and community organisations (68 percent)
- Co-ordinate regional E4E meetings (60 percent)
- Maintain regular contact about E4E developments in our region (60 percent)
- Broker initial relationships between our school and community/business partners (56 percent)
- Raise awareness about E4E in our school, especially with teachers (52 percent)
- Support or monitor relationships between our school and partners in an ongoing way (48 percent).

Part of the regional co-ordinator role has been to introduce the E4E concept gently to schools, especially for Manukau and Nelson. The case studies revealed that it is beneficial to support teachers to become familiar with E4E teaching and learning concepts, as well as helping them to begin and follow through with a community/business partnership:

> I had a range of schools and teachers at different levels. In the first three weeks I visited all schools—to talk about what E4E is, what the region's priorities were, what my role is. I asked them to invite me in to talk to wider staff—e.g., with case studies, with the intention of engaging teachers. (Regional co-ordinator)

School staff mentioned a range of ways that the regional co-ordinator has supported E4E development in their school:

> [The regional co-ordinator] will come to us at any time. (Lead teacher)
>
> [The regional co-ordinator] is talking to rotary clubs, businesses, etc. (Principal)
>
> [The regional co-ordinator] does a lot of the start-up work with communities and teacher connections…there needs to be support for the community contacts so the subject teacher is not left floundering on their own. (Lead teacher)
>
> [The regional co-ordinator] did a 15-minute session [with staff]—it reiterated what we have done…it's good for staff to recognise help is there. (Principal)
>
> [The regional co-ordinator is] very supportive, comes to school, gives a hand. We want to work with them more and [have more] time to reflect on progress. (Lead teacher)

About half of the community/business partners surveyed had first heard about E4E through the regional co-ordinator (48 percent) or their economic development agency (12 percent). Each regional co-ordinator has come up with strategies to help introduce community/business partners to E4E, and monitor relationships, manage risk, and/or understand results. Some are more formal, or more thoroughly documented, than others:

> [When I first meet them I] open them to the concept that it takes a village to raise a child. (Regional co-ordinator)

> I ask the partner what things they'd be concerned about [including] what won't go right. (Regional co-ordinator)

The majority of case study interviewees genuinely appreciated their regional co-ordinator, and saw them as vital to E4E developments in their school or organisation. Comments such as "[the regional co-ordinator is] outstanding—the right person at the right time" were common.

In line with its pilot status, cluster arrangements and expectations are in development. E4E is still being framed and developed at both the regional and national level. Some things were still being worked out at the time of our data collection:

> I'm not sure what the regional co-ordinator's role is. (Lead teacher)

> I'm not sure if [the regional co-ordinator] will set up new relationships. (Lead teacher)

> We have good professional people holding the [co-ordinator] roles… Let us get on with the job. (Principal)

There are multiple ways that teachers' professional learning might develop, including formal E4E professional development arrangements (as we see below).

Professional development role

According to some interviewees, the year began with some confusion about whether, how, and by whom professional development might be provided to schools. Some also perceived some mismatches between school planning time frames and the organic means by which the E4E Regional Cluster pilot has developed. It seems that national and regional co-ordinators have attempted to balance whole cluster meetings (with lead staff) with in-house staff sessions and one-on-one meetings within individual schools:

> The staff had 15 minutes with [the regional co-ordinator] and there is a session at end of this term with [the national co-ordinator]. (Principal)

The term "professional development" appeared to mean different things to different people within the regional clusters. The principal survey asked principals the extent to which they thought it was a priority to source professional development related to E4E over the next two years. Forty-four percent considered it high priority, 48 percent moderate priority, and 8 percent indicated it to be low priority.

The West Coast is the only region with an external professional development adviser providing regular support to E4E lead and cell teachers. The regional co-ordinator drew on personal experience with literacy and numeracy professional development in the region, to design an E4E professional development model that involved ongoing team-based and one-on-one sharing and modelling with teachers:

> 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—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 etc. For others she asks 'What do you need?' (Regional co-ordinator).

The evaluation was not set up to evaluate the professional development adviser's process or outcomes in an in-depth manner. That said, West Coast school staff interviewees saw the role as integral to their E4E progress, and we could see from their comments that the adviser was *modelling* as well as explaining what a good E4E teacher might try:

> It's been fantastic—[the professional development adviser] has been really great—it's been needs based—she's just been asking about what we have been doing and offering suggestions rather than telling us what to do. (Lead teacher)

> I've definitely changed my thinking, towards thinking in an entrepreneurial way and outside the box not just about profit making—because of [the professional development adviser] and [regional co-ordinator]… We've needed this year for walking alongside…you do need someone to think outside the square…[who is] working towards the ideal but knowing the reality. (Lead teacher)

When we asked school staff in the other three clusters about their professional development opportunities, they tended to cite meetings with the regional or national co-ordinator. Some also mentioned professional development or support received through wider enterprise education programmes such as the YES and the PrEP.

Not all schools were well positioned to take the professional development on offer at the time of our case studies, partly because it was not scheduled into their 2007 plans early enough and/or because of difficulties in accessing relievers:

> Our school couldn't arrange cover so only some could go to the session with [the national co-ordinator]. It was more of an informal talk. (Teacher)

> Two professional development visits per term is too much. (Principal)

> I'm taking a light steering approach. We're looking to have [the national co-ordinator] in after seniors have done exams. (Regional co-ordinator)

Professional development is not always seen to be the best way to support reflective learning or new developments in schools. As one principal commented, "Some [teachers] would say we need more professional development, but more would say I need time with my department." The same hesitation could also apply to opportunities for interschool professional learning communities.

Cluster collaborations

The call to work together tends to suggest a need to communicate with one another, in person or through other means. Where cluster meetings had occurred, school staff appreciated the opportunity to share ideas across schools:

> Last year's two-day E4E expo was great. It was useful seeing what other schools are doing—a chance to focus on successes. It helped me to recognise how well we are doing as a school and as a region. (Principal)

> It would be great to see what other schools are doing, especially in secondary subject areas. (Lead teacher)

The thirst to know what another school does is easily tempered by physical distance or lack of time. In that sense, interschool collaboration has sometimes been seen as a luxury rather than a necessity:

> The biggest [challenge] is the inability for our students and staff to connect with each other—a silo effect. Trying to get them together is just about impossible. We need buy-in this year for a student expo for next year. [We've] set a video conference date for three schools in September. (Regional co-ordinator)

> We haven't had much contact with the other schools…we're busy getting our stuff done…at the moment we're local community-focused. (Lead teacher)

> Yes, it [cluster collaboration] is starting but not there yet. Schools are really islands and we're no better than any other. Schools need to start reaching out to communities, and we haven't made enough bridges yet. For example we link our programme into [the local] college now but we could still do even more. We need more linkage and bonding between schools because their kids are our kids. (Principal)

It is probably telling that only 60 percent of principals thought that the regional co-ordinator should co-ordinate cluster meetings. Similarly, less than 50 percent rated collaborative learning from, or with, other schools to be high priority (Table 14).

Table 14 **Two-year priorities regarding cluster collaborations (principal survey)**

Priority	Low %	Moderate %	High %
Learn what other schools are doing in E4E	4	56	40
Collaborate with other schools to develop E4E	16	36	48
Develop the school's individual approach and common language for E4E	-	56	44

At this stage the desire to build an E4E identity within each school seems to outweigh the call to develop a common regional E4E identity between all schools. Each E4E cluster can currently be visualised as a network. The regional co-ordinator is the central connector/translator/conductor, through which the principals and/or lead teachers are connected to each other, some more actively than others. Now we take a closer look at how roles have developed at the school level.

Individual school structures

Principals' role

> 'Strong visible leadership from Senior Managers and Boards of Trustees' is one of the 'critical changes' expected to occur as part of the Regional Enterprise Clusters. (NZTE, 2007a, ECSA criteria)

The response rate on the principals' survey gives some indication of the level of E4E "buy in". Of the 25 principals who returned a consent form, only one disagreed with the statement "The principal and senior management team *support* E4E", although three disagreed that they *understood* E4E at that early stage. With regards to our 12 case studies, most principals were positive about E4E. One principal stated that within his school "the jury is out—I won't provide resources until I see something happening that is useful for kids". [34]

During the case studies we asked principals to explain what E4E meant to them and what they saw their own E4E role to be. Most clearly articulated their definition of E4E, and could explain how they hoped it would unfold in their school:

> Me and [the deputy principal] deliberately try and lead the professional learning of the staff, to make sure it is current, appropriate, well resourced, reviewed, and monitored—that goes down the whole flow to reporting to parents, the board, ERO etc.
>
> [My role is to] support [the E4E lead teacher], give out a management unit, [and] co-ordinate across different professional development areas…

[34] This principal did not support the push to embed E4E across all curriculum areas and wanted something more closely reflecting the YES model—to provide "something extra" for students who want to lead activities, make a profit, and gain business know-how.

> [My role is] chief encourager, enabler, environmental scanner…to enable people to take risks.
>
> The draft curriculum came at the right time for me—so we used the teacher only day as a half for feedback and half for department E4E planning.

When we asked each regional co-ordinator to think of a particularly strong E4E school, and describe what led to its promising progress, all four recognised that principal support was an essential component, summed up as "the principal has a passion for it". They pointed to such things as the principal's clear long-term vision for E4E in their school, and principal support for the lead team both practically (e.g., by offering release time or management units) and intellectually (e.g., by raising their own knowledge about enterprise education and sharing their thoughts about pedagogy and direction):

> [The school gets X] thousand from [the regional co-ordinator], which I've split into a management unit and relief for professional development. (Principal)
>
> I've taken a big role in driving it [E4E]. It does require the mandate of the senior manager… I'm on [the region's E4E] executive so have a strong sense of [the cluster approach]…. We're not at the [school documents] stage yet—it's starting to come into our 'speak'. I'm making sure the E4E language is in every newsletter I can. (Principal)

A lead teacher backed up the regional co-ordinators, when she said: "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." Indeed, we found that some principals appeared to be a vocal, if not primary, advocate for E4E within their school, whereas others took more of a back seat. Both approaches encouraged a lead E4E teacher to step into a leadership role, aligning with the concept of networked leadership. At least from the principals' perspective, lead teachers and principals are heading in the same direction with E4E.

Table 15 **Alignment between principals and lead teachers (principal survey)**

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

Lead teachers' role

The principals and regional co-ordinators we interviewed explained that the lead teacher is crucial to E4E progress. As one principal said, part of his own leadership role was "finding a leader whose enthusiasm can bubble over to others".

All 25 principals who completed surveys indicated that their school had an E4E lead teacher (sometimes known as the enterprise co-ordinator). Over the next two years all wanted to "strengthen or expand the role of the lead teacher" (36 percent considered it high priority and 64 percent moderate priority).

The 2007 case studies provide some initial insights into the lead teacher role.[35] E4E lead teachers appeared to be carrying out a variety of tasks, depending on their school's approach to E4E as well as their employment position in the school. We classified the descriptions that they, and fellow staff, gave about their activities into three main roles:

- administrative, for example organising meetings, reporting, etc.
- inspirational, by advocating the potential of E4E via their own teaching practice, conversations with staff, and school documents
- problem solving, such as helping teachers to develop their classroom approach or partnerships.

There appeared to be four main avenues through which lead teachers worked with a team or "cell" of teachers (some did all three, while others tended towards only one):

- co-ordinating meetings
- working one-on-one with teachers
- acting as a conduit between the teachers and external parties/resources
- recruiting more cell teachers as appropriate.

The role of the E4E "cell" and wider school

A school's enterprise team is expected to comprise a group of teachers who are committed to developing E4E in their own practice and the school.

Our case studies demonstrated that by Term 3 some schools had established a clear team of teachers responsible for E4E. Teachers opted in or were invited to participate. The exact configuration varied with 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.

For other schools the "cell" structure was less well defined, or did not exist at all.[36] At this stage it is difficult to judge whether a formal cell is necessary for E4E developments, and views on this question were neither raised nor challenged by any of our interviewees. What does appear important is finding ways for teachers to share experiences, collaborate across different

[35] Results from a lead teachers' survey will feed into our next report.

[36] In this situation we interviewed a group of teachers whom the lead teacher felt best represented the school's E4E direction.

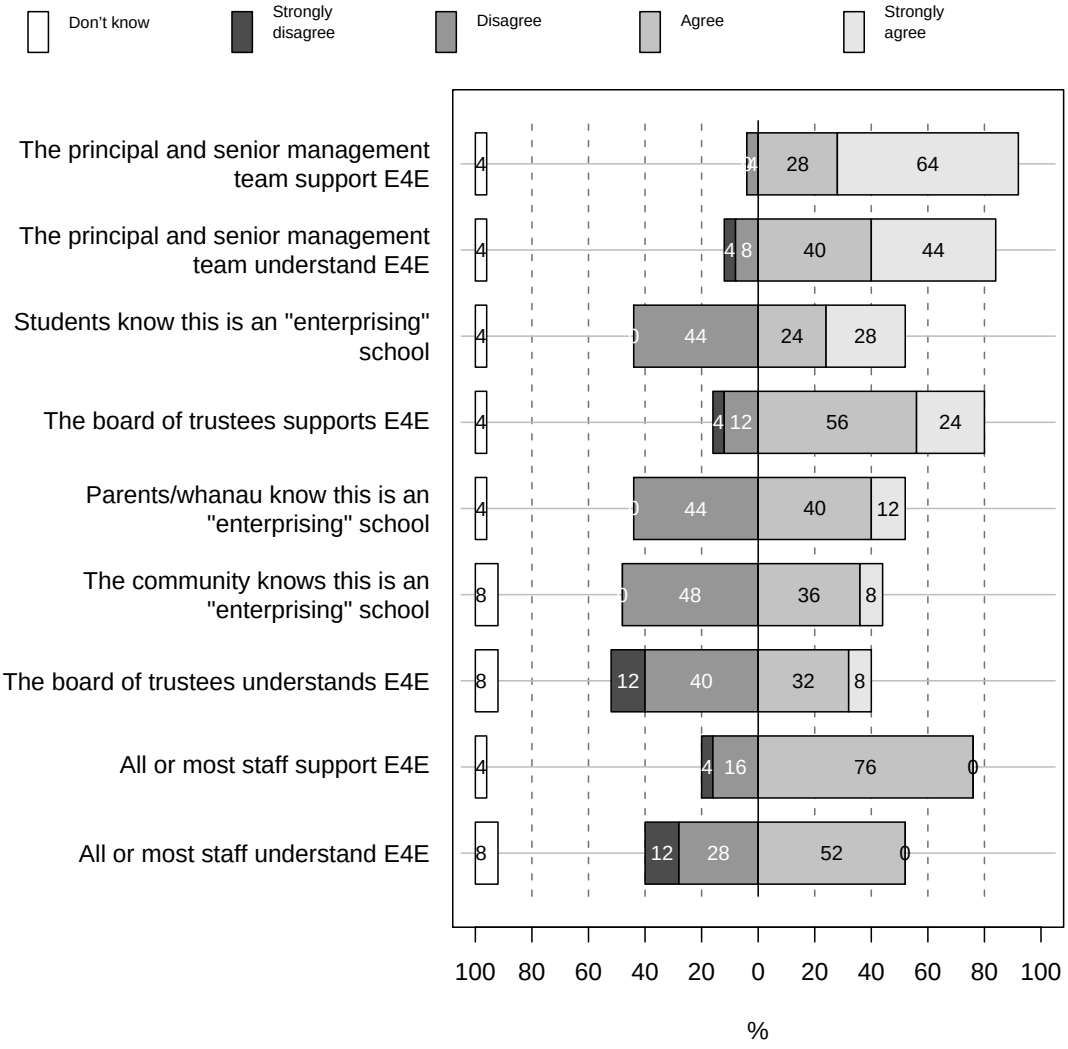
curriculum areas, and gain traction with more and more people. Table 12 shows how principals prioritised items along these lines.

Table 16 **E4E priorities about wider involvement (principal survey)**

	Low %	Moderate %	High %	DK/DNR %
Build collaboration between teachers in different curriculum areas	-	28	72	-
Link E4E with the school vision and high-level plans	-	36	64	-
Expand E4E across all curriculum areas	16	24	60	-
Strengthen/expand role of the "enterprise cell"	-	44	56	-
Get more staff interested and involved in E4E	-	48	52	-
Link E4E to other initiatives and programmes in the school	4	48	48	-
Expand E4E across all year levels	16	44	40	-
Strengthen/expand role of the E4E lead teacher	-	64	36	

As with school management, the early principals' survey suggested that teachers' support for E4E outweighs their understanding. Most saw that a careful balance was needed between providing E4E structures and directives, and allowing people to come on board at their own pace as interest spreads and the school culture changes. Figure 12 gives a fuller picture of the support and understanding of E4E amongst various parties, as judged by principals who completed the survey.

Figure 12 **Current E4E understanding and support for E4E (principal survey)**



Principals' response to the item, "the community knows this is an enterprising school" may have been partially informed by the extent to which they had already established E4E-style partnerships with community or business groups.

Partnership structures

The role of community/business partners

The majority (68 percent) of surveyed principals suggested that their school had "established strong relationships with community/business partners to support E4E". Likewise, 76 percent rated it a high priority to strengthen these relationships with *existing* partners and 72 percent considered it high priority build *new* relationships with partners. These were amongst the six highest ranked priorities out of 30 items.

The community/business partners' survey gives an indication of the kind of role partners are playing in E4E developments (Table 17). The survey option that best reflects national E4E intentions, "We are a client or provide projects for students to carry out at (or with) our organisation", had the greatest level of agreement. More than half of the respondents ticked at least two of the options.

Table 17 **Business/community partners' E4E involvement (partner survey)**

Involvement	Percent
We are a client or provide projects for students to carry out at/with our organisation	64
We critique or provide feedback on students' project work	36
We provide visits to our organisation	36
We give talks about our organisation to students (e.g., at assemblies)	16
We provide major sponsorship (money or resources) for E4E across the whole region	12
We provide sponsorship (money or resources) for E4E activities in at least one school	12
We haven't been directly involved in E4E yet but we are interested in doing so	4
Other	16

We look at these partnerships in greater detail in Chapters 7 and 8.

Overview of roles

This section was motivated by our main question: How has E4E operated at a cluster level to support E4E development so far? It has specifically addressed the sub-question: What *roles* are involved at the cluster level, and how have these supported developments to date?

A variety of roles and relationships have been set up to support E4E. These are further developed in some schools and in some regions. It has taken a long time to build collaborative cluster arrangements, and at the time we visited some were still in initial development. We found that leadership at a regional level is as important as leadership at a school level, and the way in which the cluster is structurally organised is likely to have an impact on opportunities for E4E growth and development. The evidence we have provided in this section reflects good-practice literature to the extent that leadership appears to reside at various levels of cluster hierarchies rather being located solely with principals (Hargreaves, Earl, & Ryan, 1996; Mulford, 2003).[37]

[37] This section also helps to address a "E4E strategy focus" research question about the extent to which school management/leadership structures are organised to allow opportunities for E4E growth and development. It also addresses our "21st century learning focus" questions about whether E4E supports 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?

However, at this stage the clusters couldn't be considered to be *strong* professional learning communities. According to Timperley, Phillips, and Wiseman (2003) key features to strive towards would be to further develop:

- 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.

The idea of developing shared goals is explored below.

Objectives at different levels

This "cluster focus" chapter examines what regional clusters want from E4E and how they have organised themselves to develop it. The previous section on structures and roles answered the "how" question: now we turn to the "what they want" question. We cannot understand how different roles support development without understanding what the roles are intending to develop. This section stems from our chapter sub-question: What are different people's objectives for E4E?

For the purpose of this chapter we are not concerned with the objectives of national stakeholders: we are solely interested in what our interviewees and survey respondents think. We look across data from all four regions to consider the goals and objectives that different parties have for E4E development at the cluster level. While our initial intention was to help clusters develop their own regional objectives, this was not a feasible role for us to play in the first year of the four-cluster pilot. Instead, two main research questions underpinned our 2007 data collection:

- What are schools' development priorities for E4E?
- How do schools and community/business partners perceive E4E and what are the reasons for their involvement?

Not all clusters had collectively developed common concrete objectives, or, if they had they were not known and/or cited by all involved. This is not surprising considering that it was very early in the Regional E4E Cluster journey, and that E4E is a somewhat amorphous concept rather than a prescriptive programme. National outcomes for E4E were developed during 2007.

Regional co-ordinators' objectives

The regional co-ordinators' aims, as brainstormed in May, could be grouped into eight main areas, even though the specifics differed in line with some of the regional flavours outlined earlier.

Table 18 **Regional co-ordinator early aims for their region**

Objective theme	Examples of specific aims recorded
To support enterprising teachers and schools across the full curriculum	Develop resources that will help teachers in all curriculum areas. Provide examples for all curriculum areas.
To enable authentic learning experiences	To increase relevant learning experiences. Make learning real and meaningful.
To develop business/community partnerships	Break down barriers between high schools, businesses, and communities. Create respectful, dynamic relationships…[to] value people and resources.
To improve student engagement (appropriate for today's youth)	Want our community to "get" our students: they are very different from my generation. Students are changing over time—need to review how we teach them.
To help students to be enterprising	Enterprising attributes to be used daily by teachers/students. Students involved in E4E should be more resilient, enterprising, creative, critical thinkers, who are able to contribute in the future.
To improve students' futures and lifelong learning potential	Lift achievement and aspirations of young Māori. Shift students' motivation to leave school with personal ideas/goals. Want students to believe they impact on the commercial and wider world.
To create E4E sustainability	Secure sustainable funding for regional E4E co-ordination. Foster relationships to be partnerships for sustainability.
To lead regional development	Youth as key to [our region's] economic prosperity. To be a learning region.

As can be seen in this table, co-ordinators generally had some sort of vision and a sense of direction, even though two had only recently been employed (within the month). The vision involved supporting E4E to influence short- and long-term change at various "levels", including students, teachers, schools, business/community partners, and the region as a whole. The question of how they operationally intended to get there and by when was not fully explored.

Principals' objectives

We developed a list of possible E4E objectives informed by the Regional Co-ordinator May hui, NET evaluation, ECSA applications, initial cluster visits, and the West Coast principal's EDAL objectives.[38] For the principals' survey we divided these into overall "reasons" for E4E, and specific operational "priorities" for 2007–2008, staying clear of terms like "objectives" and

[38] As far as we are aware this is the only region that had set formal objectives at that time (early Term 2).

"outcomes". However, at the most basic level we assume that if, for example, "raising student achievement" is given as a *reason* for developing E4E then an E4E *objective* is to raise student achievement and an intended *outcome* of E4E is higher student achievement.

The survey provided 29 possible reasons for developing E4E at their school. Most principals agreed with all of the 29 reasons provided, but not all *strongly* agreed. At least 80 percent of principals ticked "strongly agree" for the following five items. Apart from the first item, the other four probably echo the objectives of many other programmes and professional development initiatives available to schools and are not particularly indicative of 21st century learning goals. These 80 percent wanted to develop E4E for these reasons:

- 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).

The items that principals most commonly disagreed with were:

- Ensuring that students are capable of running a business in the future (38 percent disagree)
- Brokering students' job opportunities in E4E partner organisations (20 percent)
- Raising students' awareness of global contexts (16 percent)
- Encouraging students to see a future for themselves in this region (16 percent)
- Improving perceptions about business in the education sector (16 percent).

Of the 30 possible priorities for the next two years given in the survey, those receiving the most support were as follows:[39]

- Strengthen relationships with *existing* partners (76 percent high priority)
- Link E4E development to the incoming NZ curriculum (76 percent)
- Build collaboration between teachers in different curriculum areas (72 percent)
- Build *new* partnerships (68 percent)
- Link E4E to the key competencies (68 percent)
- Develop E4E for students in Years 9–10 (68 percent)
- Link E4E with school vision/high-level plans (64 percent).

While keeping in mind that the majority of principals rated all 30 items as moderate or high priority, the lowest priorities were to:

- Design an E4E course that integrates several curriculum areas (36 percent low priority)
- Link E4E development to careers advice/support (20 percent)
- Link E4E to achievement standards (24 percent)

[39] See Appendix F for principals' responses to the full list of priorities.

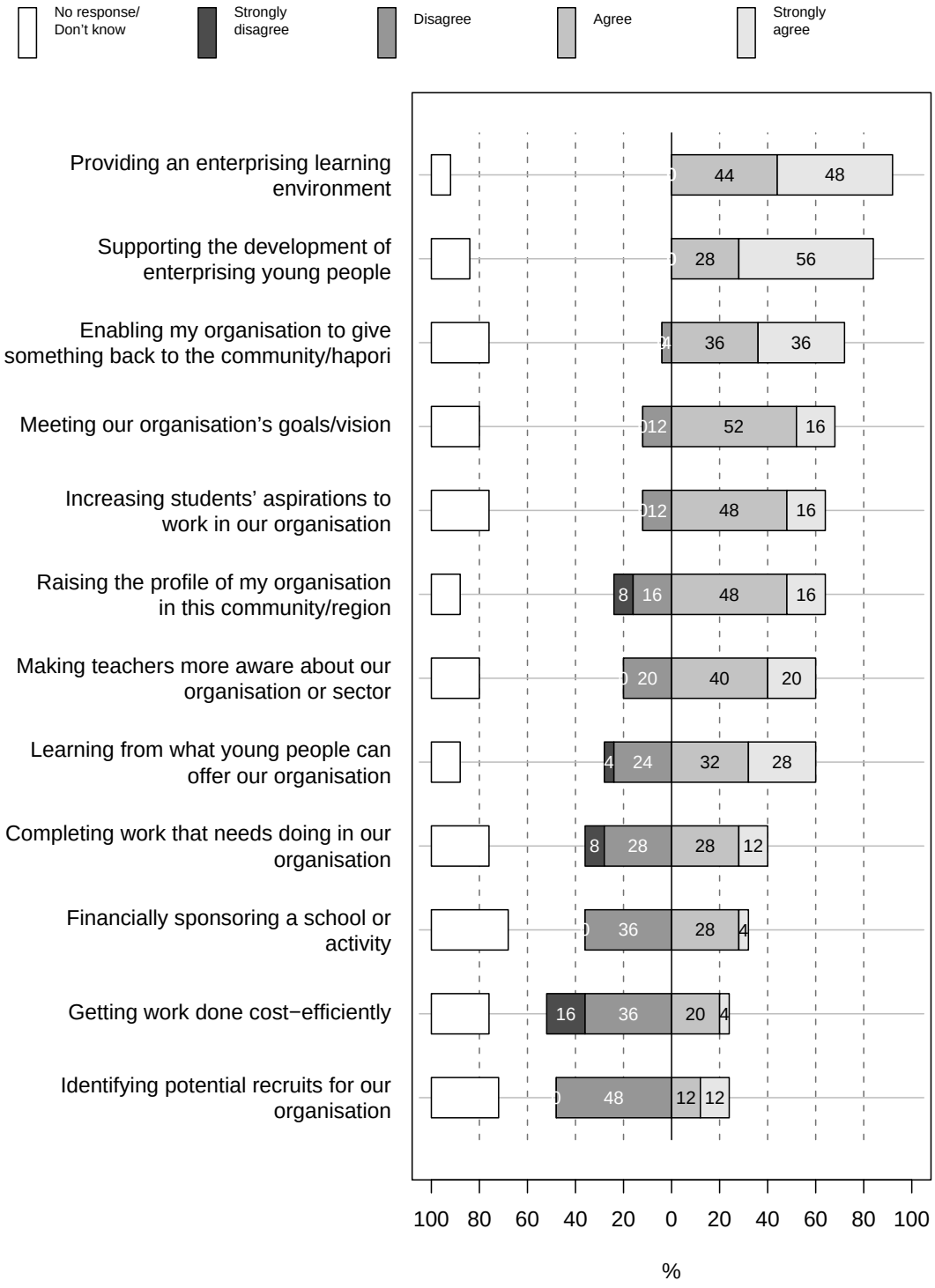
- Link E4E to unit standards (20 percent)
- Link E4E in targeted curriculum areas (20 percent).

The first item is worded in such a way that it is not clear to us whether principals consider it low priority because they do not want a *separate* E4E course, or because they do not want to *integrate* curriculum. The relatively low priority given to linking E4E to assessment could indicate that either assessment is in the "too hard" basket or E4E is an "add on" that does not relate to assessment. Alternatively it could reflect the suggestion (made by some interviewees) that assessment dampens the truly enterprising spirit.

Community/business partners' objectives

The community/business partners' survey asked: "What do you see as the main purpose of E4E at your organisation?" Responses to the 12 response items are provided in the figure below:

Figure 13 **Purpose of E4E for community/business partners**



Similar to the principals, "supporting enterprising young people" tops the list. The most apparently "self-serving" reasons came out at the bottom. Amongst these are: "completing work that needs doing in our organisation" and "identifying potential recruits for our organisation".

That said, in the interviews some partners did point out that they had recruited, or hoped to gain, an employee from the process—even if it was a secondary reason for being involved:

> Staffing is a lot easier—it complements their study and gives them money with part time work. We don't have to advertise. (Partner)
>
> Who knows—you might see potential in one of the students you have. (Partner)
>
> I can see natural flair…I might offer one-year work experience, then they might not need to get a qualification…some waste time going to university because experience beats it. (Partner)

Others pointed out that supporting the development of enterprising students met their long-term objectives of more enterprising employees, even if future employees were not these exact students:

> We do it in our business quite a lot. [Why?] Just giving back to the industry. We hope that students will go on to design school…it's a good source of potential employees. (Partner)

Comparing principals' and partners' objectives

We asked partners to indicate how strongly they agreed or disagreed with the 29 reasons for E4E from the principals' survey. For analysis purposes, we have grouped the 29 statements into six objective categories, named as follows:

1. To enhance students' futures (SF)
2. To benefit the region, communities, and businesses (RCB)
3. To bring about change in teaching and schools (T&S)
4. To increase students' engagement and achievement (E&A)
5. To boost perceptions of, and partnerships between, schools and businesses/communities (P&P)
6. To improve students' skills, knowledge, and attributes (SKA).

All 29 reasons are provided in the table below, each with a code to indicate their category.

Table 19 **Reasons for E4E (principal and partner surveys)**

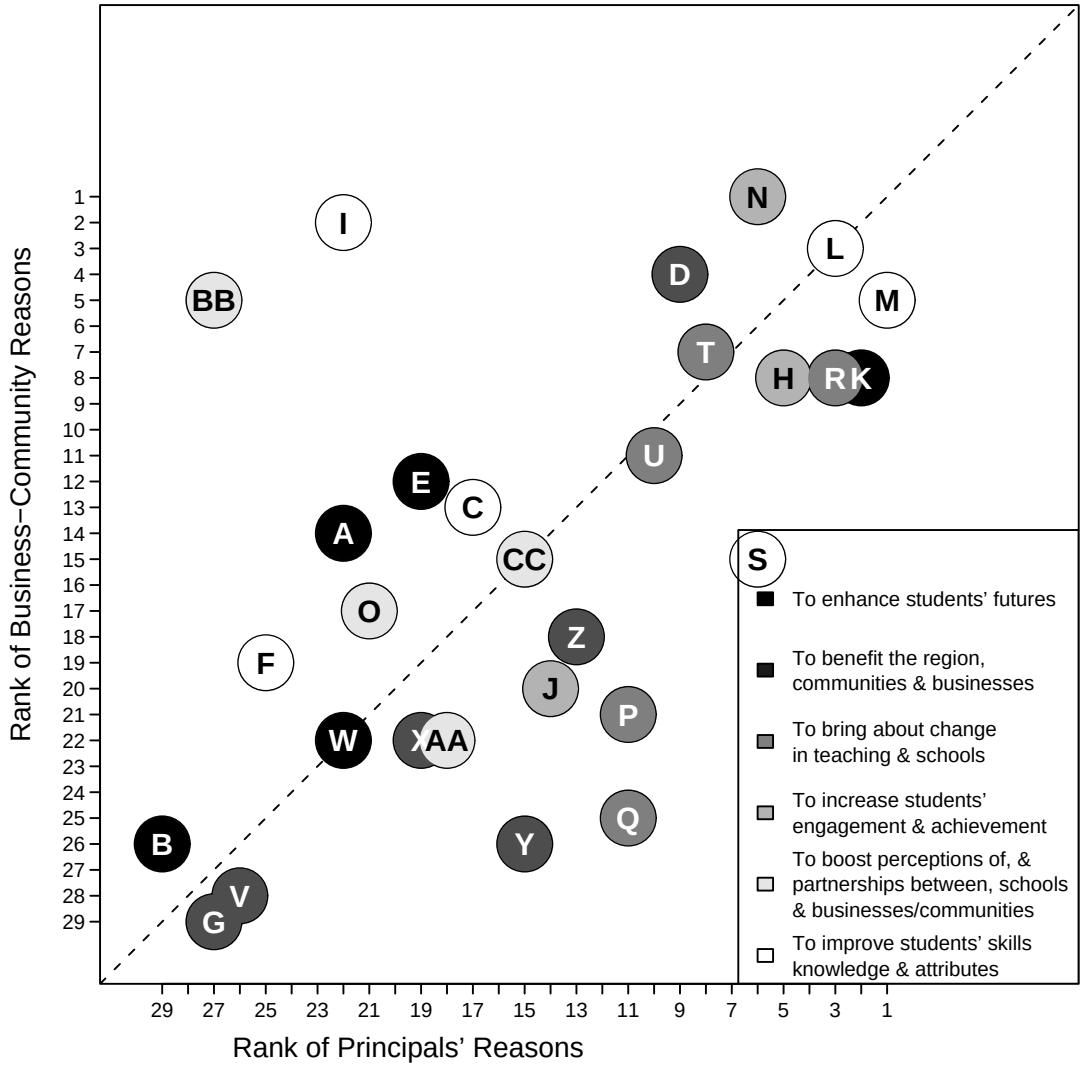
		Code
a)	Helping students to find their preferred career and learning pathways	SF
b)	Ensuring students are capable of running a business in the future	SF
c)	Making students more aware of how things happen in their own local community/hapori	SKA
d)	Teaching students the value of work and contributing to society	RCB
e)	Supporting students to develop new contacts and relationships in their community/hapori	SF
f)	Raising students' awareness of global contexts	SKA
g)	Brokering students' job opportunities in E4E partner organisations	RCB
h)	Increasing students' engagement, interest, or motivation in school/kura	E&A
i)	Ensuring students are "job-ready" when they leave school/kura	SKA
j)	Encouraging students' to stay at school/kura	E&A
k)	Helping students to feel positive about their future and themselves	SF
l)	Raising students' confidence and aspirations	SKA
m)	Raising students' enterprising attributes and attitudes	SKA
n)	Increasing student achievement	E&A
o)	Exposing teachers to workplace or community/hāpori realities	P&P
p)	Helping to reshape school curriculum and teaching to support "21st century" learning	T&S
q)	Challenging "old ways" of teaching, learning, and curriculum design	T&S
r)	Providing more relevant and authentic learning experiences for students	T&S
s)	Promoting life-long learning	SKA
t)	Providing enterprising or entrepreneurial activities for students	T&S
u)	Raising the enterprising nature of the school/kura	T&S
v)	Advancing social investment and/or economic prosperity in the region	RCB
w)	Encouraging students to see a future for themselves in this region	SF
x)	Preparing students to contribute to the future economic development of this region	RCB
y)	Preparing students to contribute to the future social and cultural development of this region	RCB
z)	Ensuring that our school and our students actively participate and contribute to their community/hapori while they are still at school	RCB
aa)	Furthering a relationship between our organisation and the region's economic development agency	P&P
bb)	Improving perceptions about business in the education sector	P&P
cc)	Improving perceptions about the value of schooling in our business and community sectors	P&P

In order to compare principals' and community partners' levels of agreement with each item we used *ranked scores*, drawing on an approach used in the NET evaluation (Bolstad, 2006a).[40] This analysis technique is well suited to comparisons between small samples—because statistical findings, such as averages and variances, can be affected by the responses of just one or two individuals. We calculated principals' average score for each statement, and then ranked these average scores from highest (1) to lowest (29). The same process was used to rank the community/business partner responses.

The figure below visually represents the comparison between principals' and community partners' reasons (or objectives). The letters refer to the items in the table above, and the colour codes refer to the categories. The principals' ranked scores are plotted on the x-axis and the community/business partners' on the y-axis. Points that lie furthest to the right are highest ranked by principals and points that lie closest to the top are highest ranked by business/community partners. The diagonal line enables a comparison—where points nearest to the line are similarly ranked by principals' and partners. Points that lie above the diagonal line show items that received a higher relative ranking from community partners. Points below the line show items that received a higher relative ranking from principals. The ranked scores do not indicate the *magnitude* of the average score for each party—these specific values have been referred to in the text of this chapter, where appropriate.

[40] Originally adapted from another NZCER project (Hipkins, Conner, & Neill, 2006).

Figure 14 **Reasons for E4E (principals' and community/business partners' surveys)**



It is difficult to see clear patterns when we look at the data in relation to the six colour-coded categories. Items in the fifth category (to boost perceptions of, and partnerships between, schools and businesses/communities, P&P) tended to be ranked higher by community/business partners. On the other hand principals tended to rank items in the third category (to bring about change in teaching and schools, T&S) higher than partners. However, one item in each of these categories did not fit this trend.

It is more enlightening to focus on individual items within the categories. Doing this shows that the majority of the items tend to cluster around the diagonal, suggesting that business/community partners' ranked reasons for E4E were not markedly different from the principals. Looking at the top of the diagonal, the items (N), (L), and (M) were ranked relatively highly by both principals and business/community partners alike. This suggests that E4E is expected to bolster students'

assurance that they can be successful through being enterprising, confidence, and achievement. On the other hand both parties gave low ranking to the following three items:

- Ensuring students are capable of running a business in the future (b)
- Brokering students' job opportunities in E4E partner organisations (g)
- Advancing social investment and/or economic prosperity in the region (v).

There were some clear difference between partners' and principals' ranked scores. The greatest mismatch was that business/community partners' agreement gave much higher ranking to the following two items:

- Ensuring students are "job-ready" when they leave school/kura (i)
- Improving perceptions about business in the education sector (bb).[41]

Conversely, the principals ranked the following items highly, while the business/community partners did not. The items arguably all have to do with future-focused whole-school change:

- Challenging "old ways" of teaching, learning, and curriculum design (q)
- Helping to reshape school curriculum and teaching to support "21st century" learning (p)
- Promoting lifelong learning (s)
- Preparing students to contribute to the future social and cultural development of this region (y).

Differences aside, 68 percent of the 25 community/business partners surveyed agreed that they had "the same goals for the relationship" as the school they were working with. Only one (4 percent) disagreed, and the rest either did not know (12 percent) or did not respond (16 percent).

Visual representations of objectives

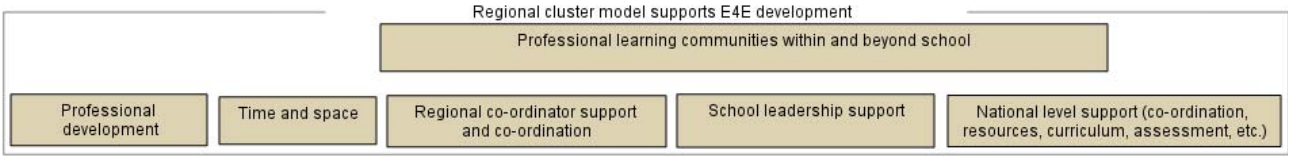
All of these different reasons and priorities from different cluster-level stakeholders can be quite difficult to remember and make sense of. We have tried to build them all into a simple model to help people identify the main objectives. There appear to be seven main areas that people within the regional clusters are aiming towards. We will take the reader through each zone, and then show how they build a full model (shown in Figure 15 on page 118).

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

The regional clusters have been set up on the assumption that various structures, roles, and relationships should provide a base for learning about, and developing, E4E. Part of the rationale for having clusters rather than individual schools working on E4E is so to foster professional

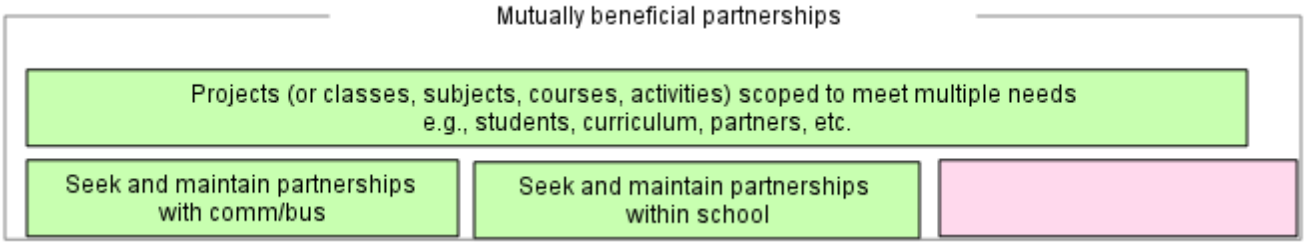
[41] In contrast, the parallel item, "Improving perceptions about the value of schooling in our business and community sectors" (cc), was equally ranked by principals and community/business partners.

learning communities that extend beyond the reach of one school. We have put some of the components that at least some cluster interviewees said were essential in the "brown zone".



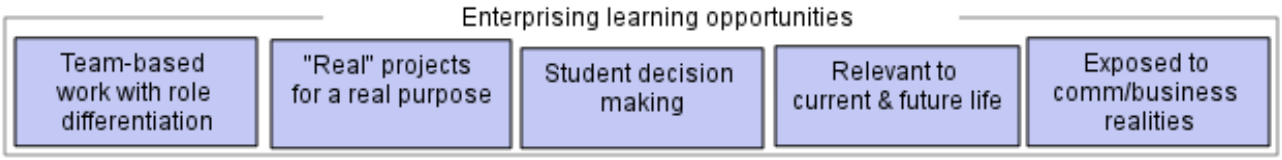
Aim two: Mutually beneficial partnerships are created (green zone)

A key aim for the regional co-ordinators and most school staff is to create and sustain partnerships that will enable more enterprising learning opportunities for students. School staff mentioned that they wanted to seek partners within the school, as well as external partners, because both could provide "authentic" projects. It is generally hoped that partnerships will be mutually beneficial, and thus projects should be set up to meet the needs of all involved. Interviewee and survey responses suggested that E4E does not have to be bounded by discrete projects. Instead, for most, the 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 a "pink zone" which we will return to later.



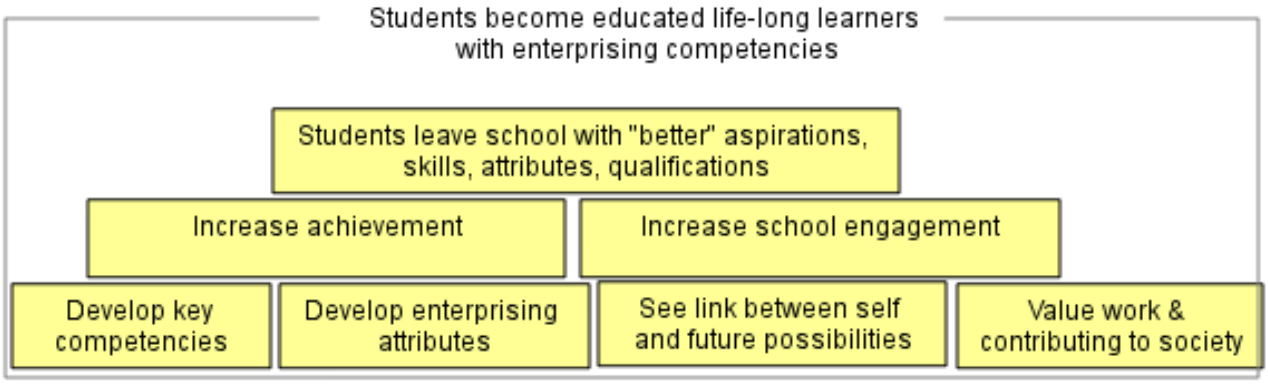
Aim three: Enterprising learning opportunities are provided (purple-blue zone)

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 interviewees, including students, tended to cite when they were asked to describe their understanding of E4E are presented in the "blue-purple zone" below.



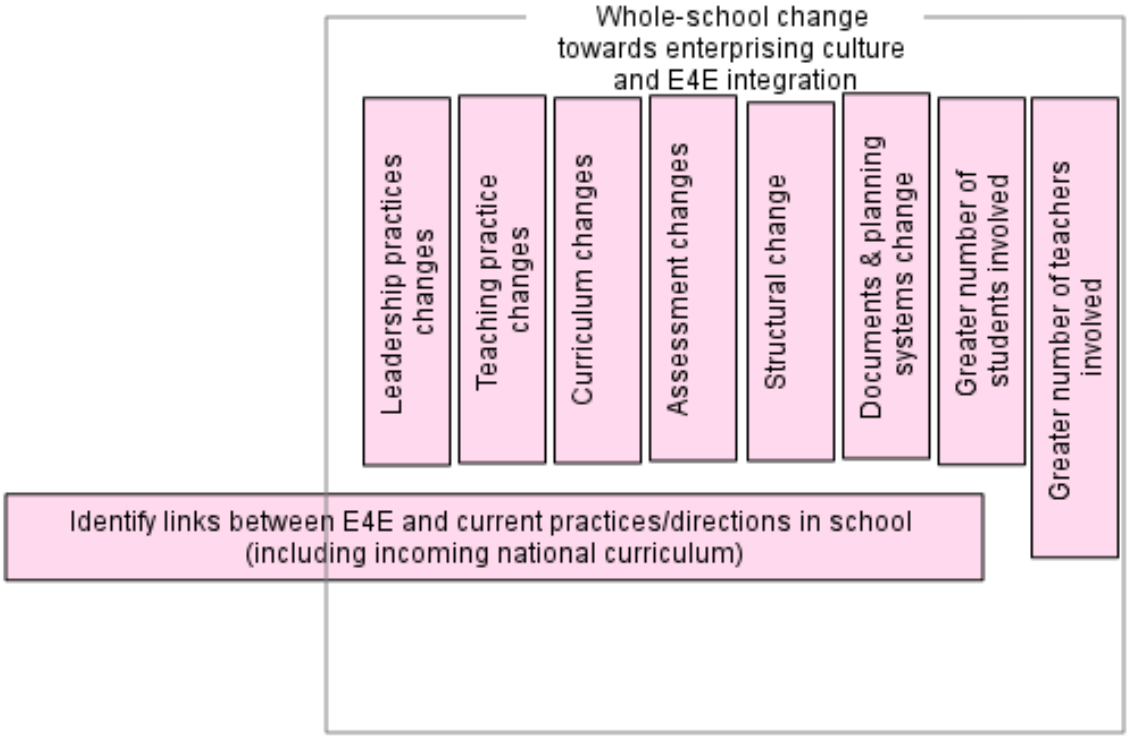
Aim four: Students become educated life-long learners with enterprising competencies (yellow zone)

Why do people want to develop enterprising learning opportunities? E4E resources call for students to develop "enterprising attributes", and this is generally supported by people we spoke to within the clusters. As we saw in Chapter 4, community/business organisations desire such attributes even more than the skills and academic abilities that schools traditionally focus on. That said, cluster members' desire to build students' enterprising attributes is complemented by a host of related aims. These are summarised by the yellow zone below. Ultimately, the intention is that E4E will help schools to help students to become educated life-long learners with enterprising competencies. Some school staff's commentary suggests that they see things like key competencies and enterprising attributes as means to increase school achievement and engagement, as well as seeing them as ends in themselves. Therefore we have put achievement and engagement higher in the zone.



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

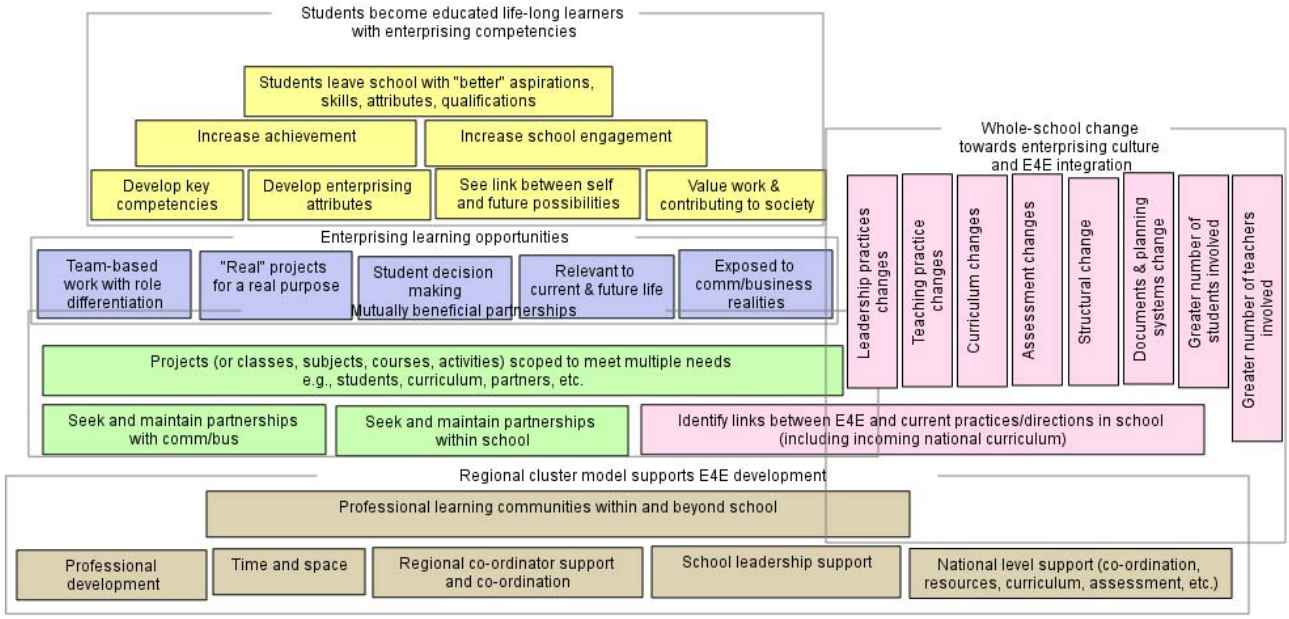
A key aspect of E4E is its whole-school change aim. The aim is to develop enterprising teachers and enterprising schools, as well as enterprising students. The pink zone shows that E4E cannot be integrated into curriculum and school culture on its own. Other concurrent shifts are needed. Some of the shifts mentioned by interviewees and survey respondents are presented in the pink zone. Nevertheless, there appears to be some disagreement between different cluster members about the extent to which whole-school change should drive or emerge from E4E. There are also differences of opinion about how fast such changes can happen. When we draw all zones into one model, the reader will see that the "pink zone" merges with the "green zone". This reflects three things our participants told us: one, more enterprising learning opportunities can be created without partnerships; two, partnerships cannot exist without links to school priorities and curriculum; and three, E4E cannot be developed if people cannot make links between E4E and the current practices and directions already within a school.



The model

The diagram below attempts to draw cluster stakeholders' main objectives for E4E into one visual model. This could be seen as akin to a programme logic diagram, which tends to represent sequential relationships between inputs, outputs, and outcomes (immediate, medium-term, and long-term). While we do not employ such language here, we have drawn on some programme logic literature to develop the diagram (for example, Duignan, 2004; Monroe, Fleming, et al. (2005); Rogers, Huebner et al., 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.

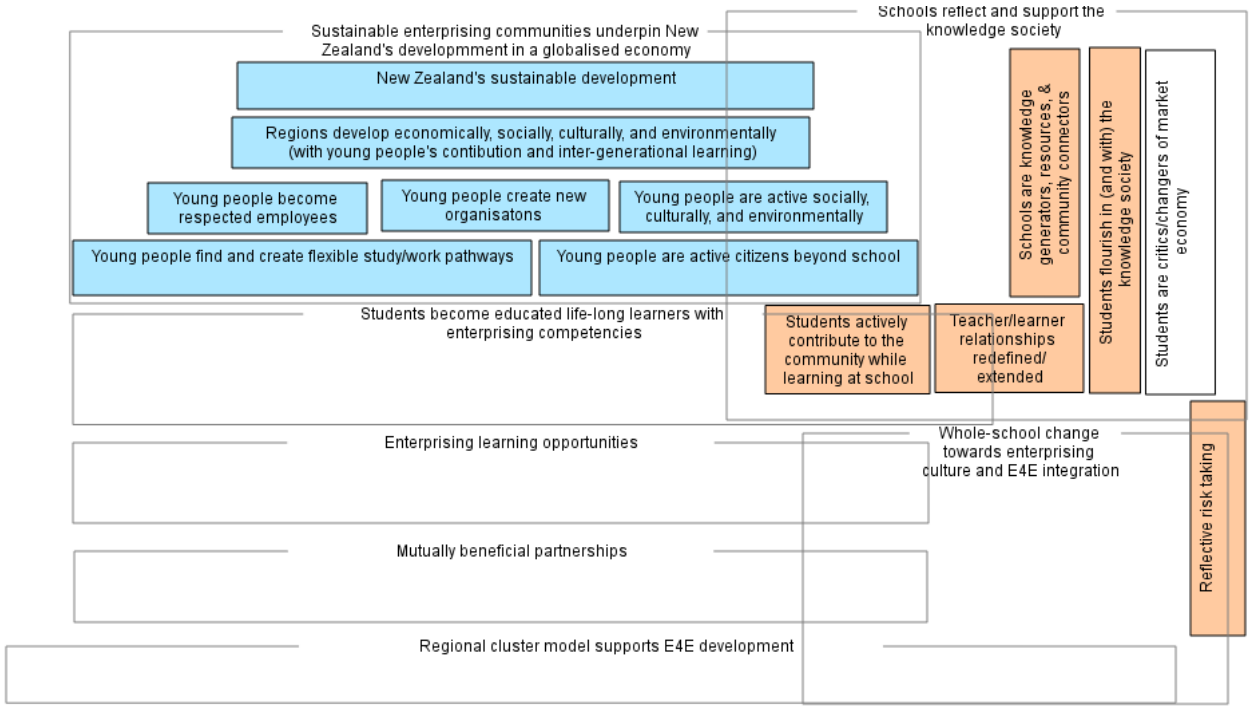
Figure 15 **School-centred representation of E4E objectives**



Two explanatory comments are probably necessary at this stage: First, case study interviewees told us that the process of whole-school change can be very slow, even though they also recognised that the longevity of E4E is dependent on it. Some believed that it was possible to bring in an enterprising approach to teaching and learning (purple-blue zone and pink zone) without necessarily engaging an external partner (green zone). These interviewees tended to mention the importance of time for professional learning (brown zone) for teachers to be confident with E4E concepts and pedagogy first.

Second, we have labelled Figure 15 above as a "school-centred" representation of E4E. This diagram does not fully represent *all* the cluster-level objectives that have been captured by the evaluation to date. Figure 16 below extends the aims further, providing a "wider society" representation which is even more complex. To the five zones of Diagram 1 marked, we have added another three coloured zones which represent the higher-level objectives, or more long-term outcomes of E4E, supported by at least *some* people within each of the regional E4E clusters. Different people have different ideas about whether and how E4E should aim to influence students' lives beyond school or influence New Zealand society generally.

Figure 16 **Wider-society representation of E4E objectives**



Aim six: Sustainable enterprising communities underpin New Zealand's development in a globalised economy (sky-blue zone)

The sky-blue zone encapsulates E4E's societal-level aims that underpins, summed up by the concept of "development". The left-hand side illustrates the more economic aims associated with E4E, whereas the right-hand side reflects the more social aims. Individuals seem to weight them differently and some believe they can oppose each other. Many school staff were sceptical about strictly economic aims and distanced the role of education from them. Likewise some were concerned that regional development should not depend on students remaining in the same region that they were schooled in. Hesitations aside, at least some surveyed principals and community/business partners agreed that these kinds of society-level aims underpinned their reason for developing E4E.

Aim seven: Schools reflect and support the knowledge society (red zone)

The red zone points to some of the aims associated with formal education in the 21st century. It summarises some of the data presented in Chapter 4. Whole-school change alongside E4E integration opens up the space for a reorientation of schools in the knowledge society. Long-term E4E outcomes could be a transformation in the education system, in which schools would actively interact with economic and social developments—rather than being "separate" institutions to preparing enterprising students to influence economic and social developments *after* they leave school.

Aim eight: Students are critics/changers of the free-market economy (white zone)

In programme logic language, the white box could be seen as an "unintended outcome", and may have the potential to undermine the high-level aims of some of E4E's key stakeholders. On the other hand, the possibility for it to happen is nested within ideas about good enterprise education. That is, students should be given the tools and knowledge to understand and critique the economic paradigms that have shaped New Zealand and the world over time (Clark, 2004). Few of our interviewees identified this as one of their aims: however, several mentioned that they did not want E4E to be about bolstering a capitalist, free market economy.

Before we move on, please note that, in an ideal world, such a model would be collaboratively developed by key stakeholders and participants (Owen, 2000; Rogers et al., 2000; WK Kellogg Foundation, 2004). Here we constructed it, using notes from meeting conversations and survey and interview data in an attempt to reflect a range of objectives implicitly and explicitly held by different parties within the regional clusters. The categories of reasons for E4E (from the principal and community/business partner surveys) and the aims from the Regional Co-ordinators' May hui can be mapped onto the zones roughly as follows.

Table 20 **Categories of reasons/aims mapped to Figures 15 and 16**

Categories of reasons for E4E	From	Zone
To lead regional development	RC hui	Sky-blue, aim 6
To enhance students' futures (SF)	Survey	Sky-blue, aim 6
To improve students' futures and life-long learning potential	RC hui	Sky-blue, aim 6
To benefit the region, communities, and businesses (RCB)	Survey	Sky-blue, aim 6
To increase students' engagement and achievement (E&A)	Survey	Yellow, aim 4
To improve student engagement (as appropriate today's youth)	RC hui	Yellow, aim 4
To improve students' skills, knowledge, and attributes (SKA)	Survey	Yellow, aim 4
To help students to be enterprising	RC hui	Yellow, aim 4
To enable authentic learning experiences	RC hui	Purple-blue, aim 3
To bring about change in teaching and schools (T&S)	Survey	Pink, aim 7 (and purple-blue)
To support enterprising teachers and schools across the full curriculum	RC hui	Pink, aim 7 (and red)
To boost perceptions of, and partnerships between, schools and businesses/communities (P&P)	Survey	Green, aim 2 (and sky-blue)
To develop business/community partnerships	RC hui	Green, aim 2
To create E4E sustainability	RC hui	Brown, aim 1 (via all zones)

The purpose of the visual is to help the evaluation team make sense of E4E for this 2007 report. Further consultation and refinement are needed before it could be used for any other purpose.

Overview of objectives at different levels

This section has looked across the four regions to capture the objectives that different parties have for E4E development. Literature about enterprise education highlights that it is a contested space, with an assortment of programmes set up to achieve different ends, often with a variety of stakeholders each holding different ideas about what it could or should be (Broz, 2003; Clark, 2004; Hytti & O'Gorman, 2004).

We looked at the objectives of people in different roles, pointed out a number of similarities and differences, and summarised them into the cohesive model presented above. Overall we found that:

- The regional co-ordinators seem to be focused on all levels of the E4E system, leading towards their long-term vision for regional and national development premised on more enterprising students, teachers, schools, and partnerships.
- Principals' and community partners' objectives are not at odds with one another. However, some main differences are that partners emphasise certain aspects of business objectives and principals emphasise certain aspects of school change objectives.
- Principals hold a range of priorities for developing E4E, and these generally are consistent with the national aim to embed enterprising education in different curriculum areas and school culture, as well as to develop specific E4E partnerships and projects.
- There appear to be several layers of objectives that interviewees and survey respondents associated with E4E, with different people emphasising different layers and sometimes seeing some tensions between them. We have summarised seven general areas of objectives: a regional cluster model is set up and fostered; mutually beneficial partnerships are created; enterprising learning opportunities are provided; students become educated life-long learners with enterprising competencies; there is whole-school change towards E4E integration and an enterprising culture; sustainable enterprising communities underpin New Zealand's development in a globalised economy; and schools reflect and support the knowledge society.

Our conclusion from all this is that more work may be needed for schools and clusters to continue to clarify their objectives—our visual representation could possibly be adapted to better suit their local aims. Whatever the process, it needs to be done in a way that helps people engage with the "big picture" beyond a project or classroom, while at the same time helping them to recognise areas that they can personally have an impact on. It would also need to be a flexible process that enables people to see where to put their energy without tying them to activities or outcomes that might become less appropriate as things continue to change. We suggest that people consider the

"ecological approach" to future-focused educational change outlined in a recent NZCER evaluation of Secondary Futures[42] (Roberts & Gardiner, 2005).

Briefly, this approach involves two principles (Sterling, 2001). Firstly, the process by which change is encouraged will influence what the change will actually look like at the end of the process. The point is that by paying more attention to fostering a good process than a good product, there should be a good outcome even though that precise outcome cannot necessarily be predicted ahead of time. Secondly, while people should develop a *vision* for change, this vision should not be too tightly defined, because we can never know what future possibilities could emerge. Instead more attention should be paid to clarifying the principles of the vision and the assumptions that underpin it. In this approach it is argued that some change management systems are so concerned with defining their end product, and the steps that people should take to get there, that the process for change is not flexible enough to make the most of opportunities and relationships that emerge along the way, with the result that the steps set out are not appropriate by the time they are reached.

Nevertheless the "working model", provides a good "working answer" to our initial question about what cluster-level stakeholders are trying to develop. The model is a good way to demonstrate that some objectives will probably take longer to achieve than others partly because they are dependent on many things being in place before they are possible. It allows for the fact that different people might focus on different areas within a big picture. It highlights that different people's objectives can fit smoothly together while also conflicting at some points.

Although this section did not present regional differences it does represent a "cluster-level" account of objectives. The section provides a base to analyse future evaluation data, particularly with regards to how we identify and interpret outcomes. One key outcome called for by the *E4E Strategy: Draft version 4.0* (Ministry of Education, 2007a) is a hypothetical point of E4E "sustainability", beyond which the clusters would continue to develop E4E but be largely self-supporting (with some support from established professional development channels and E4E resources[43]). Our evaluation is expected to provide indications of clusters' progress towards this end-point, which we will be better placed to do by our next report. During our 2007 case studies we asked each school staff interviewee what E4E sustainability meant to them and what they thought would be necessary to achieve it. Their responses suggested nine essential aspects of E4E sustainability from a "cluster-level" perspective. These are outlined in Appendix G with exemplary quotes.

---

[42] The purpose of Secondary Futures/Hoenga Auaha Taiohi is to facilitate discussion and debate about the future of secondary education in New Zealand. Secondary Futures is a national E4E stakeholder.

[43] Draft Version 4.0 states that "the actual scope of this ongoing support will be identified and developed during phase 2".

Summary

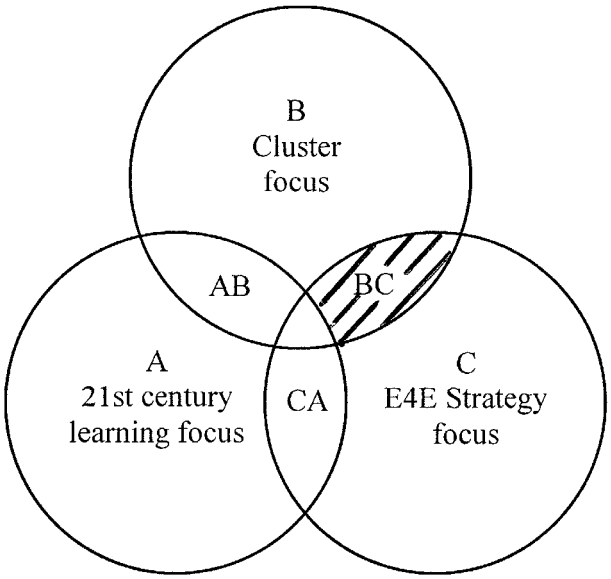
This chapter has addressed the question: How has E4E operated at a cluster level to support E4E development so far?

Section one showed that the clusters are on the way towards establishing professional learning communities, although they have a way to go before they meet literature-based expectations associated with quality professional development and transformational whole-school/system change. Within the regional cluster structure we discussed the roles of regional co-ordinator and professional development adviser/national co-ordinator, suggesting that the latter's input and impact at the time of data collection was different across the four clusters for a variety of reasons. Within the individual school structure we examined the place of principals, lead teachers, cell teachers, and wider school staff to demonstrate that each is essential in the beginning steps of E4E development even if it has sometimes been a struggle to bring all on board. Our brief look at partnership structures explained that even though it is early days, partners have come on board—possibly through previous initiatives rather than E4E *per se*—to provide authentic learning opportunities for students.

Section two considered the potential logic of E4E from a cluster perspective. We explored the range of aims and motivations of regional co-ordinators, principals, and community/business partners across all clusters, showing their main commonalities and differences. We drew these ideas into a visual representation, split across two diagrams, to show how different viewpoints could be added together to build a set of objectives from cluster activities through to high-level social and economic change. Different parties seem to focus on different areas (as represented by coloured zones and individual boxes in the model), and sometimes perceive areas to be in conflict rather mutually supporting. The topic of E4E partnerships is taken up in more detail in the next two chapters.

To summarise our answer to the chapter's overall question: at this point in the E4E journey a number of structures and roles have been established to support development, and people within the clusters hold a wide range of ideas about what E4E development should look like. Our model suggests that despite there being some disagreements on what objectives are most important, the objectives can be drawn together in a fairly cohesive way. Nevertheless, neither the various roles, nor their objectives have come together enough at the cluster level for us to suggest that the regions have developed strong E4E professional learning communities amongst their clusters of schools and partners. No doubt this will be an ongoing priority for 2008.

7. What are the strongest drivers of E4E developments in the four clusters?



This chapter looks at the intersection between the evaluation's regional "cluster focus" and the national "E4E strategy focus". That is, it combines our focus on what stakeholders at the regional level want and do with our focus on what stakeholders at the national level want and do. The previous chapter provided an insight into the range of roles and objectives that exist within the four regional clusters. This chapter takes that further, bringing in the cluster participants' experiences of working with national leaders and documents, as well as their experiences of working across different sectors with different needs.

Given that Phase Two of the Regional E4E Clusters Initiative involves national-level and regional-level stakeholders from the education and business sectors working together for E4E development, we ask "What are the strongest drivers behind E4E developments in the four clusters?" We have divided our response into two sub-questions:

- To what extent is the development of the draft E4E national strategy driving—or being driven by—what is happening at the regional cluster level?
- To what extent is the education sector influencing—or being influenced by—the business sector, when it comes to E4E developments on the ground in the four regions?

These two questions provide the two sections for this chapter. We look at the two sides of the "national development" and "regional development" pair in section one and the two sides of the "education sector" and "business sector" pair in section two. As might be expected, for both pairs it is a "bit of both," since each side has influenced the other. However, our main interest is in unpacking the nature of these relationships, while showing that it has not always been a case of "either/or" or even one of "influence". Instead we have found examples of the two sides coming together to create something new rather than one simply conforming to the other. This fits with the ideas described earlier about how knowledge is likely to be created in 21st century society.

To what extent is the national strategy driving—or being driven by—what is happening at the regional cluster level?

In this section we are interested in the balance between national drivers and local drivers in E4E regional cluster development. This section addresses the following question: To what extent is the development of the draft E4E national strategy driving—or being driven by—what is happening at the regional cluster level?

Ground-up and top-down approaches to E4E development

The four regions have been asked to pilot a cluster approach to E4E. When a top-down approach to programme development is used, a "pilot" might involve a well-defined programme that is developed by national leaders *before* it is tested in a regional location. The approach to E4E development and the Regional E4E Clusters pilot is different, as it includes a ground-up approach. Phase Two of the pilot was set up so that the regional clusters would be in action *while* the national strategy is being drafted. This means that the national leaders are on a learning journey at the same time as the regional clusters are on their learning journey.

Not only are national and regional developments happening in parallel, but they are also expected to feed into each other, so that there is some consistency to E4E development as a whole. For example, learning from each of the four regional clusters is expected to inform the ongoing drafting of the E4E strategy and national resources. In the other direction, clusters are expected to be guided by national structures and resources as they emerge. This situation could be summarised as a balance between ground-up and top-down approaches.

Some of our interviewees did not believe that a good balance had been reached. More than one interviewee described their discomfort about the fast pace of cluster developments since they considered national support structures and resources to be at an early stage. Thus they thought E4E development was too ground up. On the other hand, other interviewees discussed their unease about E4E becoming too top down. They did not want E4E to become prescriptive.

National rhetoric on E4E emphasises the freedom for regions, schools, teachers, and students to take some risks by trying out some quite different approaches to teaching and learning through

E4E. Indeed, a critical change statement in the *E4E Strategy: Draft version 4.0* (Ministry of Education, 2007a) is that "Teachers operate within a school environment that accepts risk taking as a learning experience". While we did find examples of teachers and principals who emphasised that their E4E team had been given the freedom to do just that, we also found examples of people who felt that there were too many other forces acting against this possibility. These other forces included, for example, the perception that school structures and assessment demands did not allow enough freedom for truly enterprising learning, and that funder requirements could stifle creativity.

There seem to be some perceived mixed messages about the extent to which E4E is able to be led from the national level, the regional level, or the school level. That said, it may not be the extent to which national E4E developments and regional clusters are driving each other that caused these concerns. It may be symptomatic of change generally and/or could reflect some concerns about communication and trust that may have existed prior to E4E.

Linking a new national framework to current practices in schools

Another way to answer our question about the extent to which national level development is driving what is happening at a cluster level, or vice versa, is to look at whether E4E is seen as a new national programme to drive school change or whether current school practices are seen as a way to illustrate what a national E4E programme should be about. We find that while both are happening, the balance is probably tipped towards the "current practice" end, which could mean that E4E development might be more strongly influenced by the cluster level than the national level at this stage. We now draw on our data to outline some of the strengths and challenges associated with this balance.

As discussed in earlier chapters, fundamental to E4E is the belief that it should not be seen as something "extra". Instead, an enterprising teaching and learning approach should be embedded in the current activities and directions of each school and its full curriculum. Many interviewees in a leadership position, be they a regional co-ordinator, principal, or lead teacher, spoke of how important it was to let teachers know that they were already being enterprising. The idea is that these activities just need to be enhanced or multiplied.

In many schools we visited, the term "E4E" was being used as an umbrella concept to foreground enterprising learning opportunities they already provide, perhaps to signal a unifying direction for them:

> Because there were so many things happening and teachers were asking what next. [I found there were] too many things and names needed simplifying. So we reduced to two—Te Kotahitanga and E4E … So [we've said] take away all of these different terminologies and replace it with a few. (Principal)

Others had deliberately stayed away from using the term "E4E", even though they were committed to the general direction:

> I think if you have a term people think it's another add on, another job… [E4E] is a natural process that will happen anyway with the new curriculum and the students we get today. (Principal)
>
> I think the term E4E causes huge arguments … people see it as business education … I use the term enterprising. (Principal)

When we look at the student focus groups we conducted in Term 3, at that stage very few of the enterprising learning experiences they told us about were solely "E4E projects". More often than not they were tied to particular subjects, programmes, or activities that existed in the school prior to E4E. Some of these were:

- Enterprise New Zealand Trust (ETNZ) programmes, such as Young Enterprise Scheme (YES), Primary Enterprise Programme (PrEP), and the Enterprise Studies Programme
- Future Problem Solving New Zealand (FPSNZ) programmes, such as Future Problem Solving Programme (FPS) and Community Problem Solving (CmPS)
- gifted and talented programmes, like Talent Development Initiative (TDI)
- science and technology initiatives, such as CREST
- school events, like productions, market days, galas, camps, international trips, etc.
- school leadership forums, like prefect councils, environmental committees, sports executives, school paper, etc.
- curriculum areas, such as more enterprising science practicum, technology projects, social studies topics, English assignments, etc.
- extra-curricular options, such as debating, sports coaching, etc.
- career-oriented programmes, like Gateway, Secondary Tertiary Alignment Resource (STAR), etc.
- other cross-curricular areas, such as Education for Sustainability
- teaching models, such as inquiry learning, action competence, experiential learning, thinking skills frameworks, etc.

However, three associated tensions are created by applying E4E terminology to existing (named) programmes or activities rather than seeing the national E4E framework as something totally new.

Firstly, the process of "naming" can feel like a process of "claiming". Some interviewees from at least one school that had developed something in a ground-up manner before E4E felt that overlaying the national E4E terminology signalled a loss of ownership.

Secondly, not all students had engaged in learning conversations about the types of enterprising strategies and attributes associated with E4E. Educational research points to how important it is to establish a shared language about learning with students (Claxton, 2007; Hipkins, Roberts, & Bolstad, 2007; Rogoff, 1994).

Thirdly, it means that teachers and partners we spoke to had different levels of awareness about E4E and could interpret enterprising education quite differently. Extending the E4E label to a wide range of practices could diversify E4E to the point that it becomes somewhat meaningless.

This may be particularly worrying if it is applied to what national leaders might think is a fairly "watered down" version of E4E.

That said, we saw in Chapter 4 that some school staff argue that E4E has the potential to shift schools towards 21st century learning. Often interviewees told us that linking E4E to current practice provides a pragmatic and nonthreatening approach to bring about school change. The strength is that it is relatively easy to embed E4E in different areas of schools and teaching practices, which aligns well with the national intention for whole-school change. The danger in linking E4E to current practice is that the potential for transformation could be lost, and whole-school change may not really happen.

Overview of national development and/or regional development

We started this section by asking: To what extent is the development of the draft E4E national strategy driving—or being driven by—what is happening at the regional cluster level? We have explored the different ways that nationally-led directions and regional/school-led directions have come together for E4E development, drawing on school staff's perceptions about whether they are receiving less or more national instruction than they find productive, and whether they see that E4E is a national framework that provides something entirely new or see that their current practices already illustrate what E4E is about. Our analysis has shown influence has been "two-way" driving E4E development, with school and clusters driving E4E development "on the ground" as well as national leaders "from above".

To some extent this E4E development is unique in educational development. Because the draft strategy itself was still in development at the time the evaluation began, there is more room for "co-creation" in E4E. As two OECD futures thinkers warn:

> The release of local energy through giving schools greater autonomy and support for networking and innovation will be undone if at the same time they are under intense pressure to conform. (Istance & Kobayashi, 2003, p. 15)

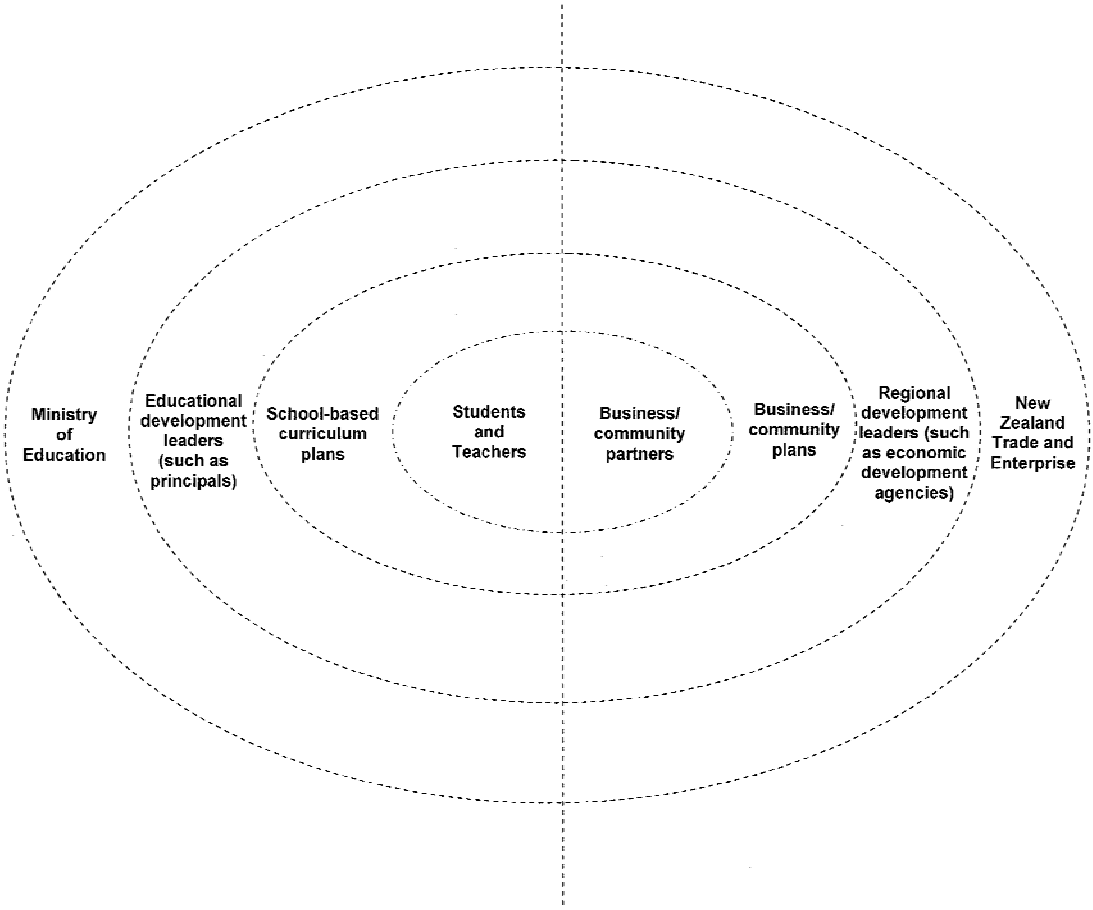
A process which involves regional progress informing ongoing national strategy development (and vice versa) can feel like a need to conform. It can also be hard to find a productive balance between making adaptations to what people are already doing to be more like E4E (tweaking) and the radical shift needed for the deeper potential of E4E to be fully embedded (transformative). Some would probably suggest that small steps are best. Others argue that real change is only possible where there are major mind shifts. The metaphor of a slow linear journey towards a known end point may not be appropriate. It might be more fitting to think of E4E development as a carefully negotiated co-construction between different "levels" of the education sector, in carefully negotiated partnerships with other sectors. This may require stakeholders at the school, regional, and national level to be very clear about the role they play, and to understand (and demonstrate) that E4E will most fruitfully develop if each makes room the other's role and helps to create a space for negotiation. We take this idea further in the next section about cross-sector partnerships.

To what extent is the education sector influencing—or being influenced by—the business sector, in E4E regional development?

Because this chapter is about the intersection between the evaluation's regional "cluster focus" and its national "E4E strategy focus", we are interested in how two sectors, education and business, come together to lead developments both nationally and regionally. This section addresses the chapter's second question: To what extent is the education sector influencing, or being influenced, by the business sector, when it comes to E4E developments on the ground within the four regions? We present data which suggest the extent to which one sector has either changed the other sector or changed its own sector to better accommodate the other sector. We highlight evidence that suggests that it is not always the case that one sector changes to be more like the other. Instead, the two different sectors sometimes come together in a way that can create "something new".

Figure 17 acts as a visual organiser for this section. It illustrates a number of layers from the local centre to the national outer. The "education sector" is on the left-hand side, and the "business sector" is on the right-hand side. The line down the centre represents a meeting point between the sectors. The E4E framework and regional co-ordinator role ensure this meeting takes place. In other words, E4E provides a vehicle for 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.

Figure 17 **Local and national interfaces between education and business sectors**



We look at the relationship between each sector pair within each layer, starting with teachers and students (education sector) with community/business partners (business sector). We will end by discussing the notion of partnership in relation to what we see happening within the Regional E4E Clusters so far. But just before we look at cross-sector relationships we will first outline some of the background assumptions that sectors seem to have about each other.

Background assumptions

We began our exploration of the relationship between sectors by looking at some current perceptions held about each sector. This is also important because a general aim of the *E4E Strategy: Draft version 4.0* (Ministry of Education, 2007a) is to improve schools', businesses', and communities' perceptions of one another.

Perceptions about education and schools

As discussed in Chapter 4, people from outside the education sector can sometimes hold negative perceptions of teachers, schools, and education. We were also interested in what people had to say about students.

Perceptions about students

In E4E, members of businesses and the local community come into direct contact with students, through providing learning environments. Working with school-age students was a new experience for some. Negative stereotypes of young people abound:

> Not everyone wants 15 or 30 hormonal teenagers running around. (Principal)

> Kids of that age very rarely have the skills to be useful anyway. They might be able to make a cup of tea, they might want to sweep the floor, but I doubt most of them would. (Partner)

> There should be another diagram [on Figure 5, page 54] with a circle of teenagers outside of the community—like with the booze ban. It will just push young people out of town and they will get done [for drinking]. [The council's aim] is to bring people to the towns so it's not appropriate to talk about all the teenagers out on the street. (Student)

Perceptions about business

We have already discussed school staff members' hesitations about associating E4E with business enterprise. Here is a snapshot of some of the expectations that exist:

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

> 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)

> [It is not authentic for students] to use local businesses to find out about coffee making because they [businesses] see they [students] are competition… There was some community hostility for why kids would be learning about coffee making. (Principal)

During focus groups, we asked students, "What do you think of when I say the word business, or what do you think working in business would involve?" Some of their responses follow:

> You've got to be brainy and be a crook; nah, know how to sell things. Just go on The Apprentice.

> A group of people working together to achieve profit. Or a group of people doing a service or goods.

> Owning your own business. It would be interesting but I wouldn't be able to handle that. I'm not smart enough for that. [Do you need to be smart?] I think you also need to be a risk taker. You need to be both.

> The type of person will influence how successful [at business] you might be… Some people can make it—like creative people [or people with] a certain edge or talent.

> [If you said business to me] I would have thought of cliché of man in suit with briefcase a few years ago—but now I've done enterprise I think it can be some different things.

Students whom we asked to do a word association for "business" came up with the following:

> Ideas, decisions, enterprising, entrepreneurs, smart, not afraid to take risks, open-minded, self-employed, motivated, numbers, people, professionalism, office job, people who want money, stuck up, bright, ambitious, marketing, communication, smart at making money, rich, fancy clothes, being boss, negotiating, real-life stuff, clean shoes, able to improvise, able to do things at the last minute, creative, hardworking, leader, committed, able to take advice, good under pressure, a company, an organisation, powerful, surprising, generous, offering, suits and ties, money, offices, paper, not much fun, fill out forms, boring, briefcase, cell phone.

Perceptions about community

Some perceptions about communities wider than "the business community" were:

> We have a traditional community with traditional ideas about school. [They have] no understanding [of enterprising education]. (Principal)

> You get some feeling at times from media putting schools down [that] there's a lot to change in community perspectives on school. There's value in the community seeing kids in a positive light. (Principal)

> School will go well despite bad teachers if the community is in there—but it will crumble if the community is dysfunctional—so schools have a big investment in reinvesting in the community. (Principal)

> We live close to white middle class communities who give significantly to school in terms of money and support for events etc. [I have taught in]… poor areas where they [the community] are just struggling to exist. The last thing they needed was school breathing down their necks asking them to contribute. (Principal)

Shifting perceptions

Many interviewees recognised that E4E provides an opportunity for these groups from different sectors to build new relationships, and potentially shift stereotyped perceptions of one another:

> There is a huge misunderstanding between the two sectors [business and education]. Those in business tend to think education is bureaucratic and esoteric. Those in education tend to think business is grasping and profit oriented. Anything that can break down those barriers is useful. (Partner)

> [E4E] promotes positive relationships. It's very good for the community and the reputation of the school. It's a great way of giving back to the community. (Lead teacher)

> Our school is respected in the community which enables us to try new things. (Principal)

> [Business partners do E4E because they] all want strong relationships with the education sector because they feel disconnected from young people. (Regional co-ordinator)

Cross-sector relationships

Now that we have outlined some of the negative perceptions that can be held about different groups, as well as the hope that E4E will build more positive relationships, we can take a closer look at the types of relationships that have been established so far. We pay particular attention to *which* sector changes and *how*, to see if changes happen more towards one direction or if "something new" is created.

As presented in the interfaces Figure 18 at the start of this section, we have incorporated students, teachers, and schools within the education sector. For the purpose of this section we have subsumed community under the "business" sector, but define business to include any sort of organisation including not-for-profit community groups.[44] However, at this stage we are not extending the business sector to necessarily include the "parent community". The latter is taken up in the next chapter.

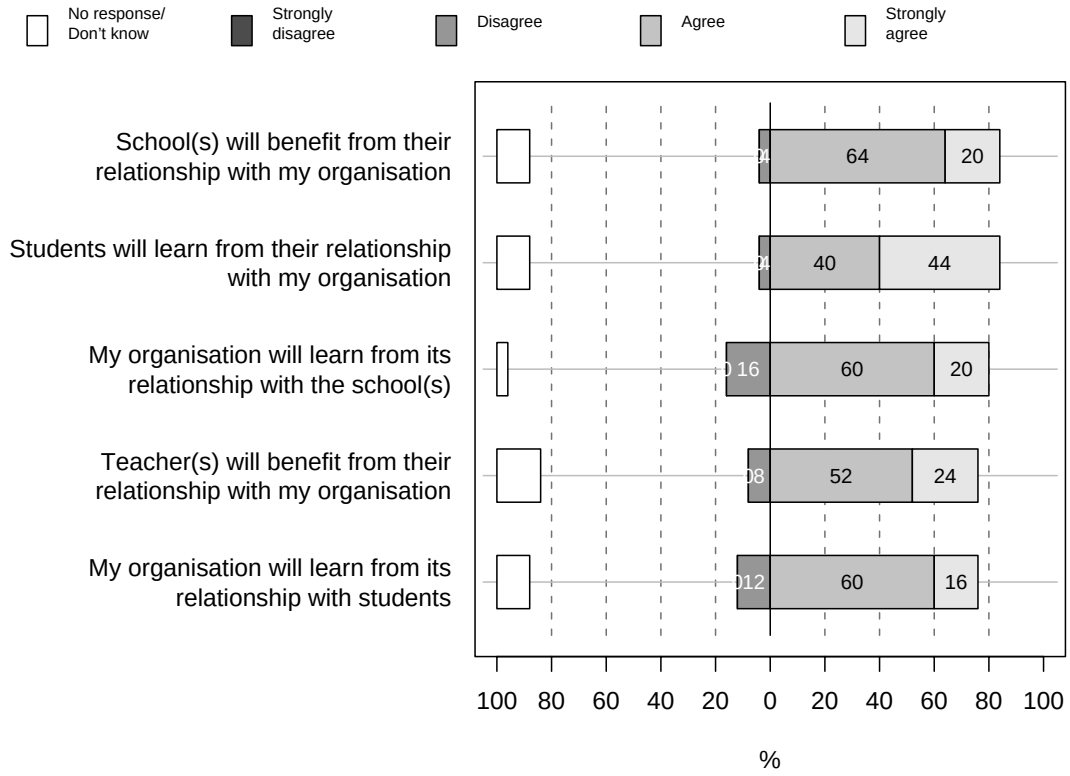
Students/teachers with *business/community partners*

The inner circle of the diagram represents the relationship between individuals involved in E4E projects—teachers and students in the education sector work with business and community partners in the business sector.

Respondents to the community/business partner survey rated how much they thought they would learn from relationships with one another within the projects. Figure 18 shows that the majority believed that all groups would learn from their E4E involvement, although the students' learning was rated the highest.

[44] Some would argue that there are three main sectors involved in E4E: education, business, and community—and maybe more. Interviewees' comments revealed that people think about the relationship between community and business in three main ways: (a) sometimes the term "business community" was used—indicating that they are considered one and the same; (b) sometimes businesses were discussed as a subset of the community; and (c) sometimes businesses were seen as distinctly different from communities.

Figure 18 **Predictions of who will learn from whom (partner survey)**



Several interviewees noted that E4E demands students, teachers, and partners to learn about—and transition between—each other's different worlds:

> I drove down to pick up some of the kids because bringing them to a working business is a big thing. I didn't want it to be too threatening. … Some boys were cursing and I said 'This is a workplace and if you go to work you have to use appropriate behaviour [which depends on] whether you're in a cow shed or forestry gang [or hospitality].' So [students start to] see hospitality as a whole package. (Partner)

Generally, we found that E4E is not about one "group" telling another group what to do or how to change. Instead, developing and carrying out an E4E project was more of an ongoing negotiation. Some interviewees suggested that, in order to enter into this kind of negotiation, there must already be some form of relationship already established. Several case study partners already had a relationship with the education sector before E4E, either through being a teacher themselves or from having a child at the school. Likewise, some school staff mentioned that they needed to build up good student behaviour and the schools' positive relationships with the local community before they felt comfortable to seek an E4E partner.

Whether or not there was already a reasonably good relationship between a school or teacher and their E4E project partner, we found that E4E projects could enable relationships to deepen. Many community/business partner interviewees claimed that a highlight of their involvement had been building relationships with students and teachers they worked with:

> Just the looks on their [students'] faces—like one of them didn't know that hogs casing was pigs' intestines. And [one student] sent me a letter saying your sausages are the best. (Partner)
>
> For the staff involved [in the E4E project] there is a lot of job enrichment. The staff love it … the relationships [and] to be involved in something outside the office. (Partner)
>
> There is a lot of satisfaction in being involved with young people. They have a lot to offer—I think everyone learns something. (Partner)
>
> It's great to have relationship between principal and teachers, not just the principal. Hopefully teachers will talk to each other then other teachers will start coming to us. (Partner)
>
> [A highlight was] seeing the teacher get more and more excited. (Partner)

Although it was still early days in many projects, several partners mentioned that another of their highlights was being unexpectedly wowed by what students could do:

> Some ended up with websites pretty close to commercial level websites…from knowing nothing at the start to building a reasonably slick product at the end.
>
> They all had the same brief but came up with 16 hugely different designs—it's not like maths where there's only one final solution to a problem … We're blown away by the kids and [their work]. We'd never had found that in the commercial world because it's coming from their world.
>
> I was worried about the time and hassle at first but they've come up with great things. I'm going to take [what they designed] to my TV show to sell … I suppose it's a partnership because I'm giving students experience in real-life work and they are giving me good ideas.

A challenge we saw was that one sector's needs could be met more than others. While we found some partner organisations were mandated to develop education relationships, for others such relationships could be considered to take them away from their core activities. It was therefore imperative that they got something out of their E4E involvement rather than just helping out students or schools:

> The information [the students provide] is important—we need it for our [organisation's] project to be successful. (Partner)

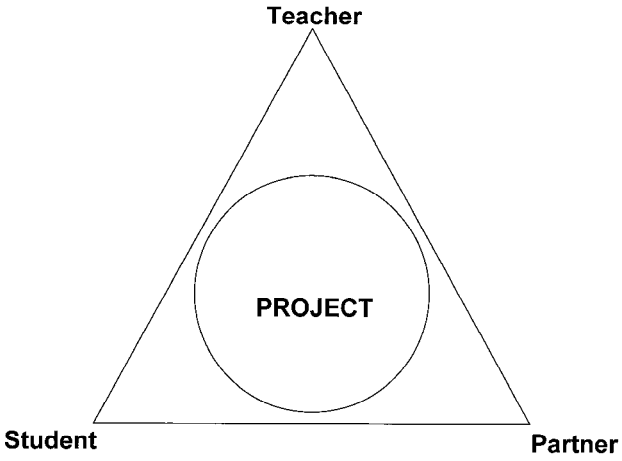
A *potential* concern, often more hypothetical than real, was that partners might be disappointed by the E4E process or final product. Teachers and regional co-ordinators spoke of managing relationships so that partners' expectations of students were realistic. We saw one example where the students, teacher, and partner each had quite different ideas about how well a project was going at its initial feedback milestone:

> It's an opportunity to do something that's real life. To do something that's probably going to get actioned, it's not fictitious. I think we'd let them down if we didn't get what we said we'd do done … [But if] they lose interest or the client gets busy, or the year ends, then that's sending a message to them which they [students] get repeated often enough: 'If you don't get it done it doesn't really matter anyway.' (Teacher)

> It's also good that they get students to do it because it's a different point of view—it's a good opportunity for students to do it. We probably pick up like the little things—like the real out of it ideas … Normally school doesn't do anything about unmotivated students. But with this the whole class is motivated. (Students)
>
> Some of it is fine but some of it is not... We said [give us] a draft by such and such a date and we will get back to you. But we're not sure what to do. Some of them aren't OK. Some can't even spell. Some of it has good content. (Partner)

The challenge is to find ways that each sector's needs can be met, in a way that brings about some form of positive change for each (including their perceptions of one another) through a process of negotiation. During an interview, a regional co-ordinator drew us their model of successful partnerships, as reproduced below:

Figure 19 **Successful E4E project model**



It shows that all three parties need to be involved in an E4E project.[45] The main point, as we understand it, was that when the focus of relationships becomes the project itself, then new possibilities are enabled for each of the parties. All three 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 (such as a product), rather than simply trying to change one another.

Curriculum plans with *business/community plans*

The second "layer" out from centre of our interface diagram involves the interface between plans from each of the sectors, not just the individuals. It illustrates that two styles of planning can come into relationship through E4E—business plans and education plans.

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

Some partners passed on business planning strategies to students once a project was underway:

> We have templates for business plans and strategic plans for customers. We do workshops for our customers. All of this can be used with school students.
>
> We talk about project management, our process for dealing with clients … I give them the project plans and proposals we do.

Our data do not allow us to comment on the extent to which this was productive for students' learning or the E4E project they were engaged in. We see that it has the potential to help students better understand the nature of the business systems, and to create an environment new ideas might spark for the project they are working on. However, it may also be an example of one-way change—where students in education are expected adopt the "ways" of the business sector.

We are better placed to comment on the extent to which school planning systems impacted on business planning systems or vice versa. Before students are involved, another level of planning tends to occur between the partner and the school.

Here, it is not the case of one party providing a planning framework for the other. Many interviewees pointed out that good joint planning should raise the likelihood of reaching a successful outcome. For joint planning, there needs to be a "meeting of minds". Each sector comes with its own planning culture and requirements which need to be negotiated. We roughly sum up differences in the table below.

Table 21 **Simplified education and business plans at the interface**

	School-based curriculum plans	Business/community 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

The next quotes highlight some of things that happened when business planning met the world of education, from an E4E partner perspective:

> 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.
>
> 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.
>
> Some kids wouldn't turn up. There was no strong sense of real-world organisation to demand that the kids got in here.
>
> [The ideal would be] a bit more involvement from us at the start to help with planning…making sure schools are teaching the right sort of things.

> Time is money. If you give me money I will have time.

Looking at the other side of the table, the following focus group conversation between several teachers nicely illustrates some of the tensions and possibilities that emerge as curriculum plans meet the world of business, from a teacher perspective:

> 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.

Many partners and school staff pointed out how essential they found it to have a regional co-ordinator involved to broker initial relationships, mediate planning, or support partnerships throughout the project process (as discussed in Chapter 6). Indeed, the regional co-ordinators appeared to be particularly attuned to the type of differences presented in the table:

> There was one breakdown in communication … A big gap when there was no communication. [The regional co-ordinator] got the ball rolling. (Partner)
>
> This year there was a lot of confusion at the start … They needed a regional co-ordinator. Businesses like to see it being organised well. (Partner)

For schools, E4E project plans cannot be easily developed without having a space created for them in wider school plans. We found some initial examples of school-level plans and resources being changed in order to better support the development of E4E approaches. Completed and in-progress 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)
>
> 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)

> If I'm voted back onto the board we will bring these [enterprising attributes] ideas into strategic planning. (Student)

Again, we found that it was not always the case of the "business sector" driving changes in school plans, or the "education sector" driving change in business plans. Schools were more inclined to examine their own practices to see if they could better accommodate business ways—but the focus was as much on how this could provide new opportunities for student learning as much as on how it could satisfy business needs. A lead teacher highlighted the potential that E4E could have for creating entirely different ways of planning and learning. She saw that a quite different approach to classroom planning was needed to make room for emergent possibilities:

> It's hard to plan out step by step because it is driven by the kids. It [planning] looks different but I'm not sure where to go with it next year. I have examples from other schools where they have put enterprising aims in their unit planning and we're thinking about it. Or we could just put broad aims and objectives, then document it as it goes and see what comes out of it, rather than plan for it ahead.

Educational development leaders with *regional development leaders*

The regional leadership level of each sector, especially principals and economic development agencies, were probably the most vocal about the potential paradigm differences between the education and business sectors. As one regional co-ordinator put it:

> The key messages help tie us together—but they will always be flavoured by the lens people look through.

Some leaders had started initial thinking about how educational development and economic development could come together in a way to better reflect some of the transformational ideas of schooling in the 21st century (as discussed in Chapter 4). NZCER's review of future-focused school change literature, in a recent evaluation of Secondary Futures, points to the importance of drawing on leadership from all levels of the education system, as well as other sectors:

> Leadership is no longer seen to be the territory of principals and management teams, but instead can reside at all levels of the school hierarchy as well as being located wider in networks. These new leaders are 'systems thinkers' who 'alter people's mental awareness of the system as a whole, thereby contributing to altering the system itself' (Fullan, 2005, p. 40). They produce leadership in others while keeping the present and future in mind (p. 62). This type of new leadership is found predominantly at a 'meso level', which connects the macro-policy level with the micro-school level (Istance & Kobayashi, 2003, p. 16). This reduces the potential for individual isolation amongst schools in more decentralised education environments, because a connected leadership network can translate and direct in both directions. (Roberts & Gardiner, 2005, p.12)

There appears to be commitment for leaders at various levels of different sectors to work together. At a regional level, at least two of the regions of have a multisector advisory group—or links into different sector forums—to support the work of the regional co-ordinator and open channels of communication between different sectors' directions. At this stage it is not possible for us to

comment on whether leader representatives from sectors are more focused on changing their own sector, influencing another sector, or finding ways to negotiate for new forms of educational, social, regional, and economic development.

Ministry of Education with *New Zealand Trade and Enterprise*

This is a pilot in its design phase. National E4E leadership comes primarily from the MOE (the education sector) and NZTE (representing the business sector). As far as we are aware, no other country has a similar high-level partnership between education and business sector representatives leading enterprise education (Strowger, personal communication, 2008). Not only that, but multisector groups work together on E4E at the national level. For example, one of several different experts and reference groups is the E4E Strategy Development Group. This includes invited representatives from the MOE, NZTE, Ministry of Youth Development, Ministry of Economic Development, Enterprise New Zealand Trust, Small Business Advisory Group, Secondary Futures, Northland Enterprise Trust, Enterprise Learning Association, New Zealand Principals Federation, Post Primary Teachers Association, principals from enterprising schools, and a student representative (E4E Strategy Group meeting agenda, 4 April 2007). One of the desired outcomes for E4E directly addresses government agencies: "agency partnerships that work to create sustainable enterprising communities". We did not interview a representative from either the MOE or NZTE for this evaluation. Therefore this section only briefly touches on perceptions about the "filter-down" effects of this national E4E partnership.

To some extent some of the assumed mismatches between businesses and schools parallel tensions that were perceived by some interviewees to exist at a national level. Some regional co-ordinators and principals expressed frustration about a perceived culture clash at the outer layer. In some ways the negotiation between different sectors' institutional minds (or ways of thinking about society) was being felt as a conflict of administrative cultures (or ways of managing for change) at the regional level:

> I don't want E4E to get bogged down in paperwork which stifles creativity. It took 15 minutes for me to fill out forms for a 15-minute regional co-ordinator visit. (Principal)

Some of the concerns expressed may relate to a possible tension between top-down and ground-up approaches to E4E development, as much as tension between the outer-layer institutions. The test will be to continue to surface and negotiate any tensions that arise to support further E4E developments.

Overview of different worlds coming together

Recent NZCER projects on "home–school" partnerships suggest that there currently seem to be four categories of motivation behind the desire for partnership. We have seen glimpses of all four in the discussion in this section. These purposes with "business/community" in place of "home" are:

1. building better relationships between different parties
2. giving information from one party to another
3. aligning parties to be more alike (generally with one party being encouraged to be more like the other, than vice versa)
4. working together to create "something different" in the negotiated space between the parties (Bull, Brooking, & Campbell, 2008).

Our interest in whether E4E builds better perceptions between schools, businesses, and communities best fits with the first category about partnerships being established for the sake of relationship-building in and of itself. We have shown that E4E clusters are beginning to enhance and change schools, business, and community perceptions of one another.[46] This is partly being achieved by E4E starting a shared conversation between groups that don't usually come together for the sake of a common purpose. However, certain challenges may appear when there is little awareness or commitment to acknowledging each other's cultures, strengths, or constraints. At present a lot of energy is being invested in managing this space of negotiation.

The second category, about information exchange, seems to occur mostly when businesses impart knowledge about a project or their organisation to students. While this more closely reflects transmissive Industrial Age education, rather than 21st century education, the exchange of, say, business plans can give students insight into a new way of doing things.

This section was actually guided by a question that best reflects the third category. It asked: To what extent is the education sector or business sector more strongly influencing what happens in E4E developments on the ground within the four regions? Along with earlier chapters, we have provided early indications of teachers as responsive learners and examples of school management/leadership structures being organised to allow opportunities for E4E growth.[47] At this stage we might say that implementing E4E will require the education sector to change more than the business sector, a conclusion which is fairly well supported by the *E4E Strategy: Draft version 4.0* (Ministry of Education, 2007a).[48]

That said, at the end of each subsection on each "layer" cross-sector partnerships, we paid particular attention to the fourth category of partnerships—working together in a negotiated space to create "something different". We are suggesting that the fourth category is most well suited to a knowledge society and related ideas about future-focused schooling in the 21st century. For example, Nakata (2007) explores the concept of "cultural interfaces", a concept which could be extended to the culture of education as it interacts with the culture of business. Nakata suggests

---

[46] This point relates to our proposal's "E4E strategy focus" evaluation questions.

[47] These points relate to our proposal's "E4E strategy focus" evaluation questions.

[48] For example, there are more Critical Changes and Measures of Change for schools and students than for business.

that two different cultures can never truly "know" each other. Instead, when cultures come into relationship with one another a "third" space is created for new possibilities to emerge. This space should be one of negotiation, where each culture stands strong in who they are, retains a curiosity about the other, and is committed to negotiating new learning as a result.

Rather than asking about which sector (education or business)—or even which "layer" (national or local)—drives change, the question for the future might be: How can E4E enable negotiation between the different worlds of education and business, as opposed to encouraging each of the two worlds to fully "know" or "become" the other?

Summary

This chapter described the intersection of the evaluation's regional "cluster focus" and its national "E4E strategy focus". We have looked at how different stakeholders, primarily located in the education and business sectors, have come together regionally and nationally to drive E4E developments.

The first half of the chapter showed that a draft national E4E strategy and centralised resources are in development as the four Regional E4E Clusters trial ways to develop E4E locally. While this contains possibilities for excellent synchronisation between levels of the education system (Fullan, 2003; Istance & Kobayashi, 2003) it has been experienced by some of the participants as uncomfortable territory, especially when top-down requirements are sometimes perceived to contradict ground-up sensibilities. In our view there is potential for different expectations about who should drive whom to compromise the possibilities this process offers for creating something quite different for education in the 21st century.

Similar issues were echoed in the conundrum about the extent to which E4E is seen as something new, or something to be adapted from current practice. Teachers and students we spoke to had no trouble relating E4E to a wide variety of school experiences (including curricular, co-curricular, extra-curricular, and integrated curricular). However, while this was seen as an effective way to embed the national E4E framework into local environments, a concern is that E4E could lose its transformational potential if its deeper intentions are not examined.

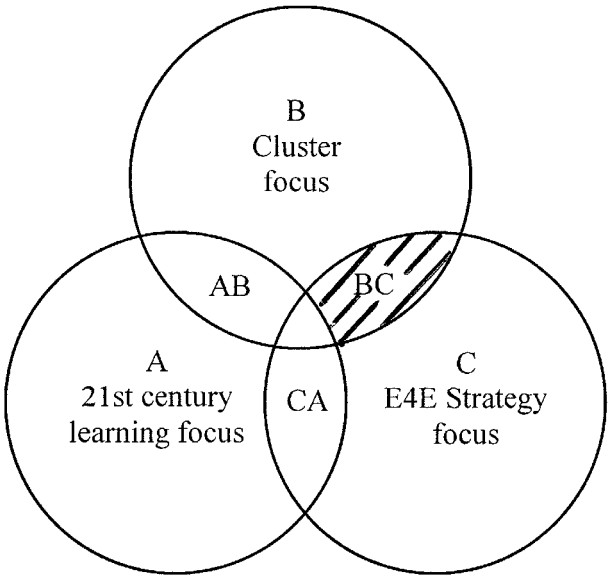
In the second half of the chapter we showed that E4E developments depend on a relationship between business and education sectors. We examined different layers of cross-sector relationships, to show that although there can be paradigm clashes (at the philosophical and practical level), it is the interaction between their points of difference that can bring about the transformational potential of E4E. Negotiated well, these new relationships can provide opportunities to develop "something new" rather than simply influencing the other. This might be new styles of relationship, different planning strategies, shared leadership networks, new products or ideas. Ultimately, when we link this to the knowledge society, the ultimate goal might be to

inspire new societal relationships that create novel solutions to new problems as they emerge in this world of fast-paced change.

Overall, the chapter has demonstrated that the E4E framework (fluid as it may be) provides a vehicle for different sectors to come together in a unique way. In has some potential to provide a vehicle for the realities of today's schools to be transformed to better fit with thoughts about schooling for the 21st century. Obviously, E4E on its own is not going to transform New Zealand's education system, or meet the Government's call for economic transformation, in the short term or on its own. Still, it is important for policy makers and E4E stakeholders to keep some of these principles in mind.

We delve deeper into the concept of partnership in the next chapter, where we investigate and explore ways in which E4E can be developed to meet the aspirations, needs, and values of Māori communities.

8. How can partnerships with Māori communities develop E4E to better meet the aspirations, needs, and values of these Māori communities?



In NZCER's evaluation of NET we discussed the need to investigate and explore ways in which E4E can be developed in order to better meet the aspirations, needs, and values of the Māori community which schools are a part of (Bolstad 2006a). For the purpose of this early report, and building on the ideas about partnership in the previous chapter, we now ask: How can partnerships with Māori communities enable E4E to develop to better meet the aspirations, needs, and values of these Māori communities?

We divide the discussion and analysis into three sections. Firstly, we describe the E4E developments in three schools with high percentages of Māori students from the Northland cluster, as they relate to Māori experiences of E4E. Secondly, we explore the relationships that these schools have developed with local Māori communities. Thirdly, we step beyond the data to discuss the notion of partnerships and the ways in which partnerships with Māori communities might be thought about within an E4E frame. Finally, we summarise our findings by discussing

potential implications for local-level developments and future drafts of the E4E strategy in relation to the E4E key message: "community partnerships are central to enterprising learning".

The schools' E4E context

We visited three Northland sites which had a number of similarities and differences. They were a kura kaupapa (Years 1–13), an area school (Years 1–13), and a secondary school (Years 7–13), each located in a different area of Northland. The two "mainstream" schools each had a bilingual unit. All three were decile 1 or 2 with between 200 and 500 students. In two of the schools, more than 90 percent of the students identified as Māori, and in the other more than 50 percent did. The Māori population was between 25 percent and 50 percent of the local population of which each school was part. All three principals are Māori, two of whom were relatively newly appointed. The focus of the E4E initiatives and how they are implemented at each of these sites are different from one another.

E4E at the kura is divided into two programmes and is run for some of the wharekura students (senior students). The first focuses on an environmental project called Youth Jam which was initiated prior to the introduction of E4E, and the second called, Ka Pai Hāpai, involves wharekura students setting up and running a tuck shop at the kura. Although different in their focuses, the co-ordinator believes they both advance key E4E messages and aims:

> They [Youth Jam and Ka Pai Hāpai] are slightly different kaupapa, but I think they are both enterprising … you draw on the kids' skills to use their initiative to be creative about their mahi and also doing things in the real world, as such, using their learning in the real world. (Lead teacher)

The E4E lead teacher at the kura sees the E4E programme as having synergies and commonalities with the philosophy of the kura. She believes that there are aspects of E4E that complement the *Te Aho Matua* philosophy. The lead teacher sees that it has allowed the students to drive and design something that meets their needs—not just what the teacher thinks is important:

> I think that it has really positive outcomes for the kids because it's student driven…it's what they want to do. So for example, Ka Pai Hapai, I had this idea that they could do some type of educational tool in Māori for the younger ones and they just looked at me, 'Nah whaea we want a tuck shop! We haven't got a tuck shop here!", and I thought OK I have to let go and stop putting my foot in there and let them do it … it has come to fruition. It is something that they really want to do. It was driven by them and I think that we have got a lot further with that, than if I tried to push them into what I wanted to happen.

At the area school, the E4E programme is driven by a lead teacher with the support of the staff and principal. It involved a specific enterprise class, YES, and PrEP, as well as efforts to move all subject-based teaching towards more curriculum integration and enterprising learning. Although the lead teacher held the big picture view of E4E, the teachers we interviewed appeared to have a shared vision about enterprising learning. For example, when we conducted a focus group

interview, the teachers spoke articulately about the changing nature of the economic environment and what learning for the 21st century should look like at the classroom level:

> Kids can't be assured of going into the traditional jobs any more. If they are not thinking outside of the square and being able to generate income for themselves they are not going to get ahead so I think a lot of the focus is on teaching them to be self-sufficient…
>
> The main thing about it [E4E] is that it is cross-curricular using skills from maths and cutting seamlessly into technology…it's the cross-curricular nature [of the programme that is beneficial] and the fact that you are using skills in a real way...because too often in school we divide everything up and put them into little boxes so they go away thinking for instance graphics has nothing to do with art or maths...it's about making the connections [between different types of skills and knowledge].

At the secondary school, E4E is part of a long-term vision for the school. While the principal believes strongly in "leading from the front", groundwork to develop and realise the vision includes co-constructing a set of shared expectations among staff and students to develop a sense of "ownership" of the school:

> When a Year 9 arrives at the school I want them to take ownership of the land. So we are looking at having a transition programme for the day…[on] the first day its only the Year 9s and 13s who are at the school, at that stage the Year 13s hand over ownership to the Year 9s—on the second day and third day it's only the Year 9s at school…and the message is clear, this is your school as opposed to…you are the "turd former"… So the Year 9s take ownership of the school and they then welcome back all their tuakana. That ownership should then start to pervade as they move through the school, and they then pass on back down to the others what it means to be mana whenua.
>
> Because I think they [head girl and head boy] are quite exceptional people…I would like to invite you back sometime to spend time with those two. For them to talk to you and show you around 'their' school, because that is what they will say to you, 'Welcome to <u>our</u> school'. (Principal)

E4E messages have been integrated into teaching and learning. For example, the senior programme involves experiential and self-directed learning. A particularly interesting facet of this is that the school employs a trained chef to "teach" the food technology programme which runs a restaurant based at the school, and a qualified carpenter runs their hard technology programme where students build a house that is then relocated into the community. However, the term "E4E" is not necessarily used in relation to projects such as this as the principal has adopted a pragmatic approach to streamline the language and ways in which staff talk about what they are doing:

> [The teacher] is out there doing what he loves doing and he is also now giving the students some of the E4E philosophy, so take away all of these different terminologies and replace it with a few … so you have got things happening but its not under E4E … they can talk to you for quite a while on [E4E ideas] but they don't see it as E4E.

"Being Māori" is normalised in these schools by the fact that they all have large Māori student populations and are located in communities with substantial Māori populations. At one of the

schools, because nearly all of the students are Māori, the principal sees that there is no need to develop a programme for Māori students specifically; the one they have designed is for Māori students. Furthermore, by the mere fact that the principals are Māori, and the communities that the schools serve are predominantly Māori, the way the schools are run will more likely reflect Māori ways of doing things. For example, in the above quote on the previous page, the principal, when describing how he goes about establishing new students' sense of ownership of the school, he describes student ownership in terms of mana whenua.

E4E and Māori communities

E4E as an initiative recognises the importance of developing sustainable school–community–business relationships. We now look at the types of relationships that these three schools had developed with Māori communities. Māori community involvement in the E4E initiatives at the schools we visited varies both in the nature and scope. However, one thing in common was that "external" Māori involvement in the schools appears to be mainly in the form of Māori parents or members of the community being invited to attend events or help out at the different schools.

For example, at the area school, parents are to be invited to the end-of-the-year "market day" function but do not seem to be actively involved in students' E4E-related projects in any way. On the day we conducted the interviews, we did observe many Māori parents supporting and involving themselves with the kapa haka group. Nevertheless, when we asked the lead teacher whether E4E had made any difference to the school's relationship with the local community or local businesses she was quick to point out that involvement did not necessarily appear under the banner of E4E:

> I can't take credit for that. The bilingual unit does heaps, and the music teacher brings people in. The [principal] has contacts with other schools—we've had swaps with the girls' rugby team, [the school] band, and [through the school] dance. We had an art guy come in to encourage kids to go out of the school. We have a relationship with Rotary club [and] previously had Patsi Shaw in. The club comes in every two years and runs helicopter rides for students.

At the kura kaupapa Māori, whānau were generally quite supportive of the E4E initiative. That said, the initiative is largely driven by the kaiako and students at the kura, and parents appear to have been called in to help assist an initiative that the school largely designed rather than helping to design:

> We do send out pānui to the parents to let them know about Ka Pai Hapai and Youth Jam, that kind of thing, and that they are brought on board to help out or be a part of, discuss things that are going on. So [the level of parental involvement is] quite high but as I say there probably would be a group that would not know about it [E4E] … (Lead teacher)

At the secondary school, there is an intention to enquire into how the school could meet the self-defined needs of the local community. The principal is beginning to establish a relationship with

the local rūnanga although there does not seem to be any formal relationships being established with the local hapū or rūnanga for the purposes of E4E at this stage. The relationship appears to be in the preliminary stages, although the school has been an integral part of the Māori community since its establishment. The principal sees that good relationships and communication need to be in place before it is appropriate to develop joint E4E projects:

> I have chosen to become involved in lots of community things, not in an official capacity, but always just representing the school. I go to monthly meetings for the takiwā [of Ngapuhi]. I choose to attend those monthly meetings.

In fact, a previous initiative with a local marae was in the process of being rekindled, this time being led by the hapū rather than the school:

> One of the things that [the regional co-ordinator] came up with, and it was part of one of the funding boards, was to look at an initiative between the local marae and the school. And so I put that through. A couple of years back they actually had an initiative in place. The school went so far—it started off with a hiss and a roar as lots of things do but they never finished it off. And that's what came back from the [community consultation] evaluation when I put it out there. And so I asked the question, 'What do you anticipate the school should do to tidy things up?' And they responded [a few months later], and they would like us to re-start, and they will pick it up as opposed to the school being completely responsible for it. (Principal)

All three schools are ideally positioned in terms of their school leadership to develop and/or enhance relationships with hapū and iwi in the region. The principals at the schools in the case studies are all Māori, have whakapapa connections to iwi in the north, and know how to go about developing relationships with local iwi and hapū on behalf of the school. It appears to us that the right ingredients are in place to develop further sustainable partnerships with Māori communities. We look at this point more critically later in this chapter.

A couple of questions about Māori involvement in E4E are raised when we began to think about the community relationships or partnerships that E4E encourages, and the types of outcomes that E4E aims to achieve. Firstly, when talking about the Māori community, who are we referring to? For example, should there be a relationship and involvement with some type of formal local tribal body, or are individual Māori parents and individual Māori members of the community what was envisaged in the E4E initiative? Secondly, who should be involved in defining the type of relationship between the Māori community and/or members of the Māori community and the schools?

To answer these questions we need to examine the notion of partnership and what happens for partners when "genuine" partnerships are formed. We now step beyond the specific contexts of each of the case study schools, to take a more general look at how partnerships with Māori communities might enable E4E to develop to better meet the aspirations, needs, and values of these Māori communities.

E4E "partnerships" with Māori communities

The types of partnerships that schools and their communities desire and aspire to may vary from community to community. If we truly want to establish partnerships with Māori communities as part of E4E, and believe this to be mutually beneficial, it appears to us that more time may be needed to think about how to achieve this and what this might look like. We need to talk further about what a "successful" partnership might mean in this context.

A key message of Education for Enterprise is that "community partnerships are central to enterprising learning" (Te Kete Ipurangi, 2007). Māori have had a range of experiences with regards to "partnerships" with the Government—both positive and negative. Community partnerships have become a key part of the Government's strategy for the delivery of a range of social policy initiatives over the last 10–15 years. They have also been the focus of advancing the Government's Treaty of Waitangi commitments and objectives.

Whilst Māori communities—particularly, but not only, iwi authorities—have embraced this shift in the Government's thinking towards partnerships at the local level, Māori have also become somewhat weary of the these types of partnerships, as they are often created to meet government needs and government perceptions of what Māori communities need, as opposed to what Māori communities believe they need. Another important concern is the capacity of Māori organisations to respond to requests from government agencies and the community to become involved in these types of partnerships. Such collaborations require time and resources, which, for some iwi, are scarce. Iwi organisations make pragmatic and strategic decisions about where they deploy resources in order to achieve their main aims and objectives as iwi. These Māori experiences of partnerships with government agencies (central and local-level government) are part of the context in which E4E considerations and representations of partnership are operating.

New Zealand education has a long tradition of community–school partnerships. It has long been a part of the culture of New Zealand communities to become involved in schools. This has largely been on a voluntary basis and schools tend to be the main benefactors of the partnerships. The "partnerships" tend to be based on the goodwill of the community and are more similar to a form of sponsorship rather than partnership. This applies in both mainstream and Māori medium settings. In a forthcoming NZCER report about kura kaupapa Māori we have noted the shift in the type of parental involvement to the periphery of the educational aspects of kura kaupapa Māori where they are more involved in either governance roles or assisting by way of involvement in fundraisers and helping out with transport on trips, and so forth. E4E provides an opportunity for kura/schools to work *alongside* the community (including parents) to "co-construct" educational programmes that meet the needs of both the kura/schools and the community.

In a sense, E4E partnerships might be similar to the types of partnerships that occur in the commercial world. In the commercial world, partnerships are neither formed, nor are they sustained, if only one of the partners is benefiting from the partnership. A successful partnership in this context is one where the partnership is mutually beneficial and constantly being assessed by both parties for its ongoing viability. If partnerships are going well both parties continuously

look at ways in which the partnerships can be enriched so that both receive improved benefits. Sometimes, successful partnerships can end as things change; for instance, if the market demands different products and services. Our point is not to say that E4E partnerships with Māori communities should be based on a commercial model, but that different *models* of partnership need to be explored and debated.

Putting aside the commercial context, the notion of "partnership" signifies the idea of two parties joining together to achieve a series of aims and objectives that are mutually beneficial. More often than not, what is involved in the partnerships and the reason for coming together is created through discussion and negotiation with each other. It is through discussions with each other that the ways in which the relationship can be mutually beneficial become clearer—one party can contribute a set of things which the other does not have access to, and vice versa, and together perhaps they can achieve things that they may not have achieved outside of the relationship. In other words, it is through the relationship that *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. We touched on these ideas in the previous chapter in terms of partnerships between the business and education sectors. Such ideas can be extended to E4E partnerships between schools and Māori communities.

From the evidence we have collected, it appears that schools, and E4E regional and national leaders, may already have ideas about how they want to engage the different sectors of the community (i.e., particular Māori communities) and may know what they want to gain from a "partnership" with those sectors of the community. This could be problematic; firstly because it might limit the opportunity for one party to openly define the ways in which they wish to be involved or the types of outcomes they wish the partnership to achieve. Another danger is that E4E might carry unexamined assumptions about "problems" that it can address. For example, if an outcome of E4E is to raise Māori aspirations, then already an assumption is made that Māori aspirations need to be raised. These unexamined assumptions could be brought into the discussion with the potential Māori partner(s).

If partnerships can be developed in a mutually beneficial way, and co-constructed between both potential partners, in this context, with Māori communities, we think that this has the potential to overcome another important Māori community concern signalled earlier: iwi organisations make pragmatic and strategic decisions about where to deploy their, sometimes scarce, resources based on achieving their main aims and objectives. If partnerships with Māori communities, particularly but not only iwi, can be developed in such a way that the partnership will assist iwi in achieving their aims and objectives, then Māori communities are more likely to actively engage with schools in partnerships in a way that establishes the types of partnerships that E4E envisaged, and partnerships that are more sustainable.

Implications for E4E development with Māori communities

We have found that schools are attempting to build relationships and perhaps even partnerships with Māori communities in order to meet the aspirations, needs, and values of Māori communities. Schools tend to have somewhat "traditional" relationships with their local communities. There is an assumption in E4E national documentation that "partnerships" with Māori communities should be central to E4E, and we see that in some ways E4E could offer a new model for such "partnerships". However, we are suggesting that more thought needs to be given to the types of partnerships that E4E really encourages schools to engage in with Māori communities—and that signals at the national and regional leadership level might need to shift to accommodate this.

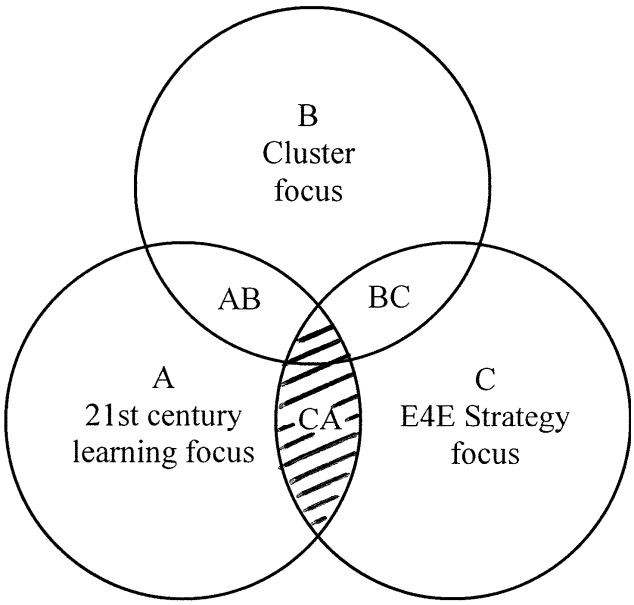
We also suggest that when focusing on partnerships with the Māori community, the question of which *part* of the Māori community we are talking about needs to be addressed. A key intention of Northland's E4E application in 2007 was to strengthen relationships between schools and iwi organisations and expand the E4E model to support this:

> We went to the Tai Tokerau 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)

One of the schools that we visited was beginning to develop a relationship with the local hapū rūnanga. By and large, however, the main point of engagement for case study schools with the wider Māori community, at this stage, was through the Māori parents. While relationships with parents are important, we do not think that these relationships are the only way to further E4E objectives and goals. We think that schools should continue, where they have started, to develop relationships with local hapū and iwi as these relationships take time to establish.

We think that issues and opportunities we have raised in this chapter need to be thoroughly considered when trying to develop "partnerships" with the Māori community—particularly negotiating real, mutually beneficial relationships that are not just based on the goodwill of the community partner. This would involve the community partner getting real benefits out of the partnership. E4E could become a vehicle for schools to meet Māori community needs and aspirations; however, neither E4E nor schools can assume they know what these are. Ideally these would be identified and defined through discussions between the schools and Māori communities. It would also mean doing things in a way that was not just consistent with their key values and beliefs, but also enhance, enrich, and entrench these in the community.

9. How closely does the national E4E strategy align with 21st century learning?



Introduction

In this chapter we step back again to consider the "big picture" of 21st century learning, this time in relation to the *E4E Strategy: Draft version 4.0* (Ministry of Education, 2007a). Twenty-first century learning ideas have informed the development of the national curriculum document (as can be seen in the references to future-focused issues and in the prominence of the key competencies) which has in turn informed the development of the national E4E strategy, and vice versa. The question we attempt to answer in this chapter is: How closely does the national E4E strategy appear to align with 21st century learning ideas? The reason we are interested in this question is that, as discussed in Chapter 4, we see E4E as a potential vehicle for realising 21st century learning ideals.

Initial analysis of the strategy

The *E4E Strategy: Draft version 4.0* (Ministry of Education, 2007a) describes E4E programme outcomes, sets of "critical changes" that are considered necessary for E4E school clusters to

become sustainable, and "measures of change" for monitoring the progress of schools, students, teachers, and business partners against the critical change statements.

The *E4E Strategy: Draft version 4.0* (Ministry of Education, 2007a) includes the Programme Outcome, "To produce students who have enterprising skills and attributes so they are able to succeed in the face of a rapidly changing social and economic environment" (p. 3). This acknowledges that E4E should be about learning for 21st century society. The programme outcome has since been further developed with stakeholders to produce several E4E desired outcomes for: government agencies; business and community; education providers; and students (Te Kete Ipurangi, 2007). None of these make explicit reference to 21st century society, although some appear to imply some possible beginning steps towards 21st century learning.

By analysing the Existing and New School Clusters' critical change statements and measures of change we can offer some further comment about the alignment of the *E4E Strategy: Draft version 4.0* (Ministry of Education, 2007a) with 21st century learning ideas. We consider the emphasis that different "critical change" and "measures of change" statements appear to place on opportunities for students to:

- build their learning capacity by foregrounding core intellectual skills and competencies
- build self-efficacy
- generate new knowledge by engaging in authentic tasks in real-world contexts
- work in collaboration with others
- engage in "big picture" and systems-level thinking.

Building learning capacity by foregrounding core intellectual skills and competencies

As we stated in Chapter 4, 21st century learning is about new knowledge generation rather than reproducing old knowledge, and building competencies rather than accumulating facts. It foregrounds core intellectual skills (such as creative and critical thinking, analysing, synthesising, and problem solving) rather than assuming students will automatically develop these as a result of learning subject content.

Two exemplary *E4E Strategy: Draft version 4.0* (Ministry of Education, 2007a) critical changes related to these 21st century learning ideas, for the *existing* school clusters and *new* school clusters respectively, are: "Schools focus on developing the skills and attributes of enterprising people" (p. 8); and "Teaching processes assist students to develop the skills and attributes of enterprising people" (p. 11). Indeed, the enterprising attributes listed on the Te Kete Ipurangi E4E website are reflective of some of the core intellectual skills discussed above.

Other ways in which the *E4E Strategy: Draft version 4.0* (Ministry of Education, 2007a) could be said to promote similar 21st century ideas about learning dispositions is through statements that focus on school environments which "accept risk taking as a learning experience" (p. 9); and on

developing "students' skills of creative and innovative thinking, participation and contribution to communities, and relating to others" (p. 10).

There is a critical change statement about "improved learning outcomes for students by better preparing them to grow and flourish in a knowledge based economy" (p. 9). However, the only four measures of change for students in the Regional Clusters section of the *E4E Strategy: Draft version 4.0* (Ministry of Education, 2007a) state that students: "are provided with real life examples/models; learn outside the classroom in interaction with business and entrepreneurial models; increase their awareness about local businesses; and raise their aspirations" (p. 9). None of these seem clearly linked to the critical change statement.

Building self-efficacy

To be aligned with 21st century learning ideas, students should be actively involved in making important decisions about their learning and knowledge production. More student decision making, in partnership with others, might be one small step towards meeting the need for self-efficacy in 21st century society.

The *E4E Strategy: Draft version 4.0* (Ministry of Education, 2007a) gives some mixed messages in this regard. The Regional Clusters section of the draft strategy does emphasise the importance of students making decisions about their learning and being actively involved in the construction of curriculum. Examples include critical change statements such as "Students have input into the design of the school curriculum" and "Students make decisions about their learning rather than having decisions made for them" (p. 9).

Although it is not our role to consider draft strategy outputs other than the school clusters, it is probably worth noting that the language used in other sections of the *E4E Strategy: Draft version 4.0* (Ministry of Education, 2007a) could suggest underlying assumptions about curriculum being owned and delivered by teachers. This is exemplified in the following two critical change factors for teachers who are expected to: "*deliver their curriculum content* in ways that enable their students to become more enterprising people"; and "explore innovative ways of using diverse models of *curriculum delivery* in a range of contexts" (p. 12, italics ours).

To be more consistent with learning for the 21st century, such statements may need to create space for students to be part of curriculum design[49] and to construct the concept of curriculum as more of a process to be "enacted by" students than as content to be "delivered" by teachers. That said, to some extent the *New Zealand Curriculum* gives similar mixed messages (Boyd & Roberts, 2007).

[49] For example, as happens to some extent through having student representatives on the E4E Strategy Development Group and Key Stakeholders Group.

The *New Zealand Curriculum*'s "managing self" key competency suggests that students who are self-managing have "a can do attitude" and "are enterprising" (Ministry of Education, 2007b), both of which feature in the *E4E Strategy: Draft version 4.0* (Ministry of Education, 2007a). Nevertheless, the concept of self-efficacy is extremely complex, especially when framed within a 21st century learning discourse. The *E4E Strategy: Draft version 4.0* (Ministry of Education, 2007a) does not necessarily align with these deeper interpretations. For a succinct discussion of the relationship between self-management and 21st century society see NZCER's background paper on the nature of the key competencies (Hipkins, 2006, p. 34).

Generating new knowledge by engaging in authentic tasks in real-world contexts

One of the facets of 21st century learning is that students actively participate in new knowledge generation in the here and now. Learning opportunities which involve authentic projects in real-world contexts are part of this picture.

The *E4E Strategy: Draft version 4.0* (Ministry of Education, 2007a) goes some way towards supporting this type of learning. Examples include the following two critical change statements: "Schools generate…authentic opportunities to develop the key competencies" (p. 8); and "Students apply their wider school learning in real life situations" (p. 9); and the following measure of change: "Participation by students in learning experiences outside the classroom through interaction with business and entrepreneurial models" (p. 9).

The wording of these statements could imply that the main purpose for these experiences is for students to practise what is learnt at school, apply it, or see the relationship between it and the "real world". To align more closely with 21st century learning the draft strategy would need to also emphasise another purpose—making a contribution to society through generating new knowledge. If this were the case, perhaps outcomes related to business partners might need to go beyond current critical changes like "[businesses] have a better understanding of young people's skills and attributes and empathy for their world" and "the provision of a business context for curriculum based learning experiences lead to students' better understanding of the role of enterprise in New Zealand society" (p. 10). Such changes do not necessarily imply that students work in partnership with business/community partners to produce something of real benefit. We take this challenge further in the next section.

Before that, it might be worth considering different interpretations of what authentic learning might involve. NZCER's evaluation of NET suggested that, at that Phase One stage, E4E student learning activities tended to demonstrate two out of three types of "authenticity" (Hipkins, 2006). They were authentic to the discipline area(s) students were studying (often, but not always, business), and/or authentic to students' lives (being relevant or personally meaningful to them), but were rarely authentic in terms of being significant and meaningful to society (Bolstad, 2006a). Perhaps the latter could be addressed in the draft strategy.

Working in collaboration with others

Apart from the comment about exercising "group initiative" (p. 9) the *E4E Strategy: Draft version 4.0* (Ministry of Education, 2007a) does not explicitly address the team work dimension of E4E, however "students" are discussed as a collective and many of the measures of change and critical changes might assume that students will work in collaboration with each other.

The *E4E Strategy: Draft version 4.0* (Ministry of Education, 2007a) is consistent with 21st century learning in its promotion of relationships between schools and business/community groups, but the *nature* of these relationships does not necessarily reflect 21st century learning goals. The document contains many change statements that focus on the contribution business/community partners might make to student learning, but there are few measures of change focusing on the contribution schools/students might make to business or community groups. At the same time there are mixed messages about whether the purpose of business and community partners is to "support" the school/students or to collaborate "in partnership" with the school/students. This is exemplified by two of the measures of change for business connected with the new school clusters: "community *support* is evident and measurable [and] could be in *monetary terms*, *mentoring time*, or in kind"; plus "ongoing commitment by existing *community support* and *new support* on stream for next year (p. 11, italics ours).

If the intention of the E4E is to build authentic partnerships between schools and business/community groups, in which both parties contribute and benefit, a goal related to 21st century learning ideas about different knowledge sets interacting to create "something new", then more could be done to ensure the draft strategy sends a consistent message to this effect.

Engaging in "big-picture" and systems-level thinking

Advocates of 21st century learning call for holistic and integrated approaches to learning that facilitate generative relationships between different knowledge areas. This requires students (and projects) to draw from—and bring together—different disciplines, with a deep understanding of how each discipline functions as a knowledge system. It involves thinking about paradigms, systems, the ways in which different groups frame the world.

Some statements in the *E4E Strategy: Draft version 4.0* (Ministry of Education, 2007a) appear somewhat consistent with this "big-picture" systems-level thinking. Examples include the critical change factor that: "Schools involve students in a holistic approach to learning—at all levels and in all components of the total curriculum" (p. 8); and the measures of change for schools which include "integrating E4E into school planning and infrastructure, designing their curriculum around E4E, and providing E4E as a context for developing the key competencies" (p. 8). To have the *New Zealand Curriculum* (Ministry of Education, 2007b) name enterprise as a future-focused theme to connect learning areas, supports the implicit call for more integrated curriculum in the *E4E Strategy: Draft version 4.0* (Ministry of Education, 2007a).

In order to align more closely with 21st century learning the draft strategy would also need to emphasise the importance of systems thinking, such as considering the paradigms behind business disciplines. For example, when students work with a partner they might enquire into the dominant values or sets/systems of values that drive their project, and the historically specific economic climate it is part of. The student survey data suggest that systems-level thinking was one of the experiences students least frequently engaged in, highlighting a particular need in this area.

Overview of this chapter

To summarise, we think that the *E4E Strategy: Draft version 4.0* (Ministry of Education, 2007a) aligns, to some extent, with ideas about 21st century learning. This lends partial support to our initial hypothesis that E4E provides a potential vehicle for realising 21st century learning ideals. In many instances the critical change statements and the measures of change are consistent with the characteristics of 21st century learning, although different interpretations of the same statements could lead us to argue the opposite. This chapter has presented both confirming and disconfirming evidence. To some extent, statements in the *E4E Strategy: Draft version 4.0* (Ministry of Education, 2007a) have a focus on: schools; partners; and teaching practices providing students with opportunities to: carry out authentic projects for real purposes in real-world contexts; integrate ideas from different disciplines; build relationships with business and community groups; develop intellectual skills, attributes, and competencies (such as creative and critical thinking, problem solving, risk taking, and so forth); and contribute to decisions about their learning. At this stage, however, the draft strategy does not appear to directly address the deep and fundamental changes that may be necessary for schools to fully embed 21st century learning ideals and *become* part of the knowledge-based economy.

To reiterate the observation we have raised in various ways elsewhere in the report, there appear to be (at least) two strands of assumptions and goals driving E4E regional cluster developments: those reflective of 20th century ideas about schooling; and those more closely aligned with some of the literature about early steps towards 21st century learning.

10. Conclusion

This report was written a few months into Phase Two of the E4E Regional E4E Clusters Initiative. The focus of Phase Two is to pilot a regional E4E approach for new school clusters in selected regions, work towards school cluster sustainability, and evaluate the processes and outcomes of the Regional E4E Cluster model as a support structure for potential nationwide E4E development. Phase Two extends and adapts the regional cluster model, initially piloted by the Northland Enterprise Trust (NET) and the West Coast's Education to Enterprise (E2B), to two additional regions, Manukau and Nelson. The overall aim is to embed an enterprising culture within clusters of schools based on characteristics unique to their individual communities.

This report draws on data we collected during Terms Two and Three of 2007 to capture early key aspects of the beginning cluster journey. As appropriate for this early stage, we have looked at underpinning concepts and intentions, as well as processes of implementation, more than impacts or outcomes.

The report has a dual purpose. One is to set the scene for our 2009 report. The other is to support further thinking and developments of E4E and regional clusters. We hope that readers will pick up on the sections that are most relevant to them, and that they will use them to help them reflect on their role in E4E developments to date, their theoretical assumptions, and where they want to head from this point forward.

This conclusion signals the progress made to date, and draws attention to possibilities for further development.

Where does E4E come from?

Education for enterprise is a cross-curricular, community/business-linked, future-focused initiative that provides a conceptual framing for educational initiatives and teaching approaches that demonstrate an "enterprising" nature, including, but not restricted to, specific enterprise education programmes. E4E has become part of the MOE's delivery requirements under one of three Government Priorities, Economic Transformation.

Phase One focused in part on the Northland Enterprising Teachers' (NET) professional development programme designed to upskill teachers and help them develop an enterprising approach in their subjects, and across their school (as well as Enterprise New Zealand Trust programmes and Education to Business). At that stage Education for Enterprise was more of a

"concept" (Bolstad, 2006a), based on a definition of enterprising teaching and learning and a set of learning opportunities/approaches, than a programme. During 2007, E4E has been extended to include sets of key messages and outcome statements. These national developments are driven by a range of national stakeholders, as well as by the learnings from the four regional clusters.

Considering the national strategy was still in development, and that the developers wanted this evaluation to inform their thinking, we began this report with a closer look at one particular theoretical framing that makes sense for E4E—21st century learning. The conclusion of the NET evaluation suggested that:

> It is significant that leaders in the NET case study schools viewed the development of education for enterprise (or 'authentic learning') as something that should occur in conjunction with reviews and redevelopments of the whole school curriculum. There is…a need for coherent messages to be given at the national level to ensure that attempts to transform the ecology of schooling towards practices and systems that promote a lifelong learning orientation are deliberate and planned for. (Bolstad, 2006a, p. 66)

We have taken these ideas further in this report to examine the conceptual similarities and differences between 21st century learning and current E4E rhetoric and practice. If E4E is to be a vehicle for 21st century learning, then it demands that people engage with the big purpose of education. We found the majority of interviewees saw a need for whole-school change, though some had a more radical vision than others. We would hope to see that with professional development support, cluster structures, plus time and funding, more of these opportunities to consider the purpose of education would become embedded across schools. That said, such changes depend on more synchronisation of all external directives placed on schools. The *New Zealand Curriculum* (Ministry of Education, 2007b), released this year contains this possibility. As principals themselves said, we think the regional cluster model has the potential to bring E4E and the new curriculum together.

Where is E4E at, and what might keep it moving forward?

We have looked at the current status of E4E in various ways in this report. In this concluding chapter we present our findings under the following subheadings, which relate back to different areas of "cluster-level aims". To conclude each subsection, we make some recommendations.

The regional cluster model

The purpose of the regional cluster model is to support E4E professional learning communities that stretch beyond individual schools. Each cluster is supported by a co-ordinator who links—and sometimes supplies—schools with professional development and resources, links schools with business/community partners, and links schools with each other. West Coast and Northland already had established regional co-ordinated clusters, although Northland's co-ordination

approach changed part way through the year. The Manukau and Nelson regional co-ordinators were employed after our evaluation contract began, and at the time we carried out our case studies in late August/early September they had only been in the role for two to three months. Positive steps have been made towards developing a regional cluster approach to suit the individual schools at this early stage.

Each region's E4E approach is related to the individuals and schools involved. Although regional flavours show up, it appears that individual schools are interpreting and attending to the local needs of their students, rather than working as a cluster to establish shared regional objectives and region-based adaption of E4E. That said, the E4E regional cluster model seems to be bringing a convergence between schools regionally, and clusters nationally. While the regional co-ordinators have a shared vision of what E4E could look like in their region, their vision is likely to be played out slightly differently in each of the different schools they work with.

A shared vision is one sign of a professional learning community. We found that, as is common with much "enterprise education", there was a wide variety of objectives associated with E4E. Not every cluster had really clear E4E objectives collectively held by the entire cluster. That said, we were able to overlay a framework of aims that suggest there are different "levels" of objectives, even though there are some disagreements about what should be emphasised within each level. The aims are as follows:

- A regional cluster model is set up and fostered.
- Mutually beneficial partnerships are created.
- Enterprising learning opportunities are provided.
- Students become educated life-long learners with enterprising competencies.
- There is whole-school change towards E4E integration and an enterprising culture.
- Sustainable enterprising communities underpin New Zealand's development in a globalised economy.
- Schools reflect and support the knowledge society.

A strength of E4E may well be that it is flexible enough to suit different contexts, and a common goal is not important. That said, the ecological school change literature suggests that learning communities should enquire about the principles and values behind their motivations for change, and develop a rough vision (rather than a prescriptive blueprint) of what they want to create over the long term, acknowledging that there may be a variety of as yet unknown paths to get there.

None of the clusters could be said to be *strong* professional learning communities at this early stage, but the signals are there to suggest that this may develop. These signals include, for example: Manukau school leaders coming together to develop a vision statement and list of enterprising attributes that most suit their student communities; a West Coast professional development adviser working one-on-one with teachers to develop their reflective practice; Nelson teachers being invited to a resource development day; and Northland focusing on depth of practice in some schools. At the school level, signals include "mini" E4E professional learning communities that have been established in some schools, where a small group of teachers share

theory and practice across learning area boundaries. Another signal is that, in general, E4E leadership appears to be well distributed (rather than hierarchical) between national and regional co-ordinators, principals, E4E lead teachers, lead E4E teams, model classes, etc. This means that E4E learnings can flow in all directions, not just from the top down.

There are different ways that the cluster model may want to move forwards from here. Some of our suggestions for national leaders, regional co-ordinators, and school staff to consider are:

- Provide well-timed professional development to interested school clusters to help people engage in theory and visioning for E4E, as well as the nuts and bolts of how to make change over time.
- Continue to develop support materials that are not prescriptive but provide inspiration and practical guidance.
- Begin to extend learning communities to incorporate the full cluster of E4E teachers, as well as students and partners.

Each region suggests different strengths. Some of the challenges for each region to consider as they move forward are as follows:

- A challenge for Nelson may be to bring all schools fully on board with E4E, and to establish some common goals. As part of this the cluster may need to find ways to strive beyond their current educational climate, while continuing to celebrate their strengths and opportunities.
- A challenge for the West Coast may be to keep developments energised yet manageable. Likewise, the region might need to continue to come up with ways to prevent physical distance and small communities hindering E4E developments, particularly the cross-pollination that could come from cluster-wide sharing.
- A potential challenge for Manukau may be to build on the strengths of its culturally diverse communities while still enabling alternatives to lower socioeconomic occupations. The cluster could develop partnerships that recognise parent communities, as well as business communities, and consider how E4E might adapt to different cultural frameworks.
- A challenge for Northland may be to find ways to work productively with the "intensive schools" and balance their learnings alongside the desire to build an enterprising culture across the entire region. There is room for more partnerships with Māori communities where Māori communities have room to establish their own needs and contributions in relation to E4E.

Mutually beneficial partnerships

We saw evidence of a variety of partnerships in various stages of development. Some had been established prior to E4E, while others were just beginning. Many had been initiated and supported by the regional co-ordinators, although there were also examples of school and business/community-initiated partnerships.

Partnerships across the business and education sectors occur at all levels of E4E from the partnership between the MOE and NZTE through to the partnerships between schools and

business/community groups. These partnerships involve the meeting of two different paradigms or world views and different organisational structures. In order to be successful, partners need to meet in a middle space in which their differences can be acknowledged and valued with the aim of together creating something new. This requires time and space for negotiation and mediation.

We found that principals and business/community partners had similar ideas about the purpose of E4E (although with slightly different emphases) and both groups were committed to providing enterprising learning environments. Partnerships were most successful when both schools and businesses came to better understand each other's world views and found ways to accommodate each other's structural constraints.

One of the recommendations from the earlier NET evaluation was that E4E needs to be developed in order to better meet the aspirations, needs, and values of the Māori community of which schools are part (Bolstad, 2006a). The findings of this evaluation indicate that in order for this to happen there needs to be partnerships between schools and their Māori communities that involve both partners contributing to and gaining from the collaboration to meet their individual and collective aims and aspirations. These types of partnerships do take time to develop but we think that in the long term they have the potential to be mutually beneficial.

In regard to supporting successful partnerships we suggest that:

- discussions between partners are centred around the primary purpose of the partnerships, including building educational value
- time and support be provided for discussion and negotiation between partners so that "something new" can be created in the space between them.

Enterprising learning opportunities

We did not find many examples of radically transformed learning environments, and nor did we expect to, given that most of the case study schools are in the early stages of adopting enterprising education approaches, and teachers are operating within traditional school structures, or in the process of trying to change school structures, set up for 20th century learning.

We did, however, see some evidence of the building of 21st century learning environments. Most of the activities presented under the E4E umbrella afforded students with opportunities to engage in in-depth, problem-focused projects over an extended time period, carry out real research to create new knowledge, make decisions about their learning, work in groups, and work across spaces within the school and offsite.

The approaches and types of activities provided by schools under the E4E umbrella ranged from those very similar to what already occurs in our current schooling situation, to those closer to 21st century learning ideals. This is understandable given that different regions and schools have different histories and are at different stages in relation to enterprising education. In order to provide a picture of this range we categorised the E4E activities in the case study schools into six broad types which are described briefly below.

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. 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. 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 of business and market economies. There was no evidence from the student interviews that this metalevel analysis was occurring, although we did not directly question them about this.

We see the types of activity described above as sitting loosely along a continuum where number one is most like the current schooling situation and number six is closest to 21st century learning, although not yet at the point at which we consider it represents fully developed 21st century learning ideals. However, the ways and contexts in which these approaches are taken up may alter their position on this continuum.

As signalled at the beginning of this chapter, it is not appropriate at this early stage in the evaluation to focus on the impact of the approaches described. However, the qualitative data from the case study schools provide us with an early indication of the sorts of teacher and student outcomes we might be able to expect. Teachers' reflections on their changes in practice, along with students' observations, suggest that when engaging in enterprising approaches to education teachers were less directive and more responsive, relating to students in less formal, and in more open and trusting ways; that they were highly organised but more flexible. Teachers also commented on increased job satisfaction, but with increased workloads.

The qualitative data suggest that even in schools that are just beginning to introduce E4E approaches, students were developing many of the key competencies described in the new *New Zealand Curriculum* (Ministry of Education, 2007b), including: thinking, managing self, relating to others, and participating and contributing. We found less evidence of students developing the competency, "using language, symbols, and texts", a finding consistent with another recent NZCER study of the uptake of the key competencies (Boyd & Watson, 2006). This competency is related to systems-level thinking in that it involves working with and making meaning of the

codes in which knowledge is expressed. To solve problems and generate ideas students need to know how knowledge systems work and interact.

In regards to supporting enterprising learning opportunities we suggest that:

- teachers be provided with more support and time to explore the knowledge of different disciplines, their origins, and how these have evolved, and to engage in systems-level thinking themselves as well as time and support to develop approaches to enable students to do the same within enterprising learning environments
- students be given more opportunities in their work with business/community partners to serve the community so that both they and the partners benefit.

Whole-school change towards E4E integration/enterprising culture

E4E is not an isolated programme that can be "dropped" into any school. Instead it is a new way of thinking about education, a new way of doing teaching and learning. Some might even say it is a new way of being. It demands whole-school change in the direction of a more "enterprising" culture, and a focus on "enterprising" ways of teaching and learning. A key aspect of this whole-school change is that it needs to be driven by people *within* schools, to develop a sense of ownership for progressing change. That said, school staff need to have access to leadership support, be that in the form of intellectual inspiration or practical resources. While we saw evidence of both in our data, one area of tension symptomatic of this type of development process to date has been the unclear relationship between national E4E development and local E4E development.

Interviewees told us how important it was that they could apply E4E in any way that suited their students, their partner, or their communities. At the same time, however, they also told us that they did not have access to enough educational resources about E4E to be able to make these changes. Some case study schools and the regional co-ordinators were beginning to develop their own resources to support E4E, and integrate E4E into the various documents that guide their practice (e.g., school visions and classroom planning templates). They were often wary about national expectations being placed on them when, as they saw it, this was likely to undermine their capacity to take real risks, and/or develop E4E in a way that they saw as appropriate and sustainable for their area (e.g., slow, incremental change paced to what teachers felt comfortable with).

The *E4E Strategy: Draft version 4.0* (Ministry of Education, 2007a) outlines numerous critical changes and measures of change to map the way forward to E4E sustainability. Many of these indicators are markers of whole-school change. When we looked at the *E4E Strategy: Draft version 4.0* (Ministry of Education, 2007a) in detail, we found that it was hard to see the "wood for the trees", or more appropriately it was hard to see the path through the woods. Although people we spoke to primarily agreed with the Te Kete Ipurangi, E4E website's "public version" of the draft strategy, they could not necessarily see a specific path for teachers to take to get to the

end points outlined (e.g., how to integrate E4E into the Year 9 maths programme or how to make enterprising links between maths and English). Hopefully, as the website develops, it can incorporate these types of resources.

In regards to supporting whole-school change towards E4E culture, we suggest the following:

- National leaders may wish to consider the question of how to achieve balance between engaging and supporting innovation and trying to capture or predetermine innovation. At what point does one undermine the other?
- The national draft strategy might be revised to strengthen the messages about 21st century learning, at the same time as outlining the steps that might be achievable at different stages of an E4E journey.

Summary

We structured this report under the three main areas of "21st century learning focus", regional "cluster focus", and the national "E4E strategy focus". We have traced the development of the relationships between them thus far. We see the potential over time for these intersecting circles to overlap more with each other as E4E develops nationally and through the regional cluster model to realise 21st century learning aims.

References

Beeby, C. (1992). *The biography of an idea.* Wellington: New Zealand Council for Educational Research.

Bentley, T., & Miller, R. (2006). Personalisation: Getting the questions right. In OECD, *Personalising education* (Schooling for Tomorrow series) (pp. 115–126). Paris: OECD.

Bolstad, R. (2006a). *Evaluation of the Northland Enterprising Teachers (NET) initiative*. Unpublished New Zealand Council for Educational Research report. Retrieved 15 December 2007, from: http://www.nzcer.org.nz/pdfs/15059.pdf

Bolstad, R. (2006b). Questions for a twenty-first century senior secondary curriculum. *Curriculum Matters, 2*, 105–127.

Boyd, S., & Roberts, J. (2007, December). *Learning by "doing", or doing what you are told?* Presented at the New Zealand Association of Research in Education national conference, Canterbury University, Christchurch.

Boyd, S., & Watson, V. (2006). *Shifting the frame: Exploring integration of the key competencies at six Normal Schools*. Wellington: Ministry of Education.

Broz, J. (2003). An enterprising focus for a school curriculum. *Primary & Middle Years Educators*, *1*(2), 3–6.

Bull, A., Brooking, K., & Campbell, R. (2008). *Successful home–school partnerships*. Unpublished report presented to the Ministry of Education by NZCER.

City of Manukau Education Trust. (2007). Home page. *City of Manukau Education Trust website*. Retrieved 15 December 2007, from: www.comet.org.nz

Castells, M. (2000). *The rise of the network society* (2nd ed.). Oxford: Blackwell.

Clark, J. A. (2004). Commentary: Enterprise education, or indoctrination? *New Zealand Journal of Educational Studies, 39*(2), 321–332.

Claxton, G. (2007). Expanding young people's capacity to learn. *British Journal of Educational Studies*, *55*(2), 115–134.

Destination Northland. (2007). About Northland overview. *Destination Northland website*. Retrieved 15 December 2007, from http://www.northlandnz.com/livework/pages/overview

Duignan, P. (2004, 29 August). Intervention logic: How to build outcomes hierarchy diagrams using the OH diagramming approach [WWW document]. *The Strategic Evaluation website*. Retrieved 15 December 2007, from: http://www.strategicevaluation.info/se/documents/124pdff.html

Fullan, M. (2003). *Change forces with a vengeance*. London: Routledge Falmer.

Gilbert, J. (2005). *Catching the knowledge wave? The knowledge society and the future of education*. Wellington: NZCER Press.

Hargreaves, A., Earl, L. & Ryan, J. (1996). *Schooling for change: Reinventing education for early adolscents*. London: Falmer Press.

Hipkins, R. (2006). *The nature of the key competencies: A background paper*. Unpublished New Zealand Council for Educational Research report. Retrieved 15 December, 2007 from: http://www.tki.org.nz/r/nzcurriculum/pdfs/nature-of-k-round-paper.pdf

Hipkins, R., Roberts, J., & Bolstad, R. (2007). *Key competencies: The journey begins*. Kick starts series. Wellington: NZCER Press.

Hytti, U. (2002). *State-of-art enterprise education in Europe: Results from the ENTREDU project*. Finland: Small Business Institute, Turku School of Economics and Business Administration.

Hytti, U., & O'Gorman, C. (2004). What is "enterprise education?" An analysis and methods of enterprise education programmes in four European countries. *Education & Training, 46*(1), 11–23.

Istance, D., & Kobayashi, M. (2003). Introduction. In D. Istance & M. Kobayashi (Eds.), *Networks of innovation: Towards new models for managing schools and systems*. Paris: OECD.

Maharey, S. (2006). *Let's talk about personalising learning.* Wellington: Ministry of Education.

Manukau City Council. (2007a). About Manukau. *Manukau City Council website*. Retrieved 15 December 2007, from http://www.manukau.govt.nz/default.aspx?page=about_manukau

Manukau City Council. (2007b). Snapshot of Manukau's economy. *Manukau City Council website*. Retrieved 15 December 2007, from http://www.manukau.govt.nz/default.aspx?id=5677

Miller, R., & Bentley, T. (2003). *'Unique creation': Possible futures—four scenarios for 21st century schooling*. Nottingham UK: National College for School Leadership.

Millett, R. (2006, July). Building Learning Partnerships for change. Paper presented at the Evaluation and Social Change Conference. Tauhara Centre, Taupo.

Ministry of Education. (2006). *The New Zealand curriculum draft for consultation 2006.* Wellington: Learning Media.

Ministry of Education. (2007a). *E4E Strategy: Draft version 4.0. Last updated 03/04/07.* Unpublished.

Ministry of Education. (2007b). *The New Zealand curriculum for English-medium teaching and learning in years* 1–*13.* Wellington: Learning Media.

Monroe, M., Fleming, M. et al. (2005). Evaluators as educators: Articulating program theory and building evaluation capacity. *New Directions for Evaluation,* 108, 57–71.

Mulford, B. (2003). Leadership and organisational learning in schools and improved student outcomes. In D. Istance & M. Kobayashi (Eds.), *Networks of innovation: Towards new models for managing schools and systems*. Paris: OECD, pp.74–78.

Nakata, M. (2007). The cultural interface. *The Australian Journal of Indigenous Education, 36*, 7–14.

Nelson Tasman Tourism. (2007). About Nelson. *The official tourism website for the Nelson region*. Retrieved 15 December, 2007, from: http://www.nelsonnz.com/nelson/

NZEI Media Release. (10 August 2005). *West Coast teachers say new report more considered***.** Retrieved 15 December, 2007, from: http://www.nzei.org.nz/media_centre/press_releases.htm#3

New Zealand Trade and Enterprise. (2006). *ECSA fund—Regional Enterprise Clusters application form 06/07*. Christchurch: Author.

New Zealand Trade and Enterprise. (2007a). *ECSA Fund—refunding application 07/08*. Christchurch: Author.

New Zealand Trade and Enterprise. (2007b). *ESCA round seven—criteria & guidelines for applications*. Christchurch: Author.

New Zealand Trade and Enterprise. (2007c). *ECSA tender March 07—criteria & guidelines for applications*. Christchurch: Author.

OECD. (2005). *The definition and selection of key competencies: Executive summary*. Paris: Author. Retrieved 15 December 2007, from http://www.oecd.org/dataoecd/47/61/35070367.pdf

Owen, J. M. (2003). Evaluating educational programs and projects in Australia. In T. Kellaghan, D. Stufflebeam, & L. Wingate (Eds.), *International handbook of educational evaluation: Part two: Practice* (9, pp. 751–768). Dordrecht: Kluwer Academic Publishers.

Roberts, J. (2007, March). *Evaluating the Regional E4E Clusters Initiative: Working with the West Coast*. Presentation at the West Coast E4E introductory gathering, Kingsgate Hotel, Greymouth.

Roberts, J., & Gardiner, B. (2005). *Exploring possibilities: An evaluation of the short-term effectiveness of the Secondary Futures process*. Wellington: New Zealand Council for Educational Research.

Rogers, P., Huebner, T. et al. (2000). Program theory evaluation: Practice, promise, and problems. *New Directions for Evaluation,* 87, 5–13.

Rogoff, B. (1994). Developing understanding of the idea of communities of learners. *Mind, Culture and activity*, *1*(4), 209–229.

Statistics New Zealand. (2002). *Monitoring progress towards a sustainable New Zealand: An experimental report and analysis*. Wellington: Author.

Sterling, S. (2001). *Sustainable education: Revisioning learning and change*. Totnes, Devon: Green Books.

Te Kete Ipurangi. (2007). *Education for Enterprise website*. Retrieved 15 December, 2007, from: http://www.tki.org.nz/r/education_for_enterprise/index_e.php

Tilbury, D. (1995). Environmental education for sustainability: Defining the new focus of environmental education in the 1990s. *Environmental Education Research, 1*(2), 195–212.

Timperley, H., Phillips, G., & Wiseman, J. (2003). *The sustainability of professional development in literacy: Parts one and two*. Wellington: Ministry of Education.

Vaughan, K., Roberts, J., & Gardiner, B. (2006). *Young people producing careers and identities: The first report from the Pathways and Prospects project*. Wellington: New Zealand Council for Educational Research.

West Coast Regional Council. (2007). About our region: Economic. *The West Coast Regional Council website*. Retrieved 15 December, 2007, from: http://www.wcrc.govt.nz/about_us/our_region/economic.htm

WK Kellogg Foundation. (2004). *Logic model development guide*. Michigan: Author.

Appendix A:Two-year evaluation questions

Strategy focus

The MOE and NZTE have indicated interest in the evaluation gathering evidence of the following. This report provides some initial insights into some of these areas, although they will be more fully addressed in the 2009 report:

- The extent to which the enterprising programmes of learning have been shaped to suit the needs of students and the local community.
- The extent to which outcomes demonstrate teachers as responsive learners. For example, evidence of teachers:
  1. working collaboratively with colleagues in new ways, adapting resources to fit the enterprise framework, and adapting NCEA achievement standards to meet the local community
  2. demonstrating enterprising skills and attributes as teachers/learners (e.g., taking risks).
- The extent to which outcomes demonstrate students developing enterprising skills and attitudes (within and beyond their core learning areas), and the extent to which student motivation for achievement and career aspirations are enhanced by involvement in E4E.
- The extent to which school management/leadership structures are organised to allow opportunities for education for enterprise growth and development (e.g., 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.).
- The extent to which "schools" and "business" and "community" perceptions of one another are enhanced and changed by E4E clusters (e.g., the extent to which the community and businesses learn new things about schools, schools learn new things about business and communities, etc.).
- The extent to which E4E enhances opportunities for students to engage in "authentic learning", and for schools to "personalise learning" for their students, through relationships with people/groups/businesses in the community, and the impacts of this for students, schools, and communities.
- The extent to which E4E enhances or extends current understandings about "effective teaching".

21st century learning focus

The following questions will guide the evaluation's 21st century learning focus:

- 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 life-long 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 education for enterprise provide for students to develop the key competencies? How does this compare with students' opportunities to develop the key competencies in more "conventional" classrooms?

Appendix B: Information sheet

Evaluation of the Regional Education for Enterprise (E4E) Clusters

INFORMATION SHEET

As part of Education for Enterprise (E4E), the Ministry of Education and New Zealand Trade and Enterprise are funding four Regional Enterprise Clusters (in Northland, West Coast, Nelson and Manukau). The aim is to embed an enterprising culture within clusters of schools based on characteristics unique to their individual communities.

The New Zealand Council for Educational Research (NZCER) has been contracted to conduct an evaluation to track progress and support developments in these regional clusters through 2007 and 2008. We have designed the evaluation to include: a cluster-specific focus; an E4E Strategy focus; and a "21st century learning" focus. This means we can consider the range of goals and priorities that might exist amongst different groups regionally and nationally. We can then provide engaging evaluation feedback that meets the needs of different audiences.

This collaborative evaluation will support the ongoing development of E4E within individual schools, regional clusters, and nationally. It will explore what different people think E4E means in their environment, what links there are with other educational and regional developments, the different ways E4E develops overtime, and the various things that happen as a result. At a high-level we are interested in how effectively clusters can work with E4E, and how effective E4E really is for schools, communities, and education in New Zealand.

We will find this out through interviews and surveys with people in each of the four regions. Responses will be used to provide ongoing feedback to schools, clusters, and other stakeholders. E4E is a learning journey, which we hope the evaluation will assist with (likewise, the evaluation is a learning journey, which we want to keep flexible to suit what we find along the way). We are also here to support schools and regions to do their own research and evaluation in the area. Our evaluation plan is the result of numerous meetings with E4E funders, National and Regional Co-ordinators, plus school staff that attended March 2007 regional meetings (in West Coast and Northland).

Everybody invited to take part in the evaluation has the right to decline. Principals choose whether their schools will be involved. All other individuals will decide whether they want to participate in any surveys, interviews, or other activities. We will do all we can to keep participants' identities confidential. We will not report on individual schools (except to the school

itself). However, since there are only a small number of E4E schools within each region, some people who are very familiar with the initiative may be able to guess some of the schools from descriptions of their involvement in E4E. Where appropriate, we will take steps to keep individuals from being identified by their comments (for example, by collating principals', teachers', or students' comments across several schools).

A key aim of the evaluation is to provide feedback throughout the evaluation to support ongoing growth, development, and sustainability of E4E practice in the four clusters, and the national strategy. We can give each school a user-friendly summary of their own survey responses, with comparisons against schools in their region or nationally (if desired). Schools involved in focus groups and interviews will be provided with brief summaries if we can maintain individuals' confidentiality. We will also develop presentations, workshops and summary documents, which we will deliver ourselves or via National/Regional Co-ordinators. We will present emerging findings for the October ECSA funding round, and produce two full reports (end 2007 and start 2009). Dissemination may also include resources, articles or presentations for wider education and research audiences.

Further information about NZCER and our researchers: www.nzcer.org.nz

Further information on E4E: http://www.tki.org.nz/r/education_for_enterprise/index_e.php

Appendix C: Evaluation plan

Evaluation of the regional education for enterprise (E4E) clusters

EVALUATION PLAN

The different parts of the evaluation are outlined in the table below. This plan is the result of numerous meetings with E4E funders, National and Regional Co-ordinators, plus school staff that attended March 2007 regional meetings (in West Coast and Northland). The plan remains flexible—but this is our intention. Timing may shift if necessary.

When	What	Who (if they agree!)	How	Why
Term 2 2007	*Principal priorities survey* To explore how principals view E4E, their priorities, and the type of information that may help.	Principals in all E4E schools in the four regions (approx 40)	NZCER will send survey to principals.	Principals give initial agreement to take part in E4E, provide overall school leadership, and have an overview of how different initiatives and directions in a school fit together.
Term 2 2007	*Student teaching and learning survey* To explore what students think of school and the ways they learn. This survey is about "whole-school" practices, not just about E4E.	Approximately 2 senior and 2 junior classes in all schools with students in Year 7 or above.	NZCER will send surveys to E4E lead teacher (or contact). Up to 4 teachers will give to it to one of their classes. Schools will have some input into deciding the classes (so they get back information about their school that's useful to them).	The "big picture" focus suits schools at the start of an E4E journey (and may not have activities in place) through to schools who have embedded E4E across the curriculum (and may not have marked E4E classes). It gives schools data that is relevant to all teachers and is useful for seeing links between what is already happening, underpinning E4E approaches, and new directions in education generally.

When	What	Who (if they agree!)	How	Why
Ongoing through 2007	*Community/business partner initial survey* To explore reasons for business and community involvement in E4E, and what they think about E4E, education and career paths.	All community partners that schools or regional co-ordinators have an E4E relationship with.	NZCER will give surveys to regional co-ordinators and/or schools to give out to organisations. Completed surveys will be sent directly to NZCER. (Ongoing—i.e. whenever a new relationship is built they receive a survey).	A key goal of E4E is to develop positive relationships between schools and communities/businesses, and to provide authentic learning environments for students. Regional co-ordinators and schools should find this data useful for working with different motivations in E4E.
Term 3 2007	*Case studies* To explore how schools are approaching E4E. Topics might include: - experiences of E4E - what E4E teaching/ learning looks like - what being "enterprising" involves - what is unique about an E4E approach - challenges - survey findings (if available).	2–4 schools per region to hear from: - students - teachers - principals - community partners - regional co-ordinator.	NZCER will select schools according to our criteria and schools' interest. We will work with the lead teacher (or other contact) to set up our visit, give our invitations to people, and devise an interview timetable for us. We may also ask to see relevant school documents and/or classes in action.	Surveys can only tell us so much. Case studies allow us to understand E4E in more depth and in complex school environments. We will be able to zoom in on areas of interest that emerge during the evaluation, by visiting schools that are trying something new etc.
Term 3 2007	*Student focus groups* To explore E4E through the experiences and priorities of students.	Focus groups with students from 3–8 selected schools, with 5–8 students per group.	NZCER will select schools according to our criteria and schools' interest. We will work with the lead teacher (or other contact) to set up our visit, give our invitations to students, and devise a timetable for us.	As E4E is still in development, "student outcomes" are not yet known—and students are the best people to help us understand. In line with E4E priorities, we are interested in how well E4E is tailored to the needs of different students and communities, as much as how well students respond to E4E. We expect that as the evaluation evolves students can become more active in the process, drawing on innovative techniques and a more participatory research approach.

When	What	Who (if they agree!)	How	Why
Term 3 2007	*Māori development interviews* To explore Māori approaches to E4E, and the potential fit (or otherwise) between aspects of E4E and Māori contexts, values, or aspirations.	Staff/students in 1–3 kura kaupapa and schools with high Māori rolls. Iwi organisations, community members, groups or businesses.	NZCER will work with the regional co-ordinator and selected schools to identify relevant people to interview. We aim to begin building relationships in Term 2.	NZCER's 2006 evaluation of NET Northland identified a need to strengthen and expand the E4E model to better meet the needs of Māori students and communities. A focus for the Northland E4E cluster in 2007 includes strengthening relationships between schools and iwi organisations and expanding the E4E model to support this.
Term 4 2007	*Community/business partner wrap-up survey* To explore how they were involved in E4E in 2007, plus the outcomes, challenges and possibilities that arose.	All community partners that schools or regional co-ordinators have an E4E relationship with.	NZCER will send the survey to community or business partners who returned the initial survey to NZCER.	We can get an idea of the rates at which different kinds of activities and impacts occur across all schools, once we have a better idea about what these might be from interviews and case studies. We can look at the perspectives of different groups (eg teachers, students, community partners) on similar topics.
Term 4 2007	*Student E4E class survey* To explore how they were involved in E4E in 2007, plus the outcomes, challenges and possibilities that arose.	Classes where teachers have used E4E approaches and activities.	NZCER will send surveys to E4E lead teacher (or contact). Ideally each E4E teacher will give the survey to some (or all) students in a relevant class. Depending on numbers, we will work with schools to select teachers and/or students.	As above
Term 4 2007	*E4E teacher survey* To explore how they were involved in E4E in 2007, plus the outcomes, challenges and possibilities that arose.	All E4E lead/cell teachers, or teachers that use E4E approaches and activities	NZCER will send the surveys to E4E lead teacher (or contact) to give to relevant teachers. (Depending on teacher numbers we may suggest selecting a subset).	As above
2008	The plan for 2008 depends on what emerges during 2007. We will provide more information then, however we expect it to involve a range of surveys and visits for interviews. We will incorporate some questions from the 2007 surveys plus new ones. We expect that there will be at least one survey for each group: teachers, students, community partners.			

Appendix D: March 2007 cluster visits

Evaluation of the regional education for enterprise (E4E) clusters

MARCH 2007 CLUSTER VISITS

In March 2007 NZCER researchers attended E4E cluster meetings in the West Coast and Northland. We gave a short presentation about our overall intentions for the evaluation. Afterwards we asked principals and lead teachers for their thoughts, concerns, and suggestions. We took these very seriously to plan the evaluation that we are now inviting you to take part in. Here is a summary of many of the points that schools raised. (Of course not everybody would necessarily agree with every suggestion, and the full nature of the discussion is not represented).

- Ensure the evaluation helps teaching, learning, and ultimately students
- Make questions generic to suit the wide range of schools, individuals, and roles
- Don't just use E4E terminology
- Get "baseline" information as early as possible
- Share data in a form that schools/regions can really use
- Compare school data against national/regional picture
- Get data on community relationships and needs
- Use participatory approaches (some less keen)
- Explore links between E4E and the draft curriculum/key competencies
- Explore how schools integrate E4E across the curriculum
- Remember E4E is a fledgling exercise—support experimentation and don't expect the world
- Don't expect one-size-fits-all for regions, schools, or students
- Consider "enterprising umbrella" not just E4E
- Start from where schools are at—not everyone is on the same page
- Evaluate E4E professional development
- Remember social entrepreneurship
- Student voice is the most important, so is students hearing other voices from schools and communities
- Consider students who leave school

Appendix E: E4E case study activities (abridged)

Students design an E4E logo for the region
Students work within a business
Students create, design, and make products to sell at the school “market day”
Textile students do sewing and mending jobs for staff
Graphics students design website material and t-shirts for a business
Graphics students design signage for the District Council
Accounting students sell lunch and morning tea to staff at the local intermediate school
Drama students write the script for the school production and plan and implement all aspects of it
Students contribute to school fundraising event (a garden trail) from within their different subject areas, e.g., economics students design products to sell, music students provide entertainment, maths students plan the route and timing, horticulture students create worm farms for fertiliser, hospitality students make lunch bags, etc.
PE and health students carry out research for the Health Action Trust into the main health issues for national, local, and in-school agencies and present this on a school notice board
PE and health students run sports activities at the local primary school
Students run all aspects of providing a school newspaper from writing articles to procuring advertising, and so forth
Drama students interact with students at the local kindergarten to develop ideas for creating and presenting a drama performance for them
PE students run lunchtime sports tournaments, based on research about what students want
Social studies students research towns in the local area for the City Council website
Engineering students fix bikes through the sport and recreation division of the Council
A student works with the local butcher and makes a poster to advertise his business
Maths students learn about costing, profit margins etc. and other issues related to working in the industry from a local business person and then design, cost, and make their own pizzas
Students make invites and a display board for an upcoming E4E conference
Students research local places and employment using inquiry learning approaches
Students observe a graphic designer at work over several weeks
Students produce a house decorating costing CD
Students choose from a selection of projects related to a school-wide theme (and offered by pairs or small groups of teachers from different disciplines) to work intensively on over a three-day period in cross-level groups. Projects include such things as: designing and making toys for animals at the zoo, creating and performing entertainment for local retirement homes

Students organise functions like the school ball or school reunion
Students work on cross-curricular integrated projects related to big ideas such as equality and inequality
Students create bracelets to publicise bonded labour and to raise money for the cause against bonded labour
Students illustrate wall hangings with Māori proverbs
Students plant gardens with community members, in the school and community
Students build houses within their technology curriculum
Students set up and run a company, e.g., a babysitting agency
Students support younger students having difficulty with reading
Students design new products or concepts to meet gaps in the market
Students run a canteen or school-based restaurant
Students from within different subject areas contribute to the creation of a new school tracksuit, i.e., the textiles students do the pattern making and design, accounting students the costing, art students the logo design, physical education students the research into questions of comfort and style, and economic students the promotions and marketing
Students research the Māori history of New Zealand places and make suggestions about visual representations of the places for a graphic design company to use in the creation of graphic images to represent those places.
Students arrange, advertise, and lead a house auction
Students help collate and make decisions about how to respond to the results of a survey designed by staff on students' healthy canteen food preferences
Students design a new logo for school blazers
Students design and cost the City Council's annual Christmas card
Textile students create hand-eye co-ordination resources for the local kindergarten
Students work for the Council to create shade shelters for local recreational areas
A photography student takes photos of jewellery for local jeweller's website
Students work with local artists to create murals and sculptures
Prefects run extra-curricular activities, chair committees, and mentor younger students
English and drama students carry out research to write scripts, and create a theatre piece to raise money to donate to a home set up for sex workers in Brazil
Social studies students work with NGOs making water filters for families in Cambodia
Students work in "community problem-solving" teams to choose a community issue to address such as working with the local primary school to promote sun safety
ICT students make interactive books for a local kindergarten

Appendix F: Two-year principal priorities

Table 22 **Principal priorities for staff understanding and involvement**

	Low priority %	Moderate priority %	High priority %	Don't know %
(a) Get more staff interested and involved in E4E	-	48	52	-
(b) Source staff professional development related to E4E	8	48	44	-
(c) Strengthen or expand the role of the enterprise co-ordinator or lead teacher	-	64	36	-
(d) Strengthen or expand the role of the "enterprise cell" (or group of staff involved in E4E)	-	44	56	-
(e) Develop the school's individual approach and common language for E4E	-	56	44	-

Table 23 **Principal priorities for collaboration and partnership**

	Low priority %	Moderate priority %	High priority %	Don't know %
(a) Strengthen relationships with existing business and community partners to support the school's E4E activities and approaches	4	20	76	-
(b) Build new relationships with new business and community partners	-	32	68	-
(c) Learn what other schools are doing in E4E	4	56	40	-
(d) Collaborate with other schools to develop E4E in this region	16	36	48	-
(e) Build collaboration between teachers in different curriculum areas in the school	-	28	72	-

Table 24 **Principal priorities for student E4E opportunities**

Develop or strengthen enterprising learning opportunities for...	Low priority %	Moderate priority %	High priority %	Does not apply/ Did not respond %
(a) Students in Years 1–6	8	4	12	76
(b) Students in Years 7–8	4	16	20	60
(c) Students in Years 9–10	-	20	68	12
(d) Students in Years 11–13	-	36	56	8
(e) Students who need to be academically extended	4	40	52	4
(f) Students who are disruptive to others in class	16	28	56	-
(g) Students who are failing or have failed courses	12	36	48	4

Table 25 **Principal priorities for depth and integration of E4E**

	Low priority %	Moderate priority %	High priority %	Don't know %
(a) Link E4E with the school vision and high-level plans	-	36	64	-
(b) Link E4E with community or regional plans (written or spoken)	12	72	12	4
(c) Expand E4E across all year levels	16	44	40	-
(d) Evaluate your school's current approaches to E4E, in order to "take things to the next level"	-	48	52	-
(e) Link E4E development to the incoming *New Zealand Curriculum*	-	24	76	-
(f) Link E4E development to the "key competencies"	-	32	68	-
(g) Link E4E development to careers advice/support for students	20	24	56	-
(h) Link E4E to achievement standards	24	36	40	-
(i) Link E4E to unit standards	20	36	40	4
(j) Expand E4E across all curriculum areas	16	24	60	-
(k) Develop E4E in targeted curriculum area(s)	20	40	28	12
(l) Design an E4E course that integrates several curriculum areas	36	40	20	4
(m) Link E4E development to other initiatives and programmes in the school	4	48	48	-

Table 26 **Principal priorities for links with other initiatives**

	High potential %	Moderate potential %	Low potential %	No potential %	Do not run it/Did not respond %
(a) STAR	44	36	8	-	12
(b) Gateway	44	44	-	-	12
(c) Young Enterprise Scheme	44	20	-	-	36
(d) School careers adviser	28	56	4	-	12
(e) CREST or other science-based initiatives	16	28	4	-	52
(f) Bright Sparks programme	8	12	-	-	80
(g) Leadership programmes or activities	44	40	-	-	16

Appendix G: Sustainability

We asked each school staff interviewee what E4E sustainability meant to them and what they thought would be necessary to achieve it. Their responses suggested to us that there are nine essential aspects of E4E sustainability. These are listed below with exemplary quotes:

1. Reaching a critical mass of E4E supporters and developers:

   > I think what we'll see is weight of numbers—as people see it's worthwhile they will start to come on board. Then the rest will start to feel left out and wonder if they are professionally doing the right thing—it's teachers talking to teachers. (Principal)

2. Achieving and noticing good results from partnerships and projects:

   > Teachers need processes and resources in place to feel good and notice a difference and outcomes for students. (Regional co-ordinator)

3. Embedding E4E in the everyday operations of a school and curriculum:

   > Embedding it into your programme so it's happening all the time. (Principal)

   > E4E will be embedded in the curriculum and in our own school. So it's not seen as separate and different, but that it's an approach and just what we do. (Lead teacher)

   > Sustainability means E4E is an integral part of every curriculum area, not just a one-off project [needs] success in projects for teachers. (Lead teacher)

4. Prioritising E4E by leaders within a school and region:

   > It needs a directive from management, making it mandatory…we've seen lots of initiatives that have been fantastic but they've fallen over because 'top corridor' has not given the support it needed. (Lead teacher)

   > It has to be documented more. It needs time allowance and management units. (Principal)

5. Enabling E4E to be responsive to local needs and contexts:

   > To me it's the programme I talked about—we run things in the school to look after our school… If we take responsibility for each other we take responsibility for as many learning opportunities as we can. (Principal)

   > It's got to be where both parties are gaining. E4E is a two-way trip. (Lead teacher)

6. Realising E4E will be a long-term (and possibly slow) journey:

   > Sustainability is to be able to continue with it indefinitely. (Lead teacher)

   > The concept of E4E can be ongoing even if a project might terminate. (Lead teacher)

7. Ensuring that the wider education system supports E4E:

> The biggest threat to E4E is not to have national qualifications framework… Because it is tied with the curriculum review we plead with the NCEA framework to meet the needs for an integrated context—our kids succeed in E4E but that means nothing without qualifications. (Principal)
>
> The new curriculum will give E4E its own momentum. (Principal)
>
> The outside support I would like is trust. I don't think it requires a lot of money—except staffing resourcing, and opportunities for professional development. (Principal)

8. Assuring permanent regional E4E co-ordination:

> We're very dependent on the regional co-ordinator. Maybe for some projects they will just keep going from the initial setting up but you need somebody who's going to do the admin, the setting up, the community relations…it would need to be staffed and resourced. (Lead teacher)
>
> We need a regional co-ordinator. (Principal)
>
> [E4E regional development is] only as good as the time the person in the co-ordinator role has…a teacher's time is very limited. (Partner)

9. Securing ongoing funding:

> [Sustainability needs] funding—and that it will be gone in 2–3 years… Authentic learning does have time and cost implications. I'm concerned that will be like the PE [Physical education] positions that were funded for a short time—then we had to pull it out of operational funding…. So if it is sustainable—there needs to be financial and personnel support from MOE, NZTE, and business. (Principal)
>
> Most businesses are small with no spare resources; schools have no spare resources. We're all running on the smell of an oily rag. (Principal)
>
> The Government assumes once the funding stops it will continue. That's not realistic. Take away funding and I think it will disappear because the demands on schools are great. (Principal)
>
> If we had 40 more hours a week to share between five teachers we'd have a roaring E4E programme. (Teacher)
>
> If we could find a partner to help us money wise it would help. I've been to a business but they said they already provided our big cup and a scholarship. (Lead teacher)

The aspect of funding is probably the most contentious. Many interviewees were very clear that they did not think E4E could continue if funding ceased. That said, at least two principals suggested that funding is not necessary once E4E is truly embedded in schools' everyday teaching and learning practices:

> I've always viewed that E4E will be sustainable because it doesn't require funding—they can be self-resourced. (Principal)
>
> 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)