KEY COMPETENCIES: REPACKAGING THE OLD OR CREATING THE NEW?
Key Competencies: Repackaging the old or creating the new?

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Key competencies: repackaging the old or a new opportunity?

The identification of key competencies by the OECD DeSeCo project was an attempt to describe the things that everyone should know and be able to do in order to lead a "successful life" in a "well functioning society". They were intended to integrate knowledge, skills, attitudes, and values and to place an emphasis on lifelong learning. The OECD key competencies, combined with the dispositions that underpin Te Whāriki, provided a foundation for the competencies proposed for the New Zealand school curriculum and the slightly different ones named for development in the tertiary sector.

This conference provided a forum for exploring international and national thinking about key competencies, and the conditions that might be necessary if they are to be more than a repackaging of old ideas and so serve a transformative role within education. Tony Mackay, Director of the Centre for Strategic Education in Melbourne, facilitated the day and set the context by suggesting that the discussion was planned to "push us beyond simply refining or incrementally attempting to improve what we currently have and rather go beyond that and really think about the kind of step change that we need if we’re going to transform the nature of the schooling experience for young people and really achieve the kind of goals and aspirations that we jointly hold."

He went on to raise the following points.

The OECD work in the area of key competencies deliberately set out to go beyond the parameters of the PISA assessment work and to ask questions about the assessment of student performance in areas beyond reading, mathematics, and science. There is a concern that we look at student success across a much wider range of competencies.

Today’s societies place challenging demands on individuals, who are confronted with complexity in many parts of their lives. What do these demands imply for the key competencies that individuals need to acquire? Defining such competencies can improve assessments of how well prepared young people and adults are for life’s challenges, as well as identify overarching goals for education systems and lifelong learning (DeSeCo Project Report, p. 4).

This led the OECD to argue that students need to be using tools interactively, that’s language, technology and other areas of course. Interacting in heterogeneous groups, a real sense of the understanding of the interrelatedness of the way in which we operate and work and also acting autonomously and understanding that if we are going to be able to be successful, all three of those broad categories are going to be necessary.

There are obvious challenges in supporting the development of such expertise, such as understanding the conceptual basis for the competencies and how they relate to other aspects of the curriculum. Nobody is suggesting, for example, that a focus on key competencies is in some way to question the importance of basic skills. Basic skills and learning foundations remain a pre-requisite. This is also not an attempt to substitute key competencies for domain-specific competencies: they are clearly indispensable but we need to ensure that in this debate we keep the various dimensions connected and interrelated. There is a real interest at the moment in the way in which we can respond to this broader conceptualisation and this is what is informing curriculum review work in New Zealand and in Australia across the various states.

This focus on curriculum review was evident at an international forum held in Melbourne last year where Tom Bentley, the Director of the Independent Think-Tank Demos in the UK, suggested that virtually everywhere debates about curriculum specification revolve around the following three dimensions: the knowledge, and skills, and cognitive development needed to function competently in society and economy; the values and expectations which society as a whole relies on and deems essential; and the skills and dispositions which enable each individual to participate actively, shape their own learning, and thrive in a creative society.
Tom Bentley\(^1\) went on to say that debates about curriculum or school reform often pitted these three dimensions against each other as if each was competing to dominate the educational process. In many different places clearer specifications of each are often sought. For example, the national literacy and numeracy strategies in England or the requirement in Singapore that by the end of the primary stage of education students will have learned to love Singapore.

Finally, Tom suggested that in any learning process these three dimensions co-exist. Different curriculum frameworks will emphasise them more or less and seek to combine knowledge content with the specific application of cognitive skills and be surrounded by other kinds of dispositions and capabilities such as the motivation to learn and the ability to apply.

The question is how do you move from the importance of each of those dimensions and bring them together in a way that is real for young people's learning. This is a real challenge for us all—how might these be applied in places of learning for young people? Tom says the only way to ensure that the school system is really capable of meeting these essential learning requirements, that is key competencies, in ways which are both consistent and high quality thereby achieving excellence and equity—is actively to develop priority forms of learning and teaching in ways which deliberately integrate the key dimensions of successful delivery—curriculum, pedagogy, assessment, learner orientation, and context. Further schooling would need to adjust other aspects of the organisation of teaching or assessment to reflect this integration.

So if we are going to make real the challenge of key competencies/essential learning and bring the various dimensions together, it is clear that it has to be done in the way in which we successfully integrate teaching and learning and the way in which we bring curriculum, pedagogy, assessment and context together. This will not be an easy exercise and it is the one that has been stimulating and challenging us all, across multiple countries, particularly in the last 10 years and has sharpened considerably in the last few, supported by the OECD work.

There is another very challenging issue to consider as well and that is what the future might look like if the implementation of key competencies is to lead to a genuine transformation, not just old clothes dressed up somehow differently. Could the future be as Charlie Leadbeater, a Demos associate in the UK, describes in *The Shape of Things to Come: Personalised, learning through collaboration* (2005). Imagine a school where every child would see themselves as an investor in their own learning. Older children would frequently coach and mentor younger children. Those who were more advanced in a subject would help those lagging behind. Children would help teachers design learning programmes, their parents would be parties to these discussions. The children would see it as their responsibility to learn in their own time, often using online tools provided by the school. Although every child would have a personalised learning plan, most learning would take place in groups but those would not be organised into rigid year groups, class membership would be in part determined by aptitude and appetite. Instead of a rigid timetable and lessons lasting about fifty minutes, the school schedule might resemble something more like a marketplace or an airport. Instead of lessons devoted to a single subject—History, then French, then Maths—more lessons would encourage children to learn multiple skills, to mix insights from different disciplines. These lessons would be led by teachers and assistants who would combine skills from different disciplines and backgrounds. The school itself would be open from early and well into the evening, it would be located with other facilities—perhaps in a shopping centre, the cultural district, or in office park. It might resemble a café more than a school. Opportunities to learn would be ubiquitous, any time anywhere, using personal tablet computers and mobile phones. Learning would not just happen at special times, in special places—schools, with special people—teachers. A national curriculum setting out what everybody should learn would be too clumsy for a world in which new ideas and information would emerge the whole time via Google. Teachers would have a critical role in searching for new learning materials and guiding children to these opportunities. They would have to amend and create the curriculum, not slavishly follow it. Instead of exams at the end of the educational

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pipeline to assessing what children had learned, most assessment would take place during the course to help children learn more effectively.

While this is a picture of what our education systems should become in the near future most policy in the UK, or indeed Australia and New Zealand, is still directed at correcting past mistakes and attempting to improve the quality and productivity of a *quasi* industrial form of production in which children come in at one end, are worked on by professionals and then exit at the other end with the requisite skills and qualifications.

New Zealand is very well placed to think strategically about education of the future with its Secondary Futures project and because it is at the forefront of the kind of thinking about schooling for tomorrow that has been stimulated by the OECD project. It is a challenging context in which to have today’s debate and to think about these issues, not just in terms of the way in which we might be able to infuse key competencies or generic skills, no matter how good, into our current curriculum, but how it might indeed really help to reshape the way in which we think about curriculum, assessment, teaching, and learning, that genuinely can ensure that all young people emerge from their schooling experience adequate for the kind of challenges that they face and at the same time, of course, be absolutely dedicated to lifelong learning.

So there’s the modest aspiration for the day that we can perhaps, through our conversations and discussions really begin to explore some of the challenges that are associated with the kind of stimulus that I hope these opening few minutes have provided.

**Robyn Baker**  
*Director,*  
New Zealand Council for Educational Research

**Tony Mackay**  
*Director,*  
Centre for Strategic Education
Key competencies:
A new way forward or more of the same?

Professor Alan Reid
University of South Australia
Introduction

The idea/language of key competencies has been around for the past twenty years. Like many educational ideas it has travelled, being taken up in many places at different times, in new forms and with new emphases. I understand that it has recently taken up home in New Zealand, although not without some people questioning whether or not it has a place here. I believe that like most educational ideas, key competencies can be vehicles for simply reproducing the curriculum status quo or for transforming the curriculum for social justice purposes. In my view their various manifestations have been more of the former than the latter, but it does not have to be that way. I will argue that if key competencies are to fulfill their transformative potential there is a need to understand how they can be understood, represented, and practised in curriculum terms.

The paper is in three parts. In the first part, I will describe how competencies have been and are understood and represented in curriculum, using mainly Australian examples. In the second part, I will critique these dominant understandings on two major grounds: (a) that competencies lack a sturdy rationale; and (b) that competencies have not been understood adequately in curriculum terms. I will use this critique to develop a reconceptualised version of competencies. In the third part I will speculate about the benefits that a different approach to understanding key competencies might bring.

SECTION A: What are key competencies and where have they come from?

In its first manifestation, the concept of key competencies was (and still is in some countries) a term used to describe generic skills for the workplace. That is, key competencies were economically motivated with the workplace being their major reference point. For example, key competencies, developed in Australia in the late 1980s to early 1990s, were defined in the Mayer report as:

...competencies essential for effective participation in the emerging patterns of work and work organisation. They focus on the capacity to apply knowledge and skills in an integrated way in work situations. Key Competencies are generic in that they apply to work generally rather than being specific to work in specific occupations and industries. This characteristic means that the Key Competencies are not only essential for effective participation in work but are also essential for effective participation in further education and in adult life more generally. (The Key Competencies Report—Putting General Education to Work, Mayer, 1992, p. 7).

The Australian Mayer Key Competencies comprised competencies that are skills or attributes (see Table 1 below). They are seen as transcending traditional subject boundaries and as thus being “cross-curricular”. Whilst they can be developed within a specific subject area, the skill or attribute is not exclusive to a particular discipline. For example, “working in a team” is a generic skill. Students can learn to do this in many different contexts.

The key competencies are also seen as being important for all young people “regardless of the education or training pathway they follow” (Mayer, 1992, p. 1) and indeed as a bridge between general and vocational education (Mayer, 1992, p. 6). That is, while they may have been motivated for economic reasons, they are also applicable to other aspects of life.

There were similar moves in other countries, such as the Scottish Core Skills, English Key Skills, New Zealand’s Essential Skills, key competencies in a number of European countries, and the US Secretary’s Commission on Achieving Necessary Skills, Workplace Know-How (Werner, 1995).
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<td>Collecting, analysing and organising information</td>
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<td>Communicating ideas and information</td>
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<td>Planning and organising activities</td>
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<td>Working with others and in teams</td>
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If the push for key competencies had developed as a result of employer demands, during the 1990s they began to be (re)shaped by educators who grappled with the task of working them into the curriculum. During this process, the narrow focus of employability skills began to expand in response to a number of critiques which took two broad forms.

First, there were those who did not contest the fact that the competencies had an economic emphasis, but who argued that the key competencies were narrow in their description of employability capacities. In particular, they maintained that the lists of competencies were conceptually confused and neglected the human factors, the cognitive processes, and the motivation that influenced the acquisition of competencies. For example, the NCVER in Australia argued that a more holistic model was required. They proposed clusters of key generic skills, all of which contributed to the development of autonomy, personal mastery, and self-direction. These clusters comprised:

| Work readiness and work habits | including basic skills, using technology, planning and organising, self-management, business orientation |
| Enterprise, innovation, and creativity skills | including entrepreneurship, creativity and innovation skills |
| Interpersonal skills | including communication, team skills, customer service, cultural understandings and with underpinning personal attributes and values such as emotional intelligence and self understanding |
| Learning, thinking, and adaptability skills | including learning, thinking, analytical capability and problem solving, systems thinking, adaptability, and with underpinning personal attributes such as willingness to learn, positive attitudes to change, etc. |

In a number of countries, as a consequence of this sort of critique, attempts were made to expand the focus of the key competencies to include personal attributes and values, even while the rationale remained primarily an economic one.
Second, there were those who saw this approach as giving in to economic interests—harnessing human capital (Collins, 1995) and making schools “servants of the economy” (Crittenden, 1995, p. 30). At the same time these critics recognised the value of generic competencies. They wanted to expand the purpose of key competencies to encompass the social, cultural, environmental, personal, and political dimensions of life and not only the economic dimensions. Gradually these expanded versions of generic competencies began to appear in official curricula around the world. For example, a number of Australian States have coined the term Essential Learnings to encompass a range of competencies.

In South Australia for example, there are five essential learnings: communication, futures, identity, interdependence, and thinking. The SACSA describes essential learnings as:

understandings, dispositions and capabilities which are developed through the learning areas and form an integral part of students' learning. They are resources which are drawn upon throughout life and enable people to productively engage with changing times as thoughtful active, responsible and committed local, national and global citizens.

There are a number of countries across the world which have developed similar lists and are seeking to make these a central part of their curriculum. My quick reading of your key competencies indicates that New Zealand is also moving in this direction. So too are many universities. For example (and sticking with South Australia), the University of South Australia describes the sort of graduate it is seeking to develop in ALL programs as one who:

• operates effectively with and upon a body of knowledge of sufficient depth to begin professional practice;
• is prepared for lifelong learning in pursuit of personal development and excellence in professional practice;
• is an effective problem solver, capable of applying logical, critical, and creative thinking to a range of problems;
• can work both autonomously and collaboratively as a professional;
• is committed to ethical action and social responsibility as a professional and citizen;
• communicates effectively in professional practice and as a member of the community; and
• demonstrates international perspectives as a professional and as a citizen.

In summary, when we talk about key competencies it is important to recognise that we may be talking about very different conceptions of their purpose and their representation. I have suggested that there seems to be at least two broad approaches to key competencies. The first has a utilitarian economic focus and is organised around an intention to develop competencies for the workplace and the new economy. The second has a liberal humanist focus and is organised around an intention to develop competencies, in every individual, for civic and personal as well as economic life.

SECTION B: The critique

I want to raise two major concerns about the ways in which key competencies are being understood and practised in various countries. First, they lack a sturdy theoretical rationale; and second, they have not been theorised in curriculum terms. I will deal with each in turn.

The critique: Rationale

In my view the two versions of competency described above are inadequate as they currently stand. The economic version is instrumental and runs the danger of limiting education to simply being a servant of the economy. The education version is too individualistic, placing too much emphasis on education as a private benefit, and too little on education as a social and public good, as well as a private benefit. I want to suggest that there is an urgent need to develop a rationale for key competencies that goes beyond the

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2 It is interesting to note that as educators have begun to use the concept of competency in its second or expanded form (albeit incorporating work skills), employers have begun to grow uneasy, and in Australia now employability skills are being developed by business in parallel with the expanded versions of essential learnings.
economy and individuals, and that is based on a commitment to democracy and social justice. I have
not got the time here to argue a detailed rationale along these lines, but I will try to sketch out the bare
bones of an argument.

I want to draw on the work of Sen (1992, 1999, 2002) and Nussbaum (2000) who have tried to reframe
understandings about social justice and equality in development studies and welfare economics. Both
have developed what has been called the capabilities approach, arguing that instead of economic growth,
the indicator of a nation’s quality of life should be capabilities—what people are actually able to do and
be. “Capabilities to function” are the basis of a just society because they ensure not only that people
have rights, such as the right to political participation, but that they have the capabilities to exercise
those rights. Thus “capabilities to function” are a combination of the knowledge, skills, and dispositions
that enable people to function in and on the world. They comprise the key ingredients for personal and
collective agency. They are important indicators of what a person is able to do and to be in different
arenas (e.g. work, civic, community, and personal life) and thus the extent to which citizens in any
society possess capabilities is an important measure of the civic health of that society. Education is
central to their development.

From this perspective, the starting point for curriculum planning is (a) an identification of the capabilities
needed to live enriched lives and to participate actively in democratic life, and (b) a description of the
underlying principles inherent in the capabilities. These principles will guide subsequent practice. The
initial curriculum questions are: What are the capabilities, how do we understand them, and what are the
principles and processes that will be used to facilitate their development?

Since the approach is based on a view of education as an end in itself, it has a democratic logic, suggesting
that all capabilities should be developed to their fullest potential in all people. In a truly democratic
society, educational provision must go beyond an aspiration for economic success or social control. This
is not just for the pragmatic reason that people are more likely to be productive citizens and workers if
they have not been alienated by their educational experiences, or if their human potential has been fully
developed. It is primarily because such an aspiration must surely be the foundation of any democratic
society. As John Dewey argued, it is a part of the essence of democracy that it “makes provision for
participation in its good of all its members on equal terms” (Dewey, 1916, Chapter 7, summary, quoted
in Edward & Kelly, 1998, p. 8). It makes little sense to construct an education system for a democratic
society based on the idea that some capabilities can be developed in some students but not others, or in
restricting the range of capabilities developed to those that, for example, only contribute to the economic
health of a society. Surely a democratic society demands equality of opportunity and entitlement for all,
regardless of wealth, social class, gender, or ethnicity. It is the role of schools to develop the capabilities
of all students to the fullest extent possible.

I want to suggest that New Zealand’s key competencies can be understood in the same way as capabilities.
This understanding rejects a single economic focus and suggests that key competencies should represent
what personal capacities might be required to live, work, sustain relationships, and be a citizen in a
nation state in a globalising world. 3

You may reject this rationale, but my point is that the nature of the rationale will largely determine what
the key competencies are and how they might be understood. The rationale I have outlined suggests that
the two understandings of key competencies described earlier are inadequate.

The critique: The role of competencies in curriculum terms

The second aspect of the critique is that competencies have not been adequately theorized in curriculum
terms. That is, not enough work has been done to understand what role generic skills and understandings
play as curriculum artefacts, such as their relationship to the learning areas/subjects. The focus always
seems to be on the “content” of the competencies.

3 I have just been involved in a major review of senior secondary education in South Australia. The recently released report argues that the
following capabilities should be at the heart of the new certificate: communication; civic participation; health, well-being and personal
development; work and knowledge work.
Now in developing this critique I will focus on the official or intended curriculum, recognizing that what is intended is often at variance with what is enacted. But the written text does influence discourse and practice, and it does represent considered thinking about the place of aspects of the curriculum architecture such as competencies. It gives us some sense of how competencies are being imagined/understood, and thus the possibilities for practice.

From my investigations of official curricula around the world there appears to be three main ways in which generic skills and understandings are represented.

1. **The “name and hope” model.** Here there is a rhetorical flourish in the official document, with an exhortation that teachers pick these up and ensure that they are taught in their subjects. However, the rest of the document rarely returns to them, and certainly there seems to be no connection between the competencies and what is taught and assessed. (e.g. SACE: “these curriculum statements offer a number of opportunities to develop essential learnings and key competencies as students engage with their learning”). In this model there is no attempt to understand the role of competencies, nor how they might be enacted. They seem to be more like broad educational aims that will be delivered by the subjects.

2. Then there is the **“raising consciousness” model.** Here curriculum designers and teachers are asked to be conscious of the competencies when they design curricula. The University of South Australia’s graduate qualities model, for example, expects that curriculum designers will apportion percentages to each graduate quality within a course and program, with the expectation that there will be an equal coverage. Whilst such an approach does focus attention on the qualities, my concern is that it fails to address the relationship between subjects/disciplines, assuming instead that a crude quantification will result in curriculum change.

3. The **“embedded” model.** Here there is an attempt to describe the competencies inside the Learning Areas. This happens in a range of ways. For example, in the SACSA each key idea and learning outcome designates which essential learnings and key competencies should be developed. Apart from removing from teachers the capacity to decide when and how to develop particular competencies, the model atomises/fragments the competencies and makes them subservient to the subjects/learning areas.

In my view all three approaches are inadequate because too little effort has been expended thinking about the competencies as curriculum artefacts. As a consequence they have little chance of disturbing the dominant grammars of the curriculum. They are simply accommodated inside traditional approaches, so reproducing the curriculum status quo. In summary then, I think we need to consider more deeply (a) the nature of the dominant curriculum, and (b) how to understand the place and function of competencies in new curriculum approaches. What follows is a preliminary effort to do that.

Some reflections on the curriculum role of competencies

The dominant model of curriculum is represented in Diagram 1 below.

**Diagram 1: The dominant curriculum model**
Since the starting point for the dominant model is the acquisition of knowledge content, a key curriculum question relates to how that knowledge is organised. Ivor Goodson (e.g., 1997) has powerfully demonstrated that forms of knowledge organisation are not natural, they are socially constructed. In the 20th century knowledge content was typically packaged into subjects, and these have taken on a life of their own with their own hierarchies, status, traditions, and professional gatekeepers. Many of these are linked to disciplines. In the last decade of the 20th century in Australia, the dominant form of curriculum organisation changed from subjects to Learning Areas. These are a hybrid mix of discipline-based knowledge and the grouping of “similar subjects”, and are slowly building a professional constituency of support.

When curriculum planning starts with knowledge content, the form of the curriculum largely determines the purposes of the curriculum—that is, the teaching of subjects/Learning Areas becomes an end in itself. This makes the organisation of knowledge the focus of curriculum debate in relation to the official curriculum. Thus, when the Learning Areas were formed in the early 1990s in Australia, the professional subject associations took up the cudgels, some lauding the new arrangements, others claiming that their subject interests had been neglected or watered down by them. Another form of this focus on knowledge content is the argument that the official curriculum is too crowded. However, although each of these approaches has a very different view about how knowledge content should be organised, they are similar in one very important respect: by accepting knowledge content as the starting point, they fail to shake free from the fundamental grammars of the dominant curriculum.

Where the dominant curriculum tradition has incorporated something like the concept of competencies it has always been defined in relation to knowledge content, usually organised through subjects or Learning Areas (as per the three models outlined above). This has led to the competencies being marginalised, despite the rhetoric of curriculum documents. The power of the dominant curriculum grammars causes them to be absorbed into the logic of the subjects/Learning Areas, with the attendant problems of content atomisation and linear approaches to learning.

An alternative approach is to separate key competencies from knowledge content and to understand each as playing distinct but complementary roles. This approach is presented in Diagram 2 below.

**Diagram 2: A capabilities-based curriculum model**

In this model there are two parts to the official curriculum. The idea is to teach through one part—knowledge—in order to develop the second part—key competencies. There are some key features of each part that need to be understood. It seems to me that key competencies should be understood and developed holistically. Each competency should be richly described in terms of procedural principles which describe what it is and what the processes are for its development. The important requirement
of these descriptions is that they do not atomise the competency by breaking it into many parts and expressing them as objectives or outcomes. Rather, the procedural principles will seek to represent each competency as a whole rather than as a sum of its parts. There may of course be variations in descriptions of each competency at different points in formal schooling, but these differences will be on the basis of an increasing complexity or sophistication of the whole competency, not an aspiration to develop parts that will be aggregated. The pedagogical challenge is to plan learning experiences with reference to the whole capability, even while one aspect of it might be the focus of a specific experience.

In this approach, the knowledge content part of the curriculum is no longer the starting and finishing point for curriculum planning, as it is in the dominant model. Rather, there is a dynamic interaction between the two. There will always be two things happening. Often the starting point will be content, say a key concept or idea from a discipline, but the design challenge is not only to decide how to introduce students to the concept, but also to decide which one or more of the competencies can be developed through that concept. That is, the knowledge content is important in its own right and as the vehicle through which capabilities are developed.

This important shift makes the organisation of knowledge content a pedagogical activity, where the educator is selecting knowledge content with reference to its role in developing a competency, not solely as an end in itself. And it also changes traditional modes of assessment and reporting. Instead of assessment being related solely to how much knowledge content a student has learned, the focus is also on the extent to which the student can demonstrate a continued competency growth. This clearly has implications for the types and forms of assessment that are selected. Similarly, reporting on student progress—both to students and parents/guardians—will change. Rather than there being only a sole focus on subjects/learning areas, reports will also describe competency development, and this might be supplemented by student portfolios demonstrating the ways in which competency development has happened in other non-formal learning situations.

This might seem an unremarkable change, but in my view it fundamentally alters the nature of curriculum debate. In the last section, I want to speculate about some ways in which a different understanding of competencies might address a number of apparently intractable/long-term curriculum questions and tensions.

SECTION C: What are some benefits of a reconceptualised approach to competencies?

It has the potential to address long-standing issues relating to equity in curriculum work

The competencies-based approach provides a way to conceptualise equity by addressing a number of the problems with previous approaches. Thus rather than understanding equity as a curriculum that is common to all—an approach that invariably favours those students whose knowledge is selected as the common/core knowledge—or as providing a range of diverse subject offerings—an approach that invariably results in hierarchies of subjects—the competencies-based approach seeks to promote “unity in difference, rather than disunity through sameness” (Kelly, 1995, p.110). The aspiration to develop the broadly-described competencies to the fullest extent possible for all students provides the unity. The difference is catered for by the flexibility to select strategies for achieving the competencies that are appropriate to the needs of students in local contexts. The key point is that the development of the key competencies is an aspiration for ALL students. They cannot be differentially developed even though students might take different pathways to achieving them.

It has the potential to address long-standing issues relating to hierarchies of knowledge

The dominant curriculum is hierarchical, with those subjects comprising what Connell calls the competitive academic curriculum enjoying a reputation as the most rigorous, and being taken by those
pursuing a university pathway. Non-academic subjects are relegated to the margins, invariably populated by the “weaker” students. For decades now, curriculum designers have pursued the holy grail of “parity of esteem”, urging that subjects are treated equally, always without success. The fact is that “subjects” have become the battle grounds of education, with turf wars being fought by subject guardians. Those subjects at the top of the pile refuse to concede ground.

Competencies may be the Trojan horse needed to destroy curriculum hierarchy. If competencies were taken seriously through being consciously and systematically taught, assessed, and reported on, they would assume an importance currently assigned to subjects. This would result in subjects becoming the vehicles through which competencies are achieved, rather than as ends in themselves. The first steps in reducing the cause of curriculum hierarchies will have been taken.

It has the potential to provide more educative forms of accountability

The approach provides a focus for forms of accountability that are educative and do not narrow the curriculum. The current emphasis on literacy and numeracy tests and benchmarks has been criticised on at least two counts—that it promotes a constrained view of these important capacities and that it assumes that they can be developed prior to and independently of other capacities. A competencies-based curriculum offers a mechanism for resolving these issues. For example, in many countries, literacy and numeracy are described as part of the broader competency of communication and multiliteracies. Understanding literacy and numeracy in this way means that when governments highlight them for accountability purposes, they are not isolated or constructed as an old version of the “3Rs”. Rather, they are seen as being connected to associated functionings and so defined as part of a larger whole.

Of course this approach to accountability is applicable to all the competencies. Thus, at various times, one or more aspects of a competency might come into the spotlight for accountability purposes, leaving other aspects in the wings as the supporting cast. The spotlight may shift periodically as different aspects are brought into focus, and those previously foregrounded recede into the shadows but remain part of the cast. In addition, it would be possible to eventually benchmark the competencies and use them as the basis for gathering information about the health of education in a particular system. This work would require a great deal of trialling and research, but such activity would contribute to the development of deeper understandings about the competencies themselves whilst providing a logic and coherence to national accountability structures and processes.

It has the potential to dissolve a number of the binaries that have dogged curriculum work for so long

Competencies suggest a way to break down a number of unproductive curriculum binaries. These include:

• *Disciplinary vs. interdisciplinary*

In the dominant approach, issues such as disciplinary versus interdisciplinary knowledge are decided upon during the process of constructing the official curriculum. They are determined prior to the process of curriculum planning and teaching in schools. In a competency-based official curriculum, however, such decisions are taken by teachers on the basis of judgements about how best to develop a particular capability in her/his local contexts. Sometimes it might be deemed appropriate to teach within a discipline or subject, at other times the decision will be to teach across a number of disciplines.

In this way the approach doesn’t set up an unproductive disciplinary versus interdisciplinary binary. No matter how knowledge content is organised in the official curriculum, the decision about whether or not to work within or across discipline boundaries is a professional one that is taken at the classroom level as teachers work through the issue of how best to develop the competencies. It is not a decision that needs to be pre-determined. As a consequence, the model does not force the many professional associations that have been established around subjects/disciplines to circle the wagons and defend their territory (e.g., Goodson, 1996). Rather, it will encourage an ongoing classroom and eventually whole-of-profession consideration about the many different disciplinary and interdisciplinary ways to
develop competencies. It is an approach that both respects the status of discipline-based knowledge, whilst facilitating interdisciplinary work.

- The top-down vs. bottom-up approaches to curriculum change

A competencies-based curriculum dissolves the top-down/bottom-up binary that has dogged curriculum work for so long. This is because the structure is non-hierarchical and flexible. There is an interactive relationship between the competencies and the knowledge content, each part requiring the other. This enables a national approach (competencies) with a lot of room for local interpretation. There will be many different ways to work towards the same competency, suggesting that top-down imposition will be less successful in terms of curriculum change than ongoing professional discussion, exchange of examples of good practice, and the development of appropriate resources. At the same time, the approach is not entirely locally based and *laissez-faire* (i.e., bottom-up). The competencies and the associated accountability requirements ensure a commonality of purpose across Australia.

It has the potential to ground the notion of lifelong learning?

If the competencies define what people are able to do and be, in a knowledge society they need to be developed throughout a person’s life, not just during the years of schooling. Put another way, in a knowledge society the idea of curriculum must go beyond the formal institutions of education to embrace workplace, community, and recreational settings. The competencies-based approach is one way by which to ground the concept of lifelong learning in a knowledge society. The development, maintenance, and enhancement of competencies is something that should be a common community aspiration, and there are any number of ways that might happen. For example, why should processes for the development of government policy not require an educational impact statement (will this policy enhance or hinder the process of competency development?) in much the same manner as environmental impact statements are required? Could those who develop public spaces be required to consider how the space might be used to enhance certain competencies? Whether or not these are practical ideas, the point remains that an always provisional list of competencies provides a focus for the rhetoric of lifelong learning.

It has the potential to provide a focus for an ongoing curriculum conversation in the profession

The dominant curriculum model establishes the official curriculum as a “thing”—something that is redeveloped every few years and then “implemented”. In this way the official curriculum is constructed as a *fait accompli* and the role of the teacher is confined largely to technical rather than conceptual considerations. As a consequence, professional conversations about curriculum issues are limited. By contrast, the competencies-based approach constructs the official curriculum as the starting point for curriculum discussion. This means that teachers are involved in ongoing discussion at two levels: at the wider across-system level where discussion focuses on the nature of competencies; and at the local level where discussion focuses on how to teach through knowledge content to achieve the competencies. In this way the approach offers a way to generate stimulating professional debate and at the same time to focus that debate. The official curriculum can be refined as the conversation proceeds, thus constructing it as an evolving and dynamic resource rather than one that is static and inert.

It has the potential to be a mechanism that democratises the curriculum and its processes

In my view, curriculum discussions should be an important part of any democracy. However, there has always been a tension between (a) the involvement of the general community in discussion about curriculum and (b) the fact that curriculum making demands professional educational expertise. The structure of the competencies-based approach I have described provides a way to resolve this tension. The competencies part of the curriculum should be the subject of general community debate and discussion, not least because it offers a focal point for ongoing discussion about the kind of society we want and what is needed for all citizens to live productive and enriching lives. These are democratic questions that
should involve the citizenry of a nation state, not be confined to professional educators. However, the knowledge content part of the curriculum, and the associated pedagogical issues including the selection and organisation of content and models of teaching and assessment, are matters that are the province of professional educators who have the expertise to make judgements in relation to these matters. Thus, the two-part nature of a competency-based curriculum offers a natural way to encourage democratic involvement in the curriculum of schools whilst preserving the professional integrity of educators.

Conclusion

In this paper I have argued that the key competencies approach could be more of the same or it could serve to transform the curriculum in more socially just and democratic ways. I have suggested that in its various forms around the world, it has tended to be more of the former than the latter, for at least two main reasons. First, key competencies have lacked a sturdy rationale, and second key competencies have been inadequately theorized in curriculum terms.

I have proposed one possible way to reconceptualise the key competencies, and have speculated about some possible benefits that this approach might bring in addressing a number of intractable curriculum issues. However, since we do not have sufficient empirical data upon which to base curriculum policy in this area, I want to urge that as New Zealand starts the process of introducing key competencies, it does so inside a framework that encourages professional research and enquiry. More than this, it should be possible to use competencies to create a curriculum conversation across countries as educators grapple with the exciting conceptual issues they present, and share ideas and resources about the ways in which they are working with these intriguing curriculum ideas in particular contexts and settings.

Note: An updated, fully referenced version of this paper will be published in *Curriculum Matters* 2:2006.
Key Competencies:
Challenges for implementation in a national curriculum

Rosemary Hipkins
New Zealand Council for Educational Research
Introduction
When I was putting this presentation together I was aware that there would be people with a range of different backgrounds in the audience, with different experiences of these key competencies so far. It is difficult to work out a balance between introducing them and having a rich conversation around what they might mean, including exploring the issues that might cause us to stumble as we try to implement them. So I'll let you be the judge of how well I have done that. But for people who haven't seen them before, or not seen them very much, I have made a set of summaries that gives these descriptions. I have taken the direct words out of the latest draft of the curriculum, as up-to-date as I could possibly make them.

OK, so it's my job to talk about the competencies in the New Zealand context so we can have this rich conversation about them. First of all, this slide shows how they translate from the OECD version that Alan mentioned in his presentation. On the left-hand side are the OECD key competencies, as these were worked out in the DeSeCo (Defining and Selecting Competencies) project.

<table>
<thead>
<tr>
<th>DeSeCo</th>
<th>New Zealand Curriculum</th>
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<tbody>
<tr>
<td>Functioning in socially heterogeneous groups</td>
<td>Relating to others</td>
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<td></td>
<td>Participating and contributing</td>
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<tr>
<td>Acting autonomously</td>
<td>Managing self</td>
</tr>
<tr>
<td>Using tools interactively</td>
<td>Using language, symbols, and text</td>
</tr>
<tr>
<td>Thinking</td>
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As you can see, I have lined them up, so that our five relate to the relevant key competency of the OECD four. But there's one important difference—in the OECD version, thinking is seen to be a cross-cutting competency—that is, it is just a part of each of the other four. In our curriculum we have got it as a competency in its own right, not cross-cutting like that. That change took place after considerable debate and I wasn't privy to the actual resolution of the question, but I think it relates to the perception that thinking needs to be an explicit focus for development.

We've been thinking about these key competencies a lot in the office, and our collective research experiences have informed my presentation today. A lot of our projects have touched on them in various ways. Some of the strands of work that I have been fortunate to be involved in, including some of the future-focused work we have carried out, has helped our growing understanding of their complexity. These projects include:

- **Future-focused research** (e.g. education for the knowledge era (Gilbert, 2005), various ICT projects, and the Secondary Futures Phase 1 evaluation);
- **Assessment-focused research** (e.g. the NCEA-related Learning Curves and Shifting Balances projects, the Assessment Resources for Classroom Teachers project, with a focus on adding a dimension of formative assessment to new and revised items in the Assessment Resource Banks; and a background paper on Documenting Learning of the Key Competencies);
- **Curriculum-based research** (e.g. participating in the National Curriculum Marautanga Project; key competencies case studies, the Curriculum Innovation Projects, and background papers on the Senior Secondary Curriculum and School-Based Curriculum Design); and
- **Teaching and learning/school contexts research** (e.g. four small Self-Regulated Learning projects, the 2003 National Surveys, and an evaluation of algebraic computers for mathematics learning).

We really do have to pool our experiences of all these areas when thinking critically about what we are
going to do about the key competencies. I was extremely interested to hear Tony say, in his introduction, that as well as lining up curriculum, assessment, and pedagogy, context is a really important part of the discussion. I was very heartened to hear that because I think that that is something that we are going to have to keep in the forefront. The potential does exist for the key competencies to be specified nationally, but interpreted locally according to context. I hope that we have got the potential right for achieving that balance in our revised curriculum. The draft, which is going to come out in June, specifies the intention for schools to develop their local curriculum within the national parameters. So hopefully we will feel confident to actually take up this conversation and look at ways to do that.

But I do see some challenges! I have organised my presentation around four of them:

1. "We already do that!"
2. "We haven’t got the time to do that."
3. "What type(s) of knowledge?"
4. "If they’re not assessed, we’ll just ignore them."

Points 1, 2, and 4 are all things that I have heard people say. Well, they are paraphrases probably. They are stated a bit baldly because they are often dressed up a wee bit more than that, but basically that’s what some of the comments I’ve heard boil down to. And the third challenge, which Alan also identified, is the need for a rationale and to theorise how these key competencies relate to the traditional structure of the curriculum. This is a huge agenda for 50 minutes and I am just going to have to skim over some salient points while hopefully contributing to the rich conversation that we have about them.

"We already do that"

Let’s start with the “we already do that” challenge. I’m going to begin with the key competency “thinking”.

Building on current teaching for thinking initiatives

Here’s a comment that I took from CMP online, which is the website for discussing the whole curriculum project, including the key competencies:

A lot of what the key competencies and you describe is done, or attempted to be done, already in schools. Of course how well and for what purpose is all a bit of a grey area when teachers have really been focused on their area of expertise. (Comment from a secondary advisor, www.cmp.ac.nz)

The reference to “a bit of a grey area” interests me and rings true. Obviously we are going to need to have the conversation about ways in which these key competencies are something more than what we’ve focused on before. Because there is something that’s very familiar about them! And there are a lot of things already happening in schools that people could say contribute to the development of the key competencies. But is that all that is intended or is there something more, and if there is something more, what does it look like? Here’s another version of the above comment, this time from a primary school teacher.

I am struggling to get my head around the way the key competency ‘thinking’ is articulated in the draft. Thinking in itself means little and is something we all do. (Some well, some not so well - remember when your teacher told you to think harder and you were already thinking as hard as you could—he/she should have said think differently or what is another strategy we could use.) It should be the management of our thinking processes or strategies that is the desired competency. (Comment posted to www.cmp.ac.nz)

So a lot of people would say that they already have initiatives that develop thinking skills. But is this all we mean, or is there something more to the key competency “thinking” than that, remembering that in the DeSeCo version it cut across all the others? I believe that there is something more to it. This next list is taken from work done by some Israeli researchers. They’ve been looking at what it takes to
get teachers to actively develop students’ thinking abilities. Here’s my summary of their key findings.

Teaching for development of competency in thinking requires:

- active practice in cognitively challenging tasks;
- learning a variety of thinking patterns and skills;
- opportunities to transfer thinking skills from one context into different contexts;
- specific feedback on progress in use of thinking tools and approaches;
- freedom to think and learn from mistakes; and
- gaining the language tools to think about thinking (based on Zohar and Schwartzer, 2005).

Getting the language skills to think about thinking! We’ll need to do this to really develop the metacognitive aspects of this competency. I think this will be quite difficult, and the “specific feedback on progress” aspect may be challenging as well, because obviously you can’t do that without a language to think about thinking. “What progress are students making with their thinking skills in this context?” “What will be another strategy they could use?” “How effectively are they using the tools that they are using?” These are types of questions for a conversation to be had with students—one I don’t think we are necessarily doing just yet. Zohar and Schwartzer specifically say that this type of learning is for all students, not just for “bright” students. In Alan’s talk this morning he said that this is a matter of social justice and that resonated for me. Developing these skills should be part of every single school student’s inheritance. There are some issues and challenges here, I think. The next slide shows some other interesting issues for the active development of thinking as a key competency.

### Thinking issues and challenges

- Metacognition is an important (new) emphasis
- “Thinking” can potentially be integrated with every other key competency — metacognition is important to all of them
- “Embodied” thinking is important — the brain is no less biological than the rest of the body
- Thinking dispositions need to be fostered — you have to want to do it!
- There is no substitute for practice — no one else can do your thinking for you.

Metacognition is something that trips off the tongue very lightly—a bit like “lifelong learning”! But what does it really mean, and what is it going to take for us to do it? And what does it mean to integrate thinking with each of the other key competencies because, as we will see shortly, there is a reflective, metacognitive component in every single one of them. And what about embodied thinking? Some people who have critiqued the current version of the key competencies in our curriculum say that they still lend themselves to a dualistic way of thinking about the mind as being separate from the body (see for example O’Conner & Dunmill, 2005). From a more embodied perspective, the key competencies should keep the mind and body together and look at them as a whole system. What does this challenge mean for our curriculum? I think that’s a conversation that we are going to need to have as we gain a richer understanding of them.

And then there’s the challenge that you have to want to think. We can introduce these things in the classroom, but what does it take to develop that disposition? Because if students don’t want to do it, no amount of introducing “thinking” to them is going to be effective is it? They have got to do it for themselves. And here’s another point. I think there’s always a great temptation to think that we can tell students how to think. But actually the research literature is quite clear that what students need is practice and more practice, in lots of contexts. Nobody else can do your thinking for you, in the same way that nobody else can digest your food for you. You’ve got to do it for yourself. So that raises some challenges that do take us beyond some of the present initiatives.
Relating to others is not just about co-operation

I want to turn now to the key competency “relating to others”. Remember we are talking here about the “we already do that” challenge. When I was thinking about that phrase, in the context of this competency, I thought it might translate to “well, we already use co-operative learning”. So I thought I would use that as a basis for perhaps having a look at the richness of what’s intended by this competency. It’s not just about social skills, although they are of course important enablers, and I am sure that the developers of co-operative learning would say the same. But we do know that co-operative learning can be minimally interpreted as assigning roles so that everyone in the group will work together. So it is important that this competency is seen as being something more than that.

The research project I’m introducing here interested me because it was set up as a carefully controlled study. This Israeli researcher looked at whether adding metacognitive questions made a difference to students’ learning of the content of challenging graph interpretation tasks. She found that it did (Karmarski, 2004). Here are some examples of the questions the researcher added to make sure that the students did discuss things at a more metacognitive level:

- What is the same about this task from what we have done before?
- What is different about it?
- What strategy/principle/tactic can be used to solve the problem?
- Is the result reasonable?

Another group of students—another class of students—did the same group tasks, but without these metacognitive prompts and didn’t make the same learning gains. I thought that was quite interesting. There don’t seem to be a lot of projects at the moment that look at “relating to others” specifically in terms of cognitive learning gains. I have found a few studies, and this is one of them. It was published in *Learning and Instruction*, which is a fairly rigorous journal, so I thought that it was worth sharing.

There are some ways of knowing things that belong to a group. These create a dimension of “relating to others” that we are not so used to thinking about. For example, effective shared arts performances or winning team sports games involve a sort of collective “knowing” as the activity unfolds. Alan alluded to this challenge this morning when he said that he thought that the competencies were still too individually focused. So what is it going to look like when we develop the competency of relating to others as a property that belongs to a group, not as something that sits inside the head of an individual person? I think that’s an enormous challenge for us. And of course it makes links between the key competencies and future employment, which Alan talked about as well. The future-focused literature that Jane Gilbert canvasses in her book *Catching the Knowledge Wave* emphasises that it is really important, in the way that economies work now, that creativity comes from what’s constructed in the spaces between people, not just what individual people know. So competencies for relating to other people are important economically. But they are important for all sorts of other reasons as well and important in ways that we are not necessarily used to thinking about them.

Languages, symbols and texts—not just literacy and numeracy

OK, that’s two of the competencies that I’ve just sketched very quickly. I hope I’ve illustrated that both definitely have got “something more” than what we are used to thinking about at the moment. So let’s try another one—language, symbols, and texts. I have been fascinated to hear people say that they think this is the most familiar one, when I actually personally think it is the most different of the five key competencies, and the one that is going to take the longest for people to get their heads around.

I have been trying to anticipate what people might say about this one in terms of “we are already doing that”. I could hear people saying “Oh well, this is just literature and numeracy and we already do that.” So I’m going to try to tease out why have we got all these things in the title of this competency. Why languages? Why symbols? Why texts? I want to just briefly sketch in a bit more detail around what I think is different about this one.
So let’s just start off with the languages and symbols for a minute. Let’s look at this whole idea of things that are *symbols* in our culture. Now you don’t need any explanation of what this symbol stands for I am sure. Everybody can instantly recognise the message coded visually into it. Just think for a moment about how prevalent these sort of symbols are in our society. It is simply meant to be information giving. It is probably part of a road sign somewhere. It is the same as the signs that say Ladies, Gents, picnic spot, railway crossing, or a million other things that give practical information just in a few briefly sketched lines.

But compare that one with this one. This morning as we were driving up to Paraparaumu Station, it was pouring with rain and I have never noticed before that the McDonalds in Paraparaumu is on a slight rise and there are these golden arches standing out, you know, in the heavens, in the greyness of the early morning light. I thought “Goodness me, I wonder if they just poked that symbol up until it was higher than everything else on the highway?” The point is, McDonalds don’t just want you eating at a fast-food place, they want you eating at *their* fast-food place. They have encoded a whole lot of lifestyle stuff—marketing things and emotive responses—into the “golden arches”. I didn’t have to tell you they are called the golden arches. They have paid advertisers a lot of money to make sure that you know that and that’s what you think as soon as you see that sign. This manner of using symbols is also very prevalent in our society. People talk a lot about the consumer culture, and the need for students to understand how that helps to construct their identity, and so on. If we want to use this aspect of “using language and symbols and text” in our school learning, then we are going to have to be very clear that that’s part of what we intend by this competency.

And here’s a third symbol, while we are on the food-related topic. I am sure you all know what this one means too. There’s a lot of scientific knowledge coded into this type of symbol. If you want to be a good citizen recycler, you don’t have to know all that science for yourself, because all you have to do is to look at the number on the code and put the things in the appropriate place.

So there’s a lot to think about in terms of the different types and purposes of signs and symbols. At the moment I think they are a more familiar idea in some parts of the curriculum than others. There’s explicit reference to them in arts, and obviously in media studies, because a lot of these things are to do with the way ideas are communicated in various media.

My next slide shows a court marked out for basketball and a basketball player in action. The various symbols of the court markings, the referee’s whistle and hand signals, and players’ clothes and gestures all go together. They form a *meaning-making system*. I don’t think that we are necessarily used to actually talking about examples like this—all the ways in which meaning-making symbols fit together to make a system. We just take them for granted once we know them.

I borrowed the idea for this example from James Gee, and a very interesting article that he wrote on literacy a few years ago (Gee, 2003). In this article Gee talks about what you need to know to be literate in reading a description of basketball. He talks about the fact that you need to know what the markings on the court stand for, and people who are really literate in basketball know that if you shoot a goal from here and not there it is worth so many points. And they need to know about what words mean in that context because “dribble” is a word with very different meaning in other contexts.

Extending this idea, my final image on this slide is a borrowed news shot from a high-profile sports match. To read this image in a literate (“insider”) way you need to know that basketball and netball are not the same thing. There are more symbols in this image and I probably don’t have to tell you who that player is, even though you can’t see her face very clearly. The GS on the front of that black uniform will tell you this is Irene Van Dyke and the yellow shows that the opposition is Australia.
So when we put symbols and symbol systems together, we also need to expand our thinking about the nature of texts. Because texts are not just written words on a page. They can include all of the things shown in the next slide:

- visual art works;
- a kapa haka performance;
- a front page for a website;
- a cartoon; and
- a traditional book.

All of these things, and many others, are texts with their own system of meaning making built into them. They have their own signs and symbols, which work together in particular ways. The example on the screen, of a website front page, is actually in German. But you don’t have to be able to read it to see that that is a website and to know that you could navigate around that, find your way around that site, and know how to operate it, because it has its own sort of geography built into it.

So, we need to think much more broadly about language, symbols, and texts. And here’s another respect in which I think there are some very new things for us to think about. This time it’s in terms of future-focused literature, and thinking about how much of the meaning making we do now is screen based and hence visual, rather than verbal. The next slide shows key differences between these two ways of communicating, with ideas drawn from Jane’s book, and from the work of Gunther Kress in the UK.

<table>
<thead>
<tr>
<th>Verbal media</th>
<th>Visual media</th>
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<tbody>
<tr>
<td>Print/word based</td>
<td>Screen/image based</td>
</tr>
<tr>
<td>Linked to sound</td>
<td>Linked to vision</td>
</tr>
<tr>
<td>Words follow in a temporary sequence</td>
<td>Images appear simultaneously</td>
</tr>
<tr>
<td>Sequencing implies cause/effect logic</td>
<td>Open to different sequences of reading</td>
</tr>
<tr>
<td>Words must be “filled with meaning”</td>
<td>Images already relatively full of meaning</td>
</tr>
<tr>
<td>Writing conveys the message, images “illustrate”</td>
<td>Writing is one (usually minor) part of message</td>
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I’m not saying that verbal communication is not important. Indeed, there is no substitute in terms of thinking for constructing a formal argument in writing. I know I have been wrestling with my thesis all weekend. But there are some very different things about the ways that visual and verbal media communicate ideas and messages to us. If we want our students to be literate for the 21st century, then “basic” literacy is only a beginning point, because there are all these other things that they are going to need to understand. So I think that we have got some huge challenges around making a rich dialogue about this particular competency.

OK, now you might not agree with this next quote:

... art expresses feelings and social commentary better than mathematics does. Mathematics expresses relationships and patterns better than drama does. Drama expresses human interactions and story better than photography does. And so on (Indiana Study Group, 2001).

I thought this could be an interesting, provocative opener for a professional conversation actually, about what different bits of the curriculum contribute to this key competency. The quote is from a large project that looked at literacy across the curriculum in Australia, done by the Australian Council for Educational Research. This is actually a group of American researchers who were part of that project. They were talking among themselves about the implications of making a competency like “using language, symbols, and texts” central to the work that they did. What did that mean for them as people who worked in separate discipline areas? How were they going to actually pull those various aspects
of communication together in the overall curriculum, when they all worked in their separate discipline areas? These teachers found that they needed to have very rich professional conversation about those questions across the curriculum areas.

Hopefully such cross-curriculum conversations are something that we'll be able to have here as well. And yet there is an important both/and argument here. As Alan said, we would also need a lot of conversation about how the key competencies integrate into individual curriculum areas and interact with knowledge there. In addition to saying “OK, different curriculum areas contribute to a collective pool in different ways”, there are also some very highly specific knowledge aspects that you need to understand to be literate in any one specific curriculum area. I have just put a little montage together here for science because that was my curriculum area—I was a science and biology teacher.

Quite often when I worked at a college of education we talked to student teachers about light-ray diagrams, like this little periscope diagram here. We found we had to address the question “OK, what does this arrow mean on this diagram?” We would talk about this as a meaning-making feature in a diagrammatic text. Because light is everywhere, and there are so many trillions and millions of particles that you can’t separate them, to communicate an idea you have to, in your mind, take one imaginary particle and trace its path. You think where this path would need to go to allow the eye to see the view in this periscope, then that’s the line that you draw. And student teachers would say “Is that all? Is that it?” Because it is so obvious and so easy. But it’s not obvious and easy until somebody tells you the way it works. I have had similar conversations with people about food chains, and why the arrows go the way that they do, and discussions with people about whether students have got the idea wrong if they put the arrow in the wrong direction. That often results in a big, red cross! But if you ask the student what they were thinking about, and it was “what eats what”, then it makes sense to reverse the arrows. They go the way they do because they express the concept of energy flow.

Even just those three simple words evaporation, whiteness, and theory have all got some very specific science literacy features built into them. The first one, for instance, is an example of nominalisation, where you take a whole concept or process and put it into one noun with “ion” on the end of it. Think about the conversation that you would need to have with somebody to explain to them what evaporation is if they don’t already know. It would have to be more than a couple of sentences, I am sure. You might even need to actually press the physical world into service to help with your explanation and get some things to show them. Now let’s look at “whiteness”. I have just read a book called The Geographies of Thought (Nisbett, 2003) which compares Western European thinking with East Asian thinking. I was fascinated to read that taking an adjective and putting a “ness” on the end of it, to turn it into a general property of a group of objects, is a characteristic of Western thought that is not necessarily shared by people whose background is in Asian ways of thinking. Well of course I had never thought about it before, because I am so inculcated in Western European systems of thought that they are transparent to me. That’s a huge challenge for us isn’t it? The more we are steeped in a particular way of communication, the less likely we are to recognise its specific features as such. I won’t start now on the everyday and science-specific meanings of the word “theory” or I won’t stop.

I really like this next quote—Gunther Kress has a good turn of phrase.

... the use of the term [literacy] at once also provides a comforting answer: we are all ‘doing’ literacy. This answer then acts as a full stop to further essential thinking and analysis. Once the ointment of literacy has been spread evenly across the problem areas, we have all done our bit and that might then be that (Kress, 2001).
Some of you will know that Kress writes internationally about signs and symbol systems in literacy. He’s cautioning here that we need to expand our view of what this key competency means, so that we don’t just spread the “ointment of basic literacy” across the curriculum and then think “we’ve done that one”. But that’s not to say, as Alan noted this morning, that basic literacy is not important too. The question is how you get both that and what you need to add to develop the sense of “using languages, symbols, and texts” that I’ve sketched here. That is the conversation that we need to have.

OK, looking at the time, it’s probably appropriate that I move onto the question of time. I want to address the “we haven’t got time to do that” challenge.

“We haven’t got time to do that”

I am sure, for those of you who are teachers, this sentiment will ring very true. There are all these different things that people are being required to think about. There is no doubt that teachers’ days are very full, and that the curriculum is very full. If we want to make a space for some professional reflection of the sort that Alan suggested this morning, how are we going to do that? And then again, how are we actually going to fit these key competencies into the curriculum itself?

One thing rings a little warning bell for me. It relates to some of my own research in the Learning Curves project. With others in NZCER I have been looking at the NCEA and its implementation over its first three years (see for example, Hipkins, Vaughan, with Beals, Ferral, & Gardiner, 2005). One of the things we found in that project was that the very standards that have got the most potential to integrate the competencies into the curriculum were the ones that teachers were most likely to have dropped. I had one science HOD say to me that she thought that gathering research skills was probably the single, most important thing that students could learn for their future, but she didn’t have time to do it. There’s something a little bit concerning about comments such as that.

When we talked to the students themselves we found that they were actually getting a range of very narrow experiences that counted as “research” in various curriculum areas. Here are some of the things that they said about what it was like to do research for the NCEA assessments: “copy and paste, copy and paste”.

Students’ experiences of “research” for NCEA (Learning Curves 3)

- Learning how to find stuff fast on the Internet. You can find anything once you have learnt how to do it. Copy and paste. Copy and paste.
- How to write it in your own words so it’s not cheating.
- Rewriting is stupid. What is written is better than how I could say it.
- In history and physics it is more like getting facts. In English it is translating what you have found into your own words and stuff.
- History taught me how to use focusing questions to scan through resources. It was useful but I only use this tactic in history.
- Processing. How to identify what you want and get rid of the rest.

How much and what sort of “thinking” is suggested here?

There was very much a view that research is constituted of information retrieval and repackaging. You could say that, if we wanted to develop “thinking” as a key competency through research, for example, we are certainly not going to do it if students have of sorts of experiences they were reporting to us here. Another danger of that view is that, in all sincerity, the HODs could say “Well these are just generic skills. I don’t have to teach them in my curriculum area because English teachers do that.” So there are some really big challenges here I think. If we want to use research, the key competencies suggest it should be “authentic” research. I am going to come back to this at the end of my presentation.
students won’t develop key competencies through participation in research activities if we don’t actually challenge what “research” means. Otherwise curriculum “content” dominance will prevent that potential from ever being achieved.

<table>
<thead>
<tr>
<th>Challenging priorities</th>
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<tbody>
<tr>
<td>Research is dispensable when it is seen as “information retrieval and repacking”</td>
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<tr>
<td>But both the “thinking” and “LST” key competencies strongly suggest discipline-specific components of research</td>
</tr>
<tr>
<td>Knowing how to seek and use information is an important aspect of “lifelong learning”</td>
</tr>
</tbody>
</table>

If we want teachers to see that there are discipline-specific aspects of research, and that these are interrelated with the key competencies, then that’s a rich, professional conversation that we are going to need to have. If we really think that research is an important thing for students to do, so that they can learn to be lifelong learners say, the potential is there for us to do that with the NCEA. But we’ve got a lot of work to do, to develop the assessment aspects.

OK, let’s move on a little bit through the time challenges. I’m next going to discuss the key competency “managing self”.

Making time for learning to manage one’s own learning

I will be really interested to see how people interpret “managing self”. Will it be seen as being about behaving well, being ready to learn, having your pens and pencils out on Monday morning—that sort of thing? There is a lot more to this competency than that.

<table>
<thead>
<tr>
<th>“Managing self” is not just about behaviour</th>
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<tr>
<td><strong>Engagement</strong></td>
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<tr>
<td>• behavioural – aim is increasing</td>
</tr>
<tr>
<td>Autonomy</td>
</tr>
<tr>
<td>• motivational/emotional linking learning to effort</td>
</tr>
<tr>
<td>• metacognitive – aim is self-regulated learning (SRL)</td>
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</tbody>
</table>

The idea of a “learning career” integrates identity and engagement (Ecclestone & Pryor, 2003). You have to want to be a “lifelong learner”.

There are some aspects of this key competency that are about engagement with learning, most certainly. That’s not just about being good, but about actively being engaged, and really wanting to research, and thinking about your thinking, and all those things that we’ve talked about so far. Teachers do need to make a space where students can develop those aspects. But there’s also a very strong identity thread to this key competency.

The people who write about identity as an aspect of managing self talk about things like knowing how to be a particular sort of person, in appropriate ways, in different contexts. That’s quite a challenging competency. What is it going to look like in terms of curriculum learning? I think that we need a lot more conversation about that question. I know that some people have moved in the direction of helping students to know and act on their strengths and weaknesses as learners. For others, I think that’s a learning journey still to come.

All the aspects of “managing self” come together in the idea of students as people who have “learning careers”. They develop particular sorts of ways of being learners and ways of thinking about themselves as learners (see for example, Ecclestone and Pryor, 2003). As Tony said right at the start of the day
(I wish I had written it down) it’s about seeing learning as an investment in yourself that’s important. I think that is a really powerful idea—one that could potentially help us to lift this competency to something that we want to spend a lot more time on. Ultimately of course students have to want to be lifelong learners.

A particular danger I see in this key competency, especially if we say “we haven’t got time to do that”, is the interpretation of autonomy as expecting people to get on and do their learning by themselves. In a piece of research I read just recently, some students talked about their images of themselves as learners and learning to be learners. The British researchers who did this project talk about the fact that the students who were left to work on their own too much actually did the opposite of developing the sort of autonomy that we would want them to develop. They became more, rather than less, dependent on the teacher (Bullock & Muschamp, 2006).

So there need to be aspects of teaching that make the space and time for doing some things in different ways. I think the idea of self-regulated learning has something to offer here. Zimmerman is one of the big contributors to this idea, as you will know if you have done any work in this field. He talks about four stages that students go through when learning to be self-regulating:

- observing the targeted learning;
- emulating (the teacher or other modeler of the intended learning);
- doing the learning tasks with self-control; and
- finally learning to think about the learning in the task and to self-regulate this (Zimmerman & Kitsantas, 1997).

These four stages imply that the teacher needs to be modelling what it is to be a learner, what it is to reflect on and think about your learning. And that is going to take time. So, if we say “we haven’t time to do this”, then that’s going to be a very significant barrier to the implementation of this competency in the way that it is intended.

I really like the metaphor of “learning fitness”. Guy Claxton talked about this when he was out here for an NZCER conference several years ago. The idea is that if we want all students to learn to manage their own learning we borrow from the metaphor of working on physical fitness to talk about what we need to do to work on learning fitness. Just as there are specific things that a coach can do to help somebody when they go to the gym, so also can teachers “coach” for learning fitness. Jane Gilbert developed this metaphor in her recent book and the next slide summarises her ideas (Gilbert, 2005).

<table>
<thead>
<tr>
<th>Physical fitness coach</th>
<th>Learning fitness coach</th>
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<tbody>
<tr>
<td>Designing a programme for a starting level</td>
<td>Designing a programme for a starting level</td>
</tr>
<tr>
<td>Coaching on safe use of fitness equipment</td>
<td>Teaching specific types of thinking tools</td>
</tr>
<tr>
<td>Setting targets that challenge but don’t risk physical injury</td>
<td>Setting learning goals that challenge without being too discouraging</td>
</tr>
<tr>
<td>Supporting while encouraging taking responsibility for own fitness programmes</td>
<td>Supporting and encouraging regular practice</td>
</tr>
<tr>
<td>Being a role model</td>
<td>Being a role model</td>
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Source: Claxton, 2003; Gilbert, 2005

If we translate all those physical support activities over to learning support, then what is that going to look like for students in the classroom? This question takes us back to the challenge from Zohar. Improving learning fitness is a challenge for all students.

Can I just turn back now to that other aspect of “managing self”—the one about identity. I want to borrow from Jane’s thinking again:
In the new online forms of communication, the standard model of individuality is long gone. People routinely use Internet communities (chat rooms, online games and so on) to play with their identity, to construct and reconstruct themselves in ways that have very little to do with their real world, real-time bodies (Gilbert, 2005, p.117).

This is an area where I think we need to have a rich, professional conversation to enhance our own understandings about the impact of new communication technologies on identities as a learner. I haven’t got time to develop the whole argument today. I can only signal that, if we are going to make a space for this conversation, and not resort to saying we haven’t got time to do that, or even we already do that, then we need to talk a lot more about the implications of multiple identities. Learners today need to manage themselves in different situations, and this trend has been exacerbated by virtual communities that are available on the web. I found this example a couple of years ago in a research report called Digital Literacies of the Cyber Girl (Thomas, 2004).

<table>
<thead>
<tr>
<th>Metacognition and screen-based identities</th>
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<tbody>
<tr>
<td>I mean, I’d have whole new typing styles for people, like if I were trying to trick someone I knew into thinking I was some-one else, I’d type a lot differently than I do normally. A person’s typing style can give them away like a voice does.</td>
</tr>
<tr>
<td>As another person I might capitalize my I’s and I’d use full, proper sentences instead of fragments. I probably would not use the word “like” and ellipses wouldn’t show up often, if at all.</td>
</tr>
<tr>
<td>OR, if I decided to be somebody else, I might type like my cousin and numerous other teenyboppers out there... Hey! WUtZ uP wit U?? Lol</td>
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</table>

Thomas, 2004

Here’s a 16-year-old talking about how she can construct herself as a different person in her communication with people online, just by the way she types. Now there’s a very strong link here to using language, symbols, and texts. But there’s also a very strong sense of self-awareness and a metacognitive layer to this. In the past, when we didn’t have these many different ways of communicating, we didn’t need to think about so much these things. So this awareness is out there—at least for some students. I wonder how common it is? In asking that question, that way, am I showing my age? Are young people actually already much more aware of these different ways for constructing their identities than we allow for in the classroom learning? If yes, what does that mean for what we do in the classroom?

Making space in a crowded curriculum

Making space for these learning priorities is definitely a big challenge. If we are going to transcend the “we haven’t got time to do that” response, this challenge must be addressed. I think there is actually a very urgent need to address the “so what” question when we are thinking about how to put traditional curriculum content together with the key competencies. It is very easy for us to keep traditional content in the curriculum just because it’s traditional content. My subject area is biology. Biology teachers are really struggling with this one at the moment because there has been a huge explosion of biological knowledge in the world and you couldn’t possibly begin to think about covering it all. There’s just no way. It’s impossible. But if you have a view that learning in a subject is about learning the key ideas of that area, then all of this is going to be very challenging. I really like what Jay Lemke said about this at a conference in Spain just recently. He spends a lot of time talking about language as symbols and texts, and their meaning in science and mathematics teaching particularly. He had this to say about the crowded curriculum:

If there are truly fundamental principles in science, then the extended study of any few topics in science will eventually bring students into contact with those principles. (And if not, then they were not really so fundamental, were they?) (Lemke, 2005).
He’s very dry, and you can see his dry tone coming through there. By “topics” he means authentic enquiry, as I’ll talk about in a minute. But his question raises another one that I think is going to be really important for us to address. If we are going to embrace these key competencies and find way to integrate them with traditional “content”, then do we leave the question of what that content should be to chance or inquiry context? Do we have some principles to say what it should be? I know that one of the mandates for the curriculum stocktake was to reduce content, but it seems to me this has been done rather cautiously. There still is a lot of content there, and if we really are going to make the space for key competencies, then more pruning is going to need to happen. Does it matter if it happens differently in different areas? Should we be creating some principles, so that people can decide locally what’s going to be retained, or should content coverage be mandated nationally? That’s a conversation I think we need to have. It leads me to the third of my foci for today, which is the question about “whose knowledge”.

What and whose knowledge?
The key competencies are intended to be holistic, which means that we do have to think about how knowledge, in its traditional sense, is going to relate to the skills, attitudes, and values that together go with that knowledge to make up the competency. If they work together then what are the implications for curriculum integration? This holistic sense is most easily achieved in authentic tasks. (I’ll come to the meaning of authentic in a minute.) Such tasks are seldom neatly divided up into the discipline areas that we divide our curriculum up into. So what are we going to do about that?

I just want to point out too, that the view of knowledge that underpins the key competency initiative is very much a sociocultural one. Knowledge is seen as situated and distributed, which again points to key competencies being done in authentic tasks. But how is that understanding going to interface with our traditional curriculum, especially in the secondary school?

<table>
<thead>
<tr>
<th>Coherence/integration</th>
<th>Views of learning</th>
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<tbody>
<tr>
<td>• key competencies are holistic – each one integrates knowledge, skills, attitudes, and values (in a specific discipline area)</td>
<td>• situated knowledge – use of “authentic” tasks</td>
</tr>
<tr>
<td>• key competencies often work together</td>
<td>• distributed knowledge – competence emerges in the context rather than being seen as the property of an individual</td>
</tr>
<tr>
<td>• “authentic” tasks often require curriculum integration</td>
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“Participating and contributing” and “authentic” learning opportunities
Some people will have seen me use the examples on this next slide before. I really like some of the things that are happening in environmental education, where activities often integrate across curriculum areas. The example here is a particularly nice one from the Waterways Project, which I picked up off the Royal Society’s website. The children at Ahipara School have taken on the responsibility for cleaning up and restoring the riparian edges of a stream, so that the waterway is improved in quality. They have also taken on an ongoing long-term monitoring project, where the children learn how to measure the different parameters of the waterway. So it’s not just a curriculum task that’s done today and then they forget about it, because they’ve undertaken to keep it going over a period of years. Children new to the activity have to learn to take readings in the same way as previous children have done, so that the project can build a reliable body of data over time.

This example of “participating and contributing” models the meaning of authenticity from the sociocultural literature. There are some challenges here, because if you interpret authentic as meaning authentic to the discipline, e.g., “we are learning like real scientists”, actually there’s a lot of literature that casts

1 www.rsnz.org – detail not included in this summary.
that as a problem. There’s no time to go into that argument in detail today. Suffice to say that doing that privileges the discipline content and may not move us past the curriculum structure and questions that we’ve got already. On the other hand we have also tried “learning in context” as a means of conferring authenticity. The version of the science curriculum we’ve got at the moment tried to do that and we found it sometimes that just trivialised things, depending on the context picked. Using “contexts” like this can also avoid the hard questions of curriculum integration and lead to piecemeal learning.

So what do sociocultural theorists say “authentic” should mean? Well, the question being investigated should be personally meaningful to the student at the same time as it has some meaning and weight out there in the wider society. This is not something that’s trivial. This is something that is going to advance the cause of knowledge. Jane Gilbert talks about it in her book as students having an opportunity to build genuinely new knowledge. Sally Boyd tells me that participants in the Normal Schools key competency project are trying to think about authenticity by using this phrase: “use” rather than “cover” knowledge. And that seems to me to be a really good starting point for a professional conversation about what authenticity means.

One of the things that fascinates me is that some curriculum areas are already leading the way with the authentic participation challenge. Some of them are listed here.

<table>
<thead>
<tr>
<th>Some curriculum areas/initiatives already have an “authentic” participatory focus</th>
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<tbody>
<tr>
<td>• Action competence (health, PE, home economics)</td>
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<tr>
<td>• Action/reflection cycle (all arts subjects – dance, drama, music, visual arts)</td>
</tr>
<tr>
<td>• Technology design and implement process</td>
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<tr>
<td>• Education for enterprise</td>
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<tr>
<td>• Environmental education</td>
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</table>

What might it take to get this focus in subjects that have traditionally been seen as “core” to the curriculum?

Notice how these are what you might call the fringes of the curriculum. My question is “How do we get the sense of authentic participation into the very heart of the curriculum, into the subjects that have traditionally been mandated as the core right through into secondary school?” The areas listed, all in their own ways, have got participating and contributing embedded in them. But obviously this key competency is going to need to be embedded right across the curriculum. Will it mean the same thing or something different in each area? I suspect there will be some differences between them. It’s not difficult to see, for instance, how the values for education for enterprise could potentially conflict with the values for environmental education—around the question of sustainability for instance.

James Beane has talked about this a lot. He comes to New Zealand quite often so some of you may have heard him talk. I was interested, in the context of thinking about these authenticity questions, to put together the themes that he looks at as potential curriculum integrators (Beane, 1997).
I’ve arbitrarily divided the list into the more immediately personal and the societal levels but all of them could integrate across both levels and they suggest huge questions. How such themes would translate into the learning that might be done in our curriculum is a conversation we need to have. They could be a good starting point for talking about the meaning of “authentic participation” in the way that’s intended by this key competency. I have already said I see “using language symbols, and texts” is the key competency that is most different. It seems to me that “participating and contributing”, through the questions and challenges it throws up, has the potential to pull all the other key competencies in together. So I see this one as the integrator—the one that could actually help us to make this whole process work—if we really think about how to get it right.

Now here’s a wonderful quote from the citizenship literature:

"Citizenship education is prone to somewhat contradictory impulses. On the one hand the justification for its development rests on the need for greater participation in order to strengthen democratic structures and processes further; on the other hand, citizens are perceived as subjects to be moulded to state authority…. The citizen is free and not free at the same time" (Davies and Issitt, 2005).

There’s quite a lot of literature out there that talks about what learning to participate as citizens might mean in terms of citizenship education at school. Is it something that you need to be actively taught? I haven’t actually got time to go into that here but I did want to mention this challenge made by Davies and Issitt. We’re bound up in school structures, as we’re bound up in other societal structures. We can’t just go out and do anything we like and yet, if individuals are going to be active participants within an overall societal structure, then there’s a both/and question here isn’t there? How do you learn to be both a person who has a strong and robust sense of your identity in different situations and the person who is part of a collective group and contributing on that level? I think that’s not a conversation that we are used to having. It takes me back to the whole question of teamwork, but it also leads to another question. A lot of things happen in school that are not part of the formal curriculum, but they are nevertheless a very powerful and important part of students’ learning. In some contexts we talk about them as part of the “hidden curriculum”. In other contexts they are “extracurricular”. In what way do the other things that we do at school contribute to the development of the key competencies? This question is particularly relevant to this issue of citizenship, but not only to that. So that’s another conversation I think that we are going to need to have.

"If they are not assessed, we’ll just ignore them"

Looking at the time, I can see I am running out, and I am just going to skate very quickly over the assessment challenge because I think that this is a conversation for a bit later. In many respects it is the knottiest challenge. I don’t say that because I think that we should put it aside. We know that we need to have this conversation but maybe it comes a bit further down the track when we have richly explored what the key competencies might look like and we’ve got a stronger rationale for what they are in our curriculum.
Ultimately we are going to have to think about assessment and one of the things that worries me is the idea of “levelling” the key competencies. I can hear my friend Miles Barker, in a meeting, saying in his rather dry way, “am I Level One or Level Two for curiosity?” A question like that makes a nonsense of the whole idea that “level” based progress could be described for aspects of learning such as attitudes. But we do have curriculum that has levels, and we are used to thinking of learning in terms of making progress through them. So what does progression in building key competencies look like? How do we know that students are getting more proficient at using the key competencies? That’s a conversation I have got some ideas about but I don’t think today is quite the time to unpack them. I’m just saying that in this rich conversation that’s something that we are really going to need to look at.

One of the things that I see great potential for, especially in terms of that “we haven’t got time to do that” response, with the need to make some curriculum space, is thinking a bit more laterally about what “authentic participation” might mean in terms of assessment. I really like Ginette Delandshere’s work here. She talks about assessment being “under-theorised”. She advocates for rethinking assessment as a form of enquiry. Then the question—the ultimate assessment question—is not “What do you know?” but “What does it mean to know?” (Delandshere, 2002). What does “knowing” mean for me as an individual and for us as a group? This is a deceptively simple question, and a very powerful one. It links to the idea that if we are going to encourage students to be lifelong learners, then we need to actively co-opt them into assessment and help them to learn how to do it for themselves. It is the same challenge as for thinking. Ultimately no-one else can do it for you. If you are going to judge the efficacy of your own learning well beyond school, then you need practice.

<table>
<thead>
<tr>
<th>Students as:</th>
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<tr>
<td>• informants on assessment contexts</td>
</tr>
<tr>
<td>• collectors of evidence</td>
</tr>
<tr>
<td>• assessment task designers</td>
</tr>
<tr>
<td>• evaluators of evidence</td>
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**Assessment as enquiry... What does it mean to know?**

Delandshere, 2002

Again there are some real challenges here. I’ll just allude very briefly to two pieces of research that we did for the Ministry concerning the NCEA and changes in classroom practice. We produced some graphs that compared teachers’ perceptions of their priorities and actual use of various aspects of good practice, taken initially from the Australian Science in Schools project. In four different subject areas, sitting at the bottom of the graph—lowest for both priority and practice of all the factors considered—was “involving students in assessment decision-making”. This was even so in home economics. I say “even” because these were the teachers who had made the most change in their overall practice post-NCEA. Either this is something that many teachers feel they cannot safely do, or is it something that they do not want to do at the moment. So I am signalling a big challenge there, if the benefits listed on this next slide are to be achieved:

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2 Mathematics, science, geography, and home economics.
Advantages of greater student involvement in assessment

- Consistent with development of dispositions for lifelong learning.
- Consistent with focus on metacognition and self-regulated learning.
- Consistent with intent of all five key competencies (potentially allows for integration).
- Potentially makes a space for better assessment of collective work.

In conclusion

I want to end with a reminder that the OECD rationale for the key competencies is future focused. We do need to keep that focus in front of us while we work at their implementation. But what do we mean by “a successful life”? And how much do we want to critique what we mean by “a well functioning society”? That question has already come up in earlier talk today. I really like David Perkins’ quote here:

We would like youngsters, and indeed adults, to become alert and thoughtful when they hear an unlikely rumour, face a tricky problem of planning their time, have a dispute with a friend, or encounter a politician’s sweeping statement on television (Perkins, 2003, p.1).

Some of you will know his work as an expert on the teaching of thinking. So I have come back in a circle to where I started this morning. Perkins’ comment alerts us to a transfer challenge. If we want people to take these types of competencies beyond school, then they are going to need to be translated into contexts that don’t necessarily relate to what we might think of as the subject matter of school. One of the challenges is going to be to see ways to teach that let students know that this isn’t just “school stuff”. These are competencies you can use all your life, not just in your school life. I think that is a pretty powerful challenge. I really like the sorts of questions that Alan posed in his earlier address about aspirations and how we transform the curriculum. I hope my questions today will add to that conversation.

References


Why Key Competencies Matter for Student Development

Cathy Wylie
New Zealand Council for Educational Research
Tena koutou katoa

I am coming at the key competencies from a rather different angle from the two speakers that we’ve heard so far. I am coming at it from the point of view of the evidence we have from the longitudinal Competent Children, Competent Learners study. These things that people are talking about as if they are new to the curriculum, if we look at how children develop over time, we actually discover that they’re essential to the development of children/learners. If we don’t attend to them from an early age, we’re actually stunting the growth of our kids and young adults and the adults that they are going to be, who are going to sit in rooms like this and have conversations that we hope will be deep.

Evidence

Evidence from the longitudinal Competent Children, Competent Learners study:
• How attitudes & skills support the traditional 3Rs—and vice versa
• Activities and practices that support both

What I want to talk about is how important it is that if we are going to have in-depth conversations we start to address the actual relationships of the key competencies and what we’ve thought about as being the work of schools—the three Rs—from a very early age, because they’re not separate, they go together and that is one of the very strong messages that is coming out of the work we’ve done in the Competent Children, Competent Learners project.

So that’s the angle that I am coming at today, which is slightly different from what you’ve heard so far. Like Rose, I am a pragmatist, and I keep thinking about how we move from where we are, to where I think we ought to be. So the implications that I am going to draw from the work are in some ways quite pragmatic, and I hope they seem modest enough not to frighten anyone, but maybe they are frightening, I don’t know, you’ll let me know!

So this talk is focused around the evidence from the longitudinal Competent Children, Competent Learners study and it’s really about how the attitudes and skills that we called “attitudinal competencies” in the study and that are related to some of the key competencies as they are now defined, are related and support the cognitive competencies and vice versa—a very important point.

It is also about the evidence that’s come through from this study and other studies about the activities and practices that support them both. And there’s a lot of stuff coming through from our study about things that go on out of school, as well as inside school and inside early childhood education, that start, I hope, to support the kinds of things we can be doing inside the curriculum. The sorts of things that both Alan and Rose have talked about as approaching the curriculum differently and not seeing it as giving up so much, as coming at it differently, and I think it can be done. I think it can be done with the right policy frameworks in place: I don’t think it would be done otherwise.

Implications

• The value of integration of activities (or “two for the price of one”)
• The importance of rich opportunities to learn
• The importance of support for early opportunities
• The importance of knowing what we are doing

The implication of the work that I’ll talk about today is the value of integrating activities: back to the old phrase “two for the price of one”. This is really what’s it about. It is not a choice of one or the other; we’ve got to have both and it’s really thinking about the sorts of activities that will promote growth in both.

I talk a lot about the development of habits. Rose and Alan talked about the importance of practice and about the embedding of things, and it’s really about what sorts of activities and guidance embed these
things so that they become part of who we are, part of our identity, part of the way we approach the world just naturally. I think habits is quite a good, if old-fashioned, word but it makes a lot of sense to me because it encapsulates both skill and dispositions.

It is important to have rich opportunities to learn and that’s doubly important for those who are disadvantaged in our society. That’s where the social justice element comes in for me—trying to make sure that we have those rich opportunities right across the board, but especially for those who come from poor homes.

It is important to have support for early opportunities. Because we follow children from the age of near five, we know that the kids who were advantaged early on or had rich opportunities are the ones who can carry that through more easily than others.

And the importance of knowing what we’re doing, which is a very simple thing, but I think comes back to our work as teachers, to look at what it is that we are providing in a way that lets us see—not just ticking things off, have we covered this, but have we actually provided these opportunities and I have some suggestions for that at the end because, like people at the table I have been sitting at, assessment is really, really important to our ability to embed this in the curriculum.

<table>
<thead>
<tr>
<th>What is the Competent Children, Competent Learners project?</th>
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</thead>
<tbody>
<tr>
<td>• The youngest of New Zealand's three large longitudinal projects following children over time</td>
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<tr>
<td>• Also the smallest—a sample of around 500</td>
</tr>
<tr>
<td>• Funded by the Ministry of Education and NZCER</td>
</tr>
<tr>
<td>• Education focus, rather than health or justice</td>
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</table>

What is the Competent Children, Competent Learners project? Thanks to the Ministry of Education which has funded most of the work on the project, there’s a nice summary booklet in your folders which will give you a lot of detail about the Competent Children, Competent Learners project and the main findings from our age-14 phase, which was just released about a fortnight ago, so I won’t go very much over the project now. It’s a longitudinal project, with an education focus. We’ve followed children from age near five, when they were in their final early childhood education setting. We’ve just finished the age-16 data collection, and are starting to analyse the age-16 data. We’ll be talking about that next year.

<table>
<thead>
<tr>
<th>Competent Children, Competent Learners project</th>
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</thead>
<tbody>
<tr>
<td>• Data gathered from the sample themselves, parents, and teachers</td>
</tr>
<tr>
<td>• Started with children in their final early childhood education service in the Wellington region in 1993</td>
</tr>
<tr>
<td>• Reports covering age near-5 to age 14 on the Ministry of Education (<a href="http://www.minedu.govt.nz">www.minedu.govt.nz</a>) or NZCER websites (<a href="http://www.nzcer.org.nz">www.nzcer.org.nz</a>)</td>
</tr>
<tr>
<td>• Starting to analyse age-16 data—reports in 2007</td>
</tr>
</tbody>
</table>

Now why did we have the prescience to call our project Competent Children, Competent Learners? Anne Meade and I started the project together and we were looking first of all at the impact of early childhood education. Once you start to look at the impact of something, you have to think well what is it supposed to be doing, what is its purpose and you think, OK, early childhood education is at the start of learning, so surely there has to be something about developing children who are lifelong learners, who pick up the ability to learn. So we had to think what it is that makes it possible to learn.

So we started getting interested in going beyond the three Rs. At that stage most people evaluating early childhood education just simply looked at, usually, literacy or teacher grades when they got to primary school, or they looked at social skills. But we went broader than that because we were thinking what we wanted these kids to be like as adults. We actually came down to something very simple: “We’d like
to be living next door to them”, and once you start to think about what that really means—we weren’t just talking about whether they had a noisy motorbike or not, we were talking about attitudes and values and knowledge.

So we started with early childhood education setting the frame, beginning to set in place habits for learning, both as children and as adults, and the ability to participate in our society, both the social and work worlds.

The attitudinal competencies that we thought about—there were five main areas and they do relate to what had emerged as the key competencies in New Zealand—there’s communication; there was perseverance; self-management which we took in a rather narrower frame than Rose has outlined to you and I much prefer her approach; and social skills. Communication in the project refers to both listening and speaking skills—both are very important.

<table>
<thead>
<tr>
<th>Attitudinal competencies</th>
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<tbody>
<tr>
<td>• Communication – KC: relating to others, managing self, participating and contributing</td>
</tr>
<tr>
<td>• Perseverance – KC: managing self</td>
</tr>
<tr>
<td>• Self-management – KC: managing self</td>
</tr>
<tr>
<td>• Curiosity – KC: thinking</td>
</tr>
<tr>
<td>• Social skills – KC: relating to others</td>
</tr>
</tbody>
</table>

The cognitive competencies we looked at were literacy, both reading and writing. We looked at mathematics and we also looked at what we called logical problem solving, which is seeing patterns and being able to complete patterns.

<table>
<thead>
<tr>
<th>Cognitive competencies</th>
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<tbody>
<tr>
<td>• Literacy (reading, writing) (linked to KC: using language, symbols, and texts, thinking)</td>
</tr>
<tr>
<td>• Mathematics (linked to KC: thinking)</td>
</tr>
<tr>
<td>• Logical problem solving—non-verbal; patterns (linked to KC: thinking)</td>
</tr>
</tbody>
</table>

So that’s just a bit about the Competent Children, Competent Learners project and what our competencies were and I want to look now at the relationships between those attitudinal competencies. We have five main areas there. Both Rose and Alan have spoken about the danger of fragmentation, the danger of seeing these things as existing quite separately from each other and needing a separate assessment and I think that is one of the dangers as we move into this area.

One of the things we found in our study was that there are very strong correlations between those five areas that I mentioned. In other words they do overlap, you don’t have to think about taking each one of them separately and teaching it separately or assessing it separately—they do overlap.

More than half the correlations are .75 or more: very strong. There are two core twins, or I think of them as the core twins—perseverance and communication. These are two competencies that are really worth paying attention to when we think about learning tasks, learning strategies, and work with children.

How do the attitudes develop over time? One of the great advantages for longitudinal study is that you are not just looking at how things correlate at the time. If we look at someone as a five-year-old, how does that correlate with the way they behave in the world, act in the world, acting—being active rather than passive—at the age of 14?

Well, the correlations are lower when we look across time, but they also get stronger as children grow older.
The development of attitudes

- Correlations between attitude scores for the same individual start at 0.5 between 5 and 6, reach 0.66 between 12 and 14
- More variation over time than for cognitive competencies (0.72 between 5 and 6, reach 0.90 between 12 and 14)
- Difference reflects greater contextual nature of attitudes

There are some patterns in the stability or growth or change in competencies over time. Young people who improved their performance over time from an initial low level tend to improve gradually. I think this is very important. We find this in both the attitudes and the cognitive competencies. We have a big focus on the transition to school, and the first year at school. We want to really push the kids on and we think we get them over the post, we do the six-year reading net and we find that they’re over there, we can forget about worrying about them: well we can’t. I think from our study we’re finding that we have got to keep paying attention to kids and especially those who move very fast in their first year of school from a low base. They often fall back later, can’t maintain that initial boost.

People also keep worrying about the transition to secondary school. We have found that the transition to secondary school is associated just as much with improvements in young people’s attitudes as with declines in their attitudes. It is no better or worse than any other two-year period in kids’ lives. We need to be worrying about kids’ development of attitudes or key competencies, call them what you will, at every stage during their schooling, and not just over a change between one schooling type and another, it’s all the way through.

Just to give you an example of the patterns of consolidation over time. We do find that those who start off school with higher levels of performance are likely to maintain high levels at 14, particularly in maths. The stability of high performance over time is about the same for attitudes as it is for reading. It’s harder for those who started at a low base to be scoring above the median in our attitudinal assessments, than it is for those who started at a high base.

<table>
<thead>
<tr>
<th>Patterns of consolidation</th>
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<tbody>
<tr>
<td>High performers at age 8—above median at age 14:</td>
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<tr>
<td>87% mathematics</td>
</tr>
<tr>
<td>94% reading</td>
</tr>
<tr>
<td>58% attitudes</td>
</tr>
<tr>
<td>Low performers at age 8—above median at age 14:</td>
</tr>
<tr>
<td>9% mathematics</td>
</tr>
<tr>
<td>15% reading</td>
</tr>
<tr>
<td>23% attitudes</td>
</tr>
</tbody>
</table>

Low performers for attitudes more likely to fall back over time.

If we compare stability from ages 5 and 8 to age 14 for the high performers, we find that about the same proportion remain stable over that period, but for the low performers, it is only about half of them. In other words, things have really hardened up for that group by the age of eight. Things are getting stuck
at a low level for that group and that’s the group that we say we are worried about in New Zealand, our tail of under-achievement in the international tests by which we all seem to measure ourselves these days. So just hold that in your mind because I’ll be coming back to that.

I’ll look now at the relationship between the attitudes and the cognitive competencies. They are two sides of the coin, not two completely different realms. Not one realm that we might not have time for: we have got to have time for both of them.

Two important points. First, the correlation levels between the attitudes and cognitive competencies are lower than between the attitudes themselves. Second, the two kinds of competencies are also quite distinct. We can’t reduce one to the other. When we do factor analysis we don’t find that we can simply say that a kid who’s good at reading and maths is always going to be good at persevering or communicating. We don’t find that nice, neat link.

This tells us that we’ve actually got to pay attention to both at the same time. It can’t be a choice of one or the other and that’s why it matters for children’s development, that we can’t just think of the traditional curriculum in terms of the three Rs in a knowledge content as Alan was talking about. That won’t do. We have actually got to be thinking about how we do both at the same time in our schooling.

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**Two sides of the coin**

- Attitudinal and cognitive competencies are related (correlation levels range from 0.34 to 0.57)
- Also distinct—not reducible to single factor
- How does this matter for children’s development?

Continuing the theme of two sides of the coin.

**Two sides of the coin**

- Attitude levels related to previous cognitive levels
- Current cognitive levels related to current attitude levels
- Spirals of growth
- Or circles of isolation/resentment/defeat

Because we can follow relationships between competencies over time, we can see whether one comes first. We find that the attitude level that you have does feed your cognitive level at the same time. If I am persevering does that help my maths? Well, yes it does. Does it help my maths two years later—no it doesn’t, not nearly to the same extent. And one of the interesting things that we are finding is that it’s really important to have cognitive growth early on, because that feeds the attitudes at the next level.

**The importance of growth in reading & maths for attitudes**

<table>
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<tr>
<th>Age 5 Cognitive</th>
<th>Age 6 Cognitive</th>
<th>Age 8 Cognitive</th>
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<tbody>
<tr>
<td>Attitudes</td>
<td>Attitudes</td>
<td>Attitudes</td>
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</table>

You’ll see in this diagram, the arrows from the age-5 cognitive level feeds both the cognitive and attitude levels at age 6. The attitudes are only working on the cognitive at the same level.

So it is a bit of a complex picture, but it tells us that we have to really make sure that kids are getting some success early on in what we think of as the cognitive areas of school. Bear in mind that I am also saying
that these two things aren't entirely separate, so we have to think about ways, tasks/activities that embed those two things together.

To give you some examples of how this unfolds through time: when we look at absenteeism at age 14, the kids who are most likely to be absent have lower scores on the cognitive competencies from ages near-five and six. It starts very, very early on. Their scores on the attitudinal competencies start to be lower only a couple of years later, at age 8. So that lack of early understanding, being able to engage with maths and literacy, perhaps in the way it was taught—who knows—has long-term effects. But that's the pattern that we are seeing at the moment with the traditional curriculum.

Another example—motivation for all school work at age 14. We find that those with low motivation levels also have low competency levels as far back as age five for maths and reading and then we start to see the attitudinal things kick in and also the ways that students are spending their time—the habits, the activities. Those kids have got lower motivation towards school work at age 14, have had lower levels of reading enjoyment, not just reading but enjoyment of reading, and have had higher levels of involvement in bullying from age 10. What that says to me is that they have turned off the work of school because there's nothing in schooling for them. And they are getting themselves ground down into something which is quite circular. There isn't a spiral of development through activities and engagement, there is a repetition, because the other thing has become too hard for them. It's closed off, they haven't developed the habits and the knowledge that can propel them forward.

<table>
<thead>
<tr>
<th>e.g. motivation toward schoolwork at 14</th>
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<tbody>
<tr>
<td>Students with lower levels of motivation at 14 have:</td>
</tr>
<tr>
<td>Lower competence levels as far back as age 5 for mathematics and reading</td>
</tr>
<tr>
<td>Lower levels of reading enjoyment, homework completion from age 10</td>
</tr>
<tr>
<td>Higher levels of involvement in bullying from age 10</td>
</tr>
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</table>

**Relations between competencies and experiences**

The relations between competencies and experiences are what I want to get on to next. What are the sorts of activities, what are the sorts of experiences that will help students develop into learners that will help them develop these attitudes as well as the cognitive competencies?

We have found some insight from the aspects of early childhood education that are still evident statistically at age 14: these are around the interaction between staff and children around activities.

<table>
<thead>
<tr>
<th>Relations between competencies and experiences</th>
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<tbody>
<tr>
<td><strong>What endures from ECE experience</strong></td>
</tr>
<tr>
<td>☐ Staff-child interaction around activities</td>
</tr>
<tr>
<td>Staff-child interaction depends on:</td>
</tr>
<tr>
<td>☐ Good content knowledge</td>
</tr>
<tr>
<td>☐ Approach</td>
</tr>
<tr>
<td>☐ Knowledge of child</td>
</tr>
</tbody>
</table>

Staff-child interaction is a core part of good teaching at whatever level you are working at. It depends on good content knowledge of course, but it also depends on the approach to the child, whether you're pitching it right for the child and you know the child. Do you know what interests them, can you build on those interests, can you guide them to the activities that will maintain and enhance that interest?

The aspects of quality that continue to contribute to competency levels are all aspects that involve the use of language. In early childhood education, it wasn't just staff sort of pointing kids at an activity and
saying “Oh, it is about time you went on the puzzles”, but actually guiding them in the use of those puzzles and using language and asking questions, so that the kids have to also use language and practise the use of language.

In the Competent Children, Competent Learners study, we’ve asked about kids’ activities out of formal education: first by asking parents about their kids’ activities, then when the kids were older, by asking the kids themselves what it was that they were doing in their leisure time.

| • Positives: |
| Activities that are similar to school work—literacy and maths (informal) |
| Performing arts |
| Music |
| At younger ages: board games, cards |

No surprises that the positive experiences are activities that are similar to school work. But we are talking about informal experiences, we are not talking about parents sitting down and drilling kids, we are talking about the use of literacy and maths in everyday life and coming to the habit of them, the practice of them, this is part of who you are, the identity formation.

Performing arts and music involve social interaction, goals, perseverance, the idea of symbols, and also give you a sense of enjoyment and what it is to achieve a goal.

At younger ages activities that are positively related to competency development are things like ball games and cards. What do they involve? They involve social interaction. Sometimes you’re pitting yourself against others, sometimes you’re teamed up and pitting against another group of people. They involve adults often sitting down with kids, but also kids sitting down with each other and having to use language, having to strategise, having to think about the best move to make or the situation that you find yourself in, or how to beat somebody else off.

All of these experiences have got a number of different dimensions to them. There’s not just one key competency or just one aspect of knowledge, but a number of intertwined aspects. These activities are really rich for kids’ development, and it’s the kids who have had these rich learning opportunities who can carry them with them as they grow, not as bundles of knowledge, but as habits and ways of living and ways of trying things out.

| Relations between competencies and experiences |
| • Value of developing interests |
| • Higher competency levels if children had a favourite activity at age near-5 |
| • Wilton playcentre—work on children’s schema |
| □ Parent looking to see what patterns |
| □ Parent supports activities where child can follow interest |
| □ Parent notices increased persistence, communication |

One of the things that comes through very clearly in the Competent Children, Competent Learners study is the value of kids having interests, of developing interests. When the kids were five, we asked the parents what their child’s favourite interest was. I found it fascinating that it was the kids whose parents could identify some favourite interest at that age, something that their kid really enjoyed doing that made them come alive, who on the whole had higher competency levels than the kids for whom parents just said “Oh they like running round, they like physical play”. Now it might be that those parents didn’t know their kids very well and that’s part of that whole equation of how the kids develop, it is through adult support, adult interest, adult use of language, but it also might indicate that those kids actually hadn’t developed interests. There hadn’t been enough for them to get their minds into—minds and bodies.
So it’s really important that we encourage kids to have interests. I don’t mean in a stifling kind of “Oh my God, my kid’s got to develop an interest and I’ve got to thrust them into five different after school activities”. I don’t think that’s important at all. It’s not the quantity, it is the quality, it just has to be one or two things that really appeal and that you can support a kid in.

My colleague Linda Mitchell has been working with Wilton Playcentre in the Centre of Innovation work which is being funded by the Ministry of Education. Parents at this playcentre have been working on children’s schema, patterns of interest or connection underlying different activities. For example, something like enveloping, which can include wrapping yourself in a rug as well as scribbling over things. There’s a whole lot of patterns that you can work out from what look like quite different activities that children do, and then support that pattern. And when parents did that, and talked to their children as they did the activities, or found more for them to do where they could pursue the schema that interested them, they noticed that their children developed increased persistence and communication skills. So we come to the two sides of the coin: these interests aren’t just content knowledge, but they are also ways of developing these good habits.

<table>
<thead>
<tr>
<th>Leisure use at age 14</th>
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<tbody>
<tr>
<td><strong>Sports players</strong></td>
</tr>
<tr>
<td>34%</td>
</tr>
<tr>
<td>More males than females</td>
</tr>
<tr>
<td>Lower enjoyment of reading</td>
</tr>
<tr>
<td><strong>Electronic-games—No strong interests</strong></td>
</tr>
<tr>
<td>24%</td>
</tr>
<tr>
<td>Higher proportion of low-income, Māori &amp; Pacific young people</td>
</tr>
<tr>
<td>Lowest enjoyment of reading</td>
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</table>

At age 14 we were able to identify four different clusters of interests that the 14-year-olds had at that time. We had the sports players: about a third of our sample were in this category. We had what we call the electronic games/no strong interests group. I should say that the sports players had a similar level of playing electronic games as the kids in this group, but they were also interested in sports. So there was something in which they had an interest that called them out, that enabled them to develop and display. I shouldn’t say just display because that implies that there’s always an external reason, but they had an internal interest and motivation towards. But for the other group, other than quite a high level of playing games, there is nothing that’s calling these kids out or challenging them or allowing them to feel that they are getting towards some goal and that they can feel proud of themselves. So this is the group that we need to worry about. They have the lowest enjoyment of reading—and enjoyment of reading is one of the best signs that kids are positively engaged in learning.

<table>
<thead>
<tr>
<th>Leisure use at age 14</th>
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<tbody>
<tr>
<td><strong>All-rounders</strong></td>
</tr>
<tr>
<td>Regular sport, exercise, reading, performing arts</td>
</tr>
<tr>
<td>28%</td>
</tr>
<tr>
<td>More females than males</td>
</tr>
<tr>
<td>More very high-income, Pakeha/European and Asian young people</td>
</tr>
<tr>
<td>Higher enjoyment of reading</td>
</tr>
<tr>
<td><strong>Creative interests</strong></td>
</tr>
<tr>
<td>Performing arts, making things</td>
</tr>
<tr>
<td>Irregular sport and exercise</td>
</tr>
<tr>
<td>13%</td>
</tr>
<tr>
<td>High enjoyment of reading</td>
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</tbody>
</table>
The two other groups that we had were the all-rounders, and a smaller group—the creative interests group—about 13 percent of the sample. Basically, the kids in these two groups are fine, they have got interests that call them out, interests that use language, that can involve them with other people, so on all these counts they’re fine.

<table>
<thead>
<tr>
<th>The cost of no interests</th>
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<tbody>
<tr>
<td><strong>Most vulnerable group:</strong></td>
</tr>
<tr>
<td>Electronic games—no strong interests</td>
</tr>
<tr>
<td>Lower cognitive &amp; attitudinal scores</td>
</tr>
<tr>
<td>Low levels reading enjoyment</td>
</tr>
<tr>
<td>Lower levels school engagement</td>
</tr>
<tr>
<td>Higher levels risky behaviour</td>
</tr>
<tr>
<td>Higher levels family friction</td>
</tr>
<tr>
<td>Heavy TV watchers</td>
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</tbody>
</table>

Our most vulnerable group are those who don’t have any strong interests outside school. And they’re not much hooked into school either. So there’s nothing challenging or affirming—there’s what looks like a vicious circle. This group tended to have lower cognitive and attitudinal scores at 14, low levels of reading enjoyment, they’re not engaged in school, and they’ve got high levels of risky behaviour both in and out of school. There’s more family friction at home so that’s not working terribly well and they’re heavy TV watchers, a largely passive way of spending time. You feel as if they are rubbing up against things, and it’s hard for those around them because there’s nothing for those who are working with them to try and get a handle on. These young people are a deep challenge to us all.

<table>
<thead>
<tr>
<th>Relations between competencies &amp; experiences</th>
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<tbody>
<tr>
<td><strong>Implications</strong></td>
</tr>
<tr>
<td>Importance of developing key competencies—self-regulation, &quot;thinking&quot;</td>
</tr>
<tr>
<td>Importance of developing things to think through, that encourage self-regulation</td>
</tr>
<tr>
<td>Importance of &quot;interests&quot;</td>
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</table>

So our findings reinforce the crucial nature of developing the key competencies, and starting early. Adults need to think about giving kids things that they can think and grow through. You don’t just think in a vacuum, you’ve actually got to have something to put your mind into and therefore I come back to the importance of interests and not in a ticking-off manner, but as things that will deeply call you out.

<table>
<thead>
<tr>
<th>Two for the price of one</th>
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<tbody>
<tr>
<td><strong>Interests = activities that include:</strong></td>
</tr>
<tr>
<td>✓ Interaction</td>
</tr>
<tr>
<td>✓ Language, symbols, patterns</td>
</tr>
<tr>
<td>✓ Have goals, challenge</td>
</tr>
<tr>
<td>✓ Ask persistence and concentration</td>
</tr>
<tr>
<td>✓ Give rewards</td>
</tr>
<tr>
<td>✓ Provide enjoyment</td>
</tr>
<tr>
<td>✓ Experience of &quot;flow&quot;</td>
</tr>
<tr>
<td>✓ Build confidence</td>
</tr>
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We can look at what we’re offering and what children—students—are doing in terms of whether their activities offer “two for the price of one”. I think these dual value activities include interaction, language, symbols, and patterns. They have goals and challenge, and offer tangible reward for persistence. They also ask us to concentrate and not just fritter our minds away. So it isn’t just things that are easily mastered. They give rewards—I think it’s really important that we have the habit of what it is to have a reward that we have earned ourselves and therefore to want it. They provide enjoyment, they provide the experience of flow, of being totally absorbed in what you are doing and so not distracted about whether a friend is text-messaging you, whether you’re popular. That’s irrelevant because you are absorbed in what it is that you are doing, you’ve got that strength. And they build confidence.

So from thinking about activities outside school and in early childhood that are positive for children’s growth, we have some insight we can apply to thinking about the activities we offer in school.

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<th>What makes a difference?</th>
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<tr>
<td><strong>Engagement in learning at age 14</strong></td>
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<tr>
<td><strong>Linked to positive learning environments:</strong></td>
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<tr>
<td>- Good feedback</td>
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<tr>
<td>- Relevant teaching</td>
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<tr>
<td>- Challenging work</td>
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<tr>
<td>- Learning at students’ pace</td>
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<td>- Students aren’t overtly compared</td>
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What makes a difference—I want to get on to this now—what can we do as adults and teachers? Positive learning environments were linked to higher levels of engagement in learning at age 14. What teachers do does matter. Our findings are consistent with other research, so we have got some really powerful knowledge now for education. We know that good feedback is important, so we have to think about what opportunities we have to create that good feedback. We know relevant teaching is important. It’s important that there’s challenging work, that relevancy isn’t just a matter of providing something which is easy, but actually something which has got teeth in it as well. Important that we learn at students’ pace and that students aren’t overtly compared—I think that’s quite an important one. I think we are relatively lucky in New Zealand that we don’t do that all that often.

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<td><strong>In positive learning environments:</strong></td>
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<tr>
<td>- Students like teachers</td>
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<tr>
<td>- Students are positive about a subject</td>
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<td>- Students are positive about their work</td>
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In positive learning environments, students like the teachers. This is also important for the teachers because it helps the teachers feel more positive about the students and give what they need to give. Students are positive about a subject, and they are positive about their work. So it’s worth creating a positive learning environment, both for the students and the teacher.

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<tr>
<td><strong>Student engagement in school also linked to:</strong></td>
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<td>- Home support (as a whole, not just for school)</td>
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<td>- Supportive friendships</td>
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<td>- Interests that can extend</td>
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There’s another thing which I think is very important. Students’ engagement in school is not just a function of what goes on in school. We can’t use this as an excuse not to create positive learning environments and the conditions for them. But we do have to think about these other environments, and ways we might develop interests or confidence or trust that can gradually shift opportunities and ways of spending time for those who are disengaged.

**What makes a difference?**

- Students come with “the past” but:
- Their reaction to current
  - learning environments
  - teachers
  - views of subjects
  - carry less of past with them

**IMPORTANCE OF:**

- ONGOING EFFORTS
- OPTIMISM

At age 14, students definitely came to school carrying stuff from the past—these habits, these identities. But one of the very encouraging things that we also found out was that the reaction to current learning environments, teachers and their views of subjects, carried less of the past with them. In other words, teachers can still make a real difference here.

I am very encouraged by the work of James Catterall. He did some work in Californian schools looking at students whose primary teachers thought would fail high school and how many of them actually went on to prove their teachers wrong. That’s important: that we don’t give up on the students who may be harder to teach if they have got to secondary school with a lot of bad habits or unengaged habits. They are not unredeemable and they do—many of them—want to get their teeth into something. It’s really trying to make sure that we provide them with those opportunities. So I think it’s important that we retain our optimism as adults for the students in our care.

And I was also interested in a very recent Finnish study that I came across in relation to teaching that encourages engagement, and that might bring students out of a narrow circle. This was actually a study at the beginning of primary school, where they compared classes where maths teachers emphasised motivation, with those that just emphasised the maths tasks. Students in classes whose teachers were giving a priority to developing a love of learning actually did better on maths than those where they just stuck with the traditional maths. So it was a really nice study of how two for the price of one actually pays off more than just simply saying “We have actually got to stick with the three Rs, got to stick with this because this is what the kids have to learn.”

**Are we providing a positive environment?**

- Formative use of assessment
  - But can we assess the key competencies?
    - Issues of context
    - Issues of time
    - Issues of fragmentation

Are we providing a positive environment? I think it is important that we look at what we are doing in classes, that we don’t just assume we are doing good things, that we find ways to stand back from it and this gets into the formative use of assessment, because that’s what we should be doing. And then the question arises “Can we assess the key competencies?” Margaret Carr and I did some work around whether you could assess the key competencies with the school entry assessment a couple of years ago for the Ministry of Education. We came up against some of the same issues that Rose has
spoken of. There is the issue of context, that the key competencies are quite contextual sometimes. You can’t necessarily know that somebody who’s going to persevere in one environment is always going to persevere in another. (I don’t know that they always should.)

There are issues of time. If you did assess each of the key competencies, reading, and maths separately, you’d probably go mad. So people wouldn’t do it, or they would do it in a very cursory way. The difficulty is that if things aren’t assessed, then people won’t pay them attention, because of the weight that assessment now carries. Rose has raised the critical issues of how we measure progress in the key competencies, since even more than the 3Rs, progress is not a linear matter, with clearcut levels.

And there are issues of fragmentation. We know from our study that the key competencies overlap. They are inter-related.

So there are all these issues about can we assess the key competencies as well as should we? Would that actually mean that we have less time for the real work of teaching and learning? Both Rose and Alan have suggested that students play more of a role themselves in assessment, which I think is a very positive and creative way to go.

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<tr>
<td><strong>An alternative to individual student assessment:</strong></td>
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<tr>
<td>Assessing Opportunity to Learn</td>
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<tr>
<td>Seeing what opportunities for &quot;two for the price of one&quot; activities in your classroom</td>
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<tr>
<td><strong>How can you know?</strong></td>
</tr>
<tr>
<td>□ Self/peer analysis of &quot;opportunity to learn&quot;</td>
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<tr>
<td>- Use exemplars, rubrics, matrices</td>
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<td>- Student surveys, discussion, presentations</td>
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These issues (complexity) got Margaret Carr and I thinking about a different approach, an alternative to individual student assessment. Why do we think that everything has to be assessed on an individual basis? Instead, what about assessing the opportunity to learn? And using that as the starting point for thinking about change in practice. Partly this approach arose out of the Competent Children, Competent Learners study. When we rated the quality of early childhood education environments, we developed some rubrics or exemplars of what, for example, a good early childhood education setting would look like if teachers were responsive to the children that they were working with and if they weren’t responsive. And there’s been a lot of work now, in recent years, about developing exemplars as a way of describing inter-related aspects, getting away from checklists and so forth. That really got us thinking that maybe it’s more important for teachers to look at their classes and think: am I providing the opportunity for students to learn what it is that I think is important for them—what we have decided in this school is important—both the key competencies and literacy and numeracy?

In terms of my pragmatic transition from the actual “now that we live in” to the ideal that we would like, tools that allow you to see if you were providing these “two for the price of one” opportunities for learning, may make sense. Development of these tools also provides opportunity for people across the education sector to work together on a shared project. This may be an idea; but I think it is important to develop these and have a shared set, which can be used by not just teachers, but also the Education Review Office.

Students could also take part in the development of shared exemplars or matrices. This would be consistent with the development of the key competencies. In thinking about the engagement of students in relation to exploring the opportunity to learn in our schools (and thus giving it more attention), I started with quite a traditional approach: student surveys. These can actually give us quite a quick fix sometimes of what is actually going in our class, compared to what we think we are giving them. But I agree with Rose that there is great value in involving students at other stages of the thinking and discussing of the opportunity to learn—and the use made of it.
The very preliminary matrix above could help start discussion of activities: aiming for ones that would end up in the top left quadrant, so we are not all over the mat trying to provide opportunities to learn that are not connected, and we are not simply providing ones that look as if they are saturated on one dimension, but are actually quite parched on another.

### Core curriculum – verb or noun?

- Rethink curriculum coverage—more in less
- Core = dig deep, through layers
  - Rich, not siloed
  - Understanding & delight

And that got me thinking about the core curriculum. I think it is about time we remember that “core” is a verb, as well as a noun, and “core” means to dig and to dig deep and to get down to the essence. I would like to think about to core rather than covering the core curriculum. Maybe if we thought that way, we’d be able to free our minds and think about a core that provides both sides of the same coin. So it is to dig deep and to dig through layers and to try and get something which is rich, to produce understanding and delight.

Understanding and delight may also be useful criteria. If you think back to Rose’s examples from the students, the learning they were talking of was not delightful, or yielding understanding. It was just “I have got to do this task as quickly as I can to get on to the next”. We all talk about a busy society, but that seems to me absurd. Kids don’t need to be taught how to be busy, they need to be taught to slow down and dig deeper and be getting a number of layers through how they dig deeper, rather than just simply lurching on to the next task.

### Implications

- The value of integration of activities (or “two for the price of one”)
- The importance of rich opportunities to learn
- The importance of support for early opportunities
- The importance of knowing what we are doing

So finally, I think what comes out of our longitudinal study, the implications of this work, are that it is important to integrate activities, to think two for the price of one, rather than competing. It’s not key competencies versus core curriculum—think to core. The importance of rich opportunities to learn, starting from a very early age: there has been more attention paid in recent years to what parents can do with children, and it has been good to see some of the campaigns from the Ministry of Education, but we probably need to be going further.
I think we do need to think about developing together the tools that enable us to see “Are we providing these kinds of learning opportunities and support for students who will develop these habits and the enjoyment?” That students won’t be doing some activity just because some adult says they have got to do it, but because they are actually getting enjoyment from it and they are getting a sense of life and understanding from it, and that they value life and understanding. To come back to the point “What is the rationale for the key competencies?” I would hope that it is not just utilitarian, how can I serve the economy or how can I serve society, but also that I am going to enjoy being alive and enjoy being part of a contribution that I make with others.
PANEL DISCUSSION

A Future Focus: What are the implications for research, policy, and practice?

Presenters

Mary Chamberlain  
Ministry of Education

Jane Gilbert  
New Zealand Council for Educational Research

Garrick Cooper  
New Zealand Council for Educational Research

Margaret Carr  
University of Waikato

Marg McLeod  
Wellington Girls’ College
Mary Chamberlain  Ministry of Education

Tena koutou katoa.

I sense a great deal of excitement about key competencies which I also share and I think the thing that excites me most is their potential to make a difference to our kids and enable them to be better than we are.

I was talking to numeracy facilitators the other day and they were saying the evidence indicates that all kids are capable of achieving Levels 1 to 3 in the maths curriculum with good teaching. But they then went on to say that achieving Level 3 of the maths curriculum is a higher level of achievement than most New Zealanders currently have.

And that got me thinking. How might our communities be different if all New Zealanders were strong in the key competencies—what might that look like? This links to the rationale of why we should have key competencies. It’s so that we can all be the best we can be. It’s not just about the economy and society. It’s so we can all enjoy and lead the fullest life we possibly can. But then it’s also so that we can all contribute the best we can to our community, to society, and to the economy.

I’ve heard comments today about policy frameworks being needed to support key competencies if they are to make any difference; and I heard that there was tiptoeing around the issue of assessment. And that might be because we don’t actually know the answers yet. And I heard that people were talking about the need to develop rich progressions and pictures of the key competencies and again we haven’t done that. If we knew what they looked like, we would be sharing that thinking with you instead of just the big ideas.

So, I want to make two points: one is that we have to continue with the participatory process that we’ve used right through this curriculum development because it is not about what the Ministry will do, or what a teacher might do, it is about how we might all work together to develop these competencies. And the other is that I think if we really want competencies to make a difference, we have to think about what we know from change management literature, because we know there are some key things that need to happen if they are not just to fall over in the first rush of enthusiasm.

Have we got a strong enough vision? Is the vision in the draft curriculum strong enough? Has it captured the essence of what we want key competencies to be? And what more do we need to do? What rich pictures can we develop through practice and how can we share those? Often change initiatives fail because of lack of communication. Maryanne Mills and I have talked to hundreds and thousands of people around the country and we think everybody knows about key competencies and the curriculum projects, but often we still have teachers asking “What do you mean, are you changing the curriculum? What are these key competency things?” We think we have communicated lots but we probably need to multiply our efforts ten-fold.

The need for a strong guiding coalition comes through change management literature. The bigger the change, the more people that you need guiding it. All of the people here today—NZCER, Margaret who’s on the panel, and her colleague Sally Peters, who have been working with links between early childhood and schools—are all part of the strong guiding coalition leading key competencies.

Celebrating early success is also important. We have four clusters of schools at the moment, about 300 teachers in all, playing around with the key competencies, taking time, thinking about how they might provide support for developing them. Thinking about how they might provide the conditions that promote them in their schools. How are we going to celebrate and share what they find out?

And we have to overcome the barriers that Rose Hipkins talked about. She talked about time, she talked about “well we are already doing it”. She talked about “if the competencies are not assessed we will just ignore them”. And there are bound to be other barriers that we need to think about and address.

And if we really want to embed key competencies, we will have to see them as part of the way we do things, habits and practices, and ways of living.
Kia ora koutou.

I am going to raise some challenges and see what you make of them.

This is meant to be provocative because I think there are some questions that do need to be asked. There are some things about the key competencies and the curriculum that I think we need to face head-on, otherwise they are likely to be resisted and opposed.

So the first thing I would like to say is that I think the key competencies are important because they lay the foundations for, they give permission for, and they foreground the kinds of things that we need for 21st century learners, the people who are going to have a successful life and work in the knowledge society. They’re student centred rather than knowledge centred. They allow a focus on doing things with knowledge, rather than knowledge for its own sake, and they lay the foundations from which it is possible for schools to be knowledge-producing, rather than knowledge-consuming entities, which I think are all aspects of what’s needed for the knowledge society. I think that’s important, so that’s my first point.

The second thing I want to say is that I think it’s important that we don’t get distracted in the details of implementation and lose sight of the reason why the need for key competencies has arisen in the first place. As I understand it, the purpose is to build the kinds of dispositions in people that are required for successful life and work in the knowledge society. So I think it’s important not to lose sight of that as a big goal. The defining feature of the knowledge society is that knowledge has a new meaning. Knowledge doesn’t mean what it did in the past, it has got a new meaning now and I think the theorising we do about the curriculum needs to take that idea into account.

Somewhere in the literature that I read to prepare for this, someone said that the key competencies “overcome” the old debates about skills versus knowledge and so on, by integrating skills, knowledge, and attitudes in “performances”. Now I don’t think it’s quite as easy as that. I don’t think the divide between skills and knowledge is as easy to overcome as is represented in this literature. I also think there is a bit of a danger in getting mixed up between individual knowledge and disciplinary knowledge. That is, individual knowledge, the learner, and the knowledge that they are learning; and the disciplinary knowledge that underpins the curriculum. That’s what tended to happen in the whole constructivism debate that some of you might know about. Things got very confused and difficult.

Disciplinary knowledge is important and we need to think about that differently. One of the things that is important about this is that the knowledge that underpins the curriculum seems to be more or less conceptualised as kind of business as usual, the same sorts of knowledge we have always learnt, maybe tweaked a bit, but the same kinds of things.

That is something we need to talk about. What students learn and why they need to learn it has changed, and we need to take account of this and face it head-on. It will be difficult because we actually need a set of principles, a theory of knowledge to base this on, and it will be difficult because we haven’t had a good theory up until now.

But we do need a theory and I’d like to just illustrate why I think we need it by making one point. If we don’t deal with this, the key competencies will be resisted and they’ll be opposed by many secondary school teachers especially those in the traditional academic schools, and they’ll be opposed for very good reasons. When you look at the whole history of educational curriculum and where our ideas about education came from, we are going back thousands of years to Plato and so on, and then adding in the whole thing of equity and equal opportunity and so on. There’s a whole muddle of ideas that are all mixed up together in our thinking about what should be in the curriculum that we’ve never really resolved, but we have to resolve them now, otherwise we are just going to be locked into a debate about whether it is about skills or knowledge.
I think that a lot of people will read the key competencies as skills, skills as opposed to traditional academic knowledge, and therefore see them as having low status. And so they will want to resist them, because they will say we are “dumbing down” the curriculum—“lack of rigour, lack of standard”—all of those things that come up every time we try to produce change in the curriculum.

And so we need to start foregrounding this discussion with ideas about the sort of theory of knowledge, the kind of principles that are going to underpin the curriculum, alongside the debate about the key competencies. The two things need to happen together. We must not get immersed in implementing the curriculum and the competencies and leave discussion of our theories of knowledge behind in the too-hard basket, although it is quite hard.

The first picture is supposed to represent a viewer looking at the landscape of the curriculum and at the moment and in most secondary schools, the thing that is very hard to see past, is getting students so that they can gain entry to the university course that they want. Behind that is passing the assessments and the credits they need. The learning needs of the students and thinking about the future are in the background.

So if you imagine yourself the height of that person, you are not going to be able to see much at all of the things behind those letters, because they are right in the way.

So in the second slide, Person B is looking at the same landscape, but it’s turned around, so they are seeing the Learning for the Future part at the front and the university course parts at the back.

In the third slide, the idea that I want to leave you with is that Person A and Person B are looking at the same landscape, but they are seeing very, very different things in the foreground and background. A helpful way to think about this is to ask, “How could we build a bridge so that Person A and Person B can get up above this and look down on it and see all of those things at once so that their vision is not blocked by the thing that’s right in the foreground?”
Kia ora anō tātou!

I offer my comments from the perspective of someone who has been involved in kura kaupapa Māori or Māori-immersion education for over 10 years at a number of levels and a researcher in kura kaupapa Māori for over five years. I'll talk very briefly about the idea of taking the key competencies and trying to incorporate them into Māori-medium education, which I am guessing would be the next step once they have been debated and discussed.

“At first glance...there appear to be similarities”

Many of the key competencies and their descriptions are dispositions and skills that Māori have long valued in their society and are indeed what Māori-medium education is trying to develop in students. For example, “participating and contributing” involves taking an active part in a range of local, national, and global communities. Active involvement in one’s marae and tribal affairs is seen as the “norm” for Māori children in Māori-medium education. Ma pango ma whero ka oti te mahi.

Another example: “using languages, symbols, and texts”. Using a wide range of medium to communicate ideas and beliefs is evident in Māori culture from whakairo and tukutuku, to haka and waiata poi to other more subtle ways of communicating which are integral to communicating and interpreting.

You could draw other similarities with the other competencies.

“However…”

It needs to be said that the key competencies have their own history and genesis that are independent of Māori-medium education. This in itself is not a problem unless one attempts to transport these into Māori-medium education.

If this is the case, at some point these will have to be translated. It is at this point where problems arise. Those who are familiar with the debate around the Pītaiaio (science) curriculum document will be aware of this.

Let me give you two examples, taken from an excellent article written by Bruce Biggs on the problems of translation of another document in New Zealand history. Biggs cites a back translation to illustrate the problem of translating from one language to another. The following translations from English to Japanese and back to English produced:

• “angry raisins” from “grapes of wrath”;
• “license to commit lustful pleasures” from “liberty and the pursuit of happiness”. Both are fraught!

Using the first method you may be able to add an additional meaning to the host concept over time but it is more likely to be subsumed by the depth of meaning the concept already carries.

Using the second method requires time in order for those words/concepts to become accepted and used widely in the host language.

An additional issue that arises is that these are concepts that have been developed in a particular context that is independent of Māori-medium education.

A way forward is to look at some of the forms and types of Māori scholarship and analysis that are already in Māori society and attempt to use this as a basis of key competencies in Māori-medium education. There will be some similarities and there will also be some differences. If one of Mason Durie’s goals of Māori education is “to live as Māori” then I think we could add another one to that and that is “to think as Māori”. “To think as Māori” must surely be one of the goals of Māori-medium education.

I think the Māori discussion around the key competencies can occur alongside English-medium discussion and then with a discussion between the two. In fact, what you might get in the future is some type of localised key competencies for Aotearoa New Zealand which have a flavour of this country, and which would sit alongside Māori key competencies as conceptualised by Māori.
Key competencies: A shift in mindset?

I have three points that I would like to make:

- It may not be business as usual.
- Key competencies are more than skills.
- All key competencies ought to include critique.

It may not be business as usual

Thinking back over ten years in early childhood there has been an enormous shift in mindset and I think that these new key competencies are going to cause exactly the same sort of thing. It may not be business as usual!

I think that one of the things that helped us to come to grips with this very, very different way of thinking about curriculum, was first of all some time to play. Nobody imposed any kind of assessment procedures on us; people said just work with these and talk about them.

Another thing was that there was a lot of professional development and some of the best professional development was when teachers could get together and say, “Look I’ve tried this and this seems to be what the relating to others, or what contribution is about.” So, coming together was what was happening for the children and the opportunities for teachers to share ideas with each other with the guidance of very good professional development leaders. That was a really important aspect of it.

Increasingly over that time, people were starting to document what was happening and they were documenting in many ways. Questions about the key competencies were going up on the walls—this is what some teachers in schools in New Zealand are already trying. In England and in the USA as well, thinking of the work described by Debbie Meier in The Power of Their Ideas. And in early childhood, we are now working a lot with portfolios. The stories that are in those portfolios go home, they go to grandparents, they get emailed across the world, but what is particularly happening is that the community is now involved because there’s something to talk about—it’s something concrete, it’s something that we can all start to talk about.

The key competencies are more than skills

They are action competencies and so we have to see them as something different. Inclinations, attitudes, and values transform skill into action. We need to remember that if we want students to do things differently, we have to ask them to be different people. We have to look at their interests and what kind of people they aspire to be, in order to make that connection with what they are doing. The early childhood curriculum talks about learning dispositions and working theories being fundamental. This view is very strong and the early childhood sector has been working with these ideas in a range of ways for 14 years.

All key competencies ought to include critique

The third aspect is this notion of including critique. In the OECD competencies critique was an overarching aspect of all of the three major key competencies. Not just thinking, but critical thinking. Examples of critique might be the balancing of the key competency of managing self against the key competency of participating and contributing; or reflecting on and resisting sometimes the texts and scripts that we take for granted; or recognising alternative viewpoints and curious solutions. I think critique is absolutely crucial—one of the fundamental aims for education. These possibilities don’t just belong in the thinking box, they belong absolutely across all the key competencies.

And one of the things that I have learned from the early childhood experience is that attempting to do these things has been an exciting and totally unfinished journey.
I am speaking from a secondary perspective, so sorry to my colleagues in primary, intermediate, and early childhood centres out there. Changing current secondary teacher practice to a transformative model of learning is no easy task and I guess when I think about the implications of that, I feel scared at the effort that lies in front of us all.

There are certainly some things we know and it was very interesting today to have some of that informed research, for example, about students’ success and transitions. And if I speak as a mother—I have two sons—when my oldest son entered secondary school he was delighted to move to a different environment, where he moved around classes, where he experienced different knowledge in different discipline areas and suddenly became aware that science had its own body of knowledge. And the stimulation of different teachers and different styles of delivery was actually something that suited him.

I guess one of the things that all of us fear is that in going down these new pathways, we throw out the baby with the bath water, so to speak, and don’t protect the things that we know do work. I think that is one of the notes of caution that we have to hang on to. At the same time, that cannot be a justification for holding on to the status quo. We have entered a new age and what we do in our secondary schools currently, adheres to an industrial model of production which is no longer fitting and for those reasons these key competencies have to be thought about differently.

And if I think about some of the things that we’re doing—when we started this discussion in my school 18 months ago I guess, all of the current disciplines would assert that they deliver key competencies. How do we keep the dialogue going to a point where we actually get to the point of change, because it’s the change process which is critical for us to pick up in our schools.

The current practice, if we look at our best and our brightest who are leaving school, does develop competencies. When I look at what’s delivered in our co-curricular programmes, when I think of the young women who take on the Stage Challenge—who take charge of a project; who direct, manage, organise, work co-operatively, and produce the most outstanding thing on stage, largely without teacher facilitation—it is amazing what these young people can do. And I think in our schools we underestimate hugely, the talent that our young people have and that, if we took our construct away, and gave them the framework within which to work, they could in fact probably be prepared for life much better than we do currently.

I want to pick up some of the threads from Jane Gilbert’s work and if you haven’t read her book, Catching the Knowledge Wave? you must read it, because it’s critical. The notions of authentic experience; the notions of relationship and connectedness; and the notions of students understanding their own processing and thinking and learning and how we enable those things to happen better are important. We also know that knowledge within disciplines is critical for building that depth in areas that this country is dependent on for its future economy. But the world is very different from the world we grew up in and unless we move our sights to engage with the technology that our young people are already familiar with and working with every day, then we will lose them and leave them well behind.

The teacher role is critical because the traditional role as a conduit of knowledge is no longer appropriate. So how do we change teachers in our schools who are of similar age to ourselves and who have operated for 20–30 years of their practice in a particular way?

Other challenges, of course, are the systemic challenges, because I’ve come to a point where I firmly believe that authentic learning experience can’t happen within the traditional confines of the classroom. Learning can be enhanced, it can be set up and guided, but with teachers as facilitators we actually have to create spaces for students to fill, not actually fill the spaces for our students.

I guess one of the challenges is “Can competencies be effectively integrated in 50–minute lessons in five or six different learning contexts, or disciplines, which occur for students daily in the secondary environment?” “Have we got those systemic shapes right?” I think the answer is “They are now outmoded but where do we move to?” All of us need to take the risk of stepping off the parapet and yet
are we going to be on this journey alone? Who is going to be there holding our hand? And if this is the partnership, what are the expectations of our parent communities, many of whom want schools that will traditionally deliver what they had when they were at school?

So, there is a huge amount of work for us to do, not just within our organisations, but in building that partnership—reflective partnership—with our community. Not only do we need to be informed by our community, but we also have to lead it because our professional knowledge in some of these areas is far greater than the knowledge that our parents might bring and we need to inform their ideas about the things they say they want to see happen. So how do we move that debate, as a collaborative debate, to create the challenge that needs to happen?
Participants’ Perspectives
The group discussions provided an opportunity for participants to discuss and raise issues around the implications of the introduction of the key competencies for research, policy, and practice.

There were a number of ideas common to the various groups and it is worth recording some of them here.

• A strong thread through all participants' comments was the importance of alignment: through the early childhood, primary, secondary, and tertiary (especially teacher education) sectors; across government departments and agencies (particularly the Ministry of Education and the Education Review Office); employer groups; and, finally, with strong linkages between research, policy, and practice. One group summarised the reasons for this: “... so we have constantly adapting change that is sustainable and based on evidence from practice.”

• There was some concern about whose world view the key competencies are taking into account. This concern was particularly strong for Māori and some felt that implementation of the key competencies should wait until the framework for Te Marautanga is further advanced. Allied questions were: Whose knowledge? Whose values and beliefs?

• Some groups addressed the key question of the conference and expressed some concern that this development is a repackaging of the old. Some big questions were posed: Where is the person in this? The child? The teacher? Have we forgotten that relationships are at the heart of teaching and learning? Where is the notion of beliefs? While the term “competencies” has been broadened they are still essentially “outcomes” with the addition of dispositions, attitudes, and values.

We have arranged the following comments in themes but have made every effort to retain the essence of the original statements—at times using direct quotes.

**Implications for research**

Research has to be the key area that informs any change, and the implementation of the key competencies. If the research is robust, relevant, current, and not “fad” based it should be informing policy and implementation at a local, regional, and national level.

There was a query about whether there is a research base that shows how the key competencies will work. “Obviously this whole idea is a bit of a leap into idealistic ‘dark’—it needs to be built on evidence that the learners are going to be ‘as good as they possibly can be’. So research needs to evaluate/explore/document potentially effective practice in development of the key competencies in a range of schools—and this in turn needs to inform the PD.”

There was a comment that research can lead change rather than just react to it or back up already existing ideas. Research should happen alongside the developments, not following them.

Following the theme of alignment, there was a perceived need for research with a workplace focus with links to trade and school subjects to create a more authentic learning context. This could also relate to ways of attracting our “best” students into teaching.

**Classroom-based research**

Several groups mentioned the need for action research, carried out by practitioners and classroom related and for more collaborative research between researchers, teachers, and students. This research could be built into existing professional development. One concrete suggestion was to get people together to produce resource material and then make it available online.

Several groups wanted more research about the “tail”. One group posed some important questions: “What is the research behind the development the KCs related to the NZ context? What do we know about the language background of the students in the tail? What do we know about how they were supported, or not, in their community languages in schools and how this might affect their place in the tail?” This points to a need for more bicultural research.
Monitoring and tracking

A number of groups suggested the need to research progress in implementation, assessment, and reporting; and the interpretation of the key competencies in a range of schools and across all sectors.

Some specific suggestions for ongoing research were: developments in teacher attitudes, practice, and programmes in secondary; impact on students; and transition point research.

From one group: "How do, or will, we measure the success of curriculum changes? We need more research and practical examples on how curriculum is developed in a range of schools."

There was support from a number of groups for longitudinal research, e.g. the Competent Children project and a suggestion that a longitudinal project to track key competency progress should be set up.

One group wanted to know if the NEMP project would be adjusted to include the key competencies.

Models and programmes

A number of groups wanted more research on models of implementation and quality programmes. They also wanted descriptions of the key competencies in various contexts and how they can work in practice. These descriptions could also include community involvement and response.

There was some concern that only one model has been presented: "Have we excluded other ways of doing things?"

Dissemination

Some groups pointed to the need for wider dissemination of research. Maybe there could be regular communication of research findings with schools similar to the NZQA update.

Implications for policy

There was a strong feeling that the policy environment has to support the vision and that the vision needs to be sustainable—not changed at the whim of a new government. Along with the vision goes the practical implications of things such as timetabling and class size. As one group put it: "We need to ensure that policy is consistent, practical, and supported by resourcing to ensure that all teachers and all learners are not 'trying out something new' again. We need policy that ensures nationwide consistency, yet allows for local/regional context to enable flexibility to be there as needed. Hopefully the policy that will be supporting the Curriculum Project review will enable schools to not have increased workloads, will focus on improved teaching and learning, and will build on an existing exceptional educational system that NZ can be proud of."

Community involvement

Groups pointed to a need for a broader community understanding about what is happening in education. A public communication/marketing strategy needs to be developed to raise public awareness. This idea was taken a step further by the suggestion that there should be national public discussions about the kind of future and the kind of knowledge we want.

Equity and social justice

Groups felt that we need to clarify what is meant by "social justice". One group asked: "Is it all assumptions that the academic/university model is the one to aspire towards? What of the highly intelligent student at a high school who wants to be a hairdresser?"

There was a comment that the key competencies seem like the answer to everything but it is unclear how they will address equity issues. And a caution that many communities may not wish to address these issues.
Others felt that policy has a function in addressing the needs of all students in New Zealand—especially the “tail”. This tail consists of mainly Māori and Pasifika students but little seems to be happening to address this. From one group: “The majority of our Māori students are in majority culture schools and the attendees of the conference were largely Pākehā who are in classrooms teaching, and we need to be hearing and questioning all we can to ensure we are able to meet the needs of the students.”

Alignment
There was some excitement that the key competencies would be connected to the knowledge/curriculum contexts and developed alongside the knowledge base. The follow-on from this was the need for “better linkage with ERO, particularly in terms of assessment”.

As well as alignment across school sectors, agencies such as ERO, the Ministry, NEMP, and support services also need to be aligned. Teachers may be encouraged to take risks, only to find themselves hampered by an accountability process. Alignment with other policy developments is also needed, particularly within the Ministry where there are perceived competing discourses.

Curriculum and assessment
Some groups expressed reservations about whether the revised curriculum will be broad enough to include and embed the key competencies. Policy needs to clarify how the two integrate and to specify the balance between them.

A number of groups expressed concern about assessment of the key competencies. There was a suggestion that descriptors of progression in the competencies in various contexts would be useful. From one group: “The assessment conversations re key competencies need to occur at the same time as the conversations about what the key competencies are and how we facilitate them. Achievement standards/assessment models need to align with the principles underlying the key competencies.” Concern that the key competencies will be levelled gave rise to the suspicion that they may be “a form of NCEA-type assessment under another guise”.

Resourcing for professional development is important, especially in the use of new technologies, e.g. videoconferencing.

School-based autonomy
Several groups saw a need for clarification of the extent of school-based autonomy and the amount of devolution to the community. There appears to be a contradiction in that because the competencies are clearly defined there may not be a lot of freedom for communities to steer the direction of their schools. Some felt that there was an assumption that all parents would want to be involved. If this is an expectation then there is a need for “advertising” to make sure that the messages are out in communities.

There was a plea to the Ministry to “let ‘brave’ principals work on school-based curriculum development with their communities, so that teachers’ professional judgements working alongside children as people are what counts”.

There was some concern that one set of competencies has been predetermined through what appears to be unreserved acceptance of the OECD model. From one group: “How does this sit with the need for our kids to be tolerant global citizens working with, trading with, and living with other cultures outside the OECD who may not share our key competencies?”

Policy makers need to be responsive to feedback and be prepared to listen to particularly the student voice from all sectors.
Implications for practice

Implementation issues

Most groups raised issues of implementation. One group echoed the feelings of many with a number of key questions: “How do key competencies fit with the other reviews of the curriculum? How will staff be supported to implement the key competencies in the school setting? How will they look in their final form? All these answers will impact on the school context, teachers’ practice, and student learning. They will impact differently in early childhood education, primary, secondary, again depending on how the end product will look”. Several groups expressed this concern about the need for connectedness between all schooling sectors.

Groups queried the proposed timeframe for implementation and suggested that there needs to be agreement with practitioners about how much time is needed for effective implementation. There was support for a slow and thoughtful process of change rather than a “big bang”, with a question about how realistic the proposed one-year timeframe is.

One group raised the issue of the integrity of implementation while several other groups commented on the need for this to be achieved through a shared understanding and commitment to the vision, rather than just a token acceptance. “Might just supplement key competencies for essential skills and sail on without thinking.” Along with this was a query about “How deep are we really going to drill down on the key competencies?” and a comment on the need to “live, support, and develop them”. There could be an opportunity to extend the vision to students and parents and also an opportunity for educators to discuss their own values, not just the key competencies.

Questions were raised about how much autonomy schools would have in making decisions around the key competencies, with some concern that schools might go “off on their own pathways, not necessarily meeting the needs of students but possibly meeting needs of groups with other agendas”. There is a need for some flexibility, but also consistency across schools considering the levels of transcience.

Teachers will see opportunities and also reasons not to change. There is a big job making sure that practitioners are carried along with this. We have a number of overseas-trained teachers and teachers who are “tired out” and it is going to be difficult to move these groups. “Teachers see themselves as re-constrained—are they or aren’t they?” Issues of motivation for teachers were raised in the context of the need for them to see the key competencies as worthwhile, something they want to do, and that they are interested in. One group suggested there was a need for more honesty with schools about how big the change really is: “Are we really on the brink of shaping education for the 21st century … or are we just tweaking the essential skills?”

Several groups raised issues of time, questioned the capacity of schools to carry out the implementation, and saw major implications for staffing. “Schools (especially secondary) will need to overhaul the school day/week structure, classroom setups etc.” There were also concerns about how the key competencies could be fitted in with other demands, e.g. NCEA. Many saw a need for change management training and support for principals.

One group expressed concern about working with the draft in case this changes while another was concerned about longer-term changes. While it’s exciting to implement an integrated approach to developing key competencies within the curriculum a policy shift would mean that schools must rethink/reshape/readdress current practice which is already showing results. This theme was picked up by a number of other groups who felt that we should build on existing good practice, i.e. both repackage and create the new. We should acknowledge what schools do well.

Pre-service teacher education

One major implication is ensuring that student teachers develop the competencies themselves—so that they become more aware of themselves as problem solvers, users of language tools and symbols, but
with a deeper appreciation/awareness of the importance of effectively managing self, developing and knowing what resilience is. We need to consider how we deliver our curriculum and how we ensure critical conversations and authentic “implementation”. We also need to ensure our students “live” the key competencies, “experience” them, and know how to hold on to the holistic, big ideas. We must avoid resorting or reverting to fragmented lists of skills which in fact do not add up to the whole.

Underpinning these ideas is the need for a sound theory of education. If this was a focus for teacher education new ideas like the key competencies would not be such a huge issue as they could be easily assimilated into the theory.

"Initial teacher providers must be involved in the debate—this sector was hardly mentioned during the day!"

Professional development

Among the groups there was wide agreement that there is a need for nationally-led, well-resourced, and sustainable professional development. One suggestion was: “Some national, credible institution must take up the challenge to lead/facilitate schools as they work towards this.” This approach could lead to connectedness across the sectors.

Schools will need to have time to have conversations—rich and deep across many stakeholders including children and with the opportunity to share ideas across clusters of schools to see how others are implementing the key competencies. There was also a call for professionally developed resources. Good models already exist in some subject areas, e.g. technology and the arts. These and other things that are working well could provide a base for professional development.

One group saw a need for more conversations about how the curriculum will be integrated to encompass knowledge content and key competencies.

School-based professional development has to be based on creating a sound learning community with the importance of getting a shared understanding stressed. A starting point could be establishing what is being done well, then looking at the key competencies and then planning next steps. To achieve this school leaders need advice and guidance.

Communication/learning community

Some groups expressed concern about how much consultation has actually taken place. “Community conversations and consultation will need to be vast!” And these conversations are going to require time.

One group suggested that the following key questions need to be addressed: “How will we know what other communities are doing? How can we come to know what is happening? What vehicle will be used to share these communications? How will this process be funded? What is the time for development? Will there be time for reasonable feedback?”

Communication between teachers, students, community, and other schools is imperative for long-term success if we are to create a shared vision and ownership among all the groups involved. “Government needs to model this if ‘we’ becomes a true ‘we’ and all will follow—did this session model key competencies?”

Groups saw a need for very strong communications—clear, targeted, and broad. Communication should include a “family and community” strategy as well as a “professional learning” strategy. Schools need more knowledge about the key competencies so they can “sell” them to the community. A wide publicity campaign was also suggested.

Competencies vs. capabilities

Two groups thought that capabilities has a better sound than competencies. Why change “making meaning” to LTS? Does it encompass the concept in a better way? Others felt that we may not yet have the language right and may need to incorporate notions of habits of mind and action.
Assessment/accountability

There was some worry about whether the competencies should be assessed and concern about the idea of level-based key competencies. There is an issue around making assessment relate to opportunities to learn, without becoming assessment for compliance. “I can see ERO asking schools what they are doing about KC, and being shown documents and matrices indicating where they are addressed in units and/or subjects (without it necessarily bearing much resemblance to what happens in practice).”

In an accountability environment there will be a need for “trust and support from a high level (Ministry) to provide a safe environment for schools to take the leap”. If adults are to exhibit the key competencies in their own behaviour, interactions, attitudes, and so on they will feel uncomfortable at times and will need reassurance that they are on the right track.

On another level, there was a suggestion that more dialogue around the issues with less focus on compliance would enable a shift towards a “knowledge creation” culture.

Streamlining the education system

The need for a streamlined education system was a persistent theme. There is need for connectedness across every level—policy, teacher education, secondary, primary, early childhood, students, parents, and community.

One group suggested that this connectedness could occur in assessment with links between school and early childhood assessment. Others suggested that synergies across sectors would allow transformative pedagogical thinking. Some mind shifts would be needed but positive relationships could come from time for talking with each other, identifying the commonalities and how they connect to current practice.

Some final quotes

“Not good enough to repackage the old!”

“Thanks for a stimulating day!”

“Let’s acknowledge the challenges, but also acknowledge the positives happening in all sectors and the contexts that may vary and present particular opportunities.”
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