Unpacking the key competencies: What does it mean for primary schools?

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Introduction

This paper draws on the insights gained from documenting the journeys undertaken by six Normal Schools as they integrated the new Key Competencies (KCs) framework from the draft revised curriculum (Ministry of Education, 2006) into their teaching and learning programmes. This paper discusses some of the challenges the schools faced. The issues explored include: creating a shared understanding of the KCs between staff and students; creating space to foreground the KCs; and findings ways to document students' learning in regard to the KCs.

This research stemmed from a desire by the Normal Schools Association to increase the focus on professional discussion within their organisation. They decided to use the introduction of the KCs framework as the initial context for these discussions. They contracted NZCER to work alongside them as they explored ways to approach the KCs. This exploration sat alongside a review of curriculum delivery that was also occurring at the schools.

There were two main aspects to the research support provided by NZCER. The first aspect was the development of case studies that documented the approaches six volunteer schools took to integrating the KCs into their practice (Boyd & Watson, in press). The data collected for these case studies included interviews with staff and students, informal classroom observations, document analysis, and a parallel staff and student survey of teaching practices related to the KCs. The second aspect of the research support involved feedback to the schools and to a series of Normal School forums.

Background to the KCs framework

In 2005, as part of the current revision of the New Zealand curriculum, the Ministry of Education (MoE) proposed five KCs for the New Zealand compulsory school sector:

- Relating to others (RO)
- Managing self (MS)
- Participating and contributing (PC)
- Thinking (T)
- Using language, symbols, and texts (ULST).

The New Zealand KCs framework was informed by international work conduced by the Organisation for Economic Cooperation and Development (OECD, 2005). The OECD sought to identify and describe, across its member nations, what people should know and be able to do in order to lead a "successful life" in a "well-functioning society".

A MoE pamphlet states that "the suggested framework of key competencies promotes a *lifelong learning* model" (Ministry of Education, 2005, p. 2). In discussing the definition of competence, some of the developers of the original OECD framework, Rychen and Salganik (2003), emphasise that their definition places the:

> ...complex demands and challenges that individuals encounter in the context of work and in everyday life at the forefront of the concept... (Rychen & Salganik, 2003, p. 43).

Hipkins (2005) notes these statements imply that the KCs are intended to be developed in contexts that are challenging, have personal relevance to students, and require them to actively engage with problems. Commentators suggest that this implies a shift in teaching practice towards approaches that could be broadly defined as constructivist or student-centred (Hipkins, Boyd, & Joyce, 2005).

One purpose of the case studies was to explore how "early adopter" schools interpreted the KCs framework and approached some of the shifts in thinking about curriculum and pedagogy that are implied by the lifelong learning focus that underpins the KCs.

Commonalities in the schools' change processes

Another purpose of the case studies was to provide a way of documenting and sharing the models of change used at the schools. There were a number of commonalities in the change processes used by the schools which are described below.

Reviewing the big picture

School leaders saw the KCs framework to be a timely development as it offered them a lens through which they could review school practices in respect to curriculum delivery and pedagogy. One key driver of this review was a desire to reduce what many perceived to be "curriculum clutter". A second driver was an interest in further exploring approaches such as curriculum integration, that were aligned with recent national and school professional development (PD) trends that have emphasised student-centred practices. School leaders noted that a focus on the KCs supported the foregrounding of a "hidden curriculum" of attitudes, values, and social skills and saw the framework to be aligned with the student-centred practices they were currently developing.

Professional leadership

At all six case study schools the principals and/or the senior management team were involved in setting the direction for the exploration of the KCs. These leaders saw their role as a key learner and professional leader. School leaders also used this opportunity to develop leadership capabilities in their staff. At all schools, a range of staff were encouraged to take on leadership roles in developing school approaches to the KCs.

Developing processes for unpacking the KCs

At the case study schools, a variety of models were used to introduce the KCs to staff and students. School leaders were aware of the importance of using processes that developed a collective view and that ensured all staff were aware of, and had ownership over implementing, new initiatives such as the KCs framework. To this end, at all of the schools, some form of ongoing, in-house, whole-school PD about the KCs was initiated.

At some schools, an in-depth exploration of the KCs was undertaken by the whole staff, at other schools, teams of "early adopters" trialled ideas that could then be shared with others. The whole-school or team PD organised at the schools had a number of features in common. These were:

- school leaders providing information and background about the KCs, lifelong learning, and curriculum approaches to staff
- visits between schools to share ideas
- the "unpacking" of each KC and the development of a shared language between all staff about each KC
- locating an exploration of KCs within integrated or inquiry-learning programmes that were centred around key themes
- the connection of the KCs framework to existing pedagogy
- exploring the link between the KCs and current tools and strategies such as thinking skills, learning styles, the Habits of Mind, or co-operative learning strategies
- the trialling of approaches to introducing the KCs to students and discussion of these approaches
- the trialling of approaches to developing assessments or exemplars for the KCs and discussion of these approaches.

Developing a shared language: Getting the KCs into "kids' talk"

At most of the schools, teachers individually or jointly devised learning activities to support students to unpack the KCs and to work alongside them to develop school views about the KCs. The successes and challenges of these experiences were then discussed at PD sessions. This co-construction of the KCs was a key shift in practice, and was commented on by many staff. They noted that this contrasted to their prior approaches to the Essential Skills which were, on the whole, completely invisible to students.

Staff noted that, to co-construct the KCs with students, it was necessary to have a student-centred pedagogical base. For many teachers, co-construction was a next step from the AtoL, formative assessment, literacy, or numeracy PD they had recently attended. All these programmes had emphasised making the processes and outcomes of learning more "explicit" to students.

Managing change

The ongoing and iterative nature of the PD organised by the schools was a key aspect of this PD. It included many opportunities for professional discussion, experimentation with ideas, and reflection. These processes increased staff and student ownership over the KCs framework.

A comparison of the experience of the schools in this study to the school change literature reveals that these schools had many of the supports in place that are likely to support positive change (Boyd, Bolstad, Cameron, Ferral, Hipkins, McDowall, & Waiti, 2005), and the professional communities developed by teachers had many of the hallmarks of a professional learning community as described by Timperley (2003).

Emerging challenges

As stated previously, one aspect of the case studies was to explore how the schools approached some of the shifts in thinking about curriculum and pedagogy that are implied by the lifelong learning focus that underpins the KCs. School staff found themselves grappling with five main challenges which are described below.

Challenge 1. Creating space for authentic learning

Given that the KCs are intended to be developed through real and challenging situations (Hipkins, 2005; Rychen & Salganik, 2003), during the case study visits, and through analysis of the survey data, we looked at the opportunities schools were creating for students to demonstrate the KCs through these types of situations. We called this "authentic learning" and we looked for learning situations which:

- enabled students to take action on real projects of concern to themselves or society
- gave opportunities for student choice
- gave opportunities for challenge or risk taking
- were fun, relevant, and engaging
- related to students' needs and level (were differentiated).

At the schools, curriculum integration and inquiry learning were seen as ways to provide this authenticity. Accordingly, we examined the way curriculum integration and inquiry approaches were used to create these experiences.

Approaches to curriculum integration

All of the schools were experimenting with models of curriculum integration. There appeared to be two main drivers for this. On a pragmatic level, integration was a response to curriculum overcrowding. Most of the schools had dealt with concerns about curriculum clutter by offering stand-alone literacy and numeracy in the morning and "integrating" other subjects in the afternoon (such as science, social studies, arts, and technology).

Another driver for curriculum integration was philosophical. This was a desire to provide rich and authentic learning opportunities and co-construction of the curriculum as suggested by Beane (1997), a researcher and programme developer widely recognised as one of the architects of the current curriculum integration movement.

Based on the models used at the schools, we developed a continuum of curriculum integration as shown in Table 1. At one end is a traditional teaching programme. At the other end is the student-driven exploration of problems pertinent to society as suggested by Beane (1997).

Table 1: A continuum of curriculum integration

	Type of integration		
Aspect	**Traditional (no integration)**	**Topic-connection (partial integration)**	**Full integration**
Place of curriculum	Separate curriculum areas	Partial integration of content or curriculum areas (for example, literacy and numeracy activities connected to social studies, science, drama, or sports events)	Integration of those aspects of subjects that are necessary to the learning context
Programme driver	Coverage-driven programmes (contexts stem from the curriculum)	Mix of coverage- and context-driven programmes (contexts stem from the curriculum and teacher interests)	Context-driven programmes (contexts are problems relevant to students and society)
Opportunities for student-choice	No student choice	Limited student choice	Issues decided by co-construction (many opportunities for student choice)
			

Examples of all three types of integration co-existed in schools. Most common were approaches that fell into the "topic connection" category; for example, students wrote reports about their experiences in other curriculum areas. In contrast, in the full integration model, the opportunities for literacy instruction that arose as students addressed questions of meaning to themselves would be utilised. Participating in a drama production or school camp and later engaging in literacy, visual art, or drama work to document these experiences was a common example of "topic connection". Students did not perceive these opportunities to be co-constructed—rather handed to them by teachers.

This research suggests there is potential for these experiences to be reframed so that they offer more opportunities for co-construction and fuller integration. This would be likely to increase the potential to provide students with ownership over their learning and opportunities to develop and demonstrate the KCs.

Approaches to inquiry learning

Inquiry learning was also seen as a vehicle to provide authenticity. Most schools were using inquiry-learning models within an integrated framework. Schools varied as to how the purpose of inquiry learning was conceptualised. In most cases an inquiry approach was described as a tool to teach

students a research process, that is to "*learn about* doing" and in some cases by "*learning in*" a particular environment.

Many of the "authentic" learning situations described by teachers, such as visits to local museums or inquiry projects, enabled students to "learn about" or "learn in" real contexts outside school. Many of these situations were created "for" but not "by" students. In some cases inquiry processes were being used as a tool to support students to develop action competence as they "*learnt by doing*" in the "action" part of an inquiry cycle. Like approaches to integrated learning, it appears that the potential for inquiry approaches to provide rich opportunities for students to develop and demonstrate the KCs could be further tapped.

Reframing integrated and inquiry models

An alternative view of authentic learning was offered by some staff. This view aligned with the ideas about action competence that underpin the previous health and physical education curriculum (Ministry of Education, 1999a), models of environmental education (Ministry of Education, 1999b), and the likely intent of Rychen and Salganik (2003). These staff considered that authentic learning involved students working on projects to research, design, plan, and create solutions to real-life problems. These teachers reframed experiences such as school productions, camps, and integrated/inquiry projects to create ways of giving students these opportunities. For example, students planned healthy food menus, budgeted, or designed games for a school camp; and as part of an inquiry, students elected to explore new options for their overcrowded school bus service, and worked with the local council to develop solutions. In order to reframe activities in this way, teachers needed to be comfortable with loosening the reins and giving students more autonomy over decisions.

In general, focusing on the KCs had supported the schools to review curriculum planning, downsize coverage, and reframe priorities. The information presented above indicates there is further potential for schools to review their "big picture" in regard to the models used to deliver the curriculum to create more space for approaches that are likely to support students to develop the KCs.

Challenge 2. Shifting towards unfamiliar pedagogies

Using the survey data we examined current teaching practices at the schools and how these aligned with approaches that could potentially support students to demonstrate the KCs. As part of the survey we asked teachers to rate a series of practices that were linked to each KC. We asked them to rate how important each practice was and how often it occurred in their classrooms. On the whole, those practices that were rated as most important were also rated as occurring more frequently. Table 2 shows the 15 items most often rated as "very important".

Table 2: Top 15 teacher items in order of importance

Survey item*	KC	Rating
Teachers encourage students to take responsibility for their actions	RO	Most important
Teachers model the behaviours, skills, and attitudes they would like students to develop	RO	
Students are encouraged to respect and help each other	RO	
Students are supported to feel safe asking questions	PC	
Teachers spend time helping students to learn	MS	
All student groups are actively supported to join in lessons	PC	
Students and teachers are encouraged to respect and help each other	RO	
Teachers have high expectations for all students	MS	
Teachers help students feel confident about learning	MS	
Students have the opportunity to make mistakes, and learn from them without penalty	T	
Teachers give students feedback about areas for improvement, and assist students to work out their next learning steps	MS	
Students are supported to feel safe when giving views that are different from other students	PC	
Teachers give students feedback about their strengths	MS	
Students' existing knowledge and experiences are used in teaching	PC	
Students have the opportunity to identify and discuss new ideas and problems, and don't just learn "facts"	T	

* This table shows each practice using the language from the teacher questionnaire. In some cases the wording used in the student questionnaire was slightly different.

A thematic clustering of items is evident in this list. Most of the top 15 items are connected to the three most familiar and socially-orientated KCs, that is, *Managing self*, *Relating to others*, and *Participating and contributing*. The *Participating and contributing* items relate to aspects of this KC that are demonstrated within classroom interactions. This clustering shows that teachers' priorities were centred around creating safe classroom environments in which students felt comfortable about learning and expressing themselves, and in which students were offered constructive feedback about their learning.

Table 3 shows the 15 items teachers rated as being the least important. Teachers rated most of these practices as "important" but tended to indicate that they happened less frequently than the practices in Table 2.

Table 3: Lowest 15 teacher items in order of importance

Survey item	KC	Rating
Teachers support students to take action on issues of concern to themselves	PC	
Learning activities enable students to participate in a range of social and cultural settings	PC	
Students set their own learning goals	MS	
Knowledge and texts are presented to students as having different interpretations rather than as given "facts"	ULST	
Students are taught how to analyse different types of information to look for patterns and trends	ULST	
Students are given time to explore and clarify their own values	PC	
Students are given choices in learning activities or contexts	MS	
Classroom contexts include Māori points of view and ways of doing things	PC	
Students are taught ways to manage group dynamics	RO	
Students are supported to assess their peers' work and give feedback	MS	
Students take part in discussions about meta-cognition and how they learn	MS	
Students have the opportunity to learn about the conventions of different subjects	ULST	
Students plan how they will work, and organise their time	MS	
Classroom contexts include Pacific peoples' points of view and ways of doing things	PC	
Teachers spend time telling students how to behave	MS	Least important

In Table 3 the items that were rated as less important (and also as occurring less frequently) are pedagogies that are more unfamiliar, and therefore likely to be more challenging, than the practices in Table 2. The practices that fall into this category are the aspects of:

- MS that relate to student autonomy over learning and meta-cognition
- PC that relate to action competence and learning in environments that are socially and culturally diverse
- ULST that relate to understanding about different subject conventions and critical literacy.

This data gives an indication of the aspects of the KCs that teachers were finding more difficult to incorporate into their practice, and the more complex territories that an exploration of the KCs could be leading schools towards.

Gilbert (2005) discusses the need for new frameworks and approaches to curriculum and pedagogy that enable all students to have opportunities to take action on real-world problems. She frames this shift as a necessity for preparing students for the demands of the knowledge society. This study suggests that integrated or inquiry-learning approaches have this potential, but the multiple drivers in the current environment have led to a situation in which this potential has yet to be fully tapped. It appears that to do this, schools will need to more closely explore ways to deal with curriculum overcrowding, and teachers will need support and structures that enable a shift in practice.

In the original OECD (2005) framework, reflectiveness is noted as being at the "heart of the KCs". This suggests that prominence needs to be given to the meta-cognitive and reflective aspects of ***all*** the KCs to ensure that they are not viewed solely as a set of social skills or as a behaviour management tool. If teachers are to move towards a deeper exploration of the KCs, there is a need for the shared language about the KCs to reflect the multiple aspects of each KC.

Challenge 3. Process overcrowding

Most staff thought that developing a shared KCs language with students was supporting them to make the process of learning more "explicit" to students, and a number thought the KCs fitted well with existing tools and strategies that also had this focus. Examples given included approaches to thinking skills such as de Bono's Thinking Hats, the Habits of Mind, and co-operative learning strategies.

Other staff expressed concerns about "process" overcrowding. They saw an overlap between some of these approaches, and were concerned about "fitting them all in". The most frequently mentioned overlap was the connection between the KCs and the Habits of Mind.

Like curriculum overcrowding, the exploration of the KCs had highlighted for some staff the need to refine the approaches taken to encouraging students to understand the processes of learning. Accordingly, some schools had plans to review their approaches.

Challenge 4. Interpreting "Using language, symbols and texts" (ULST)

Teachers thought the three most familiar and socially-orientated KCs (PC, MS, RO) were easier for them and students to interpret and recognise. They tended to start their exploration of the KCs by integrating one or two of these KCs into their practice. Thinking was also easier for staff to interpret, and they tended to link this KC with existing thinking tools/strategies.

Most teachers found ULST to be the most unfamiliar KC, and the hardest to interpret and to integrate into planning. Hipkins (2006) suggests that ULST is potentially the most different from the Essential Skills, and may need more "unpacking" than the other KCs. The findings from this study support this view, suggesting that more support is needed to assist teachers to fully interpret and integrate this KC.

Challenge 5. Assessing the KCs

At most of the schools, teachers were informally assessing students' development of the KCs using formative assessment procedures. School staff were debating whether and how to more formally assess the KCs. Most were approaching this task more cautiously to avoid the "tick box" approach that had occurred with the Essential Skills. Staff were debating whether there was a need to summatively assess the KCs, and how to formally report on the KCs. Some staff considered the KCs should not be formally assessed. Others considered it as vital they were, otherwise there was a risk that the KCs would be sidelined.

At the case study schools, most staff were planning to use their shared KCs language at three-way conferences to introduce parents to the KCs, and were also planning to replace the Essential Skills and

behaviour sections of school reports with comments on students' performance in relation to aspects of the KCs. Teachers were less sure about whether they would make a global judgement to inform these comments or have a more formalised system of assessing student progress. Some schools had developed rubrics to chart progression in the KCs within and across year levels. They were planning to use these rubrics to "level" students and report to parents. In general, school leaders and teachers considered that expectations surrounding assessment needed to be clarified at a national level.

International literature supports teachers' use of formative assessment strategies to assess the KCs and suggests that new assessment models are needed that move us away from the types of standardised testing that occurs for assessing progress in literacy and numeracy. Following a review of issues surrounding the implementation of the KCs, Hipkins, Boyd, and Joyce (2005) found considerable overlap in approaches used to assess similar concepts to the KCs. In their paper, Hipkins et al. drew on Delandshere and Petrosky's (1998) work to develop the idea of the KCs as a "complex performance". Delandshere and Petrosky note that complex performances integrate many components. As the KCs are an integration of knowledge, skills, attitudes, and values, this suggests that they need to be viewed and assessed as "complex performances".

Delandshere and Petrosky suggest there are differences between the models that underpin the assessment of academic achievement and complex performances. Measurement theory, on which standardised tests rest, assumes that attributes such as numeracy skills are in a steady state. Variations between assessments are often described as the result of error, not a unique response to a specific context. If this idea is applied to a KC such as *Relating to others,* how it is demonstrated could vary substantially according to context. This suggests that different assessment models are needed to capture this complexity. This points to a need for a process that supports the development of system-wide understandings about the implications for assessment practice of a shift to the "complex performance" model.

Summary

The schools in this study were at the start of a journey to incorporate the KCs framework into their teaching and learning programmes. Almost without exception, all of the staff and students we interviewed found exploring the KCs a fascinating and positive experience. The in-depth discussions in which staff and students engaged as part of the change processes schools designed were supporting schools to review curriculum delivery, further develop leadership capabilities in a range of staff, develop a whole-school language to talk about the KCs, and further develop whole-school pedagogies and assessment practices.

These schools were "early adopters" of the KCs framework and therefore lessons can be learnt from their experiences that may support other schools. The school leaders and teachers in this study considered carefully planned PD was needed to support the introduction of the new KCs framework and the revised curriculum to ensure that schools fully engaged with the potential changes to practice suggested by a focus on the KCs. This research indicated that schools could benefit from:

- resources or PD that provides schools with background about the theoretical underpinning of the KCs model

- support to develop PD processes that enable staff to explore the KCs and take ownership over the model (for example, through a networking or cluster approach)
- encouragement to review the "big picture" of curriculum delivery and the way integrated and inquiry models are framed
- support to shift practice towards unfamiliar pedagogies such as co-construction of the curriculum with students
- national directives that give schools the space to experiment with new ideas
- support to further explore ways to document or assess the KCs.

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