Assessing Key Competencies:
Why Would We? How Could We?

Dr Rosemary Hipkins

Introduction

As schools begin exploring the key competencies, one question that teachers frequently ask is: "What about assessment?" This pamphlet may help you to start the conversation in your school, framing both assessment and the key competencies within wider questions about the purposes and outcomes of schooling and education.

When thinking about assessing key competencies, we need to consider all these questions:

- What sorts of learning outcomes have schools traditionally fostered?

- How have these outcomes been assessed?

- Why was the assessment carried out that way?

- What uses were intended for the assessment information gathered? What uses were actually made of it?

These are still important review questions, but the key competencies add new critical layers to assessment conversations:

- Might key competencies represent different sorts of learning outcomes?

- If so, do the key competencies introduce different types of assessment challenges, and how should we respond to these challenges?

- Do we want assessment information about key competencies for the purposes we already know, or might there be new purposes here as well?

- Do we actually need to assess key competencies, or will they do their curriculum work through the ways in which we refocus other outcomes?

It's important to address these questions because the key competencies challenge school leaders and teachers to rethink learning and schooling in some important ways. When thinking about whether to assess key competencies, we need to consider which aspects of existing practice remain appropriate and which need to be rethought, reshaped, and/or replaced. It's also very important to consider what we might want to achieve by assessing key competencies. That question creates a useful "frame" for all the other considerations.

Dr Hipkins is one of many New Zealand educationalists who have been involved in the development of *The New Zealand Curriculum.*

Why assess key competencies?

The following table sets out three broad purposes for assessing any learning and the general features of assessment tasks suitable for each purpose. This table is not intended to be read in an either/or way. Each purpose has its place. So does each type of task. The challenge here is to reconcile two potentially conflicting questions:

- Which broad purpose most closely matches the intent of introducing key competencies into the curriculum?

- For which purposes is our school thinking about assessing key competencies?

Table 1: Three broad purposes for assessment

Purpose	Appropriate assessment tasks and tools
Accountability and reporting	
Summative assessment results are shared with students, their parents, the wider community, ERO, and the Ministry of Education.	This purpose has traditionally been met by benchmarked tools, tests, and examinations (e.g., Performance Achievement Tests [PATs], Assessment Tools for Teaching and Learning [asTTLe], and School Certificate) that yield data comparing students to their peers.
Improving teaching and learning	
This purpose, which involves formative assessment, may be called assessment for learning or assessment as learning.	Achievement evidence is judged against specified standards or outcomes rather than by comparing students with each other. The focus is on what each student can do and their next learning steps. Any task that validly answers these questions can be used. The judgment is usually made by the teacher. Assessment for learning can be used for summative purposes if it is designed for this use, e.g., the National Certificate of Educational Achievement (NCEA).
Fostering lifelong learning	
This purpose extends assessment for learning by adding a focus on dispositions and actions. It more actively includes the student in all aspects of decision making.	Students are directly involved in assessing their own learning and in thinking about their success in terms of learning to learn, with the aim of empowering them to continue learning at and beyond school.

The first two purposes on this table will be very familiar to all teachers. The third is becoming more and more important, and we'll shortly look at why that is. If fostering dispositions for lifelong learning is seen as important, and if strengthening key competencies is seen as an important means of achieving this goal of long-term learning, we need to explore ways of including students in making judgments about their learning. Of course, this has to be done without relinquishing professional responsibility for gathering assessment feedback to inform next learning steps or to report for accountability purposes. We need to blend the best of what we know already with some newer strategies that give more prominence to the students' own judgments. This is a shift in thinking about the roles that teachers and students play during learning. It's already emphasised in projects, such as Assess to Learn (AToL), that focus on strengthening teaching and learning. Conversations with students about their identities, strengths, and goals as learners add this further dimension for fostering lifelong learning.

Assessment experts who have considered the challenge of meeting all these purposes without doing too much assessment say that rich information about achievement during meaningful assessment tasks can be pared back to meet reporting purposes. But pared-back assessments are difficult to scale up to provide information for next learning steps or personalised learning achievements. So what types of tasks might be helpful here? NZCER researchers recently analysed several different contexts where assessment methods were intended to address similar purposes to those above (Hipkins, Boyd, and Joyce, 2007) and came up with this list of design features for tasks to be used for assessment:

- The *learning* to be gained from the task is clear to all involved.

- Assessment tasks involve judging a performance. Ideally, this should happen in a way that refers to what students can do now compared with what they could do before.

- The performance to be judged is based on a task that is as authentic as possible, that is, located in a meaningful context and involving doing something that the student would see as relevant to their learning.

- Both the learner and the assessor are clear about the types of evidence that will be used to infer successful performance. For this reason, assessment should be criterion based.

- The process of assessment needs to empower the learner to further develop their personal competencies.

- For this to happen, reporting provides clear feedback based on the collected evidence, so that actual achievements and next learning steps are clear.

- When making an overall judgment about competency in any one aspect, several assessment events and/or contexts should be used and different types of evidence should be collected.

- More than one person is involved in making judgments, where possible.

- The learner should preferably be included in the summative process as soon as they are old enough to participate meaningfully. The process should be collaborative.

It should be evident that many different types of tasks could meet these design specifications. There is no one right way to assess key competencies, but some types of assessment tasks will meet these specifications more easily than others. We'll come back to that at the end of the booklet. Before we get to practical assessment questions, it's important to be clear about the benefits of putting time and effort into rethinking familiar assessment practices. Why should we do this? Why can't we just keep using assessment methods we already know so well? These are the important questions we'll consider next.

The "something new" in key competencies: there are implications for assessment

"Change" is a key word when thinking about twenty-first-century learning (and schooling). In a time of extremely rapid social change, schools have to keep up with the demands of helping students to adapt and prosper in their lives now and in a future the shape of which is unclear to us. It's not easy to determine what students will need from schooling to set them up well for their lives in the future, but some of the challenges of living in a globally connected world can be anticipated. They include:

* greater exposure to cultures other than one's own;

* ready electronic access to abundant information, some of it of dubious quality;

* changing patterns of work and social engagement;

* communication methods unrestricted by time and place or the need to be physically present.

People on different sides of the world can work together in real time, or many people can contribute to an online discussion at a time to suit. Some people are choosing to live, for at least some of their time, in a virtual "second life", where they may choose to be someone quite different from the person who lives inside their physical body. Virtual societies and other technologies can help students with disabilities to transcend barriers to their learning – or can create new barriers for them. New ethical issues are raised by the widespread use of cellphones. All these types of societal developments have implications for the education outcomes and hence for assessment. Table 2, set across the centre pages of this booklet, illustrates how the key competencies have the potential to strengthen and transform the school curriculum to help students meet these challenges in their lives now and in the future.

More about these new dimensions of learning and assessment

"Meta" knowing

It is evident from table 2 (pages 8–9) that meta-level knowing, or "knowing about knowing", is an important new focus when key competencies are added to the curriculum. Students need to develop the knowledge, skills, and disposition to question information, ideas, and experiences so that they learn about these competencies as tools that they can appropriate for their further learning and for their understanding of how they learn best. For example, in metacognition (knowing about cognition), students learn about their thinking so that they can adapt the thinking tools they currently possess when they encounter a new learning challenge.

Fostering a disposition to learn

New learning challenges call for creative problem-solving. Students have to be willing to use what they know and to recognise opportunities for doing so. Teachers help by scaffolding learning and modelling the use of knowledge and skills in relevant ways. They orchestrate opportunities for learning from and with others. In this way, the dispositional and identity components of key competencies are seen as important for ongoing development as a lifelong learner.

Empowering students to become experts on their own learning

Another new dimension relates to the recognition that learning occurs in many places, not just at school. Contexts outside school may afford rich opportunities for students to demonstrate their developing competencies. People other than teachers may provide valuable expertise and learning support. Links between schools and families are important here. Traditionally, parents and caregivers, like the students themselves, have been on the receiving end of assessment information but have seldom helped shape it. The use of "learning stories" illustrates one way that assessment might change to make discussions about developing competencies more inclusive.[1]

Rich learning contexts

There is an important new focus on the contexts in which assessment occurs, including designing meaningful tasks that invite and enable students to act on the basis of what they have learned. Over time, students develop personal stories about themselves as learners. Assessment needs to help them build coherent narratives about their identities as people who can practise, persist, and overcome obstacles to immediate learning success. Students need opportunities to apply what they know and can do in more complex and demanding contexts. The assessment focus is on strengthening key competencies (which everyone already has in some measure), not on measuring comparative "abilities" as if these are fixed qualities of individual learners.

What does all this mean for assessment?

As we have seen, new dimensions of learning are highlighted by the inclusion of key competencies at the heart of the curriculum. These dimensions challenge some assumptions that are deeply embedded in traditional assessment practices:

1. The knowledge, skill, or attitude being assessed is in a fixed state, that is, what the individual does in this task or moment is indicative of what they can always do. An example would be making a judgment about a child's potential without allowing for the possibility that it could be expanded by appropriate challenges.

2. If the learning sampled in this one assessment is valid, that is, the assessment task assesses what it says it does, then the result is indicative of overall learning and ability in this area. An example would be seeing the mark from one "robust" final examination as indicating overall learning and ability in a whole subject and across a considerable period of time.

3. Competency resides in individuals separately from the contexts in which they demonstrate it.

4. Variations in an individual's assessment results that occur on different but related occasions are caused by measurement errors or poorly designed tasks. This assumption underpins traditional thinking about the reliability of assessments.

⬚⬚⬚⬚ Looking at assessment through a different lens

When key competencies are added to the assessment mix, rethinking the assumptions above might lead to ideas more like these:

- **Addressing assumptions 1 and 2:** Performance is context specific, so competency is judged only after evidence has been accumulated from a range of performances in varying contexts. One-off judgments have little validity in themselves but may contribute to a growing assessment picture as the student works towards meeting identified learning goals.

- **Addressing assumption 3:** The context of the task requires careful attention. Tasks need not only to provide opportunities for demonstrating competencies but also to invite and foster students' inclinations to show what they know and can do. That is, the task must be meaningful and engaging for the student.

- **Addressing assumption 4:** Changes across similar performances may represent evidence of learning as the competencies in question are adapted for use in new tasks.

«Review questions

- What sorts of tasks would fit with this changing picture of assessment?

- What sorts of assessment methods support the documentation of accumulating evidence?

- What might make assessments valid in these changing assessment contexts?

- Does reliability matter? Why or why not? When and when not?

⬚⬚⬚⬚ A new metaphor: assessment tasks as performance

One way to rethink assessment is to consider the demonstration of competency as a "complex performance". This term comes from an American assessment thinker, Ginette Delandshere. For her, the sum is greater than the parts, and all the parts of a situation fit together. While individual parts may be singled out for specific attention, separate and isolated assessments of these are likely to misrepresent the overall learning, especially when they are reported in ways that strip away the context of the learning being demonstrated. Delandshere also suggests we think about assessment as an inquiry process in which we ask this question: "What does it mean to know?" (Delandshere, 2002).

Howard Gardner, of "multiple intelligences" fame, explains assessing the understanding aspects of a performance in this way:

> Why talk about performances of understanding? So long as we examine individuals only on problems to which they have already been exposed, we simply cannot ascertain whether they have truly understood. They *might* have understood, but it is just as likely that they are simply relying on a good memory. The only reliable way to determine whether understanding has truly been achieved is to pose a new question or puzzle – one on which individuals could not have been coached – and to see how they fare.
>
> Gardner, 2006, page 34 (emphasis in original)

This comment suggests an issue with traditional knowledge assessments! Focusing on the reasons for adding key competencies to the curriculum sharpens this challenge by adding dispositional dimensions to the traditional focus on understanding.

Teamwork as a complex performance

When thinking about the challenges of assessing key competencies as complex wholes with contributing parts, it could be helpful to think about the ways we assess a group or team performance. Sports commentators frequently discuss both a whole-team effort and the performance of individuals within that team. Arts commentators frequently evaluate a whole performance but also single out the most talented and enriching individual contributions. This dual-level assessment might also be possible when thinking about:

*   group tasks and the contribution of individuals;
*   integrating tasks and learning in one contributing knowledge area;
*   a whole performance, with improvement in one specified skill;
*   strengthening all the competencies but with a specific focus on one of them.

Gaining the best of old and new

What is described here is different from traditional assessment models but does not negate them. Nor is it the case that traditional targets of assessment are no longer of interest. Teachers will still want to know what progress their students are making in literacy, in numeracy, and in learning about important "big ideas" of the traditional curriculum. The traditional parts of the curriculum can still be assessed in ways that have been refined over time and that continue to be updated. But the new types of outcomes need new types of assessment models and assumptions.

Getting practical: a focus on assessment methods

There are two possible approaches to the challenge of developing ways to document students' progress in strengthening key competencies. One approach is to use less familiar methods of assessment, which are likely to be new for many teachers. Another approach is to adapt more familiar strategies so that they are appropriate for new purposes. Either approach needs to be used in a context where clear learning goals for key competencies sit alongside more traditional learning goals. Some more familiar and less familiar strategies are described on pages 10–11, followed by an example from one school (page 12) combining features from several of the strategies.

Table 2: How key competencies refocus assessment outcomes

Traditionally assessed outcomes		Challenges for learning in the twenty-first century	
Literacy and numeracy – the "old basics" These are assessed using a range of tools, including some that are nationally benchmarked, e.g., PATs and asTTLe.		**Multimodal communication methods** combining written text, pictures, moving images, music, etc., which can be free of time, place, or the need for participants to be physically present	
Knowledge gained in a range of learning areas (seven in the New Zealand Curriculum Framework; eight in the New Zealand Curriculum) Knowledge is typically assessed by pencil and paper tests, essays, examinations, project reports, etc.		A shift to using **knowledge to carry out meaningful tasks** (learning to be a person who can apply the knowledge he or she has learned) Students need to develop multiple "literacies" as they make broader and deeper connections between various disciplines and learn about the nature of subjects.	
A range of skills appropriate to different learning areas (e.g., the essential skills of the New Zealand Curriculum Framework) Skills are frequently assessed against checklists or, sometimes, by producing a completed product or project. If motivation is assessed at all, it is typically by means of a generic checklist prepared in advance and completed by the student.		**Adapting skills** into actions matched to each new situation arising from changing patterns of work Developing the disposition to lifelong learning is a valued outcome.	
Socialisation – fitting in, responding appropriately in different contexts and to relevant sources of authority (which may be knowledge or people); being a "good citizen" Socialisation skills are usually assessed by the teacher, based on inference from what they are in a position to observe.		**Ability to respond** appropriately in multiple cultural settings and working in diverse groups in rapidly changing social conditions Working with others is central to lifelong learning. There is explicit recognition that learning in all settings is important, not just learning that happens at school.	

How key competencies refocus outcomes	Assessment challenges
Multimodal communication adds "new basics". Students need to learn how to use the various tools and representations of each learning area and to become more skilled at combining them.	Traditional print-based pencil and paper tests do not provide a sufficient range of evidence to demonstrate these additional more complex outcomes.
There is a new focus on: • creating and critiquing knowledge, not just "having" it; • making links (seeing connections) to the whole learning context; • meta-level learning – learning about knowledge, thinking, disciplines, etc.	Many traditional assessments measure knowledge gains (and sometimes the ability to apply gains) but not the appropriate use of knowledge in meaningful tasks. Assessment frequently focuses on individual aspects of learning, even within learning areas. Tasks that assess integrated knowledge are less common. We don't yet have much experience of assessing meta-level learning within and across subjects and/or learning areas. How might we do this meaningfully?
Skills are integrated with knowledge, attitudes, and values in ways that direct attention to dispositions. The focus is on students being ready, willing, and able to use skills and knowledge in appropriate ways at relevant and appropriate times. As with knowledge, we become better at adapting and using skills in new and flexible ways when our identities are engaged and the task has real meaning. Discussing learning – the meta level – helps students recognise new opportunities to adapt and use their skills.	Dispositions can only be demonstrated in action – assessment is of the moment and needs to be set in a meaningful context. The overall shape of dispositions is "fuzzy" (Carr, in press) meaning that it is difficult to predetermine what can be observed and documented (e.g., included on checklists). Assessing "learning to learn" has proved to be a tricky challenge and is an area of active international research – there are no easy answers as yet.[2]
Key competencies focus on ongoing development of the individual identity as a person who can envisage acting in certain ways and who is willing and able to do so. Thinking and acting autonomously includes a focus on why it is appropriate to act in certain ways in diverse contexts and on rights, roles, and responsibilities. Group learning is valued and practised.	Typically, traditional assessments infer learner qualities from imposed behaviours (e.g., being on time, being tidy and organised, doing homework, etc.). How do we assess students' growing autonomy if we don't give them opportunities to show it? Assessment should be meaningful for the learner, not just for others. Assessment of group learning is a new focus. Taking greater account of extracurricular activities and learning outside school is another new challenge.

Newer assessment strategies to consider

The four strategies that follow are not meant to be an exhaustive list. They give a flavour of assessment methods that could be suitable.

Learning logs or journals are already being used by many teachers in ways that are compatible with assessing key competencies. Students could add a key competency dimension when they use their journal to set clear competency learning goals, record evidence of their success in meeting these, and reflect on their ongoing learning needs. This dimension could sit alongside any journal entries related to other learning goals.

A **learning story** is a short narrative that documents an instance when a learner shows the disposition to use some aspect of competency, adapting what they can already do to meet the challenges of the task at hand. An accumulation of learning stories over time provides a picture of the learner's developing and strengthening competency. The stories may be instigated and written by the teacher, the student, a parent, and/or some other adult. They will typically be developed collaboratively and may include photos or other evidence. While this assessment method was initially developed in early childhood settings, it has recently been used at all levels including secondary school (Carr, 2001; Ministry of Education, 2004a).

Portfolios collect annotated evidence of learning. These can be a lot of work for teachers. However, the process will be better aligned with lifelong learning intentions if students compile their own portfolios, selecting items for inclusion and writing descriptive reflections on what the evidence shows about their learning. This variation on the creation of a learning story extends across a period of time rather than being a single snapshot. It's important that teachers provide models for students to follow and that each student feels safe to comment honestly on what they perceive to be their learning strengths and ongoing needs. Portfolios can contribute to reporting purposes when they are used as a basis of three-way teacher, student, and parent conferences.

Rich tasks were first designed as part of the New Basics curriculum initiative in Queensland, Australia. New basics are the multi-literacies for the information age that need to be added to the old basics of reading, writing, and numeracy. Rich tasks are carefully designed to be both complex and multifaceted. Students work towards achieving them over several years and receive formative feedback as they make progress. In the New Basics project, teachers were involved in the actual assessment, but the initial design of the tasks and of the assessment schedules was done by small teams of experts and teachers working together. The tasks were generic enough to enable schools and teachers to choose contexts and task details that met the learning needs of their own students. More recently, "rich task blueprints" have been developed to give teachers more input into the actual tasks.

For examples of the original tasks, go to:

http://education.qld.gov.au/corporate/newbasics/html/richtasks/richtasks.html

For examples of newer task blueprints, go to:

http://education.qld.gov.au/corporate/newbasics/html/blueprints/blueprints.html

▨▨▨▨ Rethinking familiar assessment strategies

Most teachers are very familiar with the use of rubrics specifying levels of achievement, and they often develop these to describe learning progress. The matrices published as part of *The New Zealand Curriculum Exemplars*[3] have been widely used for reporting aspects of achievement. Some early examples of using the matrices for assessing aspects of key competencies have been circulated, but their appropriateness for such assessment may be limited for the following reasons:

- Rubrics typically differentiate between levels of performance at one moment in time and based on one source of evidence.

- Only one aspect of a task can be manageably assessed – to do more would require the assessor to remember too many descriptors, with the result that judgments could become unreliable.

- Contexts are not usually taken into account; rubrics tend to specify a very general performance.

- Except where a rubric is used for self-assessment, students are judged by others and are not directly involved in determining the meaning of their demonstration of learning.

- The theoretical basis on which progression across the levels of the rubric has been established is often unclear. For example, progression could be seen as developmental or indicative of growing expertise or improving self-regulation. Alternatively, progression could be related to task complexity or conceptual difficulty or the degree of abstraction of required knowledge and so on.

- Even if there is a clear theory of what progress looks like, this is likely to apply to either knowledge or skills (but not both) and is most unlikely to take dispositions into account.

This does not mean that rubrics should be discarded. The challenge is rather to use them in ways that involve the student in the learning and/or assessment conversation and that creatively address the limitations listed here. This is most likely to happen when the whole school community works to build a collective understanding of the school's vision of learning and of valued achievement goals.[4] The example that follows is from one school at an early stage on a learning journey.

Example 1

Using the exemplars matrices for self-assessment

A secondary science team selected one aspect from the "skills" matrix of the science exemplars (Ministry of Education, 2004b) to focus on a specific aspect of "using language, symbols, and texts" for each topic to be studied. They edited the selected scale to match the planned learning focus and then printed the scale on large laminated sheets, one sheet for each progress step. These sheets were displayed in the classroom, and their meaning was discussed with the students. Students wrote their name on a sticky and posted it on the scale. As the unit proceeded and they produced evidence of their achievement, they could move their name up the scale.

Comment

This could be a good "starter" activity because it increases use of self-assessment within a familiar unit of work. Empowering students to discuss their learning progress is a strength and would be further enhanced if students had helped to construct the scale. A challenge is that the development of one small aspect of competency does not add up to the greater whole, nor does it provide evidence that students will be disposed to use this aspect of competency beyond this learning context. Also, the traditional focus on each student's learning does not address the challenge that learning is supported in a context and typically takes place during interactions with other people and resources.

Opportunities to learn

An important theme of the background paper on the key competencies (Hipkins, 2006) is that students must be given opportunities to actively practise and strengthen their learning. For example, when learning about thinking (metacognition), they will need opportunities to practise this type of thinking, to talk about it using appropriate language, and to evaluate their learning. This suggests that a different type of assessment focus might be on auditing the learning opportunities provided to students – that is, the spotlight might initially focus on teacher decisions and actions rather than student achievement.

The following example selected one feature (Teachers and students use and share a vocabulary of thinking words) from a longer list of features of effective learning for developing higher order thinking skills. It shows how this feature might be expanded into a set of auditing questions that could be addressed in the school. The key competency "thinking" had been selected as a specific focus for development.

Example 2

Feature of programme	Teachers and students use and share a vocabulary of thinking words
Evidence of opportunity to learn	• Students and teachers have compiled a shared vocabulary. • There is a process for sharing additions to this vocabulary as we learn more. • Students have opportunities to discuss the meaning of these words. • The words are displayed where students can see them. • Students use these words in learning conversations. • Teachers give students feedback about the ways they are using these words. • Students have opportunities for self- and peer-assessment of their use of thinking words in a unit of work. • Teachers have planned new tasks where students could adapt and use their learning. • Students show they can use their thinking words in these new contexts.

Comment

A description such as this could be collated as part of a professional discussion of the intended learning focus and could be seen as a "work in progress". Given the multifaceted nature of each key competency, it would doubtless have more features than this brief example. If data was collected systematically and across time, a list such as this could be used for planning and reporting processes.

<<Review questions

- What are our existing assessment priorities and why?
- Do we need to change or add to these in the light of twenty-first-century learning needs?
- Should we audit the opportunities we provide students to develop the aspects of key competencies that we identify as priorities?
- Do we already use formative assessment methods that could be adapted to include key competency dimensions? What would need to change, and what could stay the same?
- What newer strategies would work best for us? How might we develop these?

Making >> connections

The New Zealand Curriculum Exemplars

www.tki.org.nz/r/assessment/exemplars

An exemplar is an authentic example of student work annotated to illustrate learning, achievement, and quality in relation to curriculum levels 1–5. Exemplars for years 1–10 have been published in print and online to support each of the seven curriculum statements.

Kei Tua o te Pae: Early Childhood Exemplars

A first set of ten books in a folder was published in 2004. The second collection of early childhood exemplars was published in November 2007. Schools with primary classes have been sent a reference set of both collections.

Kick Starts: Key Competencies: The Journey Begins

www.nzcer.org.nz/default.php?cPath=139_133_43&products_id=1874

This discussion kit (Hipkins, Roberts, and Bolstad, 2007) is based on research into five "early adopter" schools. Seven pamphlets cover topics such as: the nature of and reasons for the key competencies; how schools can develop their own approaches; what the key competencies might mean for curriculum, teaching, learning, and assessment; and discussion ideas, further reading, and resources. Two posters (and an accompanying teachers' guide) model ways of encouraging the "thinking" key competency.

Key competencies – The New Zealand Curriculum Online

http://nzcurriculum.tki.org.nz

The New Zealand Curriculum Online presents case studies from a range of schools that explored what the competencies might mean for teaching, learning, and school leadership. It offers links to a large body of associated literature. A 30-minute video of Dr Rosemary Hipkins discussing some implementation issues for key competencies is organised in short sections and integrated with slide material to make it suitable for use in facilitated discussions.

DeSeCo: Definition and Selection of Key Competencies: Theoretical and Conceptual Foundations

www.portal-stat.admin.ch/deseco/index.htm

Endnotes

[1] See Carr (2001) and Ministry of Education (2004a).

[2] More details can be found at www.learntolearn.ac.uk

[3] *The New Zealand Curriculum Exemplars* can be found at www.tki.org.nz/r/assessment/exemplars

[4] See, for example, Boyd and Watson (2006) and Hipkins, Roberts, and Bolstad (2007).

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