

Rosemary Hipkins

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## Abstract

Teachers' curricular intentions and the manner they construct learning opportunities in the classroom have an impact on engagement. This chapter is set in the context of a curriculum intention to develop senior high school students' competencies/capabilities, which has implications for the manner in which teachers 'talk up' reasons for engaging with learning. Differences in perceptions of the learning affordances their teachers offer are described for the students' most and least enjoyed subjects, with enjoyment standing as a proxy for emotional engagement. The responses of the teachers of each student's two classes add to the rich contextual picture of more and less engaging classroom learning contexts and point to the importance of creating spaces for metacognitive conversations about learning, and of supporting students to more actively link current learning to their personal lives. This is practically useful knowledge because many of the dimensions of engagement discussed can arguably be influenced by teachers' actions and beliefs.

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## Introduction

This chapter explores students' engagement with learning in their final years of schooling. Engagement is framed as active *participation* in learning with *competency* development in mind. The link to competencies is intended to capture the sense of engagement as 'energy in action'

(Russell, Ainley, & Frydenberg, 2005). Following one much-cited literature review (Fredricks, Blumenfeld, & Paris, 2004), the scope of engagement is taken to encompass behavioural, cognitive and emotional dimensions of participation in learning. Motivation, by contrast, is taken to be about '*energy* and *direction*, the reasons for behaviour, why we do what we do' (Russell et al., 2005, p.3, emphasis in the original).

The nature of engaging classrooms is explored through the complementary lenses of 'opportunities to learn' (as orchestrated by the teacher) and 'affordances' that support and enable learning (as perceived by the student). Whether tacitly assumed or explicitly identified, teachers create

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R. Hipkins, Ph.D. (✉)  
New Zealand Council for Educational Research,  
Wellington, New Zealand  
e-mail: Rose.hipkins@nzcer.org.nz

opportunities for students to engage in class through the purposes they envision for learning. These purposes in turn influence their selection of curriculum content, their choice of learning resources, the instructional processes they deploy, and how they ‘talk up’ and generally prepare students for any subsequent assessment events. Assuming all these choices are coherent and broadly appropriate to the learning needs of the students, the opportunities to learn that the teacher shapes are *necessary* for learning, but a sociocultural framing posits that they are not *sufficient* to ensure the engagement of all or even necessarily most of the students in the class (Haertel, Moss, Pullin, & Gee, 2008).

Opportunities to learn, as envisaged and enacted by the teacher, may or may not be recognised by the students as offering *affordances* for their personal learning. Gee (2008) described affordances as ‘action possibilities posed by objects or features in the environment’ (p.81). To name just a few, affordances could include students’ understanding of what the learning is really about and for; their estimations of their likely success in completing the tasks in relation to their motivation to do so; their personal interest in and connections to the contexts of learning, including prior knowledge and experiences on which they might draw; and any possibilities for social and intellectual interaction as students learn together. Thus opportunities to learn are realised only when individual students see ways to transform the intended learning into action and are willing to invest the necessary effort to do so.

Within the scope just outlined, discussions of engagement include considerations of the broader purposes that frame learning at any specific stage of schooling. This chapter is set in the context of the final years of high school, when students are preparing for and being assessed to gain exit qualifications, all the while making choices that take into account their likely options for work or further study in the immediate post-school years. Traditionally, teachers have used the necessity to prepare for high-stakes examinations as a means of keeping the majority of students engaged at a stage of their learning when adolescents can become restless, ready as they see it for adult life

and perhaps pushing back against the strictures of school. However, contexts for schooling are changing in ways that unsettle tidy relationships where examination prescriptions become de facto curriculum, teaching is directed towards content acquisition, and traditional exit examinations assess the extent to which the prescribed content has been acquired and understood (Bolstad & Gilbert, 2008).

Outside of education, rapidly changing social and economic conditions are creating new uncertainties. It is no longer possible to assume a ‘known future, a known set of options to choose between, each requiring a known set of skills and aptitudes, and therefore a known – and well-trodden – pathway’ (Bolstad & Gilbert, 2008, p.35). With global changes and uncertainties in mind, this chapter argues that new ways of thinking about keeping students engaged in the final years of schooling are now needed. It draws on data from the longitudinal study *Competent Children/Competent Learners* (Wylie & Hodgen, 2012) to describe student and teacher views of classroom learning conditions at age 16 and to discuss implications for changes in pedagogy. The survey items discussed in the chapter were designed with New Zealand’s recent curriculum and assessment reforms in mind, specifically a focus on learning as *competency* development. New Zealand’s national curriculum and school exit qualification system are briefly outlined next, to provide the context for the data and discussion that follows.

## Curriculum and Assessment Reform in New Zealand

In common with many other nations, New Zealand is wrestling with questions of what it means to educate students for the rapidly changing economic, environmental and social conditions that characterise life in the twenty-first century (Bolstad & Gilbert, 2008; Gilbert, 2005). The most recent New Zealand Curriculum (NZC) is a future-focused *framework* curriculum whose purpose is to provide a sense of national direction for local decision-making. Each school has to

**Table 21.1** The origins of five NZC key competencies

Name given to competency by OECD	New Zealand Curriculum version (note that these are 'best matches' not 1–1 equivalents)
Acting autonomously	Managing self
Functioning in socially heterogeneous groups	Relating to others Participating and contributing
Using tools interactively	Using language, symbols and texts
Thinking (as a 'cross-cutting' competency that interacts with all the others)	Thinking (not identified as cross-cutting)

work out how best to build up a detailed local curriculum based on the national framework, with the identified learning needs of its own student community demonstrably addressed. A vision statement and a set of principles guide the reading and interpretation of the whole. The vision is for students to become 'confident, connected, actively involved lifelong learners' (Ministry of Education [MoE], 2007, p.8), and the principles highlight the following as key design considerations: coherence, inclusion, cultural diversity, high expectations, a future-focus, learning-to-learn and community engagement with local curriculum design and enactment, together with a focus on the Treaty of Waitangi as the foundation for bicultural relationships with the indigenous people of New Zealand.

The vision and principles are given life when schools design learning programmes that weave more traditional content with specified values and key competencies. Eight broad sets of values, identified and shaped via a national consultation exercise, are expected to be encouraged, modelled and explored. As outlined in Table 21.1, five NZC key competencies were adapted from a set of four developed by the OECD's DeSeCo project. This project defined 'key' competencies as those learners need to develop during their schooling in order to maximise their chances of living meaningfully in, and contributing to, well-functioning societies, both during and well beyond their school years (OECD, 2005). Some people use the word 'capabilities' with similar intent (Reid, 2006). Learners draw on a wide

range of competencies, but those labelled as 'key' are seen to be universal rather than situation specific (Rychen & Salganik, 2003). The implication is that these competencies are transferrable across contexts and continue to develop across the life span.

Key competencies integrate knowledge and skills with attitudes and values, and are demonstrated as complex responses to any challenges learners confront as they adapt what they already know and can do to new contexts, or to more demanding aspects of familiar contexts (Rychen & Salganik, 2003). In this way, a focus on competency development draws attention to *dispositional* aspects of learning and to ideas such as *action competence*: knowing how best to respond, having the necessary knowledge and skills to do so and being disposed to use these. These dispositional aspects of learning have been characterised as being 'ready, willing and able' to undertake the learning task and confront its challenges (Carr, 2006, 2008). Engagement here is not optional but rather a necessary condition of learning. It is '*energy in action*, the connection between person and activity' (Russell et al., 2005, p.4, emphasis in the original).

If students are to strengthen their personal competencies as demonstrable outcomes of learning, schools must weave competencies together with traditional content. The latter is specified in NZC as sets of achievement objectives for eight learning areas, each differentiated into eight curriculum levels that broadly indicate progress across all the years of school from age 5 to around age 17 or 18. (Students can leave after they turn 16, but this is discouraged because by then they would be unlikely to have any qualifications that would keep them on a learning pathway). Each learning area is framed by a one-page 'essence statement' that sets out the unique contribution that this learning area makes to the enacted curriculum. Schools are expected to discuss these 'high level' ideals as they plan how to give expression to curriculum as a complex whole (Hipkins, 2011).

This local curriculum planning will ideally result in the provision of learning experiences that support all students to develop and strengthen

their current competencies and to explore and model the curriculum values, all in the context of also learning the concepts and skills specified in the achievement objectives. Planning appropriate curriculum is thus a highly complex *design* task. Even with the vision and principles to provide guidance, there could be very many different ways to assemble these pieces. There are also strong implications for pedagogy: the ‘how’ of teaching is as important as the ‘what’ and both come together in the ‘why’, i.e. the purposes for learning that are envisaged, or perhaps simply assumed, by both students and their teachers (Hipkins, Bull, & Reid, 2010). Framing the engagement issue thus directs the inquiry focus beyond the individual student as engaged in learning or not (although that remains important) to take account of teacher-student interactions, teachers’ curriculum decision-making and the classroom learning conditions they co-construct with their students – in other words, the manner in which affordances for learning play out in action.

New Zealand does not have a programme of national testing, so effectively carrying out the processes specified in NZC for local design and review is an important professional responsibility for every school. Even the school exit qualification, awarded at three levels broadly corresponding to the final 3 years of high school, the National Certificate in Educational Achievement (NCEA), has a flexible, modular structure that continues opportunities for local curriculum design right through to the end of schooling (Bolstad & Gilbert, 2008; Hipkins & Vaughan, with Beals, Ferral, & Gardiner, 2005). Standards-based assessment is underpinned by suites of ‘achievement standards’ that can be mixed and matched, at least in theory. Some standards are internally assessed by each school, and these typically specify types of learning that cannot be assessed in traditional examinations. Externally assessed standards do often entail examinations, but even here, some innovation is possible; for example, portfolio assessments are often used in the arts and technology learning areas. NCEA is part of a National Qualifications Framework (NQF) that extends to post-school learning pathways. Thus, there are additional curriculum design opportunities

and challenges for high schools as they create coherent pathways through and beyond the senior high years. Ideally, all assessment should be competency-focused, but in practice, revising the existing suites of achievement standards to reflect discipline-specific opportunities for competency development is proving to be demanding, with considerable implications for teacher professional learning and pedagogical change.

### Changing Pedagogy for Changing Times?

An *Effective Pedagogy* section included in the NZC framework provides advice about creating a supportive learning environment, encouraging reflective thought and action, enhancing the relevance of new learning, facilitating shared learning, making connections to prior learning and experience, providing students with sufficient opportunities to learn and inquiring into one’s own teaching practice to ensure student learning needs are being met (MoE, 2007, p. 34). All of these aspects of pedagogy could be seen as fundamental to improving *traditional* teaching practice. None *necessarily* implies pedagogical change or curriculum transformation for new times. However, the demands of competency development do potentially bring new pedagogical imperatives. NZC defines the key competencies drawing on ‘knowledge, attitudes and values *in ways that lead to action*’ (MoE, 2007, p.12, emphasis added) and the dispositional challenges of competency development have already been noted. One engagement challenge here is that action contexts that are new and challenging for one learner might not offer any learning ‘stretch’ to another. This implies that some degree of personalisation is needed if key competencies are to be fostered via participatory learning.

The NZC notes the development of key competencies is ‘both an end in itself (a goal) and a means by which other ends are achieved’ (MoE, 2007, p.12). Key competencies ‘enable learning’ (ibid, p.38) with the clear implication that there is a strong link between the development of key competencies and learning-to-learn.

Russell et al.'s meta-analysis of engagement and motivation begins with summary of learning outcomes for the twenty-first century. Interestingly they make essentially the same learning-to-learn connection: 'Engagement in learning is both an end in itself and a means to an end' (Russell et al., 2005, p.3). They also link engagement to more dynamic learning processes and better quality educational outcomes as foundations for continuing to learn in the years beyond school. Developing learning-to-learn dimensions challenges teachers to offer opportunities that draw students into metacognitive conversations that support them and reflect on acts of meaning-making, including *how* and *why* they are learning, not just *what* they have acquired (Hipkins, 2006). For such conversations to be rich and meaningful, the learning that is planned must be intellectually engaging for both students and the teacher, and the teacher must be clear about the nature of the 'big picture' to which the learning is making a contribution.

NZC further notes that social contexts are important enablers of progress in developing key competencies; the manner in which competencies develop over time is shaped by students' 'interactions with people, places, ideas and things' (MoE, 2007, p.12). The sociocultural idea of *affordances* is cued by these words, as is the related idea that learning is *mediated* by whether and how students understand and take up these affordances (Wertsch, 1998). Thus a sociocultural framing for learning that fosters competency development positions learning as social, contextually bound and *emergent* (Davis & Sumara, 2010). Competencies come into view during learning interactions that vary according to the demands of the specific subject, the affordances that the planned learning offers individual students, and the various new contextual links that become apparent. This description stands in contrast to a more universalist view of learning where competency might be seen as a relatively stable characteristic, separately owned by discrete individuals (Delandshere & Petrosky, 1998). A sociocultural interpretation implies that key competencies cannot be taught generically: they have to be explored from a disciplinary perspective by teachers in

every subject area, and there is an element of unpredictability in their outcomes. Teachers need to be sufficiently confident to be responsive to students' ideas and reactions, and to follow new learning possibilities as these unfold.

This chapter is not intended to argue for competency development per se. Rather, it uses the idea of key competencies as a lens for re-examining curriculum assumptions and pedagogical practices, and ensuring that any initiatives intended to strengthen student engagement take the whole learning context into account, including adopting a more nuanced view of opportunities to learn and how these are impacted by the classroom environment and teacher's actions. Many teachers are unfamiliar with sociocultural theories of learning and so are likely to miss the subtle language cues in NZC. If they think about learning as being mainly the individual acquisition of knowledge and skills, they are likely to miss the part played by the affordances of learning environment they are responsible for orchestrating for their students. If they are unaware of constructivist theories of learning, the very possibility that different students will perceive different purposes for the new learning offered, and hence create different links to what they already know and can do, might pass the teacher by. The research presented in this chapter did not engage explicitly with teachers' reasoning, but rather with the manner in which their (likely tacit) curriculum and pedagogical beliefs were translated into the opportunities to learn that they offered in their classes.

### **Determining Engagement as a Situated and Mediated Construct**

This section of the chapter introduces the engagement data drawn from the longitudinal Competent Children, Competent Learners project. This project has tracked around 500 New Zealand students from pre-school education through their school years and on into the world of work or further education. Well before the OECD key competencies were developed, the prescient decision was taken to focus on competency development as

children moved through school (see Wylie & Hodgen, 2012 for a more detailed project description). At age 16, when the students were in a wide range of high schools, they were invited to respond to a set of items that described aspects of the learning they experienced during classes in the subjects they most and least enjoyed, as well as in English which they would all have been studying. This chapter focuses on data about most and least enjoyed subjects. Thus, self-reported enjoyment of learning in a class is the situated measure used in this chapter to determine comparative engagement of an individual student in two different settings, each with a different teacher.

The construct of ‘most enjoyed’ subjects directs attention to *emotional* components of engagement (Fredricks et al., 2004). It could be argued that focusing on enjoyment is not a good proxy for engagement because students may well enjoy subjects that make few demands on them cognitively or even behaviourally – they can have a good time and not do much work. However, the student responses outlined shortly do not bear out this sceptical view. Also, there is evidence in the Competent Learners project that enjoyment was linked to experiencing academic success (Wylie, Hipkins, & Hodgen, 2009; Wylie & Hodgen, 2012), which implies that both cognitive and behavioural dimensions of engagement are also present when students indicate positive affective responses to their learning. A second possible objection to the use of enjoyment as a proxy for engagement runs the opposite way. Students may be cognitively and behaviourally engaged in subjects they do not enjoy, especially if they are motivated by strongly held instrumental reasons for choosing these. Indeed, in other research, we have found instances of students taking physics ‘under sufferance’ because they need it for pre-entry courses leading to limited-entry study pathways into highly valued professions such as medicine (Hipkins, Roberts, Bolstad, & Ferral, 2006).

Many studies that include a classroom component compare different context/cohort combinations and hence conflate two sets of variables (different settings/different students). The Competent Learner study provided an illuminating lens on classroom contexts when teachers of the two

classes nominated by a student were contacted and invited to complete a survey that included questions about both the class and the student. We see two different classes through the eyes of the same student, but also as perceived by the teacher of each of those classes. One part of the survey addressed opportunities to learn through the teacher’s eyes. This part comprised 32 items that described the general learning conditions in the class. A 5-point Likert scale (strongly agree to strongly disagree with neutral in the middle) was provided for the teacher to indicate how well the item description accorded with the class in question. Other parts of the survey asked the teacher to respond to questions about the named student as a learner. One bank of 36 Likert-scaled items asked the teacher to estimate how often the student did what the item described (never, occasionally, sometimes, often, or always) while learning in the nominated class. Another bank of 13 items described aspects that imply motivational underpinnings for engagement (e.g. ‘always strives for excellence’) and asked the teacher to judge how well that item applied to the student on a 5-point Likert scale (strongly agree to strongly disagree with neutral in the middle). A full discussion of all these rich data can be accessed in the project report (Wylie et al., 2009).

The selection of teacher items for inclusion in this chapter was informed by a consideration of their potential to illuminate aspects of competency development, and by being able to match them to student items that broadly encompassed the same idea. Students completed questions about learning conditions in their most and least enjoyed classes. For each class, they responded to a bank of 58 items (X is a class where...) using a 5-point Likert scale (strongly agree to strongly disagree with neutral in the middle). Some of the items concerned the affordances they perceived in that class setting. Table 21.2 matches these to teacher items related to opportunities to learn. Other student items concerned their personal behaviour in the class. Table 21.3 matches these responses to corresponding teacher perceptions about the student as a learner in that class.

Note that the distinction teachers were asked to draw between the student as an individual and

**Table 21.2** Comparing teachers' perceptions of opportunities to learn with students' perceptions of the affordances offered in these classes

Item set no	Most enjoyed class = 418 students and teacher of each student Least enjoyed class = 417 students and teacher of each student	% agree or strongly agree		
		Most enjoyed	Least enjoyed	Difference
1	Student view: The teacher uses examples that are relevant to my experience	77	27	50
	Teacher view: <i>I relate the context to students' experiences</i>	77	66	11
2	Student view: We have a lot of hands-on practical activities	73	24	49
	Teacher view: <i>Students do a lot of practical activities</i>	72	38	34
3	Student view: The teacher gives me useful feedback on my work that helps me see what I need to do next and how to do it	86	40	46
	Teacher view: <i>Feedback I give students shows them their next steps</i>	84	75	9
4	Student view: I can try out new ideas/ways of doing things	81	35	46
	Student view: We discuss different ways of looking at things/interpretations	65	27	38
	Teacher view: <i>Students are given time to reflect on their learning</i>	65	57	8
5	Student view: I get to think about ideas and problems in new ways	67	30	37
	Teacher view: <i>Students are encouraged to assess each others' work and give feedback</i>	62	17	45
6	Student view: I get time to think and talk about how I'm learning	62	17	45
	Teacher view: <i>I encourage students to think and talk about how they are learning (the methods they are using)</i>	57	52	5
7	Student view: Students help and support each other	78	44	34
	Teacher view: <i>Students can work out problems together</i>	74	78	-4
8	Student view: I can make mistakes and learn from them without getting into trouble	84	50	34
	Teacher view: <i>Students can make mistakes and learn from them without getting into trouble</i>	92	92	-
9	Student view: We do projects about real things/issues	54	25	29
	Teacher view: <i>Students have the opportunity to act on issues that concern them</i>	50	33	17
10	Student view: We assess each other's work and give feedback	47	20	27
	Teacher view: <i>Students are encouraged to assess each others' work and give feedback</i>	39	30	9
11	Student view: We learn things outside the classroom, e.g. on fieldtrips	41	14	27
	Teacher view: <i>Students interact with people outside school as part of their school work</i>	43	23	20
12	Student view: I work with other students on group tasks	71	52	19
	Teacher view: <i>Students do a lot of group activities and discussions</i>	54	37	14
12	Student view: We can choose the topics we want to do	28	10	18
	Teacher view: <i>Students are encouraged to lead group projects/class activities</i>	37	25	12
	Teacher view: <i>Students are given input into the context and direction of learning activities</i>	64	52	12

the class as a whole does not apply to student responses – they were who they were in that setting, and hence all their items comprised one large bank. Note also that each student completed the same item set for both their most and least enjoyed subjects. Unless they had the same teacher for both these subjects (which in view of the differences about to be reported seems fairly unlikely), the corresponding teacher items for most and

least enjoyed subjects will have been completed by two different teachers. A further caution concerns the likelihood that the items were not interpreted in comparable ways by the student and the teacher. Notwithstanding these cautions, the following data patterns paint a compelling picture of opportunities to strengthen competencies that can make a positive contribution to student engagement.

**Table 21.3** Comparing teachers and student perceptions of the student as a learner in the class

Item set no	Most enjoyed class=418 students and teacher of each student, Least enjoyed class=417 students and teacher of each student	Students:% agree or strongly agree		
		Teachers:% happens often or always		
		Most enjoyed	Least enjoyed	Difference
1	Student item: I learn things that are challenging	86	22	64
	Teacher item: <i>Where there is a choice, chooses work that allows him/her to gain further knowledge and skills</i>	44	27	17
2	Student item: My teacher is interested in my ideas	85	27	58
	Teacher item: <i>Clearly explains things so you get a very good idea of what is happening and what s/he is thinking</i>	60	37	23
3	Student item: I get totally absorbed in my work	64	13	51
	Teacher item: <i>Has a good concentration span when working</i>	59	40	19
4	Student item: I organise my time so I get things done	64	24	40
	Teacher item: <i>Finishes all class work</i>	70	45	35
	Teacher item: <i>Is organised and well prepared for assessments</i>	61	43	18
	Teacher item: <i>Finishes all homework</i>	58	38	20
5	Student item: When I finish my work, I check and make changes if needed before handing it in	68	29	39
	Teacher item: <i>Assess his/her work and makes improvements before completing or handing it in</i>	47	31	16
6	Student item: I expect to get lots of NCEA credits	71	32	39
	Teacher item: <i>S/he is realistic about likely achievement in assessment tasks</i>	68	60	8
7	Student item: We discuss different ways of looking at things/ interpretations	65	27	38
	Teacher item: <i>Aware that there are different ways of interpreting knowledge</i>	42	30	12
8	Student item: I meet any goals I set myself	64	27	37
	Teacher item: <i>Meets any goals s/he sets her/himself</i>	57	39	18
9	Student item: I can make mistakes and learn from them without getting into trouble	84	50	34
	Teacher item: <i>Learns from mistakes/experience</i>	65	47	18
10	Student item: When I'm doing something I think about whether I understand what I'm doing	74	47	27
	Teacher item: <i>Asks questions so s/he understands</i>	63	41	22
11	Student item: Students can safely express different views from each other	79	53	26
	Teacher item: <i>Respects other points of view or different ways of doing things</i>	71	60	11
12	Student item: I work with other students on group tasks	71	52	19
	Teacher item: <i>Takes full part in a group that is working to complete a learning task together</i>	58	36	22
13	Student item: I can choose which assessments I want to do for NCEA	17	14	3
	Teacher item: <i>S/he makes strategic decisions not to do assessments</i>	5	8	3
	Teacher item: <i>S/he makes impulsive decisions not to do assessments</i>	8	12	4

## Engaging Students in Whole-Class Settings

Table 21.2 documents 12 matched sets of items, ranked by the size of the difference between students' perceptions of the learning conditions in

their most and least enjoyed classes. Each set of items shows overall frequencies for the affordances of the class as the students perceived these, matched to overall frequencies for opportunities to learn as perceived by the teacher of each student in those same classes. To illustrate, item set



1 shows that three-quarters of the students (77%) perceived that the teacher of their most enjoyed subject used examples relevant to their experiences. Congruent with this, 72% believed that this teacher knew what interested them. By contrast only 27% of these same students thought the teacher of their least enjoyed classes used relevant experiences and just 20% thought this teacher knew what interested students. Three-quarters of the teachers of the nominated most enjoyed classes (77%) thought they related contexts of learning to students' experiences, as did 66% of those who taught in students' least enjoyed classes. Thus the frequency difference between the perceptions of teachers of most and least enjoyed classes that they orchestrated opportunities to draw links between current learning and students' wider experiences was just 11%, compared to a 50% difference in students' recognition of such linking as an affordance of the learning in most and least enjoyed classes. A similar pattern holds for all the item sets in Table 21.2.

Note that some item sets in Table 21.2 are closely matched, with only a slight change of wording for teacher and student versions. However, some groupings bring together items with similar intent but different descriptions. For example, item set 4 contrasts one teacher item that asked about reflection as a general activity with three student items that each described a different possibility for reflecting on learning. Similarly, item set 12 explores students' perceptions of choice as residing in actual selection of topics and opportunities to show leadership in class. By contrast, the matched teacher item cues student 'input' which need not imply the same level of freedom, or ultimate determination of curriculum topics and directions. This difference doubtless explains the atypically large difference in item set 12 between teachers of most enjoyed classes and students' views of learning in those classes.

The pattern of responses in Table 21.2 suggests that enjoyment of learning, as a proxy for engagement in learning, is associated with a range of opportunities to be *actively participating* as a learner. In addition to a traditional focus on 'hands-on' learning, students were more likely

to be active in all of the following ways in their most enjoyed classes:

- Taking part in reflective conversations about the meaning of new learning (item set 4), looking ahead to next learning steps (item set 3) and discussing acts of learning per se (item set 5), with all three item sets showing close to 50% differences in frequency of occurrence in most and least enjoyed classes
- Building connections between school and life beyond school (item set 1), learning in contexts beyond the classroom (item set 10) and engaging with real issues (item set 8)
- Interacting with peers, both during learning (item sets 6 and 11) and when assessing learning (item set 9)
- Making and correcting one's own mistakes (item set 7) and exercising some autonomy over learning directions and/or showing leadership in class (item set 12)

In the most enjoyed classes, frequencies for student recognition of the various affordances were largely matched by teacher perceptions of opportunities to learn in those classes. The pattern is very different when student responses are compared with those for teachers of least enjoyed classes. In these least enjoyed classes, the opportunities teachers perceived they offered were not recognised as affordances by many of the students. It may be that some of the teachers of the least enjoyed classes did not make certain opportunities to learn as visible to students as they thought they did. It is also possible that some teachers of these classes were out of touch with students' interests and learning needs, or perhaps simply not focused on students as individual learners, which could be the case for a teacher with a very strong content orientation, for example. Alternatively, students might be less active in seeking connections, perceiving relevance and participating actively when they are not enjoying a class. Either way, it seems less likely that opportunities to participate actively in learning will be recognised or embraced in students in their less enjoyed classes.

One caveat for the comparisons in Table 21.2 is that teachers were thinking about that class as a whole, whereas each student was focused on

their personal learning. We have no way of knowing if all the students in any one class would have answered the survey in a similar way. What we can say is that not enjoying a class is often linked to having a teacher who appears less attuned to a specific student's personal learning needs, compared to the teacher of their most enjoyed class. This is borne out by a comparison of items that did apply specifically to an individual student, as discussed next.

### Associations Between Expectations and Engagement

Table 21.3 follows a similar format to Table 21.2, but here the teacher is responding to items about the student as a named individual in their class. Some of the student items have already been introduced, but here, they are matched to teacher items specifically related to them personally. Where the wording matches closely, the item set draws a contrast between how the student sees themselves as a learner and how their two teachers see them. Some item sets are not as closely matched but have been paired because they inform the same opportunity or learning challenge. For example, item set 2 probes student perceptions that their teachers are interested in what they think, whereas the matched teacher item asks about how well the student can express what they think (the teacher Likert scale changes accordingly). This pairing assumes that teacher awareness of the relevant behaviours is actually linked to opportunities to demonstrate these. Item set 6 is different again. This item set contrasts students' expectations of gaining credits from their NCEA (qualifications) assessments with the teacher's view of whether or not those expectations are likely to be realistic.

Again we see, through the students' eyes, much lower frequencies of occurrence in their least enjoyed classes of the various potential affordances described. For most item sets, the teacher-reported frequencies of occurrence were also considerably lower in least enjoyed classes than in those the students most enjoyed. Keep in

mind here that these are comparisons of the *same* students, as they variously engage with learning in two different settings. Classes that were seen as least enjoyable by these students were associated with:

- Lack of intellectual challenge (item set 1), or learning 'stretch' as indicated by getting totally absorbed in a task (item set 3), or getting involved in conversations about ideas (item set 2), where for all three items again we see student frequency differences of 50% or more between most and least enjoyed classes
- Lack of opportunities for learning from mistakes (item set 9), safely exploring alternative views and ways of interpreting knowledge (item sets 7 and 11), and asking questions to develop a better understanding (item set 10)
- Not valuing the work sufficiently to take care over its completion (item set 4), or checking it for potential improvements (item set 5); not working purposefully in class (item set 8), including with other students (item set 12); and the slightly greater likelihood (at least from the teacher's perspective) of skipping an NCEA assessment (item set 13)
- Not expecting to gain intrinsic rewards in the form of personal goals met (item set 8) or the extrinsic reward of assessment credits gained towards an NCEA qualification (item set 6)

Interestingly, students' intellectual involvement tended to be underestimated by teachers in most enjoyed classes, compared to students' own perceptions. For example, whereas 86% of students thought learning was challenging in their most enjoyed classes, just 44% of the teachers of those classes thought students would choose work that allowed them to gain further knowledge and skills (and hence, by implication, would be more challenging). It may be simply that some teachers felt they lacked the evidence to comment, but then that could be indicative of lacking overt opportunities to make the relevant observations during class. Alternatively, it may be that students overestimate the extent of their active meaning-making or simply do not see the challenges that the teacher sees to be inherent in learning implied by some items. What we can say is that, from the

students' perspectives, there are indications that opportunities for active and challenging meaning-making are associated with greater enjoyment of learning. Both Tables 21.2 and 21.3 show such items at the top of the student rankings for frequency differences between most and least enjoyed classes. This in turn suggests that for many respondents, 'enjoyment' did not signal a preference for taking an easy route in class.

Comments made by some of the teachers of least enjoyed classes suggested they saw it as unreasonable to be expected to know personal attributes of individual students. Non-response or choice of 'neutral' in this part of the survey was correspondingly higher than for returns from teachers of favourite classes. Notice too that these teachers were consistently more pessimistic in their expectations of students' likely learning effort and success. Elsewhere in the survey, teachers were asked to predict students' likely highest level of qualification in their post-school years. The teacher of a student's most enjoyed class typically indicated a higher qualification than the teacher of the same student's least enjoyed class (Wylie et al., 2009). Students also held lower expectations of success in their least enjoyed classes, and in this instance overall frequencies for their views were much closer to those of their teachers. One student item simply stated 'I do well [in this class]'. Most students (89%) agreed this was so in their most enjoyed class, compared to 34% in their least enjoyed class.

Notice that active participation of students in making decisions about assessment for NCEA, as opposed to learning in general, was not seen by most students as something they could or would do, nor did their teachers see this as an option open to the students. Unlike almost every other item set reported in this chapter, there was no substantive difference for most and least enjoyed classes (item set 13). NCEA is built from standards-based modules, and so students have a degree of choice in shaping the composition of their certificates, at least in theory (Hipkins et al., 2005). Our 16 year olds *could* be supported to develop considerable autonomy in charting their course through NCEA, but it appears that this

seldom happens. In a recent national survey, just 10% of high school teachers said they always or quite often involved their students in building NCEA assessment plans (Hipkins, 2010a).

If students perceived that NCEA did in fact offer them the affordance of making strategic assessment choices, would this enhance their enjoyment in the same way that perceptions of greater autonomy in other aspects of their learning appear to do? What would need to change for teachers to perceive that they can in fact support students to take up this opportunity, which already exists in principle? Would both they and their students experience rewards in the form of greater enjoyment of learning in the parts of the curriculum in which they choose to aspire for assessment success? These are questions that bear further investigation. Some pointers to the challenges that teachers face as practice imperatives change are implied by a small but growing body of research on teaching for competency development.

### The Engaging Nature of Competency Development

A recent analysis of the challenges of integrating key competencies with learning in one very simple science topic [the water cycle] (Hipkins, 2010b) identified the following four key points of difference from traditional teaching of this topic. First, the teacher must hold a clear 'big picture' purpose in mind, so that the learning matters for something more than just acquisition of new content knowledge. Second, the learning should be set in context and linked to students' life experiences, and where possible, these links should be sufficiently open that students can personalise the connections to what matters to them. Third, acts of meaning-making within the discipline of science should be an explicit focus of learning, not just something that happens serendipitously (or not). Finally, students' ideas should be used in ways that establish and sustain their connection to the intended learning while also setting up new challenges that strengthen their learning-to-learn

capabilities (Hipkins). It will be evident that all four of these areas of potential difference align with the aspects of pedagogy highlighted in Tables 21.2 and 21.3 as more likely to be happening in students' most enjoyed classes.

Notwithstanding these strong potential links between teaching for competency development and student engagement with learning, a growing body of key competencies research has revealed that they are likely to be interpreted, at least initially, as requiring only a surface level changes to pedagogy, and perhaps a strengthening of current 'good practice' (Hipkins, 2011). For example, the title 'managing self' underplays the intent of the OECD equivalent 'acting autonomously' (see Table 21.1). As cued by its NZC title, managing self has been widely interpreted to entail involving students in goal setting and managing routines of learning such as arriving at class on time and with the necessary materials, in contrast to the OECD definition that includes aspects such as 'acting within the big picture' (Rychen, 2004). Some items reported in Table 21.3 are set at this surface level of competency development, yet even this is sufficient to impact enjoyment, and hence by implication engagement with learning.

Self-managing behaviours certainly create conditions where school learning can be initiated, but they will not necessarily strengthen students' ability to apply some self-direction to their learning, or to develop self-awareness of a learning-to-learn nature. Arguably, the combination of the key competencies 'thinking' and 'using language symbols and texts' *could* refocus learning in ways that make acts of learning per se a focus of classroom conversations. On a surface level, 'thinking' might be envisaged as teaching a set of skills (Harpaz, 2007), while 'using language, symbols and texts' has been characterised by some as the 'literacy and numeracy' competency (Hipkins, 2007). While basic academic skills are foundational to other learning, a skill-based generic interpretation seriously underestimates the intellectual challenge that these competencies can add to learning. In combination, these two key competencies could invoke semiotic dimensions that require meaning-making to be explicitly addressed

within different disciplinary conventions (i.e. addressing the 'nature' of the subject, not just the content). One competency identified as a specific challenge for twenty-first century learning that could be developed here is the willingness and intellectual means to explore *ideas as ideas*, not just as received wisdom (Bereiter & Scardamalia, 2006). Tables 21.2 and 21.3 include items that could be read as entailing active this type of meaning-making, although it is again likely they were not read very deeply by many respondents. Even so, the tables reveal considerable differences between the affordances that student perceive their least and most enjoyed classes offer for: exploring ideas, discussing multiple interpretations of knowledge, and thinking and talking about acts of learning.

The DeSeCo definition of competency development draws attention to the need to mobilise knowledge and skills for use in challenging new contexts (Rychen & Salganik, 2003). At the very least, the key competency 'participating and contributing' implies that students need to be able to make personally meaningful links between theory and action and between classroom learning and life beyond school (Bolstad, Roberts, Boyd, & Hipkins, 2009). 'Contribution' also implies giving something in exchange for learning, which is suggestive of an action component where appropriate. The items included in Table 21.2 tend to position teachers as the orchestrators of opportunities for learners to be active, rather than supporting students to be proactive for themselves. Nevertheless, there are clear indications in both tables that enjoyment of learning is linked to opportunities for some level of active participation in practical activities, addressing real-life issues and in conversation and interaction with other learners.

The final key competency in the NZC set of five is titled 'relating to others'. At a surface level, this competency can be seen as being about appropriate interpersonal behaviour in class and at school. With the OECD equivalent 'functioning in socially heterogeneous groups' in mind, pairing this competency with 'managing self' points towards building greater self-awareness in

relation to diverse others and the need to modify personal cultural expectations and behaviours in different contexts. Taking a different tack, pairing ‘relating to others’ with ‘participating and contributing’ draws attention to other people as a learning resource, and to the need to strengthen skills for interacting and developing ideas in the spaces between learners, which is often cited as important for ‘knowledge work’ in the twenty-first century (Gilbert, 2005; Bereiter & Scardamalia, 2006). The items presented in Tables 21.2 and 21.3 are more clearly aligned with the latter pairing, again with the caveat that they may not have been read particularly deeply by respondents. Regardless of the level of interpretation and application in the classroom, the potential of teaching for competency development to impact engagement is again evident in clear differences between the opportunities that teachers offer and students perceive as affordances in their most and least enjoyed classes.

Items that describe practices that hint at fostering greater learner autonomy ranked lower in teachers’ estimation of the opportunities they offer and students’ estimation of the affordances available to them, even in most enjoyed classes. Just 39% of teachers in most enjoyed classes said that students were encouraged to assess each others’ work and give feedback, and 37% said students could sometimes lead classroom learning. Just 28% of students said they could choose study topics in their most enjoyed classes, and only 17% perceived they could make choices about the NCEA assessment they would undertake. These options were hardly available at all in least enjoyed classes. If teachers are serious about fostering greater student autonomy, they need to scaffold opportunities for greater self-determination of learning pathways, greater self-awareness of purposes, habits and progress in strengthening competencies as a learner and as a citizen in a diverse and rapidly changing world. If the imperative for greater self-direction in combination with greater participation is not to be misrepresented as a relativistic ‘anything goes and nothing matters’ view of curriculum (Hipkins et al., 2010), many teachers of high school students will

need to gain greater clarity around multiple potential purposes for learning, while also reframing their subjects as disciplinary tools that do specific sorts of work in the world, within certain agreed conventions. That is, they will need to become more ‘literate’ about the nature of their specialist subjects, so they can help their students do the same (Hipkins, 2010b). Given the data presented in this chapter, we could hypothesise that any shifts to affording students greater autonomy in their learning will also help strengthen student engagement. Whether the complex inter-related changes sketched in this section happen more widely in practice remains to be seen.

### **Advancing Teacher Conversations About Student Engagement**

This chapter has explored student engagement in relation to the opportunities for learning that teachers say they offer and the affordances for learning that senior high school students perceive to be available to them in most and least enjoyed classes. Framing learning in terms of developing or strengthening key competencies adds a critical curriculum dimension to the discussion and aligns curriculum change imperatives with pedagogical change. The analysis has presented teacher and student data separately in order to contrast differences in perceptions, but, in reality, engagement is co-constructed in the classroom moment as interactions play out between teacher and students, and between the students themselves. This section of the chapter proposes a complex, dynamic framing of the relationships between teacher and student actions, motivations and engagement and identifies some implications for teacher professional learning.

As well as having separate teacher and learner components, there is an element of *simultaneity* to engagement as it emerges in the classroom moment (Davis & Sumara, 2010). Davis and Sumara noted that it is unhelpful to debate the merits of either student-centred or teacher-centred learning *as if* they are an inevitable duality. Learning is simultaneously both individual and

situated. The classroom environment is anticipated and orchestrated by the teacher in the first instance but ultimately co-created by all those present. Engagement also has temporal dimensions. It emerges in the flow of time, building on past experiences and looking to possible futures. Within a complex framing such as this, the choice of feelings about individual subjects is a useful proxy for engagement because it is likely to include aspects of all three temporal dimensions (past, present, future), whether students and teachers are aware of the impact of these or not.

For the student, the identification of a subject as ‘most enjoyed’ is likely to relate at least in part to their *personal* interests and preferences, underpinned by the goals and aspirations that motivate them, which are grounded in past learning experiences and in all the other factors that impact on their general engagement trajectory across the years of school (Wylie & Hodgen, 2012). Although the chapter has focused on overall frequency differences between most and least enjoyed subjects, there is evidence that some students’ perceptions of specific affordances did not differ for the two classes they nominated. Selecting two of the more metacognitive statements, ‘I get time to think and talk about how I’m learning’, and ‘I like to reflect on how I’ve learned something’, we cross-tabulated students’ responses for each class. We found that the manner in which individuals responded in these two settings was significantly more likely to be similar than different. Students who agreed that they got time for reflecting on their learning in their most enjoyed class were also more likely to agree that this time was also available in their least enjoyed class. Those who selected the neutral response for one class were also more likely to select it for the other, suggesting perhaps that they were not sure what these items were about. Interestingly, the pattern did not hold at the very strong level of response: students who totally agreed they got this time in their most enjoyed class were as likely to totally disagree about their least enjoyed class as to totally agree. The relationship between individual and contextual dimensions of engagement in class is clearly complex and could well be the subject of a further level of analysis of the data set reported here.

Believing that learning that is worth the investment of effort and time doubtless acts as a continuing personal motivation, while also increasing the likelihood that opportunities offered by the teacher will be recognised as affordances for learning by the student and hence taken up. However, the clear student *and teacher* differences between most and least enjoyed subjects point to the strong influence teachers can exert on students’ personal preferences in the moment. As they focus and shape the learning possibilities offered, teachers influence cognitive engagement. Interestingly, the *cognitive* quality of interactions is the pedagogical dimension where the data show the strongest differences between most and least enjoyed subjects. Students do appear to be engaged by challenging learning that stretches them (see also Wylie & Hodgen, 2012), especially when metacognitive dimensions such that learning-to-learn are also in the frame. Teachers can help students envisage *new* personal and collective learning possibilities here.

Teachers also help enlarge personal perceptions of relevance when they support students to look beyond the personal to interpersonal differences in perspectives and outwards again to the world beyond school. Again the data show strong associations with engagement. Most enjoyed classes are participatory spaces where students interact safely and enjoyably with each other, and where learning is meaningfully linked to their life experiences and to issues that concern them. With competency development in view, the purposes for learning that teachers ‘talk up’ need not be limited to near-horizon possibilities such as passing examinations but can extend to the sorts of young people students wish to become and the sorts of futures they could potentially help build for themselves and others (Bolstad et al., 2009). This framing illustrates why some define engagement as ‘*energy in action*, the connection between person and activity’ (Russell et al., 2005, p.3).

The Competent Learners research shows that teachers who are more successful at engaging students appear able to make more realistic assessments of the opportunities they offer and that students take up. They know their students better

and in general hold higher expectations of their achievement. One powerful implication from the findings is that teachers need not simply accept students' feelings about their class. They can take the lead in co-creating a learning environment that is more engaging and simultaneously more likely to build students' competencies in powerful and useful ways. However, in order to do so, they may need to let go of some control of the learning action, affording more space for students to create links of personal relevance to them and in which they can exercise responsible choices about learning options and pathways. In one recent case study project, we found that making these types of pedagogical changes appeared to be easier for some teachers than for others (Bolstad et al., 2005). Why is that? This question bears further investigation. There are implications for professional learning in relation to extending teachers' pedagogical repertoire, but also in relation to challenging them to rethink their views of curriculum and of purposes for learning.

This chapter has positioned key competencies as potential drivers of profound curriculum change, albeit with modest success so far in New Zealand. Doubtless other similar initiatives could achieve the same impetus by addressing the same pedagogical (and perhaps curriculum) differences between classes that students enjoy and those that they do not. This chapter is not an argument for foregrounding competency development per se but for re-examining curriculum assumptions and pedagogical practices and ensuring that any initiatives intended to strengthen student engagement take the whole learning context into account. This must include adopting a more nuanced view of opportunities to learn and how these are impacted by the classroom environment and teacher's actions.

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