Rethinking subject English for the knowledge age

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KEY POINTS

- The educative purposes for English evident in current and past New Zealand curriculum documents focus primarily on transmitting and reproducing knowledge.

- Future-oriented theorists argue that if we want students to be future builders, they need opportunities to *do things* with knowledge, and to develop knowledge-building capabilities.

- The future-oriented literature suggests that we can do this by providing opportunities for: finding and solving real problems; working with a balance of freedom and constraint; expressing diverse ideas; working in the spaces between ideas; revisiting and improving on ideas; and recording the evolution of ideas over time.

- We can imagine what each of these learning opportunities might look like in English by considering some examples from existing research.

- Exploring what it means to support knowledge building in one learning area, such as English, is one way of taking a "first step" towards a future-oriented curriculum, in which we attempt to bring the different learning areas together more purposefully.

Future-oriented theorists argue that if we want students to be future builders, we need to provide them with opportunities to *do* things with existing knowledge, rather than just reproduce it. In this article I consider the implications of this argument for English. I describe some theory-driven learning opportunities that may enable students to build knowledge, and I provide some research examples from classrooms of what each opportunity might look like for English. I suggest that exploring how to support knowledge building within existing learning areas, such as English, is one way of taking a "first step" towards a future-oriented curriculum, in which we attempt to bring the different learning areas together more purposefully.

Introduction

Why do we have English as a subject in the school curriculum? We do not often ask this question—English has *always* been there, along with mathematics, and science, and we assume that it always will. I recently asked the "Why English?" question to a number of friends and received a range of responses. These included: to learn how to read and write properly; to get a good job; to develop into a rounded individual; to gain access to Shakespeare, Dickens, Austen, and other great writers; and to learn to read critically rather than take information at face value. Underpinning these different responses are different assumptions about the *purpose for English* in the school curriculum and the purpose of the education system more generally—whether it be to learn the basics, to get a job, or to develop as an individual.

Future-oriented educational theorists argue that if we want students to be future builders, we need to provide them with opportunities to *do* things with existing knowledge, rather than just reproduce it. In this article I argue that past and current New Zealand curriculum documents tend to emphasise that the purpose for English is to transmit and reproduce knowledge. The documents have less emphasis on English as a context for students to build knowledge. I then consider what a focus on knowledge building might mean for the English learning area, and provide some classroom examples to illustrate what this might look like in practice.

Why reproducing knowledge can no longer be the main goal of education

There are social, economic, and environmental arguments for why reproducing knowledge can no longer be the main goal of the education system.[1] Some of these arguments are that:

- we can no longer anticipate the knowledge that students will need in their future lives
- the changing nature of the workforce means that most jobs will require the capacity to work with others to innovate, and to create *new* ideas
- the concept of knowledge as something that is stored in, and transmitted between, individual minds is not consistent with what we now know about minds and learning, or with how we think about and use knowledge in the out-of-school world
- the complex problems the world faces cannot be solved from within existing knowledge sets or belief systems
- the focus on reproducing knowledge (and associated teaching and assessment processes) produces inequitable educational outcomes for particular social and ethnic groups.

Future-oriented theorists argue that the main goal of education must now be to provide students with opportunities to *do things* with knowledge—to use existing ideas in new ways, and to recombine or adapt existing ideas for new purposes—and to develop knowledge-building capabilities.[2]

Purposes for English evident in New Zealand curriculum documents

There is an existing body of literature on the educative purposes for English (see for example, Locke 2009; Thompson 2004). I have used this literature to identify the purposes for English which are evident in past and present New Zealand curriculum documents. These are to foster students':

- intellectual development through exposure to the "great" works of literature (the cultural heritage purpose)
- personal growth through creative expression (the personal growth purpose)
- acquisition of the languages, texts, and practices needed to access social and economic power (the textual acquisition purpose)
- critical thinking about the purposes and audiences of text (the critical thinking purpose).

Each of the purposes has emerged in response to particular social conditions and has its own history. However over time these purposes have become diluted, or have been reinterpreted, adapted, or layered with other purposes in response to new social contexts. Current curriculum documents are consequently made up of a muddle of purposes, some of which contradict or compete with one another. The summary below describes each purpose in its "pure" form, even though this is not how these purposes appear in curriculum documents or are practiced in classrooms.

The cultural heritage purpose

Underpinning the cultural heritage purpose for English is the assumption that some literary texts have inherent qualities making them more worthy of study than others. This idea can be seen in the maintenance of a literary canon made up of "classic" texts, such as those by William Shakespeare. These texts are considered the best models because they have stood the test of time. The cultural heritage purpose rests on the assumption that students will develop intellectually through *exposure* to these great works.

The task of the school is not just to provide students with access to the great works of literature, but also to teach them the "proper" methods for using them. This involves discovering the "true" meaning of the text through a close reading of the words on the page without reference to anything outside of it and without any predefined agenda of what one wants to find there.[3]

The following curriculum statements are indicative of the cultural heritage purpose.

> [The teacher must aim] to...train the pupils in the *proper use of books*, and thus to foster an *appreciation* of English literature (From the 1928 Syllabus, cited in Department of Education, 1961, p. 1, italics added).

> Literary texts with established critical *reputations* and from different periods and places have a central place at all levels (Ministry of Education, 1994, p. 12, italics added).

> The study of New Zealand and world literature contributes to students' ... awareness of New Zealand's bicultural *heritage* and their understanding of the world (Ministry of Education, 2007, p. 18, italics added).

The personal growth purpose

The personal growth purpose for English is for learners to develop as individuals by making meaning of their experiences through language. Consistent with reader-response theory (see, for example, Iser, 1978; Rosenblatt, 1978), it is believed that meaning is made through a transaction between reader and text. It is understood that different readers interpret texts differently, and that this difference reflects different prior experiences. Students' engagement with text is considered important and students are provided with opportunities to respond to texts creatively, for example, through art, drama, and writing.

The following curriculum statements are indicative of the personal growth purpose.

> The purpose of teaching English to New Zealand children is to contribute to the general aim of education in this country—to help each child develop fully as an individual and a citizen. (Department of Education, 1961, p. 2)

> Language makes a unique contribution to wider aims of education, which include: To foster children's intellectual, emotional, and imaginative growth; To help children develop a positive self concept; To extend children's awareness of ideas and values. (Department of Education, 1986, p. 10)

> Students appreciate and enjoy texts in all their forms. The study of New Zealand and world literature contributes to students' developing sense of identity (Ministry of Education, 2007, p. 18).

The textual acquisition purpose

The textual acquisition purpose is for students to acquire the functions of language needed to participate successfully in society. There is a focus on providing students, and particularly those from non-dominant cultures, with the language and texts of power.[4] This purpose is influenced by functional linguistics (in particular the work of Michael Halliday (see Webster, 2009) and linked to work on genre (for example, Cope and Kalantzis, 1993). Meaning is no longer seen just as a transaction between the author and the reader, but as socially constructed.

The following curriculum statements are indicative of the textual acquisition purpose:

> Exploring and learning about the language of a variety of texts … will help them [students] respond confidently to, and develop control over, the wide range of texts and language uses required for learning and living in society. (Ministry of Education, 1994, p. 17).

> By understanding how language works, students are equipped to make appropriate language choices and apply them in a range of contexts. (Ministry of Education, 2007, p. 18)

The critical thinking purpose

The critical thinking purpose for English is to raise students' awareness of the purposes and audiences of text. Critical thinking involves, for example, enabling students to determine the reliability of textual sources and claims, or to detect bias. It involves analysing and evaluating the function and the form of text.

The following curriculum statements are indicative of the critical thinking purpose.

> Students should develop the skills, knowledge, and strategies to analyse and evaluate language, including their own. They should reflect on the different social assumptions, judgements, and beliefs which are embodied in texts, and which different people bring to language and learning. (Ministry of Education, 1994, p. 9)

> Students learn to deconstruct and critically interrogate texts in order to understand the power of language to enrich and shape their own and others' lives. (Ministry of Education, 2007, p. 18)

These statements point towards, but fall short of, what is described by the term *critical literacy*. Critical literacy involves taking the ideas signalled above a step further by raising students' awareness of the ways in which language is used to maintain existing forms of power, and how it can be used to challenge these forms of power. It involves students developing power over the text by learning that what a text means is dependent on the reading practices they use, and that they can choose to read a text in different ways. Students learn to identify the preferred reading of the world offered by a text, and to challenge that reading with their own.

Different purposes, common assumptions

Although the educative purposes for English described in the sections above differ, I think that they all rest on the same assumption: that students are ideally taught to use selected texts to develop a critical platform, foundation, or argument that legitimises a reading, rather than try to discover the "correct" meaning of the text. This is what is traditionally assessed and how we measure whether students are learning in—or "doing"—English.

With the cultural heritage purpose, for example, sudents are required to emulate the work of mature scholars, rather than contribute to, or advance the interpretations of text in the classroom community, or situate their ideas within the larger knowledge-building effort.

While the personal growth purpose acknowledges that the meaning of a text may be coloured by the reader's experience, the text is viewed as exerting control over the production of meaning. The personal growth purpose provides opportunities for students to express themselves through their textual interpretations, and may provide students with opportunities to refine their ideas, and share them with others. Interpretations are not, however, expected to contribute to, shape, or build on collective knowledge at the class or society level.

With the textual acquisition purpose, canonical texts and their established meanings are not necessarily valued because they are considered inherently more "true" or "better" than others (as with the cultural heritage purpose), but because knowledge of them is considered to provide students access to power. However, like the cultural heritage purpose, the textual acquisition purpose is for students to acquire and reproduce certain forms of textual knowledge and ways of using language rather than constructing something new to meet their own purposes.

Aspects of the critical thinking purpose also rest on the assumption of there being a truth to be found. For example, the achievement objective relating to "evaluating the reliability and usefulness of texts"[5] rests on the assumption that there is a truth out there in the world against which a text may be measured. A text is deemed useful and reliable if it provides a close match with the "real world".

As noted earlier, statements in the New Zealand curriculum documents point towards, but fall short of, identifying the development of critical literacy as a purpose for English. In *theory*, critical literacy offers an approach for enabling students to do things with knowledge and develop knowledge-building capacities. However, in practice there is a tendency to focus on critiquing how meaning is constructed through text at the expense of how a text might be re-constructed for different purposes (a knowledge building endeavour). For this reason critical literacy as played out in classrooms has been criticised for operating on the past agendas of others and being backward looking (see, for example, Kress, 2002). The statements in the New Zealand curriculum documents about English are consistent with this more limited approach in that they focus on critiquing how

meaning is constructed through text. Less attention is given to enabling students to re-construct such texts for different purposes.

There is merit in all four approaches to teaching English described above, and a good English programme will draw on components of all of these. However, what is missing in these approaches is an explicit focus on knowledge building.

Re-thinking English

What would rethinking English to enable students to build knowledge and to develop knowledge-building capabilities involve? Futures-oriented theorists argue that if we want students to learn how to build knowledge we need to provide them with opportunities to think about, talk about, and work with knowledge in the ways that knowledge workers (such as scientists, scholars, and entrepreneurs) in the out-of-school world do (see, for example, Scardamalia and Bereiter, 2006). This argument goes for students of *all* ages. David Perkins (2009) suggests one way of introducing very young children to these ways of working is by providing them with opportunities to play what he calls "junior versions" of the "whole game" of different disciplines, in much the same way as we provide them with opportunities to play adapted versions of sports such as cricket or netball.

A knowledge-building approach to the use of literary texts in English would therefore involve emulating the types of work literary critics in the out-of-school world do as they generate and critique interpretations of text. The goal is not to turn classrooms into review organisations (the students will not necessarily produce interpretations that contribute to a knowledge-building endeavour beyond the school—although they might) but to help students adopt a knowledge-building mindset, and enculturate them into a knowledge-building society.

Opportunities for building knowledge

The ideas described above are theoretical. I am interested in what they would actually look like in practice. As argued by complexity theorists working in the field of education (for example, Davis et al., 2008), the emergence of knowledge (and of minds) cannot be caused. It can however be enabled. There are a number of existing pedagogies that provide some ideas about what we might do in our classrooms to enable the emergence of new knowledge and to enable students to develop knowledge-building capacities. Examples include:

- some of the pedagogical approaches promoted by David Perkins (for example, Perkins, 2009)
- knowledge-building pedagogy (for example, Scardamalia,

2002; Scardamalia and Bereiter, 2006)
- complexity thinking pedagogy (for example, Davis et al., 2008)
- multiliteracies pedagogy (The New London Group, 2000)
- some of the dialogic pedagogies such as Shared Evaluation Pedagogy (for example, Aukerman, 2008, 2012).

These pedagogies start from the premise that the purpose of education is to enable students to build new knowledge and to develop knowledge-building capabilities. These pedagogies share to varying degrees the assumption that: knowledge is (and minds are) collective, emergent, and improvable. Some of the main learning opportunities promoted by these pedagogies include opportunities for:

- finding and solving real problems
- working with a balance of freedom and constraint
- expressing diverse ideas
- working in the spaces between ideas
- revisiting and improving on ideas
- recording the evolution of ideas over time

Let's look at some classroom examples of what each of these opportunities might look like in English programmes. I have selected examples from some recent research projects I have been involved in.[6] Although the research examples come from the primary school sector, the ideas are relevant to all ages and can be applied to early childhood education and secondary school contexts.

Finding and solving real problems

Building knowledge requires, in the first instance, a question, problem, or task that *requires* the creation of new knowledge. These problems need to be real—if not for the world, at least for the group of students concerned. They need to be problems that "arise from efforts to understand the world" (Scardamalia, 2002, p. 9), that matter socially and allow students to pursue their own social purposes (Aukerman, 2008, p. 57), and that have disciplinary significance, societal significance, personal significance, or charisma (Perkins, 2009, p. 130). The research example in Box 1 illustrates how a teacher of very young children provided them with opportunities to first of all find such problems, and then engage with them.

The point in Box 1 is that the teacher did not select the book with the goal of teaching her children how to make the sorts of inferences described in the research example above. These problems emerged from the group of children, because the teacher had allowed the space for them to find and solve their own problems—problems that were specific to that particular group of children at that particular time. She provided them with enough freedom to find and build knowledge about a problem

that was meaningful to them, their families—and in fact to society at large.

Roimata's Cloak

A Year 1 teacher read the picture book *Roimata's Cloak* (Tamehana, 1995) and provided time for open-ended, child-led discussions about the story and illustrations every day for two weeks. *Roimata's Cloak* tells the story of a girl who goes on a long journey to visit her kuia, and on the way home gives away feathers from her cloak to a kereru who needs them. The end of the story is ambiguous—one possible interpretation is that the birds help Roimata to literally fly to her kuia by giving her their feathers; another is that Roimata dies. What exactly happens to Roimata and her cloak emerged as a shared problem of understanding amongst the group of children as they listened to and discussed the story. After the first reading they talked about why the birds put the feathers on the cloak, why the cloak could fly, and where the bird and the cloak were flying to. The possibility that Roimata had died led to the emergence of another shared group problem—what happens when you die. The children then began to draw on their own experiences of death. One child told the class about the funeral she had just been to. Others then told of the funerals they had been to, and the pets that had died. One talked about a family member who was, at the time, dying. The teacher told about when her own mother died. The class wove a cloak using materials brought from home—fabric, ribbon, unspun wool—and continued to discuss what happened to Roimata, and what happens when you die.

BOX 1. OPPORTUNITIES TO FIND AND SOLVE PROBLEMS

A balance of freedom and constraint

Any creative act requires the right balance of freedom and constraint. Davis et al. (2008) talk of the need for activities with the simultaneous presence of rules or constraints, and the flexibility needed for unanticipated possibilities to emerge. The degree of constraint present in any situation is dependent on many factors, including the task, the texts, the technologies, the teacher, the students, and the time frame. Texts, for example, have differing degrees of ambiguity—ambiguous texts invite multiple interpretations, whereas didactic, explicit, or prescriptive texts, presented as factual or "true", place more constraint on the reader.

Ensuring the right balance of freedom and constraint needed for students to generate new knowledge requires considerable skill. It involves attempting to balance the constantly changing possibilities provided by the context (for example, the learning environment, including information and communication technology, texts, tasks, and so forth) and by the students themselves. It also involves balancing constraints emerging through the co-action of the students and their contexts as new knowledge emerges. This requires teachers to have a deep understanding of how texts work, and a deep understanding of their students.

This does not mean "anything goes". In the context of reading, Maren Aukerman (2008) argues that students should be expected to explain how their statements about text are supported both by textual evidence and by their understandings of their own knowledge and experiences.

The research example in Box 2 illustrates how a Year 7/8 teacher provided her class with an open-ended task (making a movie) that involved a lot of freedom and also some constraints, and how this task enabled them to create new ways of thinking about the story of Ernest Shackleton's Antarctic voyage.

Shackleton

A Year 7/8 teacher set her class the task of making a movie representing Ernest Shackleton's Antarctic voyage. She divided her class into small groups, giving each a chapter from a simple text designed for 7-to-8 year olds describing one section of the journey to depict in any way they chose. These conditions enabled the students to produce some groundbreaking work. No group just followed the "script" of their chapter, and each group produced something very different. One of the groups, for example, juxtaposed genres and modes not usually associated with each other by depicting their section of Shackleton's journey in rap. By re-presenting a story of a white man's survival in the wilderness in a genre usually associated with black, urban, gangster culture, they created a rich interpretive site. Their selection of lyrics from a 1970s pop song, 'Don't Rock the Boat', and the play on meanings this allowed, drew attention to the constructed nature of language. Regardless of the *intentions* of the students as film makers, this re-presentation of the Shackleton story offers new interpretive possibilities. It invites the reader to think about traditional tellings of the Shackleton story in new ways.

BOX 2. OPPORTUNITIES TO WORK WITH FREEDOM AND CONSTRAINT

Expressing diverse ideas

It is widely agreed that if the goal is to enable the emergence of *new* knowledge, then there needs to be a diverse pool of ideas available to draw on (Davis et al., 2008; Scardamalia, 2002; The New London Group, 1996). As teachers, we therefore need to make space for a wide range of ideas and space for students to seriously explore them; even those ideas which differ from our own. One of the ways to do this is to move away from the idea of there being one "true", "best", or "correct" answer, and towards the idea of there being a range of useful ideas. This can be achieved by focusing on the viability (or usefulness) of ideas for the context (The New London Group, 1996), by focusing on knowledge advancement as "idea improvement" rather than as progress toward the truth (Scardamalia & Bereiter, 2006; Scardamalia, 2002), and by highlighting differences of opinion about the meaning of texts, by those in the class, and in the wider world (Aukerman, 2008). The research example in Box 3

illustrates one teacher's capacity to put into action some of these ideas, during a series of group reading lessons.

"Buttons"

The teacher of a Year 5 class gave a reading group the story "Buttons", by Amanda Jackson (2010) to read and discuss over several days. "Buttons" tells the story of Abby, a girl from Rotorua, who needs to get a dressing gown because she is being billeted for a school trip with a family in another city. Her family find an old dressing gown belonging to Abby's Aunty and mend it by replacing the missing buttons with a range of un-matching buttons that each has its own story. Abby leaves her dressing gown behind by mistake and the family she is billeted with replace the mismatched buttons with new matching pink ones before posting it back to Abby.

The teacher introduced the story by facilitating discussions about dressing gowns in ways sensitive to the possibly diverse experiences of the students in her group. Throughout the discussions the teacher maintained a space open to students' different ideas. The teacher modelled how the author shows, but does not tell, that the matching buttons are a disappointment to Abby's aunty, and then asked the children for their interpretations of how Abby might be feeling about the dressing gown. As a result of the space for different experiences, ideas, and beliefs, two students resisted the reading (held by the teacher and implied by the text) that un-matching buttons with stories to tell are preferable to brand new matching buttons, and to offer their own alternatives. One insisted that Abby would be happy to have a dressing gown with the new buttons because they were all the same and matched the colour of the dressing gown. Another child agreed, adding that the colour was pink—a cool colour for girls. Their interpretations were informed by what was valuable to them, as children, and by their identification with the main character.

BOX 3. OPPORTUNITIES TO EXPRESS DIVERSE IDEAS

The teacher in the research example in Box 3 provided an environment in which students had space to suggest a range of textual interpretations, even if their interpretations differed from her own. The fact that one child's inference about how Abby might feel about the new buttons could be seen as perpetuating gender stereotypes—that pink is a girls' colour—raises the question of what to do with student views that we as adults may feel uncomfortable with.

One answer to this dilemma is to provide opportunities for diverse ideas to interact or collide. If the goal is the emergence and advancement of knowledge, then it is not enough just to have *available* a diverse range of ideas. For the emergence of knowledge we need opportunities for diverse ideas to collide.

Working in the spaces between ideas

To enable the emergence and advancement of knowledge we need to provide opportunities for ideas to bump up against each other. This can be achieved by relinquishing attempts to control the structure and outcomes of the collective (Davis et al., 2008). This is not simply a case of shifting from teacher-centred to learner-centred

approaches. Neither teacher-centred nor learner-centred approaches are considered particularly viable. Each assumes that the individual is the sole site of cognition. Instead, these theorists say we need to see classrooms as knowledge centred—the aim is to occasion a knowledge-producing community. The locus of learning becomes the classroom collective, and the teacher's task is to set up the conditions for the complex system of the class to learn. In the context of reading comprehension, Aukerman (2012, p. 48) recommends not just the "decentering of text-as-authority, but also a decentering of teacher-as-textual authority". Aukerman (2008, p. 58) recommends that the teacher "resists evaluating a student's textual hypothesis as right or wrong", and "encourages students to elaborate, contest, and extend their peers' ideas". Box 4 is an example of this process in action.

Voices in the Park

A Year 3/4 teacher wanted to provide the children in her class with the opportunity to build collective knowledge about the mother in the picture book *Voices in the Park* (Browne, 1998) by using evidence from the text, the illustrations, and their own experiences. She photocopied each page in which the mother appeared, and then cut each page in half so that the illustrations were on one sheet and the text on the other. She then divided the class in half. Each child in one half of the class was given one of the pages of text, and each child in the other half of the class was given one of the illustrations. The task was for each child to come to some conclusions about the character of the mother based on evidence they had. The teacher then formed two groups, with the first comprising all "text" students and the second composed of all "illustration" students. Each group discussed their findings. The teacher then paired the children up so that each pair included one child who had the text, and one who had the associated illustration. Their task was to put the two halves of the page together and come to an agreement on what sort of person they thought the mother is and why. The teacher then brought the whole class together, read the story to them, and provided time for a child-led discussion about the character of the mother. The children engaged in animated discussion about their views of the mother's character, providing supporting evidence from the text and from their prior experiences and knowledge. The teacher re-read the book everyday for a week, allowing time for the discussion to continue.

BOX 4. OPPORTUNITIES TO WORK IN THE SPACES
BETWEEN IDEAS

In Box 4, we can see that the opportunities for students to bring their diverse ideas together in multiple ways enabled them as a group to knit their ideas together. The teacher found that over time the interpretations become richer and more nuanced and that, although this was not her initial intention, a collective idea of what the mother was like emerged and was agreed on.

As well as setting up knowledge-centred networked systems, the teacher in the research example above provided her students with opportunities to revisit the same text and their ideas about that text multiple times.

Revisiting and improving on ideas

The example in Box 5 demonstrates how a Year 1 teacher enabled the children in her class to develop knowledge-building capacities, and to build new knowledge, by providing them with multiple opportunities to revisit texts and textual interpretations over time.

New Zealand picture books

A Year 1 teacher planned and taught a unit on New Zealand picture books. She allowed between 2 and 4 weeks to focus on each book. Each day she read the book, and provided her students with opportunities to respond in a range of ways: discussing the story, re-telling the story, dressing up as story characters, and playing, dancing, acting, painting, writing, and making movies about the story. As the children engaged in these activities they developed rich, collective interpretations of various aspects of each text, including its characters and themes. Over time, collective ideas about the stories emerged and evolved.

As well as providing opportunities for the children to revisit each *story* many times, the teacher also provided opportunities to revisit the big *ideas* or themes that had emerged from one story, even after the focus had shifted to another. For example, a conversation about imagination which emerged during a focus on *Not a Box* (Portis, 2007) continued through *My Cat Likes to Hide in Boxes* (Dodd, 2010) and *A Lion in the Meadow* (Mahy, 1989) where it grew and broadened into a conversation about truth. The children spent a lot of time discussing whether there really was a lion in the meadow, whether the dragon was a scary or friendly one, and the mother's response to the little boy's story. These themes of fear, reality, and imagination, and the response of adults to the world of children, were picked up and developed when reading *Kehua* (Kahukiwa, 1998). The children talked about whether the kēhua in the story was real, and why no one but the grandmother in the story had time to listen to the child, to take the child's fear seriously, and to help. These conversations also became interwoven with other classroom stories, including the stories of children's own lives. The teacher had not set out to focus on these particular themes, nor had she chosen the picture books with these themes in mind. Rather they emerged from the children's ongoing interpretations of the texts, and their lives. What the teacher *did* do was to listen for the emerging child-initiated themes, and provide space throughout the unit and the year to revisit and develop collective knowledge about them.

BOX 5. OPPORTUNITIES TO REVISIT AND IMPROVE ON IDEAS

Recording the evolution of ideas

For a living system to learn it must be able to select and preserve what is important and to discard what is considered unimportant (Davis et al., 2008). At an individual level, this is an automatic process, but collectives need to be more deliberate and systematic if they wish to preserve group interpretations. This need provides a role for the teacher. Davis et al. (2008, p. 203) describe this role as "the consciousness of the collective"

as a means of illustrating that the teacher's task is to *notice* rather than to determine the interpretations of the collective. The teacher selects from and orients towards the interpretive possibilities that emerge, preserving these possibilities (for example, on wall charts), and helping to register them in the collective memory (for example, through tasks that are recursive). This requires the teacher to be constantly attentive to the emergence of possibilities that they themselves may not have anticipated, and an awareness of their own beliefs and assumptions. These ideas are similar to those promoted by Aukerman (2008) who recommends the teacher "hold back" in group discussion and that when the teacher does speak it is to draw attention to or seek clarification about ideas raised by students. Examples of the teacher engaging in the role of noticing and recording can be found in some of the classroom stories described in this article. Other research suggests that the use of information and communication technology can assist with the process of recording group ideas and the collective advancement of ideas.

Where to next?

Future-oriented theorists argue that if we want our students to be future builders we need to provide them with opportunities to build knowledge, rather than just reproduce it. In this article I have described some of the learning opportunities the futures-oriented literature suggests may support this goal. Many of the learning opportunities described in this article are already happening in New Zealand schools. However, it is important to remember that each of these opportunities is necessary but not sufficient for enabling new knowledge to emerge. What we need now are examples from New Zealand classrooms in which all opportunities are simultaneously present, and where there is an explicit focus on supporting students to build knowledge and develop knowledge building capacities. This could provide us with a "first step" towards a future-oriented curriculum, in which we attempt to bring the different learning areas together more purposefully.

Notes

1   See Gilbert (2005) for a more detailed description of these arguments.

2   Carl Bereiter and Marlene Scardamalia (Scardamalia, 2002; Scardamalia & Bereiter, 2006), for example, talk of the need to provide students with the opportunities to *build* knowledge. Brent Davis, Denis Sumara, and Rebecca Luce-Kapler (2008) talk about the importance of knowledge centred (rather than teacher- or child-centred approaches). In the New Zealand context, Jane Gilbert

(2005) talks about the importance of "doing things with knowledge", and Rachel Bolstad and Jane Gilbert (2012) talk about the need for a curriculum that uses knowledge to develop learning capacity.

3 This approach is sometimes referred to as as the New Criticism.

4 This does not involve denigrating other non-standard forms of language, such as students' out-of-school literacies as these are recognised for their legitimacy in particular contexts. Rather than trying to change the dialects of non-dominant social groups the teacher's task is to accept them and encourage their use in the classroom, while at the same time teaching how to master Standard English.

5 The achievement objectives for each subject can be found in the fold-out sheets at the back of *The New Zealand Curriculum* (Ministry of Education, 2007).

6 These include: McDowall (2010); Twist & McDowall (2010), and McDowall & Parr (2012).

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