

Literacy teaching and learning for the 21st century

Bridging the theory to practice gap

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KEY POINTS

- Literacy teaching and learning needs to change to meet the demands of the 21st century. Students now need skills to deal with multimodal texts, such as audio and moving images.
- This project used an existing framework of literacy skills—the Four Resources Model—and analysed examples of multimodal literacy learning. The four elements of the model are: breaking the code; making meaning; using texts; and analysing texts.
- Breaking the code—this means recognising and using features and structures of the text, such as continuity in movies.
- Making meaning—this means understanding the relationship between form and function and drawing on knowledge of the text and external knowledge to interpret the text. For example, making or understanding references to other texts, or choosing background music to convey emotion.
- Using texts—this means understanding and participating in the communities that make use of texts, such as acting as a reviewer or seeking an audience and writing with them in mind.
- Analysing texts—this means developing the critical literacy skills to question the interpretations or assumptions presented by the text. For example, comparing versions of Shackleton's Antarctic journey story.

If literacy learning needs to change for the 21st century, when students need to deal with new formats, such as blogs, sound clips and YouTube, what does this mean in practice in the classroom? This article gives a possible framework for thinking about multimodal literacy skills and shows how it relates to real examples of student learning.

Introduction

In recent times much has been written about the need to transform literacy teaching and learning to better prepare students for living and learning in the 21st century.¹ It is clearly no longer sufficient to teach students how to make meaning solely of and with print texts. Students are faced with multimodal texts on a daily basis, and need the capacity to make meaning of and with them. They also need a metaknowledge of meaning making that they can apply to texts of the future. And, in a globalised world, is it no longer sufficient to teach students solely how to use Standard English and to do so only in classroom contexts. Students need to know how to learn and transform the discourses of all the communities they wish to be part of.

There has, however, been relatively little work on the implications of this theorising for practice.² In this article I draw on the findings of a recent research project on literacy teaching and learning in e-learning contexts (McDowall, 2010) to provide some ideas of what literacy learning for the 21st century might mean, and what it might look like in the classroom. I begin with a brief overview of the research project and a description of our theoretical frame.

A brief introduction to the research

In 2009 the Ministry of Education awarded e-fellowships³ to a small group of teachers to carry out classroom-based inquiries into literacy teaching and learning in e-learning contexts. CORE Education and the New Zealand Council for Educational Research (NZCER) conducted a research project (McDowall, 2010) for the Ministry of Education alongside these inquiries. There were two components to the research project: first,

supporting the e-fellows to design their inquiries and, second, analysing data collected from across the e-fellows' classrooms and from their portfolios⁴ according to a common research question. The question was: "How are e-learning contexts used effectively to support the literacy learning needed for the 21st century?"

The 2009 e-fellows included eight teachers working at a range of levels from new entrants to Year 8, and one secondary school English teacher working at Year 11. Three of the e-fellows' schools were deciles 1–3, six were deciles 4–6 and one was decile 10. Four of the projects involved creating multimedia texts and posting them online for others to view and respond to; two involved making movies; two, posting online responses to books; and one, producing content for a regional television station.

Our theoretical frame

In our project we used the Four Resources Model (Luke & Freebody, 1999) as a framework for analysing the literacy teaching and learning that occurred as students and teachers engaged in contextualised learning experiences and explicit instruction. The Four Resources Model separates the repertoire of literacy practices students must master into four broad roles—code breaker, meaning maker, text user and text analyst—emphasising that each is necessary but not sufficient in any act of reading. These are explained shortly.

It is important to note that, although we used the roles from the Four Resources Model to structure our observations, our interpretation of what it means to break the code, make meaning, use texts and analyse texts is not based solely on the work of Luke and Freebody. The Four Resources Model focuses on written and spoken languages

and visual images. We applied the model to *all* modes of meaning making, including, for example, audio (the use of sound effects, music and so forth). We interpreted the term *visual images* broadly, as including print, gestural and spatial modes of meaning making, as well as static images, such as illustrations, and moving images, such as video. Further, the Four Resources Model was originally developed as a tool for thinking about reading and responding to texts and we also applied it to the *production* of texts—for example, writing or performing.

From theory to practice

The next four sections outline our interpretation of what it means to break the code, make meaning, use texts and analyse texts, followed by examples from the e-fellows projects to demonstrate students' growing capacities in each of these areas.

Breaking the code

Breaking the code involves recognising and using the features and structure of text. For example, with print text this requires an understanding of alphabet, sounds in words, spelling and structural conventions, such as the summary of arguments that occurs just before the conclusion in an expository essay. The e-fellows provided many examples of shifts in students' capacity to break the code in different modes. For example, several teachers described how their students had to learn about the need for consistency in transitions across shots when encoding visual texts—such as that a character's appearance should not change from shot to shot for no reason.

We also observed students developing the ability to encode and decode in a range of modes. One group of Years 7/8 students creating a claymation⁵ movie segment spent a considerable amount of time working out how to get their seals to jump out of the water. In the end they worked out how to do this by cutting bits off the model so it looked like it was disappearing and then filming the sequence backwards.

Breaking the code also involves working out how different modes—for example, print, illustration and sound—work together. We observed students developing this skill. One group became aware that it would be difficult for the audience to understand where their characters were in the sequence of their journey. The solution they came up with was to add the subtitle "Elephant Island campfire" and to add a campfire sound.

Another group working on a different section of the same movie was struggling with a scene showing their characters having a meeting at the end of the day to plan. This scene was followed by an identical scene

in the morning and the students noted, "You can't tell it's the next morning!" They decided to add the subtitle "Sleeping", a dark background to signify night and music that fitted with the idea of sleeping so the audience knew what was happening.

When talking about their learning, many students commented on their improved code-breaking skills:

I learnt how to make a movie—all the little steps to get it right. (Student, Years 7/8 class)

I'm proud of doing the illustrator [role] because I normally find lots of mistakes [discrepancies between text and visual information] in my drawings and I quickly rub it out and do it better than the first time. (Student, Year 4 class)

Making meaning

Making meaning involves drawing on knowledge of the text and out-of-text knowledge. It involves generating, responding to, evaluating and making choices about the possible meanings that can be made in any given context.

Knowledge of the text requires an understanding of the relationship between function and form.

The function of a text is its purpose and includes a consideration of audience. The form of a text includes text mode and elements such as structure, language devices, features and punctuation. Many teachers found that students had little understanding of the relationship between function and form at the beginning of their projects:

I've felt that [the relationship between function and form] has been [something] that the children haven't understood: When they read a book, 'Why is the picture this colour? Why has the font got bigger, when we watch something on TV? Why have they done this? Why have they used that sort of music, what was the message?' And that as we move into the editing phase, 'So why are you using that?' (Years 4–6 teacher)

Teachers provided many examples of students learning about the relationship between function and form:

They were totally fascinated by the challenge of creating music that fitted with their movie and their message. They explored all sorts of things. They watched movie segments. They talked about their feelings, how the character would be feeling in that particular scene and how they could show that to an audience. In the past, they would just have picked hip hop. (Years 4–6 teacher)

During our classroom observations we also saw examples of students building an understanding of the relationship between function and form. The first example is a five-year-old child's response to a page depicting the bird's death in the picture book *Roimata's Cloak* (Tamehana, 1995):

On one of the pages with the rainbow, how it looks so soft, it kind of feels a little bit sad because it looks so soft,

because it's like something special when someone dies.
(Student, new-entrant class)

The second comes from a Years 3/4 student discussing the sound effects she intended to add to her slideshow story:

Student: I could add happy music: La-le-la, la-le-la.

Interviewer: Yeah and what would the happy music tell the person watching the movie?

Student: It would be like then they know something good is going to happen—like the girl lives happily ever after.
(Student, Years 3/4 class)

Making meaning also involves using out-of-text knowledge (social and cultural), much of which is implicit. This includes prior knowledge and experience and knowledge of other texts. There were many examples of this occurring:

I had such a neat moment today. At the end of the story one of my children said out of the blue, 'I can make a connection between this and the *Three Little Pigs* story we read—they are both about fear.' (Year 4 teacher)

I have [heard sound effects like this on movies]—like when sharks are approaching people. And on PlayStation it has a big ears piranha fish and when you go into the water too deep it goes 'pikaaaah' and it goes 'bom-boom, bom-boom, bom-boom'. (Student, Years 7/8 class)

Teachers described how, at the start of the projects, students did not tend to generate more than one meaning of text and did not evaluate the merits of different meanings. Nor did they know how to defend their own interpretations or challenge the interpretation of others. By the end of the projects there were many examples of students learning how to present and defend their ideas, to support or challenge others and to alter their own ideas in the light of new evidence. One teacher commented:

They're expecting that somebody else can challenge them on something and they can change [their mind] ... And it's very, very cool that they're starting to feel more safe and secure in that everyone can have a different opinion. I think they're slowly moving off from the belief in there being a right or wrong [answer] and that I don't have all the answers. (Year 4 teacher)

Students were very enthusiastic about their growing ability to generate more than one interpretation of text:

I like sitting in a group talking 'cos we're actually starting an argument, 'cos everyone's got different reasons, so it's like we're having a little war as talking. (Student, Year 4 class)

I'm proud that I can disagree with people because I used not to be able to disagree with people. (Student, Year 4 class)

Presenting, defending and changing ideas required a level of text analysis that many students had not previously engaged in, and many commented on how challenging they found this:

Student: I've learnt that you've got to read the story over and over again so you know what it means ... I read it, like, four times at home.

Interviewer: Some people would say that is boring?

Student: It's ... so you know what it means ... (Student, Year 4 class)

Making meaning also involves adapting or recombining conventional text elements in new ways to generate new ideas and designs when reading and creating texts. We saw examples of students engaging in these acts of redesign. An example of this can be seen in the mock television advertisement for a trip on the *Titanic* that the Years 4–6 students entered into the Fair Go School Ad Awards competition during the year of the e-fellowship project. The students created black humour through the juxtaposition of period costumes, set and music with modern elements and a pun that used a modern-day expression—"A trip to die for".

Another example comes from a group of Years 7/8 students who juxtaposed genres and modes that are not usually associated by depicting their section of Shackleton's Antarctic journey in rap and by including the lyrics of a 1970s pop song "Don't Rock the Boat".

Some of the Years 3/4 students also created such effects by juxtaposing the language conventions of the traditional fairy story with contemporary jargon, as the following examples illustrate:

A prince, a king, and a queen lived in the big, big castle. The prince was handsome, the queen was beautiful, and the king was cool because he was a lifeguard and people liked him ...

Some played on traditional fairy story beginnings and endings:

As for the stepmother she was in danger because she had a pack of wolves around her, she did not live happily ever after ...

... and they got married and lived happily ever after like every fairytale ends with.

These examples show how all acts of meaning making, whether or not intended by the author, are acts of redesign—a point that was not lost on their teacher:

It has been interesting to see how some of the stories have evolved from the basic fairytale into something quite different and intriguing. I am looking forward to seeing each new development in their stories. (Years 3/4 teacher)

Using texts

Using texts involves understanding that texts perform different cultural and social functions, and that these functions shape the way texts are used and understood. Students need to know the conventions associated with using texts in different contexts and how these can be used and adapted to suit particular purposes.

Teachers provided students with opportunities to become users of text by setting up environments that emulate those found in the real world of literary critics, TV presenters, writers, film makers, social commentators and so forth. They did this by either drawing on their own expertise as members of these discourse communities in their out-of-school lives or by linking students with out-of-school experts.

Learning words, acts, values, beliefs and attitudes

Teachers described how their students learnt and adhered to the (often unspoken) conventions of the discourse communities in which they participated. This involved knowing not just what to contribute but how and when. Students used the technical terms of the discourse communities in which they worked. For example, the new-entrant students used terms such as: *expression, gesture, tone, clarity, transitions, voice-over, director, credits* and *sound effects*. The Year 3 students used terms such as: *character, setting, plot, climax, problem* and *solution*.

Students also learnt the conventions required to use the tools of these communities:

They filmed and presented [at a Māori principals conference] and they were there in front of it, as confident as. Here they were changing shots. One of the little ones who was acting as director started the thing: 'Quiet! Quiet on the set. Filming now.' And in the middle of it someone made a booboo. 'Cut! Sound check.' And the principals are going, like, [mimes being impressed]. (Years 4–6 teacher)

Students not only learnt the language of their discourse communities but *how* to use it. This involved an understanding of genre conventions, when and how to be silent as well as to speak, how to listen to another's viewpoint and how to justify interpretations using evidence from the text. As one student from the Year 4 class said, "If you're doing the blog you have to write appropriate stuff."

Students also learnt and shared the values and beliefs of their discourse communities—that making meaning of and with text is a worthwhile endeavour; that it is hard work and requires patience, persistence and perseverance; that it is a collective as well as an individual process; that it is a knowledge-generating exercise; and that it provides opportunities for creative thought, imagination and, sometimes, for deep insight.

The norms of discourse communities are established and maintained through repetition and monitoring by group members. Over time, we saw students beginning to modify their own behaviours and monitor the behaviour of others. For example, the new-entrant teacher described how the "silly" behaviour of one child in front of the camera was quickly modified by the reactions of his peers who did not want their movie "ruined". The Years 3/4

teacher described how one of her students questioned another for not taking on board any of the feedback the student provided on his story. The Year 4 teacher described how several group members began to challenge another for consistently writing posts as part of their literature circle blog in which he expressed his agreement with the opinions of other group members without giving a reason:

Interestingly, if I wait, the children are beginning to monitor each other and starting to ask why someone has said something and asking them to add further to their post. (Year 4 teacher)

Building identities

There were many examples of students taking up the identities of their discourse communities. The Years 3/4 teacher referred to her students as writers or authors because "that is how they see themselves", and the Year 2 teacher made a similar observation of her own students. The new-entrant teacher discovered that her students had told their relieving teacher the story she was reading would make a good movie and how to go about making it. She would be the director and they would be the actors, then they would add a voice-over.

The experience of participating in discourse communities helped students to "try on" and, in many cases, adopt the identities of community members:

I didn't know I could be a writer but when I had a go I actually did it. (Student, Years 3/4 class)

I learnt how to work with a group—how to be a director and have people listen to me. (Student, Years 4–6 group)

It's good when you can learn new things instead of just doing normal schoolwork, and it feels like you have a career suddenly ... Since we get to do this every day nearly it's quite like a job or something, but it's actually quite fun. (Student, Year 4 class)

Students saw their text production and interpretation not as practice exercises for when they "grew up" and carried out these activities "for real", but as being viable and available for use in the real world here and now. Our observation of two students discussing the prospect of selling the movie they were making at an aunt's video store is an example of this. I turn now to focus more closely on the impact of having an audience.

Having an audience

Having an audience was a fundamental component of the discourse communities students took part in. All but one of the projects had an audience of some kind. Most began with "captured" audiences consisting of peers in other classes, the school assembly, parents and extended whānau. The texts produced by students at five of the

e-fellow schools were available online and received hits from around the world, but mainly from family and friends. The films produced by the students at two of the schools had a premiere for family and community members. The animations produced by the students at another school were aired on a local television station.

As students developed their confidence, experience and skills, they began to elicit more authentic audiences. For example, one of the bloggers from the Years 7/8 group sent an email to the principals of local contributing schools to inform them of the school blog:

He composed this wonderful email ... The fact that [the students] are looking at how they can get the ball out a bit wider, to more than just our school's community, reflects that they are actually proud of the work that they are doing; recognising that it is of value to more than just the people in our immediate community, and they want to celebrate what each other is doing. (Years 7/8 teacher)

The students in the Year 2 class went online in search of an authentic audience. While their buddy class was great at commenting on their blog postings, it was a captured audience and the class wanted an authentic one. They knew they were getting external hits on their site, but not whether the visits were authentic. They decided that an audience could not be considered authentic “until we have some dialogue that they have been touched” (Year 2 teacher). In their search they found *Room 6 Cyber Kids* (the site of a class of bloggers from another city), and the students were so impressed with the aesthetics of their site that they emailed them to find out how they could “bling” their own blog. After making their alterations they got feedback from *Room 6 Cyber Kids*—“We love your new background”—and so the dialogue continued.

Teachers described how having an audience—whether captured or authentic—made students more aware of text use. For example, the Years 7/8 teacher described how reaching out into the wider community had encouraged her students’ thinking about the nature of their audience, and how to engage them in the blog:

[One student was] talking about a hook to hook them in. He tuned into what his book review is going to do. It is that knowledge of audience. And with that knowledge of audience, they have to think about the skills they are applying to create it. (Years 7/8 teacher)

The Year 4 teacher described how one of her students saw the “summariser” as an important literature circle role because those visiting the blog may not have read the story and so would need the summary to contextualise the blog comments made by other students in the group.

Having an audience also helped students adopt the identities of their discourse communities:

These kids had experienced an authentic audience, the confidence of talking on [television programme], leading it,

making decisions on what was said, working on the script. Like adults, they write that, all of that. (Years 4–6 teacher)

Engaging with members of out-of-school discourse communities

As students built their capacity and confidence to participate and contribute as members of their various discourse communities in school, they also began to seek connections with members of these communities in the out-of-school world. For example, bloggers from both the Year 4 and the Years 7/8 teachers’ classes made contact with and received replies from the authors of books they had read. Below is an excerpt from the response one student received from Kate De Goldi:

... it was a buzz to see your review—it was so succinct and positive! ... I thought writing about anxiety in a moderately humorous way would be a more powerful way of communicating Frankie’s difficulties. It’s incredibly nice to get feedback from a reader—doesn’t happen all that often—so I’m most chuffed ... thanks so much. Hope you’re reading something else new and wonderful now ... Have you read *Millions* by Frank Cottrell Boyce ... I think you might enjoy that—very funny and poignant at the same time ... (Years 7/8 group, blog)

Soon after, the Years 7/8 teacher had the opportunity to meet Kate De Goldi (at the New Zealand Reading Association Conference) and expressed surprise that “She was just as rapt to see that he had taken the time to blog about the book.” This was not a case of a student sending fan mail or an author humouring him with a reply. It was a case of two readers and writers communicating within a common discourse community.

Analysing texts

Analysing text not only covers critical thinking, but also the broader aspects of critical literacy. Critical literacy involves considering the construction of texts; questions of inclusion, exclusion and representation; and the ways in which texts can position a reader. Critical literacy involves questioning texts rather than taking them at face value.⁶

Overall there were fewer examples of students learning critical literacy skills than of breaking the code, using texts or making meaning. Findings from this project suggest that younger students are able and interested and, perhaps most importantly, need to develop critical literacy.

The e-fellows saw the capacity to analyse texts in these ways as important:

You have to make them critical of that visual language though ... It’s like television isn’t it? [A child in my class], he plays GTA [Grand Theft Auto], which is R18 and is serious, like shooting guns and prostitutes and everything

... He is the loveliest child. Are his parents making the right choice for him? I don't know. So hopefully you can give them a little bit of that [critical literacy skills]. (New-entrant teacher)

Several e-fellows provided students with opportunities to see how texts position readers. For example, the Year 4 teacher began her literature circle unit with *The True Story of the Three Little Pigs* (Scieszka, 1996) to demonstrate how there is always more than one possible reading of a text, and that stories are never neutral, but told from particular positions. The students' task was to discuss whether or not the wolf really was the victim (as portrayed in the retelling). Later in her unit the Year 4 teacher discussed the idea of a new literature circle role—"the conscientious objector"—a role one of her colleagues was experimenting with in her own class. This role involved a consideration of the ethics of texts, characters, authors and so forth.

The Years 7/8 teacher provided students with several different versions of the Shackleton story and gave them opportunities to watch video clips, with the aim of increasing their capacity to analyse the different ways stories are, or can be, told and the effects of these different tellings. The Year 11 teacher began her unit on formal writing with the topic "Social networking sites such as MySpace and Facebook are endangering New Zealand teenagers", so that students had the opportunity to reflect on and learn more about the need to analyse texts and their sources. These teachers all described the ways in which their students' capacity to analyse texts developed over the course of their projects.

Students learnt not just to practise critical literacy in relation to texts but also in relation to their peers' attempts to make meaning of them. We observed an example of this in a discussion between a group of Year 4 students. They were considering the decision the main character in *Kids Alone in a Cyclone* (Radford, 2005) had to make when offered a ride home by a truck driver she did not know while she and her younger brother were fighting their way through a violent storm. One of the students argued she should not accept the ride if the truck driver had tattoos:

I've had a thought. If the person, the truck driver, had any tattoos ... It depends if they have offensive tattoos on their upper body because then they'd be really rough. (Student, Year 4 class)

Another child challenged her assumption that tattoos signify a person who is rough on the basis of different experiences and a different world view—that her father had tattoos and drove a truck. What was interesting was the lack defensiveness expressed by either child or the group as a whole during this interchange. This was an interesting meaning-making question to consider, just like the many

other questions about text they had raised and attempted to answer already. In the student focus group following our observation, students talked about the importance of not taking texts, including the interpretations of their peers, at face value and the importance of taking time to consider different perspectives.

Where to next?

This article provides information to support a broader and more inclusive concept of literacy than solely the capacity to read and write Standard English. This more inclusive concept better supports students living and learning in the 21st century. Expanding our concept of literacy does not mean rejecting more traditional approaches to literacy teaching and learning or neglecting reading and writing skills. Nor does it mean that reading and writing achievement will drop. Our findings suggest that opportunities to work across a range of modes may in fact have the opposite effect—that is, of supporting achievement in reading and writing, especially for students with a history of underachievement in these areas. This is a topic I intend to address more fully in another article.

Our attempts to illustrate what the capacity to break the code and make meaning of, use and analyse visual, audio, gestural, spatial and multimodal, as well as print, texts might look like in practice is a work in progress. It is our hope that this work and the examples of literacy teaching and learning provided here may be used, adapted or added to by other educators as they provide opportunities for their students to build the capacities needed for living and learning in the 21st century.

Acknowledgements

I would like to acknowledge the e-fellows and students involved in our research project and the other members of the research team: Vince Ham, Michael Winter and Gina Revill from CORE Education and Sally Boyd from NZCER. I would also like to acknowledge the work of the Ministry of Education Multiliteracies Working Party, led by Sarah Jones, whose collective thinking provided us with some useful ideas for framing the research project.

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- 3 For more information on the e-fellowship programme, see <http://www.minedu.govt.nz/educationSectors/Schools/Initiatives/ICTInSchools/ICTStrategy/LatestICTNewsAndReleases/ELearningTeacherFellowships.aspx>
- 4 The e-fellows' portfolios can be found at <http://efellows2009.wikispaces.com>
- 5 Claymation is a form of animation using clay figurines.
- 6 For further reading on critical literacy applied in the classroom see Anstey and Bull (2006) and Sandretto and the Critical Literacy Research Team (2008).

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Notes

- 1 Much of this literature has grown out of the early work of The New London Group (1996)—a futures thinking approach to literacy teaching and learning known as Multiliteracies Pedagogy.
- 2 Local exceptions include Sandretto and the Critical Literacy Research Team (2008) and Locke, Cawkwell and Sila'ila'i (2009).

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