“The problem with the future is that it keeps turning into the present”

Preparing your students for their critically multiliterate future today

SUSAN SANDRETTA AND JANE TILSON

KEY POINTS

• Educators have been calling for future-focused, flexible conceptualisations of literacy since 1996.

• A critical multiliteracies lens provides the “why” or the rationale for a future-focused literacy programme.

• The four resources model (Luke & Freebody, 1999) provides the “how” or template with which to implement a future-focused literacy programme.

• Drawing on insights from New Zealand research, we use three vignettes to demonstrate how teachers enacted critical multiliteracies lessons using the four resources model.

• We provide a mapping template and reflective questions as a springboard to initiate reflective discussion.
Introduction: The future of literacy

The title of this article comes from the comic strip *Calvin and Hobbes*. In an instalment centred on the New Year, Calvin vents to Hobbes nothing has changed and ponders why things have not improved. Calvin exclaims that the new year is just like the old: “I thought the future was supposed to be better!” Hobbes enlightens Calvin: “the problem with the future is that it keeps turning into the present”.1 As literacy educators and researchers, we believe this is our situation right now in New Zealand: The problem with the future of literacy education is that it is difficult to see beyond the present. Specifically, if we do not interrogate and shift our present literacy practices, we will not be preparing students for the future.

Few would argue with the notion that education is charged with preparing young people for the future. What the future holds, however, is a contentious topic. With the changes in the global economy, we see increased cultural and linguistic diversity, and rapid changes in communications technologies impacting classroom practices (Facer, 2011). We no longer live in stable times where we can predict which knowledge will be useful in the future (Kress, 2008). Instead, we face an unknown future world characterised by its “super complexity” and unpredictability (Barnett, 2004). This lack of stability has significant implications for literacy education. To understand why, we need to consider the various reasons why society thinks it is important for school students to develop literacy, and what counts as literacy.

Traditionally, schools taught students the old “basics” of reading and writing that privileged communication using the linguistic semiotic system.2 These basics were sufficient to prepare “people who were literate in a certain sense and for a particular kind of society” (Kalantzis & Cope, 2012). Today, however, we cannot place any bets on what sorts of jobs will be available in the future for our students. Even future forecasters in the Department of Labour (2008) explain, “it is difficult to say which industries, sectors and occupations are going to grow the most” (p. 15) by 2020. What a number of these future-focused reports do agree on is that people who can communicate flexibly using technology will be in demand in the future (Karoly & Panis, 2004). While one purpose of education is to prepare students for future employment, in our view it is also important that literacy education prepare students who can critically create and interpret meaning across a range of text types for different purposes and contexts.

Of course New Zealand teachers are not insulated from appeals to address the future. The *New Zealand Curriculum* (*NZC*) (Ministry of Education, 2007) promotes the development of future focus (p. 9) learning for students, yet provides little detail on how it might be enacted. The Education Review Office (2012) found of the eight principles in *NZC*, future focus was the least evident in the school curriculum. In a number of schools “there was a clear lack of understanding of the implications of the future focus principle, resulting in a very restricted interpretation of its scope” (p. 18). Rather than seeking to prepare students for an unknown future, or “to future-proof the children” (participating teacher initial interview, 2011, p. 4), what might it mean for our current literacy programmes if we conceptualised the future as “a dynamic and emergent reality” (Facer, 2011, p. 3)? That is to say, the future of literacy education is not out there waiting for us to discover; rather, our present literacy practices are shaping it today.
In the remainder of this article we argue that reconceptualising literacy will support teachers to develop future-focused literacy teaching. Drawing on our research with New Zealand teachers (Sandretto & Tilson, 2013), we argue that a critical multiliteracies framework can provide rationale for a future-focused literacy programme (the “why”), and that the four resources model (Luke & Freebody, 1999) can provide a way to enact such a programme (the “how”).

What are multiliteracies?

It has been 18 years since the term multiliteracies was coined by a group of leading literacy researchers from the United States, the United Kingdom, and Australia (The New London Group, 1996). Their reconceptualisation of literacy takes into account rapid changes in communication technologies that have resulted in wider access to multimodal texts, that is, texts that draw not only upon linguistic codes and conventions, but also visual, audio, gestural, and spatial modes of communicating (The New London Group, 1996). A multiliteracies view encourages us to conceptualise literacy as “a repertoire of changing practices for communicating purposefully in multiple social and cultural contexts” (Mills, 2010, p. 247).

That is to say, a multiliteracies view encourages us to broaden our understandings of literacy education beyond traditional literacy practices that typically focus on linguistic codes and conventions. For example, in the field of multiliteracies the term “text” is conceptualized broadly: “A text is a vehicle through which individuals communicate with one another, using the codes and conventions of society” (Robinson & Robinson, 2008, p. 3). This view of text acknowledges that we draw upon multiple modes (audio, gestural, linguistic, spatial, and visual) to communicate and make meaning across diverse contexts (Kress, 2013). Texts can be traditional paper, or live (such as a debate or play), or new digital-electronic (Anstey & Bull, 2006).

In 2007 the New Zealand Ministry of Education formed the multiliteracies working group to consider the influence of information and communication technologies on literacy in response to a growing demand to revise literacy policy (Jones, 2009). The group drafted a framework for multiliteracies acquisition which took a multiliteracies lens to the four resources model (Luke & Freebody, 1999), and signalled a need to augment current literacy practice and policy:

The working group concluded that we need to expand on current practice models to take account of the need for young people to develop a range of social, creative, ethical and cultural practices to make meaning in a technology-rich and culturally diverse world. (p. 1)

Unfortunately the findings of this group did not come to fruition. We view this as a missed opportunity for New Zealand literacy policy and practice to adopt a more future-focused agenda.

Four resources model

The four resources model (Luke & Freebody, 1999) suggests students take up four social practices: as code breakers; meaning makers; text users; and text analysts. We believe this model has travelled time well, with multiple ongoing affordances for teachers and students. Code breaker refers to the practices readers use to break the codes and systems of texts. Meaning maker relates to the ability of readers to make meaning from texts, what we commonly refer to as reading comprehension. Text user represents the practices of using and constructing texts effectively in a wide variety of contexts. And, lastly, text analyst emphasises that texts are not neutral and signifies the practice of analysing texts. This role involves “the analysis and critique of relationships among language, power, social groups and social practices” (Knobel & Healy, 1998, p. 8). In the four resources model (Figure 1), we detail questions that capture the essence of each of the four resources. We have found this figure a useful resource for teachers and students alike.

The New Zealand Effective Literacy Practice (ELP) handbooks (Ministry of Education, 2003, 2006) are theoretically underpinned and directly reference the four resources model. We find it ironic that the ELP handbooks suggest “we need a broader view of literacy now [more] than ever before” (Ministry of Education, 2003, p. 19), yet these texts collapsed the four resources into three, diminishing their potential for students and teachers. Although the ELP handbooks reference the four resources model, the role of text user was removed without explanation. At face value, the term text user may appear over-simplistic and unnecessary. We argue, however, that the text-user role is the most complex of the four resources; here students draw on code breaking, meaning making, and text analysing resources as they negotiate reading and producing texts across a range of contexts in savvy and agentic ways (Strop & Carlson, 2010). A focus on the text-user role supports students to engage metacognitively and articulate how texts work and how they choose to use texts.

In addition, within the ELP handbooks we believe the text-analyst role has been diluted by renaming it “thinking critically”. The term critical has a number of meanings, including fault finding, analysis that leads to opinion, vital, or life-threatening. Multiple meanings...
Code breaker
Essentially, how do I crack the code of this text?
How do I crack this text?
How does the text work?
What do I know about texts like this that might help me crack the code?
Is there more than one semiotic system operating here? If so how do they relate?
What are its codes and conventions?
How do the parts of the text relate to one another? (Layout and organisation)

Meaning maker
Essentially, what does this text mean to me?
How will the purpose and context for my reading influence my meaning making?
What social, cultural, literacy and technology knowledge and experiences do I have that might help me make meaning of this text?
How are the ideas in this text sequenced and connected?
How does this affect the way I make meaning?
Are there other possible meanings and readings of this text?

Text user
Essentially, what do I do to use this text purposefully?
What is the purpose of this text and what is my purpose in using it?
How have the uses of this text shaped its composition?
What should I do with this text in this context?
What will others do with this text?
What are my options or alternatives after reading?

Text analyst
Essentially, how might I be shaped through engagement with this text?
What kind of person(s) with what interests and values produced this text?
What are its origins?
What is the producer of this text trying to make me believe or do?
What beliefs and positions are dominant or silenced in the text?
What do I think about the way this text presents these ideas and what alternatives are there?
Having examined this text what action am I going to take?

Semiotic systems
Linguistic—oral and written language (vocabulary, generic structure, punctuation, grammar, paragraphing)
Visual—still and moving images (colour, vectors, line, foreground, viewpoint)
Gestural—facial expressions and body language (movement, speed, stillness, body position)
Audio—music and sound effects (volume, pitch, rhythm, silence, pause)

Spatial—layout and organisation of objects and space (proximity, direction, position in space)

FIGURE 1. FOUR RESOURCES MODEL

Source: Bull & Ansley (2010, pp. 10, 19)

become problematic when the term remains undefined in literacy policy (Sandretto with Klenner, 2011). The term critical is often associated with Bloom’s Taxonomy and the skills of analysis, synthesis, and evaluation, and is frequently presented as an unbiased thinking skill (Paul, 1983). When critical thinking is understood as a neutral term, it runs the risk of avoiding any engagement with moral, social, cultural, or political concerns.

When students act as text analysts, however, they are encouraged to consider who is included or excluded in a text, how someone is represented, and the potential effects of the text construction. Hence, we use the term critical multiliteracies to emphasise our commitment to the text-analyst role (Sandretto & Critical Literacy Research Team, 2006; Sandretto with Klenner, 2011).3

We assert students need all four resources to confidently communicate across a broad range of purposes, using multiple modes and text types. A strength of the four resources model is that it maps across and captures the depth and complexity of English in NZC in a way the ELP handbooks’ collapsed model cannot.

TABLE 1. MAPPING THE FOUR RESOURCES

| Level 5 English: “Speaking, writing, and presenting” |
| Processes and strategies |
| Students will: Integrate sources of information, processes, and strategies purposefully and confidently to identify, form, and express increasingly sophisticated ideas. |
| CB | MM | TU |

| INDICATORS: |
| - uses an increasing understanding of the connections between oral, written, and visual language when creating texts; |
| - creates a range of increasingly varied and complex texts by integrating sources of information and processing strategies; |
| - seeks feedback and makes changes to texts to improve clarity, meaning and effect; |
| - is reflective about the production of own texts, monitors and self-evaluates progress, articulating learning with confidence. |
| CB | MM | TU |
| CB | MM | TA |
| CB | MM | TU |
| CB | MM | TA |
| CB | MM | TA |

Four Resources code: Code breaker—CB; Meaning maker—MM; Text user—TU; Text analyst—TA


In Table 1 we provide a brief glimpse of how the four resources model maps across the “Speaking, writing and presenting” achievement objective of level 5 English in NZC. It is clear from this snapshot that the four resources rarely work in isolation. We assert this mapping exercise can be conducted across all curriculum areas and levels, and is relevant for all age groups, from early childhood
“We argue that critical multiliteracies enacted through the four resources model supports you to become a teacher of curriculum literacies, rather than teaching literacy in isolation”

through to and including the tertiary sector (Clutterbuck, Seamons, & Rowlands, 2012; Ludwig, 2006). The mapping exercise illustrates the flexibility and practicality of the four resources model across NZC.

The four resources model provides a framework for thinking about literacy in its broadest sense. Today, all teachers are teachers of “curriculum literacies” (Wyatt-Smith, Cumming, Ryan, & Doig, 1999) with responsibilities to support students to develop the specialist codes and conventions of diverse multimodal texts across all curriculum areas. We now illustrate these ideas through selected findings from a project that investigated ways teachers can bridge students’ in- and out-of-school literacies to enhance their critical analysis of multiple types of texts (Sandretto & Tilson, 2013).

Research design

Over 2 years, 19 teachers and their students from seven schools participated in the project, Critical multiliteracies for “new times”. The schools included full primary schools, two intermediates, and a college, and were located at rural and urban sites.

All students of each participating teacher were involved in whole-class lessons, and five students from each class acted as researchers examining their own multiliteracies. The student–researchers also participated in focus-group interviews after each videotaped lesson. The project constructed a wide range of data using an ethnographic perspective (Green & Bloome, 2005). This article draws on data from three sources: participating teachers conducted and participated in an initial and exit interview with other participating teachers; participating teachers took part in optional follow-up days to discuss sustainability of their critical multiliteracies approaches after the conclusion of the project; and student researchers participated in one exit interview conducted by participating teachers (but not their own teacher).

Researchers iteratively analysed data across all sources for 1 year and coded themes across four categories: learning from students, learning from teachers, learning about students, and learning about teachers. This article reports on three themes drawn from the project’s larger body of findings: Reconceptualising literacy, changes in literacy teaching practices, and reflecting on current practices to prepare for the future.

Reconceptualising literacy: “Pen and paper is not the only definition of literacy” (participating teacher exit interview, 2012)

We believe that the first step in developing a flexible, future-focused literacy programme is reconceptualising literacy and what counts as a text. Current resources used by New Zealand teachers define literacy as “the ability to understand, respond to, and use those forms of written language that are required by society and valued by individuals and communities” (Ministry of Education, 2003, p. 13, emphasis added). This conceptualisation of literacy, with its primary focus on the linguistic system, omits a future focus (Limbrick & Aikman, 2008), and potentially limits approaches to literacy instruction. Consequently, teachers may largely focus on supporting students to make sense of and create texts privileging the linguistic system. In this section, we examine ways participating teachers and students reconceptualised literacy and texts through engagement with critical multiliteracies and the four resources model.

One teacher discussed the freedom he gained when reconceptualising literacy:

Multiliteracies has broadened my idea of what literacy is in a real big way … it was great to have the opportunity to go outside our conventional curriculum … it’s just that breadth of what can be literacy … it’s broadened the way I look at … the way I’ve been doing literacy in the classroom. (Participating teacher exit interview, 2012)

We argue that critical multiliteracies enacted through the four resources model supports you to become a teacher of curriculum literacies, rather than teaching literacy in isolation (Wyatt-Smith et al., 1999). Another teacher noted the flexibility involved in a critical multiliteracies perspective: “multiliteracy actually involves pretty much everything we do in the classroom, not just literacy” (EI, 2011).

This teacher explained the flexibility inherent in a critical multiliteracies approach:

[This project] has certainly made me think about how I teach … it certainly won’t be reading and writing on the board any more in the morning … [It’s] more important to look at it from a much broader point of view … providing
... activities that require children to actually think for themselves, being the critical part, and give them a range of sources or modes being the multiliteracies part of it. (Participating teacher exit interview, 2012)

This excerpt captures a shift in a teacher’s thinking in which literacy no longer lives solely in the block of time scheduled each day for literacy instruction. The text-analyst role (Sandretto, 2011) is clearly evident in this conceptualisation of literacy. He also highlights the importance of multiple text types, rather than relying on traditional, written texts.

The following excerpt illustrates a (re)conceptualisation of what counts as a text:
Yeah, and I think that has been one of the big learning curves for us actually, that when we came in I think we probably thought of text as a traditional text, maybe we might have extended that to oral language and visual language but really just the fact that … everything involves a text of some type. (Participating teacher exit interview, 2011)

The idea that a text is any combination of modes (audio, gestural, linguistic, spatial, and visual), supports teachers and students to focus on communication, regardless of the curriculum area (Bearne, 2003). Students participating in the project also echoed the role of communication in what counts as a text:
Interviewer: Ha[ve] [critical multiliteracies] made you think about texts differently?
Student 2: It makes us think like there’s all different ways to communicate to other people. Instead of just talking you can point, use your hands, you can nod, use your face …
Student 3: At first I thought it was just writing and all that. (Student–researcher exit interview, 2012)

These brief excerpts illustrate how the critical multiliteracies lens supported teachers and students to reconceptualise literacy.

Changes in literacy teaching practices:
“There is no ‘best practice’ in this work”
(Participating teacher follow-up interview, 2012)

Reconceptualising literacy and what counts as a text, we believe, leads seamlessly to changes in literacy teaching practices. In this section, we share three brief vignettes of how teachers enacted critical multiliteracies lessons using the four resources model. As stated above, there is no best practice, or one right way, to go about implementing critical multiliteracies in your programme. We do not provide a step-by-step lesson plan, but rather illustrate the key ideas of the lesson with clear links to the four resources model. We conclude by acknowledging the tensions involved in shifting your practice.

Reading faces
One lesson supported students to read what are often taken-for-granted, everyday texts: faces. The teacher photocopied black and white photographs of different facial expressions. She then unpacked the metalanguage of the gestural system, with the students focussing on the fine details of eyebrow position, shape of the eye, position and shape of mouth, size of nostrils, and how they are used to indicate emotion and mood (code breaker) (Bull & Anstey, 2010). In small groups, students had to name and justify the mood captured in the photograph by drawing attention to particular aspects of the face (meaning maker). The students annotated the photocopied face using the gestural metalanguage. Teachers and students were surprised at the lack of consensus across group findings. The students in the follow-up interview noted that the ability to read faces cannot be taken-for-granted, and is an essential life-long skill.

Reading advertising
In this vignette, we consider a lesson in which students identify all five semiotic systems to gain an appreciation of how the audio, gestural, linguistic, spatial, and visual systems work in concert to create meaning (code breaker, meaning maker). The lesson relied on previous direct acts of teaching around the metalanguage of each system. Students working in small groups with a laptop viewed the Nolan’s cheddar cheese advertisement. The advertisement is particularly engaging, with a mouse surviving a near death experience in a mousetrap baited with Nolan’s cheddar cheese. In their own time students could repeatedly view the clip, and were able to notice, consider, and reconsider how the authors of the text deployed the semiotic systems to fulfil the purpose of selling cheddar cheese (meaning maker, text user, text analyst). Students were animated and engaged as they listed the elements of the semiotic systems and noticed the intertextual links between the advertisement and the soundtrack to the movie Rocky (code breaker) (Conti, 1977). By positioning each small group as the “driver” of the viewing, they were able to take charge of the process and attack the deconstruction of the advertisement in whatever manner made sense to them. The lesson concluded with the groups comparing and contrasting their findings, allowing them to demonstrate the depth of their engagement and critical analysis.

Audacity and the read aloud
The final vignette illustrates how one of the teachers decided to challenge herself and her students to use a new software tool, Audacity. She began a podcasting unit by
putting students into small groups and providing a range of stories for them to select. The students were charged with reading the story out loud, recording the read aloud with Audacity, and enhancing the recording with sound effects. The students shared their podcasted stories at a school-wide assembly. The teacher introduced the students to the audio semiotic system (code breaker) to support the creation (meaning maker) of their read aloud (text user). This unit highlights the connections between the repertoire of practices that students need to develop, as captured in the four resources model.

Tensions

While these brief vignettes illustrate the freedom possible when developing critical multiliteracies and units, we acknowledge this is brave work for teachers given the constraints of time and resources. Teachers that participated in the research are still wrestling with traditional and new conceptualisations of literacy and what this means for their practices. In a follow-up day discussion, the teachers articulated competing tensions that they work within as they seek to implement changes in their practices that reflect their flexible conceptualisations of literacy. One teacher noted the “cognitive dissonance” between his beliefs and his practices: “It’s changed my beliefs about it, but it might not have changed the practices (laughter)” (FI, 2013). Another teacher noted: “I know it can be different. It’s just not quite different yet” (FI, 2013).

The teachers noted:

Teacher 1: What you were really meaning is that we have permission to use [critical multiliteracies] in their guided reading without feeling that we’re missing out on anything …

Teacher 5: It’s not the permission thing at all, I think perhaps … it’s fitting it in … while still having the accountability for these writing levels and these overall teacher judgements that are a term by term now … because providing [different text types], giving them a YouTube clip or giving them anything that’s in video …

Teacher 2: Yeah and the [student] engagement goes bang.

Teacher 5: Exactly but yet we’re still under pressure to get back …

Teacher 2: To the safe place that we know… guided reading three times a week, blah blah blah, yeah. (FI, 2013)

This quote illustrates the tension the teachers face between the freedom and flexibility of introducing a wider variety of text types into their traditional guided reading practice, and their concern that by doing so their students may not meet the required achievement objectives or writing levels. The teachers who participated in the project continue to find it difficult to sustain a shift in their practices, despite their awareness about increased levels of student engagement. One teacher commented: “I mean look at … [students’] responses when they get even little snippets of anything to do with critical multiliteracies and they have such an enthusiasm … why aren’t we doing it more often?” (FI, 2013).

Back to the future: Reflecting on your current literacy teaching

A concern for teachers is to develop a balanced literacy curriculum in terms of pedagogies and texts (Bull & Anstey, 2010). As teachers, we critically reflect back on our practices in order to identify and evaluate what is working well, refine our practice, and inform change for the future. In this section we provide a mapping template (Figure 2), which can be used alongside Figure 1, and reflective questions to prompt analysis of your current literacy programme and identify the areas you wish to augment.

First, we suggest that you put the four resources model (Figure 1) and the programme mapping tool (Figure 2) side by side. The metalanguage captured in Figure 1 will support you to map your current literacy

<table>
<thead>
<tr>
<th>Text Types (list different text types)</th>
<th>Four Resources</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Code breaker</td>
</tr>
<tr>
<td></td>
<td>Audio</td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>

- **Step one**: Map text types across the programme. (For example, traditional paper or live texts, or new digital-electronic texts.)
- **Step two**: Map the literacy programme across the four resources.

FIGURE 2. PROGRAMME MAPPING TOOL
programme using Figure 2. We believe that this mapping exercise will make existing gaps visible. For students to take up the four social practices of a literate person, it is essential they have opportunities to develop each resource across diverse texts. Critically mapping your programme is the first step toward realising that goal.

Next, we suggest that you use the following provocations in collaborative dialogue with colleagues. As suggested by Day (1999),

the problem with reflecting alone is that there is a limit to what can be disclosed and what information can be collected and received by an individual with a ‘vested’ interest in avoiding uncomfortable change processes. Others are needed in the process. (p. 216)

While you may not use all these reflective questions, or follow the order as it is listed, an important step in developing your flexible, future-focused literacy programme is to critically reflect and to begin to imagine new or different ways to think about your literacy teaching. The provocations below will support collegial conversations after you map your programme.

Pro provocations6

- What counts as literacy?
- Describe how literacy is enacted across a typical day (or week) in your programme.
- Which kinds of texts are the most prevalent?
- Give examples of the kinds of texts students make in your programme.
- When do your students have opportunities to break the codes of each semiotic system? (linguistic, audio, gestural, spatial, and visual) [code breaker]
- When do your students have opportunities to make meaning from texts? [meaning maker]
- When do your students have opportunities to purposively use and construct texts? [text user]
- When do your students have opportunities to critically analyse texts? [text analyst]
- Which of the four resources (code breaker, meaning maker, text user, text analyst) does your programme privilege?
- Which of the four resources, or text types, need greater emphasis?
- How might you reimagine your current literacy programme?
- We propose that the mapping template (Figure 2), along with the provocations listed above, can support you and your colleagues to create a space where you can imagine new or different ways to think about your literacy programme.

Concluding thoughts: The future is now

The future is not something that is done to us, but an ongoing process in which we can intervene. (Facer, 2011, p. 6)

In this article we have pondered how teachers might intervene now to construct a future-focused literacy programme using a critical multiliteracies view of literacy and the four resources model. We argue that the time is now to reconceptualise literacy policy and practice to address the concerns described by the multiliteracies working group (Jones, 2009). Educators are charged with developing curriculum that will prepare students for the future, a responsibility mandated by NZC. But we do not know what form that future will take. We have suggested that adopting a critical multiliteracies view will support you to articulate the “why” of your future-focused, flexible literacy programme, while the four resources model provides a template with which to enact a critical multiliteracies stance, or the “how” of your literacy programme.

In this article, we provide a rationale and support for you and your colleagues to open spaces where you can collectively and creatively reimagine a flexible, future-focused literacy programme. It is our hope that the resources provided here support you and your colleagues to intervene and shift your present literacy programme for the future that is here now. Rather than viewing the future with trepidation, we suggest you embrace its uncertainty with enthusiasm, knowing new spaces will emerge where teachers and students have the freedom to reimagine how literacy can be understood and experienced.

Suggested readings

Acknowledgements

This project would not have been possible without the funding and support provided by the Teaching and Learning Research Initiative. Our sincere appreciation goes to the 19 teachers, their students and 84 student researchers for the generous gift of their time and insights.

Thank you to our reviewers and the editors for their thorough and thoughtful contributions to the final draft of this article.

Notes

1. Our sincere thanks to Bill Watterson and Calvin and Hobbes for this insightful observation.
2. The linguistic semiotic system uses the codes and conventions of grammar and syntax with which to communicate meanings. When constructing a text using the linguistic system, the author makes use of nouns, verbs, adjectives, pronouns, punctuation, clauses, sentences, paragraphs and so forth to communicate a particular meaning (Bull & Anstey, 2010).
3. For further discussion on the distinction between critical literacy and critical thinking see (Sandretto with Klenner, 2011, pp.10–14).
5. Audacity is a free software programme that is for recording and editing sound. See http://audacity.sourceforge.net/ for more information.
6. Some of the provocations listed were posed by the participating teachers.

References


