

Tween Here and There, Transitioning from the Early Years to the Middle Years: Exploring Continuities and Discontinuities in a Multiliterate Environment

Lisbeth Kitson

ABSTRACT

This article considers the continuities and/or discontinuities for literacy development experienced by students as they make their transition from the early foundational years of primary school into the 'first' stage of the middle phase of learning within a multiliterate environment. Year 4 can be a critical period in reading development with the surfacing of some difficulties in reading comprehension for some students. This phenomenon has been termed the 'fourth grade slump'. New digital technologies and multimodal texts are viewed as panacea for improving literacy instruction and ameliorating the fourth-grade slump. Data from the case study of one Year Four teacher, Janelle (pseudonym) is reported. It explores how she grappled with the implementation of an Interactive Whiteboard and a variety of multimodal resources. Findings suggest that the affordances and constraints of multimodal texts and how teachers use them can offer both continuities and discontinuities for literacy development.

Introduction

The middle years of schooling have been flagged locally, nationally and internationally as a 'distinctive and significant area of educational concern' (Carrington, 2002, p. 3). Definitions of 'the middle years' have been diverse but generally relate to early adolescence – students between the ages of 10–15, from Years 5–9 (Barratt, 1998). Unlike other Australian states, Education Queensland has expanded their notion of the middle phase of learning to include two distinct stages, with the first stage commencing at Year 4. Whilst one key theme in middle years literature is the transfer and transition of adolescents from primary to secondary school (Carrington, 2002; Galton, Gray & Ruddock, 2003), this article considers the continuities and discontinuities for literacy development experienced by students as they make their transition from the early foundational years of primary school into the 'first' stage of the middle phase of learning. In particular it explores the complexities of literacy teaching in the multiliterate environments created by Interactive Whiteboards.

What are the needs of students in Year Four?

Pre-adolescents or students in this first stage of middle learning, like their older counterparts experience a period of unparalleled physical, cognitive, social and emotional growth (Johnson, 2008). Physically, puberty can occur as early as 9–10 in children. Girls in particular, are showing earlier signs of the onset of puberty (Zuckerman, 2001). Whilst acknowledging

that students develop at different cognitive rates, students in Year Four are typically in the concrete operations stage of Piaget's stages of development. In this stage students can apply logical reasoning and perception to work out concrete problems. In relation to literacy this increased power of logic and comprehension enhances a student's ability to understand more multifaceted storylines (Roberts, 2008). Socially and emotionally, egocentric tendencies lessen, with students strongly influenced by friends, peers and the media. Year Four students form part of the 'tweens' segment of the population, recognised both as an economic marketing demographic, and a cultural group (Guthrie, 2005). Today they engage in life-worlds shaped by fashion, music, television, technology and video-games created specifically for them. It is through technology and media that Year Four students determine their own identity and position in the world (Beavis, 2005).

In relation to academic learning students of this age typically display a growing curiosity and eagerness to explore learning experiences of greater breadth and depth. However, for some the challenges are overwhelming and their interest diminishes and progress slows (Education Queensland, 2004). Year 4 can be a critical period in reading development with the surfacing of comprehension difficulties for some students (Best, Floyd & McNamara, 2004). This phenomenon has been termed the 'fourth grade slump' (Chall & Jacobs, 2003; Gee, 2000; Education Queensland, 2000; Meichenbaum & Biemiller, 1998; Snow et al., 1998). Students who experience difficulties with reading in the early foundational years often continue to struggle as they progress through their schooling (Brozo & Simpson, 2007; Sanacore & Palumbo, 2009).

Chall, Jacobs and Baldwin (1990) in exploring the notion of the 'fourth grade slump' conceptualised reading as a staged developmental process. In the early stages of reading, students are 'learning to read' with a focus on decoding, word recognition, fluency, and an understanding of the language and pattern of narrative texts. However, from Year Four to upper primary, students start to 'read to learn' and encounter more varied and challenging texts with longer, more complex sentence structures, as well as more abstract vocabulary. There is an increased emphasis on factual texts which require an understanding of how knowledge is structured differently within subject areas or 'curriculum literacies' (Rose & Acevedo, 2006; Wyatt-Smith & Cumming, 2003). Through this transition, children enter the 'world of knowledge' in printed form, gaining access to 'knowledge that can be acquired only if one knows how to read the texts that contain it' (Chall, 1983, p. 70). Whilst some programs have been developed to address this need, they have focussed on Years 5-9 (Rose & Acevedo, 2006). Clearly, earlier considerations of enhancing students' literacy development as they transition from the early foundational years into the first stage of the middle phase of learning, Year Four are warranted.

Reading in the 21st Century

Chall's model of reading stages has mainly been referenced to print-based texts. More recently, new digital technologies are viewed as a panacea for improving literacy instruction and in ameliorating the fourth-grade slump (Cummins, 2008; Gee, 2008). However, Gee (2008) in considering digital texts emphasised that students need more than being able 'to read to learn' in content areas. He stressed the capacity 'to read to discover and innovate,' not just settle for the ability 'to read to learn' school content as a body of inert (static) information (p. 10). This is important in that the effect of digital technologies has redefined skills needed by employers and employees for workplaces within a 'knowledge society' (Stewart, 1998). 'Knowing how to access, evaluate, and apply information is necessary for success in the workplace and at school' (Schmar-Dobler, 2003, p. 81).

A Multiliteracies approach (New London Group, 1996; Cope & Kalantzis, 2000) is one approach that would appear to address Gee's expanded notions of 'reading to learn'. It is a way of planning for reading in the 21st century and calls for a more discriminating approach to reading, with a focus on critical literacy. It also draws together two other areas of change: (1) multimedia and technology and the range of semiotic systems they use, and (2) cultural and linguistic diversity. Unsworth (2001) proposed that the notion of Multiliteracies or multiple literacies is distinguishable not only by multimodality and the mediums and channels of communication but according to domains of learning or content areas. The increased range of technology on offer in classrooms, in particular Interactive Whiteboards, offer opportunities for engaging with multimodal texts, which use a variety of modes to communicate meaning. However, all of these modes come with their inherent affordances and constraints for meaning-making. In the next section aspects of practice or features of multimodal texts that create continuity or discontinuity in multiliterate practice will be examined and discussed.

Context for this study

This article draws on findings from a larger ethnographic case study of one primary school with a whole school implementation of Interactive Whiteboards (IWBs). It sought to address the gap in empirical research in relation to Multiliteracies (New London Group, 1996; Cope & Kalantzis, 2000) by exploring if and how teachers integrate IWBs into their literacy curriculum in ways that develop multiliterate practices in the area of reading, viewing, writing and shaping. In this article findings from one Year Four teacher, Janelle (pseudonym) are reported. This case study of Janelle allowed for an exploration of how one teacher grappled with the implementation of IWBs and the variety of resources they afford.

Data were collected during literacy blocks over a 4 month period and entailed classroom observations, reflections recorded in email correspondence and formal reflections. For some days both fieldnotes of observed events and teacher reflections for the same event were available. This made possible a contrastive analysis between Janelle's espoused beliefs and her enacted practice (Argyris & Schon, 1974) and allowed access to how multiliteracies was constructed in her classroom to create continuities or discontinuities in learning.

What counted as Multiliteracies? Continuities for practice

In order to discuss Janelle's classroom practice, we need to frame it within her espoused view of Multiliteracies. Her definition included a focus on speaking and listening, reading and viewing, writing and presenting.

Multiliterate people have the ability to be literate with a variety of modern texts – reading a book to find information, search the web to locate information, differentiate between two websites that count as true information. They can read between the lines with text and email digital messages. They can present orally to a variety of audiences. They can create a digital presentation to explain something.

It also acknowledged both print-based and multimodal texts with the key purpose of 'reading to learn', with the ability to discriminate what counted as valid information.

Janelle believed that students should use web pages for some tasks such as accessing and reading and researching sporting profiles, rather than books as these were the most up to date. She did, however, counter with, 'Internet texts: need to question their accuracy, though this is difficult to really do because what text source is accurate'. In classroom lessons, Janelle's practice focused on efforts to encourage greater student interaction with the IWB where she taught technological skills to students to physically interact with IWB resources. Janelle later noted:

My students are constantly engaging in new forms of literacy – primarily digital forms of literacy because of the Smartboard. However, these are not often made explicit. I believe this is critical – and I endeavour to expose my students to a variety of literacy forms – digital, visual, written, multimodal – perhaps not enough attention given to audio.

Janelle's teaching practice supported the enacted use of a variety of multimodal texts such as web pages, Learning Objects, interactive games and stories, computer software and teacher-created resources on both the IWB and classroom computers. Janelle integrated the IWB into classroom practice, applying the whole group-small group-whole group teaching strategy within the two hour literacy block. Her beliefs about Multiliteracies indicated a continuity of practice for bridging the digital divide, the development of much needed literacy skills for the 21st century, and ameliorating the fourth-grade slump (Gee, 2008; Cummins, 2008).

What counted as Multiliteracies? Discontinuities for practice

Whilst engaging students with new forms of literacy made possible by the use of information and communication technologies (ICTs) and digital texts, an important aspect of Multiliteracies that Janelle did not focus on was critical literacy. Critical literacy was identified in year level planning documents and alluded to in Janelle's definition of Multiliteracies, however, it remained a new concept that was recognised but not enacted in practice. After reflecting on the literacy practices of her students in a later email Janelle considered that, 'Need to incorporate more of a critical literacy aspect.' She also suggested that the:

IWB is the ideal opportunity to explicitly develop these skills with students. The collaboration and social learning process would also aid students in these skills. We regularly visit the Internet for a specific purpose and this becomes the main focus. Maybe more 'just in time' learning needs to be taking place when using the smartboard.

Janelle could see the potential of IWBs in teaching her students about examining the cultural and social context of texts but was unsure of how to enact her understanding. She indicated that:

I tend not to do this with Year 4 students – why? I find this difficult to do with Year 4 students. I think that the upper school is more conducive to the cultural and social aspects of texts.

Numerous authors (Comber, 2003; Green & Cochrane, 2003) have discussed the use of critical literacy in early childhood settings with the provision of practical examples. With the advent of ICTs and multimedia, students are exposed to a greater range of texts on a daily basis. When we consider that our identities and futures are shaped by the cultural texts we encounter (Luke, 1993), it is important for students to develop a critical perspective about texts.

Another aspect of multiliteracies that is important for the comprehension and the construction of multimodal texts is attention to the meaning-making of the semiotic systems or modes of communication. Only one classroom event revealed a small amount of discussion about the use of two visual clues in an interactive story book. In order to discuss the meaning-making of the different modes a metalanguage (Cope & Kalantzis, 2000) is needed. However; the overall use of a metalanguage by Janelle to discuss texts was limited. In classroom interactions where she was guiding students to be 'whiteboard teachers', Janelle used language such as 'click on this', 'choose that word' rather than using technical language such as 'icon' and 'hyperlinks'. In order to foster the development of Multiliteracies, Unsworth (2002) further suggested that it is necessary to understand the bases of their diversity, both in the affordances computer technology offers and the increasing

prominence of visual images. For students to develop effective practices with Multiliteracies, they need to be familiar with how language, image and digital rhetorics can be situated independently or interactively to construct different meanings.

Literacy as print-based: A discontinuity

Unsworth (2002) stated that whilst existing print-based teaching practices will endure in the future, they are of themselves insufficient for the development of literacy practices required for a changing future. Information previously presented in traditional text formats is now being offered in different forms of electronic communication. Observation of Janelle's enacted practice, when using web-pages revealed traditional print-based practice. At times, web pages were cut-and-pastes and adapted as evident in one reflection when she stated that, 'Karak the Mascot text (copied from Internet) in 'kidspeak' language so they responded well to the corresponding comprehension activity'. In another whole class activity, Janelle cut and pasted Internet text and photos for a sportsperson, Donald Bradman, into the Smart Notebook software. Teaching practice focused on developing students' comprehension of the content of the written text, rather than considering the text as a web page, with all of its inherent textual features such as graphics, vivid colour and eye-catching phrases. As Coiro (2003, p. 458) stated, 'Electronic texts introduce new supports as well as new challenges that can have a great impact on an individual's ability to comprehend what he or she reads. The Internet, in particular, provides new text formats, new purposes for reading, and new ways to interact with information that can confuse and overwhelm people taught to extract meaning from only conventional print'. Janelle reflected later that it was a 'Relevant written text used from the Internet and 'skimming' skills appropriate for this mode of text'.

Acknowledging the need for different strategies – a continuity

When asked if reading a print text and reading an Internet text required the same approaches, Janelle responded:

No ... I think Internet text really needs the reader to focus on the specific text, and not everything else on the page. Plus there isn't the turning of the pages, the text is often non-linear in that hyperlinks can take kids to other links etc. They are the same I guess in that they are a series of words, sentences, paragraphs etc. But often the text is organised quite differently. In books text is usually clearly organised under headings or on the page, whereas the Internet restricts the creator of the text to try and fit it all on a page, often smaller fonts, often without clear organisation or headings. Students need to rely more on skimming and scanning skills with the Internet.

Janelle understood some of the key understandings about the nature of multimodal texts (Anstey, 2002) in that they can be multimodal, interactive and non-linear.

YES – I do practise this, and once again, because the smartboard is a tool that enables me to effectively do so. When we are looking on the internet we discuss the hyperlinks, we also consider using tools (spotlight) to focus on specific text and not everything else on the page.

Janelle believed that different reading practices were needed when reading print and multimodal texts. However, whilst she may consider that there are differences in reading approaches with print-based and Internet texts, 70% of her students in a Home Literacy Survey viewed reading a web page as the same as reading a book. This may have been a result of Janelle's print-based approach to teaching with texts and this had implications for classroom practice. For example, when attempting to locate particular information with web pages on one occasion, students had to navigate through 'everything else on the page' and struggled to complete the task of 'reading to learn'. This seems to link to Coiro's (2003) notion of confusion when being overwhelmed by vast amounts of information.

It may also relate to the proposed lack of attention to expository texts in the early foundational years, a possible attributing cause of the fourth grade slump (Sanacore & Palumbo, 2009). Internet texts are often expository in nature, with students needing familiarity with the concepts, vocabulary and organisational formats (Schmar-Dobler, 2003). This would appear to coincide with Janelle's reflection with the 'Internet sites were too hard for students' and linked to lack of concept and vocabulary knowledge.

Regardless, as Leu (1997, p. 65) warned that 'individuals unable to keep up with the information strategies generated by new information technologies will quickly be left behind.'

Differences in teaching practice – a possible discontinuity

Later, when reflecting Janelle recognised her different teaching approaches when using traditional picture books and multimodal texts. She explained that when using picture books she discussed audience and purpose, yet with multimodal texts she did not. When asked to elaborate, Janelle responded:

I think we tend not to because we haven't fully acknowledged online resources as a type of literacy ...which is rather naïve of me I guess ...but it is a relatively new literacy that is being utilised in the classroom – and perhaps more and more because of the smartboard.

Not elaborating on the audience and purpose of multimodal could provide a discontinuity for some students. Best, Floyd & McNamara (2004) highlighted that knowledge of genre is an important aspect of text comprehension. Multimedia technologies produce hybrid, nonlinear interactive texts in which there can be the blurring of genres.

Lack of relevant texts – a discontinuity

On several occasions (see Table 1) Janelle commented that she could not find relevant texts for students of this year level and appeared resigned to this. In most instances this related to the challenging nature of existing texts, with unfamiliar vocabulary or content. In her reflections she did acknowledge that prior knowledge was important for student comprehension of texts and attempted to locate texts with which students may be more familiar. In other instances the challenge of the text related to the sentences structure, which impacted up student understanding. For example, the editing text did not allow for students to predict the correct placement of text connectives. For some spelling activities, there can be differences between American English and British English, which can cause a discontinuity for students. Janelle saw these as constraints as she prepared IWB lessons.

Janelle also reflected that she should have 'carefully located better resources for them, rather than depend on the ones that were provided in this online activity'. At a later date students were having difficulty in completing a task which needed them to locate information from a website. 'Students doing Internet task had difficulties with the text (unfortunately the parent helper wasn't here for this activity which I had planned for)'. Resigned to the fact that she couldn't find Internet texts at her students' levels, her strategy became to recruit parental help. 'Can't find enough texts at the students' levels – so I need to improve this aspect I need to recruit more helpers for my literacy block'. Through all of these experiences, Janelle was building her knowledge about how to problematise and address these issues.

Janelle used a variety of Learning Objects in the classroom to engage students in literacy learning. Similarly there were issues about the affordances and constraints evident in the texts themselves. In this particular Learning Object titled 'Picture This' (Education Services, 2008) whilst hyperlinks allowed access to the meaning of challenging words such as nova, the positioning of the linked window blocked the sentence. This would prevent readers from re-reading the sentence in its entirety to situate the meaning of the word nova. The decisions

Table 1. Reflection by Janelle on texts used in classroom

Quote	Analysis
Texts somewhat difficult for this year level, though some children could comprehend. Size of text too small for students to read. Perhaps text was not relevant in terms of content.	Text too challenging Readability of text an issue Lack of relevance of content
Text being too difficult – mainly with the vocabulary plus unfamiliar content for the students, e.g. Donald Bradman.	Consideration of vocabulary Consideration of relevance of content
Texts (I think) are targeted at a higher level than perhaps Year 4, but this is probably always going to be the case with Internet texts.	Consideration of text level Teacher appears resigned to lack of appropriate texts
American phonics activity didn't have a direct effect as it was on vowels. The text for editing was too challenging as it was difficult to work out where the connectives could be placed, when they did not comprehend the meaning of the sentences.	Text too challenging Structure of text did not allow students to predict placement and make meaning

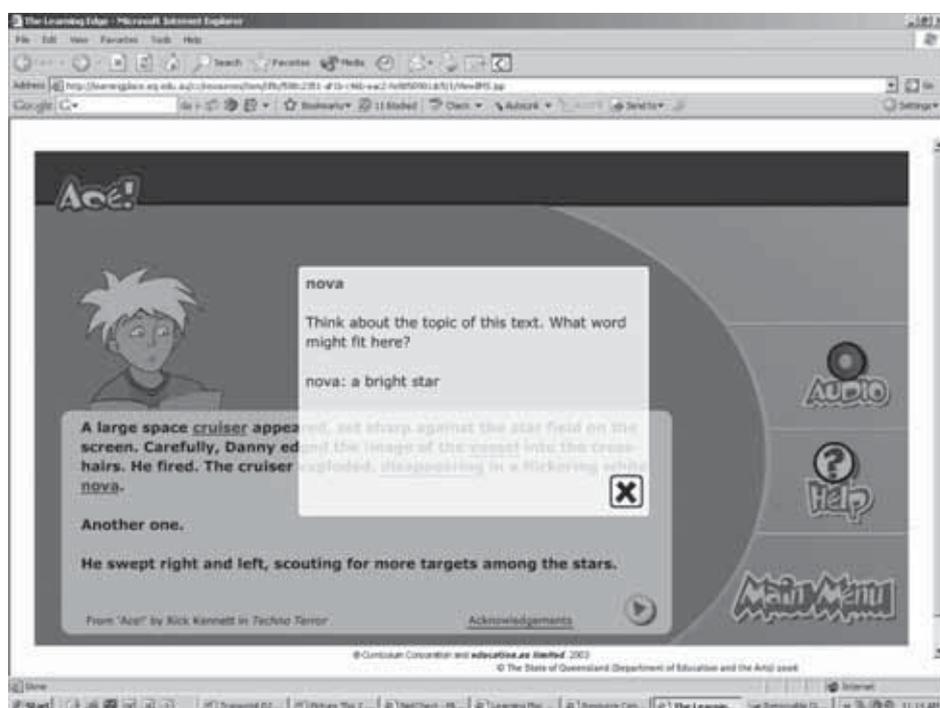


Figure 1. Screenshot of 'Ace' story

teachers make about the types of texts and learning objects that they use for presenting content have clear implications for students' understanding and learning. The IWB and the multimodal resources that they offer have particular affordances and constraints for meaning-making. Teachers need to be critically mindful about resource selection and the level of challenge it may offer students in their classrooms. Like Janelle, teachers need to problematise these resources and consider how to scaffold their use in the classroom.

Conclusion ... So what can we learn from Janelle?

Teachers like Janelle are important to the success of actively embedding technologies like the IWB into classrooms. She is a well-intentioned teacher who believed in the potential of the IWB for improving students' outcomes and engagement. Janelle had considerable technological knowledge and expertise however; she struggled with her knowledge about

how to develop multiliterate practices for her Year 4 students. Year Four students are ‘tween’ learning to read and reading to learn, ‘tween’ the early foundational years and what is often recognised as the middle years. As suggested by Beavis (2005) and Gee (2008) technologies and multimodal texts are central to this ‘tween’ segment of the population and provide inroads to ameliorating the fourth grade slump. However, as shown in this article, what they offer and how teachers use them can offer continuities and discontinuities for literacy success.

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