BLOGS AND THE DEVELOPMENT OF INDEPENDENT LEARNING SKILLS. A CASE STUDY OF A PRIMARY SCHOOL LITERATURE CLASS BLOGGING PROJECT

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Abstract

This paper seeks to contribute to knowledge about the potential offered by blogs in literacy education through the presentation of a case study of a book-talk blog project carried out in 2011. The children's blogging constituted their personal responses to the books they were reading. Using a multimodal framework, posts of 50 children were analysed to gain a better understanding of the role blogs played in developing independent learning skills within a collaborative online environment. Interviews with teachers were also conducted to gain a fuller understanding of contextual factors and variables. The results indicate that the blogs provided *spaces* within which children can publish meaningful responses to their reading to an informed audience representing aspects of *multiple selves* (Döring, 2002). In order to do this, they make a range of choices relating to images, text and embedding of media. Over the course of the eight-week duration of this project, these choices evidenced the development of skills and knowledge as well as an inclination to "push the boundaries."

Background

Over the past twenty years, computer-based technologies have become a part of the daily lives of children in countries such as Australia, where the federal government is rolling out a computer in schools program that will see about 800,000 computers placed before children in schools. A professional development program will accompany this for teachers that will cost an estimated 41 million dollars. A 2006 survey of computer usage in Australia showed that 41% of 5 to 8 year olds in Australia use a computer from two to six days a week. Access figures for very young children in Australia are also very high with 87.31 % of homes with children aged 4 to 5 years reporting their access to computers (Zevernbergen & Logan, 2008). These authors have pointed out that this has led to a "digital divide" between the learning experiences encountered in a child's home environment and those experienced in early childhood educational settings. Many children entering schools have developed skills such as using a mouse, finding letters and numerals on a keyboard or screen, typing letters, navigating websites, retrieving files, using pull-down menus, loading CDs and DVDs, uploading photos from a digital camera, using toolbars, saving files, printing documents and files, using drawing software and typing words (Zevenbergen & Logan, 2008).

Web 2.0 technologies have presented new opportunities for developing

diverse online environments and enhancing interactivity, participation and feedback between diverse groups of authors and readers. In particular, blogs and social networking sites have provided new opportunities and incentives for personal writing. The use of blogs in primary school classrooms has become widespread and their use is changing the teaching and learning landscape in many schools. In fact, according to a recent European Commission report, blogs are the most widely used Web 2.0 tool in schools (Redecker, 2009). Nevertheless, there remains a lack of precise information about the ways in which blogs can enhance the development of multiliteracies and independent learning skills.

The proliferation of digital tools, particularly as they are applied in educational contexts has also changed the way we conceptualise literacy, and the terms multiliteracies and multimodality have achieved a prominence in most discussions about the development of reading and writing skills in young children. The concept of multiliteracies dates back to the mid-nineties. Its main exponents were the New London Group who used the term in an effort to account for both the increasing "multiplicity of … modes of meaning making" as well as the "realities of increasing local diversity and global connectedness" (Cazden et al., 1996). In some ways, the multimodality of meaning making has a history that goes far beyond the developments of the Internet and multimedia. For example, the combination of different modes of communication has been a feature of children's literature for a long time. The profound shift (Kress, 2010) has come about because of factors that are obvious such as the increasing dominance of the image in multimodal texts and the increasing proliferation of reading from a screen, rather than from a book. Less obvious, are the changes in social relationships that have been a concomitant with this revolution and the changes in the disposition of readers and writers as they grapple with the semiotics of images rather than the linguistics of sentence-based meaning (Kress, 2010; Kress, 2003). In addition to this, must be added the shift in the way knowledge itself is now conceptualized. As Siemens (2006) has pointed out, the contexts and flow of knowledge are rapidly changing and the connectedness of knowledge and the speed of its dissemination have produced a major game change:

> In today's online world, an author can post a series of ideas/writings, and receive critique from colleagues, members of other disciplines, or peers from around the world. The ideas can be used by others to build more elaborate (or personalized) representations. The dialogue continues, and ideas gain momentum as they are analysed and co-created in different variations. After only a brief time (sometimes a matter of days), the ideas can be sharpened, enlarged, challenged, or propagated. The cycle is dizzying in pace, process, and final product, which is then fed back into the flow cycle for continual iteration. (p.7)

Kress (2010) links this speed and the hypertextuality that facilitates it to the moves away from a more hierarchical society towards a more lateral one. Certainly, it seems that the dispositions of readers/writers who navigate their ways in and out of texts collecting, synthesising and co-constructing (readers

as designers of the texts they read (Kress, 2010) have undergone a fundamental shift in this environment. This change in meaning making has required the development of new skills and strategies include the "ability to negotiate meaning across numerous texts or combine technologies to construct new meanings" (Gomez, Schieble, Curwood, & Hassett, 2010, p. 22).

Digital literacies have the potential to bridge the gaps that exist between home and school learning lives (Davies & Merchant, 2009). The contention that digital literacies can encourage knowledge building in distributed ways requires further investigation, particularly in terms of their integration to existing educational frameworks. Developing a deeper understanding of the extent to which the development of digital literacy enhances independent learning skills, learner autonomy and self-efficacy presents educators with an interesting challenge. Maher (2011) makes the point that because digital tools promote constructivist teaching approaches, students are more likely to be involved in initiating and constructing knowledge that is personally meaningful to them. In the email project described in this research, involving observational data with a class of 22 primary school children, it is evident that the Internet provided these students with a means of undertaking authentic activities that provided them with opportunities to build knowledge in a distributed way. The research focused on the cultural knowledge developed by these students, but also evident is the knowledge they gained from a process that explicitly encouraged them to make choices and reflect on their learning both individually and socially (Maher, 2011).

There is a growing body of research that has focused on the cognitive benefits that accrue to students working in learning environments that have been restructured through the use of Web 2.0 tools. The heightened level of student engagement and increased understanding of course content identified by Heafner and Friedman (2008) were also noted by So, Seah, and Toh-Heng (2010), who studied the benefits of online collaboration for younger students in Singapore. Both studies focused on the advantages of online collaboration over more traditional methods of teaching. Important to both studies was the enhanced collaboration that was afforded the use of wikis and blogs. While these studies focused on student understandings of content in these environments, other studies such as that by Lapadat, Brown, Thielmann and McGregor (2011) were more concerned with the development of digital skills. Drawing on the original conception of digital literacy by Lankshear and Knobel (2008) these authors propose a definition of *digital literacy* that has three aspects. First, proficiency in decoding and encoding symbols in a digital environment (reading and writing); second *digital fluency*, characterized as technological fluency in the use of tools; and third, the "dynamic engagement in the social construction of meaning" within new genres and registers afforded by the online environment (Lankshear & Knobel, 2008, p. 71). The more recent study by Reich, Murnane and Willett (2012) into the use of wikis in K-12 classrooms in the U.S. examined a representative sample drawn from over 180,000 wikis. As well as considering questions relating to equity and the role of the teacher, this research also posed the question:"To what extent do wikis created in U.S. public schools provide

opportunities for 21st-century skill development?" The findings indicated that, under the right conditions, the individual student wikis and collaborative workspaces did provide opportunities for students to develop 21st Century skills such as collaboration and online publishing.

The implication of this evidence and that provided by researchers such as King (2011), Alm (2006) and Warschauer (2000) is that learning with Web 2.0 tools does enhance the knowledge and skills that are the building blocks of learner autonomy. In this context, it is important to recognize that learner autonomy is not a product, but a process and it is clear that web-based technologies can and do play an important part in this process. Benson (2007), Nunan (1997) and Reinders (2010) conceptualise autonomy as a process with number of distinct phases that begin with awareness raising. In addition, it is one of the great misconceptions of learner autonomy that it is about learning alone. In fact, as Benson (2001) makes clear, it is also about interdependence, collaboration and building the skills of learners to reflect on their own learning, aligning with Reich, Murnane, and Willett's (2012) concept of 21st Century skills. The characteristics of the kind of environment necessary for building autonomy has much in common with the pre-requisites for effective online collaboration identified by Siemens (2005). Both require a diversity of opinions, both require the nurturing and maintenance of connections and both require currency.

The Study

The aim of this research was to examine the potential offered by blogs in literacy education. The premise for this investigation was that collaboration around ICT activities has been shown to have the potential to enhance the learning of transferable thinking skills (Wegerif, 2002) and make an important contribution to the development of learner autonomy. The research focused on a blogging project undertaken with a Year 6 class (11-12 year olds) as a part of a literacy project in their library lessons. Thirty students took part in this project in which they used the blogs to develop responses to their own reading and comment on the entries of their classmates. The children's blogging constituted their personal responses to the books they were reading. The questions guiding this research were:

1. To what extent did the blogs foster collaborative learning?
2. What skills and knowledge were developed by the students involved in using blogs?
3. What lessons were learned by teachers involved in this project in relation to the scaffolding required for using blogs in the classroom?
4. What evidence was there that the use of blogs contributed to the development of learner autonomy?

Methodology

The methodological framework for this study drew on aspects of case study methods (Miles & Huberman, 1994) and data was gathered from two sources. The first was the student blogs and the second was in the form of semi-structured interviews conducted with the teachers leading this unit of study.

The blogs that were analysed were developed over an eight-week period and were based on a number of entries ranging from 17 to 5. The blogs had functionalities that permitted the uploading of video or the embedding of links to a video and it was also possible to upload pictures, include animations and vary the size and colour of a range of fonts. It is this multimodal element that encourages students to "navigate, design, interpret and analyze texts in new and more interactive ways" (Serafini, 2010, p. 86). Thus, as Gomez et al. (2010) point out, the reader is required to become an active interpreter of meaning, rather than a passive one.

The students were given a fairly simple brief, which had within it three elements: (a) a description of the book they had read; (b) developing a persuasive text designed to encourage classmates to read the book; (c) selecting a favourite paragraph and explaining why this excerpt is so important. The scaffolding developed by the teacher supported the students' development of their ideas as well as the development of the basic structure and visual elements of their blog. The students made a range of choices relating to images, text and embedding of media and they displayed varying levels of the skills and knowledge that have come to be associated with digital literacies.

Using a social semiotic multimodal framework drawing on the work of Bateman and Delin (2001) and the work of Kress and van Leeuwen (2006), posts of 50 children were analysed from several different perspectives. This analysis was primarily aimed at determining the levels of complexity in the argument presented and the level of digital literacy that was required in order to present this argument in a coherent manner within the functionalities of the blog. Bateman and Delin (2001) suggest five levels that relate to the fulfilment of the communicative goals of multimodal online text:

- *Content structure* – the structure of the information to be communicated;

- *Rhetorical structure* – the rhetorical relationships between content elements; how the content is "argued";

- *Layout structure* – the nature, appearance and position of communicative elements on the page;

- *Navigation structure* – the ways in which the intended mode(s) of consumption of the document is/are supported; and

- *Linguistic structure* – the structure of the language used to realise the layout element.

The second work used as a basis for the framework, the work of Kress and van Leeuwen (2006), provides a tool kit for the analysis of visual compositions such as advertisements, magazine pages and covers, photographs, schoolbooks,

web pages. It is a method that allows breaking down compositions into their most basic components and then understand how these work together, what relationships can be made between them on a page, in order to create meaning.

Using these two works in combination, the framework applied was able to demonstrate how the structural elements, organisation, and representation of the blogs worked together to provide *spaces* within which the children can publish meaningful responses to their reading to an informed audience representing aspects of *multiple selves* (Döring, 2002). This in turn enabled the articulation of the role the blogs played in developing students' skills and knowledge within a collaborative online environment.

The Interviews with teachers were conducted at the beginning and the end of the unit to gain a fuller understanding of contextual factors and variables. These were coded and analysed using a thematic analysis and the results informed the analysis of the blogs as well as the recommendations for teaching that arose from the analysis. These interviews also provided a good picture of the pedagogical practices around the development of the online texts. As with the teaching of literacy in print-based contexts, teachers working in online environments need to include a variety of writing opportunities, and provide models for the kinds of writing they are teaching to students. Using a meta-language to describe parts of a written work and developing a scaffolding process when teaching students is also a part of the multiliteracies approach. As students become more expert at understanding these newer aspects of learning about literacy, the scaffold is gradually removed. Students are then empowered to practice and experiment with their reading and writing on their own, using the new skills and understandings.

Analysis

For the purposes of this paper, the detailed analysis of one of the blogs will be presented. Following this, the key themes that are emerging from the analysis of the other blogs will be detailed. This approach will make clear the approach taken to the analysis and highlight the key findings that emerged from the analysis of all the blogs.

Melissa's Blog

Content structure.
The organisation of the blog is actually quite complex. Melissa's bog is actually a blog within a blog as she has embedded a Glogster page on the blog. The heading of the page shows the original Kidsblog Platform. The page itself has six related sections: three text boxes; a comments box; a video box and a background section that has the effect of highlighting the other sections.

Rhetorical structure.
The rhetorical structure draws on the content structure to create an argument. Each section of this blog is effectively linked by a purpose relationship. The core element in this is the second text box in which Melissa explains the task that she has been set and sets the topic. The third box down tells us something about the author – but it is the video that provides the summary of what the

story in about. Melissa' rhetorical structure relies on multimodal texts that are arranged hierarchically so that we come to the video only after we have read about the purpose of the blog, Melissa's appraisal of the book and the information about the author.

Figure 1. Screenshot of a student's blog.

Layout structure.
The layout structure evidences the skills required to organise the graphical and typographical elements that make up the blog. The dynamic nature of the layout is highlighted as the reader opens this page and a turning circle indicates that the embedded Glogster page is loading. The text and video blocks are located in the centre of the page and shown against a green background. The type in the third box is more prominent than the second so that there is an implied hierarchy in the page. The instruction written at the top is to *Scroll Down*. This alerts our attention to the presence of scroll bars in the text boxes, but it also draws us to see the page as a vertical alignment. All the elements of the page support this vertical hierarchy. The author is directing our attention to what she sees as the most important element – the video. Around the text boxes are placed artefacts that would normally be associated with school – a computer, notebooks, pencils and chalk. These serve the layout function of pointing us to the focus of the blog the texts and video.

Navigation structure.

The navigation structure refers to those elements that act as *signposts* (Bateman & Delin, 2001) within the blog. In Melissa's blog, the signposts are at two levels – those that are a part of the template such as *Comment*s or *Kidsblog* and those that are a part of the authors design. The instruction *Scroll Down* is such a signpost and when the reader scrolls down the effect is one of surprise that much more text has been written than is actually shown. The differing fonts and font sizes in the text box also serve a function of directing our attention to core elements – such as the name of the book and the task. The icon at the bottom of the third text box informs us that there is more to be said about this book.

Figure 2. Enlargement of icon from student blog.

The 'YouTube' logo beside the video alerts us to the fact that a video has been installed – although there is no hint of what is contained in the video. Once it is played the various page elements come together to form a coherent whole.

Linguistic structure.

The text from the second text box is shown here in full for the purpose of this analysis. Spelling and punctuation is as it is on the blog.

ON LOAN
    In library, at my school, we got to choose a book to read and then right a blog about it and the book I chose was a really good one and it was called 'On loan'. On loan was first published by 'Penguin Books Australia' in 1990. But the edition that I read was published in 1996 but still by the same people.

I really liked On loan because it had a really good story line and you just couldn't put the book down because you just wanted to find out what was going to happen next. It was about a 14 year old Vietnamese girl who had just had her birthday. The one wish she really wanted to come true was to know her real birth date and meet her real family because she was adopted. The only problem was that her parents were dead. Well at least that was what she had been told. On her 14th birthday she got a letter from her real father. He told her all these things that she hadn't known before including her real birth date. He came to Australia but only for 5 days. Lindy, the 14 year old girl (whose Vietnamese name is Mai), has to decide between the family she has practically known her whole life and her real family who she thought were dead. All the exciting things she went through and all of the information she has learnt about her real family have got her stuck in two minds!

Which family will she choose?   Read the book to find out!
READ ABOUT THE AUTHOR OF THIS BOOK BELOW!

Melissa's language is appropriate for the genre of the book report. She realises the informational purpose of the text, uncovering just enough information to evoke the interest of the reader. In addition, she is also adept at deploying the language of appraisal, including the use of exclamation marks and the use of the imperative. The embedded clauses are an interesting aspect of this writing – evidencing advanced literacy skills but also conveying the complexity that is a feature of the story she is talking about. It is striking that the embeddedness of her language is paralleled in the embedded nature of the blog layout and design. Another interesting aspect of the language deployed here is the role it fulfils as but one important part of the coherent argument that is the blog itself. That is, the text is one of the multimodal elements serving the purpose of drawing in the reader and informing him or her.

Melissa's blog very clearly exemplifies the skills requires to create meaning using multimodal tools online. She demonstrates an awareness of colour, salience and layout design, and she also shows an awareness of the effects of different kinds of images (Callow, 2003). Indeed, the visual grammar of the blog (Kress & van Leeuwen, 2006) sets up a structure that gives most salience to the video. On the thumbnail for the video we see a blond woman sitting on a bed with a young girl who has an Asian appearance. The video box itself is presented as a stylised flyleaf with the page about to turn. The way this thumbnail is presented adds to its salience and its informational value.

Figure 3. Screenshot of video thumbnail from student's blog.

The overall composition of images in the blog serves two related functions. Firstly, it locates the blog within the school where this task was set – there by establishing a kind of membership. Secondly, it draws the reader in, directing attention and inviting interactivity. In fact, there are 8 comments on the page, indicating that the other students engaged with the multimodal narrative presented by Melissa.

Emergent Themes

The analysis of all the class blogs enabled information to be gathered about the kinds of skills and knowledge that were being deployed. The following section presents these as themes that emerged from this analysis.

Design Decisions

The students blogs all demonstrated design choices that hade been made by the students themselves. These choices meant that each and every blog had a unique appearance, even though the students were working within the one-blog template. Only twenty-seven percent of the blogs included video clips

and forty-five percent included a link with a Glogster page. Sixty-three percent of the blogs included an uploaded picture. It can be argued that the ability to make these kinds of decisions is part of a creative process. Andrew Churches' (2010) detailed work on what he has termed *Bloom's Digital Taxonomy*, places this capacity at the top of the higher order thinking skills.

Interactivity

As Gee (2007) has pointed out, thinking and reasoning are inherently social and distributed (p.184). Web 2.0 applications have enormous potential in terms of fostering this aspect of knowledge creation through the interactive nature of platforms such as blogs and wikis. Every blog analysed in this project included an element of interactivity, most obviously through the comments page and through the authors' responses or changes to the blog made as a result of these comments. However, interactivity was also achieved through the design choices of the students and through the overall tenor of the blogs. The reports on the books students had read often included second person pronouns and questions directed at the audience. According to Churches (2010), this collaborative aspect of projects such is also a component of higher order thinking skills.

Visual Literacy

While the intricacies of design varied between the blogs in terms of the use of uploaded pictures and videos, all the blogs showed some form of awareness of the visual elements of the blogs. All the blogs included differing font sizes and colours and used these very consciously for effects of emphasis or interactivity. Different coloured backgrounds, animations and small images were generally used in ways that added to the meaning of the blog, indication that students were aware of the visual impact of the blogs.

The Textual Analyses

The interesting aspect of the linguistic analyses was the relationship between higher levels of digital literacy and high levels of text based literacy. All the blogs that included more intricate designs also demonstrated more detailed and more intricate texts discussing their books. Conversely, only two of the blogs that contained detailed narratives did not deploy more complicated design elements such as video and uploaded images. The question of the exact nature of this relationship is something that will need to be taken up in future research

The realisation of the different meta-functions is achieved in each of the blogs through the blog as a whole. Field, tenor and mode are realised through the juxtaposition of images, text and animations as well as the blog template itself. The related meta-functions are also realised through the overall design of the blog – and often the visual takes precedence over the textual elements. For example, the ideational meta-function, closely linked to the semiotic meta-function of field, relates to the ways in which the blog conveys ideas that are to be shared with the audience. Within all the blogs, this meta-function is realised through the interplay between text and image, text and font size and text and font colour. Similarly, the interpersonal meta-function, closely related to the tenor of the blog, is realised not only through the language, but

also through the use of symbols and pictures and through the comments and the responses to these comments. Melissa's blog is very typical of this process. As was seen above, this blog made use of icons relating to school to place the blog in its context and include the readers as fellow members of the class. Other blogs used small cartoon images that would be familiar to the readers as a way of directing the blog to a specific audience.

Finding and Synthesising Relevant Information

Seventy-two per cent of the blogs showed evidence of the students searching and using information from other sources in their blog. This included visual texts as well as information gained from sources such as Wikipedia. Interviews with the teachers revealed that one of their major concerns was the tendency of some students within previous projects to simply cut and paste material onto their blog, without critically analysisng its relevance and appropriateness. Teachers had addressed this concern through focused lessons on web searching and the attribution of web-based material. This uncritical use of web-based material was not evident in the blogs analysed, indicating some success in relation to the focused teaching of the relevant skills and knowledge required for the development of the blogs.

Discussion

The analysis of the blogs was designed to do two things. First, it was intended to provide answers to the questions relating to the role Web 2.0 writing and publishing in the development of students' autonomy as learners. Second, the research also addressed the problem of developing methodological frameworks that would enable a narrative to be built up about the kinds of applied skills and knowledge evidenced in the students' blogs.

From the above analysis, it is clear that the majority of students designing and developing these blogs were using higher order thinking skills. They were involved in creating and publishing and they were using collaboration, moderation, negotiation and comments within this process (Churches, 2010). They did this in terms of the choices they made about the relationship between text and image but also in the way they synthesised and presented information to a specific audience about the books they had been reading. The majority also evidenced high-level digital literacy skills in terms of the design aspects of their blogs, showing a very keen awareness of the functionality of the blogs and the possibilities this platform presents for the varied uses of colour, image and animations.

More research is needed into the question of the exact ways in which the skills involved in publishing via Web 2.0 tools can be made explicit and fostered in classrooms, so that students' conception of themselves as autonomous learners can be strengthened.

Conclusion

The web is a now established as an important tool in the teaching and learning of literacy in schools. Gaining a better understanding of its role in the developing and strengthening students conceptions of themselves as

independent learners is a vital task if the full potential of these technologies are to be realised within effective educational frameworks. One of the lessons for teachers drawn from this research relates to the type of scaffolding required for students to develop the skills and knowledge needed for projects involving online publication and collaboration. This needs to focus on the development of content, but also on aspects of design and 'netiquette'. It is clear that the development of digital literacies to the level required for this kind of content does need explicit classroom work. Further classroom-based research is obviously needed in order to ensure that our pedagogical frameworks keep up with these developments.

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