Literacy and learning with multimodal texts: classroom glimpses

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This article reports on some of the findings of a study in Sydney schools in 2004 that examined how students in Primary and Junior Secondary school grades read and interacted with multimodal texts in different curriculum areas. The majority of these students were from language backgrounds other than English. Findings indicate that when students were engaged in tasks with multimodal texts there was a synthesis of literacy and learning, learning was collaborative, students articulated their own learning and there was opportunity for both teachers and peers to scaffold learning.

Introduction

The young person who watches digital TV, downloads MP3 music onto a personal player, checks e-mail on a personal organiser and sends symbolised messages to a mobile phone of a friend will not be satisfied with a 500-word revision guide for [HSC] physics (Abbott, 2003, p. 45).

There is now an acceptance of the textual shift that has occurred for today’s students whose environment is filled with visual, electronic and digital texts where the world of communication for children is entirely different from what school offers and prepares them for (Kress, 2003; Gee, 2003; Lankshear & Noble, 2003). The terms multi-literacies (New London Group, 2000; Unsworth, 2001), multimodal texts, multimodal discourse and multimodality (Kress & van Leeuwen, 1996; 2001) represent attempts to describe the textual shift and to conceptualise the changed learning paradigm that is fundamental for literacy and learning in an age of sophisticated digital communication.

While we may acknowledge this changed paradigm we are a long way from understanding how these changes can be realised pedagogically. We need to investigate the way meaning is constructed through multimodal texts. The synchronous functioning of the modes of image, movement, colour, gesture, 3D objects, music and sound on a digital screen require a different type of ‘reading’ and literacy that entails non-linear and simultaneous processing. In addition, we need to understand how multiple modes of communication are influencing students’ motivation and learning.

Several studies in recent years have been investigating specific aspects of this complex area emphasising the importance of teachers knowing how to use multimodal texts and multimodal learning environments in classrooms to enhance student learning. Kress et al (2001) have looked at the multimodal environments of Science classrooms while Jewitt (2002) has examined these environments in English classrooms. Beane (2003) has examined students’ production of their own multimodal texts, demonstrating how they need to be incorporated in literacy assessment. Callow and Zammitt. (2002), Unsworth (2003) and Walsh (2006) have examined the different types of reading needed for multimodal texts.

Several ongoing studies are providing insight into the way the literacy curriculum needs be reframed for new modes of communication. For example, Unsworth, Thomas and Bush (2004) have investigated the way images are used in standardized literacy test while Simpson (2005) has been investigating the pedagogy of online communication through Book Raps.

This paper discusses some of the data from a recent study that aimed to investigate the research question: What specific aspects of literacy or learning are evident when students are reading multimodal texts? The underlying aim of this question was to examine any identifiable differences between reading multimodal texts compared with print-based texts and to consider the pedagogical implications of such differences.

The study involved fourteen teachers and three curriculum advisers from schools within...
both the Catholic Education Office Sydney and the Catholic Education Office Parramatta. These all worked with the researcher to examine the types of literacy and learning that were occurring when students of Primary and Secondary school age read and interacted with multimodal texts.

**The study**

The research undertaken was field research in classrooms with a case study focus, qualitative data collection and analysis. The research was conducted in Infants classes, Years 3-4, Years 5-6 and one Year 8 Secondary class. Most of the classes had high ESL populations. Student questionnaires, videotapes and audiotapes of students’ oral and written responses of students to visual and multimodal texts were analysed. There were eleven case studies developed with some teachers working together in the one class. The case studies involved lessons where a teacher with either a whole class, several groups or one group of students were engaged with one or more types of multimodal texts. These lessons were either videotaped or audiotaped. In a few situations where taping was not suitable, the teacher made detailed notes and submitted samples of students’ work.

The study entailed progressive stages that involved meetings between partners, selection of teachers, initial and subsequent meetings with teachers, implementation of the research with groups of students, collation and analysis of data. Teachers selected tasks that would easily integrate into their current program, in some cases these were specific English/literacy lessons while in other cases they were part of an integrated program with Science or HSIE. Teachers developed a rich range of tasks such as web quests, comparison of a CD-ROM with a book, construction of visual and digital texts within a Book Rap, construction of web pages, animated advertisements, power point presentations and i-movies. Many of the tasks involved multiple stages so that students were either videotaped or audiotaped. In a few situations where taping was not suitable, the teacher made detailed notes and submitted samples of students’ work.

The two case studies discussed here are exemplars that demonstrate the learning contexts that developed around multimodal texts and tasks, with Case Study 1 being an example of students using a narrative text while Case Study 2 shows students using information texts. A summary of each case study is presented in table form with a description of the procedures and stages of the task development shown in the left hand column. The right hand column provides a summary of evidence related to criteria for aspects of literacy, learning or visual/digital literacy with significant aspects in italics to demonstrate aspects of coding used. It should be noted that all the tasks involve a great deal of listening and talking as students worked in pairs or groups. Further comments are presented after each table.

**Case study 1 – Year 2**

The teacher led two groups of students to read and compare the print and CD-ROM version of the picture story book *Just Grandma and Me* (Mayer, 1983). In this story a fantasy animal, ‘Little Critter’, and his Grandma spend a day at the beach, where Little Critter has different adventures such as riding an umbrella, going snorkeling and battling with a nasty crab (see table 1 opposite).

**What specific aspects of literacy or learning are evident when students are reading multimodal texts?**

In the following section data from two of the case studies is described and analysed. Data was analysed to identify evidence of literacy, specifically aspects of reading using Luke and Freebody’s reading practices model (2002) as a guide. Students’ responses, from classroom observations and from videos of lessons, were coded according to whether they were using coding, semantic, pragmatic or critical practice.

While these reading practices do not occur separately, and pragmatic practice would be part of all reading events, they provide a useful framework for identifying what aspects of reading and understanding are occurring. At the same time we considered, for example, whether the decoding incorporated visual or digital elements and whether such elements triggered different levels of comprehension or semantic practice.

Since several tasks involved different curriculum areas, evidence of learning was recorded by considering students’ understanding of specific content knowledge or aspects such problem solving. Continual consideration was given to the interactive processes that occurred when students used or responded to visual or digital texts. While criteria were identified separately it is important to acknowledge that they do not occur separately but rather as part of the integrated process that involves reading, responding to, talking about, interacting with and learning from texts.

**Description of the case studies**

In this story a fantasy animal, ‘Little Critter’, and his Grandma spend a day at the beach, where Little Critter has different adventures such as riding an umbrella, going snorkeling and battling with a nasty crab (see table 1 opposite).

**Comments on Case Study 1**

**Reading print and digital forms of the story**

When reading both the print and the digital forms of the story the students were enthusiastically engaged in learning, particularly in linking previous experience to new knowledge, predicting
outcomes of the narrative, understanding the
narrative at different levels, articulating their
learning in discussion with teachers and peers,
comparing and contrasting. Coding practice,
semantic practice and pragmatic practice thus
were integral to their reading and response to the
different texts. Examples of student predictions
are shown in their discussion with the teacher in
Table 2.

The students’ responses are typical of the
types of prediction students make when a new
book is introduced. The difference here is that the
teacher is deliberately not showing the students
the illustrations so that they will use their
imaginations to visualise the events, and attempt
their own illustrations. As the students were
reading the story with the teachers they were
asked to “Put that picture in your mind because
you’re going to draw it later”. Here the teacher
was developing metatextual awareness. The
teacher’s final question “Does it have to be a
person?” was preparing them for other alternatives
such as the fantasy characters that appear in the
illustrations of the book and the CD-ROM.

Differences observed in students’ reactions
while reading the CD-ROM were those that
would commonly occur when students are using
electronic or digital texts, but are interesting to
consider in relation to the reading process. While
students using the CD-ROM story showed similar
processes for decoding and comprehending,
they were clearly attracted by the visual images,
movement and sound . . .
Students’ illustrations of the print form of the story

Students’ illustrations of the story demonstrated their interpretation of the story as they drew on their background knowledge of grandmothers, transport and the activities that might take place at the beach. The illustrations showed understanding of narrative structure, as well as literal and inferential comprehension. Several illustrations showed students were attempting to show movement and interaction between participants. Several students presented the main character to the viewer at the beginning or end of the story. Some students added speech bubbles to aid the interpretation of the story as they drew on their interpretation of the story as they drew on their understanding and inference. Several illustrations showed students were attempting to show movement and interaction between participants. Several students presented the main character to the viewer at the beginning or end of the story. Some students added speech bubbles to aid the representation of characters or emotions. As Bearne has shown (2003), students’ writing and illustrations are attempting to use characteristics that occur in digital texts. Bearne has developed a strong case for using students’ illustrations in the assessment of writing.

Table 3 Discussing the differences between the book and the CD-ROM story

<table>
<thead>
<tr>
<th>1.</th>
<th>What are some of the differences you noticed between story on paper and the story on the computer?</th>
</tr>
</thead>
<tbody>
<tr>
<td>S1</td>
<td>The computer story didn’t have speech marks</td>
</tr>
<tr>
<td>S2</td>
<td>The words always flashed - to show where you were up to.</td>
</tr>
<tr>
<td>T</td>
<td>Can you do that with a paper book?</td>
</tr>
<tr>
<td>S3</td>
<td>No... you could highlight it.</td>
</tr>
<tr>
<td>T</td>
<td>What other ways could you keep track?</td>
</tr>
<tr>
<td>S2</td>
<td>Use your finger</td>
</tr>
<tr>
<td>T</td>
<td>Do you think the story on the computer would help children to learn to read? [Students all nod or say ‘yes’]… what type of children?</td>
</tr>
<tr>
<td>S4</td>
<td>Little children.</td>
</tr>
<tr>
<td>T</td>
<td>How do you think it would help them?</td>
</tr>
<tr>
<td>S3</td>
<td>It highlights it.</td>
</tr>
<tr>
<td>S2</td>
<td>It helps them keep up</td>
</tr>
<tr>
<td>S1</td>
<td>They hear it... the computer says the words and they can say them after it.</td>
</tr>
<tr>
<td>T</td>
<td>Can you think of any other differences between the story on paper and the story on the computer?</td>
</tr>
<tr>
<td>S2</td>
<td>The computer is ‘automatic’. In the book these pages have been drawn or someone can take a photograph. You don’t have to draw it.</td>
</tr>
<tr>
<td>S3</td>
<td>It has movement and sound... you don’t need to read it.</td>
</tr>
</tbody>
</table>

**Students’ comments on the differences between the book and CD-ROM versions**

Students participated in a group discussion with the teacher who asked them about the differences they experienced in reading the book compared with the print version of the story. Some of their responses are shown in Table 3.

These comments from the students themselves provided evidence of their metatextual awareness, specifically their awareness of how texts are constructed, thus moving towards critical practice. The students were aware that the most appropriate audience for the CD-ROM would be “little children” and they provided insightful comments on the features that would assist children who were learning to read, for example the provision for words to be highlighted, sounded out and repeated. The last comment that “you don’t need to read it”, referring to the CD-ROM version of the story, showed the students’ understanding that a different and more passive process was possible for the CD-ROM compared with the cognitive effort required for reading a book version of the story. These comments show these young students’ awareness of both the advantages and disadvantages of digital texts, and in fact reflect findings by researchers into this area.

Recent research has shown both the advantages and disadvantages of digital texts for students’ reading. Studies have shown that visuals, graphics and sound effects assist prediction, comprehension and vocabulary knowledge (e.g. Doty et al, 2001) or that children engage in richer story-telling after reading CD-ROM stories (Mathews, 1996). Lefever-Davis and Pearman (2005) found that digital texts aided decoding, students could self-select and control own learning and that using pronunciation as a model assisted self-confidence. Alternatively, Lefever-Davis and Pearman (2005) found that students became dependent on electronic features for decoding, they were distracted by hot spots not linked to storyline, they were distracted if they saw the story as a game to be played and with some text they became frustrated with electronic features if animations were slow or the electronic pages took a long time to change. These studies reveal the complexities in researching the reading of digital texts as findings are often related to the researchers’ perception of reading and the purpose of the specific task.

The comments of the students in Table 3, combined with observations by the researcher, showed that students were well able to interchange between reading either the print and digital forms of the text and clearly understood the different purposes of each. The discussion of...
Case Study 2 shows similar responses from students using print and digital information texts.

Case Study 2

Teacher assigned some Year 3 students, in pairs, to work through a Web Quest on Gallipoli and Anzac Day for HSIE. Some students used information books to find information and a final outcome was for each pair of students to produce a PowerPoint of their learning and present this to the whole class.

Comments on Case Study 2

This task required students to use skills of reading for information while learning new information related to World War 1, Australia’s involvement in the battle of Gallipoli and the reason for commemorating this event through Anzac Day. As students completed the Web Quest peer support and collaboration was essential. They were supporting each other through the search using strategies such as deciding on key words, confirming their understanding of new vocabulary, locating relevant information and discarding less relevant information, summarising, understanding cause and effect and synthesising information into their own words and production. ICT skills such as navigating menu board, scrolling, clicking on and following links were essential as were the range of skills required to create a PowerPoint presentation.

Students discussed information and talked through the process as they interpreted questions, located information and recorded information in their own words. Some students initially lacked confidence and became frustrated at not being able to locate information but their confidence improved through the task. A significant aspect of student motivation and learning was enhanced when they realised they needed to critically analyse information rather than obtain a quick answer to the questions. As with the younger students in Case Study 1, these students discussed some differences between finding information on a digital text compared with books, as shown in Table 5.

Table 5 Discussing the differences between information books and websites

| T [to students]: Did you enjoy doing the Web Quest and using the computer to find information, or would you rather find information from a book? |
| S5: Well probably 50-50 with both because with a book maybe you find some parts but not all and with the computer it’s the same. |
| T: What do you like about using the computer? |
| S5: Well mainly I like doing Maths problems on the internet or reading about things on the internet or reading emails my friends send me. |
| T: Would you rather use the internet or an information book to find information? |
| S5: Last time I said I’d rather use computers but now I’ve swapped my mind because now books to me are really important. |
| T [to S6] What did you find about using the computer? Was it challenging or easy? |
| S6: I found it OK because I’ve done this sort of work before and I love working on the computer. I think it’s easier to find information and things like that on the internet because with a book you have to turn the pages and you might not find the information on that page, or it might be in another chapter. |
| T: Did you find that the questions were hard or easy? |
| S6: I found most of the questions were easy. The hard part was putting all the information into sentences. It was hard because there was so much information to choose from and you had to only give one answer. |

... student motivation and learning was enhanced when they realised they needed to critically analyse information rather than obtain a quick answer...
These comments from the students revealed their metatextual awareness of the different constructedness of texts and the different purpose of each type of text. The comments showed that they were able to use both types of texts although the preference of each student was the opposite to each other. They were conscious of their own metacognitive processes.

Student articulation of their learning through the tasks was further evidenced in part of the discussion two students had with the whole class when they were presenting their PowerPoint. This is shown in Table 6. S7 and S8 are used to indicate the students presenting the PowerPoint, while S9 and S10 indicate students from the class audience. As with Case Study 1, it was insightful to see the confidence such young students displayed when asked to articulate aspects of their learning as they explained the process they went through. Students within the whole class audience asked many sensible questions and this was a model for them as they all were to develop a PowerPoint presentation.

Discussion

Glimpses of different episodes have been presented from two of the eleven case studies. While they do not represent all of the data from the research project they are typical of the trends that were occurring with regard to classroom use of multimodal texts. The significance of all the case studies was that, like Case Study 1 and 2, multimodal texts were integrated within a program that involved use of books as well as digital texts, a range of progressive activities to challenge students, and student production of multimodal texts.

Literacy was not a separate process but was embedded within integrated learning tasks. Apart from the Kindergarten students, who were beginning readers, there was little evidence of students having problems with decoding although in some instances students helped each other by reading together. Tasks provided opportunities for comprehension or semantic practice to be developed at literal and inferential levels and students were clearly motivated to understand material in order to complete the tasks. Vocabulary development occurred, particularly content area vocabulary. As shown in some students’ comments, they had the most difficulty when required to transfer information into their own words for their written/digital responses to the tasks. Several tasks engaged students in critical literacy although it was evident that this had to be consciously planned by teachers and explicitly demonstrated to students.

Students were clearly engaged in learning throughout these tasks. There was evidence of problem solving, reflection, metacognition and creative thinking. The collaborative nature of the tasks fostered peer learning and assisted students’ motivation and engagement in tasks. Learning was relevant and cohesive for students when their work incorporated a range of tasks that required interchange with others in pairs or groups working with or producing texts that combined the modes of speech, print, image, graphics, movement, gesture and sound.

Conclusion

While we may acknowledge that a print-based pedagogy is no longer sufficient for the literacy practices needed in our society where much essential information is communicated through images, electronic and digital communication, we are a long way from knowing how to develop classroom learning experiences that will assist students to manage multiple literacy and learning practices. The two exemplars presented in this paper demonstrate that student literacy and learning can be enhanced through working with multimodal texts in integrated, relevant tasks.

However there are many aspects that need further investigation to assist the development of relevant pedagogy. Further classroom-based research is needed to determine the literacy strategies students need for reading, using and producing multimodal texts. We need ongoing investigation to develop the relevant, explicit pedagogy appropriate for integrating multimodal literacies with conventional literacy practices.

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References


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