“A whole new literacy”: teachers’ understanding of students’ digital learning at home.

Dr Eileen Honan

The University of Queensland

Dr Eileen Honan is Senior Lecturer of Literacy and English Education at The University of Queensland. Her research focuses on improving the teaching and learning of literacy and English. Recent research has investigated the use of digital texts in classrooms, and the development of professional learning models for teachers in remote and rural areas.

Abstract

This paper reports on an analysis of data collected through interviewing four teachers about their understandings of young people’s uses of new digital technologies at home and outside school. The teachers display some understanding and knowledge of their students’ access to new technologies, the skills they have developed using these technologies and the learning that occurs when using digital texts. However, it seems that these teachers cannot perceive the learning in terms of any educational affordance, or cannot see that students’ knowledge of digital texts used outside of school could be useful or have any place in the literacy classroom. The paper concludes with some questions that may start teachers thinking in different ways about their incorporation of digital texts into their literacy classrooms.

Obviously it's a whole new literacy, if that's the right word, that doesn't – that obviously the kids that are engaged within that are entering a whole new – you know, something entirely different that's beyond my world

Introduction

There have been many different accounts of teachers' engagements with new technologies in their literacy classrooms, from both positive reports (Walsh, 2010) to those who claim that teachers have been slow to change their approaches (Labbo, 2006; Ladbrook, 2009). Rather than aligning with one or other side of a relatively spurious argument, I believe the issues related to teachers' uses of digital texts[1] in their literacy classrooms are complex, cannot be viewed in "unidimensional terms" (Alvermann, 2010, p. 10), and are located within historical and contemporary discourses about the nature of schooling and the types of texts and literacy practices valued in classrooms (Honan, 2009).

My research in this area is motivated by two concerns: first, students are increasingly disengaged with traditional approaches to literacy education (Alvermann, 2008; Carrington, 2006). Viewing this disengagement through a non-deficit lens (Comber & Kamler, 2004) requires turning our collective professional gaze onto our pedagogical practices in our own classrooms (I include here my own preservice teacher education classroom) to interrogate the value and worth of the conventional approaches to literacy education.

Second, many teachers have taken up the use of new technologies as an integral part of their literacy work. As Hague and Williamson (2009, p. 3) argue, integrating new technologies into classrooms requires something "more substantial than claiming that schools need to make use of ICT to sustain the engagement and motivation of learners. It recognises that accessing information and knowledge through diverse technological and media forms affects learning itself". Unfortunately what is sometimes reported as exemplary practice by teachers who are

[1] In my work I refer to "digital texts" as any kind of text designed to be read or produced on a screen, and those screens could be on a computer, a hand-held game, a gaming console, or a digital camera

using new technologies (see for example, Coiro et al, 2008) resembles the 'old wine in new bottles' approaches to literacy education reported by a team of academics (including myself) in 1997 (Bigum et al., 1997). As Coiro and her colleagues point out, "pioneering teachers who have been leading the way with respect to adopting the Internet in classrooms tend to focus on the technology aspects of use, rather than seeing the issue as an instructional issue for literacy" (Coiro et al, 2008, p. 9).

These concerns are not, however, embedded within discourses of blame and teacher deficit models. Pedagogical practices are difficult to change (consider that Dewey was writing about the need for a progressive pedagogy in the early 1900s), and teachers are often confronted with competing versions of the relative value and worth of particular literacy practices, texts, and pedagogies through, for example, professional development that focuses on functional grammar, media reports about poor NAPLAN[2] results, and a national English curriculum that prioritises knowledge of 'quality' literature as an essential requirement[3]. Within this climate it seems to be not unusual that researchers claim that "teachers seem hesitant in using popular culture and digital technologies in the classroom" (Ladbrook, 2009, p. 71). However, it is important that those of us who do believe that new technologies have a place in the classroom, also encourage an understanding of the new literacy practices and the new pedagogical approaches required to engage with "innovative uses of computer technologies" (Labbo & Place, 2010, p 17).

As Jackie Marsh (2008) and others (Alvermann, 2008; Dyson, 2003) have pointed out, teachers who are not mindful of the changes to literacy practices caused by digital technologies are also often "limited by their apparent lack of attention to children's out-of-

[2] National Assessment Program for Literacy and Numeracy is the Australian 'high-stakes' testing regime introduced in 2008.

[3] The Australian Curriculum, Assessment, and Reporting Association (ACARA) is developing national curriculum in all key learning areas with the curriculum for English, Mathematics, Science and History to be implemented from 2013 across all states in Australia

school practices in the curriculum" (Marsh, 2008, p. 1300). Alvermann reminds us that "markers of student expertise are given scant attention in our everyday classroom practices" (Alvermann, 2008, p. 13), not only expertise with new technologies, but expertise in literacy practices that are not a regular or traditional feature of school. In the data presented in this paper, the teachers interviewed worked in schools in both low and high socioeconomic areas, yet there seems to be no difference in their perceptions about what children learn at home in relation to class status. There is however a discernable reluctance for teachers to believe that the learning that occurs at home (whatever kind of home that is) could be useful in educational terms.

Affordances

In this paper, I use data from interviews with teachers who are using digital texts in their classrooms to illustrate that they do have an understanding of the opportunities and affordances that new technologies provide young people. In using the term 'affordances' I refer to Lankshear and Knobel (2003) and Hutchbys' (2001) sociological description of the relation between the social and the technological in thinking about what are the possibilities for action through the uses of technology. Selwyn and Facer (2007, p. 13) believe the term "affordances" can describe the combination of "technological possibilities, user capabilities and understandings, and the wider social context". Guy Merchant (2010, p. 137) argues that "meaningful interactions between pupils and teachers are informed by the wider access to the ideational and relational resources that new technology makes possible" (Merchant, 2010, p. 137). It is my contention that there is a gap between teachers' understanding of these affordances that young people take up when using new technologies at home, and their abilities to engage with these new resources in their literacy classrooms.

Access

When researching the connections between home and school literacy practices, whether those practices are associated with 'bedtime reading' (Alloway & Gilbert, 1998; Comber & Kamler, 2004; Janks & Comber, 2006; Kamler & Comber, 2005) or the literacies associated with using digital texts, access issues are often foregrounded as an explanatory or even causal factor (see for example, Holloway, 2002; Judge et. al., 2004). The literature on the 'digital divide' (e.g. DiBello, 2005; Gray, 2004; Hargittai, 2004; Holloway, 2002) rarely unpacks the data available on access and usage within low socioeconomic areas. It is quite clear, for example, from the available research that does this unpacking, that there are uneven patterns of usage and access among families from low socioeconomic backgrounds (Zappala & McLaren, 2003).

Increasingly, access to new technologies is being understood as a more complex issue than that previously described (National Telecommunications and Information Administration, 1999; Organisation for Economic Co-operation & Development, 2001). Selwyn and Facer (2007) advise that the divide is related not just to the physical access to equipment and machines, but also to the motivations for using any technology and the nature of that usage. Associated with this more complex explanation of access is the increase in types of new technologies that are used on a daily basis and the literacy affordances made possible through this diversity. The variety of new platforms, including the use of mobile phones and game consoles for Internet access, and the increasing interconnection between Web 2.0 applications and digital platforms (e.g. linking news stories from online newspaper sites to a Facebook page; following a favourite TV show on Twitter; downloading podcasts of favourite radio programs) require different questions to be asked about access to new technologies. For example, ABS data shows that in 2009, 31% (841,400) of children had a mobile phone at the time of interview (Australian Bureau of Statistics, 2009). This simple set of numbers does not explain however the capabilities of the phone (camera, Internet, multimedia messaging) nor

the usages of the phone. For example, there is some indication that young people are using their phones more often for sending and receiving text messages than for making telephone calls. There has been a rapid increase in the use of applications designed for mobile technologies especially since the introduction of the iPhone and its associated application store. Internet sites are now designed to be viewed on a mobile screen and the cameras built into phones use high quality lenses and produce images with high resolution quality.

In the data reported in this paper, the two issues of affordance and access intersect in teachers' talk about student use of new technologies and digital texts. While the teachers are cognisant of the diversity of technologies available in the home, they do not use this same diversity in their classrooms, and they seem to be unable to perceive that the learning that occurs at home can have any possible place in literacy classrooms.

The context of the data

The data used in this paper were collected as part of a study investigating the impact of socioeconomic status on the use of digital literacies in schools. Other aspects of this study's findings have been reported elsewhere (Honan, 2009, 2010), and a more detailed description of the methodologies employed can be found in those publications.

Four primary schools in Brisbane, Queensland participated, two schools located in low socioeconomic communities (named here as Hill and Valley) and two located in high to middle socioeconomic communities (named here as River and Mountain). I met with school principals and the teachers who expressed an interest in the study, and provided them with both verbal and written information about the project's aims. One Year 7 teacher from each school agreed that I could observe five literacy sessions in her class (Year 7 is the last year of primary school in Queensland). The classroom observations were videotaped using a small, lightweight, hand-held digital camera that allowed me to roam around the classrooms

zooming in on particular students or activities. The focus of the observations was the use of digital technologies in literacy lessons, and so, wherever possible, I captured the work students were doing using these technologies. All the interactions observed involved students using a computer, and I found little or no evidence at any of the four schools that any other kind of technology was used to engage students with digital texts. At the completion of the series of five observations, I interviewed the classroom teachers and a focus group of five to six students. I audiotaped these interviews which focused on discussions about the context of the lessons observed, as well as teachers' and students' understandings of the connections between their home use of digital technologies and the observed practices in the classroom.

The teachers

The focus in this paper is the data drawn from the interviews with the four teachers who were involved in the study. I am especially interested in the daily practices of primary school teachers, teachers doing "business as usual", rather than investigating the exemplary, unusual or special. In my initial discussions with teachers and school principals I therefore emphasised that I wanted to capture their regular practices using digital texts, and that I did not expect them to plan anything new or different to cater for my presence. The students engaged in a variety of activities during the observations, including engaging in a literature circle using an online discussion tool, completing a Webquest, entering data into an Excel spreadsheet, and creating a multimedia 'infomercial'.

The four female teachers interviewed were all teaching Grade 7 at the time, although Anne from Valley worked with another teacher in a cooperative Grade 6/7 space, and Sam from Mountain taught an 'extension class' of Grade 6 and 7 students. All four were experienced

teachers who were enthusiastic about the use of new technologies in their classrooms. Kate from River had been involved in professional development related to the use of ICTs leading to a ICT Pedagogical Licence (now known as a Digital Pedagogy Licence) through the Queensland Education Department's Smart Classrooms initiative (http://education.qld.gov.au/smartclassrooms/). Both Teresa from Hill and Sam from Mountain mentioned the inevitability of integrating new technologies into their classrooms and their understanding of computers as 'tools':

Teresa: It's just my viewpoint on using a computer I just think it's a tool just another tool to help you research and communicate

Sam: I guess I have a firm belief that the computer is just a tool in the classroom, so any project that I set, the computer just becomes another form of research or a production tool, rather than – unless it's an explicit teaching of how to use a certain technology, it's just a part to the end.

At Valley, Anne had fought hard to gain access to computers for her class, as she describes here:

Anne: *I have rotations every day every week and I didn't have enough computers. And so they've just started feeding me some these are older ones I don't care as long as they get me onto the Internet and get the kids working on computers I couldn't care. So I'm up to 11. The other classes would have 6 or 7. and we all have a printer. We either have access to a photocopier or we have access to our own printer. So it's all there.*

The four teachers were skilled pedagogues, experienced literacy teachers, and keen users of new technologies. Yet the literacy practices observed in the lessons (see Honan, 2010) were traditional, routine and part of "a widespread and resilient logic of practice" (Johnston & Hayes, 2008, p.110) that is so entrenched that any new idea or innovation is "recontextualised

and adapted to fit within the logics of practice that shape what is seen to be possible within these classrooms" (p. 111).

In my search to explain this contradiction, between teachers who talk enthusiastically about new technologies and digital texts, and the observed pedagogical practices they use in their literacy classrooms, I have re-examined the interview data to explore further the teachers' understandings of the affordances of new technologies and new literacy practices.

Interviewing as a comfortable method

Interviews as a technique for data collection have become a commonplace (almost ubiquitous) component of educational research using qualitative methods. It is almost routine for researchers to describe their interviews as 'semi-structured' and all 'good' research methods books include at least one chapter on the use of interview techniques (e.g. Freebody, 2003; Merriam, 1998; Silverman, 2004). Unfortunately as Steiner Kvale (2006) has pointed out many of these accounts are based on "a fantasy of democratic relations" that mask "the basic issue of who gains materially and symbolically from the research and where claims of participation disguise the exertion of power" (Kvale, 2006, p. 482).

So while I can believe that by the time of the interviews I had developed a comfortable rapport with all four teachers which resulted in the discursive relations between us being more informal and conversational than a formal interview, I also cannot ignore the power relations that existed in these contexts. It was I as the researcher who gained both material and symbolic status from the research, it was I who turned the tape recorder off and on, designed the 'semi-structure' of the sessions, made the decisions about what questions to ask, and when they were asked.

Of course, after the interviews had been concluded, when the transcription and analysis stages of the research process are undertaken, the power relations between the interviewer and

interviewee become even less unequal, as the decision making becomes my sole responsibility. Member checking (Guba & Lincoln, 1982) has been used by some researchers to attempt to provide participants with some influence on this stage of the process, yet even then, the researcher maintains the symbolic and material higher status. As Lapadat and Lindsay have pointed out, “researchers need to acknowledge that transcripts are constructed texts and, as such, decision-making criteria, positionality of the participants (including the researcher), voice, and trustworthiness ought to be addressed during the research and when it is reported” (Lapadat and Lindsay, 1999, p. 76).

The analysis of the interview data that follows therefore has been completed within the context of not accepting the data at ‘face value’, nor is there any attempt to describe the data as some unassailable truth. The “indeterminate ambiguity of interviewing” (Scheurich, 1997, p. 75) allows only possible or probable interpretations of the answers given during the interviews and disallows any attempt to generalise or essentialise the findings.

The interview data does however provide some insight into the complex relations between teachers’ understandings of the importance of new technologies, their struggles to accommodate differing versions of literacy in their classrooms, and their use of routine pedagogical practices. These relations are explored in the next sections through three intersecting avenues: the teachers’ descriptions and talk related to students’ home access to new technologies, their discussions of particular skills related to using new technologies, and the hints and clues within their talk about their knowledge of the learning young people can gain through using new technologies.

Home access

In the teachers' talk their knowledge of access to new technologies, there does seem to be some acknowledgement of the complex issues described earlier. Anne at Valley includes the use of mobile phones when asked about access to new technologies:

Anne: I'd actually be most surprised to find out that any of the grade 7s did not either have a computer or access to a computer or something else you know. They all have mobile phones or access to mobile phones.

Anne may be indicating her knowledge about using other technologies apart from computers through the use of the phrase "*or something else you know*". However, there is little indication that this knowledge of student use of phones is used when considering literacy activities in the classroom.

Anne is one of the two teachers working in low socioeconomic schools but here does not take up that normative deficit view that 'these kids' do not have regular access to computers, the Internet or other new technologies.

Anne: And many of the families I can remember parents coming to me and saying we haven't got a lot of money but what computer would you recommend. So I think more and more they're thinking about those sort of things and the need for the kids to be able to be technologically adept or whatever.

Teresa, the other teacher working in a low socioeconomic area, does fall into the discourses of deficit as she struggles to distinguish between her perceptions about access and the information provided by a school survey and my conversation with some of her students:

First I ask Teresa:

What about the connection or lack of connections between the way you teach digital technologies in the classroom and the way you think they would be using them at home, your kids?

In response Teresa almost defends a lack of connection by claiming that

See I think that, I mean as we know, we surveyed I don't even think that 50% of my class have access to the Internet.

In specifically talking about the six students from her class who I interviewed as a focus group Teresa qualifies her knowledge of their access:

Teresa: *And they all would they'd all have computers in that group, oh Bobby wouldn't*

Interviewer: Yeah

Teresa: *Oh yeah they do but not the Internet*

Interviewer: Right

Teresa: *But he's got a computer. And the other ones would have. Probably was not a typical representation*

Interviewer: Well that's what I was interested in

Teresa: *No it's not*

Interviewer: You don't think it is?

Teresa: *Umm there's kids who don't have a computer in their home at all*

Interviewer: Right

Teresa: *I think Bobby would probably be fairly typical that a lot of them do have it but don't have Internet access. Or have varying degrees of Internet access. They might have it for a couple months of the year but not the whole time.*

It does seem that Teresa is claiming her students do not have access or if they do have it is not 'correct' or 'proper' access. I do not disagree here with Teresa's concern about students' lack of regular access to the Internet, yet I am interested in the contradictions between these claims and the students' conversations with me. While I did only talk to six students, all of them had access to computers and the Internet at home, all had a variety of other hardware including phones, cameras, and game consoles, and all spoke about a variety of practices regularly engaged with, including downloading games and music, doing homework related tasks, using MSN and social networking sites. This is reminiscent of other reports (Snyder, Angus, & Sutherland-Smith, 2004; Warschauer, Knobel, & Stone, 2004) where teachers in low socioeconomic schools underestimated their students' access to computers and the Internet (Honan, 2006).

At River, Kate slips easily between accessing the Internet and accessing a computer:

Interviewer: Do you take for granted, then, that all of your students have access to the Internet?

Kate: I can actually go – the Internet, we do: I do a survey at the start of each year, and we generally do find that everyone has access to a computer.

It could be inferred that Kate is not aware that the Internet can be accessed through use of other platforms apart from a computer. There is no further information available about the survey that Kate uses, but if there is the same slippage in terms there, then it would not necessarily capture accurately all students' use of the Internet outside of school. Generally in the students' talk, (and in my other conversations and observations of young people), there is a sense that the desktop computer is as outdated a platform for the Internet as email is as a communication tool. Sam from Mountain does seem to indicate that she has some knowledge of the range of digital technologies used at home:

Sam: And also at home, some kids have access to lots of technology at home, so they're really experienced, like a lot of these kids have their own laptops and stuff.

As I pointed out earlier, however, there was no evidence in the lessons observed that student use of digital technologies at home apart from a desktop computer was acknowledged. In the literacy teaching and learning that occurred students were positioned as novices, learning how to use particular literacy skills on desktop computers. The affordances provided by the availability of digital texts on other platforms were generally ignored.

Generally the four teachers do seem to have some insight into students' access to new technologies at home, while perhaps not articulating any knowledge of the complexity of the issues related to access. This may have some impact on their understanding of the skills that young people bring to the classroom if they engage and access a variety of digital technologies.

Skills

Attempts to categorise, identify and label the literacy skills required to engage with digital texts are ongoing and are undertaken within a variety of research arenas, from the information literacy field associated with libraries to media literacy (Hague & Williamson, 2009) and "cyber-literacy" skills (Klages & Clark, 2009). In the teacher interviews, these teachers refer to a wide range of 'skills' that can be interpreted as necessary to engage with digital texts, from keyboarding, to Internet searching, from transferring knowledge of icons from one piece of software to another, to evaluating the quality of information found during researching.

While the teachers acknowledge that the students have gained some of these skills through use of digital technologies at home, there seems to be some reluctance to see the relevance of

these skills in their literacy classrooms. For example, Anne from Valley knows that her students have developed skills while playing games and using the Internet:

They know how to search on the Internet, and they know how to um play games. I think that the skills they have. I think they have good mind, um eye/hand coordination I think it's very good for that. I suppose they know a little bit more about the keyboard and where to find things because obviously if you're using a keyboard for something you don't really have time to study the keys. So I spose they're a bit better at those sort of skills.

Here Anne continually qualifies her comments through her tentativeness in the language she uses: they know a "little" bit more about keyboarding, they're a "bit" better at "those" skills. It could be assumed that these skills are not important, or necessary, in a literacy classroom where the use of new technologies is encouraged.

At Mountain, Sam can see that the skills her students have developed through using the Internet at home can be useful at school:

Sam: Just the access to so much volumes of text and stuff. And you do see them reading and researching and viewing...I find with the Internet, the kids are so savvy that they can do searches, they can pinpoint, you know, the latest, I guess, issue or concept so that it allows them a lot more freedom. It allows me to allow them to do more of that 'What is it?' that inquiry-style, 'What is it that I want to learn?' 'What is it that I need to know more about?'

And at River Kate believes that her students are 'quite comfortable' with using computers:

Kate: I think they're quite comfortable doing a lot of the things that we do. There are days when you need to, or activities when you do need to explicitly teach them, if you're showing them a new software program. I find that, these kids, you just need to show them maybe once

or twice and then they get the hang of it, and then maybe they might even use that program and find other things as well: so experiment with the program more. Whereas you know we don't need to specifically really tell them to change a photo image, you need to do this and this, because sometimes a lot of them, some of them you do have to, a lot of them can find that out for themselves, just through plain experimentation.

I believe these comments begin to provide some insight into the reasons for the pedagogical practices observed in these teachers' classrooms. The tone of the teachers' voices captured on the tape recorder, and even the lack of emphasis on their part on these skills, contributes to a general sense of disengagement. Yes they do know that their students use new technologies at home, and yes they do know they have gained some skills from this use, but there does not seem to be any understanding of the affordances that these skills could contribute to classroom learning. However, given the emphasis in many schools on the codebreaking skills required to complete NAPLAN tests, it is not necessarily surprising that these digital textual skills are ignored or not valued.

Indeed, at Mountain and at River, the teachers insist that their students do NOT use their skills in using new technologies in preparing an assessment task. At Mountain the students were constructing posters and one of the criteria was a handwritten heading. I asked Sam about this criteria:

Interviewer: In the criteria you've got things like, "The heading has to be handwritten".

Sam: So what I wanted them to experiment with was, rather than just using the computer, I wanted them to, I guess, meet somewhere in the middle between the old way of where kids did things by hand, and the new way of just using computers. So rather than the computer designing the font and then selecting a style, for this experience I wanted them to be the com– act like the computer and come up with the design of the font that's going to be eye

catching, etc. So they had to think about what makes a good heading. So there was an integration of both.

At River, Kate asked her students to use both print and digital texts in constructing biographies:

Interviewer: They had to use both print references and Internet references, can you just explain why you had that criteria?

Kate: Yeah, it was just to allow the kids to realise that the Internet's not the only source of information they can get information from. Because, today in particular, the kids, that's the first source that they often go to is the Internet, which is a good thing except they also still need to realise that they can actually get very good quality information from books and other resources too, because sometimes today, even some of those books are a little bit easier to understand than some of the sites they can get on the Internet as well... So I do instruct the kids to use different sites which are easier for them. We try to avoid using Google and so forth.

I think these comments represent the industrial mindset described by Colin Lankshear and Michele Knobel (2007), where the world is viewed "very much as it always has been: what has changed is the way in which everyday practices are undertaken (Marsh, 2008, p. 1299), or the "cultural gap" (Burn et. al., 2010) between teachers and students' uses of digital texts at home and the opportunities provided to use these same texts in the classroom. Certainly the hierarchical view of the relationship between print and digital sources for information seems to be at odds with the teachers' attitudes and enthusiasm about using digital texts in their classrooms, and the attempt to make some connection between the 'old way' of printing headings compared to the new is at odds with the teachers' interest and genuine praise when students produced texts using innovative features they had not seen before. While the

mindsets described by Lankshear and Knobel are often discussed as dichotomous with the industrial in opposition to the new "cyberspatial-postindustrial" (2007, p. 10) they themselves warn of the complex relations between the two sets of dimensions described. The teachers' talk about their students' learning is an example of this complexity.

Learning

There is some evidence that the teachers do understand the kinds of new learning that can occur within digital spaces.

Anne from Valley articulates her understanding of this new learning here:

Anne: They're probably more confident. They're probably more game to have a go at something because they've obviously learnt a lot of it by trial and error or by watching someone else so they because they learn that way often they're prepared to say oh is that what you do with that. Or can you show me again.

There is some resonance here with Gee's work on the learning that occurs when young people are using games (Gee, 2003) and his argument that these learning principles can be applied to literacy learning in classrooms.

Sam at Mountain hints at understanding this learning when she says:

Sam: And for some kids, it's a fabulous way to provide extension... to get them, get them to develop some of that deeper knowledge base that... the whole world's out there for them.

Yet at the same time, Sam indicates her lack of understanding of this 'whole world' when she says:

Sam: Obviously it's a whole new literacy, if that's the right word, that doesn't – that obviously the kids that are engaged within that are entering a whole new – you know, something entirely different that's beyond my world.

I think this comment provides some insight into the complex relations between home and school, between industrial and cyber mindsets, between the literacy practices used by young people at home and those required to be successful literacy students at school, between the 'deep grammar' of schooling (Lankshear and Knobel, 2007) and the social and technological affordances encountered by young people in their lives outside classrooms. This is not a binary relationship though, and I believe the divisions can be transversed, and in many ways I think these teachers also believe in the crossing of these boundaries.

Concluding thoughts on crossing boundaries

In some ways it can appear just too difficult to engage with this boundary crossing work especially in the face of increasing pressures to focus on the traditional codebreaking aspects of literacy in classrooms. In this light the work that these four teachers have already done in bringing new literacy practices and digital texts into their classrooms is admirable and can be seen as working against a tide of normative attitudes to teaching literacy (Honan, 2009). I am always reluctant to provide any sort of solutions or teaching suggestions as I believe so many of these kinds of hints and tips devalue the professional decision-making that all teachers do on a daily basis in working out what will work with their students. However, I can use some of the ideas from this paper to provide some questions that may start teachers thinking in different ways about their incorporation of digital texts into their literacy classrooms. The first question is obviously, "what do you know about your students' engagement with digital texts outside of the classroom?". This question cannot be answered with the results from a survey, although certainly that kind of data is a useful start. Engaging in productive and substantial

conversations with students around this topic may shed more illumination on the access to types of texts, the skills they have acquired, and the learning that has occurred.

Secondly, when thinking about incorporating digital technologies into literacy classrooms teachers may consider asking, what is 'new' about the literacy practices we are using with these 'new' technologies? Many of the skills learned in digital spaces are related to using text, image, and sound in new and unexpected ways, ways that are not usually accepted in classrooms. Teachers could design tasks where students use these skills rather than the traditional print based skills usually taught in literacy lessons.

Third, is it possible to change classroom practice so that the ways in which children learn in digital contexts are encouraged? I am thinking here especially of those learning principles espoused by Gee in relation to playing video games (Gee, 2003). For example is it possible to set up literacy tasks where students learn new skills 'just in time' while working on teams in efforts to solve challenging problems?

These questions begin the process of thinking about the educational affordances provided by digital technologies. It is this re-thinking that is required if schools and teachers are going to engage in meaningful and successful ways with digital texts in their literacy classrooms.

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