

Digital literacies in two low socioeconomic classrooms: Snapshots of practice

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ABSTRACT: The teaching of digital literacies is regarded as an important facet of literacy teaching in the 21st century. With many literacy tests continuing to indicate that students' levels of achievement tend to be differentiated along socioeconomic lines, it seems timely to consider the connections between home and school and how these play out in relation to digital literacies. This is particularly important in light of the considerable evidence that has demonstrated how important home-school connections are in ensuring improved traditional literacy outcomes for students from low socioeconomic backgrounds. With these points in mind, this article reports on an investigation into the usage of digital technologies in two middle-years classrooms in low socioeconomic suburbs in a regional Australian city. Using a range of ethnographic techniques, the study explored two teachers' approaches to teaching students how to use digital technologies in one school term. Through snapshots of digital practices in the two classrooms, three issues are considered: teachers' pedagogical approaches; students' access to digital technologies at home and at school; and the teachers' recognition of students' prior knowledge of digital technologies. The article concludes by reflecting on the need for teachers to draw on the digital literacies that students are using in their out-of-school lives, to make bridges to school learning and thus address the challenge of preparing students to be literate in the 21st Century.

KEYWORDS: Deficit discourses, digital divide, digital literacies, digital technologies, literacy, socioeconomic status

INTRODUCTION

Current understandings about the learning of literacies highlight the importance of social and cultural contexts and the way that literacies always involve people conducting social and cultural activities. This view challenges monolithic accounts of "literacy" as a set of neutral and transportable skills and instead understands literacies as active and interactive practices that always occur within social situations and cultural contexts (Barton & Hamilton, 2000; Luke, 1992).

Traditionally, school literacy learning has privileged a narrow range of literacy practices and this has had the effect of advantaging some learners and disadvantaging

or marginalising others. As Gee (2004) points out, some students “get an important head start” to the learning of school literacies before they arrive at school (p. 3). Indeed, success in school literacy learning – defined by Alloway and Gilbert (1998) as “demonstrated competence in the context of literacy as it is done and evaluated in schools” (p. 255) – has been inextricably tied to “the repertoires of practices and knowledge that they [students] already had from their home and community experiences” (Comber & Barnett, 2003, p. 5).

In talking about the connections between home and school, Comber (1998) argued that what has often been understood as “background” – socioeconomic status, family practices, ethnicity, home languages, and “young people’s life-worlds and experiences” – is “by no means ‘background’ in their [students’] access and take up of educational provision and school literacies” (p. 3). From the seminal work of Shirley Brice Heath in the US (1982, 1983) through to more recent research in the Australian context (e.g. Comber & Kamler, 2004; Freebody, Ludwig, & Gunn, 1995; Kamler & Comber, 2005), it has been acknowledged that families engage in diverse literacy practices and that these are not always recognised as valid in school contexts.

There is plenty of evidence that the non-acceptance of home literacy practices as valid or useful generally results in deficit stories about students and families (Freebody *et al.*, 1995; Henderson, 2005; Kamler & Comber, 2005). However, there is also evidence that home-school connections are important when trying to improve literacy outcomes for students whose literate strengths and capabilities in contexts outside schools do not match the valued and normalised literacy practices of schooling (Freebody *et al.*, 1995; Thomson, 2002). By reconceptualising home literacies as resources to support school literacy learning, teachers can help to reconnect students to classroom literacy learning (Comber & Kamler, 2004; Kalantzis, Cope & The Learning by Design Project Group, 2005).

As digital technologies have increasingly permeated daily life and impacted on the literacy practices that are used (Australian Bureau of Statistics, 2006b; Carrington, 2006; Healy, 2008; Henderson, 2008), there has been growing recognition that digital literacies and the use of digital technologies are a necessary part of school learning. While considerable research has focused on a so-called “digital divide”, which highlights the “gap” between those who have technological access and those who do not (e.g. National Telecommunications and Information Administration, 1999; Organisation for Economic Co-operation & Development, 2001), there is a growing sense that the divide is actually between the rich literate practices used by young people in their homes and the narrow and restricted practices engaged in by schools and teachers. Recent data from the USA and the UK indicate that the so-called digital divide between socioeconomic groups is not as clear-cut as it was 20 years ago (InterActive Education Project, 2002; Horrigan, 2006). As the costs of computer technologies and internet access decrease, and the infiltration of mobile phone technologies increases, families from low socioeconomic backgrounds are more likely to perceive access to information and communication technologies (ICTs) as an educational imperative (Honan, 2006a).

Despite parental investment in digital technologies as a “techno-educational panacea” (Schofield-Clark & Demont-Heinrich, 2004), there is some evidence that teachers in low socioeconomic schools often underestimate the access of students to computers

and the internet (Honan, 2006a; Snyder, Angus, & Sutherland-Smith, 2004; Warschauer, Knobel, & Stone, 2004). Previous studies have also indicated that teachers generally do not take account of students' home use of digital technologies, especially when that use involves mobile phones and game consoles rather than computers (Honan, 2008).

With these issues in mind, the current research set out to investigate the use of digital technologies in two classrooms in schools in low socioeconomic areas. Through snapshots of digital practices in the two classrooms, three issues are considered: teachers' pedagogical approaches; students' access to digital technologies at home and at school; and the teachers' recognition of students' prior knowledge of digital technologies. The article concludes by reflecting on authentic purposes and contexts for learning digital literacies.

THE RESEARCH

To begin an investigation of the usage of digital technologies, particularly computers, in schools and to explore students' perceptions of this usage in relation to their home practices, data were collected in two middle-years (young adolescent) classrooms in low socioeconomic suburbs in a regional Australian city. In particular, the research set out to investigate teachers' assumptions about the digital literacy practices and the digital texts used at home by students from low socioeconomic backgrounds; what the students described as their home digital literacy practices and the types of digital texts that they accessed, and how the home practices described by the students compared with what they were expected to do at school.

The small study was conducted in two, state primary schools located in low socioeconomic suburbs in a regional city area of south-east Queensland, Australia. A two-step process was used to identify the two schools. Unemployment data from the Australian Bureau of Statistics (2006a) were mapped against information from the state education authority about the locations of schools (Department of Education Training and the Arts, Queensland, 1999). Once schools were identified as located in the section of the city with the highest level of unemployment, schools' Annual Reports, which are available to the public from the internet, were used to select two schools.

In their Annual Reports, both schools noted the high level of unemployment in their local communities, along with other factors that are often linked with low socioeconomic status (Australian Bureau of Statistics, 2000; 2007). One school's Annual Report stated that the majority of their students came "from families with long term unemployment and 50 per cent of the students live in families with only one natural parent," and the other reported that the school population had "a moderately high rate of student transience, a significant unemployment rate and a high percentage of single parent families." In both schools, a small number of students came from indigenous families. (References are not provided so that the anonymity of the schools is preserved.)

The research was conducted in one middle-school classroom in each school (Classroom 1 and Classroom 2). The classes, each with approximately 25 students,

were chosen through negotiation with the school principals, who identified a teacher who had an “interest” and was *au fait* with using digital technologies in the classroom. Both teachers had many years of teaching experience. During one school term of 2007, data were collected during a weekly visit by one of the researchers. As a participant observer in the classrooms, the researcher used a range of ethnographic techniques, including classroom observations, field notes, informal discussions with students and interviews with the teachers and the students.

During classroom observations, data were collected about activities within the classrooms as a whole, but there was a specific focus on a small group of students – eight in Classroom 1 and six in Classroom 2. We had asked the teachers to consider students who they knew would fit our interest in low socioeconomic status and home usage of computers. However, we also explained that we wanted to cause the least disruption to classrooms as possible and were happy for the teachers to consider what was convenient to them. In the case of Classroom 1, convenience played a major role. The class was already operating in three small groups for focused lessons on the use of computers and the teacher chose one of those groups for the focused observations of particular students.

CLASSROOM SNAPSHOT 1

The class that was observed in one school was a Years 5, 6 and 7 multi-age class located in a large, double teaching space. The children were between 10 and 12 years old. Four computers were available at one of the back corners of the room. These were used at times during class and the teacher allowed students to use them in the mornings before school commenced. However, twelve computers were located in a small room next to the classroom. These were not for the exclusive use of the class, but were accessed by classes from across the school. The room thus served a “computer laboratory” purpose within the school.

For the class in question, a teacher-aide provided focused half-hour lessons on computer use for small groups of approximately eight students at a time. The computers in the withdrawal room were located on desks that were arranged in a U-shape against three of the walls. This set-up meant that students faced a wall when they were using a computer and keyboard and that they had to turn their bodies when they were required to look at the whiteboard located on the fourth wall. The centre of the room was an empty space. It was apparent during the observations of the focussed lessons that once students sat at a computer, they remained in that position until the half-hour lesson was finished.

During the research period, the class was working on a Mathematics investigation about the number of “letter slots” on a vinyl pencil case. Students were collecting data about the number of letters in the names of students in their own class as well as across the school. This information was to be stored in Microsoft Excel and the students were learning how to use that program during the teacher-aide’s focused lessons.

CLASSROOM SNAPSHOT 2

The class in the second school was a Year 6 class (approximately 11 years of age), located in a single teaching space with four computers on desks at the back of the classroom. These were used by the students before school, during school time, and during lunch breaks on rainy days. A withdrawal room containing 22 computers was located between this classroom and another and was used on a regular basis by the class. Most of the computers were situated on desks against the wall in a U-shape and students had to face the wall to use the computers. However, the rest of the room was full of hexagonally-shaped desks with chairs for students to use if not working at a computer. In most of the lessons observed, students were able to move within the withdrawal room as well as between this room and their classroom and they engaged in considerable discussion about the tasks they were doing.

During the period of data collection, all students in the class were preparing a PowerPoint presentation about “Me” as part of an integrated studies unit that involved the key learning areas of Technology, English and the Study of Society and the Environment. The students were expected to create PowerPoint presentations that contained hyperlinks, different sized fonts, word art and photographs. The audience for the presentation was to be the class and the teacher. The students were encouraged to include information about the younger students (from either Year 1 or Year 2) they were mentoring as part of a whole school reading program and this provided an opportunity for later use of the PowerPoint presentations in other classrooms.

TEACHERS’ PEDAGOGICAL APPROACHES

During the observation period, it was apparent in both classrooms that there was a focus on teaching specific aspects of “how to use” a particular computer program. Despite the similar focus, however, there were considerable differences in the approaches that were taken.

In Classroom 1, where a teacher-aide provided focused and explicit instruction about Microsoft Excel, the approach was teacher-aide-directed and incorporated the teaching of a set of skills – including entering data, the addition of rows, producing graphs, and copying graphs in Excel and pasting them into a Word document – using “dummy data”. In each lesson, the students spent considerable time listening to an initial set of oral instructions, which were sometimes recorded on the whiteboard. The students were then expected to follow the steps at their computer keyboards, while the teacher-aide provided further instructions as a “voice over” (see Comber, 1997). The voice overs included instructions such as: “Go to edit and copy;” “Now go back to your spreadsheet. This time we are going to graph the money;” and “This time click on Row 4 and edit and paste.”

Even though the teacher-aide used an extensive metalanguage – which included the terms “chart wizard”, “button”, “icon”, “number keypad”, “data values”, “minimise” and many more – there was little discussion around these terms. When there were opportunities for interactions between the students and their instructor, an IRE (initiate-respond-evaluate) format was evident, whereby the teacher-aide initiated a discussion by asking a question and the students provided responses which were

evaluated by the teacher-aide (Cazden, 2001). There were few opportunities for the students to engage in discussion with each other, as they spent most of their time listening and following step-by-step instructions.

The approach in Classroom 2 was quite different from the one observed in Classroom 1. To equip the students with the skills required to produce a series of PowerPoint slides, the teacher had modelled some of the tasks that needed to be completed – including inserting photographs, changing the slide background design, adding sound. The modelling was conducted in the classroom using a computer connected to a data projector, and the teacher was logged in as one of the students. The students planned the content (information about themselves) and the wording of their series of PowerPoint slides on paper before using the computers. The paper task was completed individually. Information on the whiteboard provided an organisational structure for the four slides that students had to design, as well as a guide to inserting specific features into PowerPoint, as per the requirements of the task.

A major difference with the approach taken in Classroom 1 was that the students in Classroom 2 were working on the task (the design of PowerPoint slides) right from the beginning and their learning of aspects of the program PowerPoint occurred as they were doing the task. It was apparent that the teacher had identified “experts” within the class and called upon them to assist students who had missed some of the modelling episodes. Even though each student worked at a computer, there was much discussion about the tasks they were doing and it was evident that considerable problem-solving was occurring. The teacher moved amongst the students, answering questions and offering advice. The students experimented with colour, layout and fonts as they prepared their slides and this experimentation was a major point of discussion and comparison as the students worked at the computers.

Collaboration amongst students was a feature of the class’s use of computers and even students who were not necessarily regarded as experts took on the role of teaching other students when they were able to do something that other students could not. For example, in one instance, one of the female students shared her knowledge about changing the design and colour of the slide backgrounds with students working at nearby computers. The students also discussed the information that they displaying on slides and ways of organising and expressing that information.

TEACHERS’ RECOGNITION OF STUDENTS’ PRIOR KNOWLEDGE

In using quite different approaches to the teaching of digital technologies, the teachers also seemed to have different understandings about their students’ prior knowledge of digital technologies and the computer program that was being taught. In Classroom 1, the students were given direct instruction of sequences to follow when using Microsoft Excel and this instruction was the same for all students in the one group that was observed, regardless of their previous experiences with computers. As will be further explained in the next section, the students in that group had varied experiences of computers and one student knew quite a lot about Excel, because she had watched her father use the program at home.

In Classroom 2, all students were also doing the same task. However, the students were working at their own pace and were individualising the task as they proceeded. The teacher recognised some of the students as experts and, on occasions, matched up experts and novices. There were opportunities, however, for all students with expertise on the use of PowerPoint to share their knowledge with other students.

Even though the teacher in Classroom 2 may have seemed more attuned to students' prior knowledge, it was evident that both teachers had talked with their students about digital technologies, including computers. The teachers had certainly heard about many of the digital technologies that students used at home and there was recognition that students had better skills than teachers in some areas. For example, the teacher in Classroom 1 explained that "Their text messaging skills are quicker. While I'm still looking for the button to press they can tell me where it is."

In response to the question, "What do you know about students' access to digital technologies out of school, the teacher from Classroom 1 answered: "Probably not a lot. I do know that a few of them have X-Boxes and PlayStations and a lot of them spend time on those." The teacher from Classroom 2 responded in a similar way: "Not a lot. There's an unusually large number of kids in this class that don't have computers, about 20 per cent I think, in this day and age, that's about four kids. I thought it's like a microwave that would be standard practice."

When interviewed, the teacher in Classroom 1 indicated that she based her assumptions about students' home use of computers on a whole-school survey that had been conducted in the previous year: "A lot of them said they had computers but the majority of them said they use computers just to play games and not for any other use." The assumption that a program like Microsoft Excel was not used at home seemed to be one reason for the directed approach. Additionally, the teacher pointed out that the focused lessons taught by a teacher-aide were a school practice that she had not yet questioned:

It's been a sort of a school thing that [the teacher-aide] does a little bit of skill work before with the kids...I feel confident enough to do a lot myself where some of the other teachers just don't and I think that's probably where it originated from. And [the teacher-aide]'s done it in the past and because I'm sort of new in the school we haven't sort of talked about changing that or doing something different.

The teacher in Classroom 2 appeared to have an in-depth understanding of the role of games in her students' lives, although some value judgements seemed to be apparent in her views. For example, in talking about a possible relationship between family income and technology, she said:

I think it's probably the reverse because one of the families that's particularly poor has every electronic thing known to man, even down to the new 360 X-Box which was a thousand dollars...where you can actually do the physical boxing and attach the things to yourself.

In talking generally about students' access to digital technologies, there were indications of deficit views about the parents of children in her class and perhaps of society in general. She explained that:

I think it would be typical of what's happening – go and occupy yourself, yeah I don't want to kick a football with you or sit down and watch TV with you. Go into your room and watch TV. Unfortunately I think that's indicative of what's happening these days.

Nevertheless, despite the teachers' understandings of the place of technologies in the students' homes, it was as if they were unable to see any relationship between the use of games and other technologies for leisure activities and the use of technologies required at school.

STUDENTS' ACCESS TO DIGITAL TECHNOLOGIES

Interviews with students in both classrooms and straw polls of the two classes indicated that students "lived" with technology of various types in their out-of-school lives. Every student in both classes had access to a games console of some type, whether that was a Nintendo DS, GameBoy, X-Box or Sony PlayStation, and 58 per cent had a television in their bedroom. Many of the students also had a DVD or video player attached to their television. 84 percent reported having at least one computer in their home, and almost all of the students said that they had access to a computer elsewhere – whether they used one at a friend's or relative's house or at the local library.

What was apparent in the students' discussions of their home usage of technologies was that computers were one option among many activities that they could engage in when not at school. By far the most popular form of home entertainment was electronic games, but games were played in many forms – on games consoles, computers and occasionally mobile telephones. For many of the students, it seemed that games provided opportunities to engage in "fun" play. As the students explained, there were many types of games, ranging from those where "you shoot bad guys and everything. You escape from jail", to ones where, for example, "you have to try and knock out the blue tiles before the time runs out and then you go up to the next level".

Computers, however, were not only used for games and many of the students reported their regular use of the internet, the downloading of television programs and the use of Microsoft Word and Excel for some of their leisure activities. For example, one student used Microsoft Excel for adding up the money he had saved – to "see how much I can spend". Another said that, "Dad uses it [Excel] to do his darts things.... Because he plays darts and he has got to tally up all the dart things to give to the darts team...and I watch how he does that." Others talked about the use of the internet to "get some cheats for games on the PlayStation" or for parents to "buy off eBay". Some students, though, talked about the reluctance of some family members to use computers or about their role in teaching relatives to become users of technology. For example, one student described her mum as "not really computer smart.... She doesn't really go on the computer", while another explained, "I've actually taught my [grandfather] half the stuff he knows about computers."

In the classroom, the students' use of technologies was focused on computers, but these were not used on a daily basis. The teacher in Classroom 1 expressed concern that she had not used computers as often as she would have liked, although the students were able to use them before school and during some lunch breaks. In

Classroom 2, it was evident that computers were used fairly regularly as part of the curriculum, but that the usage was not necessarily daily. In other words, technologies seemed to play a much greater role in the students' home lives than in their classroom lives.

DISCUSSION

As we noted earlier, there has been considerable research in Australia and elsewhere that has attempted to disrupt the deficit views of literacy practices in homes that operate differently from those valued in schools. There have been significant moves towards "turn-around pedagogies" (Comber & Kamler, 2004) that base work in classrooms on the "funds of knowledge" (Moll, Amanti, Neff & Gonzales, 1992) that children bring in their virtual school bags (Thomson, 2002). Our work on research investigating the uses of digital literacies in homes and schools is based on an uncomfortable hunch that deficit views of the digital practices engaged in by students at home were becoming as deeply entrenched in schooling as those that were once so taken-for-granted about print literacy practices. Our studies into this area began with a literature review (Honan, 2006a) that seemed to indicate that these deficit discourses were operating in: accounts of the uses of technologies in low and middle socioeconomic schools (Warschauer, 2003); descriptions of teachers' assumptions about access to technologies by students from low socioeconomic homes (Snyder *et al.*, 2004; Warschauer *et al.*, 2004); and assumptions about girls' work in the "gendered digital divide" (Honan, 2006b).

While the study reported on in this article is only small, it does (unfortunately) begin to affirm some of our hunches. In relation to teachers' misconceptions about their students' access to technologies at home, the study confirms reports in the literature review as well as the findings of another smaller study reported elsewhere (Honan, 2008). That is, teachers generally underestimate students' access to computers and the internet outside of school, tend to ignore the place of other kinds of digital technologies apart from computers in students' daily lives, and more disturbingly, disparage and denigrate the uses of technologies by students at home. The teachers' comments about using computers "just to play games", parental use of television so that children can "occupy" themselves, and parents spending money on "every electronic thing known to man" unfortunately resonate with echoes of the deficit assumptions about parental attitudes to print material in terms of bedtime reading (Heath, 1982); the absence of "real" books and "quality" literature; and parents' attitudes to reading in low socioeconomic homes (Mraz & Rasinski, 2007).

The failure of teachers such as the ones in this study to tap effectively into students' funds of knowledge about digital technologies has serious and probably unexpected influences on the pedagogical practices engaged in during literacy classes where new technologies are used. Elsewhere (Honan, 2008), one of us has reported on teachers' tendencies to repeat, year after year, lessons and activities that focus on the basic operational skills needed to navigate a desktop, save a file, and open programs. In that study, students in Year 2 and again in Year 4 were being taught the same basic operational skills.

In this study, the teacher-aide in Classroom 1 practised a “defensive” and safe pedagogy where students must wait for step-by-step instructions, even when it was clear that they were capable of proceeding without constant oversight (Garrison & Bromley, 2004, p. 596). It could be argued that these pedagogical practices are used because of the aide’s lack of professional authority (compared to a qualified teacher) in relation to the students, or because of her lack of professional knowledge of alternative practices. However, the classroom teacher’s willingness to hand over the teaching using computers to the aide is in itself an illustration of the defensive teaching practices that Garrison and Bromley (2004) describe. Generally both classroom teachers and the teacher-aide engaged in pedagogical practices that assume that the completion of routine classroom tasks are more important or valuable than the engagement in creative problem-solving or higher cognitive tasks that are inherent in constructivist teaching approaches (Niederhauser & Lindstrom, 2006), essential in a “productive pedagogy” framework (Lingard, Hayes & Mills, 2003), and according to Gee (2003), developed when playing video games.

These safe and routine pedagogical practices involving the use of digital texts resonate with the practices observed in literacy classes in low socioeconomic areas by Freebody and his colleagues in the early 1990s (Freebody *et al.*, 1995). In that study, analysis of classroom conversations revealed that teachers spent an extraordinary amount of time in talk devoted to routine classroom tasks and management of student behaviour, working towards the production of “docile bodies” (Foucault, 1995). Similarly, Warschauer (2003) found that teachers in low socioeconomic schools in his study used digital technologies for routine and technical tasks that prepared their students for the workforce, while their colleagues in ‘elite’ schools “used technology to prepare scholars” (p. 132).

The isolation of computer related tasks and teaching practices from the other literacy work completed in classrooms is also an area of concern and seems to disregard young people’s complex integration of digital technologies in their out-of-school lives. The students interviewed in this study reported using a variety of digital technologies for a variety of purposes in interconnected ways that were integrated with other forms of daily activities (Henderson, 2007). This usage seems to more accurately reflect the daily use of technologies in many adult lives than the isolated tasks that were completed in the observed classrooms. The unfortunate rapid deployment of computer laboratories and hubs in primary classrooms across Australia and elsewhere (Zandvliet, 2006) supports this isolationist approach to the use of computers.

Interestingly, both of the observed classes had a set of computers in the classroom space; yet both teachers used these only sporadically. This availability of computers within the classroom could have contributed to an integration of digital activities within literacy lessons. The reasons for the lack of integration were not explored within this study. However, it does remind us of the introduction of “real” books into classrooms in the 1970s as the use of basal readers and textbook activities came into question. In many classrooms the “real” books became part of a reward system: finished work early, read a book; completed that activity, read a book; wet lunchtime, read a book. In many classrooms observed, including the two in this study, this reward system now includes “playing” on the computer.

CONCLUSION

Although limited in scope, this small research project has highlighted the challenging task for teachers to be cognisant of the diversity in understandings about digital technologies that students bring to school. Such understandings are important if teachers want to ensure that school engagement with digital literacies is indeed preparing students to cope with the literacy demands of a rapidly changing and increasingly technological and globalised world.

Not only were there apparent differences in the prior knowledges that students brought to school, there also appeared to be a divide between the everyday digital practices that students used in their out-of-school lives and the practices that teachers thought students needed to engage in. Our findings from studying these two classrooms suggest that in some cases there are huge generational differences between teachers and students. Even though the two teachers in this study said that they were confident with using and teaching about technologies, they were quite aware that their students were faster and more confident than they were with some aspects of technologies. While the students saw technologies, including computers, as one option in their out-of-school leisure activities, the teachers emphasised a much narrower approach – the teaching of specific computer skills for specific purposes.

What appears to be missing in this approach is an understanding of how knowledges about a wide range of practices with digital technologies might be useful to the learning of literacies at school. It was evident that the students' knowledges were not always used within the classroom context. Computer games, for example, were not regarded by the teachers as relevant to school learning. However, as Gee's (2003) work has highlighted, computer games can provide opportunities for developing creative problem-solving and higher cognitive skills and for learning new literacies. Within classrooms, students' knowledges about technologies and multimedia can provide "powerful tools of engagement" that bridge home and school practices and open up the possibilities for building "an expanded range of performative, entertaining, collaborative literacy practices" (Kerkham & Hutchison, 2005, p. 117).

A recent report (see Lenhart, Arafeh, Smith, & Macgill, 2008) indicates that young people also find it difficult to see relationships between their home and school digital literacy practices. It found that even though young people were "embedded in a tech-rich world" (p. ii), they did not regard their expertise in email, instant and text messaging – "the material they create electronically" (p. i) – as "real" writing. Such findings suggest that there is much work to be done in understanding the relationships between the digital literacy practices used inside and outside school.

Understanding how the digital literacies in students' virtual school bags (Thomson, 2002) might be used to assist school learning would seem to be a critical place to start. According to Kerkham and Hutchison (2005), collaborative projects that provide opportunities for teachers and students to participate in "a dynamic exchange of skills and information" and for students to learn "with and from each other" can help to reshape the teaching and learning of digital literacies in classrooms (p. 119).

While the digital literacies of home remain invisible to teachers, or as a worse case scenario are viewed as evidence of deficient home practices, then it seems that the

difficult task of catering for difference and diversity amongst students will be compounded. Making home-school connections explicit for teachers and students, combined with a mapping of how school learning might build on what students already know about digital literacies, will help teachers to move past taken-for-granted assumptions and to address the challenge of preparing students to be literate in the 21st Century. Such a move is important if we are serious about wanting to ensure equitable outcomes for schooling and to prepare all students for active and successful participation in society.

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