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I didn’t learn nothing at school from the computer. . . . Like you watch everyone else, like you watch people. I had Info Tech classes and I got to admit I learnt something but I’ve never used it—MailMerge . . . It’s real confusing, like I reckon it would be quicker if I just typed it out separately over and over again.

Fifteen-year-old Brad Brown is dismissive of his experiences with computers at school. By contrast, he is proud of his capabilities with the computer at home. When his sister, Lizzie, tells us that Brad can put things right when they go wrong, he adds:

Yeah, I fixed the computer. It wouldn’t connect one night and it was probably because all the cords were mixed up and everything . . . [I] had to go and put the plugs back in . . . I know how to make new folders and know how to download stuff, and like I said, to run this from its program or to save it to disk.

Brad can not only troubleshoot and establish file management systems, he can also locate what he needs on the Internet efficiently and critically. In fact, he displays a sophisticated range of the new literacy practices associated with the use of information and communication technologies (ICTs).
These literacies are evident, however, only in the home environment; at school, Brad is perceived as a “drop kick,” the type of kid that teachers at Greenacres Secondary School find difficult to control and to engage. Moreover, Brad’s teachers were unaware that he uses a computer at home on a regular basis for complex literacy activities.

Brad lives with his mother and younger sister in a government-subsidized council house in Greenacres, a suburb in northwestern Melbourne, characterized by high unemployment, low socioeconomic status, and high levels of speakers of languages other than English. The Browns are one of four families that took part in a year-long study we initiated to enhance understanding of the connections between literacy practices, the use of ICTs, and disadvantage. We examined the ways in which the four families use ICTs to engage with formal and informal literacy learning in home and school settings. Our intent in this chapter is to provide an understanding of the scope of this small-scale, intensive, and multidimensional study, but with an emphasis on the similarities between the families in their use of ICTs for literacy purposes and what we take to be potentially significant differences.

The project was made possible as a result of an alliance forged in late 1999 between Australia’s peak trade union body, the Australian Council of Trade Unions (ACTU), a computer and software distributor and training company (Virtual Communities), and an Internet provider (Primus), to offer computers and Internet access to workers at affordable prices (Virtual Communities 2002). Without home access to the technologies guaranteed for the families participating in our study, the investigation could not have taken place.

**BACKGROUND**

Considerable theoretical and empirical work has examined the emergence of new literacy practices associated with the use of ICTs in school settings (Snyder 1997a; Lankshear and Snyder 2000; Durrant and Beavis 2001; Loveless and Ellis 2001; Snyder 2002). In particular, this body of work recognizes that reading and writing practices, conceived traditionally as print-based and logocentric, are only part of what people have to learn to be literate. Today, being literate has to do with understanding the complex ways in which the written, oral, and audiovisual modalities of human communication are integrated into multimodal hypertext systems made accessible
via the Internet and the World Wide Web. New literacy practices represent the ability to read and write all texts, signs, artifacts, nuances, and images through which we come to understand and engage with society in the broadest sense. How to provide all students with the opportunities to acquire these literacy practices represents a profound challenge for educators and was fundamental to the study.

Research attention has also been given to computer-mediated literacy practices in home settings (Sefton-Green 1998; Downes 1999; Dede 2000). Comber and Green (1999) and Thomson (2001) have investigated computer-mediated literacy practices and disadvantage, but in school contexts. There has been little research, however, investigating the connections between home and school computer-mediated literacy practices and even less research examining home and school computer-mediated literacy practices in disadvantaged communities.

This is somewhat surprising as the relation between home and school literacy practices has been the focus of a number of important studies (Heath 1983; Street 1984; Prinsloo and Breier 1996; Barton and Hamilton 1998). These studies recognize the need to move beyond narrowly defined explanations of literacy to ones that capture the complexity of real literacy practices in contemporary society. As part of what is widely known as the New Literacy Studies (NLS), they emphasize the centrality of the social contexts in which literacy practices occur, directing attention to contrasts between home and school as sites of practice and to the relationship between home and school with respect to literacy learning (Baynham and Prinsloo 2001).

The present study takes account of these conceptions of literacy as social practice, in particular, those pertaining to the relation between school success and home conditions. The study links home background to specific linguistic and discursive practices, but when ICTs are used. Computer-mediated literacy practices may be different at home and at school.

What we mean by disadvantage should also be emerging. Clearly, disadvantage is an extremely complex concept. Being poor or disadvantaged is more than a matter of income (Travers and Richardson 1993). We can experience disadvantage or advantage through dimensions of our lives such as the characteristics of the neighborhoods we inhabit, access to the collective resources of the communities in which we live, as well as through our income. Research using the term disadvantage compares the circumstances of people or communities or places with others who are experiencing advantage or who are living in average conditions. “Being disadvantaged is thus an explicitly relative state, but the term also has a strong normative connotation. To be disadvantaged is to be unfairly treat-
ed relative to others" (Fincher and Saunders 2001: 8). Research using disadvantage as a guiding concept often refers to disadvantaging processes—processes causing the production and reproduction of disadvantage for people and places. Most importantly for our study, schools "cannot avoid the social, they are not hermetically sealed off from the world, and the trends, issues and events which shape the lives of their families and students, also profoundly affect everyday school life" (Thomson 2001: 27).

Informed by these understandings of literacy, technology, and disadvantage, the research set out to investigate what it is about computer-mediated literacy practices at home and at school in disadvantaged communities that make a difference in school success, as perceived by both the consumers (the children and their parents) and the providers (the teachers) of literacy education. The focus was on the dynamic relation between literacy practices in both settings. A major aim was to provide insight into how young people use ICTs outside school so that their teachers can build upon these practices in the classroom.

**ACCESS TO COMPUTERS IN AUSTRALIA**

Unlike television, computer-mediated communication is not yet a general medium in Australia, however, computer usage is increasing in all socio-economic sectors. The Australian Bureau of Statistics (ABS) expected that by the end of 2001 it was likely that every second household in Australia would have Internet access. As might be expected, higher levels of both computer and Internet access occur in households with higher incomes. Access is also higher in households with children under 18 years, and in metropolitan areas. In terms of gender, there are very small differences between adult male and female computer and Internet usage (ABS 2001).

But such statistics do not tell the whole story. Access cannot be seen merely as a matter of having a way to use computers and a connection to the Internet. As Burbules and Callister (2000) suggest, access needs to be rethought as a much more complex and multileveled social goal. They distinguish between quality of access and quantity of access and also between conditions of access and criteria of access. Considerations of how much need to be counter-balanced by considerations of how good. This view is consistent with Connell's (1993: 16) account of distributive justice: In relation to access to technology, it is about not only who gets how much of the
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technology resources, but also who gets the benefits associated with such resources and how much of them (Comber and Green 1999).

When it comes to school computer usage, the state of Victoria, of which Melbourne is the capital, claims to lead the way in public education: a computer to student ratio of 1:4.65 (Galbraith 2001). Notebook computers and Internet access are provided for all state school teachers at a rental cost to the teachers of several hundred dollars per year. Three of the schools in our study eligible for this scheme reported that most staff have taken advantage of the offer. All four schools in the study share the policy priority of the improvement and extension of teaching with ICTs.

THE STUDY

We were particularly interested in identifying the following: the computer-mediated literacy practices evident in home and school settings; the relations between home and school computer-mediated literacy practices; patterns of interaction around computer-mediated literacy events in home and school settings; the communicative resources available in the home setting and how these map onto the computer-mediated literacy practices available in schools. To achieve our aims, we chose a case-study methodology.

Participants and Sites

Four families were identified to take part in the year-long study. Three of the families were contacted from a list of participants in the Virtual Communities computer scheme. A fourth family from a higher socioeconomic community, with a computer at home for 5 years, was included for comparison purposes. As it turned out, however, one of the first three families did not represent the traditional profile of the union movement’s grassroots. We became aware of this family’s more privileged social position only after the study had begun. In the end, the nuanced similarities and differences, indeed, the diversity between the four families, represented in the variety of trajectories occupied by the individual members, provided us with rich sources of data to draw on in our analysis and interpretation.

We visited the homes of the participating families six times for 1- to 2-hour visits between mid-2000 and mid-2001 to observe and interview the family members as they used ICTs. The researchers also visited the
schools the students attended at least three times to observe them in the classes in which ICTs were being used and to interview their teachers and other members of the school community about the place of ICTs in the curriculum. We spoke to principals, to teachers in charge of Information technology, to English teachers, as well as to curriculum coordinators.

The Brown family, Jenny (age 33) and her two children, Brad (age 14) and Lizzie (age 12), live in a very modest three-bedroom brick-veneer council house on a major road in Greenacres. Jenny's husband walked out 6 weeks after Lizzie was born and has never made contact with them even though he resides near by. Until a year ago, Jenny had a live-in de facto, John. That relationship lasted several years and John, whom the kids refer to as their father, still drops in. At the time of the study, Brad and Lizzie attend Greenacres Secondary School: Lizzie was in Grade 7 and Brad in Grade 9.

Helen and Brendan Lawford separated in mid-2000. Helen works for a multinational power and resources company. Brendan is a communications officer for the state secretary of a union. Helen lives in a modest double-fronted weatherboard “worker’s cottage” in the inner-western suburb of Rosewood. Their 6-year-old daughter, Angela, lives mainly in the family home with Helen (and the computer) and stays overnight with her father in his flat about 200 meters away on two consecutive weeknights. Angela goes to Rosewood Primary School and was in Grade 1 at the time of the study.

The Rodriguez family arrived in Australia in 1988 as political refugees from Chile. Fernando, a metal worker, works in an automobile parts factory, and his wife, Luisa, works in a creche. Their daughter, Carmen (age 11), attends St Cecilia’s Catholic Primary School in a satellite city of Melbourne, 30 kilometers from the CBD, and Lydia (age 5), goes to a local kindergarten. The family lives in a three-bedroom, newish house on a housing estate, in a suburb called Blue Hills, also 30 kilometers from the Central Business District.

The Lake family comprises Ray (age 43), who has a bachelor's and two Grad Dips, Sara, (age 39), who has a bachelor's and a law degree, both of whom are trade union officials, Felicity (age 15) and Sally (age 13) who attend College High School—once an elite public school but now open to all. Felicity and Sally were in Grades 11 and 9, respectively, at the time of the study. The family lives in a three-bedroom house in the inner-city suburb of Kilvington. The house is comfortably furnished and full of books.

The four schools the young people in the project attended, although located in socioeconomically different parts of Melbourne, have populations representing many cultural and ethnic groups. More than 50% of the
students at each of the participating schools were from non-Anglo backgrounds. Increasingly, this is becoming the norm in the public and Catholic school sectors in Australia. It is not the case in the private sector which now accounts for more than 30% of the student population.

Data Collection Procedures

The three researchers worked with one family each and the schools the children attend. Assuming the role of participant-observers of the families and selected school classes, we recorded fieldnotes as soon as possible after our visits and audiotaped interviews with members of the families and with the children's teachers, which two of us later transcribed. We also audiotaped interactions among family members in their homes as they used the computer. We collected some artifacts volunteered to us by participants, such as electronic texts they produced and examples of e-mail exchanges. Where available, we also examined school technology policy documents.

Data Analysis

To construct an interpretation of the interconnections between literacy practices, the use of ICTs, and disadvantage, we engaged in a number of iterative steps. Given our aim of documenting the computer-mediated literacy events, particularly in the home setting, we studied our field notes and transcripts of the interviews and family discussions around the computers to identify any patterns that emerged. As our observations of actual classes were limited, we relied on the young people as informants of what was done with ICTs at school. We compared what the young people said they experienced with what the teachers reported occurred. This enabled us to consider the relation between computer-mediated literacy practices in home and school settings and how they interconnect. As the practice of comparison was integral to both the design and purpose of the study, we organized the data so that we could systematically juxtapose literacy events across families and the children's schools, as the basis for our analysis.

After experimenting with a variety of different forms of presentation for our analysis, we chose the device of what we call "narratives fragments." These fragments are selective in relation to points of comparison and contrast between the four families. Even if assembled, the stories in each case are not complete nor exhaustive but focused around themes that
we picked up within and between families and the schools the children attend. This allowed us to do some conceptual development work and to generate theoretical descriptions (Ball, Maguire, and Macrae 2000).

**THE FAMILIES**

The lives of the families described here are shaped in the relation between structural and material limits and possibilities and various individual factors, that is, their different opportunities are in part self-made, but are also framed by the continuing importance of class, ethnicity, and gender inequalities (Ball et al., 2000).

**Brown Family**

The front garden of the Brown family's house has no trees, shrubs, or flowerbeds, but the atmosphere inside is warm and casual. There is obvious affection among Jenny, Brad, and Lizzie, who interact continuously in front of the computer or the TV, with its Play Station, which are located in what the family calls “the lounge.” Both were switched on every time the researcher visited.

Jenny is slim, most often dressed in black, tight-fitting clothes that she gets from local thrift shops. She grew up in an inner-city working-class suburb and went to a local Catholic girls' school. Jenny was pregnant at 16, soon married and the mother of two, and by 18, a single parent. Apart from a short stint as a casual sales assistant before she married, Jenny has never had a job or training of any sort. The family unit of three gets by on her single-parent pension. In November 1999, Jenny’s father, a recently retired member of the Vehicle Builders’ Union, took advantage of the Virtual Communities deal to lease a computer package for himself and one for Jenny and her children. Jenny says the computer has changed their lives.

**Lawford Family**

The Lawfords were clearly upwardly mobile until they separated. The halt to the renovations of the family house, where Helen and Angela still live, is a casualty of the split. By any standards, Helen is a successful woman: She
dresses well, has an impressive demeanor, and works at the top end of town. A corporate high flyer, she has made a rapid ascent from working-class origins. Few of the young people who attended schools like hers completed their secondary schooling; fewer went on to higher education. Against the odds, Helen did both.

Student politics brought Helen and Brendan together and paved the way for Helen to move into public sector administration under a Labor State government. When Labor’s political fortunes dived in Victoria in the early 1990s, Helen made the move to the private sector. Although Brendan did not say so directly, he hinted that the deterioration in his relationship with Helen related to what he saw as her betrayal of values to which he has remained loyal.

Rodriguez Family

The Rodriguez family speaks Spanish at home. Fernando did not complete secondary school in Chile and has very limited English, choosing not to undertake any formal study in Australia. By contrast, Luisa, who had studied French in Chile before she completed secondary school, attended Migrant English classes when they arrived and Tertiary and Further Education studies in child care. She was also enrolled in a BEd Primary by Distance, but withdrew when she found it difficult to keep up with the reading. Both Carmen and Lydia are bilingual. The school they go to is not the closest but chosen by their parents because Luisa’s sister’s children had gone there. Similarly, the girls will not go to the more geographically convenient high school, but to a Catholic girls’ secondary college because “it offers the best program and standards” that both Luisa and Fernando want for their daughters. Luisa makes all the decisions about the girls’ education. Fernando and Luisa share a car and don’t go on holidays: They want their children to have greater opportunities in life than they have had.

Lake Family

The most striking aspect of the Lake house—particularly in the context of a research project focusing on computer use—is the abundance of books. They are everywhere: A set of the Encyclopedia Britannica holds pride of place on a shelf in the living room, whereas the computer is located in the back room. When the focus of the interview was on computer use, all four members of the family were careful to assert the essential superiority of books as sources of knowledge and values than anything available online.
This is a family that reveres book culture yet its members were also the most skilled users of computer technology. The family places high premium on quality family interaction time, exploiting the educational potential of every conversation. Computer use is restricted to when the girls return home from school and after 9 p.m., when friends are less likely to call.

**USING THE HOME COMPUTER**

Jenny Brown’s reason for wanting the computer package were a little different to those of her father who paid for it. He said that he hoped to give his grandchildren another source of entertainment besides the TV. He also thought Jenny might improve her chances of employment if she got some computer skills. By contrast, Jenny was interested in the potential educational benefits for her children: “Because I knew that they were using them at school and, I mean, they’re the future and they’re going to take over everywhere.”

Although Jenny “didn’t even know how to switch one on until we got it,” she has turned out to be the main user of the computer in the family: She has become addicted to chat. Brad and Lizzie also enjoy meeting people from a range of countries, backgrounds, and ages in virtual chat. But they told us that it can get very nasty. Encounters between people on the Web are not always easy and pleasant: “[a]s with other public places the Web can be a site of conflict, harassment, crime, crudity and unwanted company” (Burbules 2002: 79).

Brad, however, is more interested in using the Internet to pursue his hobby of racing cars than for chat. He moves between the TV with its Play Station and the computer where he often downloads music or creates his own cars: He appropriates various facets from a range of models and, from the bits, constructs something unique. He’s the family’s troubleshooter and teacher, working out how to do things as the need arises. He showed Jenny and Lizzie how to create folders to save potential avatars for use in the chat-rooms.

More like her mother, Lizzie can spend up to 4 hours chatting in text-based exchanges with people—extended writing that she wouldn’t contemplate at school: “It’s different. It’s exciting on the computer. With pen, it gets hard to hold it after a while.” Neither Brad nor Lizzie use the computer for school work. Although they all have their particular individual computer activities, there are also regular times when the three of them sit
around the computer together, usually at a chat site. There are some books in the house: Lizzie has 66 volumes of the *Baby-sitters* series and enjoys reading Danielle Steele novels once her mother has finished with them.

* * *

As Helen Lawford spends most of her time at work on the Internet and has her own laptop to use at home, Angela has almost exclusive use of the computer. A bright, confident and articulate 6-year-old, she is very proud of her computer skills, always keen to show them off to us. The computer has displaced the TV as her main source of recreation: sometimes with her mother beside her, sometimes alone. She uses it to play her CDs; Barbie.com is her favorite Web site. Brendan tells us that Angela “can look things up on the Internet and pursue popular culture for 7-year-olds—things that assist her with her skill development.” When she invited her friends to come to a sleepover, she printed out the invitation and mailed it. Brendan wants Angela to continue with her creative pursuits as part of his broad aspirations for her. He thinks that the computer will be used “to do her work—whether study or as a resource to gather things, or to organize social aspects of her life.” After telling us of the range of activities for which Angela uses the computer, both Helen and Brendan stress that she is an “avid reader.” They both want to strike a balance between reading and computer use for their daughter.

Brendan and Helen agree that Angela is learning computer competence the more she plays on it. They both like the idea that Angela amuses herself playing games like noticing Web addresses in advertisements on the backs of buses and taxis, and looking up the sites later. For them, there is no distinction between playing with the computer and learning. As Helen put it: “I know that when she thinks she’s playing, I know she’s learning. I know that typing out the invitations [when playing Barbie Party at Barbie.com], she’s learning. As long as I know which sites she’s going to, I’m very relaxed about playing.”

* * *

Like the Brown family, the Rodriguez’s computer is located in the living room along with the TV, the Nintendo, and the typewriter. But unlike the Browns, the Rodriguez family never sits around the computer together. Fernando uses it occasionally for e-mail to family and friends in Chile and to read newspapers in Spanish. Luisa prepared essays for her studies on the computer and now uses it to mock-up notices for work. Both Fernanado
and Luisa, acutely aware of the sites they don’t want their daughters to visit, prefer that the computer be used for educational purposes. The girls are allowed access only on weekends unless Carmen requires it to complete a school assignment. On the weekend, Carmen plays computer games. When she shows us what she can do with the computer, she moves from program to program with confidence and advanced skills. Luisa is concerned about improving her own computer knowledge. She says, “I am the mother. I must know more than her.”

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_Civilization_ is a computer game that Felicity and Sally Lake enjoy immensely, particularly when their parents join in. Felicity describes it as “fun because you have to invent things . . . I like the building and starting a civilization.” In some ways, it seemed that the Lake family not only plays _Civilization_ on the computer, but also a version of it in real life. Family members associate the game with the learning of history, culture and literature, in which they are interested. Yet all of them, even Sally, speak about their computer skills in a deprecatory way (Ray: “I’m never sure where to put the petrol in”) and play down their obvious competence. They would rather talk about music and literature.

The liberal values endorsed by the parents are carefully packaged and passed on to their girls. All four members of the Lake family commend the virtues of book culture and all that it represents to them. They see the computer as a tool that has useful functions and facilities for them to exploit. Ray and Sara bought the computer so that they could do some of their work at home and thereby leave the office earlier. There is no real competition for the computer: certain activities and needs are prioritized. The hierarchy is work, homework, general Internet searches, and then games. No one uses chat programs but everyone e-mails the Adelaide grandmother who is “an e-mail addict.” There seems to be an easy connection between the sophisticated work on computers required at school and the uses both Felicity and Sally put it to at home.

**USING COMPUTERS AT SCHOOL**

At Greenacres Secondary College, we were hard-pressed to find anyone with a high opinion of either Brad or Lizzie Brown. Lizzie was in Grade 7 and
seems hardly to have been noticed by teachers, whereas Brad was very well known. According to one teacher: “he’s the kind of boy every teacher knows,” who had been “kept down” at the end of Grade 7. In his repeat year, in what Brad remembers as the “best time since kindergarten,” he was sent for a term to a special center for students whom teachers cannot manage and who have been withdrawn from classes because of behavioral problems. There were eight students and three teachers. Brad liked the center and the teachers enormously but had to return to the regular school environment. The general view among teachers was that Brad had given up.

Apparently, “there are a lot of Brads” at the school. In the words of his English teacher, they get:

a lot of strugglers. A lot of families that put education well down their list of priorities. Certainly not all. There are parents who do care and who really do try and help the school, but then at the other end we have quite a few that education is way down on their list and that rubs off onto their kids.

Even this teacher, who Brad thought knew him best, expressed little knowledge of Brad’s family: “They’re basically working class stock. Apart from that I really don’t know.”

Brad was contemptuous of the school’s computer education program: “I thought you’d go on the Internet [but] we weren’t allowed on the internet at all for the whole class.” Life is not easy for Lizzie at school either. When asked what she does in computer classes at school, she replied: “In maths we have fun because we do Maths Circus. But sometimes we have to just write out all these sums on the computer . . . Most of the classes are OK, but what I’d like is for them just to stop telling me off.”

At school, Brad is widely perceived as having very poor literacy skills. At home, however, Brad reads “car books”: “they’re real, all the info on that exact car are real.” When his uncle gives him a car magazine, he reads “every article . . . about 10 times.” Not surprisingly, Brad was keen to leave school as soon as he was 15. In mid-2000, he was thinking about spray painting and early in 2001, he secured an apprenticeship in a small local spray shop. No one was going to make him go back to school; he would prove to everyone that he could get a job. Asked what he didn’t like about school, he replied:

Yeah, I get bored, I hate waking up for it. I hate going to it. I hate coming home and having work for it. Getting detentions . . . just everything
about it. I just hate everything about school . . . [but] I don't want be a dole bludger! My parents don't reckon I'll do it that easy so I want to prove to them that I can.

* * *

As Angela Lawford was only in Grade 1, at a school that did not prioritize the development of computer skills at such an early age, we are unable to report much about her use of computers at school. Suffice it to say, Angela's classroom teachers know her parents, particularly Helen, quite well. The assistant principal and the computers coordinator also know Helen, describing her as "pretty dynamic" and "confident." Kate Steiner, who has taught Angela for her first 2 years at school, recalls that Angela received support from the extended family for special school events and that there was a strong level of engagement in her schoolwork from her mother. She's seen widely as "bright, cheerful, always willing, and always courteous and always wanting to help the other children . . . the perfect student, the ideal child."

* * *

Using computers across the curriculum is high on the agenda at St Cecilia's that has just over 300 students, representing 58 ethnic groups, 11 full-time teachers, and a few part-time teachers. There is one computer lab and each classroom has six computers. The computers are all shared and as Carmen's teacher says: "It's all very cooperative." There's an Intranet and access to the Internet via the library. A computer consultant, Tom, comes to the school once a week and works with groups of students and teachers. The teachers develop units of work with Tom then implement them in the classroom. Carmen's teacher feels confident using ICTs in her classroom remarking that she learned pretty fast. She explains that her own children are computer literate and that "you learn so much off the younger ones. . . . It's a two-way street . . . you're always learning." Carmen develops web pages in class and also uses PowerPoint for project presentations. She loves to use the computer and sees it as an integral part of her classroom experience. Carmen gets into the computer lab only twice a week in scheduled classes, but she sometimes goes at lunchtimes. When she finds information for a project, she always writes it in her own words as her teacher will not accept material simply cut and pasted from a Web site. Carmen's confidence with computers is constantly reinforced by her teachers.
College High has one computer lab in the library with about 20 computers and about 10 classrooms with computers around the walls. The students are never required to complete work at home on computers as the school is sensitive to the fact that at least 33% of the school population live in government subsidized housing located close to the school and don't own computers. Both Felicity and Sally use computers at school in a number of ways—for Internet searches, word processing, and presentation. Although Felicity has used computers since she was just 2 years old, and recalls a favorite primary school teacher who showed the students something new to do with computers each Friday, she admits that she prefers using books for research. Felicity says that she's "afraid of breaking the computer, of making it crash." By contrast, Sally enjoys games, emailing friends, searching the Internet for projects but also considers the book version of Britannica more reliable and easier to use than trying to isolate the appropriate key word for an effective search.

**LINKING HOME AND SCHOOL**

**COMPUTER-MEDIATED LITERACY PRACTICES**

In this section, the analysis begins by illustrating the dissonance between the computer-mediated literacy practices observed in one of the homes, the Brown's, and those prescribed at school. We saw various iterations of something closer to complementarity between what took place at home and in the children's schools in the educationally motivated Rodriguez family, the upwardly mobile Lawford family, and the resolutely middleclass—at least in terms of social and cultural capital—Lake family. More attention is given to the members of the Brown family as their experience is the most illuminating in terms of the study's focus.

As already mentioned, Jenny believed that Brad and Lizzie would be advantaged at school by having a home computer. In particular, she thought the computer would 'help them look up things. However, although aware that the computer had the latest versions of *Encarta, Britannica*, and *World Book* as part of the Virtual Communities package, neither Brad nor Lizzie reported using them for schoolwork. As far as we could tell, the educational use of the computer in the home was minimal. Jenny has accepted the societal view that computers at home are good for
children's education and give them a competitive advantage (a point hammered home in Virtual Communities' television advertising during programs such as football telecasts), but does not have the educational resources herself to help them much. Besides managing the programs and troubleshooting, most of Brad's time on the computer was spent downloading music and searching for car information and images, whereas Lizzie was occupied with chat, celebrity news, magazine and fan sites, and VirtualDog.com.

Jenny has acquired her own computer competence, but boosts Brad as the "family expert" who knows how to get rid of a virus. By contrast, at school Brad is consistently perceived as a "loser." That Brad, and Lizzie for that matter, might have some acumen with computers is not even considered. When Mr. Hall was told that Brad had Internet access at home, he had rather low expectations about the sorts of activities he might be indulging in:

I'm sure, I'm certain that most of the time he's on the computer he's searching the Net; it's for pleasure not for anything educational. . . . As a teacher I have a computer at home for my kids. When my kids use the computer I like to oversee it and see exactly what they're doing. But who knows what Brad is doing!

In fact, Jenny had quite a sustained, if casual, interest in what her children were doing on the computer, and often members of the family knew what the others were getting up to. Unless Brad was listening to music in his room, all three were usually in the lounge watching TV and/or using the computer, often looking over the shoulder of the person at the keyboard and discussing the chat.

As already indicated, there is not much to say about the connections between home and school computer activities for Angela, who is only 6 years old, except to predict with reasonable confidence that both parents will continue to take a strong interest in all her school work and will increasingly encourage the use of the computer at home for educational purposes, but with an emphasis on the value of play.

In the Rodriguez family, the ways in which the computer is used is controlled and scrutinized. The school they have chosen for their girls, for which they struggle to pay the fees, is in the process of making sure that the use of computers is integral to the curriculum. This is being achieved with the assistance of a consultant who is driving the teachers' professional development. Luisa expects the school to perform and deliver a good education to her daughters. She dislikes some of the principal's ideas but
does not wish to approach anyone. Because of their distance from the school, the girls are not able to interact with school friends beyond school hours and Luisa and Fernando are not part of any school social network.

There is no tension between the approach to computers adopted at College High and the dominant attitude shared by all members of the Lake family: The educational importance of computer technologies is recognized but computers “have their place”; They must not be assigned too much cultural significance. The Lake family and the school concur, although perhaps not explicitly, that book culture provides the foundation of contemporary society. For the Lakes, the computer is a powerful tool which they want their daughters to be able to use competently—and the school that they have chosen is achieving their aims.

**DISCUSSION**

Our comparison suggests that the “socialization” of the technology—its appropriation into existing family norms, values, and lifestyles—varied from family to family. As the Lake girls are from a more economically advantaged environment, with appropriate cultural resources, they are better placed to exploit the benefits of having a computer at home; their learning experiences at home are equipping them with the literacies to participate in the technologically rich world of the future. For the Lake family, the use of ICTs is casually and almost effortlessly incorporated into their already existing base of cultural capital. Even young Angela Lawford already has a huge lead over Lizzie and Brad Brown in the cultural capital stakes. The Rodriguez girls are also quite well positioned to acquire the literacies of power (Gee 1996) mainly because their parents place such a high premium on the importance of education in the achievement of social advantage. However, we wondered whether Brad and Lizzie, even though they had a computer at home, would develop similar literacy skills and strategies for learning with ICTs particularly as they weren’t provided with the opportunities to acquire them at school.

Perhaps if there hadn’t been a disjunction between the sorts of learning opportunities afforded by new technologies when used at home as compared with school, Brad and Lizzie would have been less frustrated with their experiences at school (Furlong, Furlong, Facer, and Sutherland 2000). Their disappointment was caused largely because something they enjoyed at home was a drag at school: The use of ICTs was incorporated
into the typical practices of school life that they regarded as boring. Despite
the hype and rhetoric of empowerment and agency (Snyder 1997b, 1999),
the use of ICTs at Greenacres Secondary School is being “sucked into the
pattern of teacher control and student passivity” that Furlong et al. see as
the ‘typical conditions of learning’ in schools (Furlong et al., 2000: 103).

CONCLUSIONS

Our principal finding from this study is that, even allowing for the very
small sample, there is remarkable diversity in the ways in which families
engage with ICTs and schools, and in the ways schools engage with ICTs
and different families. Most importantly, it was apparent from the case
studies that having access to ICTs at home is not sufficient for young peo­
ple and their families to overcome the so-called “digital divide”—the gulf
between people who operate in the digital world and those who do not
have access (Castells 2001).

The findings of our study also suggest that, apart from new questions
about the probable, likely or feasible connections between the use of ICTs
and the production of social and political identities and hence, presumably,
power relations and possible social transformation, there are further ques­
tions about the complex relations between the use of ICTs and existing pat­
terns of social and economic disadvantage (Angus 1986, 1993) that need
to be asked. These are not just questions about physical access to the best
and most expensive technology (or to any at all), which is largely a matter
of income and/or interventionist policies, but also about the quality and
nature of such access as influenced by the cultural resources that individu­
als and families can bring to bear on their relationship with technology.

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