The complex digital divide

Information and communication technology amongst users of family support and foster care services

Susan Tregeagle

This paper presents the findings of qualitative research on the use of mobile phones and home access to the Internet amongst some Australian welfare service users. It shows that a digital divide – the exclusion of some groups from information and communication technology – goes well beyond access to hardware. Phones are often unavailable and access to the Internet is contingent on infrastructure, technical support and individual interest. Access to the Internet at home is poor and, even when available, the way in which mobile phones and the Internet are used appears deeply affected by poverty, literacy and age. These findings present challenges for those concerned about vulnerable children's ongoing disadvantage. Welfare agencies wishing to use the potential advantages of information and communication technology with families need to address patterns of use and the many barriers to access.

A glossary of ICT terms used in this article is presented at the end of the paper.

Susan Tregeagle
Senior Manager, Program Services
Barnardos Australia

PhD candidate
Social Justice and Social Change Research Centre
University of Western Sydney
Email: suetreg@barnardos.org.au

Many child welfare agencies are taking tentative steps to use information and communication technology (ICT) with service users. In the seamless way in which technology spreads (Willis & Tranter 2006), caseworkers are beginning to use e-mail and mobile phones to maintain contact with families. In addition, agencies are exploring pro-active uses of the Internet beyond the managerial and administrative functions of ICT with which they are familiar (Henman & Dean 2004; Hough 1996). Agencies are encouraged by a growing body of research which claims that computer-mediated communication improves access to information (Gaby & Henman 2004), can offer accessible counselling (Christensen, Griffiths & Jorm 2004) and may enhance identity, participation, self-disclosure and relationship development (Bargh, McKenna & Fitzsimons 2002; Ben-Ze'ev 2004; Tidwell & Walther 2002). Welfare workers are also interested in understanding children's use of the Internet because of concern about on-line safety (Livingstone 2003).

This paper describes the findings of qualitative research on the current use of computer-mediated and mobile phone communication amongst vulnerable children and their families. The findings explore access to ICT and the way it is used when available. They challenge welfare agencies to examine their own use of ICT with service users and to consider how they could assist in order to improve service user access. The findings go some way towards filling the gap in research identified by Wyn, Cuervo, Woodman and Stokes (2005) in relation to the use of ICT amongst groups who are of social policy interest. These authors call for research which uses the narratives of participants to address 'how users "mix" technologies and the meaning of these technologies in different social contexts...', having also explored the impact of emerging uses such as blogging and social networking sites (Wyn et al. 2005, p.39).

THE ORIGINS OF THIS RESEARCH

The potential significance of technology for vulnerable young people was brought to the author's attention by the positive findings of an action-research project which made mobile phones available to young homeless people (Hoyles & Tregeagle 2007). When welfare programs provided phones, free-call numbers and credit, young people could summon help quickly during emergencies such as a police

arrest, overdose, assault or episode of self-harm. This facility not only had the potential to save lives, but assisted the program to stop problems spiralling out of control. Improved communication made life easier for both young people and workers. Workers were surprised at the impact of simple mobile communication on developing relationships with young people; for example, they were able to proactively engage young people by sending invitations or birthday greetings. Employment prospects were also enhanced by young people having mobile phones as contact was made easier for both permanent and casual employers.

The results of the mobile phone project prompted research to focus on the potential of the Internet in the areas of foster care and family support programs. It was clear from the mobile phone research that successfully employing ICT was only possible through an understanding of the social factors affecting young people's use of ICT. For example, homeless young people were vulnerable to mugging, debt and the need to raise cash quickly, and these factors shaped the project design – for example, less attractive phones were used, credit was restricted and provision was made for somewhere to recharge the phone. Detailed knowledge of access to ICT was important as was an understanding of patterns of use.

> *Home computers were of primary interest because the home is an important access site for many service users who may lack transport and are often socially isolated.*

The research described below is not based on the belief that the spread of technology into welfare will inevitably bring improvements to welfare services, this being an illustration of '… techno-determinism coupled with a utopian vision of the techno-future' (Hutchby 2001, p.4). Rather, the research is grounded in the view that the use of technology in child welfare is linked to families' social circumstances and culture (Angus, Snyder & Sutherland-Smith 2003) and that welfare agencies will need to carefully consider the implications of using these technologies. The research does not underestimate the important issues that must accompany increased computer-mediated communication, and duty of care to families (Tregeagle & Darcy 2007).

THE RESEARCH

A qualitative research design has been used in order to gauge a depth of understanding regarding the social factors affecting ICT access, the various ways technology is used and the rapidly changing use of Internet applications (Crystal 2006). The research was undertaken by the author as part of an industry partnership between a child welfare

agency and a university and was guided by the requirements of the University Human Research Ethics Committee.

Thirty-two recent service users from seven out-of-home care or family support programs participated in the research. They included fourteen children and young people, two fathers and sixteen mothers; some children had been restored to their parents, others lived in foster families that had received support services. Some young people lived independently and two parents were in contact with their child in permanent foster care. Six were Aboriginal, an issue of some importance as Aboriginal access to ICT has been found to be low (Wyn et al. 2005); two participants were from culturally and linguistically diverse backgrounds; eleven were male and twenty-one female. Twenty-five families participated in the research and seven participants were from the same household.

The researcher approached managers in nine welfare agencies to ask them to identify potential participants and request them to contact the researcher. All of those who came forward were sent information sheets and consent forms. Participants could choose to be involved through individual interviews, electronic questionnaires or groups. They were reimbursed $50 for their time at the beginning of their involvement. An illustrated booklet was developed to assist participants who preferred a visual format. Parental permission was sought for children and young people, confidentiality was assured, access to support was offered and participants were reminded that they could withdraw from the research at any time. An Aboriginal participant was recruited as a co-researcher and, after training, assisted in a number of interviews with other Aboriginal mothers. Transcripts of interviews were sent back to participants for checking.

The research was conducted in 2006/7 in two welfare agencies in New South Wales and Australian Capital Territory. It consisted of one group interview, involving seven adult family support service users, and 25 individual interviews, involving children from age 8, young people and adults. Significantly, no one took up the electronic option.

When assessing the findings, it should be noted that the method of obtaining former service users through caseworkers may have created bias towards service users who were easily contactable; for example, they may have been more likely to have mobile phones. No young people in residential care participated in the research as none came forward. However, the method was successful in reaching people known to be difficult to engage in research (Curtis et al. 2004; Gilbertson & Barber 2002; Heptinstall 2000; Leonard 2005; Valentine, Butler & Skelton 2001).

The group and individual interviews were semi-structured and explored use of mobile phones and the Internet, including e-mail, chatrooms (both synchronous and asynchronous), virtual worlds, the World Wide Web, instant

messaging (IM), blogging (Crystal 2006) and social networking sites. Home computers were of primary interest because the home is an important access site for many service users who may lack transport and are often socially isolated. Home access is particularly important to children because of social and homework requirements, even though they have access at school (OECD 2006).

ACCESS TO MOBILE PHONES, HOME COMPUTERS AND THE INTERNET

Access to ICT proved to be more complex than mere ownership of hardware, the cost of ongoing use proving to severely limit use of ICT. Although most service users had mobile phones, many could not use them because of lack of credit. Only one-quarter of participants had working computers; a greater number (one-third) had no access to their computers, while others were not interested in using them.

Most service users did own a mobile phone, with twenty of the twenty-five interviewees and all seven members of the focus group having one (see Table 1). Of the interviewees who did not have mobiles, one adult participant had never had a mobile phone and the youngest two children and one older adult had had mobiles that had been stolen or broken.

Access to computers at home was more limited with only eight participants having a working computer at home (see Table 2). Of these, four were young people in foster care or adoptive families, and the others were three mothers and one child in family support services.

All eight participants with working computers had Internet access. While it is not clear how representative such experience may be, it is of interest to compare this to a 2002 study which found that 59% of disadvantaged families had a computer in the home, although only half of these had Internet access (McLaren & Zappala 2002).

Many service users had had computers but circumstances had changed. One young person had lost access to a computer when she had left foster care. Ten family support

participants reported having lost access to home computers; the reasons included relationship breakdowns, a house-fire, an unaffordable leasing arrangement and pawning of the hardware. Four of these families had a computer, but could not get it to work and were unable to access technical assistance. In one household there were three donated computers, none of which worked!

Loss of access to the Internet is a significant finding for this research. It focuses attention not just on initial access but also on the need for ongoing support and assistance to maintain ICT access, such as the cost of Internet service providers, anti-viral software and technical support comparable to that offered in welfare offices. A number of families had become dependent on the Internet and had found ways of using it which were important in their social circumstances. In two families, relationships were significantly disrupted when the Internet was lost. One poignant description of the impact of losing a computer came from a mother of five who refused to allow contact between the children and her violent ex-partner. She could not afford the leasing arrangement for her computer, but this had implications for family communication and her social isolation, as her interview reveals:

Q: Did you use the Internet a lot?
A: Yeah MSN, talking to my mum and friends.... Everyday, I would do all my housework, put the kids to bed and like sit there, late at night, and get friends on-line.

Q: You must really miss it?
A: Yes we just text now. It's much more expensive.

Q: Do you miss the social contact?
A: There was just more outlet, I was just more able to relax and talk to friends. The kids used to talk to their Dad on-line with web-cam and their grandparents.

Q: That must have stopped you being worried about his violence to you and the children?
A: They haven't spoken to him since.

Table 1: Ownership of mobile phone

	Ownership of mobile phone		
	Currently	Formerly	Never
Young people in, or previously in, foster care (7)	7		
Young people in family support services (7)	4	3	
Adults interviewees in family support programs or with children in foster care (11)	9	1	1
Adults in family support group (7)	7		
TOTAL (32)	27	4	1

Table 2: Access to home computers amongst service users

	Currently have functioning computer at home	Formerly had access to a home computer	Never had a home computer
Young people in, or previously in, foster care (7)	4 (all currently in placement)	1 (now living independently)	2 (living independently)
Young people in family support (7)	1	5	1
Adults in family support programs or parents of children in foster care (11)	2	3	6
Adults in family support group (7)	1	2	4
TOTAL (32)	8	11	13

In a second family of a sole father and son, the boy's siblings lived in three states. Following a further relationship break down, in which access to the Internet was lost, IM contact with the children stopped. The importance of ICT-based communication proved to be particularly relevant to, and highly valued by, families who lived in poverty and had a history of disrupted relationships

HOW ICT IS USED

When available, the way that mobile phones and the Internet were used was affected by poverty, literacy, age and individual preferences, all of which restricted use and meant that applications were used in particular ways.

Restricted use

Costs of mobile phone calls, computer hardware and software were identified as barriers to ICT use for both children and adults even when phones were available. All but two older adult participants were on pre-paid schemes. This is a reassuring finding, given the problems identified by Funston and MacNeill (cited in Wyn et al. 2005) that a quarter of young people surveyed in 1999 had problems managing mobile phone bills and 17% experienced some depression or anxiety as a result. Nevertheless, in this research there were many accounts of people unable to make outgoing calls because they had run out of credit. In some circumstances this meant that they had not been able to respond to calls from welfare agencies. As one young man, who was supported in independent housing from age sixteen, explained:

> I definitely used to run out of credit, ... [my worker] would call me and I wouldn't be able to call her back. She'd send me a message and I wouldn't be able to get back to her.

In addition to calls being unaffordable, when they had credit, service users were unable to talk for any length of time and this further restricted the phone's usefulness. Text messaging (texting) was the preferred option for younger participants – however, it was unclear whether this was due to the cost of calls or a preference for texting. Older participants rarely used texting. Most participants, however, could use both modes.

All service users commented on the expense of computers, Internet service providers and initial software and upgrades, as major barriers to their use of ICT.

Preference for particular applications

Where Internet access was available, literacy seemed to bear strongly on how it was used. Although e-mail use is prevalent in the wider community, participants in this research did not like to use it. They were unlikely to check e-mails or to respond to them. Reasons given included the time, effort and language skills involved in responding. Many stated that there was no point in checking e-mails as they rarely received e-mails from those with whom they

communicated (a very different experience from e-mail use in welfare offices). Typical is this response by an eighteen-year-old:

> I don't read e-mails. I look at them but, I dunno, it's just something about reading and writing back – it just takes too much effort for me. I dunno – if the worker had e-mailed me, I probably would have looked at it but not really have taken it in.

Use of e-mail requires regular checking, a level of literacy and a comfort with time delay between sending and receiving a message; these factors may have a bearing on service users' willingness to use e-mails. It is worth noting that in the wider community there appears to be a lessening of e-mail's popularity, particularly amongst the young, because of cluttered inboxes and spam (Canberra Times 2006). However, these difficulties were not noted by participants.

Both adults and young people expressed the view that e-mails were not an appropriate form of communication with welfare agencies:

> ... I think e-mail ... puts up more of a barrier sort of thing, I'd rather talk to someone on the phone, it's a lot more personal.

Only two young people, both of whom had been in care many hours away from their statutory workers, reported that they had initiated e-mail relationships with workers but this had been restricted to practical issues.

Young people, including the younger mothers interviewed, preferred Instant Messaging (IM) such as MSN and Yahoo!Messenger. IM has emerged as a significant form of communication particularly amongst young people (Pakula 2006). Participants in this research frequently used it for long periods of time. A number of participants saw limitations in IM in welfare communication. One felt that it should only be used in a pre-existing relationship:

> Yeah, at the beginning it would probably be good, but you shouldn't start introducing yourself on MSN, that would be stupid, really stupid.

Another participant indicated that it was no longer appropriate for her:

> I was always on MSN, it is the coolest thing when you're 14, 15 or 16 – they are the best times to message ... but my friends have grown out of it. No one uses MSN any more.

IM use appears to be age and peer group related. Some of the socially isolated younger mothers expressed resentment at not being able to use IM. For young people, inability to participate in IM was a significant problem for social contact:

> ... my friends have MSN and I go onto it [at school], nearly all my people are on it.

A ten year old complained:

... like they say, 'what's your address' and I [have to] say, 'I don't have one'.

Despite a preference for using computer-mediated communication which required less exacting literacy, younger people valued the Internet for homework. They clearly used the Internet for homework even though research indicates that, until recent years, schools may not necessarily have expected home Internet access (Angus, Snyder & Sutherland-Smith 2003). The young people interviewed were well used to using websites, particularly for school projects. School children, even in the 8 to 12 years age group, reported using the web at school and those without the Internet at home were very aware of their educational disadvantage. A fifteen-year-old commented:

> ... it's really annoying now because I've got like assignments and stuff and like I have to catch a bus into ... (half hour away by public transport).

It is interesting to note that most participants with limited Internet home access did not complain about restricted access to some of the more functional and efficient aspects of the Internet, such as job and accommodation searches or bill paying on-line. A number of older adolescents in this research did use library computers and Internet cafés. However, only two parents acknowledged the inefficiencies caused by not having access. One mother commented that her life would be easier with the Internet and another father complained that he had lost access to cheap goods available on the Internet.

More recent Internet developments, such as blogging, games (including virtual worlds), and use of synchronous and asynchronous chatrooms, did not appear to be widely used. Younger interviewees reported using computer games, although it was not clear if they differentiated between on-line games or software that was down-loaded onto the computer. However, burgeoning social networking sites, which provide the dual functions of IM and blogging in personalised spaces, were used extensively. A number of the 8-17 year olds interviewed either regularly used, or wished to use, MySpace and Bebo and this accounted for a large amount of their on-line time.

Age and individual preference

Age and individual preferences accounted for different use of ICT. As noted in the findings on mobile phones and the Internet, age was a significant issue in expectations about and interest in mobile phones. The findings show that it was the oldest and youngest who did not have mobiles and it was only the over 35-year-olds who did not appear concerned at not having access to mobiles or the Internet. The other participants, even those who did not have access to a computer at home, were interested in the Internet. One young Aboriginal mother had done a course to develop her

skills and another expressed concern about loss of computer skills since she had left school.

Despite the broad interest in having ICT access, some participants were relatively disinterested in using ICT for social purposes. For example, three adolescent boys, who had home Internet and used it for various school-related activities, saw it as a waste of time:

> Well (the web) is for school so I have to do it, but other than that I'd rather be somewhere else.

Such individual differences amongst young people are consistent with overseas research which, although from a different cultural context and now dated, described some children who did not like using a computer (Facer & Furlong 2001).

> *Exclusion from ICT adds to the difficulties of families who must adjust and work in a society increasingly dependent on technology.*

Mixing ICTs

The majority of service users had access to mobile phones and either used, or wished to use, the Internet. The three young people who did not have access to either mobile phones or the Internet seemed to be the most distressed by lack of access. A fifteen-year-old girl's story summarises the exclusion she felt:

> Anna's family was rehoused about an hour from her school following a period in crisis accommodation. Anna has a mobile phone, which is currently broken and she cannot afford to replace. Her mother rents a computer that they cannot get to work and they have never been able to afford the Internet. Because of this lack of access to ICT, Anna is unable to participate with her friends in their daily Bebo (IM) sessions or to do research for homework. If she is to use a computer Anna must travel to the public library on infrequent public transport services in the outer suburbs. She feels unsafe to do so at night.

This young woman was extremely resentful of her inability to interact socially and bitter about academic exclusion as she saw education as her only hope to escape the depressed area and the poverty affecting her family.

ATTITUDES TOWARDS USING ICT IN WELFARE INTERACTIONS

The research explored service users' attitudes to using ICT with social workers and whether they thought that there were communication problems with their workers that ICT could usefully address. Although the majority of participants

indicated that communication with workers was unproblematic, there were still a number of complaints. One young woman described frustration at workers not being available on mobile phones and the difficulty of working through office message systems:

> ... I get so annoyed so I don't ring my worker because whenever I ring her she's out of the office and I have to talk to her fucking answering machine and ask her to get back asap, and she kind of comes back six days later...

Another woman complained that, because she did not have e-mail, she was dependent on agency workers to contact her statutory child protection worker on her behalf:

> ... this other [statutory] worker keeps on saying she's going to turn up for meetings and never does, and the only way they can reach her is by e-mail [as] you can't get her on the phone.

Service users may find the absence of e-mail an increasing problem as workers become more reliant on it.

When asked about the potential to use ICT with agencies, participants were cautious but open to the idea:

> I'm not fazed when it comes to that sort of stuff. You are still talking to someone regardless of when you're on the phone or on the Internet.

There was some interest among younger people in using ICT, and the following comment was made in relation to paper-based case management systems:

> The Internet is really easier to fill out in more respects than paper because you can have a personalised number with name, personalised entry with databases, in that way you can read up on the importance of filling out information, get stats or info about things and you can do things like, you know, test things on the computer.

Some younger participants found it unusual that welfare agencies were not taking advantage of available technologies.

DISCUSSION

ICT offers speed and ease of communication, which is valued by the wider community and appears to be important to families with few resources. Most family support and foster care service users are reliant on mobile phones and keen to have the Internet at home. The Internet appears to offer rich opportunities which are relevant to conditions of poverty and disrupted relationships. However, any attempt to use ICT with families coming to welfare agencies needs to consider the social circumstances of these families.

The need for considered action

There are significant barriers to Internet access for disadvantaged families and attempts to breach the resulting digital divide require creative solutions. Computer ownership and ability to access the Internet remain a problem that extends well beyond the provision of computer hardware. Problems such as access to technical support to keep computers working, maintenance of anti-virus protection and updating of software were clearly issues in this research and reinforced the complexity of understanding Internet use with these families:

> The diffusion of a physical device (like the one off purchase required for television or radio access) differs from the take-up of a technology like the Internet, which requires considerable updating and substantial infrastructure, even after the initial acquisition. In addition, the rapidly changing form of the Internet, together with its multiple uses, stresses the need for technological skills, literacy and confidence (Willis & Tranter 2006, p. 47).

In addition, computer hardware in the households of participants in this research appears vulnerable to damage and loss. Computers were lost because of relationship breakdown, financial or domestic disasters. Welfare agencies wishing to engage service users through ICT will have to address these obstacles by finding ways to provide hardware and also by offering software and ongoing technical support. The financial and social circumstances of service users mean that their capacity to maintain equipment, software, upgrades and the ongoing costs of Internet service provision is poor. A significant attempt to assist service users to bridge the digital divide is likely to cost money and require an ongoing organisational commitment.

The need to address compounding disadvantage

Exclusion from ICT adds to the difficulties of families who must adjust and work in a society increasingly dependent on technology. Younger parents reported loss of skills and difficulty maintaining computer literacy. Young people experienced decreased social and educational opportunities with lack of access to computers. The most recent figures show that 94% of young Australians have access to a computer at home and 90% are confident Internet users (OECD 2006). IM is used widely among Australian children, and social network sites are rapidly increasing (Naughton 2006). However, many young people in this research were unable to participate in such social activity. The inability to use the web for homework was also problematic for participants and is likely to become a greater problem as schools assume a level of home access to the Internet.

This research has also shown that ICT can be important for communication in families who suffer social disruption and are geographically mobile. There are examples in this research which indicate that service users can benefit from pro-active use of ICT. In addition to the lessons learnt when homeless young people had access to phones, there are examples of families being able to use the Internet to maintain family relationships when they are geographically

separated. This is an important factor when children are affected by violence.

Accommodating ICT patterns of use

ICT is used in particular ways by service user and worker – family communication needs to be carefully assessed by agencies to ensure that the methods used are appropriate to their client group. It is essential that workers' patterns of using ICT, which are likely to be telephone and e-mail based, are appropriate to service users. A number of examples in this research indicate that workers had not communicated well with service users. The use of pre-paid phones and problems of credit may mean telephone calls may not be returned. E-mails may not be answered because of different patterns of use. Furthermore, workers may be better advised to consider using IM and texting rather than e-mails and voice calls if they wish to contact service users. There was some evidence that service users were frustrated by the limitations of current ways of communicating with agencies. These findings need to be incorporated into the communication policy of agencies to ensure communication is as effective as possible.

Respecting difference in communication styles

This research has demonstrated individual differences in how ICT is used, partly related to age and partly to personal preference. There is also some indication that these preferences may change; for example, as adolescents grow older. Such preferences need to be considered in ICT-based communication between agencies and service users. Older parents appeared more disinterested in Internet use.

Further research needs

This research has focused on urban and semi-rural service users across New South Wales and Canberra. The number of participants in this research was small and further research would be useful for understanding the experiences of groups not covered in this research, such as those in residential care, more remote families and Aboriginal people (Wyn et al. 2005). Research also needs to address the problem of how to reach service users who are out of touch with mainstream services and the attitudes of workers themselves to ICT-mediated communication. This is a fast moving area and ongoing monitoring of the use of technology amongst service users will be needed.

CONCLUSION

This research aims to contribute to the understanding of ICT use amongst a particularly disadvantaged group of children and young people in the Australian community. Whilst further work will be needed, the findings show significant and compounding difficulties exist in relation to Internet access and mobile phones.

Welfare agencies need to recognise the social factors that affect the way in which ICT is used and the implication that this has for their service users. There is evidence of significant compounding disadvantage to some people, particularly young people whose social networks and educational achievement depend on ICT, and families who lack access to what is more generally taken for granted communication. Many adults over thirty-five years of age seemed to have little interest or few skills in using ICT. In considering these questions, welfare agencies must also consider their own patterns of use of ICT and how this may either create difficulties or be useful for service users. Those concerned to utilise the many advantages of ICT with service users face many challenges. ■

GLOSSARY

Blogs: personal web pages on which owners can post messages. Some blogs are monologues, some have shared authorship and some are interactive.

Chatrooms: continuous, Internet-based discussions on a particular topic. Some have moderators and others are uncontrolled. They may be undertaken in real time (synchronous) or stored and made available to people when they come on-line (asynchronous).

Instant Messaging (IM): an Internet application which allows real time conversations with an on-screen list of known contacts. Common systems are MSN and Yahoo!Messenger.

Social networking sites: on-line social networks which enable users to create personal profiles and which vary in the level of privacy afforded. The most popular include MySpace (which allows classified ads and uploading of music), Bebo, Facebook and Friendster.

Virtual worlds or MUDS (multi user dungeons or domains named after the game 'Dungeons and Dragons'): on-line imaginary places of social interaction. The best known site is Second Life.

REFERENCES

Angus, L., Snyder, I. & Sutherland-Smith, W. (2003) 'Families, cultural resources and the digital divide: ICTs and educational (dis)advantage', *Australian Journal of Education*, 47, 18-39.

Bargh, J.A., McKenna, K.Y. & Fitzsimons, G.M. (2002) 'Can you see the real me? Activation and expression of the "true self" on the Internet', *Journal of Social Issues*, 58, 33-48.

Ben-Ze'ev, A. (2004) *Love online: Emotions on the Internet*, Cambridge University Press, Cambridge.

Canberra Times (2006) 'Email is the new snail mail — get the message?', p. 19, Canberra.

Christensen, H., Griffiths, K. & Jorm, A.F. (2004) 'Delivering interventions for depression by using the Internet: Randomised controlled trials', *British Medical Journal*, 328, 265-268.

Crystal, D. (2006) *Language and the Internet*, Cambridge University Press, Cambridge.

Curtis, K., Robert, H., Copperman, J. & Liabo, K. (2004) '"How come I don't get asked no questions?": Researching "hard to reach" children and teenagers', *Child and Family Social Work*, 9, 167-75.

Facer, K. & Furlong, R. (2001) 'Beyond the myth of the "cyberkid": Young people at the margins of the information revolution', *Journal of Youth Studies*, 4, 451-69.

Gaby, S. & Henman, P. (2004) *E-health: Transforming doctor-patient relationships with a dose of technology*, paper presented at the Australian Electronic Governance Conference, Centre for Public Policy, University of Melbourne, 14-15 April.

Gilbertson, R. & Barber, J.G. (2002) 'Obstacles to involving children and young people in foster care research', *Child and Family Social Work*, 7, 253-8.

Henman, P. & Dean, M. (2004) *The governmental powers of welfare e-administration*, paper presented at the Australian Electronic Governance Conference, Centre for Public Policy, University of Melbourne, 14-15 April.

Heptinstall, E. (2000) 'Gaining access to looked after children for research purposes: Lessons learned', *British Journal of Social Work*, 30, 867-72.

Hough, G. (1996) *Information technology in the human services: Whose dreams, whose realities?*, paper presented at HUSITA 4 Conference, Dreams and Realities: Information Technology and the Human Services, Finland, 10-15 June.

Hoyles, B. & Tregeagle, S. (2007) *Harnessing Information and Communication Technology in work with young people*, paper presented at the Are we there yet? National Youth Affairs Conference, Melbourne, 1-3 May.

Hutchby, I. (2001) 'Technologies, texts and affordances', *Sociology*, 35, 441-56.

Leonard, M. (2005) 'With a capital "G": Gatekeepers and gate-keeping in research with children', unpublished paper (personal communication), Queen's University, Belfast.

Livingstone, S. (2003) 'Children's use of the Internet: Reflections on the emerging research', *New Media and Society*, 5, 147-66.

McLaren, J. & Zappala, G. (2002) *The "digital divide" among financially disadvantaged families in Australia*, viewed 26 May 2006, <http://www.firstmonday.org>.

Naughton, J. (2006) '10 websites that changed the world', *Sydney Morning Herald*, pp. 38-43, Sydney.

OECD (2006) *Are students ready for a technology rich world?*, viewed 20 July 2006, <www.pisa.oecd.org>.

Pakula, K. (2006) 'OMG! Your such a chatterbox', *Sydney Morning Herald*, p. 21, Sydney.

Tidwell, L.C. & Walther, J.B. (2002) 'Computer-mediated communication effects on disclosure, impressions and interpersonal evaluations: Getting to know one another a bit at a time', *Human Communication Research*, 28, 317-48.

Tregeagle, S. & Darcy, M. (2007) 'Child welfare and Information and Communication Technology: Today's challenge', *British Journal of Social Work*, Advanced Access.

Valentine, G., Butler, R. & Skelton, T. (2001) 'The ethical and methodological complexities of doing research with "vulnerable" young people', *Ethics, Place and Environment*, 4, 119-24.

Willis, S. & Tranter, B. (2006) 'Beyond the "digital divide": Internet diffusion and inequality in Australia', *Journal of Sociology*, 42, 43-59.

Wyn, J., Cuervo, H., Woodman, W.D. & Stokes, H. (2005) *Young people, wellbeing and communication technologies*, Victorian Health Promotions Foundation, viewed 7 August 2007, <http://www.vichealth.vic.gov.au>.

Wishing all our readers
a safe and happy holiday season
and a peaceful New Year in 2008