The Role of the Internet in D/deaf People’s Inclusion in the Information Society

Gill Valentine • Tracey Skelton • Philippa Levy

The AHRC funds postgraduate training and research in the arts and humanities, from archaeology and English literature to design and dance. AHRC Research Centres provide a focus for collaborative research in areas of strategic importance. Although the social and natural sciences have long had access to funding to establish centres of research expertise, it was not until the launch of the AHRC’s Research Centres Scheme that researchers in the arts and humanities have benefited from a similar opportunity. For further information please see www.ahrc.ac.uk
The Role of the Internet in D/deaf People’s Inclusion in the Information Society

Gill Valentine, School of Geography, University of Leeds

Tracey Skelton, Department of Geography, Loughborough University

Philippa Levy, CICAS, University of Sheffield

A report based on the findings of a questionnaire survey of 419 D/deaf people.
The Role of the Internet in D/deaf People’s Inclusion in the Information Society

In today’s information age access to information on the Internet is increasingly necessary if people are to be able to fully participate in society and therefore to achieve a sense of personal empowerment and citizenship. This study by the Universities of Leeds, Loughborough and Sheffield examined the use of the Internet by D/deaf people in England and the consequences that the Internet has for D/deaf people’s sense of inclusion or exclusion in both hearing society and the Deaf world. The research found:

• D/deaf people (79%) are more likely to use the Internet everyday than the general population (59%).

• The majority (87%) of regular Internet users in the study access the Internet at home; only 8% of regular Internet users access the Internet in Deaf clubs.

• Over 50% of the Deaf people who said they do not use the Internet had no formal qualifications or were only educated to GCSE level.

• The main barriers which prevent D/deaf people from using the Internet are: technophobia (fear of technology); the lack of computer training available in Deaf environments and specifically in British Sign Language; the high level of English literacy necessary to understand computer manuals and jargon.

• The Internet has improved D/deaf people’s ability to access information about, and communicate with, the hearing world for instrumental purposes (e.g. banking, health information), and to communicate more effectively with hearing families. This has given some Deaf people a greater sense of equality with hearing people. However, D/deaf people are not using the Internet to develop friendships with hearing people and so are not becoming more socially integrated in, or connected with, the hearing world.

• The Internet has enabled D/deaf people to find and pass on information about Deaf issues, to meet new D/deaf friends and to communicate easily with other D/deaf people in the UK and internationally. However, this means that Deaf Clubs have become less important as meeting spaces for many young D/deaf people and raises questions about their future.

These findings are explained in detail below:

Background

Just under 9 million people in the UK are D/deaf or hard of hearing. This represents about 1 in 7 of the population. There are approximately 50,000 British Sign Language users (BSL) in the country.

For D/deaf people, many everyday activities involving communication with others, and accessing and sharing information, depend on the availability of a sign language...
interpreter or other forms of mediated communication. Being excluded from communication possibilities and information sources that hearing people take for granted has a profound impact on D/deaf people’s understanding of how the hearing world works, and on their educational and economic prospects, social welfare and well-being. For example, D/deaf people between the ages of 25 and 45 are four times more likely to be unemployed than hearing people.

The Internet however has the potential to improve D/deaf people’s access to information and consequently their status within the information society. Technologies, such as the Web, have particular advantages because they support text-based and visual forms of communication. The potential benefits for D/deaf people are threefold:

1. The Internet may provide D/deaf people with easier access to a wider range of general and Deaf-related information resources and services, thereby enhancing their personal ‘information landscapes’.

2. Computer-mediated communication (CMC) may enable D/deaf people to communicate more easily with hearing people, and to develop their own on-line Deaf ‘communities’.

3. The Internet may provide a platform for hearing people to access information about, and develop ways of communicating with, D/deaf people.

In order to further develop appropriate information resources and services for D/deaf people, it is important therefore to know more about how Internet information and communication resources currently are benefiting this group.

At the same time, research suggests that information and communication technologies (ICT) may benefit some groups more than others and may also have some unintended negative outcomes. For example, rather than fostering D/deaf people’s social inclusion the Internet may actually be deepening divisions between D/deaf and hearing people, or creating new divides within D/deaf worlds between those who have the skills to use new technologies, and those who do not.

This summary reports the findings of research with D/deaf people about their experiences of the Internet:

**Who uses the Internet?**

The results of the survey showed that:

- Deaf people who self-identified as oral communicators were more likely to be Internet users than those who identified as BSL users

- Internet users were likely to be more highly educated. Most users were educated to A-Level or above. Over 50% of the Deaf people who said they do not use the Internet had no formal qualifications or were only educated to GCSE level.

- Most Internet users were employed or self-employed.

- Slightly more Internet users were women than men.

- The majority (87%) of regular (those who use it at least once a week) Internet users access the Internet at home; 45% use it at
work, only 8% of regular Internet users access the Internet in Deaf clubs.

Most Deaf people described learning to use the Internet at school/university, in the workplace or as a result of tuition from friends and family members. These findings suggest that in order to prevent a digital divide opening up between those Deaf people who have ICT skills and those that do not there is a need to improve access to ICT for BSL users and for Deaf people who are not in education/training or work.

Among those D/deaf people who used the Internet there were three distinct types of users. These can be characterised in the following ways:

1. **Computer savvy users:** The majority of this group (90%) were BSL users and their average age was early thirties. This group was more likely to use the Internet for both work and leisure activities. In other words, their use of the Internet was quite integrated into their everyday life. They also had a high degree of confidence in their own ICT skills.

2. **Tentative users:** The average age of this group was the late forties. This group of users had less formal education than the other groups and were relatively new to computing. They reported that they mainly used the Internet at home and tend to be quite fearful of using it.

3. **Instrumental users:** had the highest level of educational qualifications and were more likely to have a postgraduate degree than other users. Their use of the Internet can be described as ‘business-like’ because they mainly use the Internet for activities such as banking and work rather than for leisure and social purposes such as on-line games or chat. Unlike group 1 (computer savvy users) this group’s use of the Internet is not integrated into their wider everyday lives.

What do Deaf people use the Internet for?

D/deaf people (79%) who responded to the survey were more likely to use the Internet everyday than the general population (59%).

There are interesting differences between the ways that D/deaf people chose to use the Internet compared to the most popular uses of the Internet by the general population. D/deaf people were more likely to use the Internet than the general population to look for health information or a job, and for on-line banking, email and to chat. For example, interviewees described using the Internet to search for medical information when they experienced hearing loss so that they were able to ask their doctors appropriate questions. Others described how on-line banking enables them to manage their money without encountering discrimination from hearing staff at the local bank.

Deaf people are less likely to use the Internet for shopping and playing games than the general population. A number of interviewees explained that they do not shop on-line because they are concerned about the security of their financial information and they find some of procedures to register a credit card number confusing and the text explaining the terms and conditions difficult to understand.
What factors prevent D/deaf people using the Internet?

The most common reason given in the survey by D/deaf people for why they do not use the Internet was that they were ‘not interested in it’. However, the interviews suggest that this reason actually conceals the fact that many Deaf people, particularly the older generation, are fearful of the Internet. These fears included: not understanding how to use it, and a fear of viruses and junk emails. This interviewee explained:

Samuel: Fear, I think. There are lots of rumours on the Internet about on-line fraud, also a lot of Deaf people don’t know about computer viruses. They are scared because they don’t know what they are. They don’t know what to do and they don’t go online because of that, so it’s mainly fear.

While ‘technophobia’ (a fear of technology) is commonplace amongst hearing people it may be more pronounced among D/deaf people because of the problems D/deaf people have accessing computer training and support. This was reflected in the survey results. Other main reasons given in the survey for why D/deaf people do not use the Internet were: ‘I do not understand how to use it’; ‘no one has taught me’.

Most Deaf people rely on their families to provide ICT training and support. Of those who responded to the survey 45% of Internet users said they think that hearing people have more opportunities than Deaf people to undertake computer training. Computer courses are predominantly taught by hearing people in hearing environments. Given the national shortage of sign language interpreters Deaf people can find it difficult to access appropriate communication support when they want to attend computer courses. For those lip-reading it is hard to watch the mouth patterns of the computer instructor and look at a computer screen simultaneously and so they often fall behind their hearing peers in the class who have the advantage of being able to listen to the instructor and work on the screen at the same time.

Computer installation information and support manuals often require a high level of ability to read English. However, as a result of the disadvantages D/deaf people encounter in an oral education system, levels of literacy within the Deaf community are below national averages. Interviewees described problems that they have encountered trying to follow computer manuals, such as not understanding what words like ‘mouse’ meant, and not recognising computer terminology in dictionaries. Indeed, many computer terms are sound based words like ‘click’ or do not have an equivalent sign. D/deaf people also have problems accessing support services provided by computer companies or retailers because they are usually telephone based. These interviewees describe some of the difficulties they have encountered:

Bethan: I can’t read or write very well at all...I only ever use sign language unless I really have to speak, like if I am forced to. I have just got a computer though, but I haven’t got a clue what to do with it — at the moment it is acting as a very big paperweight.
**Interviewer:** OK, so have you thought of a computer course or anything like that?

**Bethan:** Well actually I have but I didn’t finish it. I only did it for a few weeks and then packed it in. It was too difficult for me because of the problems I have with reading and writing, so I quit.

**Alistair:** The problem with the Internet is that when something goes wrong you have to phone a help line! I can’t do that I’m deaf — I have to get my neighbour across the road to help me and phone them to sort it out — I don’t like that, I want someone to come and help me in my own language [BSL].

These experiences indicate that while D/deaf people may have opportunities to access and use new technologies many D/deaf people can lack essential IT and information literacies necessary to enable them to make effective use of the Internet and Internet-based information and communication resources. This ‘literacy or knowledge gap’ will become an increasingly important constraint on D/deaf people’s ability to participate effectively in the information society.

**What would make it easier for Deaf people to use the Internet?**

D/deaf people identified a number of factors that could improve their ability to use the Internet.

Training in BSL: Many public access computer courses are held in public libraries however these are places that many D/deaf people do not use because books are not part of Deaf culture (although they may be more important for deafened or hard of hearing people who have good levels of English literacy). D/deaf people would benefit instead from the opportunity to learn basic ICT skills in sign language within a supportive Deaf environment such as a Deaf Club where they could also try out hardware or software before purchasing it for their home use.

Individualised learning — that is training tailored to suit individuals’ specific needs and interests (for example, just training in email, or how to use the web) — would be more helpful and less threatening to D/deaf people than generic computer courses that include a set of skills that they may not want or need to know (such as computer programming). ICT training provided in this way can also provide a route back into education or employment for some people.
Esther: I prefer face-to-face training, you know, hands on, so that if I don’t understand the information then I need to ask questions, I prefer to do this face-to-face so they can show me. The English on the Internet can be very heavy and in-depth so that can be a barrier on the Internet there is a lot of writing and I prefer to learn through pictures as aids and hands-on experience... They should have some websites that use basic English and maybe use pictures as well. It can be difficult to see a page if there is a lot of fuzzy background or too much information there.

Simpler written English: Many Deaf people can navigate the Web and find the information they want but then cannot actually understand it because the level of English used is too high. Government websites in particular were singled out for their use of complex, and dense text.

Matthew: In some sites the English is kind of really high level, so if it’s the government websites or stuff like that then the English can be quite complex. And if it’s that then I kind of just ignore it and don’t bother to read it.

Better visuals and specialist software: The Internet offers many possibilities for information to be provided in visual forms. This can include providing BSL video clips to interpret written text, the greater use of images and symbols to convey meaning, as well as visual communication technologies such as web cams. These two interviewees describe what they would like to see on-line:

Samuel: Better web cam!... There is one thing I have always wanted. Blind people have a thing which turns text into a voice. I want D/deaf people to have the text turned into sign for every website, I think that would be nice.

Jennifer: There’s a lot of information in the written English language now and I feel that we need more in BSL, more clips in BSL, for example you can have the written language, the text and then a hand sign and if you could click on that it would bring up the information in sign language which D/deaf people could access a lot easier... also a lot of web sites need to be kept up to date.

How is the Internet affecting Deaf people’s inclusion in both the hearing world and relationships within the Deaf world?

Inclusion in the hearing world

The Internet has increased D/deaf people’s ability to communicate with
The Role of the Internet in D/deaf People’s Inclusion in the Information Society

When they do so, 40% of D/deaf people chose whether to hide or share their Deaf identity on-line. The information available on line has also enabled D/deaf people to pick up greater understanding of wider world which potentially improves individuals’ abilities to participate in hearing society (e.g. by following political debates and motivating them to vote) and has encouraged more D/deaf people to travel overseas on holiday. Information obtained on the Internet can then be cascaded out within the Deaf community as this interviewee explains:

Boris: A lot of the problem with being hearing impaired is that you don’t know what the hot topic is at the moment, what people are talking about at the moment, you don’t know what people are interested in, because you don’t hear it and you’re out of it. Well that’s the case for me anyway. So by being able to go on the Internet and learn things and find out things I’m able to share those with my wife and other people...so in that respect it [the Internet] does improve the quality of my life with hearing people.

The majority of deaf people (approximately 95%) are born into hearing families. Many therefore struggle to communicate with their immediate families (parents and siblings) and particularly with their extended families. Importantly therefore the Internet has also increased the ability of some D/deaf people to contact, and develop, their relationships with hearing members of their families via email and live chat. However, there is no evidence that the Internet is playing a significant role in enabling D/deaf people to develop friendships with hearing people beyond their family members.

Being able to communicate with hearing people for instrumental purposes (e.g. to access goods and services) has given many Deaf people a greater sense of confidence and a greater sense of equality with hearing people. Just over 45% of the Internet users who responded to the survey reported that they experience less discrimination as a D/deaf person on-line than they do in everyday life; and just under 70% of said that using the Internet has improved their quality of life.

Adam: [The Internet] makes the Deaf community more confident. It means they’re more equal to hearing people, they get access to the same information, access to jobs and sport, things like that. So it’s definitely been a big improvement for the Deaf community.

Gill: I am a Deaf person and I feel like, you know, I’m equal to hearing people when I’m on the Web, there’s no difference to us. I mean I know I’m deaf, definitely, but I think, you know, it’s kind of really good because you know we can advance in the same way hearing people do, on an equal footing.

However, D/deaf people said they are not using the Internet to develop friendships with hearing people and
so they are not becoming more socially integrated in the hearing world. Indeed, one disadvantage of on-line methods of communication, such as email, is that it means that D/deaf people no longer need to have direct face-to-face contact with hearing people. Some interviewees suggested that as a result their speech and English language development may have declined.

**Relationships within the Deaf world**

Over 85% of Internet users who responded to the survey said that they think the Internet can support the Deaf community. For example, the Internet has played an important part in enabling information sharing between Deaf people (for example about Deaf events), particularly for those who are geographically isolated from Deaf clubs. It has also helped to increase the density of Deaf people’s social networks and to speed up the transmission of information and gossip between Deaf people. In some cases being able to contact Deaf people living in other countries has enabled some of the interviewees to travel internationally.

*Samantha:* I can chat to all my friends, we can all chat at the same time if we want to, which is brilliant because we’re hard of hearing, and we will struggle on the phone, but on the Internet three or four of us talking at the same time... well, it’s just like being in a group of girls on a night out, except I can hear what they’re saying.

**Gill:** I think I’m more involved with the Deaf community now, than I’ve ever been in the past. I think the well, you know you have a lot of Deaf websites, you know they’ve been set up, you know talking about Deaf issues and you know so kind of, I think it’s brought the community more together I would say.

Deaf Internet users also described making new friends with other Deaf people on-line and then arranging to meet them off-line.

**Derrick:** If you think about it the aim of the Internet, email, chat rooms, are based on communication and passing information, and for Deaf people they can communicate using webcams — it is so easy to do that with MSN chat as well — it is really important for Deaf people and I think that the Internet achieves its aim in that way.

Some of the interviewees who are deafened or have Ushers syndrome also hope that the Internet will enable them to find other people like themselves and to develop their own on-line communities and support networks. In this way the Internet may enable the Deaf community to become more differentiated.

However, the use of email and chat spaces by Deaf people in these ways is also having a negative impact on
some Deaf clubs. This is because Deaf people no longer need to go to the Deaf Club in order to meet and socialise with other Deaf people. Instead they can use ICT to chat on-line without meeting face-to-face or use email to arrange to meet Deaf friends in everyday spaces like pubs and cafés. Because communicating in this way is particularly popular with young Deaf people it means that Deaf Clubs have an ageing population.

Joan: I suppose before emailing or text messaging I would go to the Deaf Club to see my friends where now if I have something to say to them or ask them, you know to go somewhere, then I can either do it by email or text messaging so I really, yeah so I don’t go to Deaf Club as often as I used to, because of you know, you know technology now I suppose you’d call it.

Gill: I remember before, you know, me and my mates, we’d always go to the Deaf Club and chat away, and you know, it’s really nice kind of chatting but now I think, I don’t go to the Deaf Club at all, there’s no kind of group which is common to me, so yeah, the Internet and the computer and MSN, web cams and stuff is much more the way I communicate with my kind of peers.

Implications of the study

- **Addressing the digital divide:** D/deaf people should receive subsidies or allowances for ICT (in the same way that visually impaired people receive subsidies for assistive technologies) in order to enable Deaf people who are unemployed and on low incomes to afford computers and Internet connections.

- **Addressing the literacy divide:** more websites need to introduce BSL video clips, and better visual material for potential D/deaf customers/clients so that they can understand the information that is available.

- **Providing wider access to the Internet:** Deaf clubs need to promote and support D/deaf people's Internet use by providing access to Internet connected computers and training courses in BSL. This would also help to make Deaf clubs more attractive places for young people to spend time.

- **Overcoming technophobia:** tutorial and helpdesk materials need to be available in BSL. Financial support is necessary for Deaf organisations to encourage people who do not use the Internet to recognise the advantages of using this technology and to explain to them where to access ICT training and support in BSL and how to avoid any risks on-line.
About the project

The findings are based on a questionnaire survey of 419 D/deaf people that was distributed nationally. Of those who responded to the survey 307 were Internet users and 112 were do not use the Internet. Following the analysis of the survey 42 D/deaf people were interviewed in-depth. Of these 26 were Internet users and 16 were non-users; 20 of them self-identified as culturally Deaf (BSL users), 13 as deaf (oral communicators), 5 as deafened and 4 as hard of hearing. The interviewees came from: the North West, Midlands, the South West, London and the South East of the UK.

More Information

If you would like to know more about the project and its findings please contact one of the research team:

Gill Valentine
School of Geography,
University of Leeds,
Leeds, LS2 9JT.
G.Valentine@leeds.ac.uk

Tracey Skelton
Department of Geography,
Loughborough University,
Loughborough, LE11 3TU.
T.L.Skelton@lboro.ac.uk

Philippa Levy
CICAS, University of Sheffield,
Sheffield, S10 2TN.
P.Levy@Sheffield.ac.uk
The Role of the Internet in D/deaf People’s Inclusion in the Information Society

Gill Valentine • Tracey Skelton • Philippa Levy